



## Full wwPDB EM Validation Report ⓘ

Nov 20, 2022 – 05:13 pm GMT

PDB ID : 4APW  
EMDB ID : EMD-2068  
Title : Alp12 filament structure  
Authors : Popp, D.; Narita, A.; Lee, L.J.; Ghoshdastider, U.; Xue, B.; Srinivasan, R.;  
Balasubramanian, M.K.; Tanaka, T.; Robinson, R.C.  
Deposited on : 2012-04-06  
Resolution : 19.70 Å(reported)  
Based on initial model : 3JS6

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.dev43  
MolProbity : 4.02b-467  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
MapQ : 1.9.9  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.31.2

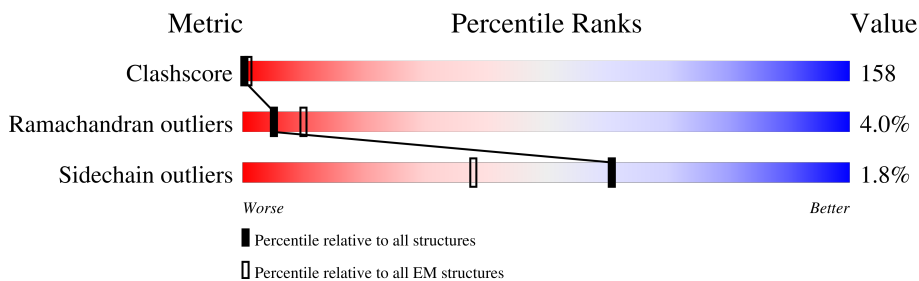
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 19.70 Å.

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



| Metric                | Whole archive (#Entries) | EM structures (#Entries) |
|-----------------------|--------------------------|--------------------------|
| Clashscore            | 158937                   | 4297                     |
| Ramachandran outliers | 154571                   | 4023                     |
| Sidechain outliers    | 154315                   | 3826                     |

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     | 329    |                  |
| 1   | B     | 329    |                  |
| 1   | C     | 329    |                  |
| 1   | D     | 329    |                  |
| 1   | E     | 329    |                  |
| 1   | F     | 329    |                  |
| 1   | G     | 329    |                  |
| 1   | H     | 329    |                  |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1   | I     | 329    |                  |
| 1   | J     | 329    |                  |
| 1   | K     | 329    |                  |
| 1   | L     | 329    |                  |
| 1   | M     | 329    |                  |
| 1   | N     | 329    |                  |
| 1   | O     | 329    |                  |
| 1   | P     | 329    |                  |

## 2 Entry composition [i](#)

There is only 1 type of molecule in this entry. The entry contains 40752 atoms, of which 0 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.

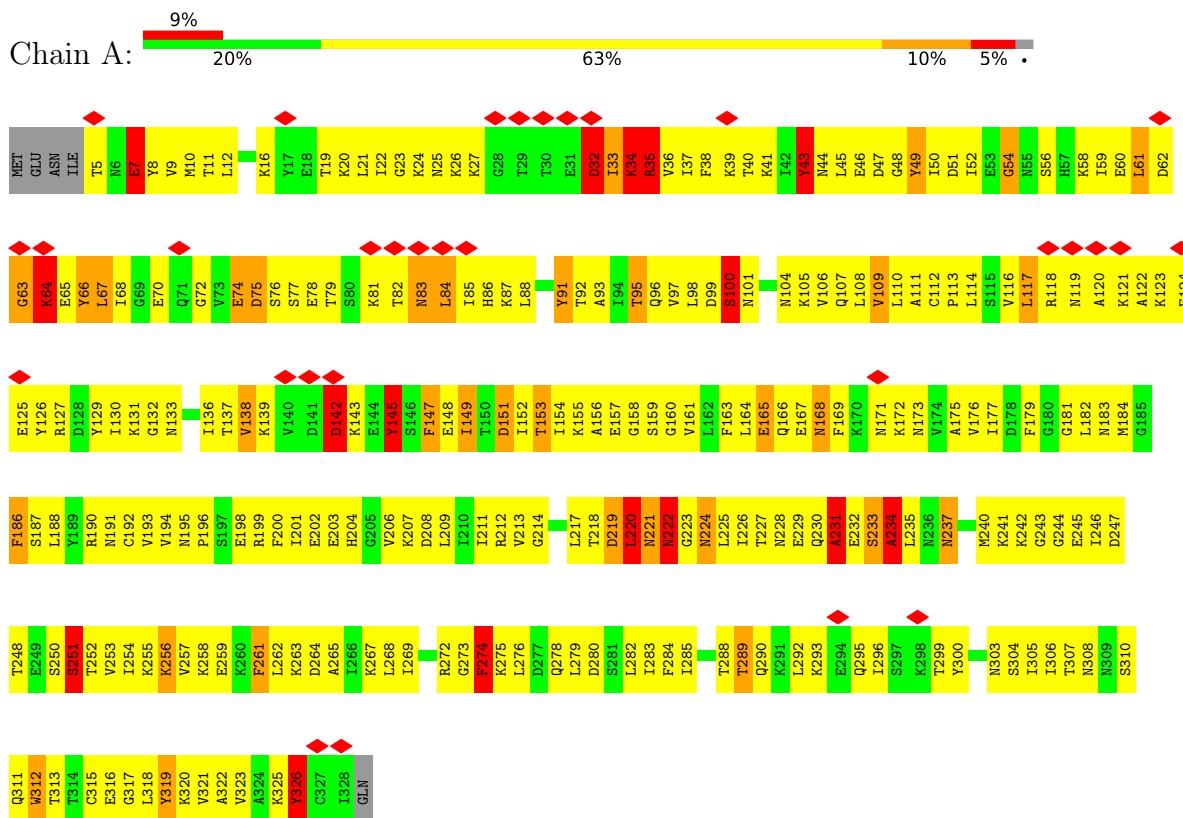
- Molecule 1 is a protein called ALP12.

| Mol | Chain | Residues | Atoms |      |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
|     |       |          | Total | C    | N   | O   | S |         |       |
| 1   | A     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |
| 1   | B     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |
| 1   | C     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |
| 1   | D     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |
| 1   | E     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |
| 1   | F     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |
| 1   | G     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |
| 1   | H     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |
| 1   | I     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |
| 1   | J     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |
| 1   | K     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |
| 1   | L     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |
| 1   | M     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |
| 1   | N     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |
| 1   | O     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |
| 1   | P     | 324      | 2547  | 1607 | 425 | 508 | 7 | 0       | 1     |

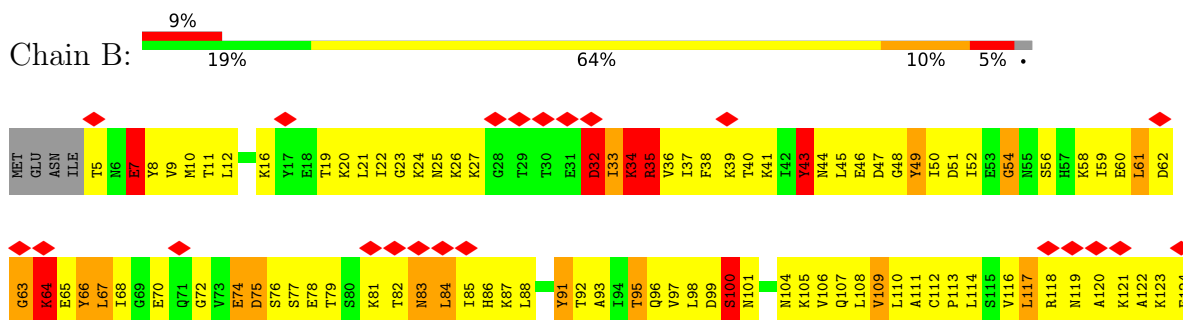
### 3 Residue-property plots i

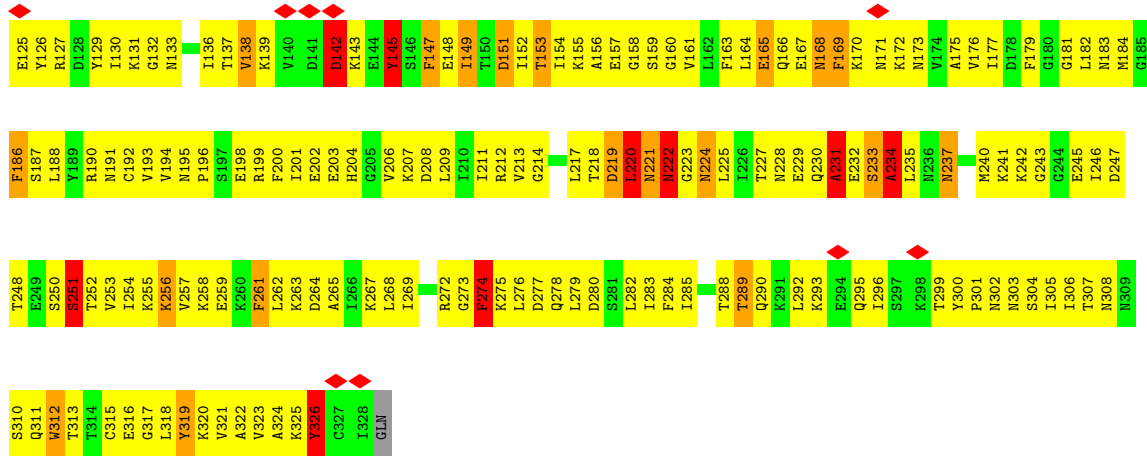
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: ALP12

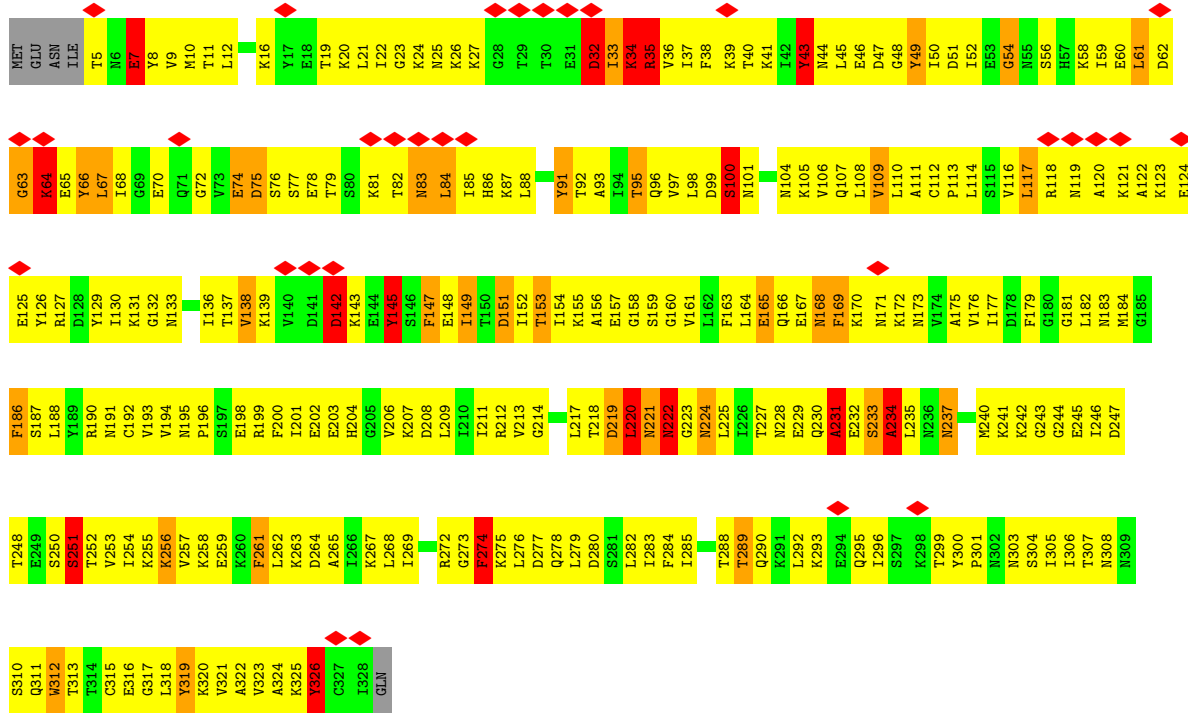


#### • Molecule 1: ALP12

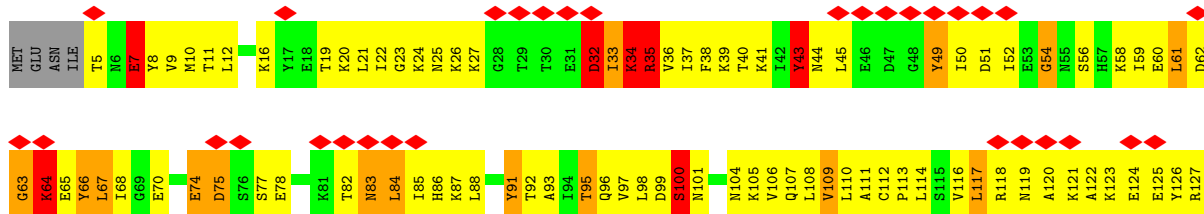


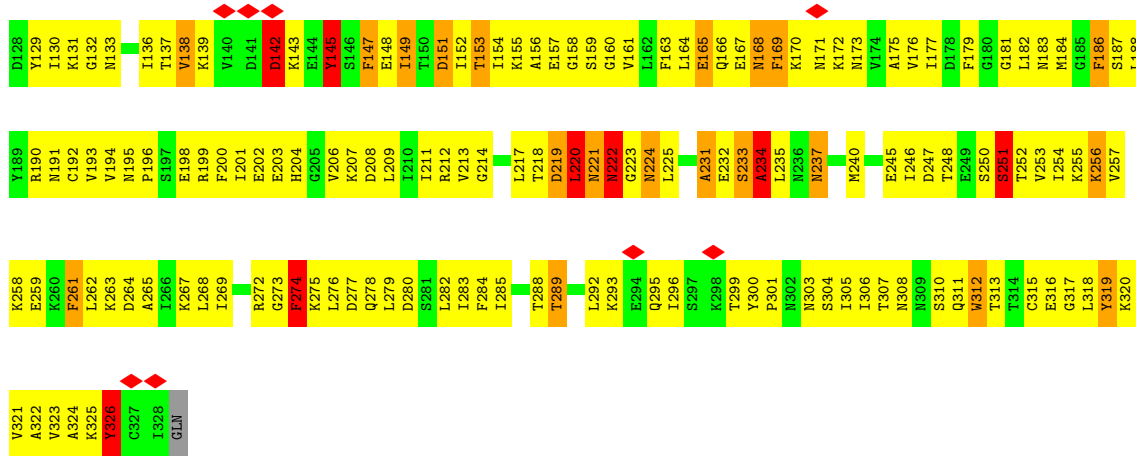


• Molecule 1: ALP12

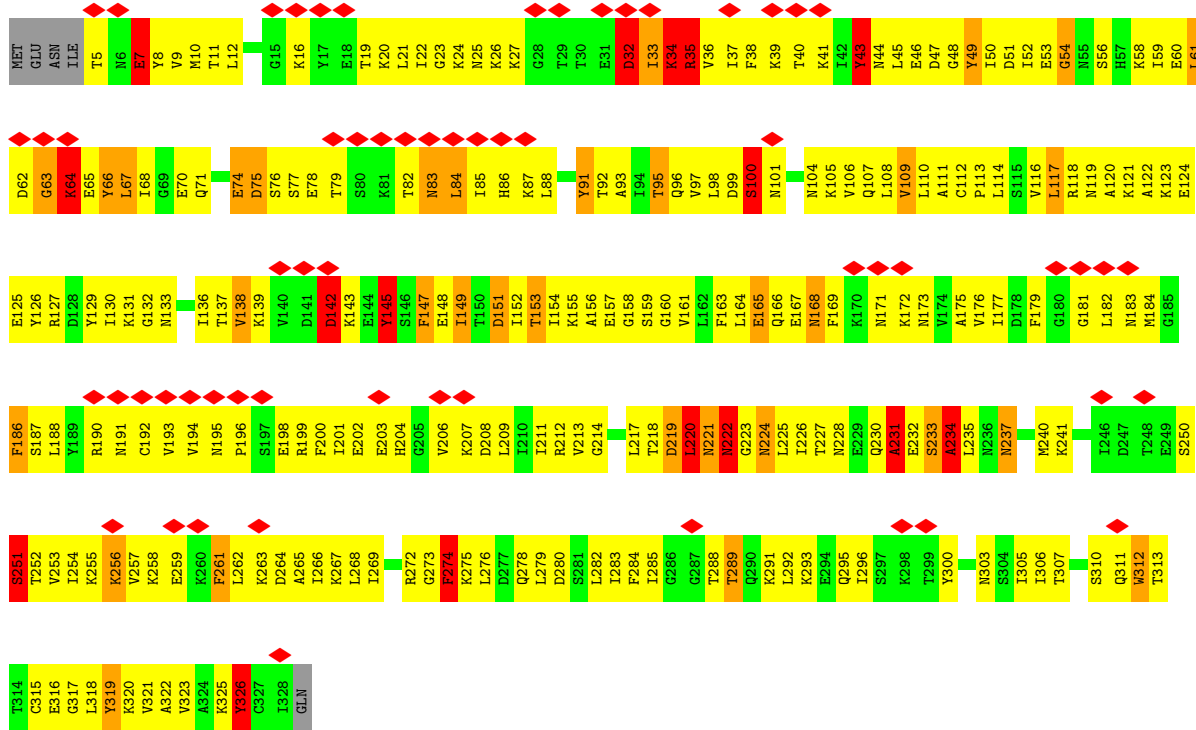


• Molecule 1: ALP12

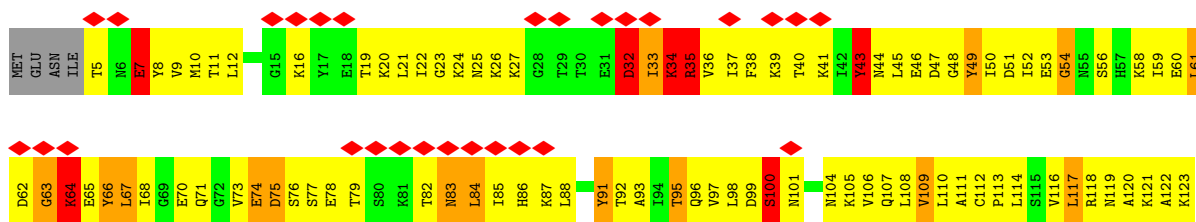


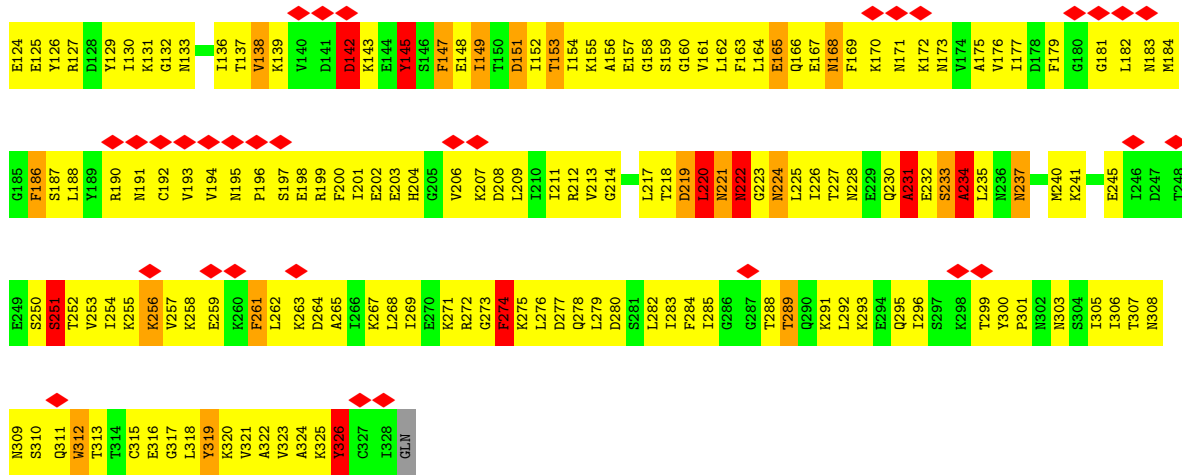


• Molecule 1: ALP12

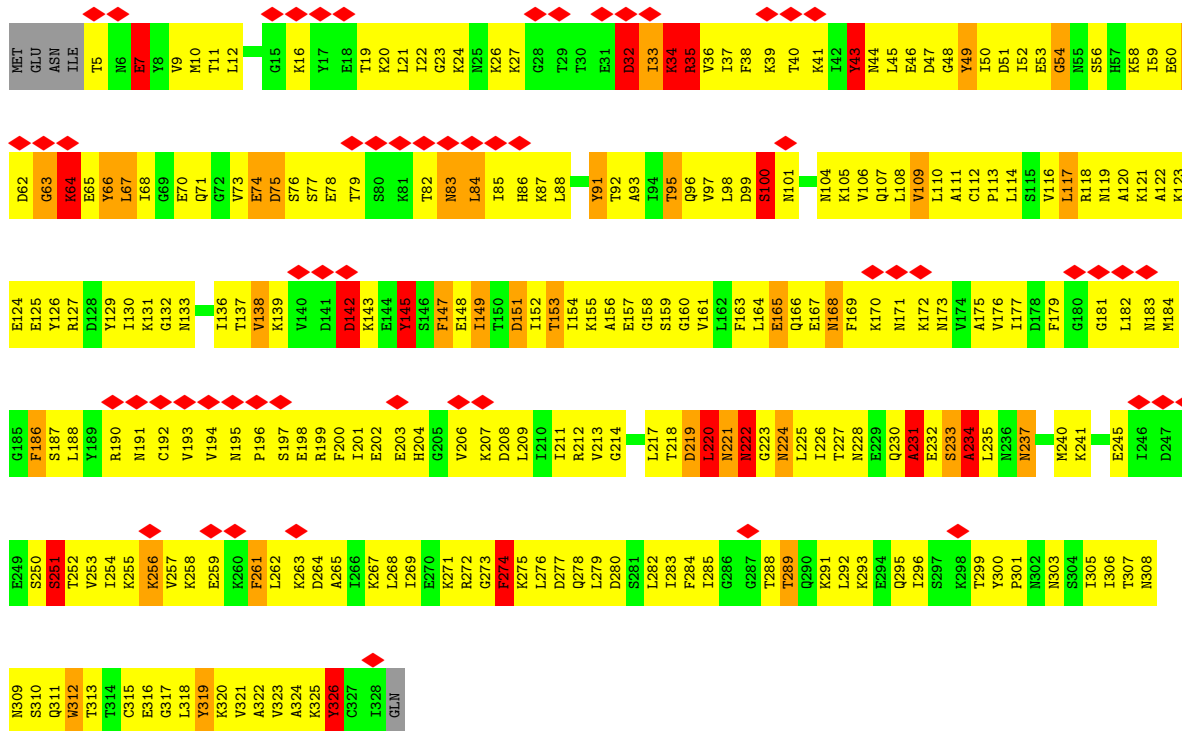


• Molecule 1: ALP12

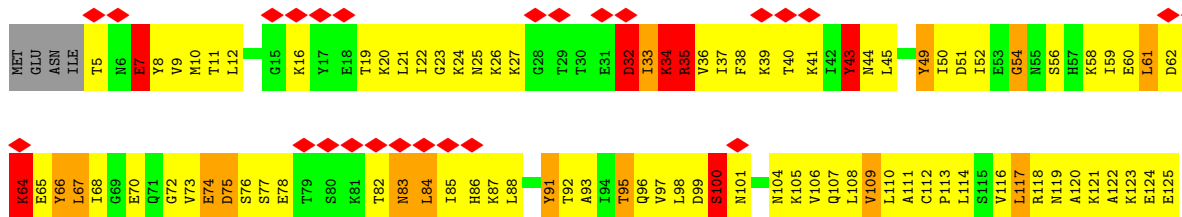




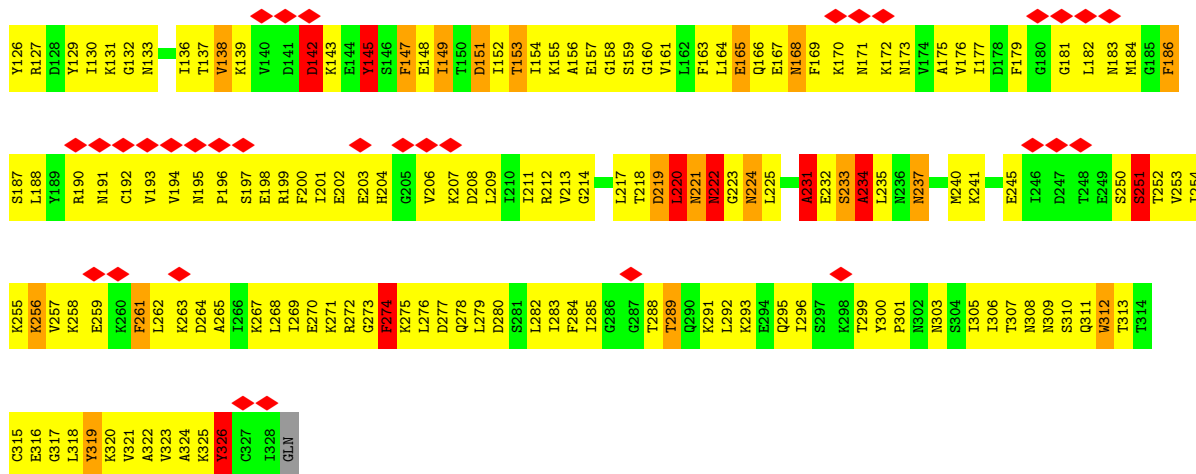
• Molecule 1: ALP12



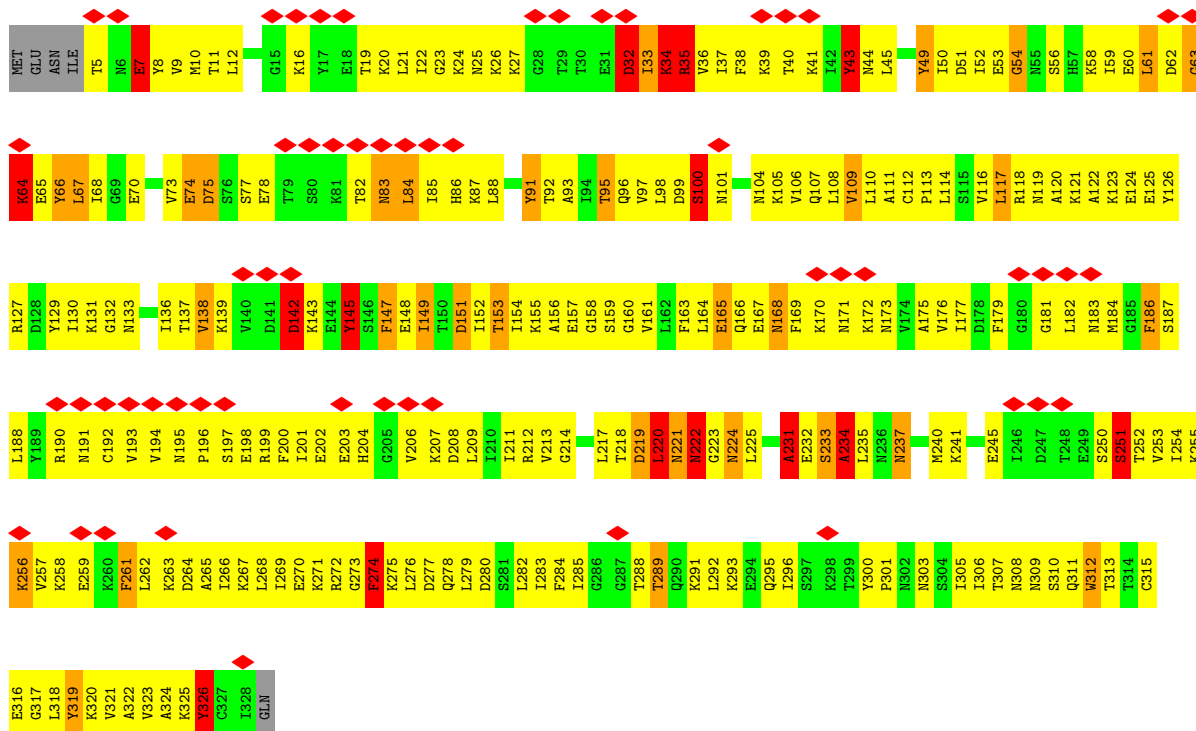
• Molecule 1: ALP12



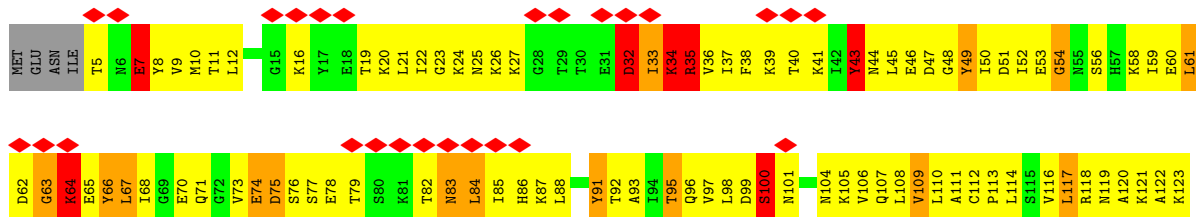


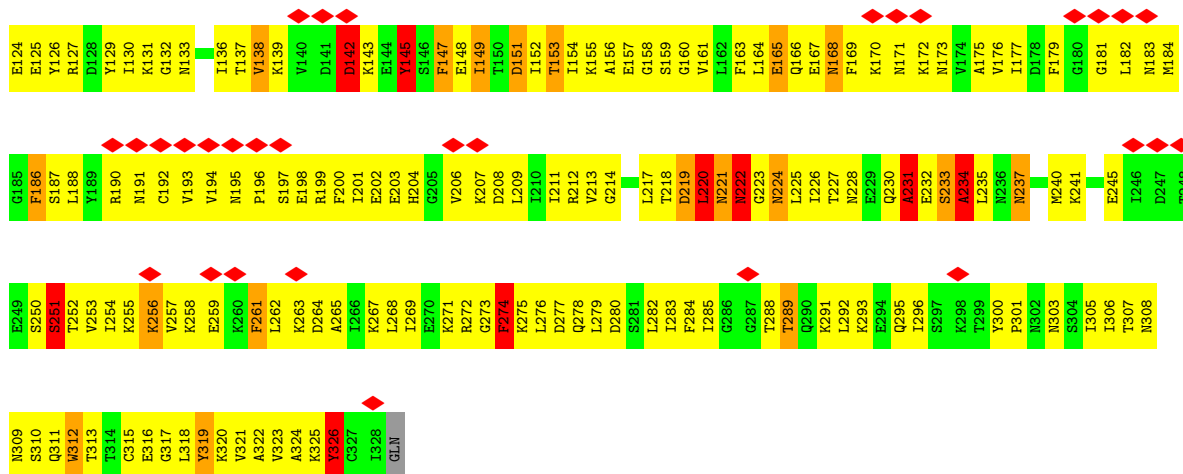


• Molecule 1: ALP12

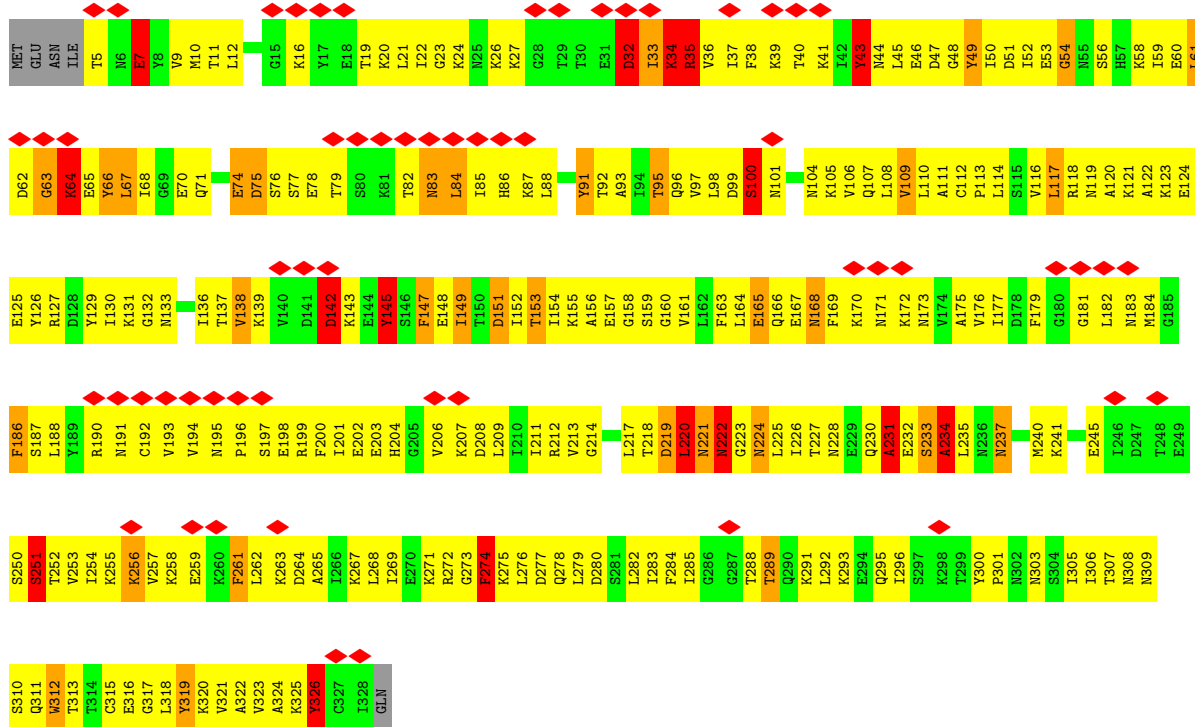


• Molecule 1: ALP12

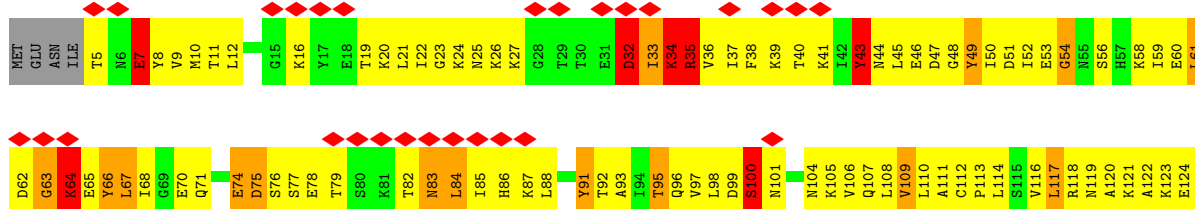
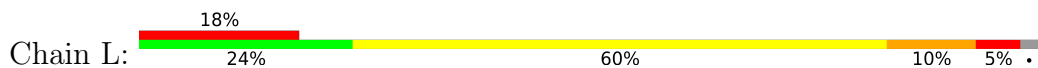


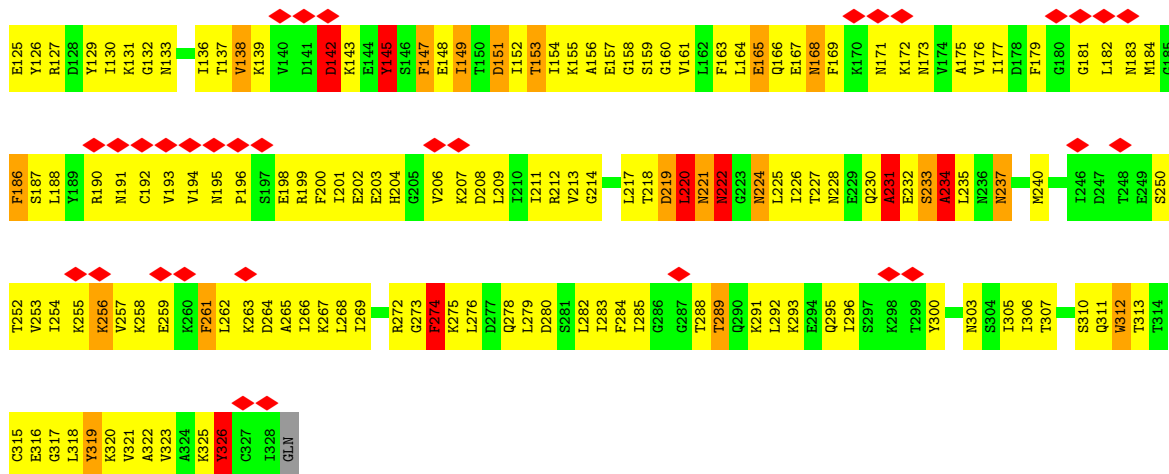


• Molecule 1: ALP12

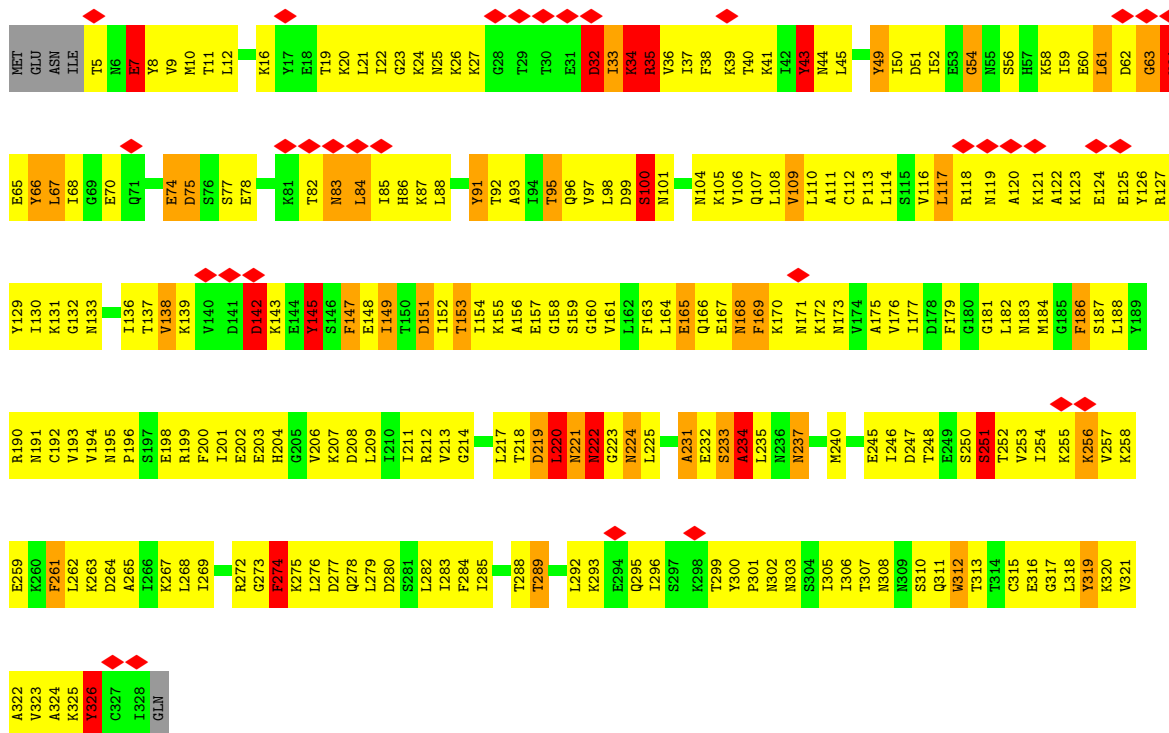


• Molecule 1: ALP12

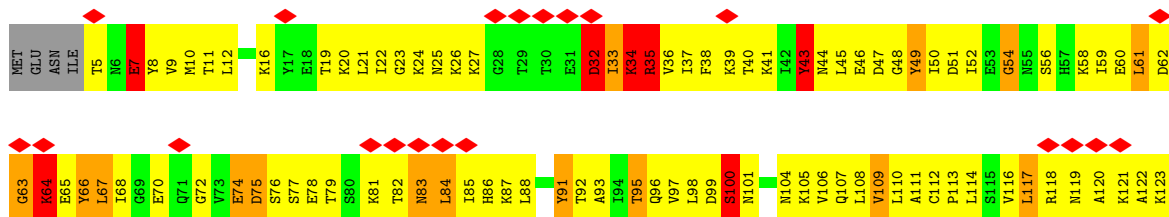


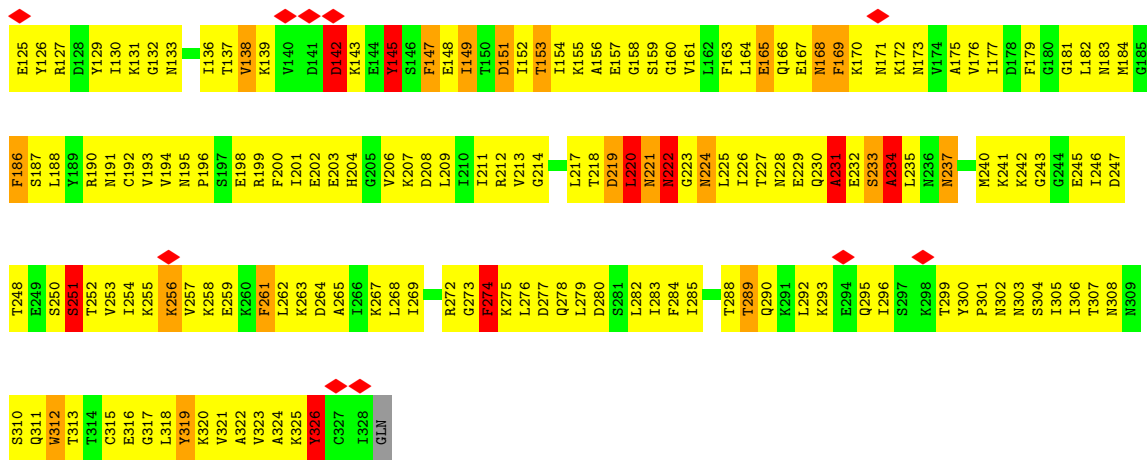


• Molecule 1: ALP12

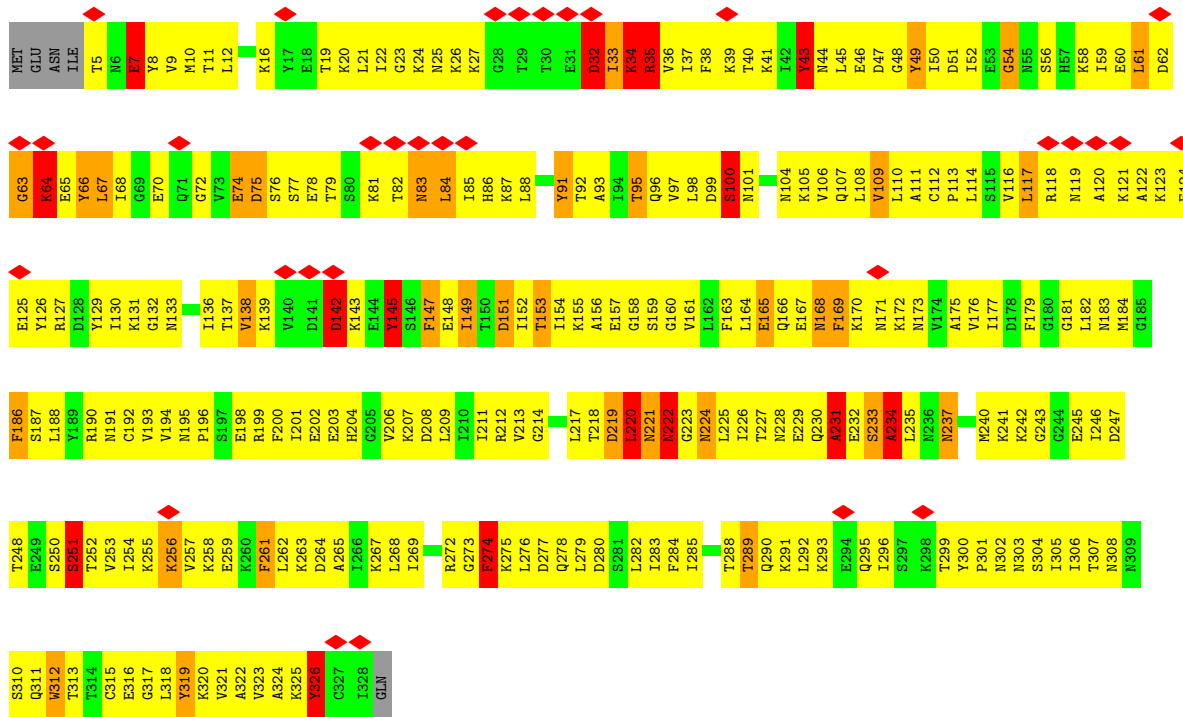


• Molecule 1: ALP12

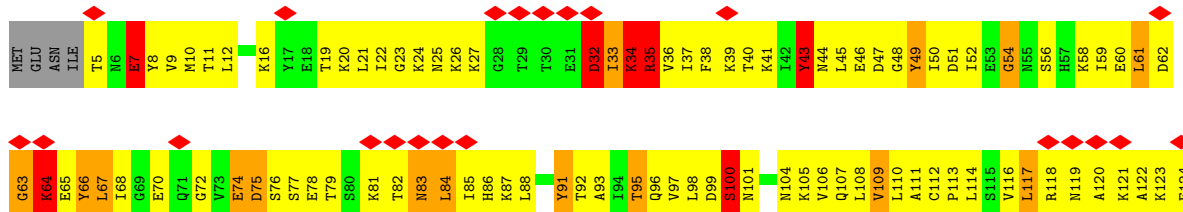


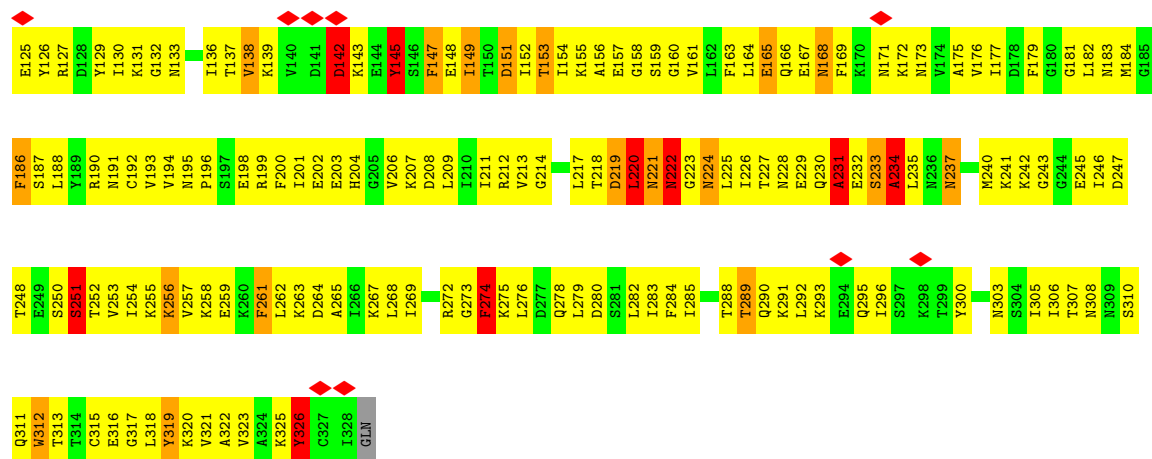


• Molecule 1: ALP12



• Molecule 1: ALP12





## 4 Experimental information

| Property                           | Value   | Source    |
|------------------------------------|---|-----------|
| EM reconstruction method           | SINGLE PARTICLE   | Depositor |
| Imposed symmetry                   | HELICAL, twist=Not provided°, rise=Not provided Å, axial sym=Not provided | Depositor |
| Number of particles used           | 5582  | Depositor |
| Resolution determination method    | Not provided  |           |
| CTF correction method              | EACH SCANNED IMAGE  | Depositor |
| Microscope                         | HITACHI H7600   | Depositor |
| Voltage (kV)                       | 100   | Depositor |
| Electron dose ( $e^-/\text{Å}^2$ ) | Not provided  |           |
| Minimum defocus (nm)               | 800   | Depositor |
| Maximum defocus (nm)               | 5000  | Depositor |
| Magnification                      | 40000   | Depositor |
| Image detector                     | KODAK SO-163 FILM   | Depositor |
| Maximum map value                  | 2.222   | Depositor |
| Minimum map value                  | -1.631  | Depositor |
| Average map value                  | 0.080   | Depositor |
| Map value standard deviation       | 0.359   | Depositor |
| Recommended contour level          | 0.88  | Depositor |
| Map size (Å)                       | 268.0, 268.0, 214.40001   | wwPDB     |
| Map dimensions                     | 100, 100, 80  | wwPDB     |
| Map angles (°)                     | 90.0, 90.0, 90.0  | wwPDB     |
| Pixel spacing (Å)                  | 2.68, 2.68, 2.68  | 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     | 0.71         | 1/2578 (0.0%)   | 1.64        | 70/3467 (2.0%)    |
| 1   | B     | 0.71         | 1/2578 (0.0%)   | 1.64        | 70/3467 (2.0%)    |
| 1   | C     | 0.71         | 1/2578 (0.0%)   | 1.64        | 70/3467 (2.0%)    |
| 1   | D     | 0.71         | 1/2578 (0.0%)   | 1.64        | 69/3467 (2.0%)    |
| 1   | E     | 0.71         | 1/2578 (0.0%)   | 1.64        | 68/3467 (2.0%)    |
| 1   | F     | 0.71         | 1/2578 (0.0%)   | 1.64        | 69/3467 (2.0%)    |
| 1   | G     | 0.71         | 1/2578 (0.0%)   | 1.64        | 68/3467 (2.0%)    |
| 1   | H     | 0.71         | 1/2578 (0.0%)   | 1.64        | 70/3467 (2.0%)    |
| 1   | I     | 0.71         | 1/2578 (0.0%)   | 1.64        | 69/3467 (2.0%)    |
| 1   | J     | 0.71         | 1/2578 (0.0%)   | 1.64        | 69/3467 (2.0%)    |
| 1   | K     | 0.71         | 1/2578 (0.0%)   | 1.64        | 70/3467 (2.0%)    |
| 1   | L     | 0.71         | 1/2578 (0.0%)   | 1.64        | 69/3467 (2.0%)    |
| 1   | M     | 0.71         | 1/2578 (0.0%)   | 1.64        | 70/3467 (2.0%)    |
| 1   | N     | 0.71         | 1/2578 (0.0%)   | 1.64        | 70/3467 (2.0%)    |
| 1   | O     | 0.71         | 1/2578 (0.0%)   | 1.64        | 70/3467 (2.0%)    |
| 1   | P     | 0.71         | 1/2578 (0.0%)   | 1.64        | 70/3467 (2.0%)    |
| All | All   | 0.71         | 16/41248 (0.0%) | 1.64        | 1111/55472 (2.0%) |

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

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 1   | A     | 1                   | 17                  |
| 1   | B     | 1                   | 17                  |
| 1   | C     | 1                   | 17                  |
| 1   | D     | 1                   | 17                  |
| 1   | E     | 1                   | 17                  |
| 1   | F     | 1                   | 17                  |
| 1   | G     | 1                   | 17                  |
| 1   | H     | 1                   | 17                  |
| 1   | I     | 1                   | 17                  |

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| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 1   | J     | 1                   | 17                  |
| 1   | K     | 1                   | 17                  |
| 1   | L     | 1                   | 17                  |
| 1   | M     | 1                   | 17                  |
| 1   | N     | 1                   | 17                  |
| 1   | O     | 1                   | 17                  |
| 1   | P     | 1                   | 17                  |
| All | All   | 16                  | 272                 |

All (16) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms  | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1   | J     | 145 | TYR  | CE1-CZ | -6.69 | 1.29        | 1.38     |
| 1   | D     | 145 | TYR  | CE1-CZ | -6.68 | 1.29        | 1.38     |
| 1   | P     | 145 | TYR  | CE1-CZ | -6.66 | 1.29        | 1.38     |
| 1   | A     | 145 | TYR  | CE1-CZ | -6.65 | 1.29        | 1.38     |
| 1   | L     | 145 | TYR  | CE1-CZ | -6.64 | 1.29        | 1.38     |
| 1   | N     | 145 | TYR  | CE1-CZ | -6.64 | 1.29        | 1.38     |
| 1   | I     | 145 | TYR  | CE1-CZ | -6.63 | 1.29        | 1.38     |
| 1   | K     | 145 | TYR  | CE1-CZ | -6.63 | 1.29        | 1.38     |
| 1   | F     | 145 | TYR  | CE1-CZ | -6.63 | 1.29        | 1.38     |
| 1   | G     | 145 | TYR  | CE1-CZ | -6.62 | 1.29        | 1.38     |
| 1   | C     | 145 | TYR  | CE1-CZ | -6.62 | 1.29        | 1.38     |
| 1   | E     | 145 | TYR  | CE1-CZ | -6.61 | 1.29        | 1.38     |
| 1   | O     | 145 | TYR  | CE1-CZ | -6.61 | 1.29        | 1.38     |
| 1   | B     | 145 | TYR  | CE1-CZ | -6.60 | 1.29        | 1.38     |
| 1   | M     | 145 | TYR  | CE1-CZ | -6.60 | 1.29        | 1.38     |
| 1   | H     | 145 | TYR  | CE1-CZ | -6.57 | 1.30        | 1.38     |

All (1111) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms   | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 1   | F     | 222 | ASN  | N-CA-CB | -18.65 | 77.03       | 110.60   |
| 1   | K     | 222 | ASN  | N-CA-CB | -18.63 | 77.07       | 110.60   |
| 1   | I     | 222 | ASN  | N-CA-CB | -18.61 | 77.11       | 110.60   |
| 1   | E     | 222 | ASN  | N-CA-CB | -18.60 | 77.11       | 110.60   |
| 1   | H     | 222 | ASN  | N-CA-CB | -18.60 | 77.12       | 110.60   |
| 1   | N     | 222 | ASN  | N-CA-CB | -18.59 | 77.14       | 110.60   |
| 1   | C     | 222 | ASN  | N-CA-CB | -18.59 | 77.14       | 110.60   |
| 1   | L     | 222 | ASN  | N-CA-CB | -18.59 | 77.14       | 110.60   |
| 1   | A     | 222 | ASN  | N-CA-CB | -18.59 | 77.14       | 110.60   |
| 1   | B     | 222 | ASN  | N-CA-CB | -18.59 | 77.14       | 110.60   |

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| Mol | Chain | Res | Type | Atoms      | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1   | P     | 222 | ASN  | N-CA-CB    | -18.58 | 77.16       | 110.60   |
| 1   | M     | 222 | ASN  | N-CA-CB    | -18.58 | 77.16       | 110.60   |
| 1   | O     | 222 | ASN  | N-CA-CB    | -18.58 | 77.16       | 110.60   |
| 1   | G     | 222 | ASN  | N-CA-CB    | -18.57 | 77.17       | 110.60   |
| 1   | J     | 222 | ASN  | N-CA-CB    | -18.57 | 77.18       | 110.60   |
| 1   | D     | 222 | ASN  | N-CA-CB    | -18.55 | 77.20       | 110.60   |
| 1   | A     | 237 | ASN  | CA-CB-CG   | 15.87  | 148.31      | 113.40   |
| 1   | N     | 237 | ASN  | CA-CB-CG   | 15.86  | 148.29      | 113.40   |
| 1   | I     | 237 | ASN  | CA-CB-CG   | 15.85  | 148.27      | 113.40   |
| 1   | O     | 237 | ASN  | CA-CB-CG   | 15.85  | 148.27      | 113.40   |
| 1   | H     | 237 | ASN  | CA-CB-CG   | 15.84  | 148.25      | 113.40   |
| 1   | C     | 237 | ASN  | CA-CB-CG   | 15.84  | 148.25      | 113.40   |
| 1   | K     | 237 | ASN  | CA-CB-CG   | 15.84  | 148.25      | 113.40   |
| 1   | B     | 237 | ASN  | CA-CB-CG   | 15.84  | 148.24      | 113.40   |
| 1   | D     | 237 | ASN  | CA-CB-CG   | 15.84  | 148.24      | 113.40   |
| 1   | M     | 237 | ASN  | CA-CB-CG   | 15.83  | 148.23      | 113.40   |
| 1   | P     | 237 | ASN  | CA-CB-CG   | 15.83  | 148.23      | 113.40   |
| 1   | F     | 237 | ASN  | CA-CB-CG   | 15.83  | 148.22      | 113.40   |
| 1   | L     | 237 | ASN  | CA-CB-CG   | 15.82  | 148.20      | 113.40   |
| 1   | J     | 237 | ASN  | CA-CB-CG   | 15.82  | 148.20      | 113.40   |
| 1   | E     | 237 | ASN  | CA-CB-CG   | 15.81  | 148.18      | 113.40   |
| 1   | G     | 237 | ASN  | CA-CB-CG   | 15.80  | 148.17      | 113.40   |
| 1   | M     | 326 | TYR  | CD1-CE1-CZ | 15.76  | 133.98      | 119.80   |
| 1   | N     | 326 | TYR  | CD1-CE1-CZ | 15.74  | 133.96      | 119.80   |
| 1   | B     | 326 | TYR  | CD1-CE1-CZ | 15.71  | 133.94      | 119.80   |
| 1   | D     | 326 | TYR  | CD1-CE1-CZ | 15.70  | 133.93      | 119.80   |
| 1   | A     | 326 | TYR  | CD1-CE1-CZ | 15.69  | 133.92      | 119.80   |
| 1   | P     | 326 | TYR  | CD1-CE1-CZ | 15.67  | 133.91      | 119.80   |
| 1   | C     | 326 | TYR  | CD1-CE1-CZ | 15.66  | 133.90      | 119.80   |
| 1   | H     | 326 | TYR  | CD1-CE1-CZ | 15.66  | 133.89      | 119.80   |
| 1   | F     | 326 | TYR  | CD1-CE1-CZ | 15.66  | 133.89      | 119.80   |
| 1   | K     | 326 | TYR  | CD1-CE1-CZ | 15.65  | 133.88      | 119.80   |
| 1   | O     | 326 | TYR  | CD1-CE1-CZ | 15.65  | 133.88      | 119.80   |
| 1   | L     | 326 | TYR  | CD1-CE1-CZ | 15.64  | 133.88      | 119.80   |
| 1   | J     | 326 | TYR  | CD1-CE1-CZ | 15.64  | 133.87      | 119.80   |
| 1   | E     | 326 | TYR  | CD1-CE1-CZ | 15.63  | 133.87      | 119.80   |
| 1   | I     | 326 | TYR  | CD1-CE1-CZ | 15.61  | 133.85      | 119.80   |
| 1   | G     | 326 | TYR  | CD1-CE1-CZ | 15.61  | 133.84      | 119.80   |
| 1   | F     | 64  | LYS  | CA-CB-CG   | 15.23  | 146.90      | 113.40   |
| 1   | H     | 64  | LYS  | CA-CB-CG   | 15.22  | 146.89      | 113.40   |
| 1   | L     | 64  | LYS  | CA-CB-CG   | 15.22  | 146.88      | 113.40   |
| 1   | I     | 64  | LYS  | CA-CB-CG   | 15.21  | 146.87      | 113.40   |

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| Mol | Chain | Res | Type | Atoms     | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1   | J     | 64  | LYS  | CA-CB-CG  | 15.21  | 146.87      | 113.40   |
| 1   | K     | 64  | LYS  | CA-CB-CG  | 15.22  | 146.87      | 113.40   |
| 1   | E     | 64  | LYS  | CA-CB-CG  | 15.20  | 146.83      | 113.40   |
| 1   | G     | 64  | LYS  | CA-CB-CG  | 15.19  | 146.82      | 113.40   |
| 1   | O     | 64  | LYS  | CA-CB-CG  | 15.19  | 146.82      | 113.40   |
| 1   | P     | 64  | LYS  | CA-CB-CG  | 15.19  | 146.82      | 113.40   |
| 1   | C     | 64  | LYS  | CA-CB-CG  | 15.18  | 146.80      | 113.40   |
| 1   | A     | 64  | LYS  | CA-CB-CG  | 15.18  | 146.79      | 113.40   |
| 1   | B     | 64  | LYS  | CA-CB-CG  | 15.17  | 146.77      | 113.40   |
| 1   | D     | 64  | LYS  | CA-CB-CG  | 15.16  | 146.76      | 113.40   |
| 1   | N     | 64  | LYS  | CA-CB-CG  | 15.15  | 146.73      | 113.40   |
| 1   | M     | 64  | LYS  | CA-CB-CG  | 15.13  | 146.68      | 113.40   |
| 1   | E     | 145 | TYR  | CE1-CZ-OH | -13.67 | 83.19       | 120.10   |
| 1   | L     | 145 | TYR  | CE1-CZ-OH | -13.65 | 83.24       | 120.10   |
| 1   | F     | 145 | TYR  | CE1-CZ-OH | -13.65 | 83.25       | 120.10   |
| 1   | O     | 145 | TYR  | CE1-CZ-OH | -13.65 | 83.25       | 120.10   |
| 1   | G     | 145 | TYR  | CE1-CZ-OH | -13.64 | 83.26       | 120.10   |
| 1   | D     | 145 | TYR  | CE1-CZ-OH | -13.64 | 83.27       | 120.10   |
| 1   | M     | 145 | TYR  | CE1-CZ-OH | -13.64 | 83.28       | 120.10   |
| 1   | I     | 145 | TYR  | CE1-CZ-OH | -13.64 | 83.28       | 120.10   |
| 1   | H     | 145 | TYR  | CE1-CZ-OH | -13.63 | 83.28       | 120.10   |
| 1   | J     | 145 | TYR  | CE1-CZ-OH | -13.63 | 83.29       | 120.10   |
| 1   | A     | 145 | TYR  | CE1-CZ-OH | -13.63 | 83.29       | 120.10   |
| 1   | N     | 145 | TYR  | CE1-CZ-OH | -13.63 | 83.30       | 120.10   |
| 1   | B     | 145 | TYR  | CE1-CZ-OH | -13.63 | 83.30       | 120.10   |
| 1   | P     | 145 | TYR  | CE1-CZ-OH | -13.62 | 83.32       | 120.10   |
| 1   | C     | 145 | TYR  | CE1-CZ-OH | -13.62 | 83.33       | 120.10   |
| 1   | K     | 145 | TYR  | CE1-CZ-OH | -13.62 | 83.33       | 120.10   |
| 1   | H     | 145 | TYR  | OH-CZ-CE2 | 10.87  | 149.46      | 120.10   |
| 1   | E     | 145 | TYR  | OH-CZ-CE2 | 10.86  | 149.43      | 120.10   |
| 1   | L     | 145 | TYR  | OH-CZ-CE2 | 10.86  | 149.41      | 120.10   |
| 1   | F     | 145 | TYR  | OH-CZ-CE2 | 10.85  | 149.40      | 120.10   |
| 1   | O     | 145 | TYR  | OH-CZ-CE2 | 10.85  | 149.39      | 120.10   |
| 1   | G     | 145 | TYR  | OH-CZ-CE2 | 10.84  | 149.38      | 120.10   |
| 1   | A     | 145 | TYR  | OH-CZ-CE2 | 10.84  | 149.36      | 120.10   |
| 1   | B     | 145 | TYR  | OH-CZ-CE2 | 10.84  | 149.36      | 120.10   |
| 1   | I     | 145 | TYR  | OH-CZ-CE2 | 10.84  | 149.36      | 120.10   |
| 1   | K     | 145 | TYR  | OH-CZ-CE2 | 10.84  | 149.36      | 120.10   |
| 1   | C     | 145 | TYR  | OH-CZ-CE2 | 10.83  | 149.35      | 120.10   |
| 1   | M     | 145 | TYR  | OH-CZ-CE2 | 10.83  | 149.34      | 120.10   |
| 1   | N     | 145 | TYR  | OH-CZ-CE2 | 10.83  | 149.34      | 120.10   |
| 1   | J     | 145 | TYR  | OH-CZ-CE2 | 10.83  | 149.34      | 120.10   |

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| Mol | Chain | Res | Type | Atoms      | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1   | P     | 145 | TYR  | OH-CZ-CE2  | 10.83  | 149.33      | 120.10   |
| 1   | D     | 145 | TYR  | OH-CZ-CE2  | 10.82  | 149.31      | 120.10   |
| 1   | L     | 67  | LEU  | N-CA-CB    | -10.51 | 89.39       | 110.40   |
| 1   | B     | 67  | LEU  | N-CA-CB    | -10.50 | 89.40       | 110.40   |
| 1   | G     | 67  | LEU  | N-CA-CB    | -10.50 | 89.40       | 110.40   |
| 1   | N     | 67  | LEU  | N-CA-CB    | -10.50 | 89.41       | 110.40   |
| 1   | M     | 67  | LEU  | N-CA-CB    | -10.49 | 89.42       | 110.40   |
| 1   | C     | 67  | LEU  | N-CA-CB    | -10.49 | 89.43       | 110.40   |
| 1   | D     | 67  | LEU  | N-CA-CB    | -10.48 | 89.43       | 110.40   |
| 1   | F     | 67  | LEU  | N-CA-CB    | -10.48 | 89.43       | 110.40   |
| 1   | K     | 67  | LEU  | N-CA-CB    | -10.48 | 89.43       | 110.40   |
| 1   | P     | 67  | LEU  | N-CA-CB    | -10.48 | 89.43       | 110.40   |
| 1   | A     | 67  | LEU  | N-CA-CB    | -10.48 | 89.44       | 110.40   |
| 1   | E     | 67  | LEU  | N-CA-CB    | -10.48 | 89.44       | 110.40   |
| 1   | I     | 67  | LEU  | N-CA-CB    | -10.47 | 89.45       | 110.40   |
| 1   | O     | 67  | LEU  | N-CA-CB    | -10.47 | 89.45       | 110.40   |
| 1   | J     | 67  | LEU  | N-CA-CB    | -10.47 | 89.46       | 110.40   |
| 1   | H     | 67  | LEU  | N-CA-CB    | -10.45 | 89.50       | 110.40   |
| 1   | D     | 224 | ASN  | N-CA-CB    | -10.35 | 91.97       | 110.60   |
| 1   | A     | 224 | ASN  | N-CA-CB    | -10.33 | 92.00       | 110.60   |
| 1   | K     | 224 | ASN  | N-CA-CB    | -10.33 | 92.00       | 110.60   |
| 1   | B     | 224 | ASN  | N-CA-CB    | -10.33 | 92.00       | 110.60   |
| 1   | L     | 224 | ASN  | N-CA-CB    | -10.33 | 92.01       | 110.60   |
| 1   | F     | 224 | ASN  | N-CA-CB    | -10.32 | 92.02       | 110.60   |
| 1   | N     | 224 | ASN  | N-CA-CB    | -10.32 | 92.03       | 110.60   |
| 1   | C     | 224 | ASN  | N-CA-CB    | -10.32 | 92.03       | 110.60   |
| 1   | G     | 224 | ASN  | N-CA-CB    | -10.32 | 92.03       | 110.60   |
| 1   | M     | 224 | ASN  | N-CA-CB    | -10.32 | 92.03       | 110.60   |
| 1   | O     | 224 | ASN  | N-CA-CB    | -10.31 | 92.04       | 110.60   |
| 1   | H     | 224 | ASN  | N-CA-CB    | -10.31 | 92.04       | 110.60   |
| 1   | I     | 224 | ASN  | N-CA-CB    | -10.31 | 92.05       | 110.60   |
| 1   | P     | 224 | ASN  | N-CA-CB    | -10.31 | 92.04       | 110.60   |
| 1   | E     | 224 | ASN  | N-CA-CB    | -10.31 | 92.05       | 110.60   |
| 1   | J     | 224 | ASN  | N-CA-CB    | -10.29 | 92.08       | 110.60   |
| 1   | N     | 326 | TYR  | CG-CD1-CE1 | -10.20 | 113.14      | 121.30   |
| 1   | C     | 326 | TYR  | CG-CD1-CE1 | -10.20 | 113.14      | 121.30   |
| 1   | K     | 326 | TYR  | CG-CD1-CE1 | -10.19 | 113.15      | 121.30   |
| 1   | F     | 326 | TYR  | CG-CD1-CE1 | -10.19 | 113.15      | 121.30   |
| 1   | B     | 326 | TYR  | CG-CD1-CE1 | -10.18 | 113.15      | 121.30   |
| 1   | M     | 326 | TYR  | CG-CD1-CE1 | -10.18 | 113.15      | 121.30   |
| 1   | A     | 149 | ILE  | CB-CG1-CD1 | -10.17 | 85.43       | 113.90   |
| 1   | E     | 149 | ILE  | CB-CG1-CD1 | -10.16 | 85.44       | 113.90   |

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| Mol | Chain | Res | Type | Atoms      | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1   | J     | 326 | TYR  | CG-CD1-CE1 | -10.16 | 113.17      | 121.30   |
| 1   | K     | 149 | ILE  | CB-CG1-CD1 | -10.16 | 85.44       | 113.90   |
| 1   | N     | 149 | ILE  | CB-CG1-CD1 | -10.16 | 85.45       | 113.90   |
| 1   | I     | 149 | ILE  | CB-CG1-CD1 | -10.16 | 85.46       | 113.90   |
| 1   | M     | 149 | ILE  | CB-CG1-CD1 | -10.16 | 85.46       | 113.90   |
| 1   | O     | 326 | TYR  | CG-CD1-CE1 | -10.16 | 113.17      | 121.30   |
| 1   | B     | 149 | ILE  | CB-CG1-CD1 | -10.15 | 85.47       | 113.90   |
| 1   | C     | 149 | ILE  | CB-CG1-CD1 | -10.15 | 85.47       | 113.90   |
| 1   | D     | 149 | ILE  | CB-CG1-CD1 | -10.15 | 85.47       | 113.90   |
| 1   | L     | 149 | ILE  | CB-CG1-CD1 | -10.15 | 85.47       | 113.90   |
| 1   | F     | 149 | ILE  | CB-CG1-CD1 | -10.15 | 85.48       | 113.90   |
| 1   | G     | 149 | ILE  | CB-CG1-CD1 | -10.15 | 85.48       | 113.90   |
| 1   | H     | 149 | ILE  | CB-CG1-CD1 | -10.15 | 85.48       | 113.90   |
| 1   | P     | 149 | ILE  | CB-CG1-CD1 | -10.15 | 85.48       | 113.90   |
| 1   | J     | 149 | ILE  | CB-CG1-CD1 | -10.15 | 85.49       | 113.90   |
| 1   | O     | 149 | ILE  | CB-CG1-CD1 | -10.14 | 85.51       | 113.90   |
| 1   | I     | 326 | TYR  | CG-CD1-CE1 | -10.13 | 113.19      | 121.30   |
| 1   | A     | 326 | TYR  | CG-CD1-CE1 | -10.12 | 113.20      | 121.30   |
| 1   | D     | 326 | TYR  | CG-CD1-CE1 | -10.12 | 113.20      | 121.30   |
| 1   | L     | 326 | TYR  | CG-CD1-CE1 | -10.12 | 113.20      | 121.30   |
| 1   | E     | 326 | TYR  | CG-CD1-CE1 | -10.12 | 113.21      | 121.30   |
| 1   | P     | 326 | TYR  | CG-CD1-CE1 | -10.11 | 113.21      | 121.30   |
| 1   | H     | 326 | TYR  | CG-CD1-CE1 | -10.11 | 113.22      | 121.30   |
| 1   | G     | 326 | TYR  | CG-CD1-CE1 | -10.09 | 113.23      | 121.30   |
| 1   | F     | 224 | ASN  | CB-CG-OD1  | -9.96  | 101.69      | 121.60   |
| 1   | M     | 224 | ASN  | CB-CG-OD1  | -9.96  | 101.68      | 121.60   |
| 1   | L     | 224 | ASN  | CB-CG-OD1  | -9.96  | 101.69      | 121.60   |
| 1   | K     | 224 | ASN  | CB-CG-OD1  | -9.95  | 101.70      | 121.60   |
| 1   | D     | 224 | ASN  | CB-CG-OD1  | -9.94  | 101.72      | 121.60   |
| 1   | P     | 224 | ASN  | CB-CG-OD1  | -9.94  | 101.72      | 121.60   |
| 1   | J     | 224 | ASN  | CB-CG-OD1  | -9.94  | 101.72      | 121.60   |
| 1   | O     | 224 | ASN  | CB-CG-OD1  | -9.94  | 101.73      | 121.60   |
| 1   | H     | 224 | ASN  | CB-CG-OD1  | -9.93  | 101.75      | 121.60   |
| 1   | A     | 224 | ASN  | CB-CG-OD1  | -9.92  | 101.75      | 121.60   |
| 1   | B     | 224 | ASN  | CB-CG-OD1  | -9.92  | 101.75      | 121.60   |
| 1   | C     | 224 | ASN  | CB-CG-OD1  | -9.92  | 101.75      | 121.60   |
| 1   | E     | 224 | ASN  | CB-CG-OD1  | -9.92  | 101.76      | 121.60   |
| 1   | I     | 224 | ASN  | CB-CG-OD1  | -9.92  | 101.77      | 121.60   |
| 1   | G     | 224 | ASN  | CB-CG-OD1  | -9.91  | 101.78      | 121.60   |
| 1   | N     | 224 | ASN  | CB-CG-OD1  | -9.90  | 101.80      | 121.60   |
| 1   | O     | 274 | PHE  | CB-CG-CD1  | -9.84  | 113.91      | 120.80   |
| 1   | D     | 274 | PHE  | CB-CG-CD1  | -9.80  | 113.94      | 120.80   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | K     | 274 | PHE  | CB-CG-CD1 | -9.81 | 113.94      | 120.80   |
| 1   | H     | 274 | PHE  | CB-CG-CD1 | -9.79 | 113.95      | 120.80   |
| 1   | B     | 274 | PHE  | CB-CG-CD1 | -9.78 | 113.95      | 120.80   |
| 1   | C     | 274 | PHE  | CB-CG-CD1 | -9.78 | 113.95      | 120.80   |
| 1   | I     | 274 | PHE  | CB-CG-CD1 | -9.77 | 113.96      | 120.80   |
| 1   | A     | 274 | PHE  | CB-CG-CD1 | -9.77 | 113.96      | 120.80   |
| 1   | M     | 274 | PHE  | CB-CG-CD1 | -9.75 | 113.97      | 120.80   |
| 1   | P     | 274 | PHE  | CB-CG-CD1 | -9.75 | 113.97      | 120.80   |
| 1   | N     | 274 | PHE  | CB-CG-CD1 | -9.74 | 113.98      | 120.80   |
| 1   | G     | 274 | PHE  | CB-CG-CD1 | -9.73 | 113.99      | 120.80   |
| 1   | J     | 274 | PHE  | CB-CG-CD1 | -9.73 | 113.99      | 120.80   |
| 1   | L     | 274 | PHE  | CB-CG-CD1 | -9.72 | 113.99      | 120.80   |
| 1   | F     | 274 | PHE  | CB-CG-CD1 | -9.72 | 114.00      | 120.80   |
| 1   | E     | 274 | PHE  | CB-CG-CD1 | -9.71 | 114.00      | 120.80   |
| 1   | C     | 32  | ASP  | N-CA-CB   | -9.53 | 93.44       | 110.60   |
| 1   | G     | 32  | ASP  | N-CA-CB   | -9.53 | 93.45       | 110.60   |
| 1   | I     | 32  | ASP  | N-CA-CB   | -9.52 | 93.46       | 110.60   |
| 1   | L     | 32  | ASP  | N-CA-CB   | -9.52 | 93.46       | 110.60   |
| 1   | M     | 32  | ASP  | N-CA-CB   | -9.52 | 93.46       | 110.60   |
| 1   | N     | 32  | ASP  | N-CA-CB   | -9.52 | 93.46       | 110.60   |
| 1   | D     | 32  | ASP  | N-CA-CB   | -9.52 | 93.47       | 110.60   |
| 1   | A     | 32  | ASP  | N-CA-CB   | -9.52 | 93.47       | 110.60   |
| 1   | H     | 32  | ASP  | N-CA-CB   | -9.51 | 93.48       | 110.60   |
| 1   | J     | 32  | ASP  | N-CA-CB   | -9.51 | 93.48       | 110.60   |
| 1   | P     | 32  | ASP  | N-CA-CB   | -9.51 | 93.48       | 110.60   |
| 1   | F     | 32  | ASP  | N-CA-CB   | -9.51 | 93.49       | 110.60   |
| 1   | B     | 32  | ASP  | N-CA-CB   | -9.50 | 93.49       | 110.60   |
| 1   | O     | 32  | ASP  | N-CA-CB   | -9.50 | 93.50       | 110.60   |
| 1   | E     | 32  | ASP  | N-CA-CB   | -9.50 | 93.50       | 110.60   |
| 1   | K     | 32  | ASP  | N-CA-CB   | -9.49 | 93.51       | 110.60   |
| 1   | C     | 274 | PHE  | CB-CG-CD2 | 9.09  | 127.16      | 120.80   |
| 1   | N     | 274 | PHE  | CB-CG-CD2 | 9.04  | 127.12      | 120.80   |
| 1   | P     | 274 | PHE  | CB-CG-CD2 | 9.01  | 127.11      | 120.80   |
| 1   | D     | 274 | PHE  | CB-CG-CD2 | 9.00  | 127.10      | 120.80   |
| 1   | I     | 274 | PHE  | CB-CG-CD2 | 8.97  | 127.08      | 120.80   |
| 1   | K     | 274 | PHE  | CB-CG-CD2 | 8.96  | 127.08      | 120.80   |
| 1   | M     | 274 | PHE  | CB-CG-CD2 | 8.97  | 127.08      | 120.80   |
| 1   | A     | 274 | PHE  | CB-CG-CD2 | 8.96  | 127.07      | 120.80   |
| 1   | H     | 274 | PHE  | CB-CG-CD2 | 8.95  | 127.06      | 120.80   |
| 1   | B     | 274 | PHE  | CB-CG-CD2 | 8.94  | 127.06      | 120.80   |
| 1   | J     | 274 | PHE  | CB-CG-CD2 | 8.94  | 127.06      | 120.80   |
| 1   | O     | 274 | PHE  | CB-CG-CD2 | 8.94  | 127.05      | 120.80   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | L     | 274 | PHE  | CB-CG-CD2 | 8.92  | 127.05      | 120.80   |
| 1   | G     | 274 | PHE  | CB-CG-CD2 | 8.91  | 127.04      | 120.80   |
| 1   | E     | 274 | PHE  | CB-CG-CD2 | 8.89  | 127.02      | 120.80   |
| 1   | F     | 274 | PHE  | CB-CG-CD2 | 8.87  | 127.01      | 120.80   |
| 1   | K     | 153 | THR  | CA-CB-CG2 | -8.61 | 100.34      | 112.40   |
| 1   | G     | 153 | THR  | CA-CB-CG2 | -8.60 | 100.36      | 112.40   |
| 1   | I     | 153 | THR  | CA-CB-CG2 | -8.60 | 100.37      | 112.40   |
| 1   | F     | 153 | THR  | CA-CB-CG2 | -8.59 | 100.37      | 112.40   |
| 1   | O     | 153 | THR  | CA-CB-CG2 | -8.59 | 100.37      | 112.40   |
| 1   | A     | 153 | THR  | CA-CB-CG2 | -8.58 | 100.39      | 112.40   |
| 1   | J     | 153 | THR  | CA-CB-CG2 | -8.58 | 100.39      | 112.40   |
| 1   | H     | 153 | THR  | CA-CB-CG2 | -8.57 | 100.40      | 112.40   |
| 1   | N     | 153 | THR  | CA-CB-CG2 | -8.57 | 100.40      | 112.40   |
| 1   | L     | 153 | THR  | CA-CB-CG2 | -8.57 | 100.41      | 112.40   |
| 1   | C     | 153 | THR  | CA-CB-CG2 | -8.56 | 100.42      | 112.40   |
| 1   | M     | 153 | THR  | CA-CB-CG2 | -8.56 | 100.42      | 112.40   |
| 1   | E     | 153 | THR  | CA-CB-CG2 | -8.56 | 100.42      | 112.40   |
| 1   | P     | 153 | THR  | CA-CB-CG2 | -8.55 | 100.43      | 112.40   |
| 1   | B     | 153 | THR  | CA-CB-CG2 | -8.54 | 100.44      | 112.40   |
| 1   | D     | 153 | THR  | CA-CB-CG2 | -8.53 | 100.46      | 112.40   |
| 1   | I     | 7   | GLU  | CB-CA-C   | 8.49  | 127.38      | 110.40   |
| 1   | O     | 7   | GLU  | CB-CA-C   | 8.49  | 127.38      | 110.40   |
| 1   | A     | 7   | GLU  | CB-CA-C   | 8.49  | 127.37      | 110.40   |
| 1   | D     | 7   | GLU  | CB-CA-C   | 8.49  | 127.37      | 110.40   |
| 1   | N     | 7   | GLU  | CB-CA-C   | 8.48  | 127.36      | 110.40   |
| 1   | G     | 7   | GLU  | CB-CA-C   | 8.48  | 127.36      | 110.40   |
| 1   | K     | 66  | TYR  | CB-CG-CD2 | -8.48 | 115.91      | 121.00   |
| 1   | L     | 7   | GLU  | CB-CA-C   | 8.48  | 127.36      | 110.40   |
| 1   | J     | 7   | GLU  | CB-CA-C   | 8.47  | 127.34      | 110.40   |
| 1   | K     | 7   | GLU  | CB-CA-C   | 8.47  | 127.34      | 110.40   |
| 1   | P     | 7   | GLU  | CB-CA-C   | 8.47  | 127.34      | 110.40   |
| 1   | H     | 7   | GLU  | CB-CA-C   | 8.47  | 127.34      | 110.40   |
| 1   | M     | 7   | GLU  | CB-CA-C   | 8.47  | 127.34      | 110.40   |
| 1   | B     | 7   | GLU  | CB-CA-C   | 8.47  | 127.33      | 110.40   |
| 1   | C     | 7   | GLU  | CB-CA-C   | 8.46  | 127.31      | 110.40   |
| 1   | E     | 7   | GLU  | CB-CA-C   | 8.45  | 127.31      | 110.40   |
| 1   | F     | 7   | GLU  | CB-CA-C   | 8.44  | 127.28      | 110.40   |
| 1   | H     | 66  | TYR  | CB-CG-CD2 | -8.43 | 115.94      | 121.00   |
| 1   | I     | 66  | TYR  | CB-CG-CD2 | -8.43 | 115.94      | 121.00   |
| 1   | P     | 66  | TYR  | CB-CG-CD2 | -8.42 | 115.95      | 121.00   |
| 1   | L     | 66  | TYR  | CB-CG-CD2 | -8.40 | 115.96      | 121.00   |
| 1   | G     | 66  | TYR  | CB-CG-CD2 | -8.37 | 115.98      | 121.00   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | J     | 66  | TYR  | CB-CG-CD2 | -8.37 | 115.98      | 121.00   |
| 1   | M     | 66  | TYR  | CB-CG-CD2 | -8.35 | 115.99      | 121.00   |
| 1   | N     | 66  | TYR  | CB-CG-CD2 | -8.34 | 116.00      | 121.00   |
| 1   | E     | 66  | TYR  | CB-CG-CD2 | -8.33 | 116.00      | 121.00   |
| 1   | F     | 66  | TYR  | CB-CG-CD2 | -8.33 | 116.00      | 121.00   |
| 1   | C     | 66  | TYR  | CB-CG-CD2 | -8.31 | 116.02      | 121.00   |
| 1   | A     | 66  | TYR  | CB-CG-CD2 | -8.29 | 116.02      | 121.00   |
| 1   | A     | 233 | SER  | N-CA-CB   | -8.29 | 98.07       | 110.50   |
| 1   | D     | 66  | TYR  | CB-CG-CD2 | -8.28 | 116.03      | 121.00   |
| 1   | E     | 233 | SER  | N-CA-CB   | -8.28 | 98.08       | 110.50   |
| 1   | F     | 233 | SER  | N-CA-CB   | -8.27 | 98.09       | 110.50   |
| 1   | G     | 233 | SER  | N-CA-CB   | -8.27 | 98.09       | 110.50   |
| 1   | H     | 233 | SER  | N-CA-CB   | -8.27 | 98.09       | 110.50   |
| 1   | B     | 233 | SER  | N-CA-CB   | -8.27 | 98.10       | 110.50   |
| 1   | O     | 66  | TYR  | CB-CG-CD2 | -8.26 | 116.04      | 121.00   |
| 1   | P     | 233 | SER  | N-CA-CB   | -8.26 | 98.11       | 110.50   |
| 1   | O     | 233 | SER  | N-CA-CB   | -8.26 | 98.11       | 110.50   |
| 1   | L     | 233 | SER  | N-CA-CB   | -8.25 | 98.12       | 110.50   |
| 1   | N     | 233 | SER  | N-CA-CB   | -8.25 | 98.12       | 110.50   |
| 1   | I     | 233 | SER  | N-CA-CB   | -8.25 | 98.12       | 110.50   |
| 1   | J     | 233 | SER  | N-CA-CB   | -8.25 | 98.13       | 110.50   |
| 1   | K     | 233 | SER  | N-CA-CB   | -8.25 | 98.13       | 110.50   |
| 1   | C     | 233 | SER  | N-CA-CB   | -8.23 | 98.15       | 110.50   |
| 1   | D     | 233 | SER  | N-CA-CB   | -8.23 | 98.16       | 110.50   |
| 1   | M     | 233 | SER  | N-CA-CB   | -8.22 | 98.18       | 110.50   |
| 1   | B     | 66  | TYR  | CB-CG-CD2 | -8.21 | 116.08      | 121.00   |
| 1   | N     | 75  | ASP  | CB-CG-OD2 | -7.91 | 111.18      | 118.30   |
| 1   | N     | 138 | VAL  | CA-CB-CG2 | -7.88 | 99.08       | 110.90   |
| 1   | H     | 75  | ASP  | CB-CG-OD2 | -7.87 | 111.21      | 118.30   |
| 1   | K     | 138 | VAL  | CA-CB-CG2 | -7.87 | 99.10       | 110.90   |
| 1   | A     | 75  | ASP  | CB-CG-OD2 | -7.86 | 111.23      | 118.30   |
| 1   | K     | 75  | ASP  | CB-CG-OD2 | -7.86 | 111.22      | 118.30   |
| 1   | P     | 138 | VAL  | CA-CB-CG2 | -7.86 | 99.11       | 110.90   |
| 1   | D     | 138 | VAL  | CA-CB-CG2 | -7.86 | 99.11       | 110.90   |
| 1   | C     | 138 | VAL  | CA-CB-CG2 | -7.85 | 99.12       | 110.90   |
| 1   | B     | 138 | VAL  | CA-CB-CG2 | -7.84 | 99.14       | 110.90   |
| 1   | A     | 138 | VAL  | CA-CB-CG2 | -7.84 | 99.14       | 110.90   |
| 1   | O     | 138 | VAL  | CA-CB-CG2 | -7.84 | 99.14       | 110.90   |
| 1   | E     | 75  | ASP  | CB-CG-OD2 | -7.84 | 111.25      | 118.30   |
| 1   | G     | 75  | ASP  | CB-CG-OD2 | -7.84 | 111.25      | 118.30   |
| 1   | O     | 75  | ASP  | CB-CG-OD2 | -7.84 | 111.25      | 118.30   |
| 1   | B     | 75  | ASP  | CB-CG-OD2 | -7.84 | 111.25      | 118.30   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | F     | 138 | VAL  | CA-CB-CG2 | -7.84 | 99.15       | 110.90   |
| 1   | P     | 75  | ASP  | CB-CG-OD2 | -7.83 | 111.25      | 118.30   |
| 1   | J     | 138 | VAL  | CA-CB-CG2 | -7.83 | 99.15       | 110.90   |
| 1   | G     | 138 | VAL  | CA-CB-CG2 | -7.83 | 99.16       | 110.90   |
| 1   | M     | 138 | VAL  | CA-CB-CG2 | -7.83 | 99.16       | 110.90   |
| 1   | C     | 75  | ASP  | CB-CG-OD2 | -7.82 | 111.26      | 118.30   |
| 1   | J     | 75  | ASP  | CB-CG-OD2 | -7.82 | 111.27      | 118.30   |
| 1   | F     | 75  | ASP  | CB-CG-OD2 | -7.82 | 111.27      | 118.30   |
| 1   | H     | 138 | VAL  | CA-CB-CG2 | -7.81 | 99.18       | 110.90   |
| 1   | L     | 138 | VAL  | CA-CB-CG2 | -7.81 | 99.18       | 110.90   |
| 1   | E     | 138 | VAL  | CA-CB-CG2 | -7.81 | 99.18       | 110.90   |
| 1   | M     | 75  | ASP  | CB-CG-OD2 | -7.81 | 111.27      | 118.30   |
| 1   | I     | 138 | VAL  | CA-CB-CG2 | -7.80 | 99.20       | 110.90   |
| 1   | D     | 75  | ASP  | CB-CG-OD2 | -7.78 | 111.30      | 118.30   |
| 1   | L     | 75  | ASP  | CB-CG-OD2 | -7.77 | 111.31      | 118.30   |
| 1   | I     | 75  | ASP  | CB-CG-OD2 | -7.77 | 111.31      | 118.30   |
| 1   | K     | 326 | TYR  | CB-CG-CD1 | -7.75 | 116.35      | 121.00   |
| 1   | J     | 326 | TYR  | CB-CG-CD1 | -7.75 | 116.35      | 121.00   |
| 1   | F     | 326 | TYR  | CB-CG-CD1 | -7.74 | 116.36      | 121.00   |
| 1   | M     | 224 | ASN  | CB-CG-ND2 | 7.71  | 135.21      | 116.70   |
| 1   | B     | 224 | ASN  | CB-CG-ND2 | 7.71  | 135.20      | 116.70   |
| 1   | F     | 224 | ASN  | CB-CG-ND2 | 7.71  | 135.20      | 116.70   |
| 1   | N     | 224 | ASN  | CB-CG-ND2 | 7.70  | 135.18      | 116.70   |
| 1   | D     | 224 | ASN  | CB-CG-ND2 | 7.70  | 135.17      | 116.70   |
| 1   | O     | 224 | ASN  | CB-CG-ND2 | 7.70  | 135.17      | 116.70   |
| 1   | C     | 224 | ASN  | CB-CG-ND2 | 7.69  | 135.16      | 116.70   |
| 1   | J     | 224 | ASN  | CB-CG-ND2 | 7.69  | 135.15      | 116.70   |
| 1   | K     | 224 | ASN  | CB-CG-ND2 | 7.69  | 135.15      | 116.70   |
| 1   | L     | 224 | ASN  | CB-CG-ND2 | 7.68  | 135.14      | 116.70   |
| 1   | P     | 224 | ASN  | CB-CG-ND2 | 7.68  | 135.14      | 116.70   |
| 1   | E     | 326 | TYR  | CB-CG-CD1 | -7.68 | 116.39      | 121.00   |
| 1   | H     | 224 | ASN  | CB-CG-ND2 | 7.68  | 135.12      | 116.70   |
| 1   | E     | 224 | ASN  | CB-CG-ND2 | 7.67  | 135.10      | 116.70   |
| 1   | A     | 224 | ASN  | CB-CG-ND2 | 7.67  | 135.10      | 116.70   |
| 1   | G     | 326 | TYR  | CB-CG-CD1 | -7.67 | 116.40      | 121.00   |
| 1   | I     | 224 | ASN  | CB-CG-ND2 | 7.67  | 135.10      | 116.70   |
| 1   | G     | 224 | ASN  | CB-CG-ND2 | 7.66  | 135.08      | 116.70   |
| 1   | I     | 326 | TYR  | CB-CG-CD1 | -7.65 | 116.41      | 121.00   |
| 1   | N     | 326 | TYR  | CB-CG-CD1 | -7.65 | 116.41      | 121.00   |
| 1   | B     | 326 | TYR  | CB-CG-CD1 | -7.63 | 116.42      | 121.00   |
| 1   | M     | 326 | TYR  | CB-CG-CD1 | -7.62 | 116.43      | 121.00   |
| 1   | C     | 326 | TYR  | CB-CG-CD1 | -7.62 | 116.43      | 121.00   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | L     | 326 | TYR  | CB-CG-CD1 | -7.61 | 116.43      | 121.00   |
| 1   | O     | 326 | TYR  | CB-CG-CD1 | -7.61 | 116.43      | 121.00   |
| 1   | L     | 43  | TYR  | CB-CG-CD2 | -7.61 | 116.44      | 121.00   |
| 1   | A     | 326 | TYR  | CB-CG-CD1 | -7.59 | 116.44      | 121.00   |
| 1   | H     | 326 | TYR  | CB-CG-CD1 | -7.59 | 116.45      | 121.00   |
| 1   | P     | 326 | TYR  | CB-CG-CD1 | -7.58 | 116.45      | 121.00   |
| 1   | M     | 43  | TYR  | CB-CG-CD2 | -7.58 | 116.45      | 121.00   |
| 1   | D     | 43  | TYR  | CB-CG-CD2 | -7.55 | 116.47      | 121.00   |
| 1   | D     | 326 | TYR  | CB-CG-CD1 | -7.54 | 116.47      | 121.00   |
| 1   | E     | 43  | TYR  | CB-CG-CD2 | -7.54 | 116.47      | 121.00   |
| 1   | P     | 43  | TYR  | CB-CG-CD2 | -7.54 | 116.48      | 121.00   |
| 1   | E     | 326 | TYR  | CB-CG-CD2 | 7.54  | 125.52      | 121.00   |
| 1   | F     | 43  | TYR  | CB-CG-CD2 | -7.53 | 116.48      | 121.00   |
| 1   | A     | 43  | TYR  | CB-CG-CD2 | -7.53 | 116.48      | 121.00   |
| 1   | O     | 43  | TYR  | CB-CG-CD2 | -7.52 | 116.49      | 121.00   |
| 1   | K     | 326 | TYR  | CB-CG-CD2 | 7.52  | 125.51      | 121.00   |
| 1   | B     | 43  | TYR  | CB-CG-CD2 | -7.52 | 116.49      | 121.00   |
| 1   | H     | 43  | TYR  | CB-CG-CD2 | -7.51 | 116.49      | 121.00   |
| 1   | I     | 34  | LYS  | CB-CA-C   | 7.51  | 125.42      | 110.40   |
| 1   | N     | 43  | TYR  | CB-CG-CD2 | -7.51 | 116.49      | 121.00   |
| 1   | G     | 34  | LYS  | CB-CA-C   | 7.50  | 125.40      | 110.40   |
| 1   | E     | 34  | LYS  | CB-CA-C   | 7.50  | 125.39      | 110.40   |
| 1   | H     | 34  | LYS  | CB-CA-C   | 7.50  | 125.39      | 110.40   |
| 1   | K     | 43  | TYR  | CB-CG-CD2 | -7.50 | 116.50      | 121.00   |
| 1   | J     | 326 | TYR  | CB-CG-CD2 | 7.49  | 125.50      | 121.00   |
| 1   | F     | 34  | LYS  | CB-CA-C   | 7.49  | 125.38      | 110.40   |
| 1   | G     | 326 | TYR  | CB-CG-CD2 | 7.49  | 125.49      | 121.00   |
| 1   | K     | 34  | LYS  | CB-CA-C   | 7.48  | 125.37      | 110.40   |
| 1   | P     | 34  | LYS  | CB-CA-C   | 7.48  | 125.36      | 110.40   |
| 1   | A     | 34  | LYS  | CB-CA-C   | 7.48  | 125.36      | 110.40   |
| 1   | L     | 34  | LYS  | CB-CA-C   | 7.48  | 125.36      | 110.40   |
| 1   | J     | 34  | LYS  | CB-CA-C   | 7.48  | 125.35      | 110.40   |
| 1   | J     | 43  | TYR  | CB-CG-CD2 | -7.48 | 116.51      | 121.00   |
| 1   | L     | 326 | TYR  | CB-CG-CD2 | 7.47  | 125.48      | 121.00   |
| 1   | D     | 34  | LYS  | CB-CA-C   | 7.47  | 125.34      | 110.40   |
| 1   | N     | 326 | TYR  | CB-CG-CD2 | 7.47  | 125.48      | 121.00   |
| 1   | M     | 34  | LYS  | CB-CA-C   | 7.47  | 125.34      | 110.40   |
| 1   | N     | 34  | LYS  | CB-CA-C   | 7.47  | 125.34      | 110.40   |
| 1   | I     | 43  | TYR  | CB-CG-CD2 | -7.46 | 116.52      | 121.00   |
| 1   | B     | 34  | LYS  | CB-CA-C   | 7.45  | 125.31      | 110.40   |
| 1   | C     | 43  | TYR  | CB-CG-CD2 | -7.45 | 116.53      | 121.00   |
| 1   | G     | 43  | TYR  | CB-CG-CD2 | -7.45 | 116.53      | 121.00   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | C     | 34  | LYS  | CB-CA-C   | 7.45  | 125.30      | 110.40   |
| 1   | F     | 326 | TYR  | CB-CG-CD2 | 7.44  | 125.47      | 121.00   |
| 1   | O     | 34  | LYS  | CB-CA-C   | 7.44  | 125.28      | 110.40   |
| 1   | I     | 326 | TYR  | CB-CG-CD2 | 7.42  | 125.45      | 121.00   |
| 1   | H     | 326 | TYR  | CB-CG-CD2 | 7.41  | 125.45      | 121.00   |
| 1   | P     | 326 | TYR  | CB-CG-CD2 | 7.40  | 125.44      | 121.00   |
| 1   | M     | 326 | TYR  | CB-CG-CD2 | 7.39  | 125.43      | 121.00   |
| 1   | C     | 326 | TYR  | CB-CG-CD2 | 7.39  | 125.43      | 121.00   |
| 1   | O     | 326 | TYR  | CB-CG-CD2 | 7.38  | 125.43      | 121.00   |
| 1   | B     | 326 | TYR  | CB-CG-CD2 | 7.37  | 125.42      | 121.00   |
| 1   | K     | 237 | ASN  | CB-CA-C   | -7.37 | 95.66       | 110.40   |
| 1   | I     | 237 | ASN  | CB-CA-C   | -7.36 | 95.69       | 110.40   |
| 1   | H     | 237 | ASN  | CB-CA-C   | -7.35 | 95.70       | 110.40   |
| 1   | J     | 237 | ASN  | CB-CA-C   | -7.35 | 95.70       | 110.40   |
| 1   | L     | 237 | ASN  | CB-CA-C   | -7.35 | 95.71       | 110.40   |
| 1   | F     | 237 | ASN  | CB-CA-C   | -7.34 | 95.71       | 110.40   |
| 1   | E     | 237 | ASN  | CB-CA-C   | -7.34 | 95.73       | 110.40   |
| 1   | A     | 326 | TYR  | CB-CG-CD2 | 7.33  | 125.40      | 121.00   |
| 1   | G     | 237 | ASN  | CB-CA-C   | -7.33 | 95.75       | 110.40   |
| 1   | B     | 237 | ASN  | CB-CA-C   | -7.32 | 95.76       | 110.40   |
| 1   | D     | 237 | ASN  | CB-CA-C   | -7.32 | 95.76       | 110.40   |
| 1   | M     | 237 | ASN  | CB-CA-C   | -7.32 | 95.77       | 110.40   |
| 1   | P     | 237 | ASN  | CB-CA-C   | -7.32 | 95.76       | 110.40   |
| 1   | D     | 326 | TYR  | CB-CG-CD2 | 7.31  | 125.39      | 121.00   |
| 1   | O     | 237 | ASN  | CB-CA-C   | -7.31 | 95.78       | 110.40   |
| 1   | N     | 237 | ASN  | CB-CA-C   | -7.31 | 95.78       | 110.40   |
| 1   | A     | 237 | ASN  | CB-CA-C   | -7.30 | 95.81       | 110.40   |
| 1   | C     | 237 | ASN  | CB-CA-C   | -7.30 | 95.81       | 110.40   |
| 1   | D     | 224 | ASN  | CA-CB-CG  | 7.10  | 129.03      | 113.40   |
| 1   | M     | 224 | ASN  | CA-CB-CG  | 7.10  | 129.02      | 113.40   |
| 1   | F     | 224 | ASN  | CA-CB-CG  | 7.10  | 129.01      | 113.40   |
| 1   | O     | 224 | ASN  | CA-CB-CG  | 7.10  | 129.01      | 113.40   |
| 1   | A     | 224 | ASN  | CA-CB-CG  | 7.08  | 128.99      | 113.40   |
| 1   | B     | 224 | ASN  | CA-CB-CG  | 7.08  | 128.97      | 113.40   |
| 1   | G     | 224 | ASN  | CA-CB-CG  | 7.08  | 128.97      | 113.40   |
| 1   | C     | 224 | ASN  | CA-CB-CG  | 7.07  | 128.95      | 113.40   |
| 1   | K     | 224 | ASN  | CA-CB-CG  | 7.07  | 128.95      | 113.40   |
| 1   | P     | 224 | ASN  | CA-CB-CG  | 7.07  | 128.95      | 113.40   |
| 1   | N     | 224 | ASN  | CA-CB-CG  | 7.06  | 128.94      | 113.40   |
| 1   | H     | 224 | ASN  | CA-CB-CG  | 7.06  | 128.94      | 113.40   |
| 1   | L     | 224 | ASN  | CA-CB-CG  | 7.06  | 128.93      | 113.40   |
| 1   | E     | 224 | ASN  | CA-CB-CG  | 7.06  | 128.93      | 113.40   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | J     | 224 | ASN  | CA-CB-CG  | 7.06  | 128.93      | 113.40   |
| 1   | I     | 224 | ASN  | CA-CB-CG  | 7.04  | 128.89      | 113.40   |
| 1   | I     | 219 | ASP  | CB-CG-OD2 | -7.00 | 112.00      | 118.30   |
| 1   | C     | 219 | ASP  | CB-CG-OD2 | -6.99 | 112.01      | 118.30   |
| 1   | M     | 219 | ASP  | CB-CG-OD2 | -6.99 | 112.01      | 118.30   |
| 1   | D     | 219 | ASP  | CB-CG-OD2 | -6.99 | 112.01      | 118.30   |
| 1   | N     | 219 | ASP  | CB-CG-OD2 | -6.98 | 112.01      | 118.30   |
| 1   | E     | 219 | ASP  | CB-CG-OD2 | -6.98 | 112.02      | 118.30   |
| 1   | K     | 219 | ASP  | CB-CG-OD2 | -6.98 | 112.02      | 118.30   |
| 1   | G     | 219 | ASP  | CB-CG-OD2 | -6.98 | 112.02      | 118.30   |
| 1   | B     | 219 | ASP  | CB-CG-OD2 | -6.97 | 112.02      | 118.30   |
| 1   | P     | 219 | ASP  | CB-CG-OD2 | -6.97 | 112.03      | 118.30   |
| 1   | H     | 219 | ASP  | CB-CG-OD2 | -6.96 | 112.03      | 118.30   |
| 1   | L     | 219 | ASP  | CB-CG-OD2 | -6.96 | 112.03      | 118.30   |
| 1   | A     | 219 | ASP  | CB-CG-OD2 | -6.94 | 112.06      | 118.30   |
| 1   | F     | 219 | ASP  | CB-CG-OD2 | -6.93 | 112.06      | 118.30   |
| 1   | J     | 219 | ASP  | CB-CG-OD2 | -6.92 | 112.07      | 118.30   |
| 1   | O     | 219 | ASP  | CB-CG-OD2 | -6.91 | 112.08      | 118.30   |
| 1   | A     | 219 | ASP  | CB-CA-C   | 6.85  | 124.10      | 110.40   |
| 1   | B     | 219 | ASP  | CB-CA-C   | 6.83  | 124.06      | 110.40   |
| 1   | P     | 219 | ASP  | CB-CA-C   | 6.83  | 124.06      | 110.40   |
| 1   | F     | 219 | ASP  | CB-CA-C   | 6.82  | 124.05      | 110.40   |
| 1   | O     | 219 | ASP  | CB-CA-C   | 6.82  | 124.04      | 110.40   |
| 1   | M     | 219 | ASP  | CB-CA-C   | 6.82  | 124.04      | 110.40   |
| 1   | C     | 219 | ASP  | CB-CA-C   | 6.82  | 124.03      | 110.40   |
| 1   | L     | 219 | ASP  | CB-CA-C   | 6.82  | 124.03      | 110.40   |
| 1   | E     | 219 | ASP  | CB-CA-C   | 6.81  | 124.02      | 110.40   |
| 1   | N     | 219 | ASP  | CB-CA-C   | 6.81  | 124.02      | 110.40   |
| 1   | D     | 219 | ASP  | CB-CA-C   | 6.81  | 124.02      | 110.40   |
| 1   | K     | 219 | ASP  | CB-CA-C   | 6.81  | 124.02      | 110.40   |
| 1   | I     | 219 | ASP  | CB-CA-C   | 6.79  | 123.98      | 110.40   |
| 1   | H     | 219 | ASP  | CB-CA-C   | 6.79  | 123.98      | 110.40   |
| 1   | J     | 219 | ASP  | CB-CA-C   | 6.78  | 123.96      | 110.40   |
| 1   | L     | 100 | SER  | CB-CA-C   | 6.77  | 122.96      | 110.10   |
| 1   | J     | 100 | SER  | CB-CA-C   | 6.77  | 122.96      | 110.10   |
| 1   | G     | 100 | SER  | CB-CA-C   | 6.76  | 122.95      | 110.10   |
| 1   | F     | 100 | SER  | CB-CA-C   | 6.76  | 122.94      | 110.10   |
| 1   | G     | 219 | ASP  | CB-CA-C   | 6.76  | 123.92      | 110.40   |
| 1   | I     | 100 | SER  | CB-CA-C   | 6.76  | 122.94      | 110.10   |
| 1   | H     | 100 | SER  | CB-CA-C   | 6.75  | 122.92      | 110.10   |
| 1   | K     | 100 | SER  | CB-CA-C   | 6.74  | 122.90      | 110.10   |
| 1   | O     | 100 | SER  | CB-CA-C   | 6.73  | 122.89      | 110.10   |

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| Mol | Chain | Res | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1   | P     | 100 | SER  | CB-CA-C    | 6.73  | 122.88      | 110.10   |
| 1   | A     | 100 | SER  | CB-CA-C    | 6.72  | 122.87      | 110.10   |
| 1   | B     | 32  | ASP  | CB-CG-OD1  | -6.72 | 112.25      | 118.30   |
| 1   | M     | 32  | ASP  | CB-CG-OD1  | -6.72 | 112.25      | 118.30   |
| 1   | E     | 100 | SER  | CB-CA-C    | 6.72  | 122.86      | 110.10   |
| 1   | D     | 100 | SER  | CB-CA-C    | 6.72  | 122.86      | 110.10   |
| 1   | M     | 100 | SER  | CB-CA-C    | 6.72  | 122.86      | 110.10   |
| 1   | B     | 100 | SER  | CB-CA-C    | 6.71  | 122.85      | 110.10   |
| 1   | C     | 100 | SER  | CB-CA-C    | 6.70  | 122.83      | 110.10   |
| 1   | N     | 100 | SER  | CB-CA-C    | 6.70  | 122.83      | 110.10   |
| 1   | H     | 145 | TYR  | CG-CD2-CE2 | -6.70 | 115.94      | 121.30   |
| 1   | C     | 222 | ASN  | CA-CB-CG   | 6.69  | 128.11      | 113.40   |
| 1   | F     | 145 | TYR  | CG-CD2-CE2 | -6.68 | 115.95      | 121.30   |
| 1   | H     | 222 | ASN  | CA-CB-CG   | 6.68  | 128.10      | 113.40   |
| 1   | A     | 32  | ASP  | CB-CG-OD1  | -6.68 | 112.29      | 118.30   |
| 1   | O     | 222 | ASN  | CA-CB-CG   | 6.68  | 128.09      | 113.40   |
| 1   | L     | 222 | ASN  | CA-CB-CG   | 6.68  | 128.09      | 113.40   |
| 1   | E     | 222 | ASN  | CA-CB-CG   | 6.67  | 128.09      | 113.40   |
| 1   | P     | 222 | ASN  | CA-CB-CG   | 6.67  | 128.08      | 113.40   |
| 1   | O     | 32  | ASP  | CB-CG-OD1  | -6.67 | 112.30      | 118.30   |
| 1   | D     | 222 | ASN  | CA-CB-CG   | 6.67  | 128.07      | 113.40   |
| 1   | C     | 145 | TYR  | CG-CD2-CE2 | -6.67 | 115.97      | 121.30   |
| 1   | N     | 32  | ASP  | CB-CG-OD1  | -6.67 | 112.30      | 118.30   |
| 1   | K     | 32  | ASP  | CB-CG-OD1  | -6.66 | 112.30      | 118.30   |
| 1   | N     | 222 | ASN  | CA-CB-CG   | 6.66  | 128.06      | 113.40   |
| 1   | H     | 32  | ASP  | CB-CG-OD1  | -6.66 | 112.30      | 118.30   |
| 1   | I     | 222 | ASN  | CA-CB-CG   | 6.66  | 128.06      | 113.40   |
| 1   | B     | 222 | ASN  | CA-CB-CG   | 6.66  | 128.06      | 113.40   |
| 1   | D     | 32  | ASP  | CB-CG-OD1  | -6.66 | 112.31      | 118.30   |
| 1   | J     | 222 | ASN  | CA-CB-CG   | 6.66  | 128.06      | 113.40   |
| 1   | C     | 32  | ASP  | CB-CG-OD1  | -6.66 | 112.31      | 118.30   |
| 1   | G     | 222 | ASN  | CA-CB-CG   | 6.66  | 128.05      | 113.40   |
| 1   | K     | 222 | ASN  | CA-CB-CG   | 6.66  | 128.05      | 113.40   |
| 1   | F     | 222 | ASN  | CA-CB-CG   | 6.66  | 128.04      | 113.40   |
| 1   | E     | 145 | TYR  | CG-CD2-CE2 | -6.66 | 115.98      | 121.30   |
| 1   | K     | 145 | TYR  | CG-CD2-CE2 | -6.66 | 115.98      | 121.30   |
| 1   | M     | 222 | ASN  | CA-CB-CG   | 6.66  | 128.04      | 113.40   |
| 1   | J     | 32  | ASP  | CB-CG-OD1  | -6.65 | 112.31      | 118.30   |
| 1   | L     | 32  | ASP  | CB-CG-OD1  | -6.65 | 112.31      | 118.30   |
| 1   | E     | 32  | ASP  | CB-CG-OD1  | -6.65 | 112.31      | 118.30   |
| 1   | A     | 222 | ASN  | CA-CB-CG   | 6.65  | 128.02      | 113.40   |
| 1   | P     | 32  | ASP  | CB-CG-OD1  | -6.64 | 112.32      | 118.30   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 1   | G     | 32  | ASP  | CB-CG-OD1   | -6.62 | 112.34      | 118.30   |
| 1   | B     | 145 | TYR  | CG-CD2-CE2  | -6.62 | 116.01      | 121.30   |
| 1   | F     | 32  | ASP  | CB-CG-OD1   | -6.61 | 112.35      | 118.30   |
| 1   | A     | 145 | TYR  | CG-CD2-CE2  | -6.61 | 116.01      | 121.30   |
| 1   | I     | 32  | ASP  | CB-CG-OD1   | -6.61 | 112.35      | 118.30   |
| 1   | I     | 145 | TYR  | CG-CD2-CE2  | -6.60 | 116.02      | 121.30   |
| 1   | L     | 145 | TYR  | CG-CD2-CE2  | -6.60 | 116.02      | 121.30   |
| 1   | N     | 145 | TYR  | CG-CD2-CE2  | -6.60 | 116.02      | 121.30   |
| 1   | J     | 145 | TYR  | CG-CD2-CE2  | -6.60 | 116.02      | 121.30   |
| 1   | O     | 145 | TYR  | CG-CD2-CE2  | -6.59 | 116.03      | 121.30   |
| 1   | G     | 145 | TYR  | CG-CD2-CE2  | -6.59 | 116.03      | 121.30   |
| 1   | D     | 145 | TYR  | CG-CD2-CE2  | -6.57 | 116.04      | 121.30   |
| 1   | P     | 145 | TYR  | CG-CD2-CE2  | -6.53 | 116.08      | 121.30   |
| 1   | M     | 145 | TYR  | CG-CD2-CE2  | -6.52 | 116.09      | 121.30   |
| 1   | B     | 49  | TYR  | CZ-CE2-CD2  | 6.40  | 125.56      | 119.80   |
| 1   | M     | 49  | TYR  | CZ-CE2-CD2  | 6.40  | 125.56      | 119.80   |
| 1   | O     | 49  | TYR  | CZ-CE2-CD2  | 6.38  | 125.55      | 119.80   |
| 1   | H     | 220 | LEU  | CA-C-O      | -6.36 | 106.74      | 120.10   |
| 1   | M     | 220 | LEU  | CA-C-O      | -6.36 | 106.75      | 120.10   |
| 1   | D     | 220 | LEU  | CA-C-O      | -6.35 | 106.76      | 120.10   |
| 1   | F     | 220 | LEU  | CA-C-O      | -6.35 | 106.76      | 120.10   |
| 1   | P     | 220 | LEU  | CA-C-O      | -6.35 | 106.76      | 120.10   |
| 1   | I     | 220 | LEU  | CA-C-O      | -6.35 | 106.77      | 120.10   |
| 1   | N     | 220 | LEU  | CA-C-O      | -6.35 | 106.77      | 120.10   |
| 1   | K     | 220 | LEU  | CA-C-O      | -6.35 | 106.77      | 120.10   |
| 1   | L     | 220 | LEU  | CA-C-O      | -6.35 | 106.77      | 120.10   |
| 1   | D     | 49  | TYR  | CZ-CE2-CD2  | 6.34  | 125.51      | 119.80   |
| 1   | G     | 220 | LEU  | CA-C-O      | -6.34 | 106.78      | 120.10   |
| 1   | A     | 49  | TYR  | CZ-CE2-CD2  | 6.34  | 125.51      | 119.80   |
| 1   | A     | 220 | LEU  | CA-C-O      | -6.34 | 106.79      | 120.10   |
| 1   | G     | 49  | TYR  | CZ-CE2-CD2  | 6.34  | 125.50      | 119.80   |
| 1   | I     | 49  | TYR  | CZ-CE2-CD2  | 6.34  | 125.50      | 119.80   |
| 1   | K     | 312 | TRP  | CD1-NE1-CE2 | 6.33  | 114.70      | 109.00   |
| 1   | E     | 220 | LEU  | CA-C-O      | -6.33 | 106.80      | 120.10   |
| 1   | O     | 220 | LEU  | CA-C-O      | -6.33 | 106.80      | 120.10   |
| 1   | C     | 220 | LEU  | CA-C-O      | -6.33 | 106.80      | 120.10   |
| 1   | J     | 220 | LEU  | CA-C-O      | -6.33 | 106.80      | 120.10   |
| 1   | N     | 49  | TYR  | CZ-CE2-CD2  | 6.33  | 125.50      | 119.80   |
| 1   | N     | 312 | TRP  | CD1-NE1-CE2 | 6.33  | 114.70      | 109.00   |
| 1   | C     | 312 | TRP  | CD1-NE1-CE2 | 6.33  | 114.69      | 109.00   |
| 1   | B     | 220 | LEU  | CA-C-O      | -6.32 | 106.82      | 120.10   |
| 1   | B     | 312 | TRP  | CD1-NE1-CE2 | 6.32  | 114.69      | 109.00   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 1   | H     | 49  | TYR  | CZ-CE2-CD2  | 6.32  | 125.49      | 119.80   |
| 1   | M     | 312 | TRP  | CD1-NE1-CE2 | 6.32  | 114.69      | 109.00   |
| 1   | C     | 49  | TYR  | CZ-CE2-CD2  | 6.31  | 125.48      | 119.80   |
| 1   | K     | 49  | TYR  | CZ-CE2-CD2  | 6.31  | 125.48      | 119.80   |
| 1   | A     | 312 | TRP  | CD1-NE1-CE2 | 6.31  | 114.68      | 109.00   |
| 1   | L     | 49  | TYR  | CZ-CE2-CD2  | 6.30  | 125.47      | 119.80   |
| 1   | F     | 312 | TRP  | CD1-NE1-CE2 | 6.30  | 114.67      | 109.00   |
| 1   | I     | 312 | TRP  | CD1-NE1-CE2 | 6.29  | 114.66      | 109.00   |
| 1   | P     | 49  | TYR  | CZ-CE2-CD2  | 6.29  | 125.47      | 119.80   |
| 1   | P     | 312 | TRP  | CD1-NE1-CE2 | 6.29  | 114.66      | 109.00   |
| 1   | F     | 234 | ALA  | CB-CA-C     | 6.29  | 119.53      | 110.10   |
| 1   | B     | 234 | ALA  | CB-CA-C     | 6.29  | 119.53      | 110.10   |
| 1   | O     | 234 | ALA  | CB-CA-C     | 6.28  | 119.52      | 110.10   |
| 1   | L     | 234 | ALA  | CB-CA-C     | 6.28  | 119.52      | 110.10   |
| 1   | J     | 49  | TYR  | CZ-CE2-CD2  | 6.27  | 125.44      | 119.80   |
| 1   | E     | 312 | TRP  | CD1-NE1-CE2 | 6.27  | 114.64      | 109.00   |
| 1   | N     | 234 | ALA  | CB-CA-C     | 6.27  | 119.51      | 110.10   |
| 1   | E     | 234 | ALA  | CB-CA-C     | 6.27  | 119.50      | 110.10   |
| 1   | F     | 49  | TYR  | CZ-CE2-CD2  | 6.27  | 125.44      | 119.80   |
| 1   | G     | 234 | ALA  | CB-CA-C     | 6.27  | 119.50      | 110.10   |
| 1   | D     | 312 | TRP  | CD1-NE1-CE2 | 6.26  | 114.64      | 109.00   |
| 1   | O     | 312 | TRP  | CD1-NE1-CE2 | 6.26  | 114.64      | 109.00   |
| 1   | H     | 234 | ALA  | CB-CA-C     | 6.26  | 119.49      | 110.10   |
| 1   | J     | 234 | ALA  | CB-CA-C     | 6.26  | 119.49      | 110.10   |
| 1   | E     | 49  | TYR  | CZ-CE2-CD2  | 6.25  | 125.43      | 119.80   |
| 1   | L     | 312 | TRP  | CD1-NE1-CE2 | 6.25  | 114.63      | 109.00   |
| 1   | D     | 234 | ALA  | CB-CA-C     | 6.25  | 119.48      | 110.10   |
| 1   | I     | 234 | ALA  | CB-CA-C     | 6.25  | 119.48      | 110.10   |
| 1   | P     | 234 | ALA  | CB-CA-C     | 6.25  | 119.48      | 110.10   |
| 1   | M     | 234 | ALA  | CB-CA-C     | 6.25  | 119.47      | 110.10   |
| 1   | H     | 312 | TRP  | CD1-NE1-CE2 | 6.25  | 114.62      | 109.00   |
| 1   | C     | 234 | ALA  | CB-CA-C     | 6.25  | 119.47      | 110.10   |
| 1   | A     | 234 | ALA  | CB-CA-C     | 6.24  | 119.45      | 110.10   |
| 1   | J     | 312 | TRP  | CD1-NE1-CE2 | 6.23  | 114.60      | 109.00   |
| 1   | K     | 234 | ALA  | CB-CA-C     | 6.22  | 119.44      | 110.10   |
| 1   | C     | 109 | VAL  | CA-CB-CG2   | -6.22 | 101.57      | 110.90   |
| 1   | N     | 109 | VAL  | CA-CB-CG2   | -6.22 | 101.57      | 110.90   |
| 1   | A     | 109 | VAL  | CA-CB-CG2   | -6.21 | 101.59      | 110.90   |
| 1   | G     | 312 | TRP  | CD1-NE1-CE2 | 6.21  | 114.59      | 109.00   |
| 1   | G     | 109 | VAL  | CA-CB-CG2   | -6.21 | 101.59      | 110.90   |
| 1   | O     | 109 | VAL  | CA-CB-CG2   | -6.19 | 101.61      | 110.90   |
| 1   | D     | 109 | VAL  | CA-CB-CG2   | -6.19 | 101.61      | 110.90   |

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| Mol | Chain | Res | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1   | I     | 109 | VAL  | CA-CB-CG2  | -6.19 | 101.61      | 110.90   |
| 1   | B     | 109 | VAL  | CA-CB-CG2  | -6.19 | 101.62      | 110.90   |
| 1   | G     | 237 | ASN  | CA-C-N     | -6.18 | 103.83      | 116.20   |
| 1   | M     | 109 | VAL  | CA-CB-CG2  | -6.18 | 101.62      | 110.90   |
| 1   | L     | 237 | ASN  | CA-C-N     | -6.18 | 103.84      | 116.20   |
| 1   | P     | 109 | VAL  | CA-CB-CG2  | -6.18 | 101.63      | 110.90   |
| 1   | K     | 109 | VAL  | CA-CB-CG2  | -6.18 | 101.63      | 110.90   |
| 1   | F     | 109 | VAL  | CA-CB-CG2  | -6.18 | 101.64      | 110.90   |
| 1   | J     | 109 | VAL  | CA-CB-CG2  | -6.17 | 101.64      | 110.90   |
| 1   | L     | 109 | VAL  | CA-CB-CG2  | -6.17 | 101.64      | 110.90   |
| 1   | K     | 237 | ASN  | CA-C-N     | -6.17 | 103.87      | 116.20   |
| 1   | H     | 237 | ASN  | CA-C-N     | -6.16 | 103.87      | 116.20   |
| 1   | E     | 109 | VAL  | CA-CB-CG2  | -6.16 | 101.66      | 110.90   |
| 1   | E     | 237 | ASN  | CA-C-N     | -6.16 | 103.89      | 116.20   |
| 1   | J     | 237 | ASN  | CA-C-N     | -6.15 | 103.91      | 116.20   |
| 1   | F     | 237 | ASN  | CA-C-N     | -6.14 | 103.91      | 116.20   |
| 1   | H     | 109 | VAL  | CA-CB-CG2  | -6.14 | 101.69      | 110.90   |
| 1   | N     | 32  | ASP  | CB-CA-C    | 6.14  | 122.68      | 110.40   |
| 1   | A     | 237 | ASN  | CA-C-N     | -6.14 | 103.93      | 116.20   |
| 1   | B     | 237 | ASN  | CA-C-N     | -6.14 | 103.93      | 116.20   |
| 1   | N     | 237 | ASN  | CA-C-N     | -6.14 | 103.93      | 116.20   |
| 1   | C     | 32  | ASP  | CB-CA-C    | 6.13  | 122.67      | 110.40   |
| 1   | I     | 237 | ASN  | CA-C-N     | -6.13 | 103.94      | 116.20   |
| 1   | L     | 32  | ASP  | CB-CA-C    | 6.13  | 122.66      | 110.40   |
| 1   | M     | 237 | ASN  | CA-C-N     | -6.13 | 103.94      | 116.20   |
| 1   | D     | 237 | ASN  | CA-C-N     | -6.13 | 103.94      | 116.20   |
| 1   | P     | 32  | ASP  | CB-CA-C    | 6.12  | 122.65      | 110.40   |
| 1   | D     | 32  | ASP  | CB-CA-C    | 6.12  | 122.65      | 110.40   |
| 1   | P     | 237 | ASN  | CA-C-N     | -6.12 | 103.95      | 116.20   |
| 1   | M     | 32  | ASP  | CB-CA-C    | 6.12  | 122.64      | 110.40   |
| 1   | N     | 220 | LEU  | CD1-CG-CD2 | -6.12 | 92.14       | 110.50   |
| 1   | O     | 220 | LEU  | CD1-CG-CD2 | -6.12 | 92.14       | 110.50   |
| 1   | C     | 237 | ASN  | CA-C-N     | -6.12 | 103.97      | 116.20   |
| 1   | B     | 220 | LEU  | CD1-CG-CD2 | -6.11 | 92.17       | 110.50   |
| 1   | A     | 220 | LEU  | CD1-CG-CD2 | -6.11 | 92.17       | 110.50   |
| 1   | I     | 32  | ASP  | CB-CA-C    | 6.11  | 122.62      | 110.40   |
| 1   | C     | 220 | LEU  | CD1-CG-CD2 | -6.11 | 92.17       | 110.50   |
| 1   | P     | 220 | LEU  | CD1-CG-CD2 | -6.11 | 92.17       | 110.50   |
| 1   | A     | 32  | ASP  | CB-CA-C    | 6.11  | 122.61      | 110.40   |
| 1   | F     | 32  | ASP  | CB-CA-C    | 6.11  | 122.61      | 110.40   |
| 1   | L     | 220 | LEU  | CD1-CG-CD2 | -6.11 | 92.18       | 110.50   |
| 1   | B     | 32  | ASP  | CB-CA-C    | 6.11  | 122.61      | 110.40   |

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| Mol | Chain | Res | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1   | D     | 220 | LEU  | CD1-CG-CD2 | -6.11 | 92.18       | 110.50   |
| 1   | O     | 237 | ASN  | CA-C-N     | -6.10 | 104.00      | 116.20   |
| 1   | I     | 220 | LEU  | CD1-CG-CD2 | -6.10 | 92.20       | 110.50   |
| 1   | H     | 220 | LEU  | CD1-CG-CD2 | -6.10 | 92.21       | 110.50   |
| 1   | G     | 220 | LEU  | CD1-CG-CD2 | -6.10 | 92.21       | 110.50   |
| 1   | E     | 32  | ASP  | CB-CA-C    | 6.09  | 122.59      | 110.40   |
| 1   | H     | 32  | ASP  | CB-CA-C    | 6.09  | 122.59      | 110.40   |
| 1   | E     | 220 | LEU  | CD1-CG-CD2 | -6.09 | 92.22       | 110.50   |
| 1   | O     | 32  | ASP  | CB-CA-C    | 6.09  | 122.59      | 110.40   |
| 1   | G     | 32  | ASP  | CB-CA-C    | 6.09  | 122.58      | 110.40   |
| 1   | J     | 220 | LEU  | CD1-CG-CD2 | -6.09 | 92.23       | 110.50   |
| 1   | K     | 32  | ASP  | CB-CA-C    | 6.08  | 122.57      | 110.40   |
| 1   | M     | 220 | LEU  | CD1-CG-CD2 | -6.08 | 92.25       | 110.50   |
| 1   | F     | 220 | LEU  | CD1-CG-CD2 | -6.08 | 92.26       | 110.50   |
| 1   | J     | 32  | ASP  | CB-CA-C    | 6.08  | 122.56      | 110.40   |
| 1   | K     | 220 | LEU  | CD1-CG-CD2 | -6.08 | 92.27       | 110.50   |
| 1   | D     | 145 | TYR  | CB-CG-CD1  | -6.01 | 117.39      | 121.00   |
| 1   | J     | 7   | GLU  | CG-CD-OE1  | 5.98  | 130.26      | 118.30   |
| 1   | G     | 7   | GLU  | CG-CD-OE1  | 5.95  | 130.21      | 118.30   |
| 1   | F     | 7   | GLU  | CG-CD-OE1  | 5.95  | 130.20      | 118.30   |
| 1   | B     | 7   | GLU  | CG-CD-OE1  | 5.95  | 130.20      | 118.30   |
| 1   | D     | 7   | GLU  | CG-CD-OE1  | 5.95  | 130.19      | 118.30   |
| 1   | L     | 7   | GLU  | CG-CD-OE1  | 5.95  | 130.19      | 118.30   |
| 1   | E     | 7   | GLU  | CG-CD-OE1  | 5.94  | 130.18      | 118.30   |
| 1   | I     | 7   | GLU  | CG-CD-OE1  | 5.94  | 130.18      | 118.30   |
| 1   | K     | 7   | GLU  | CG-CD-OE1  | 5.94  | 130.18      | 118.30   |
| 1   | M     | 145 | TYR  | CB-CG-CD1  | -5.94 | 117.44      | 121.00   |
| 1   | O     | 7   | GLU  | CG-CD-OE1  | 5.94  | 130.17      | 118.30   |
| 1   | H     | 7   | GLU  | CG-CD-OE1  | 5.93  | 130.17      | 118.30   |
| 1   | K     | 186 | PHE  | CB-CG-CD1  | 5.93  | 124.95      | 120.80   |
| 1   | A     | 7   | GLU  | CG-CD-OE1  | 5.93  | 130.16      | 118.30   |
| 1   | M     | 7   | GLU  | CG-CD-OE1  | 5.93  | 130.17      | 118.30   |
| 1   | C     | 145 | TYR  | CB-CG-CD1  | -5.92 | 117.45      | 121.00   |
| 1   | N     | 7   | GLU  | CG-CD-OE1  | 5.92  | 130.15      | 118.30   |
| 1   | P     | 7   | GLU  | CG-CD-OE1  | 5.92  | 130.14      | 118.30   |
| 1   | B     | 145 | TYR  | CB-CG-CD1  | -5.92 | 117.45      | 121.00   |
| 1   | H     | 186 | PHE  | CB-CG-CD1  | 5.92  | 124.94      | 120.80   |
| 1   | E     | 186 | PHE  | CB-CG-CD1  | 5.92  | 124.94      | 120.80   |
| 1   | P     | 145 | TYR  | CB-CG-CD1  | -5.92 | 117.45      | 121.00   |
| 1   | E     | 95  | THR  | CA-CB-CG2  | -5.91 | 104.13      | 112.40   |
| 1   | C     | 7   | GLU  | CG-CD-OE1  | 5.90  | 130.11      | 118.30   |
| 1   | G     | 186 | PHE  | CB-CG-CD1  | 5.90  | 124.93      | 120.80   |

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| Mol | Chain | Res | Type | Atoms     | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1   | G     | 95  | THR  | CA-CB-CG2 | -5.90 | 104.14      | 112.40   |
| 1   | I     | 186 | PHE  | CB-CG-CD1 | 5.90  | 124.93      | 120.80   |
| 1   | J     | 95  | THR  | CA-CB-CG2 | -5.90 | 104.14      | 112.40   |
| 1   | L     | 95  | THR  | CA-CB-CG2 | -5.89 | 104.16      | 112.40   |
| 1   | L     | 186 | PHE  | CB-CG-CD1 | 5.89  | 124.92      | 120.80   |
| 1   | G     | 145 | TYR  | CB-CG-CD1 | -5.88 | 117.47      | 121.00   |
| 1   | H     | 95  | THR  | CA-CB-CG2 | -5.88 | 104.17      | 112.40   |
| 1   | A     | 145 | TYR  | CB-CG-CD1 | -5.88 | 117.47      | 121.00   |
| 1   | J     | 186 | PHE  | CB-CG-CD1 | 5.88  | 124.91      | 120.80   |
| 1   | O     | 145 | TYR  | CB-CG-CD1 | -5.87 | 117.48      | 121.00   |
| 1   | N     | 95  | THR  | CA-CB-CG2 | -5.86 | 104.19      | 112.40   |
| 1   | F     | 95  | THR  | CA-CB-CG2 | -5.86 | 104.20      | 112.40   |
| 1   | N     | 145 | TYR  | CB-CG-CD1 | -5.86 | 117.48      | 121.00   |
| 1   | C     | 95  | THR  | CA-CB-CG2 | -5.86 | 104.20      | 112.40   |
| 1   | I     | 95  | THR  | CA-CB-CG2 | -5.86 | 104.20      | 112.40   |
| 1   | K     | 95  | THR  | CA-CB-CG2 | -5.86 | 104.20      | 112.40   |
| 1   | O     | 64  | LYS  | CB-CG-CD  | -5.85 | 96.38       | 111.60   |
| 1   | E     | 64  | LYS  | CB-CG-CD  | -5.85 | 96.39       | 111.60   |
| 1   | E     | 145 | TYR  | CB-CG-CD1 | -5.85 | 117.49      | 121.00   |
| 1   | G     | 64  | LYS  | CB-CG-CD  | -5.85 | 96.40       | 111.60   |
| 1   | K     | 64  | LYS  | CB-CG-CD  | -5.84 | 96.41       | 111.60   |
| 1   | O     | 95  | THR  | CA-CB-CG2 | -5.84 | 104.22      | 112.40   |
| 1   | P     | 64  | LYS  | CB-CG-CD  | -5.84 | 96.40       | 111.60   |
| 1   | L     | 64  | LYS  | CB-CG-CD  | -5.84 | 96.41       | 111.60   |
| 1   | A     | 64  | LYS  | CB-CG-CD  | -5.84 | 96.42       | 111.60   |
| 1   | M     | 64  | LYS  | CB-CG-CD  | -5.84 | 96.42       | 111.60   |
| 1   | J     | 64  | LYS  | CB-CG-CD  | -5.84 | 96.42       | 111.60   |
| 1   | H     | 64  | LYS  | CB-CG-CD  | -5.84 | 96.43       | 111.60   |
| 1   | B     | 64  | LYS  | CB-CG-CD  | -5.83 | 96.43       | 111.60   |
| 1   | C     | 64  | LYS  | CB-CG-CD  | -5.83 | 96.43       | 111.60   |
| 1   | D     | 64  | LYS  | CB-CG-CD  | -5.83 | 96.43       | 111.60   |
| 1   | F     | 64  | LYS  | CB-CG-CD  | -5.83 | 96.43       | 111.60   |
| 1   | N     | 64  | LYS  | CB-CG-CD  | -5.83 | 96.44       | 111.60   |
| 1   | B     | 186 | PHE  | CB-CG-CD1 | 5.83  | 124.88      | 120.80   |
| 1   | C     | 186 | PHE  | CB-CG-CD1 | 5.83  | 124.88      | 120.80   |
| 1   | I     | 64  | LYS  | CB-CG-CD  | -5.82 | 96.47       | 111.60   |
| 1   | B     | 95  | THR  | CA-CB-CG2 | -5.82 | 104.26      | 112.40   |
| 1   | F     | 186 | PHE  | CB-CG-CD1 | 5.82  | 124.87      | 120.80   |
| 1   | M     | 186 | PHE  | CB-CG-CD1 | 5.81  | 124.87      | 120.80   |
| 1   | D     | 95  | THR  | CA-CB-CG2 | -5.81 | 104.26      | 112.40   |
| 1   | P     | 95  | THR  | CA-CB-CG2 | -5.81 | 104.27      | 112.40   |
| 1   | A     | 95  | THR  | CA-CB-CG2 | -5.81 | 104.27      | 112.40   |

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| Mol | Chain | Res | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1   | L     | 145 | TYR  | CB-CG-CD1  | -5.80 | 117.52      | 121.00   |
| 1   | N     | 186 | PHE  | CB-CG-CD1  | 5.80  | 124.86      | 120.80   |
| 1   | F     | 145 | TYR  | CB-CG-CD1  | -5.79 | 117.52      | 121.00   |
| 1   | A     | 186 | PHE  | CB-CG-CD1  | 5.79  | 124.86      | 120.80   |
| 1   | M     | 95  | THR  | CA-CB-CG2  | -5.79 | 104.30      | 112.40   |
| 1   | K     | 145 | TYR  | CB-CG-CD1  | -5.78 | 117.53      | 121.00   |
| 1   | D     | 186 | PHE  | CB-CG-CD1  | 5.77  | 124.84      | 120.80   |
| 1   | P     | 186 | PHE  | CB-CG-CD1  | 5.77  | 124.84      | 120.80   |
| 1   | O     | 186 | PHE  | CB-CG-CD1  | 5.76  | 124.83      | 120.80   |
| 1   | J     | 145 | TYR  | CB-CG-CD1  | -5.74 | 117.55      | 121.00   |
| 1   | H     | 145 | TYR  | CB-CG-CD1  | -5.74 | 117.56      | 121.00   |
| 1   | O     | 66  | TYR  | CD1-CE1-CZ | 5.73  | 124.96      | 119.80   |
| 1   | N     | 66  | TYR  | CD1-CE1-CZ | 5.73  | 124.95      | 119.80   |
| 1   | P     | 66  | TYR  | CD1-CE1-CZ | 5.72  | 124.95      | 119.80   |
| 1   | I     | 145 | TYR  | CB-CG-CD1  | -5.71 | 117.58      | 121.00   |
| 1   | C     | 66  | TYR  | CD1-CE1-CZ | 5.70  | 124.93      | 119.80   |
| 1   | I     | 117 | LEU  | CD1-CG-CD2 | -5.69 | 93.42       | 110.50   |
| 1   | N     | 117 | LEU  | CD1-CG-CD2 | -5.69 | 93.42       | 110.50   |
| 1   | J     | 117 | LEU  | CD1-CG-CD2 | -5.69 | 93.43       | 110.50   |
| 1   | M     | 117 | LEU  | CD1-CG-CD2 | -5.69 | 93.43       | 110.50   |
| 1   | B     | 117 | LEU  | CD1-CG-CD2 | -5.69 | 93.44       | 110.50   |
| 1   | D     | 117 | LEU  | CD1-CG-CD2 | -5.69 | 93.44       | 110.50   |
| 1   | O     | 117 | LEU  | CD1-CG-CD2 | -5.69 | 93.44       | 110.50   |
| 1   | B     | 66  | TYR  | CD1-CE1-CZ | 5.69  | 124.92      | 119.80   |
| 1   | H     | 117 | LEU  | CD1-CG-CD2 | -5.69 | 93.44       | 110.50   |
| 1   | P     | 117 | LEU  | CD1-CG-CD2 | -5.69 | 93.44       | 110.50   |
| 1   | A     | 117 | LEU  | CD1-CG-CD2 | -5.68 | 93.45       | 110.50   |
| 1   | K     | 117 | LEU  | CD1-CG-CD2 | -5.68 | 93.44       | 110.50   |
| 1   | G     | 49  | TYR  | CG-CD2-CE2 | -5.68 | 116.75      | 121.30   |
| 1   | G     | 117 | LEU  | CD1-CG-CD2 | -5.68 | 93.45       | 110.50   |
| 1   | E     | 117 | LEU  | CD1-CG-CD2 | -5.68 | 93.46       | 110.50   |
| 1   | F     | 49  | TYR  | CG-CD2-CE2 | -5.68 | 116.75      | 121.30   |
| 1   | C     | 117 | LEU  | CD1-CG-CD2 | -5.68 | 93.46       | 110.50   |
| 1   | F     | 117 | LEU  | CD1-CG-CD2 | -5.67 | 93.48       | 110.50   |
| 1   | L     | 117 | LEU  | CD1-CG-CD2 | -5.67 | 93.49       | 110.50   |
| 1   | A     | 66  | TYR  | CD1-CE1-CZ | 5.66  | 124.89      | 119.80   |
| 1   | E     | 261 | PHE  | CZ-CE2-CD2 | 5.66  | 126.89      | 120.10   |
| 1   | G     | 66  | TYR  | CD1-CE1-CZ | 5.66  | 124.89      | 119.80   |
| 1   | L     | 261 | PHE  | CZ-CE2-CD2 | 5.66  | 126.89      | 120.10   |
| 1   | K     | 49  | TYR  | CG-CD2-CE2 | -5.64 | 116.78      | 121.30   |
| 1   | M     | 49  | TYR  | CG-CD2-CE2 | -5.64 | 116.78      | 121.30   |
| 1   | M     | 66  | TYR  | CD1-CE1-CZ | 5.64  | 124.88      | 119.80   |

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| Mol | Chain | Res | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1   | D     | 67  | LEU  | CB-CG-CD1  | 5.64  | 120.59      | 111.00   |
| 1   | B     | 49  | TYR  | CG-CD2-CE2 | -5.64 | 116.79      | 121.30   |
| 1   | O     | 49  | TYR  | CG-CD2-CE2 | -5.64 | 116.79      | 121.30   |
| 1   | F     | 261 | PHE  | CZ-CE2-CD2 | 5.63  | 126.86      | 120.10   |
| 1   | G     | 261 | PHE  | CZ-CE2-CD2 | 5.63  | 126.86      | 120.10   |
| 1   | A     | 49  | TYR  | CG-CD2-CE2 | -5.63 | 116.79      | 121.30   |
| 1   | D     | 66  | TYR  | CD1-CE1-CZ | 5.63  | 124.87      | 119.80   |
| 1   | I     | 49  | TYR  | CG-CD2-CE2 | -5.63 | 116.79      | 121.30   |
| 1   | J     | 49  | TYR  | CG-CD2-CE2 | -5.63 | 116.80      | 121.30   |
| 1   | C     | 49  | TYR  | CG-CD2-CE2 | -5.62 | 116.80      | 121.30   |
| 1   | H     | 49  | TYR  | CG-CD2-CE2 | -5.62 | 116.80      | 121.30   |
| 1   | N     | 67  | LEU  | CB-CG-CD1  | 5.62  | 120.56      | 111.00   |
| 1   | J     | 261 | PHE  | CZ-CE2-CD2 | 5.62  | 126.84      | 120.10   |
| 1   | J     | 63  | GLY  | CA-C-O     | -5.62 | 110.49      | 120.60   |
| 1   | E     | 67  | LEU  | CB-CG-CD1  | 5.61  | 120.54      | 111.00   |
| 1   | P     | 67  | LEU  | CB-CG-CD1  | 5.61  | 120.54      | 111.00   |
| 1   | G     | 67  | LEU  | CB-CG-CD1  | 5.61  | 120.54      | 111.00   |
| 1   | K     | 261 | PHE  | CZ-CE2-CD2 | 5.61  | 126.83      | 120.10   |
| 1   | N     | 261 | PHE  | CZ-CE2-CD2 | 5.61  | 126.83      | 120.10   |
| 1   | F     | 67  | LEU  | CB-CG-CD1  | 5.61  | 120.54      | 111.00   |
| 1   | K     | 63  | GLY  | CA-C-O     | -5.61 | 110.50      | 120.60   |
| 1   | C     | 67  | LEU  | CB-CG-CD1  | 5.61  | 120.53      | 111.00   |
| 1   | G     | 63  | GLY  | CA-C-O     | -5.61 | 110.51      | 120.60   |
| 1   | I     | 67  | LEU  | CB-CG-CD1  | 5.61  | 120.53      | 111.00   |
| 1   | H     | 261 | PHE  | CZ-CE2-CD2 | 5.60  | 126.83      | 120.10   |
| 1   | L     | 63  | GLY  | CA-C-O     | -5.60 | 110.52      | 120.60   |
| 1   | F     | 63  | GLY  | CA-C-O     | -5.60 | 110.52      | 120.60   |
| 1   | F     | 66  | TYR  | CD1-CE1-CZ | 5.60  | 124.84      | 119.80   |
| 1   | M     | 67  | LEU  | CB-CG-CD1  | 5.60  | 120.52      | 111.00   |
| 1   | E     | 49  | TYR  | CG-CD2-CE2 | -5.60 | 116.82      | 121.30   |
| 1   | O     | 67  | LEU  | CB-CG-CD1  | 5.60  | 120.52      | 111.00   |
| 1   | A     | 67  | LEU  | CB-CG-CD1  | 5.60  | 120.51      | 111.00   |
| 1   | J     | 67  | LEU  | CB-CG-CD1  | 5.60  | 120.52      | 111.00   |
| 1   | K     | 67  | LEU  | CB-CG-CD1  | 5.60  | 120.52      | 111.00   |
| 1   | L     | 67  | LEU  | CB-CG-CD1  | 5.60  | 120.52      | 111.00   |
| 1   | O     | 66  | TYR  | CG-CD1-CE1 | -5.60 | 116.82      | 121.30   |
| 1   | M     | 261 | PHE  | CZ-CE2-CD2 | 5.60  | 126.82      | 120.10   |
| 1   | O     | 63  | GLY  | CA-C-O     | -5.60 | 110.53      | 120.60   |
| 1   | D     | 261 | PHE  | CZ-CE2-CD2 | 5.59  | 126.81      | 120.10   |
| 1   | H     | 67  | LEU  | CB-CG-CD1  | 5.59  | 120.51      | 111.00   |
| 1   | B     | 63  | GLY  | N-CA-C     | -5.59 | 99.12       | 113.10   |
| 1   | N     | 63  | GLY  | N-CA-C     | -5.59 | 99.12       | 113.10   |

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| Mol | Chain | Res | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1   | P     | 49  | TYR  | CG-CD2-CE2 | -5.59 | 116.83      | 121.30   |
| 1   | E     | 261 | PHE  | CB-CG-CD2  | -5.59 | 116.89      | 120.80   |
| 1   | C     | 63  | GLY  | CA-C-O     | -5.59 | 110.54      | 120.60   |
| 1   | C     | 63  | GLY  | N-CA-C     | -5.59 | 99.14       | 113.10   |
| 1   | D     | 49  | TYR  | CG-CD2-CE2 | -5.59 | 116.83      | 121.30   |
| 1   | B     | 67  | LEU  | CB-CG-CD1  | 5.58  | 120.49      | 111.00   |
| 1   | L     | 63  | GLY  | N-CA-C     | -5.58 | 99.14       | 113.10   |
| 1   | E     | 63  | GLY  | CA-C-O     | -5.58 | 110.56      | 120.60   |
| 1   | M     | 63  | GLY  | N-CA-C     | -5.58 | 99.15       | 113.10   |
| 1   | E     | 63  | GLY  | N-CA-C     | -5.58 | 99.15       | 113.10   |
| 1   | I     | 63  | GLY  | CA-C-O     | -5.58 | 110.56      | 120.60   |
| 1   | J     | 261 | PHE  | CB-CG-CD2  | -5.58 | 116.90      | 120.80   |
| 1   | K     | 35  | ARG  | CB-CA-C    | 5.58  | 121.56      | 110.40   |
| 1   | E     | 35  | ARG  | CB-CA-C    | 5.58  | 121.55      | 110.40   |
| 1   | H     | 63  | GLY  | CA-C-O     | -5.58 | 110.56      | 120.60   |
| 1   | A     | 63  | GLY  | N-CA-C     | -5.58 | 99.16       | 113.10   |
| 1   | G     | 63  | GLY  | N-CA-C     | -5.58 | 99.16       | 113.10   |
| 1   | L     | 261 | PHE  | CB-CG-CD2  | -5.58 | 116.90      | 120.80   |
| 1   | F     | 63  | GLY  | N-CA-C     | -5.57 | 99.16       | 113.10   |
| 1   | P     | 63  | GLY  | CA-C-O     | -5.57 | 110.57      | 120.60   |
| 1   | K     | 63  | GLY  | N-CA-C     | -5.57 | 99.17       | 113.10   |
| 1   | O     | 261 | PHE  | CZ-CE2-CD2 | 5.57  | 126.79      | 120.10   |
| 1   | J     | 66  | TYR  | CD1-CE1-CZ | 5.57  | 124.81      | 119.80   |
| 1   | K     | 66  | TYR  | CD1-CE1-CZ | 5.57  | 124.81      | 119.80   |
| 1   | P     | 261 | PHE  | CZ-CE2-CD2 | 5.57  | 126.78      | 120.10   |
| 1   | D     | 261 | PHE  | CB-CG-CD2  | -5.57 | 116.90      | 120.80   |
| 1   | G     | 66  | TYR  | CG-CD1-CE1 | -5.57 | 116.84      | 121.30   |
| 1   | B     | 234 | ALA  | N-CA-CB    | -5.57 | 102.31      | 110.10   |
| 1   | D     | 63  | GLY  | N-CA-C     | -5.57 | 99.18       | 113.10   |
| 1   | H     | 261 | PHE  | CB-CG-CD2  | -5.57 | 116.90      | 120.80   |
| 1   | I     | 63  | GLY  | N-CA-C     | -5.57 | 99.18       | 113.10   |
| 1   | L     | 66  | TYR  | CD1-CE1-CZ | 5.57  | 124.81      | 119.80   |
| 1   | I     | 261 | PHE  | CB-CG-CD2  | -5.57 | 116.90      | 120.80   |
| 1   | I     | 261 | PHE  | CZ-CE2-CD2 | 5.57  | 126.78      | 120.10   |
| 1   | N     | 66  | TYR  | CG-CD1-CE1 | -5.57 | 116.85      | 121.30   |
| 1   | N     | 261 | PHE  | CB-CG-CD2  | -5.57 | 116.91      | 120.80   |
| 1   | P     | 63  | GLY  | N-CA-C     | -5.57 | 99.19       | 113.10   |
| 1   | J     | 63  | GLY  | N-CA-C     | -5.56 | 99.19       | 113.10   |
| 1   | N     | 63  | GLY  | CA-C-O     | -5.56 | 110.58      | 120.60   |
| 1   | O     | 63  | GLY  | N-CA-C     | -5.56 | 99.19       | 113.10   |
| 1   | F     | 35  | ARG  | CB-CA-C    | 5.56  | 121.53      | 110.40   |
| 1   | H     | 63  | GLY  | N-CA-C     | -5.56 | 99.20       | 113.10   |

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| Mol | Chain | Res | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1   | P     | 66  | TYR  | CG-CD1-CE1 | -5.56 | 116.85      | 121.30   |
| 1   | C     | 261 | PHE  | CZ-CE2-CD2 | 5.56  | 126.77      | 120.10   |
| 1   | G     | 35  | ARG  | CB-CA-C    | 5.56  | 121.52      | 110.40   |
| 1   | N     | 49  | TYR  | CG-CD2-CE2 | -5.56 | 116.85      | 121.30   |
| 1   | O     | 234 | ALA  | N-CA-CB    | -5.56 | 102.32      | 110.10   |
| 1   | D     | 63  | GLY  | CA-C-O     | -5.56 | 110.60      | 120.60   |
| 1   | H     | 66  | TYR  | CD1-CE1-CZ | 5.56  | 124.80      | 119.80   |
| 1   | M     | 66  | TYR  | CG-CD1-CE1 | -5.56 | 116.85      | 121.30   |
| 1   | A     | 63  | GLY  | CA-C-O     | -5.56 | 110.60      | 120.60   |
| 1   | D     | 66  | TYR  | CG-CD1-CE1 | -5.55 | 116.86      | 121.30   |
| 1   | L     | 49  | TYR  | CG-CD2-CE2 | -5.55 | 116.86      | 121.30   |
| 1   | M     | 35  | ARG  | CB-CA-C    | 5.55  | 121.51      | 110.40   |
| 1   | B     | 261 | PHE  | CZ-CE2-CD2 | 5.55  | 126.76      | 120.10   |
| 1   | L     | 35  | ARG  | CB-CA-C    | 5.55  | 121.50      | 110.40   |
| 1   | A     | 261 | PHE  | CZ-CE2-CD2 | 5.55  | 126.76      | 120.10   |
| 1   | E     | 66  | TYR  | CD1-CE1-CZ | 5.54  | 124.79      | 119.80   |
| 1   | J     | 35  | ARG  | CB-CA-C    | 5.54  | 121.49      | 110.40   |
| 1   | B     | 63  | GLY  | CA-C-O     | -5.54 | 110.62      | 120.60   |
| 1   | N     | 234 | ALA  | N-CA-CB    | -5.54 | 102.34      | 110.10   |
| 1   | H     | 35  | ARG  | CB-CA-C    | 5.54  | 121.48      | 110.40   |
| 1   | I     | 66  | TYR  | CD1-CE1-CZ | 5.54  | 124.79      | 119.80   |
| 1   | B     | 35  | ARG  | CB-CA-C    | 5.54  | 121.48      | 110.40   |
| 1   | B     | 66  | TYR  | CG-CD1-CE1 | -5.54 | 116.87      | 121.30   |
| 1   | I     | 35  | ARG  | CB-CA-C    | 5.54  | 121.48      | 110.40   |
| 1   | D     | 35  | ARG  | CB-CA-C    | 5.54  | 121.48      | 110.40   |
| 1   | N     | 35  | ARG  | CB-CA-C    | 5.54  | 121.48      | 110.40   |
| 1   | M     | 63  | GLY  | CA-C-O     | -5.54 | 110.63      | 120.60   |
| 1   | A     | 261 | PHE  | CB-CG-CD2  | -5.54 | 116.93      | 120.80   |
| 1   | P     | 35  | ARG  | CB-CA-C    | 5.54  | 121.47      | 110.40   |
| 1   | A     | 35  | ARG  | CB-CA-C    | 5.53  | 121.47      | 110.40   |
| 1   | C     | 35  | ARG  | CB-CA-C    | 5.53  | 121.47      | 110.40   |
| 1   | P     | 234 | ALA  | N-CA-CB    | -5.53 | 102.35      | 110.10   |
| 1   | C     | 234 | ALA  | N-CA-CB    | -5.53 | 102.36      | 110.10   |
| 1   | O     | 35  | ARG  | CB-CA-C    | 5.53  | 121.46      | 110.40   |
| 1   | A     | 234 | ALA  | N-CA-CB    | -5.53 | 102.36      | 110.10   |
| 1   | F     | 66  | TYR  | CG-CD1-CE1 | -5.53 | 116.88      | 121.30   |
| 1   | M     | 234 | ALA  | N-CA-CB    | -5.53 | 102.36      | 110.10   |
| 1   | M     | 261 | PHE  | CB-CG-CD2  | -5.53 | 116.93      | 120.80   |
| 1   | L     | 234 | ALA  | N-CA-CB    | -5.52 | 102.37      | 110.10   |
| 1   | D     | 234 | ALA  | N-CA-CB    | -5.52 | 102.37      | 110.10   |
| 1   | K     | 234 | ALA  | N-CA-CB    | -5.52 | 102.38      | 110.10   |
| 1   | E     | 234 | ALA  | N-CA-CB    | -5.51 | 102.38      | 110.10   |

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| Mol | Chain | Res | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1   | G     | 261 | PHE  | CB-CG-CD2  | -5.51 | 116.94      | 120.80   |
| 1   | I     | 234 | ALA  | N-CA-CB    | -5.51 | 102.39      | 110.10   |
| 1   | C     | 261 | PHE  | CB-CG-CD2  | -5.50 | 116.95      | 120.80   |
| 1   | J     | 234 | ALA  | N-CA-CB    | -5.50 | 102.40      | 110.10   |
| 1   | A     | 66  | TYR  | CG-CD1-CE1 | -5.50 | 116.90      | 121.30   |
| 1   | H     | 234 | ALA  | N-CA-CB    | -5.49 | 102.41      | 110.10   |
| 1   | I     | 66  | TYR  | CG-CD1-CE1 | -5.49 | 116.91      | 121.30   |
| 1   | P     | 261 | PHE  | CB-CG-CD2  | -5.49 | 116.96      | 120.80   |
| 1   | F     | 234 | ALA  | N-CA-CB    | -5.49 | 102.41      | 110.10   |
| 1   | C     | 66  | TYR  | CG-CD1-CE1 | -5.49 | 116.91      | 121.30   |
| 1   | G     | 234 | ALA  | N-CA-CB    | -5.49 | 102.42      | 110.10   |
| 1   | F     | 165 | GLU  | OE1-CD-OE2 | 5.48  | 129.88      | 123.30   |
| 1   | K     | 66  | TYR  | CG-CD1-CE1 | -5.48 | 116.92      | 121.30   |
| 1   | I     | 165 | GLU  | OE1-CD-OE2 | 5.47  | 129.87      | 123.30   |
| 1   | B     | 261 | PHE  | CB-CG-CD2  | -5.47 | 116.97      | 120.80   |
| 1   | C     | 165 | GLU  | OE1-CD-OE2 | 5.47  | 129.86      | 123.30   |
| 1   | L     | 66  | TYR  | CG-CD1-CE1 | -5.46 | 116.93      | 121.30   |
| 1   | K     | 165 | GLU  | OE1-CD-OE2 | 5.46  | 129.85      | 123.30   |
| 1   | F     | 261 | PHE  | CB-CG-CD2  | -5.46 | 116.98      | 120.80   |
| 1   | K     | 261 | PHE  | CB-CG-CD2  | -5.46 | 116.98      | 120.80   |
| 1   | H     | 165 | GLU  | OE1-CD-OE2 | 5.45  | 129.84      | 123.30   |
| 1   | G     | 165 | GLU  | OE1-CD-OE2 | 5.45  | 129.84      | 123.30   |
| 1   | I     | 237 | ASN  | N-CA-CB    | 5.45  | 120.40      | 110.60   |
| 1   | J     | 66  | TYR  | CG-CD1-CE1 | -5.45 | 116.94      | 121.30   |
| 1   | A     | 165 | GLU  | OE1-CD-OE2 | 5.44  | 129.83      | 123.30   |
| 1   | B     | 165 | GLU  | OE1-CD-OE2 | 5.44  | 129.83      | 123.30   |
| 1   | A     | 237 | ASN  | N-CA-CB    | 5.44  | 120.39      | 110.60   |
| 1   | H     | 237 | ASN  | N-CA-CB    | 5.44  | 120.39      | 110.60   |
| 1   | K     | 237 | ASN  | N-CA-CB    | 5.43  | 120.38      | 110.60   |
| 1   | O     | 237 | ASN  | N-CA-CB    | 5.43  | 120.38      | 110.60   |
| 1   | N     | 237 | ASN  | N-CA-CB    | 5.43  | 120.37      | 110.60   |
| 1   | H     | 66  | TYR  | CG-CD1-CE1 | -5.42 | 116.96      | 121.30   |
| 1   | O     | 261 | PHE  | CB-CG-CD2  | -5.42 | 117.00      | 120.80   |
| 1   | F     | 237 | ASN  | N-CA-CB    | 5.42  | 120.36      | 110.60   |
| 1   | J     | 165 | GLU  | OE1-CD-OE2 | 5.42  | 129.80      | 123.30   |
| 1   | P     | 237 | ASN  | N-CA-CB    | 5.41  | 120.34      | 110.60   |
| 1   | E     | 66  | TYR  | CG-CD1-CE1 | -5.41 | 116.97      | 121.30   |
| 1   | O     | 165 | GLU  | OE1-CD-OE2 | 5.41  | 129.79      | 123.30   |
| 1   | E     | 237 | ASN  | N-CA-CB    | 5.41  | 120.33      | 110.60   |
| 1   | J     | 237 | ASN  | N-CA-CB    | 5.41  | 120.33      | 110.60   |
| 1   | N     | 165 | GLU  | OE1-CD-OE2 | 5.41  | 129.79      | 123.30   |
| 1   | M     | 237 | ASN  | N-CA-CB    | 5.40  | 120.33      | 110.60   |

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| Mol | Chain | Res | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1   | C     | 237 | ASN  | N-CA-CB    | 5.40  | 120.32      | 110.60   |
| 1   | D     | 237 | ASN  | N-CA-CB    | 5.40  | 120.32      | 110.60   |
| 1   | G     | 237 | ASN  | N-CA-CB    | 5.40  | 120.32      | 110.60   |
| 1   | E     | 165 | GLU  | OE1-CD-OE2 | 5.40  | 129.78      | 123.30   |
| 1   | L     | 165 | GLU  | OE1-CD-OE2 | 5.40  | 129.78      | 123.30   |
| 1   | L     | 237 | ASN  | N-CA-CB    | 5.39  | 120.31      | 110.60   |
| 1   | M     | 165 | GLU  | OE1-CD-OE2 | 5.39  | 129.77      | 123.30   |
| 1   | B     | 237 | ASN  | N-CA-CB    | 5.39  | 120.30      | 110.60   |
| 1   | D     | 165 | GLU  | OE1-CD-OE2 | 5.39  | 129.77      | 123.30   |
| 1   | P     | 165 | GLU  | OE1-CD-OE2 | 5.39  | 129.76      | 123.30   |
| 1   | B     | 35  | ARG  | NE-CZ-NH1  | -5.36 | 117.62      | 120.30   |
| 1   | J     | 35  | ARG  | O-C-N      | -5.36 | 114.13      | 122.70   |
| 1   | E     | 35  | ARG  | O-C-N      | -5.35 | 114.14      | 122.70   |
| 1   | G     | 35  | ARG  | O-C-N      | -5.35 | 114.14      | 122.70   |
| 1   | H     | 35  | ARG  | O-C-N      | -5.34 | 114.15      | 122.70   |
| 1   | O     | 35  | ARG  | O-C-N      | -5.34 | 114.16      | 122.70   |
| 1   | A     | 35  | ARG  | O-C-N      | -5.34 | 114.16      | 122.70   |
| 1   | M     | 35  | ARG  | O-C-N      | -5.34 | 114.16      | 122.70   |
| 1   | I     | 35  | ARG  | O-C-N      | -5.34 | 114.16      | 122.70   |
| 1   | M     | 35  | ARG  | NE-CZ-NH1  | -5.33 | 117.64      | 120.30   |
| 1   | P     | 35  | ARG  | O-C-N      | -5.33 | 114.17      | 122.70   |
| 1   | F     | 35  | ARG  | O-C-N      | -5.32 | 114.18      | 122.70   |
| 1   | D     | 35  | ARG  | O-C-N      | -5.32 | 114.19      | 122.70   |
| 1   | L     | 35  | ARG  | O-C-N      | -5.32 | 114.20      | 122.70   |
| 1   | B     | 35  | ARG  | O-C-N      | -5.31 | 114.20      | 122.70   |
| 1   | N     | 35  | ARG  | O-C-N      | -5.31 | 114.20      | 122.70   |
| 1   | K     | 35  | ARG  | O-C-N      | -5.31 | 114.20      | 122.70   |
| 1   | C     | 35  | ARG  | O-C-N      | -5.31 | 114.20      | 122.70   |
| 1   | M     | 43  | TYR  | CG-CD2-CE2 | -5.29 | 117.06      | 121.30   |
| 1   | P     | 35  | ARG  | NE-CZ-NH1  | -5.29 | 117.66      | 120.30   |
| 1   | D     | 35  | ARG  | NE-CZ-NH1  | -5.28 | 117.66      | 120.30   |
| 1   | E     | 289 | THR  | CA-CB-CG2  | -5.27 | 105.02      | 112.40   |
| 1   | J     | 35  | ARG  | NE-CZ-NH1  | -5.26 | 117.67      | 120.30   |
| 1   | J     | 289 | THR  | CA-CB-CG2  | -5.26 | 105.04      | 112.40   |
| 1   | L     | 289 | THR  | CA-CB-CG2  | -5.25 | 105.04      | 112.40   |
| 1   | F     | 289 | THR  | CA-CB-CG2  | -5.25 | 105.05      | 112.40   |
| 1   | P     | 43  | TYR  | CG-CD2-CE2 | -5.25 | 117.10      | 121.30   |
| 1   | B     | 289 | THR  | CA-CB-CG2  | -5.24 | 105.06      | 112.40   |
| 1   | I     | 289 | THR  | CA-CB-CG2  | -5.24 | 105.06      | 112.40   |
| 1   | N     | 35  | ARG  | NE-CZ-NH1  | -5.24 | 117.68      | 120.30   |
| 1   | A     | 35  | ARG  | NE-CZ-NH1  | -5.24 | 117.68      | 120.30   |
| 1   | C     | 289 | THR  | CA-CB-CG2  | -5.24 | 105.06      | 112.40   |

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| Mol | Chain | Res | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1   | P     | 289 | THR  | CA-CB-CG2  | -5.24 | 105.06      | 112.40   |
| 1   | L     | 43  | TYR  | CG-CD2-CE2 | -5.24 | 117.11      | 121.30   |
| 1   | K     | 289 | THR  | CA-CB-CG2  | -5.24 | 105.07      | 112.40   |
| 1   | A     | 43  | TYR  | CG-CD2-CE2 | -5.23 | 117.11      | 121.30   |
| 1   | A     | 289 | THR  | CA-CB-CG2  | -5.23 | 105.07      | 112.40   |
| 1   | O     | 43  | TYR  | CG-CD2-CE2 | -5.23 | 117.11      | 121.30   |
| 1   | F     | 43  | TYR  | CG-CD2-CE2 | -5.23 | 117.11      | 121.30   |
| 1   | M     | 289 | THR  | CA-CB-CG2  | -5.23 | 105.08      | 112.40   |
| 1   | N     | 289 | THR  | CA-CB-CG2  | -5.23 | 105.08      | 112.40   |
| 1   | D     | 43  | TYR  | CG-CD2-CE2 | -5.22 | 117.12      | 121.30   |
| 1   | G     | 289 | THR  | CA-CB-CG2  | -5.22 | 105.09      | 112.40   |
| 1   | H     | 289 | THR  | CA-CB-CG2  | -5.22 | 105.08      | 112.40   |
| 1   | O     | 289 | THR  | CA-CB-CG2  | -5.22 | 105.09      | 112.40   |
| 1   | E     | 43  | TYR  | CG-CD2-CE2 | -5.22 | 117.12      | 121.30   |
| 1   | D     | 289 | THR  | CA-CB-CG2  | -5.21 | 105.10      | 112.40   |
| 1   | G     | 35  | ARG  | NE-CZ-NH1  | -5.21 | 117.69      | 120.30   |
| 1   | K     | 43  | TYR  | CG-CD2-CE2 | -5.21 | 117.13      | 121.30   |
| 1   | C     | 43  | TYR  | CG-CD2-CE2 | -5.20 | 117.14      | 121.30   |
| 1   | K     | 67  | LEU  | CB-CA-C    | 5.20  | 120.08      | 110.20   |
| 1   | B     | 43  | TYR  | CG-CD2-CE2 | -5.20 | 117.14      | 121.30   |
| 1   | G     | 231 | ALA  | N-CA-CB    | 5.20  | 117.37      | 110.10   |
| 1   | C     | 35  | ARG  | NE-CZ-NH1  | -5.19 | 117.70      | 120.30   |
| 1   | I     | 35  | ARG  | NE-CZ-NH1  | -5.19 | 117.70      | 120.30   |
| 1   | M     | 231 | ALA  | N-CA-CB    | 5.19  | 117.37      | 110.10   |
| 1   | N     | 43  | TYR  | CG-CD2-CE2 | -5.19 | 117.14      | 121.30   |
| 1   | E     | 67  | LEU  | CB-CA-C    | 5.19  | 120.06      | 110.20   |
| 1   | J     | 231 | ALA  | N-CA-CB    | 5.19  | 117.37      | 110.10   |
| 1   | D     | 231 | ALA  | N-CA-CB    | 5.19  | 117.37      | 110.10   |
| 1   | G     | 67  | LEU  | CB-CA-C    | 5.19  | 120.06      | 110.20   |
| 1   | H     | 43  | TYR  | CG-CD2-CE2 | -5.19 | 117.15      | 121.30   |
| 1   | G     | 251 | SER  | N-CA-C     | 5.19  | 125.00      | 111.00   |
| 1   | H     | 35  | ARG  | NE-CZ-NH1  | -5.18 | 117.71      | 120.30   |
| 1   | I     | 67  | LEU  | CB-CA-C    | 5.18  | 120.05      | 110.20   |
| 1   | J     | 67  | LEU  | CB-CA-C    | 5.18  | 120.04      | 110.20   |
| 1   | L     | 231 | ALA  | N-CA-CB    | 5.18  | 117.35      | 110.10   |
| 1   | G     | 43  | TYR  | CG-CD2-CE2 | -5.17 | 117.16      | 121.30   |
| 1   | D     | 67  | LEU  | CB-CA-C    | 5.17  | 120.03      | 110.20   |
| 1   | E     | 231 | ALA  | N-CA-CB    | 5.17  | 117.34      | 110.10   |
| 1   | L     | 67  | LEU  | CB-CA-C    | 5.17  | 120.03      | 110.20   |
| 1   | F     | 67  | LEU  | CB-CA-C    | 5.17  | 120.02      | 110.20   |
| 1   | F     | 231 | ALA  | N-CA-CB    | 5.17  | 117.34      | 110.10   |
| 1   | B     | 151 | ASP  | CB-CG-OD1  | -5.17 | 113.65      | 118.30   |

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| Mol | Chain | Res | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1   | C     | 231 | ALA  | N-CA-CB    | 5.16  | 117.33      | 110.10   |
| 1   | H     | 251 | SER  | N-CA-C     | 5.16  | 124.94      | 111.00   |
| 1   | B     | 231 | ALA  | N-CA-CB    | 5.16  | 117.32      | 110.10   |
| 1   | I     | 231 | ALA  | N-CA-CB    | 5.16  | 117.32      | 110.10   |
| 1   | M     | 67  | LEU  | CB-CA-C    | 5.16  | 120.00      | 110.20   |
| 1   | E     | 251 | SER  | N-CA-C     | 5.16  | 124.92      | 111.00   |
| 1   | I     | 251 | SER  | N-CA-C     | 5.16  | 124.92      | 111.00   |
| 1   | A     | 251 | SER  | N-CA-C     | 5.16  | 124.92      | 111.00   |
| 1   | J     | 251 | SER  | N-CA-C     | 5.16  | 124.92      | 111.00   |
| 1   | L     | 251 | SER  | N-CA-C     | 5.16  | 124.92      | 111.00   |
| 1   | N     | 67  | LEU  | CB-CA-C    | 5.16  | 120.00      | 110.20   |
| 1   | N     | 231 | ALA  | N-CA-CB    | 5.16  | 117.32      | 110.10   |
| 1   | F     | 251 | SER  | N-CA-C     | 5.15  | 124.91      | 111.00   |
| 1   | H     | 67  | LEU  | CB-CA-C    | 5.15  | 119.99      | 110.20   |
| 1   | K     | 35  | ARG  | NE-CZ-NH1  | -5.15 | 117.72      | 120.30   |
| 1   | P     | 67  | LEU  | CB-CA-C    | 5.15  | 119.99      | 110.20   |
| 1   | M     | 251 | SER  | N-CA-C     | 5.15  | 124.91      | 111.00   |
| 1   | O     | 251 | SER  | N-CA-C     | 5.15  | 124.91      | 111.00   |
| 1   | P     | 251 | SER  | N-CA-C     | 5.15  | 124.91      | 111.00   |
| 1   | D     | 251 | SER  | N-CA-C     | 5.15  | 124.90      | 111.00   |
| 1   | A     | 151 | ASP  | CB-CG-OD1  | -5.15 | 113.67      | 118.30   |
| 1   | H     | 231 | ALA  | N-CA-CB    | 5.14  | 117.30      | 110.10   |
| 1   | O     | 231 | ALA  | N-CA-CB    | 5.14  | 117.30      | 110.10   |
| 1   | P     | 231 | ALA  | N-CA-CB    | 5.14  | 117.30      | 110.10   |
| 1   | A     | 67  | LEU  | CB-CA-C    | 5.14  | 119.96      | 110.20   |
| 1   | B     | 67  | LEU  | CB-CA-C    | 5.14  | 119.96      | 110.20   |
| 1   | A     | 231 | ALA  | N-CA-CB    | 5.13  | 117.29      | 110.10   |
| 1   | K     | 251 | SER  | N-CA-C     | 5.13  | 124.86      | 111.00   |
| 1   | B     | 251 | SER  | N-CA-C     | 5.13  | 124.86      | 111.00   |
| 1   | C     | 251 | SER  | N-CA-C     | 5.13  | 124.86      | 111.00   |
| 1   | N     | 251 | SER  | N-CA-C     | 5.13  | 124.85      | 111.00   |
| 1   | P     | 43  | TYR  | CB-CG-CD1  | 5.13  | 124.08      | 121.00   |
| 1   | M     | 151 | ASP  | CB-CG-OD1  | -5.13 | 113.68      | 118.30   |
| 1   | L     | 35  | ARG  | NE-CZ-NH1  | -5.13 | 117.74      | 120.30   |
| 1   | N     | 326 | TYR  | CE1-CZ-CE2 | -5.12 | 111.60      | 119.80   |
| 1   | H     | 151 | ASP  | CB-CG-OD1  | -5.12 | 113.69      | 118.30   |
| 1   | J     | 43  | TYR  | CG-CD2-CE2 | -5.12 | 117.20      | 121.30   |
| 1   | C     | 67  | LEU  | CB-CA-C    | 5.12  | 119.93      | 110.20   |
| 1   | K     | 231 | ALA  | N-CA-CB    | 5.12  | 117.27      | 110.10   |
| 1   | D     | 326 | TYR  | CE1-CZ-CE2 | -5.12 | 111.61      | 119.80   |
| 1   | A     | 326 | TYR  | CE1-CZ-CE2 | -5.12 | 111.62      | 119.80   |
| 1   | O     | 151 | ASP  | CB-CG-OD1  | -5.12 | 113.69      | 118.30   |

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| Mol | Chain | Res | Type | Atoms      | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1   | O     | 67  | LEU  | CB-CA-C    | 5.11  | 119.92      | 110.20   |
| 1   | B     | 43  | TYR  | CB-CG-CD1  | 5.11  | 124.07      | 121.00   |
| 1   | B     | 326 | TYR  | CE1-CZ-CE2 | -5.11 | 111.62      | 119.80   |
| 1   | F     | 35  | ARG  | NE-CZ-NH1  | -5.11 | 117.75      | 120.30   |
| 1   | F     | 151 | ASP  | CB-CG-OD1  | -5.11 | 113.70      | 118.30   |
| 1   | I     | 43  | TYR  | CG-CD2-CE2 | -5.11 | 117.22      | 121.30   |
| 1   | J     | 151 | ASP  | CB-CG-OD1  | -5.11 | 113.70      | 118.30   |
| 1   | P     | 326 | TYR  | CE1-CZ-CE2 | -5.11 | 111.63      | 119.80   |
| 1   | M     | 326 | TYR  | CE1-CZ-CE2 | -5.10 | 111.64      | 119.80   |
| 1   | O     | 43  | TYR  | CB-CG-CD1  | 5.10  | 124.06      | 121.00   |
| 1   | E     | 151 | ASP  | CB-CG-OD1  | -5.10 | 113.71      | 118.30   |
| 1   | J     | 326 | TYR  | CE1-CZ-CE2 | -5.10 | 111.65      | 119.80   |
| 1   | K     | 151 | ASP  | CB-CG-OD1  | -5.09 | 113.71      | 118.30   |
| 1   | K     | 326 | TYR  | CE1-CZ-CE2 | -5.09 | 111.65      | 119.80   |
| 1   | H     | 326 | TYR  | CE1-CZ-CE2 | -5.09 | 111.65      | 119.80   |
| 1   | K     | 43  | TYR  | CB-CG-CD1  | 5.09  | 124.06      | 121.00   |
| 1   | O     | 35  | ARG  | NE-CZ-NH1  | -5.09 | 117.75      | 120.30   |
| 1   | D     | 151 | ASP  | CB-CG-OD1  | -5.09 | 113.72      | 118.30   |
| 1   | O     | 326 | TYR  | CE1-CZ-CE2 | -5.08 | 111.67      | 119.80   |
| 1   | F     | 326 | TYR  | CE1-CZ-CE2 | -5.08 | 111.67      | 119.80   |
| 1   | E     | 326 | TYR  | CE1-CZ-CE2 | -5.08 | 111.67      | 119.80   |
| 1   | I     | 151 | ASP  | CB-CG-OD1  | -5.08 | 113.73      | 118.30   |
| 1   | L     | 151 | ASP  | CB-CG-OD1  | -5.08 | 113.73      | 118.30   |
| 1   | C     | 326 | TYR  | CE1-CZ-CE2 | -5.08 | 111.67      | 119.80   |
| 1   | C     | 151 | ASP  | CB-CG-OD1  | -5.08 | 113.73      | 118.30   |
| 1   | G     | 151 | ASP  | CB-CG-OD1  | -5.07 | 113.74      | 118.30   |
| 1   | G     | 326 | TYR  | CE1-CZ-CE2 | -5.07 | 111.69      | 119.80   |
| 1   | L     | 326 | TYR  | CE1-CZ-CE2 | -5.06 | 111.70      | 119.80   |
| 1   | N     | 43  | TYR  | CB-CG-CD1  | 5.06  | 124.04      | 121.00   |
| 1   | F     | 43  | TYR  | CB-CG-CD1  | 5.06  | 124.03      | 121.00   |
| 1   | M     | 43  | TYR  | CB-CG-CD1  | 5.05  | 124.03      | 121.00   |
| 1   | I     | 326 | TYR  | CE1-CZ-CE2 | -5.05 | 111.72      | 119.80   |
| 1   | A     | 43  | TYR  | CB-CG-CD1  | 5.04  | 124.03      | 121.00   |
| 1   | P     | 151 | ASP  | CB-CG-OD1  | -5.04 | 113.76      | 118.30   |
| 1   | N     | 151 | ASP  | CB-CG-OD1  | -5.04 | 113.76      | 118.30   |
| 1   | N     | 233 | SER  | CA-CB-OG   | 5.04  | 124.81      | 111.20   |
| 1   | B     | 233 | SER  | CA-CB-OG   | 5.04  | 124.80      | 111.20   |
| 1   | I     | 43  | TYR  | CB-CG-CD1  | 5.04  | 124.02      | 121.00   |
| 1   | A     | 233 | SER  | CA-CB-OG   | 5.03  | 124.79      | 111.20   |
| 1   | E     | 35  | ARG  | NE-CZ-NH1  | -5.03 | 117.78      | 120.30   |
| 1   | P     | 233 | SER  | CA-CB-OG   | 5.03  | 124.77      | 111.20   |
| 1   | D     | 233 | SER  | CA-CB-OG   | 5.03  | 124.77      | 111.20   |

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| Mol | Chain | Res | Type | Atoms     | Z    | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|------|-------------|----------|
| 1   | J     | 43  | TYR  | CB-CG-CD1 | 5.02 | 124.02      | 121.00   |
| 1   | C     | 43  | TYR  | CB-CG-CD1 | 5.02 | 124.01      | 121.00   |
| 1   | H     | 43  | TYR  | CB-CG-CD1 | 5.02 | 124.01      | 121.00   |
| 1   | C     | 233 | SER  | CA-CB-OG  | 5.02 | 124.75      | 111.20   |
| 1   | O     | 233 | SER  | CA-CB-OG  | 5.02 | 124.75      | 111.20   |
| 1   | L     | 43  | TYR  | CB-CG-CD1 | 5.01 | 124.00      | 121.00   |
| 1   | M     | 233 | SER  | CA-CB-OG  | 5.01 | 124.73      | 111.20   |
| 1   | K     | 233 | SER  | CA-CB-OG  | 5.00 | 124.71      | 111.20   |
| 1   | H     | 233 | SER  | CA-CB-OG  | 5.00 | 124.71      | 111.20   |

All (16) chirality outliers are listed below:

| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 1   | A     | 34  | LYS  | CA   |
| 1   | B     | 34  | LYS  | CA   |
| 1   | C     | 34  | LYS  | CA   |
| 1   | D     | 34  | LYS  | CA   |
| 1   | E     | 34  | LYS  | CA   |
| 1   | F     | 34  | LYS  | CA   |
| 1   | G     | 34  | LYS  | CA   |
| 1   | H     | 34  | LYS  | CA   |
| 1   | I     | 34  | LYS  | CA   |
| 1   | J     | 34  | LYS  | CA   |
| 1   | K     | 34  | LYS  | CA   |
| 1   | L     | 34  | LYS  | CA   |
| 1   | M     | 34  | LYS  | CA   |
| 1   | N     | 34  | LYS  | CA   |
| 1   | O     | 34  | LYS  | CA   |
| 1   | P     | 34  | LYS  | CA   |

All (272) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group             |
|-----|-------|-----|------|-------------------|
| 1   | A     | 100 | SER  | Peptide           |
| 1   | A     | 142 | ASP  | Mainchain,Peptide |
| 1   | A     | 145 | TYR  | Sidechain         |
| 1   | A     | 147 | PHE  | Sidechain         |
| 1   | A     | 168 | ASN  | Peptide           |
| 1   | A     | 220 | LEU  | Mainchain         |
| 1   | A     | 319 | TYR  | Sidechain         |
| 1   | A     | 326 | TYR  | Sidechain         |
| 1   | A     | 33  | ILE  | Mainchain         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> | <b>Group</b>      |
|------------|--------------|------------|-------------|-------------------|
| 1          | A            | 34         | LYS         | Mainchain         |
| 1          | A            | 35         | ARG         | Mainchain         |
| 1          | A            | 43         | TYR         | Sidechain         |
| 1          | A            | 54         | GLY         | Peptide           |
| 1          | A            | 74         | GLU         | Sidechain         |
| 1          | A            | 83         | ASN         | Peptide           |
| 1          | A            | 91         | TYR         | Mainchain         |
| 1          | B            | 100        | SER         | Peptide           |
| 1          | B            | 142        | ASP         | Mainchain,Peptide |
| 1          | B            | 145        | TYR         | Sidechain         |
| 1          | B            | 147        | PHE         | Sidechain         |
| 1          | B            | 168        | ASN         | Peptide           |
| 1          | B            | 220        | LEU         | Mainchain         |
| 1          | B            | 319        | TYR         | Sidechain         |
| 1          | B            | 326        | TYR         | Sidechain         |
| 1          | B            | 33         | ILE         | Mainchain         |
| 1          | B            | 34         | LYS         | Mainchain         |
| 1          | B            | 35         | ARG         | Mainchain         |
| 1          | B            | 43         | TYR         | Sidechain         |
| 1          | B            | 54         | GLY         | Peptide           |
| 1          | B            | 74         | GLU         | Sidechain         |
| 1          | B            | 83         | ASN         | Peptide           |
| 1          | B            | 91         | TYR         | Mainchain         |
| 1          | C            | 100        | SER         | Peptide           |
| 1          | C            | 142        | ASP         | Mainchain,Peptide |
| 1          | C            | 145        | TYR         | Sidechain         |
| 1          | C            | 147        | PHE         | Sidechain         |
| 1          | C            | 168        | ASN         | Peptide           |
| 1          | C            | 220        | LEU         | Mainchain         |
| 1          | C            | 319        | TYR         | Sidechain         |
| 1          | C            | 326        | TYR         | Sidechain         |
| 1          | C            | 33         | ILE         | Mainchain         |
| 1          | C            | 34         | LYS         | Mainchain         |
| 1          | C            | 35         | ARG         | Mainchain         |
| 1          | C            | 43         | TYR         | Sidechain         |
| 1          | C            | 54         | GLY         | Peptide           |
| 1          | C            | 74         | GLU         | Sidechain         |
| 1          | C            | 83         | ASN         | Peptide           |
| 1          | C            | 91         | TYR         | Mainchain         |
| 1          | D            | 100        | SER         | Peptide           |
| 1          | D            | 142        | ASP         | Mainchain,Peptide |
| 1          | D            | 145        | TYR         | Sidechain         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> | <b>Group</b>      |
|------------|--------------|------------|-------------|-------------------|
| 1          | D            | 147        | PHE         | Sidechain         |
| 1          | D            | 168        | ASN         | Peptide           |
| 1          | D            | 220        | LEU         | Mainchain         |
| 1          | D            | 319        | TYR         | Sidechain         |
| 1          | D            | 326        | TYR         | Sidechain         |
| 1          | D            | 33         | ILE         | Mainchain         |
| 1          | D            | 34         | LYS         | Mainchain         |
| 1          | D            | 35         | ARG         | Mainchain         |
| 1          | D            | 43         | TYR         | Sidechain         |
| 1          | D            | 54         | GLY         | Peptide           |
| 1          | D            | 74         | GLU         | Sidechain         |
| 1          | D            | 83         | ASN         | Peptide           |
| 1          | D            | 91         | TYR         | Mainchain         |
| 1          | E            | 100        | SER         | Peptide           |
| 1          | E            | 142        | ASP         | Mainchain,Peptide |
| 1          | E            | 145        | TYR         | Sidechain         |
| 1          | E            | 147        | PHE         | Sidechain         |
| 1          | E            | 168        | ASN         | Peptide           |
| 1          | E            | 220        | LEU         | Mainchain         |
| 1          | E            | 319        | TYR         | Sidechain         |
| 1          | E            | 326        | TYR         | Sidechain         |
| 1          | E            | 33         | ILE         | Mainchain         |
| 1          | E            | 34         | LYS         | Mainchain         |
| 1          | E            | 35         | ARG         | Mainchain         |
| 1          | E            | 43         | TYR         | Sidechain         |
| 1          | E            | 54         | GLY         | Peptide           |
| 1          | E            | 74         | GLU         | Sidechain         |
| 1          | E            | 83         | ASN         | Peptide           |
| 1          | E            | 91         | TYR         | Mainchain         |
| 1          | F            | 100        | SER         | Peptide           |
| 1          | F            | 142        | ASP         | Mainchain,Peptide |
| 1          | F            | 145        | TYR         | Sidechain         |
| 1          | F            | 147        | PHE         | Sidechain         |
| 1          | F            | 168        | ASN         | Peptide           |
| 1          | F            | 220        | LEU         | Mainchain         |
| 1          | F            | 319        | TYR         | Sidechain         |
| 1          | F            | 326        | TYR         | Sidechain         |
| 1          | F            | 33         | ILE         | Mainchain         |
| 1          | F            | 34         | LYS         | Mainchain         |
| 1          | F            | 35         | ARG         | Mainchain         |
| 1          | F            | 43         | TYR         | Sidechain         |
| 1          | F            | 54         | GLY         | Peptide           |

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| Mol | Chain | Res | Type | Group             |
|-----|-------|-----|------|-------------------|
| 1   | F     | 74  | GLU  | Sidechain         |
| 1   | F     | 83  | ASN  | Peptide           |
| 1   | F     | 91  | TYR  | Mainchain         |
| 1   | G     | 100 | SER  | Peptide           |
| 1   | G     | 142 | ASP  | Mainchain,Peptide |
| 1   | G     | 145 | TYR  | Sidechain         |
| 1   | G     | 147 | PHE  | Sidechain         |
| 1   | G     | 168 | ASN  | Peptide           |
| 1   | G     | 220 | LEU  | Mainchain         |
| 1   | G     | 319 | TYR  | Sidechain         |
| 1   | G     | 326 | TYR  | Sidechain         |
| 1   | G     | 33  | ILE  | Mainchain         |
| 1   | G     | 34  | LYS  | Mainchain         |
| 1   | G     | 35  | ARG  | Mainchain         |
| 1   | G     | 43  | TYR  | Sidechain         |
| 1   | G     | 54  | GLY  | Peptide           |
| 1   | G     | 74  | GLU  | Sidechain         |
| 1   | G     | 83  | ASN  | Peptide           |
| 1   | G     | 91  | TYR  | Mainchain         |
| 1   | H     | 100 | SER  | Peptide           |
| 1   | H     | 142 | ASP  | Mainchain,Peptide |
| 1   | H     | 145 | TYR  | Sidechain         |
| 1   | H     | 147 | PHE  | Sidechain         |
| 1   | H     | 168 | ASN  | Peptide           |
| 1   | H     | 220 | LEU  | Mainchain         |
| 1   | H     | 319 | TYR  | Sidechain         |
| 1   | H     | 326 | TYR  | Sidechain         |
| 1   | H     | 33  | ILE  | Mainchain         |
| 1   | H     | 34  | LYS  | Mainchain         |
| 1   | H     | 35  | ARG  | Mainchain         |
| 1   | H     | 43  | TYR  | Sidechain         |
| 1   | H     | 54  | GLY  | Peptide           |
| 1   | H     | 74  | GLU  | Sidechain         |
| 1   | H     | 83  | ASN  | Peptide           |
| 1   | H     | 91  | TYR  | Mainchain         |
| 1   | I     | 100 | SER  | Peptide           |
| 1   | I     | 142 | ASP  | Mainchain,Peptide |
| 1   | I     | 145 | TYR  | Sidechain         |
| 1   | I     | 147 | PHE  | Sidechain         |
| 1   | I     | 168 | ASN  | Peptide           |
| 1   | I     | 220 | LEU  | Mainchain         |
| 1   | I     | 319 | TYR  | Sidechain         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> | <b>Group</b>      |
|------------|--------------|------------|-------------|-------------------|
| 1          | I            | 326        | TYR         | Sidechain         |
| 1          | I            | 33         | ILE         | Mainchain         |
| 1          | I            | 34         | LYS         | Mainchain         |
| 1          | I            | 35         | ARG         | Mainchain         |
| 1          | I            | 43         | TYR         | Sidechain         |
| 1          | I            | 54         | GLY         | Peptide           |
| 1          | I            | 74         | GLU         | Sidechain         |
| 1          | I            | 83         | ASN         | Peptide           |
| 1          | I            | 91         | TYR         | Mainchain         |
| 1          | J            | 100        | SER         | Peptide           |
| 1          | J            | 142        | ASP         | Mainchain,Peptide |
| 1          | J            | 145        | TYR         | Sidechain         |
| 1          | J            | 147        | PHE         | Sidechain         |
| 1          | J            | 168        | ASN         | Peptide           |
| 1          | J            | 220        | LEU         | Mainchain         |
| 1          | J            | 319        | TYR         | Sidechain         |
| 1          | J            | 326        | TYR         | Sidechain         |
| 1          | J            | 33         | ILE         | Mainchain         |
| 1          | J            | 34         | LYS         | Mainchain         |
| 1          | J            | 35         | ARG         | Mainchain         |
| 1          | J            | 43         | TYR         | Sidechain         |
| 1          | J            | 54         | GLY         | Peptide           |
| 1          | J            | 74         | GLU         | Sidechain         |
| 1          | J            | 83         | ASN         | Peptide           |
| 1          | J            | 91         | TYR         | Mainchain         |
| 1          | K            | 100        | SER         | Peptide           |
| 1          | K            | 142        | ASP         | Mainchain,Peptide |
| 1          | K            | 145        | TYR         | Sidechain         |
| 1          | K            | 147        | PHE         | Sidechain         |
| 1          | K            | 168        | ASN         | Peptide           |
| 1          | K            | 220        | LEU         | Mainchain         |
| 1          | K            | 319        | TYR         | Sidechain         |
| 1          | K            | 326        | TYR         | Sidechain         |
| 1          | K            | 33         | ILE         | Mainchain         |
| 1          | K            | 34         | LYS         | Mainchain         |
| 1          | K            | 35         | ARG         | Mainchain         |
| 1          | K            | 43         | TYR         | Sidechain         |
| 1          | K            | 54         | GLY         | Peptide           |
| 1          | K            | 74         | GLU         | Sidechain         |
| 1          | K            | 83         | ASN         | Peptide           |
| 1          | K            | 91         | TYR         | Mainchain         |
| 1          | L            | 100        | SER         | Peptide           |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> | <b>Group</b>      |
|------------|--------------|------------|-------------|-------------------|
| 1          | L            | 142        | ASP         | Mainchain,Peptide |
| 1          | L            | 145        | TYR         | Sidechain         |
| 1          | L            | 147        | PHE         | Sidechain         |
| 1          | L            | 168        | ASN         | Peptide           |
| 1          | L            | 220        | LEU         | Mainchain         |
| 1          | L            | 319        | TYR         | Sidechain         |
| 1          | L            | 326        | TYR         | Sidechain         |
| 1          | L            | 33         | ILE         | Mainchain         |
| 1          | L            | 34         | LYS         | Mainchain         |
| 1          | L            | 35         | ARG         | Mainchain         |
| 1          | L            | 43         | TYR         | Sidechain         |
| 1          | L            | 54         | GLY         | Peptide           |
| 1          | L            | 74         | GLU         | Sidechain         |
| 1          | L            | 83         | ASN         | Peptide           |
| 1          | L            | 91         | TYR         | Mainchain         |
| 1          | M            | 100        | SER         | Peptide           |
| 1          | M            | 142        | ASP         | Mainchain,Peptide |
| 1          | M            | 145        | TYR         | Sidechain         |
| 1          | M            | 147        | PHE         | Sidechain         |
| 1          | M            | 168        | ASN         | Peptide           |
| 1          | M            | 220        | LEU         | Mainchain         |
| 1          | M            | 319        | TYR         | Sidechain         |
| 1          | M            | 326        | TYR         | Sidechain         |
| 1          | M            | 33         | ILE         | Mainchain         |
| 1          | M            | 34         | LYS         | Mainchain         |
| 1          | M            | 35         | ARG         | Mainchain         |
| 1          | M            | 43         | TYR         | Sidechain         |
| 1          | M            | 54         | GLY         | Peptide           |
| 1          | M            | 74         | GLU         | Sidechain         |
| 1          | M            | 83         | ASN         | Peptide           |
| 1          | M            | 91         | TYR         | Mainchain         |
| 1          | N            | 100        | SER         | Peptide           |
| 1          | N            | 142        | ASP         | Mainchain,Peptide |
| 1          | N            | 145        | TYR         | Sidechain         |
| 1          | N            | 147        | PHE         | Sidechain         |
| 1          | N            | 168        | ASN         | Peptide           |
| 1          | N            | 220        | LEU         | Mainchain         |
| 1          | N            | 319        | TYR         | Sidechain         |
| 1          | N            | 326        | TYR         | Sidechain         |
| 1          | N            | 33         | ILE         | Mainchain         |
| 1          | N            | 34         | LYS         | Mainchain         |
| 1          | N            | 35         | ARG         | Mainchain         |

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| Mol | Chain | Res | Type | Group             |
|-----|-------|-----|------|-------------------|
| 1   | N     | 43  | TYR  | Sidechain         |
| 1   | N     | 54  | GLY  | Peptide           |
| 1   | N     | 74  | GLU  | Sidechain         |
| 1   | N     | 83  | ASN  | Peptide           |
| 1   | N     | 91  | TYR  | Mainchain         |
| 1   | O     | 100 | SER  | Peptide           |
| 1   | O     | 142 | ASP  | Mainchain,Peptide |
| 1   | O     | 145 | TYR  | Sidechain         |
| 1   | O     | 147 | PHE  | Sidechain         |
| 1   | O     | 168 | ASN  | Peptide           |
| 1   | O     | 220 | LEU  | Mainchain         |
| 1   | O     | 319 | TYR  | Sidechain         |
| 1   | O     | 326 | TYR  | Sidechain         |
| 1   | O     | 33  | ILE  | Mainchain         |
| 1   | O     | 34  | LYS  | Mainchain         |
| 1   | O     | 35  | ARG  | Mainchain         |
| 1   | O     | 43  | TYR  | Sidechain         |
| 1   | O     | 54  | GLY  | Peptide           |
| 1   | O     | 74  | GLU  | Sidechain         |
| 1   | O     | 83  | ASN  | Peptide           |
| 1   | O     | 91  | TYR  | Mainchain         |
| 1   | P     | 100 | SER  | Peptide           |
| 1   | P     | 142 | ASP  | Mainchain,Peptide |
| 1   | P     | 145 | TYR  | Sidechain         |
| 1   | P     | 147 | PHE  | Sidechain         |
| 1   | P     | 168 | ASN  | Peptide           |
| 1   | P     | 220 | LEU  | Mainchain         |
| 1   | P     | 319 | TYR  | Sidechain         |
| 1   | P     | 326 | TYR  | Sidechain         |
| 1   | P     | 33  | ILE  | Mainchain         |
| 1   | P     | 34  | LYS  | Mainchain         |
| 1   | P     | 35  | ARG  | Mainchain         |
| 1   | P     | 43  | TYR  | Sidechain         |
| 1   | P     | 54  | GLY  | Peptide           |
| 1   | P     | 74  | GLU  | Sidechain         |
| 1   | P     | 83  | ASN  | Peptide           |
| 1   | P     | 91  | TYR  | Mainchain         |

## 5.2 Too-close contacts

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     | 2547  | 0        | 2571     | 895     | 0            |
| 1   | B     | 2547  | 0        | 2566     | 1086    | 0            |
| 1   | C     | 2547  | 0        | 2566     | 1091    | 0            |
| 1   | D     | 2547  | 0        | 2573     | 795     | 0            |
| 1   | E     | 2547  | 0        | 2569     | 813     | 0            |
| 1   | F     | 2547  | 0        | 2556     | 1325    | 0            |
| 1   | G     | 2547  | 0        | 2554     | 1296    | 0            |
| 1   | H     | 2547  | 0        | 2564     | 1122    | 0            |
| 1   | I     | 2547  | 0        | 2563     | 1066    | 0            |
| 1   | J     | 2547  | 0        | 2553     | 1244    | 0            |
| 1   | K     | 2547  | 0        | 2554     | 1273    | 0            |
| 1   | L     | 2547  | 0        | 2569     | 822     | 0            |
| 1   | M     | 2547  | 0        | 2573     | 807     | 0            |
| 1   | N     | 2547  | 0        | 2563     | 1042    | 0            |
| 1   | O     | 2547  | 0        | 2565     | 1048    | 0            |
| 1   | P     | 2547  | 0        | 2572     | 902     | 0            |
| All | All   | 40752 | 0        | 41031    | 12900   | 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 158.

All (12900) 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:C:225:LEU:HD22 | 1:D:300:TYR:CE2  | 1.35                     | 1.62              |
| 1:B:46:GLU:HB2   | 1:C:324:ALA:CB   | 1.30                     | 1.61              |
| 1:O:300:TYR:CA   | 1:P:227:THR:HG23 | 1.19                     | 1.61              |
| 1:A:46:GLU:HB2   | 1:B:324:ALA:CB   | 1.30                     | 1.61              |
| 1:C:46:GLU:HB2   | 1:D:324:ALA:CB   | 1.30                     | 1.61              |
| 1:M:300:TYR:CE2  | 1:N:225:LEU:HD22 | 1.35                     | 1.61              |
| 1:J:277:ASP:CB   | 1:K:219:ASP:HA   | 1.16                     | 1.60              |
| 1:B:225:LEU:HD22 | 1:C:300:TYR:CE2  | 1.34                     | 1.60              |
| 1:E:219:ASP:CA   | 1:F:277:ASP:HB3  | 1.13                     | 1.60              |
| 1:I:277:ASP:CB   | 1:J:219:ASP:HA   | 1.16                     | 1.60              |
| 1:N:300:TYR:CA   | 1:O:227:THR:HG23 | 1.19                     | 1.60              |
| 1:F:219:ASP:CA   | 1:G:277:ASP:HB3  | 1.13                     | 1.60              |
| 1:N:300:TYR:CE2  | 1:O:225:LEU:HD22 | 1.34                     | 1.60              |
| 1:E:219:ASP:HA   | 1:F:277:ASP:CB   | 1.16                     | 1.60              |
| 1:I:277:ASP:HB3  | 1:J:219:ASP:CA   | 1.13                     | 1.60              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:240:MET:CE   | 1:F:73:VAL:CG2   | 1.75                     | 1.59              |
| 1:M:300:TYR:CA   | 1:N:227:THR:HG23 | 1.19                     | 1.59              |
| 1:O:324:ALA:CB   | 1:P:46:GLU:HB2   | 1.30                     | 1.59              |
| 1:G:219:ASP:HA   | 1:H:277:ASP:CB   | 1.16                     | 1.58              |
| 1:O:324:ALA:CB   | 1:P:46:GLU:CB    | 1.81                     | 1.58              |
| 1:N:324:ALA:CB   | 1:O:46:GLU:HB2   | 1.30                     | 1.58              |
| 1:N:324:ALA:CB   | 1:O:46:GLU:CB    | 1.81                     | 1.58              |
| 1:K:277:ASP:CB   | 1:L:219:ASP:HA   | 1.16                     | 1.58              |
| 1:A:225:LEU:HD22 | 1:B:300:TYR:CE2  | 1.34                     | 1.57              |
| 1:M:324:ALA:CB   | 1:N:46:GLU:HB2   | 1.30                     | 1.57              |
| 1:G:219:ASP:CA   | 1:H:277:ASP:HB3  | 1.13                     | 1.57              |
| 1:J:323:VAL:CG1  | 1:K:50:ILE:CG2   | 1.79                     | 1.57              |
| 1:F:203:GLU:HG3  | 1:I:198:GLU:CG   | 1.30                     | 1.57              |
| 1:O:300:TYR:CE2  | 1:P:225:LEU:HD22 | 1.34                     | 1.57              |
| 1:K:277:ASP:HB3  | 1:L:219:ASP:CA   | 1.13                     | 1.57              |
| 1:C:227:THR:HG23 | 1:D:300:TYR:CA   | 1.19                     | 1.57              |
| 1:J:277:ASP:HB3  | 1:K:219:ASP:CA   | 1.13                     | 1.56              |
| 1:B:227:THR:HG23 | 1:C:300:TYR:CA   | 1.19                     | 1.56              |
| 1:F:50:ILE:CG2   | 1:G:323:VAL:CG1  | 1.79                     | 1.56              |
| 1:F:219:ASP:HA   | 1:G:277:ASP:CB   | 1.16                     | 1.55              |
| 1:J:73:VAL:HG21  | 1:N:240:MET:CE   | 1.34                     | 1.55              |
| 1:A:46:GLU:CB    | 1:B:324:ALA:CB   | 1.81                     | 1.55              |
| 1:A:227:THR:HG23 | 1:B:300:TYR:CA   | 1.19                     | 1.55              |
| 1:B:247:ASP:C    | 1:F:52:ILE:HD12  | 1.22                     | 1.55              |
| 1:M:324:ALA:CB   | 1:N:46:GLU:CB    | 1.81                     | 1.55              |
| 1:C:246:ILE:CD1  | 1:H:320:LYS:HA   | 1.26                     | 1.54              |
| 1:G:50:ILE:CG2   | 1:H:323:VAL:CG1  | 1.79                     | 1.54              |
| 1:J:73:VAL:CG2   | 1:N:240:MET:CE   | 1.82                     | 1.53              |
| 1:K:323:VAL:CG1  | 1:L:50:ILE:CG2   | 1.79                     | 1.53              |
| 1:E:50:ILE:CG2   | 1:F:323:VAL:CG1  | 1.79                     | 1.53              |
| 1:N:324:ALA:HB2  | 1:O:46:GLU:CA    | 1.09                     | 1.52              |
| 1:I:323:VAL:CG1  | 1:J:50:ILE:CG2   | 1.79                     | 1.52              |
| 1:B:46:GLU:CB    | 1:C:324:ALA:CB   | 1.81                     | 1.52              |
| 1:F:274:PHE:CE1  | 1:I:204:HIS:CD2  | 1.95                     | 1.52              |
| 1:I:323:VAL:CG1  | 1:J:50:ILE:HG22  | 1.37                     | 1.52              |
| 1:C:46:GLU:CB    | 1:D:324:ALA:CB   | 1.81                     | 1.51              |
| 1:H:198:GLU:CG   | 1:K:203:GLU:HG3  | 1.32                     | 1.51              |
| 1:H:204:HIS:CD2  | 1:K:274:PHE:CE1  | 1.98                     | 1.50              |
| 1:C:246:ILE:CD1  | 1:G:50:ILE:HG23  | 1.41                     | 1.50              |
| 1:G:198:GLU:CG   | 1:J:203:GLU:HG3  | 1.37                     | 1.50              |
| 1:G:272:ARG:HG3  | 1:J:203:GLU:N    | 1.26                     | 1.50              |

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| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:C:240:MET:C    | 1:H:166:GLN:HG2 | 1.24                     | 1.49              |
| 1:B:46:GLU:CA    | 1:C:324:ALA:HB2 | 1.09                     | 1.49              |
| 1:F:272:ARG:HG3  | 1:I:203:GLU:N   | 1.25                     | 1.49              |
| 1:G:203:GLU:HG3  | 1:J:198:GLU:CG  | 1.38                     | 1.49              |
| 1:H:204:HIS:NE2  | 1:K:274:PHE:CD1 | 1.80                     | 1.49              |
| 1:A:46:GLU:CA    | 1:B:324:ALA:HB2 | 1.09                     | 1.49              |
| 1:F:198:GLU:CG   | 1:I:203:GLU:HG3 | 1.40                     | 1.49              |
| 1:O:324:ALA:HB2  | 1:P:46:GLU:CA   | 1.09                     | 1.49              |
| 1:C:79:THR:CG2   | 1:D:192:CYS:HB3 | 1.44                     | 1.48              |
| 1:O:192:CYS:HB3  | 1:P:79:THR:CG2  | 1.44                     | 1.48              |
| 1:G:274:PHE:HE1  | 1:J:204:HIS:CD2 | 1.31                     | 1.48              |
| 1:N:192:CYS:HB3  | 1:O:79:THR:CG2  | 1.43                     | 1.48              |
| 1:B:79:THR:CG2   | 1:C:192:CYS:HB3 | 1.44                     | 1.48              |
| 1:C:46:GLU:CA    | 1:D:324:ALA:HB2 | 1.09                     | 1.48              |
| 1:L:50:ILE:HG23  | 1:P:246:ILE:CD1 | 1.33                     | 1.47              |
| 1:M:192:CYS:HB3  | 1:N:79:THR:CG2  | 1.44                     | 1.47              |
| 1:A:79:THR:CG2   | 1:B:192:CYS:HB3 | 1.44                     | 1.47              |
| 1:F:274:PHE:CD1  | 1:I:204:HIS:NE2 | 1.78                     | 1.47              |
| 1:G:204:HIS:CD2  | 1:J:274:PHE:HE1 | 1.31                     | 1.47              |
| 1:C:246:ILE:HD13 | 1:G:50:ILE:CG2  | 1.14                     | 1.47              |
| 1:F:203:GLU:N    | 1:I:272:ARG:HG3 | 1.25                     | 1.47              |
| 1:C:246:ILE:CD1  | 1:G:50:ILE:N    | 1.75                     | 1.47              |
| 1:F:71:GLN:NE2   | 1:G:168:ASN:CB  | 1.76                     | 1.47              |
| 1:G:71:GLN:NE2   | 1:H:168:ASN:HB3 | 1.19                     | 1.46              |
| 1:H:204:HIS:NE2  | 1:K:274:PHE:CE1 | 1.80                     | 1.46              |
| 1:H:204:HIS:CD2  | 1:K:274:PHE:HE1 | 1.27                     | 1.46              |
| 1:H:203:GLU:N    | 1:K:272:ARG:HG3 | 1.28                     | 1.46              |
| 1:J:168:ASN:CB   | 1:K:71:GLN:NE2  | 1.76                     | 1.46              |
| 1:F:71:GLN:NE2   | 1:G:168:ASN:HB3 | 1.19                     | 1.45              |
| 1:L:52:ILE:HD12  | 1:P:247:ASP:C   | 1.16                     | 1.45              |
| 1:M:320:LYS:CE   | 1:N:50:ILE:HG12 | 0.99                     | 1.45              |
| 1:G:274:PHE:CE1  | 1:J:204:HIS:CD2 | 2.05                     | 1.45              |
| 1:E:71:GLN:NE2   | 1:F:168:ASN:CB  | 1.76                     | 1.45              |
| 1:N:320:LYS:CE   | 1:O:50:ILE:HG12 | 0.99                     | 1.45              |
| 1:H:272:ARG:HG3  | 1:K:203:GLU:N   | 1.27                     | 1.45              |
| 1:I:168:ASN:HB3  | 1:J:71:GLN:NE2  | 1.19                     | 1.45              |
| 1:K:52:ILE:HD12  | 1:O:247:ASP:C   | 1.16                     | 1.45              |
| 1:B:50:ILE:N     | 1:C:320:LYS:HG2 | 1.19                     | 1.45              |
| 1:C:50:ILE:HG12  | 1:D:320:LYS:CE  | 0.99                     | 1.45              |
| 1:E:71:GLN:NE2   | 1:F:168:ASN:HB3 | 1.19                     | 1.45              |
| 1:G:204:HIS:CD2  | 1:J:274:PHE:CE1 | 2.05                     | 1.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:49:TYR:CE1   | 1:G:320:LYS:HB3  | 1.52                     | 1.44              |
| 1:G:224:ASN:ND2  | 1:H:275:LYS:HZ2  | 1.10                     | 1.44              |
| 1:J:168:ASN:HB3  | 1:K:71:GLN:NE2   | 1.19                     | 1.44              |
| 1:K:320:LYS:HB3  | 1:L:49:TYR:CE1   | 1.52                     | 1.44              |
| 1:O:300:TYR:N    | 1:P:227:THR:CG2  | 1.81                     | 1.44              |
| 1:O:320:LYS:CE   | 1:P:50:ILE:HG12  | 0.99                     | 1.44              |
| 1:I:168:ASN:CB   | 1:J:71:GLN:NE2   | 1.76                     | 1.44              |
| 1:N:300:TYR:N    | 1:O:227:THR:CG2  | 1.81                     | 1.44              |
| 1:G:71:GLN:NE2   | 1:H:168:ASN:CB   | 1.76                     | 1.44              |
| 1:K:168:ASN:HB3  | 1:L:71:GLN:NE2   | 1.19                     | 1.44              |
| 1:M:300:TYR:N    | 1:N:227:THR:CG2  | 1.81                     | 1.44              |
| 1:O:320:LYS:HG2  | 1:P:50:ILE:N     | 1.19                     | 1.44              |
| 1:A:50:ILE:HG12  | 1:B:320:LYS:CE   | 0.99                     | 1.44              |
| 1:F:274:PHE:CE1  | 1:I:204:HIS:NE2  | 1.80                     | 1.44              |
| 1:B:50:ILE:HG12  | 1:C:320:LYS:CE   | 0.99                     | 1.44              |
| 1:M:320:LYS:HG2  | 1:N:50:ILE:N     | 1.19                     | 1.44              |
| 1:M:324:ALA:HB2  | 1:N:46:GLU:CA    | 1.09                     | 1.44              |
| 1:C:227:THR:CG2  | 1:D:300:TYR:N    | 1.81                     | 1.43              |
| 1:J:320:LYS:HB3  | 1:K:49:TYR:CE1   | 1.52                     | 1.43              |
| 1:F:224:ASN:ND2  | 1:G:275:LYS:HZ2  | 1.13                     | 1.43              |
| 1:F:274:PHE:HE1  | 1:I:204:HIS:CD2  | 1.25                     | 1.43              |
| 1:H:203:GLU:HG3  | 1:K:198:GLU:CG   | 1.43                     | 1.43              |
| 1:I:275:LYS:HZ2  | 1:J:224:ASN:ND2  | 1.13                     | 1.43              |
| 1:I:300:TYR:CE2  | 1:J:225:LEU:HD13 | 1.53                     | 1.43              |
| 1:I:320:LYS:HB3  | 1:J:49:TYR:CE1   | 1.52                     | 1.43              |
| 1:G:225:LEU:HD13 | 1:H:300:TYR:CE2  | 1.53                     | 1.43              |
| 1:K:50:ILE:HG23  | 1:O:246:ILE:CD1  | 1.29                     | 1.43              |
| 1:K:168:ASN:CB   | 1:L:71:GLN:NE2   | 1.76                     | 1.43              |
| 1:K:275:LYS:HZ2  | 1:L:224:ASN:ND2  | 1.11                     | 1.43              |
| 1:M:320:LYS:HE2  | 1:N:50:ILE:CG1   | 0.98                     | 1.43              |
| 1:B:227:THR:CG2  | 1:C:300:TYR:N    | 1.81                     | 1.43              |
| 1:E:49:TYR:CE1   | 1:F:320:LYS:HB3  | 1.52                     | 1.43              |
| 1:N:320:LYS:HE2  | 1:O:50:ILE:CG1   | 0.98                     | 1.43              |
| 1:A:227:THR:CG2  | 1:B:300:TYR:N    | 1.81                     | 1.42              |
| 1:B:246:ILE:CD1  | 1:F:50:ILE:HG23  | 1.33                     | 1.42              |
| 1:E:218:THR:HB   | 1:F:278:GLN:CD   | 1.38                     | 1.42              |
| 1:J:300:TYR:CE2  | 1:K:225:LEU:HD13 | 1.52                     | 1.42              |
| 1:B:245:GLU:HB3  | 1:F:75:ASP:CA    | 1.48                     | 1.42              |
| 1:F:225:LEU:HD13 | 1:G:300:TYR:CE2  | 1.52                     | 1.42              |
| 1:L:52:ILE:CD1   | 1:P:247:ASP:C    | 1.87                     | 1.42              |
| 1:C:232:GLU:N    | 1:H:308:ASN:ND2  | 1.60                     | 1.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:204:HIS:CD2  | 1:I:274:PHE:HE1  | 1.38                     | 1.42              |
| 1:F:218:THR:HB   | 1:G:278:GLN:CD   | 1.38                     | 1.42              |
| 1:K:278:GLN:CD   | 1:L:218:THR:HB   | 1.38                     | 1.42              |
| 1:O:320:LYS:HE2  | 1:P:50:ILE:CG1   | 0.97                     | 1.42              |
| 1:A:50:ILE:CG1   | 1:B:320:LYS:HE2  | 0.98                     | 1.42              |
| 1:E:224:ASN:ND2  | 1:F:275:LYS:HZ2  | 1.13                     | 1.42              |
| 1:G:274:PHE:CD1  | 1:J:204:HIS:NE2  | 1.82                     | 1.42              |
| 1:B:50:ILE:CG1   | 1:C:320:LYS:HE2  | 0.98                     | 1.42              |
| 1:C:50:ILE:CG1   | 1:D:320:LYS:HE2  | 0.98                     | 1.42              |
| 1:J:323:VAL:CG1  | 1:K:50:ILE:HG22  | 1.37                     | 1.42              |
| 1:K:323:VAL:CG1  | 1:L:50:ILE:HG22  | 1.37                     | 1.42              |
| 1:L:75:ASP:CA    | 1:P:245:GLU:HB3  | 1.48                     | 1.42              |
| 1:G:49:TYR:CE1   | 1:H:320:LYS:HB3  | 1.52                     | 1.41              |
| 1:G:218:THR:HB   | 1:H:278:GLN:CD   | 1.38                     | 1.41              |
| 1:K:50:ILE:O     | 1:O:246:ILE:CA   | 1.66                     | 1.41              |
| 1:K:300:TYR:CE2  | 1:L:225:LEU:HD13 | 1.53                     | 1.41              |
| 1:E:225:LEU:HD13 | 1:F:300:TYR:CE2  | 1.52                     | 1.41              |
| 1:G:204:HIS:NE2  | 1:J:274:PHE:CD1  | 1.82                     | 1.41              |
| 1:J:275:LYS:HZ2  | 1:K:224:ASN:ND2  | 1.15                     | 1.41              |
| 1:N:320:LYS:HG2  | 1:O:50:ILE:N     | 1.19                     | 1.41              |
| 1:G:203:GLU:N    | 1:J:272:ARG:HG3  | 1.27                     | 1.41              |
| 1:J:278:GLN:CD   | 1:K:218:THR:HB   | 1.38                     | 1.41              |
| 1:M:299:THR:C    | 1:N:227:THR:CG2  | 1.86                     | 1.41              |
| 1:O:299:THR:C    | 1:P:227:THR:CG2  | 1.86                     | 1.41              |
| 1:E:50:ILE:HG22  | 1:F:323:VAL:CG1  | 1.37                     | 1.41              |
| 1:H:274:PHE:HE1  | 1:K:204:HIS:CD2  | 1.39                     | 1.41              |
| 1:N:299:THR:C    | 1:O:227:THR:CG2  | 1.86                     | 1.41              |
| 1:I:73:VAL:HG21  | 1:M:240:MET:CE   | 1.49                     | 1.40              |
| 1:C:227:THR:CG2  | 1:D:299:THR:C    | 1.86                     | 1.40              |
| 1:F:198:GLU:HG3  | 1:I:203:GLU:CG   | 1.48                     | 1.40              |
| 1:G:48:GLY:HA3   | 1:H:325:LYS:CG   | 1.42                     | 1.40              |
| 1:K:168:ASN:HD22 | 1:L:71:GLN:CD    | 1.24                     | 1.40              |
| 1:B:246:ILE:CA   | 1:F:50:ILE:O     | 1.69                     | 1.40              |
| 1:G:218:THR:OG1  | 1:H:278:GLN:CG   | 1.69                     | 1.40              |
| 1:J:308:ASN:ND2  | 1:O:231:ALA:N    | 1.69                     | 1.40              |
| 1:B:227:THR:CG2  | 1:C:299:THR:C    | 1.86                     | 1.40              |
| 1:F:204:HIS:NE2  | 1:I:274:PHE:CD1  | 1.83                     | 1.40              |
| 1:I:278:GLN:CD   | 1:J:218:THR:HB   | 1.38                     | 1.40              |
| 1:B:246:ILE:CD1  | 1:G:320:LYS:HA   | 1.51                     | 1.40              |
| 1:F:204:HIS:CD2  | 1:I:274:PHE:CE1  | 2.10                     | 1.40              |
| 1:I:308:ASN:ND2  | 1:N:231:ALA:N    | 1.65                     | 1.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:227:THR:CG2  | 1:B:299:THR:C    | 1.86                     | 1.39              |
| 1:E:50:ILE:CG2   | 1:F:323:VAL:HG11 | 0.91                     | 1.39              |
| 1:E:71:GLN:CD    | 1:F:168:ASN:HD22 | 1.23                     | 1.39              |
| 1:J:168:ASN:HD22 | 1:K:71:GLN:CD    | 1.23                     | 1.39              |
| 1:F:50:ILE:HG22  | 1:G:323:VAL:CG1  | 1.36                     | 1.39              |
| 1:A:47:ASP:HA    | 1:B:323:VAL:CG2  | 1.36                     | 1.39              |
| 1:A:50:ILE:N     | 1:B:320:LYS:HG2  | 1.19                     | 1.39              |
| 1:B:241:LYS:HB2  | 1:G:166:GLN:NE2  | 1.36                     | 1.39              |
| 1:E:218:THR:OG1  | 1:F:278:GLN:CG   | 1.69                     | 1.39              |
| 1:F:48:GLY:HA3   | 1:G:325:LYS:CG   | 1.42                     | 1.39              |
| 1:F:50:ILE:CG2   | 1:G:323:VAL:HG11 | 0.91                     | 1.39              |
| 1:G:71:GLN:NE2   | 1:H:168:ASN:ND2  | 1.67                     | 1.39              |
| 1:J:168:ASN:ND2  | 1:K:71:GLN:NE2   | 1.67                     | 1.39              |
| 1:G:50:ILE:CG2   | 1:H:323:VAL:HG11 | 0.91                     | 1.39              |
| 1:K:75:ASP:CA    | 1:O:245:GLU:HB3  | 1.53                     | 1.39              |
| 1:C:50:ILE:N     | 1:D:320:LYS:HG2  | 1.19                     | 1.39              |
| 1:F:71:GLN:CD    | 1:G:168:ASN:HD22 | 1.23                     | 1.39              |
| 1:I:168:ASN:ND2  | 1:J:71:GLN:NE2   | 1.67                     | 1.39              |
| 1:K:168:ASN:ND2  | 1:L:71:GLN:NE2   | 1.67                     | 1.39              |
| 1:B:47:ASP:HA    | 1:C:323:VAL:CG2  | 1.36                     | 1.38              |
| 1:I:168:ASN:HD22 | 1:J:71:GLN:CD    | 1.23                     | 1.38              |
| 1:J:278:GLN:CG   | 1:K:218:THR:OG1  | 1.69                     | 1.38              |
| 1:F:71:GLN:NE2   | 1:G:168:ASN:ND2  | 1.67                     | 1.38              |
| 1:B:246:ILE:HD13 | 1:F:50:ILE:CG2   | 1.30                     | 1.38              |
| 1:C:47:ASP:HA    | 1:D:323:VAL:CG2  | 1.36                     | 1.38              |
| 1:F:201:ILE:HG13 | 1:I:272:ARG:NH1  | 1.35                     | 1.38              |
| 1:F:218:THR:OG1  | 1:G:278:GLN:CG   | 1.69                     | 1.38              |
| 1:G:204:HIS:NE2  | 1:J:274:PHE:CE1  | 1.92                     | 1.38              |
| 1:H:274:PHE:CD1  | 1:K:204:HIS:NE2  | 1.84                     | 1.38              |
| 1:I:278:GLN:CG   | 1:J:218:THR:OG1  | 1.69                     | 1.38              |
| 1:K:323:VAL:HG11 | 1:L:50:ILE:CG2   | 0.91                     | 1.38              |
| 1:E:48:GLY:HA3   | 1:F:325:LYS:CG   | 1.42                     | 1.38              |
| 1:I:323:VAL:HG11 | 1:J:50:ILE:CG2   | 0.91                     | 1.38              |
| 1:G:50:ILE:HG22  | 1:H:323:VAL:CG1  | 1.37                     | 1.37              |
| 1:K:52:ILE:CD1   | 1:O:247:ASP:C    | 1.92                     | 1.37              |
| 1:K:278:GLN:CG   | 1:L:218:THR:OG1  | 1.69                     | 1.37              |
| 1:O:320:LYS:CG   | 1:P:50:ILE:N     | 1.87                     | 1.37              |
| 1:E:71:GLN:NE2   | 1:F:168:ASN:ND2  | 1.67                     | 1.37              |
| 1:G:71:GLN:CD    | 1:H:168:ASN:HD22 | 1.23                     | 1.37              |
| 1:H:203:GLU:CG   | 1:K:198:GLU:HG3  | 1.52                     | 1.37              |
| 1:J:323:VAL:HG11 | 1:K:50:ILE:CG2   | 0.91                     | 1.37              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:320:LYS:CG   | 1:O:50:ILE:N     | 1.87                     | 1.37              |
| 1:A:246:ILE:O    | 1:E:52:ILE:CD1   | 1.71                     | 1.37              |
| 1:H:272:ARG:NH1  | 1:K:201:ILE:HG13 | 1.37                     | 1.37              |
| 1:M:320:LYS:CG   | 1:N:50:ILE:N     | 1.87                     | 1.37              |
| 1:O:323:VAL:N    | 1:P:47:ASP:O     | 1.57                     | 1.37              |
| 1:K:308:ASN:ND2  | 1:P:231:ALA:N    | 1.73                     | 1.37              |
| 1:H:274:PHE:CE1  | 1:K:204:HIS:CD2  | 2.12                     | 1.36              |
| 1:A:50:ILE:N     | 1:B:320:LYS:CG   | 1.87                     | 1.36              |
| 1:C:245:GLU:HB3  | 1:G:75:ASP:N     | 1.40                     | 1.36              |
| 1:G:274:PHE:CE1  | 1:J:204:HIS:NE2  | 1.92                     | 1.36              |
| 1:N:323:VAL:N    | 1:O:47:ASP:O     | 1.57                     | 1.36              |
| 1:K:308:ASN:HD22 | 1:P:232:GLU:N    | 1.19                     | 1.36              |
| 1:B:50:ILE:N     | 1:C:320:LYS:CG   | 1.87                     | 1.36              |
| 1:B:232:GLU:N    | 1:G:308:ASN:HD22 | 1.18                     | 1.36              |
| 1:B:240:MET:CE   | 1:F:73:VAL:HG21  | 1.41                     | 1.36              |
| 1:J:308:ASN:HD22 | 1:O:232:GLU:N    | 1.24                     | 1.36              |
| 1:M:323:VAL:N    | 1:N:47:ASP:O     | 1.57                     | 1.35              |
| 1:C:50:ILE:N     | 1:D:320:LYS:CG   | 1.87                     | 1.35              |
| 1:O:323:VAL:CG2  | 1:P:47:ASP:HA    | 1.36                     | 1.34              |
| 1:D:246:ILE:HD13 | 1:H:50:ILE:CG2   | 1.29                     | 1.34              |
| 1:I:75:ASP:N     | 1:M:245:GLU:HB3  | 1.42                     | 1.34              |
| 1:A:47:ASP:O     | 1:B:323:VAL:N    | 1.57                     | 1.33              |
| 1:E:218:THR:CB   | 1:F:278:GLN:CG   | 2.07                     | 1.33              |
| 1:G:218:THR:CB   | 1:H:278:GLN:CG   | 2.07                     | 1.33              |
| 1:I:73:VAL:CG2   | 1:M:240:MET:CE   | 2.06                     | 1.33              |
| 1:L:50:ILE:CG2   | 1:P:246:ILE:HD13 | 1.35                     | 1.33              |
| 1:N:323:VAL:CG2  | 1:O:47:ASP:HA    | 1.36                     | 1.33              |
| 1:A:241:LYS:HB2  | 1:F:166:GLN:NE2  | 1.41                     | 1.33              |
| 1:B:247:ASP:C    | 1:F:52:ILE:CD1   | 1.95                     | 1.33              |
| 1:C:246:ILE:HA   | 1:G:50:ILE:O     | 1.29                     | 1.33              |
| 1:G:218:THR:HB   | 1:H:278:GLN:OE1  | 1.25                     | 1.33              |
| 1:J:278:GLN:CG   | 1:K:218:THR:CB   | 2.07                     | 1.33              |
| 1:N:323:VAL:N    | 1:O:47:ASP:C     | 1.75                     | 1.33              |
| 1:O:300:TYR:CA   | 1:P:227:THR:CG2  | 2.05                     | 1.33              |
| 1:B:47:ASP:O     | 1:C:323:VAL:N    | 1.57                     | 1.32              |
| 1:F:218:THR:CB   | 1:G:278:GLN:CG   | 2.07                     | 1.32              |
| 1:F:272:ARG:CG   | 1:I:203:GLU:H    | 1.40                     | 1.32              |
| 1:I:308:ASN:HD22 | 1:N:232:GLU:N    | 1.28                     | 1.32              |
| 1:N:300:TYR:CA   | 1:O:227:THR:CG2  | 2.05                     | 1.32              |
| 1:A:308:ASN:OD1  | 1:E:231:ALA:CB   | 1.76                     | 1.32              |
| 1:B:227:THR:HG21 | 1:C:299:THR:C    | 0.94                     | 1.32              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:278:GLN:CG   | 1:L:218:THR:CB   | 2.06                     | 1.32              |
| 1:O:323:VAL:N    | 1:P:47:ASP:C     | 1.75                     | 1.32              |
| 1:C:227:THR:HG21 | 1:D:299:THR:C    | 0.94                     | 1.32              |
| 1:F:218:THR:HB   | 1:G:278:GLN:OE1  | 1.25                     | 1.32              |
| 1:O:299:THR:C    | 1:P:227:THR:HG21 | 0.94                     | 1.32              |
| 1:I:278:GLN:CG   | 1:J:218:THR:CB   | 2.07                     | 1.32              |
| 1:J:323:VAL:O    | 1:K:47:ASP:HA    | 1.30                     | 1.32              |
| 1:M:323:VAL:CG2  | 1:N:47:ASP:HA    | 1.36                     | 1.32              |
| 1:A:227:THR:HG21 | 1:B:299:THR:C    | 0.94                     | 1.31              |
| 1:I:323:VAL:O    | 1:J:47:ASP:HA    | 1.29                     | 1.31              |
| 1:K:323:VAL:O    | 1:L:47:ASP:HA    | 1.30                     | 1.31              |
| 1:K:75:ASP:N     | 1:O:245:GLU:HB3  | 1.46                     | 1.31              |
| 1:M:300:TYR:CA   | 1:N:227:THR:CG2  | 2.05                     | 1.31              |
| 1:B:227:THR:CG2  | 1:C:300:TYR:CA   | 2.05                     | 1.31              |
| 1:F:204:HIS:ND1  | 1:I:271:LYS:O    | 1.60                     | 1.31              |
| 1:H:203:GLU:H    | 1:K:272:ARG:CG   | 1.43                     | 1.31              |
| 1:C:47:ASP:O     | 1:D:323:VAL:N    | 1.57                     | 1.31              |
| 1:F:201:ILE:CG2  | 1:I:199:ARG:O    | 1.78                     | 1.31              |
| 1:L:75:ASP:HA    | 1:P:245:GLU:CB   | 1.60                     | 1.31              |
| 1:N:299:THR:C    | 1:O:227:THR:HG21 | 0.94                     | 1.31              |
| 1:H:271:LYS:O    | 1:K:204:HIS:ND1  | 1.60                     | 1.31              |
| 1:M:320:LYS:HD3  | 1:N:49:TYR:CD1   | 1.65                     | 1.31              |
| 1:N:320:LYS:HD3  | 1:O:49:TYR:CD1   | 1.65                     | 1.31              |
| 1:I:278:GLN:OE1  | 1:J:218:THR:HB   | 1.25                     | 1.30              |
| 1:M:299:THR:C    | 1:N:227:THR:HG21 | 0.94                     | 1.30              |
| 1:O:320:LYS:HD3  | 1:P:49:TYR:CD1   | 1.65                     | 1.30              |
| 1:E:218:THR:HB   | 1:F:278:GLN:OE1  | 1.25                     | 1.30              |
| 1:J:52:ILE:HD12  | 1:N:247:ASP:C    | 1.28                     | 1.30              |
| 1:J:75:ASP:N     | 1:N:245:GLU:HB3  | 1.42                     | 1.30              |
| 1:A:49:TYR:CD1   | 1:B:320:LYS:HD3  | 1.65                     | 1.30              |
| 1:A:227:THR:CG2  | 1:B:300:TYR:CA   | 2.05                     | 1.30              |
| 1:O:320:LYS:CD   | 1:P:49:TYR:CD1   | 2.15                     | 1.30              |
| 1:A:49:TYR:CD1   | 1:B:320:LYS:CD   | 2.15                     | 1.30              |
| 1:B:49:TYR:CD1   | 1:C:320:LYS:HD3  | 1.65                     | 1.30              |
| 1:C:241:LYS:N    | 1:H:166:GLN:CG   | 1.71                     | 1.30              |
| 1:J:231:ALA:HB2  | 1:N:308:ASN:OD1  | 1.18                     | 1.30              |
| 1:B:49:TYR:CD1   | 1:C:320:LYS:CD   | 2.15                     | 1.30              |
| 1:C:49:TYR:CD1   | 1:D:320:LYS:HD3  | 1.65                     | 1.30              |
| 1:L:231:ALA:CB   | 1:P:308:ASN:OD1  | 1.77                     | 1.30              |
| 1:N:320:LYS:CD   | 1:O:49:TYR:CD1   | 2.15                     | 1.30              |
| 1:I:278:GLN:HG2  | 1:J:218:THR:OG1  | 1.13                     | 1.29              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:278:GLN:HG2  | 1:K:218:THR:OG1  | 1.13                     | 1.29              |
| 1:B:245:GLU:HB3  | 1:F:75:ASP:N     | 1.45                     | 1.29              |
| 1:C:49:TYR:CD1   | 1:D:320:LYS:CD   | 2.15                     | 1.29              |
| 1:C:227:THR:CG2  | 1:D:300:TYR:CA   | 2.05                     | 1.29              |
| 1:E:219:ASP:OD2  | 1:F:275:LYS:NZ   | 1.65                     | 1.29              |
| 1:F:201:ILE:CG1  | 1:I:272:ARG:HH12 | 1.16                     | 1.29              |
| 1:F:225:LEU:CD1  | 1:G:300:TYR:HE2  | 1.46                     | 1.29              |
| 1:J:50:ILE:O     | 1:N:246:ILE:CA   | 1.80                     | 1.29              |
| 1:K:300:TYR:HE2  | 1:L:225:LEU:CD1  | 1.46                     | 1.29              |
| 1:G:203:GLU:H    | 1:J:272:ARG:CG   | 1.45                     | 1.29              |
| 1:J:278:GLN:OE1  | 1:K:218:THR:HB   | 1.25                     | 1.29              |
| 1:E:225:LEU:CD1  | 1:F:300:TYR:HE2  | 1.45                     | 1.29              |
| 1:G:272:ARG:CG   | 1:J:203:GLU:H    | 1.44                     | 1.29              |
| 1:K:278:GLN:HG2  | 1:L:218:THR:OG1  | 1.13                     | 1.29              |
| 1:L:75:ASP:CA    | 1:P:245:GLU:CB   | 2.09                     | 1.29              |
| 1:M:320:LYS:CD   | 1:N:49:TYR:CD1   | 2.15                     | 1.29              |
| 1:A:241:LYS:C    | 1:F:166:GLN:OE1  | 1.69                     | 1.29              |
| 1:K:168:ASN:HD22 | 1:L:71:GLN:NE2   | 1.27                     | 1.29              |
| 1:A:47:ASP:C     | 1:B:323:VAL:N    | 1.75                     | 1.28              |
| 1:F:219:ASP:OD2  | 1:G:275:LYS:NZ   | 1.65                     | 1.28              |
| 1:G:225:LEU:CD1  | 1:H:300:TYR:HE2  | 1.46                     | 1.28              |
| 1:H:203:GLU:CG   | 1:K:198:GLU:CG   | 2.08                     | 1.28              |
| 1:J:50:ILE:O     | 1:N:246:ILE:HA   | 1.10                     | 1.28              |
| 1:I:275:LYS:NZ   | 1:J:219:ASP:OD2  | 1.65                     | 1.28              |
| 1:I:300:TYR:HE2  | 1:J:225:LEU:CD1  | 1.45                     | 1.28              |
| 1:J:300:TYR:HE2  | 1:K:225:LEU:CD1  | 1.46                     | 1.28              |
| 1:C:246:ILE:CG1  | 1:G:50:ILE:N     | 1.85                     | 1.28              |
| 1:J:275:LYS:NZ   | 1:K:219:ASP:OD2  | 1.65                     | 1.28              |
| 1:K:320:LYS:HA   | 1:P:246:ILE:CD1  | 1.62                     | 1.28              |
| 1:A:246:ILE:CD1  | 1:E:50:ILE:HG23  | 1.45                     | 1.27              |
| 1:D:308:ASN:ND2  | 1:H:241:LYS:O    | 1.67                     | 1.27              |
| 1:K:278:GLN:OE1  | 1:L:218:THR:HB   | 1.25                     | 1.27              |
| 1:L:75:ASP:N     | 1:P:245:GLU:HB3  | 1.48                     | 1.27              |
| 1:F:203:GLU:H    | 1:I:272:ARG:CG   | 1.45                     | 1.27              |
| 1:G:218:THR:OG1  | 1:H:278:GLN:HG2  | 1.13                     | 1.27              |
| 1:I:324:ALA:HB1  | 1:J:46:GLU:CG    | 1.65                     | 1.27              |
| 1:J:324:ALA:HB1  | 1:K:46:GLU:CG    | 1.65                     | 1.27              |
| 1:B:245:GLU:CB   | 1:F:75:ASP:CA    | 2.11                     | 1.27              |
| 1:F:203:GLU:CG   | 1:I:198:GLU:CG   | 2.12                     | 1.27              |
| 1:K:324:ALA:HB1  | 1:L:46:GLU:CG    | 1.65                     | 1.27              |
| 1:G:198:GLU:CG   | 1:J:203:GLU:CG   | 2.11                     | 1.27              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:168:ASN:CG   | 1:K:71:GLN:NE2   | 1.88                     | 1.27              |
| 1:O:300:TYR:HE2  | 1:P:225:LEU:CD2  | 1.48                     | 1.27              |
| 1:A:225:LEU:CD2  | 1:B:300:TYR:HE2  | 1.48                     | 1.26              |
| 1:F:71:GLN:NE2   | 1:G:168:ASN:CG   | 1.88                     | 1.26              |
| 1:F:218:THR:OG1  | 1:G:278:GLN:HG2  | 1.13                     | 1.26              |
| 1:G:46:GLU:CG    | 1:H:324:ALA:HB1  | 1.65                     | 1.26              |
| 1:H:199:ARG:O    | 1:K:201:ILE:CG2  | 1.82                     | 1.26              |
| 1:H:272:ARG:CG   | 1:K:203:GLU:H    | 1.47                     | 1.26              |
| 1:K:75:ASP:HA    | 1:O:245:GLU:CB   | 1.64                     | 1.26              |
| 1:K:168:ASN:CG   | 1:L:71:GLN:NE2   | 1.88                     | 1.26              |
| 1:C:241:LYS:N    | 1:H:166:GLN:HG2  | 1.14                     | 1.26              |
| 1:I:325:LYS:CG   | 1:J:48:GLY:HA3   | 1.42                     | 1.26              |
| 1:K:75:ASP:CA    | 1:O:245:GLU:CB   | 2.12                     | 1.26              |
| 1:B:225:LEU:CD2  | 1:C:300:TYR:HE2  | 1.48                     | 1.26              |
| 1:F:46:GLU:CG    | 1:G:324:ALA:HB1  | 1.65                     | 1.26              |
| 1:J:320:LYS:HA   | 1:O:246:ILE:CD1  | 1.65                     | 1.26              |
| 1:J:325:LYS:CG   | 1:K:48:GLY:HA3   | 1.42                     | 1.26              |
| 1:K:325:LYS:CG   | 1:L:48:GLY:HA3   | 1.42                     | 1.26              |
| 1:E:218:THR:OG1  | 1:F:278:GLN:HG2  | 1.13                     | 1.26              |
| 1:G:219:ASP:OD2  | 1:H:275:LYS:NZ   | 1.65                     | 1.26              |
| 1:K:275:LYS:NZ   | 1:L:219:ASP:OD2  | 1.65                     | 1.26              |
| 1:C:240:MET:CE   | 1:G:73:VAL:CG2   | 2.12                     | 1.26              |
| 1:E:46:GLU:CG    | 1:F:324:ALA:HB1  | 1.65                     | 1.26              |
| 1:G:71:GLN:NE2   | 1:H:168:ASN:CG   | 1.88                     | 1.25              |
| 1:N:300:TYR:HE2  | 1:O:225:LEU:CD2  | 1.48                     | 1.25              |
| 1:I:278:GLN:HB3  | 1:J:218:THR:CA   | 1.67                     | 1.25              |
| 1:J:278:GLN:HB3  | 1:K:218:THR:CA   | 1.66                     | 1.25              |
| 1:K:278:GLN:HB3  | 1:L:218:THR:CA   | 1.66                     | 1.25              |
| 1:B:231:ALA:N    | 1:G:308:ASN:ND2  | 1.84                     | 1.25              |
| 1:B:240:MET:CE   | 1:F:73:VAL:CB    | 2.13                     | 1.25              |
| 1:C:241:LYS:C    | 1:H:166:GLN:N    | 1.89                     | 1.25              |
| 1:E:71:GLN:NE2   | 1:F:168:ASN:CG   | 1.88                     | 1.25              |
| 1:G:71:GLN:NE2   | 1:H:168:ASN:HD22 | 1.26                     | 1.25              |
| 1:G:203:GLU:CG   | 1:J:198:GLU:CG   | 2.12                     | 1.25              |
| 1:H:272:ARG:HH12 | 1:K:201:ILE:CG1  | 1.18                     | 1.25              |
| 1:I:168:ASN:HD22 | 1:J:71:GLN:NE2   | 1.26                     | 1.25              |
| 1:F:198:GLU:CG   | 1:I:203:GLU:CG   | 2.03                     | 1.25              |
| 1:C:225:LEU:CD2  | 1:D:300:TYR:HE2  | 1.48                     | 1.25              |
| 1:J:73:VAL:CG2   | 1:N:240:MET:HE2  | 1.49                     | 1.25              |
| 1:E:47:ASP:HA    | 1:F:323:VAL:O    | 1.30                     | 1.25              |
| 1:I:168:ASN:CG   | 1:J:71:GLN:NE2   | 1.88                     | 1.25              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:218:THR:CA   | 1:H:278:GLN:HB3  | 1.67                     | 1.24              |
| 1:I:320:LYS:HA   | 1:N:246:ILE:CD1  | 1.65                     | 1.24              |
| 1:M:300:TYR:HE2  | 1:N:225:LEU:CD2  | 1.48                     | 1.24              |
| 1:B:240:MET:HE3  | 1:F:73:VAL:CG2   | 1.47                     | 1.24              |
| 1:F:203:GLU:OE1  | 1:I:274:PHE:CZ   | 1.90                     | 1.24              |
| 1:A:246:ILE:O    | 1:E:52:ILE:HD11  | 1.26                     | 1.24              |
| 1:F:47:ASP:HA    | 1:G:323:VAL:O    | 1.30                     | 1.24              |
| 1:F:218:THR:CA   | 1:G:278:GLN:HB3  | 1.67                     | 1.24              |
| 1:G:271:LYS:O    | 1:J:202:GLU:OE2  | 1.55                     | 1.24              |
| 1:M:324:ALA:CB   | 1:N:46:GLU:CA    | 1.81                     | 1.24              |
| 1:A:231:ALA:N    | 1:F:308:ASN:ND2  | 1.86                     | 1.23              |
| 1:B:46:GLU:CA    | 1:C:324:ALA:CB   | 1.82                     | 1.23              |
| 1:E:218:THR:CA   | 1:F:278:GLN:HB3  | 1.66                     | 1.23              |
| 1:F:46:GLU:HG3   | 1:G:324:ALA:CB   | 1.68                     | 1.23              |
| 1:G:46:GLU:HG3   | 1:H:324:ALA:CB   | 1.68                     | 1.23              |
| 1:G:272:ARG:NH1  | 1:J:201:ILE:HG13 | 1.53                     | 1.23              |
| 1:H:274:PHE:CZ   | 1:K:203:GLU:OE1  | 1.90                     | 1.23              |
| 1:K:324:ALA:CB   | 1:L:46:GLU:HG3   | 1.68                     | 1.23              |
| 1:M:320:LYS:O    | 1:N:47:ASP:C     | 1.74                     | 1.23              |
| 1:A:47:ASP:C     | 1:B:320:LYS:O    | 1.74                     | 1.23              |
| 1:A:232:GLU:N    | 1:F:308:ASN:HD22 | 1.35                     | 1.23              |
| 1:E:46:GLU:HG3   | 1:F:324:ALA:CB   | 1.68                     | 1.23              |
| 1:G:47:ASP:HA    | 1:H:323:VAL:O    | 1.30                     | 1.23              |
| 1:G:198:GLU:HG3  | 1:J:203:GLU:CG   | 1.67                     | 1.23              |
| 1:I:74:GLU:C     | 1:M:245:GLU:HB3  | 1.58                     | 1.23              |
| 1:J:324:ALA:CB   | 1:K:46:GLU:HG3   | 1.68                     | 1.23              |
| 1:A:241:LYS:HA   | 1:F:165:GLU:OE2  | 1.33                     | 1.23              |
| 1:B:47:ASP:C     | 1:C:320:LYS:O    | 1.74                     | 1.23              |
| 1:C:47:ASP:C     | 1:D:320:LYS:O    | 1.74                     | 1.23              |
| 1:I:324:ALA:CB   | 1:J:46:GLU:HG3   | 1.68                     | 1.23              |
| 1:N:320:LYS:O    | 1:O:47:ASP:C     | 1.74                     | 1.23              |
| 1:G:201:ILE:HG13 | 1:J:272:ARG:NH1  | 1.54                     | 1.23              |
| 1:G:218:THR:OG1  | 1:H:278:GLN:CB   | 1.86                     | 1.23              |
| 1:B:241:LYS:CB   | 1:G:166:GLN:NE2  | 2.01                     | 1.23              |
| 1:C:246:ILE:HD12 | 1:H:320:LYS:CA   | 1.68                     | 1.23              |
| 1:I:308:ASN:ND2  | 1:N:232:GLU:H    | 1.37                     | 1.23              |
| 1:O:320:LYS:O    | 1:P:47:ASP:C     | 1.74                     | 1.23              |
| 1:F:218:THR:OG1  | 1:G:278:GLN:CB   | 1.86                     | 1.22              |
| 1:J:75:ASP:CA    | 1:N:245:GLU:HB3  | 1.68                     | 1.22              |
| 1:A:47:ASP:OD2   | 1:B:326:TYR:HB3  | 1.39                     | 1.22              |
| 1:E:218:THR:OG1  | 1:F:278:GLN:CB   | 1.86                     | 1.22              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:246:ILE:CD1  | 1:H:320:LYS:CA   | 2.18                     | 1.22              |
| 1:C:308:ASN:OD1  | 1:G:231:ALA:HB2  | 1.36                     | 1.22              |
| 1:K:231:ALA:CB   | 1:O:308:ASN:OD1  | 1.85                     | 1.22              |
| 1:O:326:TYR:HB3  | 1:P:47:ASP:OD2   | 1.39                     | 1.22              |
| 1:B:47:ASP:OD2   | 1:C:326:TYR:HB3  | 1.39                     | 1.22              |
| 1:B:245:GLU:CB   | 1:F:75:ASP:HA    | 1.66                     | 1.22              |
| 1:D:245:GLU:HB3  | 1:H:75:ASP:N     | 1.53                     | 1.22              |
| 1:H:198:GLU:CG   | 1:K:203:GLU:CG   | 2.15                     | 1.22              |
| 1:J:278:GLN:CB   | 1:K:218:THR:OG1  | 1.86                     | 1.22              |
| 1:I:278:GLN:CB   | 1:J:218:THR:OG1  | 1.86                     | 1.22              |
| 1:K:278:GLN:CB   | 1:L:218:THR:OG1  | 1.86                     | 1.22              |
| 1:B:47:ASP:C     | 1:C:323:VAL:N    | 1.75                     | 1.21              |
| 1:B:308:ASN:OD1  | 1:F:231:ALA:HB2  | 1.07                     | 1.21              |
| 1:A:79:THR:HG23  | 1:B:192:CYS:CB   | 1.70                     | 1.21              |
| 1:G:202:GLU:OE2  | 1:J:271:LYS:O    | 1.56                     | 1.21              |
| 1:H:198:GLU:HG2  | 1:K:203:GLU:CG   | 1.70                     | 1.21              |
| 1:N:326:TYR:HB3  | 1:O:47:ASP:OD2   | 1.39                     | 1.21              |
| 1:C:47:ASP:OD2   | 1:D:326:TYR:HB3  | 1.39                     | 1.21              |
| 1:C:241:LYS:O    | 1:H:165:GLU:HG2  | 1.40                     | 1.21              |
| 1:F:71:GLN:NE2   | 1:G:168:ASN:HD22 | 1.27                     | 1.21              |
| 1:F:203:GLU:CG   | 1:I:198:GLU:HG2  | 1.68                     | 1.21              |
| 1:O:324:ALA:CB   | 1:P:46:GLU:CA    | 1.81                     | 1.21              |
| 1:B:79:THR:HG23  | 1:C:192:CYS:CB   | 1.70                     | 1.21              |
| 1:G:199:ARG:O    | 1:J:201:ILE:CG2  | 1.88                     | 1.21              |
| 1:G:201:ILE:CG2  | 1:J:199:ARG:O    | 1.89                     | 1.21              |
| 1:K:323:VAL:CG1  | 1:L:50:ILE:HG23  | 1.56                     | 1.21              |
| 1:C:79:THR:HG23  | 1:D:192:CYS:CB   | 1.70                     | 1.20              |
| 1:B:46:GLU:CB    | 1:C:324:ALA:HB2  | 1.56                     | 1.20              |
| 1:M:192:CYS:CB   | 1:N:79:THR:HG23  | 1.70                     | 1.20              |
| 1:M:326:TYR:HB3  | 1:N:47:ASP:OD2   | 1.39                     | 1.20              |
| 1:H:274:PHE:CE1  | 1:K:204:HIS:NE2  | 2.06                     | 1.20              |
| 1:K:168:ASN:ND2  | 1:L:71:GLN:HE22  | 1.28                     | 1.20              |
| 1:N:192:CYS:CB   | 1:O:79:THR:HG23  | 1.69                     | 1.20              |
| 1:O:323:VAL:CG2  | 1:P:47:ASP:CA    | 2.19                     | 1.20              |
| 1:A:248:THR:HG22 | 1:E:52:ILE:HA    | 1.21                     | 1.20              |
| 1:B:47:ASP:CA    | 1:C:323:VAL:CG2  | 2.19                     | 1.20              |
| 1:C:246:ILE:CD1  | 1:H:323:VAL:CG2  | 2.20                     | 1.20              |
| 1:G:203:GLU:CG   | 1:J:198:GLU:HG3  | 1.68                     | 1.20              |
| 1:I:168:ASN:ND2  | 1:J:71:GLN:HE22  | 1.28                     | 1.20              |
| 1:O:192:CYS:CB   | 1:P:79:THR:HG23  | 1.70                     | 1.20              |
| 1:B:241:LYS:HA   | 1:G:165:GLU:OE2  | 1.40                     | 1.19              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:168:ASN:HD22 | 1:K:71:GLN:NE2   | 1.27                     | 1.19              |
| 1:K:165:GLU:OE2  | 1:P:241:LYS:HA   | 1.38                     | 1.19              |
| 1:I:52:ILE:HD12  | 1:M:247:ASP:C    | 1.55                     | 1.19              |
| 1:B:48:GLY:N     | 1:C:320:LYS:O    | 1.64                     | 1.19              |
| 1:F:218:THR:CB   | 1:G:278:GLN:HG2  | 1.69                     | 1.19              |
| 1:J:52:ILE:CD1   | 1:N:247:ASP:C    | 2.09                     | 1.19              |
| 1:J:323:VAL:C    | 1:K:49:TYR:O     | 1.73                     | 1.19              |
| 1:M:299:THR:O    | 1:N:227:THR:HG21 | 1.38                     | 1.19              |
| 1:M:320:LYS:O    | 1:N:48:GLY:N     | 1.65                     | 1.19              |
| 1:A:246:ILE:CD1  | 1:F:320:LYS:HA   | 1.72                     | 1.19              |
| 1:B:49:TYR:HE1   | 1:C:163:PHE:O    | 1.26                     | 1.19              |
| 1:C:49:TYR:HE1   | 1:D:163:PHE:O    | 1.26                     | 1.19              |
| 1:D:246:ILE:CD1  | 1:H:50:ILE:HG23  | 1.73                     | 1.19              |
| 1:K:323:VAL:C    | 1:L:49:TYR:O     | 1.73                     | 1.19              |
| 1:M:323:VAL:CG2  | 1:N:47:ASP:CA    | 2.19                     | 1.19              |
| 1:C:240:MET:CE   | 1:G:73:VAL:HG21  | 1.69                     | 1.19              |
| 1:F:199:ARG:O    | 1:I:201:ILE:CG2  | 1.91                     | 1.19              |
| 1:G:218:THR:CB   | 1:H:278:GLN:HG2  | 1.69                     | 1.19              |
| 1:I:50:ILE:O     | 1:M:246:ILE:HA   | 1.41                     | 1.19              |
| 1:N:299:THR:O    | 1:O:227:THR:HG21 | 1.38                     | 1.19              |
| 1:A:227:THR:HG21 | 1:B:299:THR:O    | 1.38                     | 1.18              |
| 1:O:300:TYR:CE2  | 1:P:225:LEU:CD2  | 2.25                     | 1.18              |
| 1:A:246:ILE:C    | 1:E:52:ILE:CD1   | 2.08                     | 1.18              |
| 1:B:232:GLU:H    | 1:G:308:ASN:ND2  | 1.40                     | 1.18              |
| 1:C:227:THR:HG21 | 1:D:299:THR:O    | 1.38                     | 1.18              |
| 1:G:48:GLY:CA    | 1:H:325:LYS:HG2  | 1.73                     | 1.18              |
| 1:I:325:LYS:HG2  | 1:J:48:GLY:CA    | 1.73                     | 1.18              |
| 1:J:325:LYS:HG2  | 1:K:48:GLY:CA    | 1.73                     | 1.18              |
| 1:L:52:ILE:CG1   | 1:P:247:ASP:O    | 1.90                     | 1.18              |
| 1:A:49:TYR:HE1   | 1:B:163:PHE:O    | 1.26                     | 1.18              |
| 1:A:229:GLU:CD   | 1:F:309:ASN:O    | 1.76                     | 1.18              |
| 1:F:48:GLY:CA    | 1:G:325:LYS:HG2  | 1.73                     | 1.18              |
| 1:F:199:ARG:O    | 1:I:201:ILE:HG23 | 1.44                     | 1.18              |
| 1:I:323:VAL:C    | 1:J:49:TYR:O     | 1.73                     | 1.18              |
| 1:A:47:ASP:CA    | 1:B:323:VAL:CG2  | 2.19                     | 1.18              |
| 1:C:47:ASP:CA    | 1:D:323:VAL:CG2  | 2.19                     | 1.18              |
| 1:G:50:ILE:HG23  | 1:H:323:VAL:CG1  | 1.56                     | 1.18              |
| 1:K:278:GLN:HG2  | 1:L:218:THR:CB   | 1.69                     | 1.18              |
| 1:K:325:LYS:HG2  | 1:L:48:GLY:CA    | 1.73                     | 1.18              |
| 1:O:299:THR:O    | 1:P:227:THR:HG21 | 1.38                     | 1.18              |
| 1:B:227:THR:HG21 | 1:C:299:THR:O    | 1.38                     | 1.18              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:47:ASP:C     | 1:D:323:VAL:N    | 1.75                     | 1.18              |
| 1:F:71:GLN:HE22  | 1:G:168:ASN:ND2  | 1.28                     | 1.18              |
| 1:M:163:PHE:O    | 1:N:49:TYR:HE1   | 1.26                     | 1.18              |
| 1:M:320:LYS:HD3  | 1:N:49:TYR:CG    | 1.79                     | 1.18              |
| 1:M:324:ALA:HB2  | 1:N:46:GLU:CB    | 1.56                     | 1.18              |
| 1:E:48:GLY:CA    | 1:F:325:LYS:HG2  | 1.73                     | 1.17              |
| 1:J:75:ASP:CA    | 1:N:245:GLU:CB   | 2.22                     | 1.17              |
| 1:N:320:LYS:HD3  | 1:O:49:TYR:CG    | 1.79                     | 1.17              |
| 1:N:323:VAL:CG2  | 1:O:47:ASP:CA    | 2.19                     | 1.17              |
| 1:B:246:ILE:HD13 | 1:G:323:VAL:CG1  | 1.55                     | 1.17              |
| 1:C:46:GLU:CA    | 1:D:324:ALA:CB   | 1.82                     | 1.17              |
| 1:K:324:ALA:CB   | 1:L:49:TYR:HB3   | 1.74                     | 1.17              |
| 1:O:320:LYS:HD3  | 1:P:49:TYR:CG    | 1.79                     | 1.17              |
| 1:J:168:ASN:ND2  | 1:K:71:GLN:HE22  | 1.28                     | 1.17              |
| 1:J:324:ALA:CB   | 1:K:49:TYR:HB3   | 1.74                     | 1.17              |
| 1:M:323:VAL:N    | 1:N:47:ASP:C     | 1.75                     | 1.17              |
| 1:N:163:PHE:O    | 1:O:49:TYR:HE1   | 1.26                     | 1.17              |
| 1:B:308:ASN:OD1  | 1:F:231:ALA:CB   | 1.91                     | 1.17              |
| 1:C:241:LYS:C    | 1:H:166:GLN:H    | 1.13                     | 1.17              |
| 1:I:324:ALA:CB   | 1:J:49:TYR:HB3   | 1.74                     | 1.17              |
| 1:C:245:GLU:HB3  | 1:G:75:ASP:CA    | 1.74                     | 1.16              |
| 1:E:71:GLN:HE22  | 1:F:168:ASN:ND2  | 1.28                     | 1.16              |
| 1:E:218:THR:CB   | 1:F:278:GLN:HG2  | 1.69                     | 1.16              |
| 1:H:131:LYS:HA   | 1:H:149:ILE:HD11 | 1.18                     | 1.16              |
| 1:I:170:LYS:HE2  | 1:J:79:THR:HA    | 1.27                     | 1.16              |
| 1:J:278:GLN:HG2  | 1:K:218:THR:CB   | 1.69                     | 1.16              |
| 1:C:49:TYR:CG    | 1:D:320:LYS:HD3  | 1.79                     | 1.16              |
| 1:C:241:LYS:HB2  | 1:H:166:GLN:NE2  | 1.55                     | 1.16              |
| 1:F:50:ILE:HG23  | 1:G:323:VAL:CG1  | 1.56                     | 1.16              |
| 1:O:300:TYR:N    | 1:P:227:THR:HG21 | 1.48                     | 1.16              |
| 1:B:49:TYR:CG    | 1:C:320:LYS:HD3  | 1.79                     | 1.16              |
| 1:G:71:GLN:HE22  | 1:H:168:ASN:ND2  | 1.28                     | 1.16              |
| 1:I:303:ASN:HB2  | 1:J:226:ILE:H    | 1.10                     | 1.16              |
| 1:M:277:ASP:HB3  | 1:N:218:THR:OG1  | 1.45                     | 1.16              |
| 1:O:163:PHE:O    | 1:P:49:TYR:HE1   | 1.26                     | 1.16              |
| 1:A:49:TYR:CG    | 1:B:320:LYS:HD3  | 1.79                     | 1.16              |
| 1:C:48:GLY:N     | 1:D:320:LYS:O    | 1.64                     | 1.16              |
| 1:C:247:ASP:C    | 1:G:52:ILE:HD12  | 1.65                     | 1.16              |
| 1:E:71:GLN:NE2   | 1:F:168:ASN:HD22 | 1.27                     | 1.16              |
| 1:K:231:ALA:HB2  | 1:O:308:ASN:OD1  | 0.99                     | 1.16              |
| 1:M:320:LYS:CG   | 1:N:50:ILE:H     | 1.54                     | 1.16              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:131:LYS:HA   | 1:P:149:ILE:HD11 | 1.18                     | 1.16              |
| 1:A:246:ILE:C    | 1:E:52:ILE:HD11  | 1.36                     | 1.15              |
| 1:E:49:TYR:O     | 1:F:323:VAL:C    | 1.73                     | 1.15              |
| 1:G:131:LYS:HA   | 1:G:149:ILE:HD11 | 1.18                     | 1.15              |
| 1:K:166:GLN:NE2  | 1:P:241:LYS:HB2  | 1.39                     | 1.15              |
| 1:A:230:GLN:HB2  | 1:F:307:THR:O    | 1.44                     | 1.15              |
| 1:B:50:ILE:H     | 1:C:320:LYS:CG   | 1.54                     | 1.15              |
| 1:J:303:ASN:HB2  | 1:K:226:ILE:N    | 1.57                     | 1.15              |
| 1:J:322:ALA:HA   | 1:K:48:GLY:HA2   | 1.29                     | 1.15              |
| 1:N:277:ASP:HB3  | 1:O:218:THR:OG1  | 1.45                     | 1.15              |
| 1:N:324:ALA:HB2  | 1:O:46:GLU:CB    | 1.56                     | 1.15              |
| 1:O:131:LYS:HA   | 1:O:149:ILE:HD11 | 1.18                     | 1.15              |
| 1:A:227:THR:HG21 | 1:B:300:TYR:N    | 1.48                     | 1.15              |
| 1:D:246:ILE:CD1  | 1:H:50:ILE:CG2   | 2.25                     | 1.15              |
| 1:F:49:TYR:HB3   | 1:G:324:ALA:CB   | 1.74                     | 1.15              |
| 1:H:201:ILE:CG2  | 1:K:199:ARG:O    | 1.94                     | 1.15              |
| 1:I:278:GLN:HG2  | 1:J:218:THR:CB   | 1.69                     | 1.15              |
| 1:I:303:ASN:HB2  | 1:J:226:ILE:N    | 1.57                     | 1.15              |
| 1:K:303:ASN:HB2  | 1:L:226:ILE:N    | 1.57                     | 1.15              |
| 1:A:241:LYS:CB   | 1:F:166:GLN:NE2  | 2.10                     | 1.15              |
| 1:E:49:TYR:HB3   | 1:F:324:ALA:CB   | 1.74                     | 1.15              |
| 1:F:131:LYS:HA   | 1:F:149:ILE:HD11 | 1.18                     | 1.15              |
| 1:F:204:HIS:NE2  | 1:I:274:PHE:CE1  | 2.06                     | 1.15              |
| 1:F:271:LYS:HZ2  | 1:I:265:ALA:HA   | 1.10                     | 1.15              |
| 1:G:49:TYR:HB3   | 1:H:324:ALA:CB   | 1.74                     | 1.15              |
| 1:O:277:ASP:HB3  | 1:P:218:THR:OG1  | 1.45                     | 1.15              |
| 1:E:50:ILE:HG23  | 1:F:323:VAL:CG1  | 1.56                     | 1.15              |
| 1:K:322:ALA:HA   | 1:L:48:GLY:HA2   | 1.29                     | 1.15              |
| 1:B:246:ILE:HD12 | 1:G:320:LYS:CA   | 1.77                     | 1.14              |
| 1:G:49:TYR:O     | 1:H:323:VAL:C    | 1.73                     | 1.14              |
| 1:H:201:ILE:HG23 | 1:K:199:ARG:O    | 1.47                     | 1.14              |
| 1:A:218:THR:OG1  | 1:B:277:ASP:HB3  | 1.45                     | 1.14              |
| 1:B:232:GLU:N    | 1:G:308:ASN:ND2  | 1.90                     | 1.14              |
| 1:I:73:VAL:CG2   | 1:M:240:MET:HE2  | 1.74                     | 1.14              |
| 1:N:300:TYR:N    | 1:O:227:THR:HG21 | 1.48                     | 1.14              |
| 1:B:247:ASP:O    | 1:F:52:ILE:CG1   | 1.96                     | 1.14              |
| 1:F:224:ASN:ND2  | 1:G:275:LYS:NZ   | 1.96                     | 1.14              |
| 1:I:275:LYS:NZ   | 1:J:224:ASN:ND2  | 1.96                     | 1.14              |
| 1:J:219:ASP:HA   | 1:J:224:ASN:CB   | 1.77                     | 1.14              |
| 1:N:131:LYS:HA   | 1:N:149:ILE:HD11 | 1.18                     | 1.14              |
| 1:O:320:LYS:O    | 1:P:48:GLY:N     | 1.65                     | 1.14              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:324:ALA:HB3  | 1:P:46:GLU:HB2   | 1.28                     | 1.14              |
| 1:B:47:ASP:OD2   | 1:C:326:TYR:CB   | 1.96                     | 1.14              |
| 1:C:240:MET:HE3  | 1:G:73:VAL:HG21  | 1.20                     | 1.14              |
| 1:G:183:ASN:HD21 | 1:J:197:SER:HB3  | 1.13                     | 1.14              |
| 1:G:224:ASN:ND2  | 1:H:275:LYS:NZ   | 1.96                     | 1.14              |
| 1:I:219:ASP:HA   | 1:I:224:ASN:CB   | 1.77                     | 1.14              |
| 1:J:275:LYS:NZ   | 1:K:224:ASN:ND2  | 1.96                     | 1.14              |
| 1:K:308:ASN:ND2  | 1:P:232:GLU:N    | 1.94                     | 1.14              |
| 1:A:46:GLU:HB2   | 1:B:324:ALA:HB3  | 1.28                     | 1.14              |
| 1:E:224:ASN:ND2  | 1:F:275:LYS:NZ   | 1.96                     | 1.14              |
| 1:J:325:LYS:CG   | 1:K:48:GLY:CA    | 2.26                     | 1.14              |
| 1:K:52:ILE:CG1   | 1:O:247:ASP:O    | 1.96                     | 1.14              |
| 1:K:219:ASP:HA   | 1:K:224:ASN:CB   | 1.77                     | 1.14              |
| 1:L:219:ASP:HA   | 1:L:224:ASN:CB   | 1.77                     | 1.14              |
| 1:M:169:PHE:O    | 1:N:79:THR:HB    | 1.47                     | 1.14              |
| 1:O:320:LYS:CG   | 1:P:50:ILE:H     | 1.54                     | 1.14              |
| 1:A:47:ASP:OD2   | 1:B:326:TYR:CB   | 1.96                     | 1.13              |
| 1:E:131:LYS:HA   | 1:E:149:ILE:HD11 | 1.18                     | 1.13              |
| 1:H:203:GLU:HB2  | 1:K:197:SER:O    | 1.44                     | 1.13              |
| 1:I:308:ASN:ND2  | 1:N:232:GLU:N    | 1.91                     | 1.13              |
| 1:I:322:ALA:HA   | 1:J:48:GLY:HA2   | 1.29                     | 1.13              |
| 1:J:170:LYS:HE2  | 1:K:79:THR:HA    | 1.26                     | 1.13              |
| 1:J:325:LYS:HE2  | 1:K:46:GLU:OE2   | 1.48                     | 1.13              |
| 1:M:219:ASP:HA   | 1:M:224:ASN:CB   | 1.77                     | 1.13              |
| 1:N:219:ASP:HA   | 1:N:224:ASN:CB   | 1.77                     | 1.13              |
| 1:A:131:LYS:HA   | 1:A:149:ILE:HD11 | 1.18                     | 1.13              |
| 1:C:46:GLU:CB    | 1:D:324:ALA:HB2  | 1.56                     | 1.13              |
| 1:C:47:ASP:OD2   | 1:D:326:TYR:CB   | 1.96                     | 1.13              |
| 1:F:49:TYR:O     | 1:G:323:VAL:C    | 1.73                     | 1.13              |
| 1:H:219:ASP:HA   | 1:H:224:ASN:CB   | 1.77                     | 1.13              |
| 1:M:131:LYS:HA   | 1:M:149:ILE:HD11 | 1.18                     | 1.13              |
| 1:M:326:TYR:CB   | 1:N:47:ASP:OD2   | 1.96                     | 1.13              |
| 1:O:219:ASP:HA   | 1:O:224:ASN:CB   | 1.77                     | 1.13              |
| 1:A:48:GLY:N     | 1:B:320:LYS:O    | 1.65                     | 1.13              |
| 1:B:131:LYS:HA   | 1:B:149:ILE:HD11 | 1.18                     | 1.13              |
| 1:B:218:THR:OG1  | 1:C:277:ASP:HB3  | 1.45                     | 1.13              |
| 1:C:46:GLU:CB    | 1:D:324:ALA:HB1  | 1.62                     | 1.13              |
| 1:C:218:THR:OG1  | 1:D:277:ASP:CB   | 1.97                     | 1.13              |
| 1:E:46:GLU:OE2   | 1:F:325:LYS:HE2  | 1.48                     | 1.13              |
| 1:G:48:GLY:CA    | 1:H:325:LYS:CG   | 2.26                     | 1.13              |
| 1:G:219:ASP:HA   | 1:G:224:ASN:CB   | 1.77                     | 1.13              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:231:ALA:HB2  | 1:M:308:ASN:OD1  | 1.45                     | 1.13              |
| 1:I:325:LYS:HE2  | 1:J:46:GLU:OE2   | 1.48                     | 1.13              |
| 1:J:74:GLU:C     | 1:N:245:GLU:HB3  | 1.67                     | 1.13              |
| 1:K:325:LYS:HE2  | 1:L:46:GLU:OE2   | 1.48                     | 1.13              |
| 1:L:131:LYS:HA   | 1:L:149:ILE:HD11 | 1.18                     | 1.13              |
| 1:N:169:PHE:O    | 1:O:79:THR:HB    | 1.47                     | 1.13              |
| 1:B:227:THR:HG21 | 1:C:300:TYR:N    | 1.48                     | 1.13              |
| 1:E:79:THR:HA    | 1:F:170:LYS:HE2  | 1.27                     | 1.13              |
| 1:F:68:ILE:HD13  | 1:F:92:THR:HB    | 1.14                     | 1.13              |
| 1:F:219:ASP:HA   | 1:F:224:ASN:CB   | 1.77                     | 1.13              |
| 1:K:52:ILE:HG23  | 1:O:248:THR:HA   | 1.22                     | 1.13              |
| 1:K:275:LYS:NZ   | 1:L:224:ASN:ND2  | 1.96                     | 1.13              |
| 1:P:68:ILE:HD13  | 1:P:92:THR:HB    | 1.15                     | 1.13              |
| 1:P:219:ASP:HA   | 1:P:224:ASN:CB   | 1.77                     | 1.13              |
| 1:A:46:GLU:CB    | 1:B:324:ALA:HB2  | 1.56                     | 1.13              |
| 1:E:48:GLY:CA    | 1:F:325:LYS:CG   | 2.26                     | 1.13              |
| 1:E:219:ASP:HA   | 1:E:224:ASN:CB   | 1.77                     | 1.13              |
| 1:G:68:ILE:HD13  | 1:G:92:THR:HB    | 1.14                     | 1.13              |
| 1:I:131:LYS:HA   | 1:I:149:ILE:HD11 | 1.18                     | 1.13              |
| 1:J:308:ASN:ND2  | 1:O:232:GLU:N    | 1.95                     | 1.12              |
| 1:K:166:GLN:NE2  | 1:P:241:LYS:CB   | 1.99                     | 1.12              |
| 1:K:325:LYS:CG   | 1:L:48:GLY:CA    | 2.26                     | 1.12              |
| 1:N:277:ASP:CB   | 1:O:218:THR:OG1  | 1.97                     | 1.13              |
| 1:E:68:ILE:HD13  | 1:E:92:THR:HB    | 1.14                     | 1.12              |
| 1:G:79:THR:HA    | 1:H:170:LYS:HE2  | 1.27                     | 1.12              |
| 1:G:274:PHE:CZ   | 1:J:203:GLU:OE1  | 2.02                     | 1.12              |
| 1:O:169:PHE:O    | 1:P:79:THR:HB    | 1.48                     | 1.12              |
| 1:O:277:ASP:CB   | 1:P:218:THR:OG1  | 1.97                     | 1.12              |
| 1:C:131:LYS:HA   | 1:C:149:ILE:HD11 | 1.18                     | 1.12              |
| 1:F:197:SER:O    | 1:I:203:GLU:HB2  | 1.47                     | 1.12              |
| 1:G:48:GLY:HA2   | 1:H:322:ALA:HA   | 1.29                     | 1.12              |
| 1:H:120:ALA:HB2  | 1:K:120:ALA:HB2  | 1.30                     | 1.12              |
| 1:M:277:ASP:HB3  | 1:N:218:THR:HG1  | 1.02                     | 1.12              |
| 1:N:323:VAL:HG23 | 1:O:47:ASP:HA    | 1.15                     | 1.12              |
| 1:N:326:TYR:CB   | 1:O:47:ASP:OD2   | 1.96                     | 1.12              |
| 1:A:46:GLU:CA    | 1:B:324:ALA:CB   | 1.81                     | 1.12              |
| 1:E:48:GLY:HA2   | 1:F:322:ALA:HA   | 1.29                     | 1.12              |
| 1:F:46:GLU:OE2   | 1:G:325:LYS:HE2  | 1.48                     | 1.12              |
| 1:L:52:ILE:HG23  | 1:P:248:THR:HA   | 1.17                     | 1.12              |
| 1:M:300:TYR:N    | 1:N:227:THR:HG21 | 1.48                     | 1.12              |
| 1:A:219:ASP:HA   | 1:A:224:ASN:CB   | 1.77                     | 1.12              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:B:218:THR:OG1 | 1:C:277:ASP:CB   | 1.97                     | 1.12              |
| 1:B:225:LEU:CD2 | 1:C:300:TYR:CE2  | 2.25                     | 1.12              |
| 1:B:248:THR:HA  | 1:F:52:ILE:HG23  | 1.16                     | 1.12              |
| 1:H:68:ILE:HD13 | 1:H:92:THR:HB    | 1.14                     | 1.12              |
| 1:J:131:LYS:HA  | 1:J:149:ILE:HD11 | 1.18                     | 1.12              |
| 1:M:277:ASP:CB  | 1:N:218:THR:OG1  | 1.97                     | 1.12              |
| 1:N:324:ALA:HB3 | 1:O:46:GLU:HB2   | 1.28                     | 1.12              |
| 1:O:326:TYR:CB  | 1:P:47:ASP:OD2   | 1.96                     | 1.12              |
| 1:A:218:THR:OG1 | 1:B:277:ASP:CB   | 1.97                     | 1.12              |
| 1:A:225:LEU:CD2 | 1:B:300:TYR:CE2  | 2.25                     | 1.12              |
| 1:A:244:GLY:N   | 1:F:320:LYS:NZ   | 1.86                     | 1.12              |
| 1:B:46:GLU:CB   | 1:C:324:ALA:HB1  | 1.61                     | 1.12              |
| 1:C:218:THR:OG1 | 1:D:277:ASP:HB3  | 1.45                     | 1.12              |
| 1:F:48:GLY:HA2  | 1:G:322:ALA:HA   | 1.29                     | 1.12              |
| 1:I:325:LYS:CG  | 1:J:48:GLY:CA    | 2.26                     | 1.12              |
| 1:K:303:ASN:HB2 | 1:L:226:ILE:H    | 1.10                     | 1.12              |
| 1:M:324:ALA:HB1 | 1:N:46:GLU:CB    | 1.61                     | 1.12              |
| 1:N:324:ALA:CB  | 1:O:46:GLU:CA    | 1.81                     | 1.12              |
| 1:B:219:ASP:HA  | 1:B:224:ASN:CB   | 1.77                     | 1.11              |
| 1:C:79:THR:HB   | 1:D:169:PHE:O    | 1.47                     | 1.11              |
| 1:C:225:LEU:CD2 | 1:D:300:TYR:CE2  | 2.25                     | 1.11              |
| 1:D:131:LYS:HA  | 1:D:149:ILE:HD11 | 1.18                     | 1.11              |
| 1:H:219:ASP:CA  | 1:H:224:ASN:HB2  | 1.80                     | 1.11              |
| 1:J:278:GLN:N   | 1:K:218:THR:OG1  | 1.81                     | 1.11              |
| 1:K:131:LYS:HA  | 1:K:149:ILE:HD11 | 1.18                     | 1.11              |
| 1:O:68:ILE:HD13 | 1:O:92:THR:HB    | 1.14                     | 1.11              |
| 1:A:79:THR:CG2  | 1:B:192:CYS:CB   | 2.27                     | 1.11              |
| 1:A:218:THR:HG1 | 1:B:277:ASP:HB3  | 1.05                     | 1.11              |
| 1:B:219:ASP:CG  | 1:C:275:LYS:HZ1  | 1.53                     | 1.11              |
| 1:E:218:THR:OG1 | 1:F:278:GLN:N    | 1.81                     | 1.11              |
| 1:F:48:GLY:CA   | 1:G:325:LYS:CG   | 2.26                     | 1.11              |
| 1:H:203:GLU:CB  | 1:K:197:SER:O    | 1.98                     | 1.11              |
| 1:I:278:GLN:N   | 1:J:218:THR:OG1  | 1.81                     | 1.11              |
| 1:B:79:THR:CG2  | 1:C:192:CYS:CB   | 2.27                     | 1.11              |
| 1:B:79:THR:HB   | 1:C:169:PHE:O    | 1.47                     | 1.11              |
| 1:D:246:ILE:CD1 | 1:H:50:ILE:N     | 2.12                     | 1.11              |
| 1:D:250:SER:HB3 | 1:D:253:VAL:HB   | 1.33                     | 1.11              |
| 1:F:218:THR:OG1 | 1:G:278:GLN:N    | 1.81                     | 1.11              |
| 1:G:120:ALA:HB2 | 1:J:120:ALA:HB2  | 1.30                     | 1.11              |
| 1:G:203:GLU:OE1 | 1:J:274:PHE:CZ   | 2.03                     | 1.11              |
| 1:I:68:ILE:HD13 | 1:I:92:THR:HB    | 1.14                     | 1.11              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:165:GLU:CA   | 1:P:241:LYS:O    | 1.91                     | 1.11              |
| 1:M:192:CYS:CB   | 1:N:79:THR:CG2   | 2.26                     | 1.11              |
| 1:M:320:LYS:CD   | 1:N:50:ILE:H     | 1.63                     | 1.11              |
| 1:O:324:ALA:HB2  | 1:P:46:GLU:CB    | 1.56                     | 1.11              |
| 1:A:79:THR:HB    | 1:B:169:PHE:O    | 1.48                     | 1.11              |
| 1:C:79:THR:CG2   | 1:D:192:CYS:CB   | 2.27                     | 1.11              |
| 1:C:219:ASP:HA   | 1:C:224:ASN:CB   | 1.77                     | 1.11              |
| 1:H:265:ALA:HA   | 1:K:271:LYS:HZ2  | 1.14                     | 1.11              |
| 1:L:52:ILE:HD12  | 1:P:248:THR:N    | 1.63                     | 1.11              |
| 1:N:250:SER:HB3  | 1:N:253:VAL:HB   | 1.33                     | 1.11              |
| 1:N:320:LYS:O    | 1:O:48:GLY:N     | 1.65                     | 1.11              |
| 1:O:250:SER:HB3  | 1:O:253:VAL:HB   | 1.33                     | 1.11              |
| 1:P:250:SER:HB3  | 1:P:253:VAL:HB   | 1.33                     | 1.11              |
| 1:C:250:SER:HB3  | 1:C:253:VAL:HB   | 1.33                     | 1.11              |
| 1:D:219:ASP:HA   | 1:D:224:ASN:CB   | 1.77                     | 1.11              |
| 1:D:219:ASP:CA   | 1:D:224:ASN:HB2  | 1.81                     | 1.11              |
| 1:G:46:GLU:OE2   | 1:H:325:LYS:HE2  | 1.48                     | 1.11              |
| 1:G:218:THR:OG1  | 1:H:278:GLN:N    | 1.81                     | 1.11              |
| 1:L:153:THR:HG21 | 1:L:325:LYS:HG3  | 1.33                     | 1.11              |
| 1:O:277:ASP:HB3  | 1:P:218:THR:HG1  | 0.94                     | 1.11              |
| 1:B:218:THR:HG1  | 1:C:277:ASP:HB3  | 0.97                     | 1.10              |
| 1:C:219:ASP:CA   | 1:C:224:ASN:HB2  | 1.81                     | 1.10              |
| 1:C:227:THR:HG21 | 1:D:300:TYR:N    | 1.48                     | 1.10              |
| 1:I:219:ASP:CA   | 1:I:224:ASN:HB2  | 1.80                     | 1.10              |
| 1:J:165:GLU:OE2  | 1:O:241:LYS:HA   | 1.46                     | 1.10              |
| 1:K:278:GLN:N    | 1:L:218:THR:OG1  | 1.81                     | 1.10              |
| 1:N:320:LYS:CD   | 1:O:50:ILE:H     | 1.63                     | 1.10              |
| 1:B:219:ASP:CA   | 1:B:224:ASN:HB2  | 1.80                     | 1.10              |
| 1:B:240:MET:HE2  | 1:F:73:VAL:CG2   | 1.59                     | 1.10              |
| 1:G:203:GLU:CG   | 1:J:198:GLU:HG2  | 1.79                     | 1.10              |
| 1:J:68:ILE:HD13  | 1:J:92:THR:HB    | 1.14                     | 1.10              |
| 1:K:153:THR:HG21 | 1:K:325:LYS:HG3  | 1.33                     | 1.10              |
| 1:N:68:ILE:HD13  | 1:N:92:THR:HB    | 1.14                     | 1.10              |
| 1:A:47:ASP:HA    | 1:B:323:VAL:HG23 | 1.15                     | 1.10              |
| 1:A:219:ASP:CA   | 1:A:224:ASN:HB2  | 1.80                     | 1.10              |
| 1:A:244:GLY:H    | 1:F:320:LYS:NZ   | 1.43                     | 1.10              |
| 1:B:250:SER:HB3  | 1:B:253:VAL:HB   | 1.33                     | 1.10              |
| 1:C:50:ILE:H     | 1:D:320:LYS:CD   | 1.63                     | 1.10              |
| 1:C:68:ILE:HD13  | 1:C:92:THR:HB    | 1.15                     | 1.10              |
| 1:D:68:ILE:HD13  | 1:D:92:THR:HB    | 1.14                     | 1.10              |
| 1:I:168:ASN:CB   | 1:J:71:GLN:HE21  | 1.49                     | 1.10              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:278:GLN:CG   | 1:J:218:THR:HB   | 1.75                     | 1.10              |
| 1:K:50:ILE:HG23  | 1:O:246:ILE:HD12 | 1.24                     | 1.10              |
| 1:M:68:ILE:HD13  | 1:M:92:THR:HB    | 1.14                     | 1.10              |
| 1:N:192:CYS:CB   | 1:O:79:THR:CG2   | 2.26                     | 1.10              |
| 1:A:46:GLU:CB    | 1:B:324:ALA:HB1  | 1.61                     | 1.10              |
| 1:A:250:SER:HB3  | 1:A:253:VAL:HB   | 1.33                     | 1.10              |
| 1:B:49:TYR:CD1   | 1:C:320:LYS:HD2  | 1.87                     | 1.10              |
| 1:B:248:THR:N    | 1:F:52:ILE:HD12  | 1.67                     | 1.10              |
| 1:C:50:ILE:H     | 1:D:320:LYS:CG   | 1.54                     | 1.10              |
| 1:E:250:SER:HB3  | 1:E:253:VAL:HB   | 1.33                     | 1.10              |
| 1:F:250:SER:HB3  | 1:F:253:VAL:HB   | 1.33                     | 1.10              |
| 1:I:73:VAL:HG21  | 1:M:240:MET:HE3  | 1.17                     | 1.10              |
| 1:J:153:THR:HG21 | 1:J:325:LYS:HG3  | 1.33                     | 1.10              |
| 1:M:250:SER:HB3  | 1:M:253:VAL:HB   | 1.33                     | 1.10              |
| 1:N:300:TYR:CE2  | 1:O:225:LEU:CD2  | 2.25                     | 1.10              |
| 1:O:320:LYS:CD   | 1:P:50:ILE:H     | 1.63                     | 1.10              |
| 1:A:241:LYS:CA   | 1:F:165:GLU:OE2  | 1.98                     | 1.10              |
| 1:A:242:LYS:N    | 1:F:166:GLN:OE1  | 1.84                     | 1.10              |
| 1:C:241:LYS:HA   | 1:H:165:GLU:OE2  | 1.49                     | 1.10              |
| 1:C:244:GLY:C    | 1:H:320:LYS:HD3  | 1.70                     | 1.10              |
| 1:D:246:ILE:CD1  | 1:H:50:ILE:H     | 1.63                     | 1.10              |
| 1:F:271:LYS:O    | 1:I:202:GLU:OE2  | 1.68                     | 1.10              |
| 1:G:225:LEU:CD1  | 1:H:300:TYR:CE2  | 2.24                     | 1.10              |
| 1:G:250:SER:HB3  | 1:G:253:VAL:HB   | 1.33                     | 1.10              |
| 1:B:50:ILE:H     | 1:C:320:LYS:CD   | 1.63                     | 1.09              |
| 1:B:68:ILE:HD13  | 1:B:92:THR:HB    | 1.14                     | 1.09              |
| 1:B:229:GLU:CD   | 1:G:309:ASN:O    | 1.85                     | 1.09              |
| 1:C:229:GLU:OE1  | 1:H:308:ASN:O    | 1.70                     | 1.09              |
| 1:G:71:GLN:HE21  | 1:H:168:ASN:CB   | 1.49                     | 1.09              |
| 1:H:153:THR:HG21 | 1:H:325:LYS:HG3  | 1.33                     | 1.09              |
| 1:M:300:TYR:CE2  | 1:N:225:LEU:CD2  | 2.25                     | 1.09              |
| 1:A:50:ILE:H     | 1:B:320:LYS:CD   | 1.63                     | 1.09              |
| 1:A:68:ILE:HD13  | 1:A:92:THR:HB    | 1.14                     | 1.09              |
| 1:F:71:GLN:HE21  | 1:G:168:ASN:CB   | 1.49                     | 1.09              |
| 1:F:225:LEU:CD1  | 1:G:300:TYR:CE2  | 2.24                     | 1.09              |
| 1:G:198:GLU:HG2  | 1:J:203:GLU:CG   | 1.78                     | 1.09              |
| 1:I:153:THR:HG21 | 1:I:325:LYS:HG3  | 1.33                     | 1.09              |
| 1:K:275:LYS:O    | 1:L:218:THR:OG1  | 1.71                     | 1.09              |
| 1:K:300:TYR:CE2  | 1:L:225:LEU:CD1  | 2.24                     | 1.09              |
| 1:P:219:ASP:CA   | 1:P:224:ASN:HB2  | 1.81                     | 1.09              |
| 1:F:198:GLU:HG2  | 1:I:203:GLU:CG   | 1.83                     | 1.09              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:250:SER:HB3  | 1:I:253:VAL:HB   | 1.33                     | 1.09              |
| 1:J:75:ASP:HA    | 1:N:245:GLU:CB   | 1.79                     | 1.09              |
| 1:J:168:ASN:CB   | 1:K:71:GLN:HE21  | 1.49                     | 1.09              |
| 1:J:278:GLN:CG   | 1:K:218:THR:HB   | 1.75                     | 1.09              |
| 1:K:170:LYS:HE2  | 1:L:79:THR:HA    | 1.27                     | 1.09              |
| 1:N:324:ALA:HB1  | 1:O:46:GLU:CB    | 1.62                     | 1.09              |
| 1:C:231:ALA:N    | 1:H:308:ASN:ND2  | 2.01                     | 1.09              |
| 1:H:250:SER:HB3  | 1:H:253:VAL:HB   | 1.33                     | 1.09              |
| 1:K:68:ILE:HD13  | 1:K:92:THR:HB    | 1.14                     | 1.09              |
| 1:K:320:LYS:C    | 1:L:49:TYR:CD1   | 2.26                     | 1.09              |
| 1:O:219:ASP:CA   | 1:O:224:ASN:HB2  | 1.80                     | 1.09              |
| 1:C:47:ASP:HA    | 1:D:323:VAL:HG23 | 1.15                     | 1.09              |
| 1:E:71:GLN:HE21  | 1:F:168:ASN:CB   | 1.49                     | 1.09              |
| 1:E:225:LEU:CD1  | 1:F:300:TYR:CE2  | 2.24                     | 1.09              |
| 1:F:79:THR:HA    | 1:G:170:LYS:HE2  | 1.27                     | 1.09              |
| 1:F:120:ALA:HB2  | 1:I:120:ALA:HB2  | 1.28                     | 1.09              |
| 1:G:153:THR:HG21 | 1:G:325:LYS:HG3  | 1.33                     | 1.09              |
| 1:I:52:ILE:HG12  | 1:M:245:GLU:O    | 1.50                     | 1.09              |
| 1:I:275:LYS:O    | 1:J:218:THR:OG1  | 1.71                     | 1.09              |
| 1:J:300:TYR:CE2  | 1:K:225:LEU:CD1  | 2.24                     | 1.09              |
| 1:J:320:LYS:C    | 1:K:49:TYR:CD1   | 2.26                     | 1.09              |
| 1:N:320:LYS:HD2  | 1:O:49:TYR:CD1   | 1.87                     | 1.09              |
| 1:B:46:GLU:HB2   | 1:C:324:ALA:HB3  | 1.28                     | 1.08              |
| 1:F:197:SER:O    | 1:I:203:GLU:CB   | 1.99                     | 1.08              |
| 1:G:49:TYR:CB    | 1:H:324:ALA:HB2  | 1.82                     | 1.08              |
| 1:L:231:ALA:HB2  | 1:P:308:ASN:OD1  | 0.91                     | 1.08              |
| 1:N:219:ASP:CA   | 1:N:224:ASN:HB2  | 1.80                     | 1.08              |
| 1:F:198:GLU:HG2  | 1:I:203:GLU:CB   | 1.83                     | 1.08              |
| 1:G:218:THR:HB   | 1:H:278:GLN:CG   | 1.75                     | 1.08              |
| 1:I:300:TYR:CE2  | 1:J:225:LEU:CD1  | 2.24                     | 1.08              |
| 1:I:320:LYS:C    | 1:J:49:TYR:CD1   | 2.26                     | 1.08              |
| 1:J:52:ILE:CG2   | 1:N:247:ASP:O    | 1.99                     | 1.08              |
| 1:J:250:SER:HB3  | 1:J:253:VAL:HB   | 1.33                     | 1.08              |
| 1:K:278:GLN:CG   | 1:L:218:THR:HB   | 1.75                     | 1.08              |
| 1:M:219:ASP:CA   | 1:M:224:ASN:HB2  | 1.80                     | 1.08              |
| 1:E:49:TYR:CB    | 1:F:324:ALA:HB2  | 1.82                     | 1.08              |
| 1:E:218:THR:OG1  | 1:F:275:LYS:O    | 1.71                     | 1.08              |
| 1:F:153:THR:HG21 | 1:F:325:LYS:HG3  | 1.33                     | 1.08              |
| 1:G:226:ILE:H    | 1:H:303:ASN:HB2  | 1.10                     | 1.08              |
| 1:J:308:ASN:ND2  | 1:O:232:GLU:H    | 1.49                     | 1.08              |
| 1:K:324:ALA:HB2  | 1:L:49:TYR:CB    | 1.82                     | 1.08              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:49:TYR:CD1   | 1:D:320:LYS:HD2  | 1.87                     | 1.08              |
| 1:C:246:ILE:HD11 | 1:G:50:ILE:N     | 1.50                     | 1.08              |
| 1:I:324:ALA:HB2  | 1:J:49:TYR:CB    | 1.82                     | 1.08              |
| 1:K:168:ASN:CB   | 1:L:71:GLN:HE21  | 1.49                     | 1.08              |
| 1:M:323:VAL:HG23 | 1:N:47:ASP:HA    | 1.15                     | 1.08              |
| 1:A:49:TYR:CD1   | 1:B:320:LYS:HD2  | 1.87                     | 1.08              |
| 1:A:230:GLN:HB2  | 1:F:307:THR:C    | 1.75                     | 1.08              |
| 1:E:49:TYR:CD1   | 1:F:320:LYS:C    | 2.26                     | 1.08              |
| 1:G:49:TYR:CD1   | 1:H:320:LYS:C    | 2.26                     | 1.08              |
| 1:J:324:ALA:HB2  | 1:K:49:TYR:CB    | 1.82                     | 1.08              |
| 1:K:50:ILE:O     | 1:O:246:ILE:HA   | 0.91                     | 1.08              |
| 1:K:165:GLU:HA   | 1:P:241:LYS:O    | 1.48                     | 1.08              |
| 1:L:52:ILE:CD1   | 1:P:247:ASP:O    | 2.02                     | 1.08              |
| 1:L:68:ILE:HD13  | 1:L:92:THR:HB    | 1.14                     | 1.08              |
| 1:N:320:LYS:CG   | 1:O:50:ILE:H     | 1.54                     | 1.08              |
| 1:O:26:LYS:HB2   | 1:O:97:VAL:HG13  | 1.36                     | 1.08              |
| 1:P:26:LYS:HB2   | 1:P:97:VAL:HG13  | 1.36                     | 1.08              |
| 1:C:242:LYS:CA   | 1:H:166:GLN:HB3  | 1.81                     | 1.07              |
| 1:E:153:THR:HG21 | 1:E:325:LYS:HG3  | 1.33                     | 1.07              |
| 1:F:218:THR:HB   | 1:G:278:GLN:CG   | 1.75                     | 1.07              |
| 1:J:73:VAL:CB    | 1:N:240:MET:CE   | 2.32                     | 1.07              |
| 1:J:276:LEU:O    | 1:K:224:ASN:O    | 1.64                     | 1.07              |
| 1:N:26:LYS:HB2   | 1:N:97:VAL:HG13  | 1.36                     | 1.07              |
| 1:O:320:LYS:HD2  | 1:P:49:TYR:CD1   | 1.87                     | 1.07              |
| 1:O:323:VAL:HG23 | 1:P:47:ASP:HA    | 1.15                     | 1.07              |
| 1:A:50:ILE:H     | 1:B:320:LYS:CG   | 1.54                     | 1.07              |
| 1:A:246:ILE:HD12 | 1:F:320:LYS:CA   | 1.83                     | 1.07              |
| 1:D:26:LYS:HB2   | 1:D:97:VAL:HG13  | 1.36                     | 1.07              |
| 1:H:202:GLU:OE2  | 1:K:271:LYS:O    | 1.70                     | 1.07              |
| 1:K:50:ILE:C     | 1:O:246:ILE:HA   | 1.73                     | 1.07              |
| 1:K:250:SER:HB3  | 1:K:253:VAL:HB   | 1.33                     | 1.07              |
| 1:B:47:ASP:HA    | 1:C:323:VAL:HG23 | 1.15                     | 1.07              |
| 1:C:218:THR:HG1  | 1:D:277:ASP:HB3  | 0.95                     | 1.07              |
| 1:F:49:TYR:CB    | 1:G:324:ALA:HB2  | 1.82                     | 1.07              |
| 1:F:49:TYR:CD1   | 1:G:320:LYS:C    | 2.26                     | 1.07              |
| 1:K:245:GLU:OE2  | 1:P:51:ASP:O     | 1.73                     | 1.07              |
| 1:M:26:LYS:HB2   | 1:M:97:VAL:HG13  | 1.36                     | 1.07              |
| 1:A:227:THR:CG2  | 1:B:300:TYR:HA   | 1.77                     | 1.07              |
| 1:A:241:LYS:NZ   | 1:F:305:ILE:HG22 | 1.70                     | 1.07              |
| 1:A:252:THR:HG21 | 1:E:53:GLU:HG3   | 1.30                     | 1.07              |
| 1:G:197:SER:HB3  | 1:J:183:ASN:HD21 | 1.13                     | 1.07              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:275:LYS:O    | 1:K:218:THR:OG1  | 1.70                     | 1.07              |
| 1:A:26:LYS:HB2   | 1:A:97:VAL:HG13  | 1.36                     | 1.07              |
| 1:C:46:GLU:HA    | 1:D:324:ALA:CB   | 1.83                     | 1.07              |
| 1:E:218:THR:HB   | 1:F:278:GLN:CG   | 1.75                     | 1.07              |
| 1:G:218:THR:OG1  | 1:H:275:LYS:O    | 1.71                     | 1.07              |
| 1:G:218:THR:CB   | 1:H:278:GLN:OE1  | 2.03                     | 1.07              |
| 1:I:323:VAL:CG1  | 1:N:246:ILE:CD1  | 2.33                     | 1.07              |
| 1:K:278:GLN:OE1  | 1:L:218:THR:CB   | 2.03                     | 1.07              |
| 1:O:324:ALA:HB1  | 1:P:46:GLU:CB    | 1.61                     | 1.07              |
| 1:C:26:LYS:HB2   | 1:C:97:VAL:HG13  | 1.36                     | 1.06              |
| 1:G:199:ARG:O    | 1:J:201:ILE:HG23 | 1.51                     | 1.06              |
| 1:K:320:LYS:CA   | 1:P:246:ILE:HD12 | 1.84                     | 1.06              |
| 1:L:250:SER:HB3  | 1:L:253:VAL:HB   | 1.33                     | 1.06              |
| 1:A:153:THR:HG21 | 1:A:325:LYS:HG3  | 1.33                     | 1.06              |
| 1:B:227:THR:CG2  | 1:C:300:TYR:HA   | 1.77                     | 1.06              |
| 1:F:52:ILE:H     | 1:F:74:GLU:HG2   | 1.21                     | 1.06              |
| 1:F:218:THR:CB   | 1:G:278:GLN:OE1  | 2.03                     | 1.06              |
| 1:L:52:ILE:H     | 1:L:74:GLU:HG2   | 1.21                     | 1.06              |
| 1:M:153:THR:HG21 | 1:M:325:LYS:HG3  | 1.33                     | 1.06              |
| 1:M:324:ALA:HB3  | 1:N:46:GLU:HB2   | 1.28                     | 1.06              |
| 1:N:153:THR:HG21 | 1:N:325:LYS:HG3  | 1.33                     | 1.06              |
| 1:A:95:THR:HG22  | 1:A:136:ILE:HD13 | 1.37                     | 1.06              |
| 1:B:153:THR:HG21 | 1:B:325:LYS:HG3  | 1.33                     | 1.06              |
| 1:D:95:THR:HG22  | 1:D:136:ILE:HD13 | 1.36                     | 1.06              |
| 1:F:197:SER:HB3  | 1:I:183:ASN:ND2  | 1.68                     | 1.06              |
| 1:I:278:GLN:OE1  | 1:J:218:THR:CB   | 2.03                     | 1.06              |
| 1:K:52:ILE:HD12  | 1:O:248:THR:N    | 1.70                     | 1.06              |
| 1:K:309:ASN:O    | 1:P:229:GLU:CD   | 1.85                     | 1.06              |
| 1:O:153:THR:HG21 | 1:O:325:LYS:HG3  | 1.33                     | 1.06              |
| 1:B:26:LYS:HB2   | 1:B:97:VAL:HG13  | 1.36                     | 1.06              |
| 1:B:95:THR:HG22  | 1:B:136:ILE:HD13 | 1.37                     | 1.06              |
| 1:C:46:GLU:HB2   | 1:D:324:ALA:HB3  | 1.28                     | 1.06              |
| 1:C:95:THR:HG22  | 1:C:136:ILE:HD13 | 1.37                     | 1.06              |
| 1:C:153:THR:HG21 | 1:C:325:LYS:HG3  | 1.33                     | 1.06              |
| 1:G:52:ILE:H     | 1:G:74:GLU:HG2   | 1.21                     | 1.06              |
| 1:G:179:PHE:HB3  | 1:G:288:THR:HB   | 1.38                     | 1.06              |
| 1:G:226:ILE:N    | 1:H:303:ASN:HB2  | 1.57                     | 1.06              |
| 1:H:211:ILE:HA   | 1:H:220:LEU:HD23 | 1.37                     | 1.06              |
| 1:H:272:ARG:O    | 1:K:203:GLU:HB3  | 1.53                     | 1.06              |
| 1:I:52:ILE:CG2   | 1:M:247:ASP:O    | 2.04                     | 1.06              |
| 1:I:300:TYR:CD2  | 1:J:225:LEU:HB3  | 1.91                     | 1.06              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:323:VAL:CG1  | 1:N:246:ILE:HD13 | 1.58                     | 1.06              |
| 1:J:179:PHE:HB3  | 1:J:288:THR:HB   | 1.38                     | 1.06              |
| 1:K:52:ILE:CG2   | 1:O:247:ASP:O    | 2.02                     | 1.06              |
| 1:B:246:ILE:HD13 | 1:G:323:VAL:HG11 | 1.31                     | 1.06              |
| 1:B:246:ILE:HA   | 1:F:50:ILE:O     | 0.89                     | 1.06              |
| 1:C:219:ASP:OD1  | 1:D:275:LYS:NZ   | 1.88                     | 1.06              |
| 1:C:227:THR:CG2  | 1:D:300:TYR:HA   | 1.77                     | 1.06              |
| 1:F:179:PHE:HB3  | 1:F:288:THR:HB   | 1.38                     | 1.06              |
| 1:F:218:THR:OG1  | 1:G:275:LYS:O    | 1.70                     | 1.06              |
| 1:G:201:ILE:HG23 | 1:J:199:ARG:O    | 1.51                     | 1.06              |
| 1:I:179:PHE:HB3  | 1:I:288:THR:HB   | 1.38                     | 1.06              |
| 1:K:179:PHE:HB3  | 1:K:288:THR:HB   | 1.38                     | 1.06              |
| 1:O:275:LYS:NZ   | 1:P:219:ASP:OD1  | 1.88                     | 1.06              |
| 1:P:153:THR:HG21 | 1:P:325:LYS:HG3  | 1.33                     | 1.06              |
| 1:B:229:GLU:OE2  | 1:G:309:ASN:O    | 1.74                     | 1.05              |
| 1:E:179:PHE:HB3  | 1:E:288:THR:HB   | 1.38                     | 1.05              |
| 1:E:218:THR:CB   | 1:F:278:GLN:OE1  | 2.03                     | 1.05              |
| 1:F:225:LEU:HB3  | 1:G:300:TYR:CD2  | 1.91                     | 1.05              |
| 1:G:71:GLN:CD    | 1:H:168:ASN:ND2  | 1.99                     | 1.05              |
| 1:H:179:PHE:HB3  | 1:H:288:THR:HB   | 1.38                     | 1.05              |
| 1:J:75:ASP:N     | 1:N:245:GLU:CB   | 2.19                     | 1.05              |
| 1:J:231:ALA:CB   | 1:N:308:ASN:OD1  | 2.02                     | 1.05              |
| 1:J:278:GLN:OE1  | 1:K:218:THR:CB   | 2.03                     | 1.05              |
| 1:J:300:TYR:CD2  | 1:K:225:LEU:HB3  | 1.91                     | 1.05              |
| 1:M:324:ALA:HB1  | 1:N:46:GLU:HB2   | 1.15                     | 1.05              |
| 1:N:277:ASP:HB3  | 1:O:218:THR:HG1  | 1.13                     | 1.05              |
| 1:B:240:MET:CE   | 1:F:73:VAL:HB    | 1.79                     | 1.05              |
| 1:C:52:ILE:H     | 1:C:74:GLU:HG2   | 1.21                     | 1.05              |
| 1:D:153:THR:HG21 | 1:D:325:LYS:HG3  | 1.33                     | 1.05              |
| 1:E:47:ASP:CA    | 1:F:323:VAL:O    | 2.05                     | 1.05              |
| 1:F:47:ASP:CA    | 1:G:323:VAL:O    | 2.05                     | 1.05              |
| 1:F:198:GLU:HA   | 1:I:203:GLU:HB2  | 1.35                     | 1.05              |
| 1:H:183:ASN:HD21 | 1:K:197:SER:HB3  | 0.93                     | 1.05              |
| 1:J:52:ILE:HG23  | 1:N:248:THR:HA   | 1.38                     | 1.05              |
| 1:J:73:VAL:HG23  | 1:N:240:MET:HE2  | 1.22                     | 1.05              |
| 1:K:211:ILE:HA   | 1:K:220:LEU:HD23 | 1.37                     | 1.05              |
| 1:L:50:ILE:HG23  | 1:P:246:ILE:HD12 | 1.29                     | 1.05              |
| 1:L:179:PHE:HB3  | 1:L:288:THR:HB   | 1.38                     | 1.05              |
| 1:N:324:ALA:HB1  | 1:O:46:GLU:HB2   | 1.15                     | 1.05              |
| 1:O:324:ALA:CB   | 1:P:46:GLU:HA    | 1.83                     | 1.05              |
| 1:P:95:THR:HG22  | 1:P:136:ILE:HD13 | 1.37                     | 1.05              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:224:ASN:O    | 1:F:276:LEU:O    | 1.63                     | 1.05              |
| 1:I:323:VAL:CG1  | 1:J:50:ILE:HG23  | 1.56                     | 1.05              |
| 1:I:323:VAL:O    | 1:J:47:ASP:CA    | 2.05                     | 1.05              |
| 1:J:211:ILE:HA   | 1:J:220:LEU:HD23 | 1.37                     | 1.05              |
| 1:M:275:LYS:NZ   | 1:N:219:ASP:OD1  | 1.89                     | 1.05              |
| 1:A:219:ASP:OD1  | 1:B:275:LYS:NZ   | 1.89                     | 1.05              |
| 1:A:248:THR:HA   | 1:E:52:ILE:CG2   | 1.87                     | 1.05              |
| 1:C:246:ILE:HD11 | 1:H:323:VAL:HG22 | 1.09                     | 1.05              |
| 1:G:95:THR:HG22  | 1:G:136:ILE:HD13 | 1.37                     | 1.05              |
| 1:G:197:SER:O    | 1:J:203:GLU:HB2  | 1.55                     | 1.05              |
| 1:H:203:GLU:CB   | 1:K:198:GLU:HG2  | 1.87                     | 1.05              |
| 1:K:52:ILE:H     | 1:K:74:GLU:HG2   | 1.21                     | 1.05              |
| 1:K:300:TYR:CD2  | 1:L:225:LEU:HB3  | 1.91                     | 1.05              |
| 1:N:275:LYS:NZ   | 1:O:219:ASP:OD1  | 1.89                     | 1.05              |
| 1:O:95:THR:HG22  | 1:O:136:ILE:HD13 | 1.37                     | 1.05              |
| 1:O:277:ASP:CB   | 1:P:218:THR:HG1  | 1.68                     | 1.05              |
| 1:B:240:MET:HE2  | 1:F:73:VAL:HG23  | 1.34                     | 1.05              |
| 1:D:245:GLU:OE2  | 1:H:76:SER:HA    | 1.56                     | 1.05              |
| 1:F:49:TYR:CE1   | 1:G:320:LYS:CB   | 2.39                     | 1.05              |
| 1:F:95:THR:HG22  | 1:F:136:ILE:HD13 | 1.37                     | 1.05              |
| 1:F:272:ARG:CG   | 1:I:202:GLU:HA   | 1.86                     | 1.05              |
| 1:H:95:THR:HG22  | 1:H:136:ILE:HD13 | 1.37                     | 1.05              |
| 1:I:52:ILE:H     | 1:I:74:GLU:HG2   | 1.21                     | 1.05              |
| 1:K:320:LYS:CB   | 1:L:49:TYR:CE1   | 2.39                     | 1.05              |
| 1:M:320:LYS:HD2  | 1:N:49:TYR:CD1   | 1.87                     | 1.05              |
| 1:N:324:ALA:CB   | 1:O:46:GLU:HA    | 1.82                     | 1.05              |
| 1:O:300:TYR:HA   | 1:P:227:THR:CG2  | 1.77                     | 1.05              |
| 1:P:211:ILE:HA   | 1:P:220:LEU:HD23 | 1.37                     | 1.05              |
| 1:B:219:ASP:OD1  | 1:C:275:LYS:NZ   | 1.89                     | 1.04              |
| 1:E:211:ILE:HA   | 1:E:220:LEU:HD23 | 1.37                     | 1.04              |
| 1:F:197:SER:O    | 1:I:203:GLU:CA   | 2.04                     | 1.04              |
| 1:F:203:GLU:HB3  | 1:I:272:ARG:O    | 1.53                     | 1.04              |
| 1:G:46:GLU:HG2   | 1:H:324:ALA:HB1  | 1.34                     | 1.04              |
| 1:L:37:ILE:HG13  | 1:L:312:TRP:CZ2  | 1.92                     | 1.04              |
| 1:O:192:CYS:CB   | 1:P:79:THR:CG2   | 2.27                     | 1.04              |
| 1:O:211:ILE:HA   | 1:O:220:LEU:HD23 | 1.37                     | 1.04              |
| 1:O:324:ALA:HB1  | 1:P:46:GLU:HB2   | 1.15                     | 1.04              |
| 1:A:46:GLU:HB2   | 1:B:324:ALA:HB1  | 1.15                     | 1.04              |
| 1:A:211:ILE:HA   | 1:A:220:LEU:HD23 | 1.37                     | 1.04              |
| 1:B:246:ILE:CD1  | 1:F:50:ILE:CG2   | 2.01                     | 1.04              |
| 1:B:247:ASP:O    | 1:F:52:ILE:CG2   | 2.04                     | 1.04              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:225:LEU:HB3  | 1:F:300:TYR:CD2  | 1.91                     | 1.04              |
| 1:F:271:LYS:NZ   | 1:I:265:ALA:HA   | 1.71                     | 1.04              |
| 1:G:47:ASP:CA    | 1:H:323:VAL:O    | 2.05                     | 1.04              |
| 1:J:320:LYS:CB   | 1:K:49:TYR:CE1   | 2.39                     | 1.04              |
| 1:K:37:ILE:HG13  | 1:K:312:TRP:CZ2  | 1.92                     | 1.04              |
| 1:K:276:LEU:O    | 1:L:224:ASN:O    | 1.63                     | 1.04              |
| 1:M:37:ILE:HG13  | 1:M:312:TRP:CZ2  | 1.92                     | 1.04              |
| 1:N:37:ILE:HG13  | 1:N:312:TRP:CZ2  | 1.93                     | 1.04              |
| 1:N:95:THR:HG22  | 1:N:136:ILE:HD13 | 1.37                     | 1.04              |
| 1:B:245:GLU:HB3  | 1:F:75:ASP:HA    | 1.20                     | 1.04              |
| 1:C:246:ILE:HD11 | 1:H:323:VAL:CG2  | 1.85                     | 1.04              |
| 1:E:52:ILE:H     | 1:E:74:GLU:HG2   | 1.21                     | 1.04              |
| 1:F:201:ILE:HG23 | 1:I:199:ARG:O    | 1.52                     | 1.04              |
| 1:H:183:ASN:ND2  | 1:K:197:SER:HB3  | 1.71                     | 1.04              |
| 1:I:320:LYS:CB   | 1:J:49:TYR:CE1   | 2.39                     | 1.04              |
| 1:O:37:ILE:HG13  | 1:O:312:TRP:CZ2  | 1.92                     | 1.04              |
| 1:E:26:LYS:HB2   | 1:E:97:VAL:HG13  | 1.36                     | 1.04              |
| 1:E:37:ILE:HG13  | 1:E:312:TRP:CZ2  | 1.93                     | 1.04              |
| 1:F:26:LYS:HB2   | 1:F:97:VAL:HG13  | 1.36                     | 1.04              |
| 1:F:71:GLN:CD    | 1:G:168:ASN:ND2  | 1.99                     | 1.04              |
| 1:G:26:LYS:HB2   | 1:G:97:VAL:HG13  | 1.36                     | 1.04              |
| 1:G:49:TYR:CE1   | 1:H:320:LYS:CB   | 2.39                     | 1.04              |
| 1:G:225:LEU:HB3  | 1:H:300:TYR:CD2  | 1.91                     | 1.04              |
| 1:H:37:ILE:HG13  | 1:H:312:TRP:CZ2  | 1.93                     | 1.04              |
| 1:H:198:GLU:HG3  | 1:K:203:GLU:CG   | 1.81                     | 1.04              |
| 1:H:271:LYS:HE3  | 1:K:202:GLU:HG3  | 1.39                     | 1.04              |
| 1:J:37:ILE:HG13  | 1:J:312:TRP:CZ2  | 1.92                     | 1.04              |
| 1:J:323:VAL:CG1  | 1:K:50:ILE:HG23  | 1.56                     | 1.04              |
| 1:J:323:VAL:O    | 1:K:47:ASP:CA    | 2.05                     | 1.04              |
| 1:A:246:ILE:HD12 | 1:E:50:ILE:HG23  | 1.35                     | 1.04              |
| 1:B:37:ILE:HG13  | 1:B:312:TRP:CZ2  | 1.92                     | 1.04              |
| 1:B:52:ILE:H     | 1:B:74:GLU:HG2   | 1.20                     | 1.04              |
| 1:C:37:ILE:HG13  | 1:C:312:TRP:CZ2  | 1.93                     | 1.04              |
| 1:D:20:LYS:HG3   | 1:D:37:ILE:HG12  | 1.40                     | 1.04              |
| 1:D:37:ILE:HG13  | 1:D:312:TRP:CZ2  | 1.93                     | 1.04              |
| 1:E:71:GLN:CD    | 1:F:168:ASN:ND2  | 1.99                     | 1.04              |
| 1:E:95:THR:HG22  | 1:E:136:ILE:HD13 | 1.37                     | 1.04              |
| 1:F:46:GLU:HG2   | 1:G:324:ALA:HB1  | 1.34                     | 1.04              |
| 1:G:203:GLU:HB2  | 1:J:197:SER:O    | 1.54                     | 1.04              |
| 1:G:211:ILE:HA   | 1:G:220:LEU:HD23 | 1.37                     | 1.04              |
| 1:G:224:ASN:O    | 1:H:276:LEU:O    | 1.64                     | 1.04              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:324:ALA:HB1  | 1:J:46:GLU:HG2   | 1.34                     | 1.04              |
| 1:J:278:GLN:CD   | 1:K:218:THR:CB   | 2.24                     | 1.04              |
| 1:K:323:VAL:O    | 1:L:47:ASP:CA    | 2.05                     | 1.04              |
| 1:L:211:ILE:HA   | 1:L:220:LEU:HD23 | 1.37                     | 1.04              |
| 1:M:95:THR:HG22  | 1:M:136:ILE:HD13 | 1.36                     | 1.04              |
| 1:N:211:ILE:HA   | 1:N:220:LEU:HD23 | 1.37                     | 1.04              |
| 1:N:300:TYR:HA   | 1:O:227:THR:CG2  | 1.77                     | 1.04              |
| 1:A:37:ILE:HG13  | 1:A:312:TRP:CZ2  | 1.93                     | 1.03              |
| 1:B:46:GLU:HA    | 1:C:324:ALA:CB   | 1.83                     | 1.03              |
| 1:C:218:THR:HG1  | 1:D:277:ASP:CB   | 1.68                     | 1.03              |
| 1:E:49:TYR:CE1   | 1:F:320:LYS:CB   | 2.39                     | 1.03              |
| 1:F:197:SER:CB   | 1:I:183:ASN:HD21 | 1.70                     | 1.03              |
| 1:F:272:ARG:NH1  | 1:I:201:ILE:HG13 | 1.68                     | 1.03              |
| 1:H:201:ILE:HG13 | 1:K:272:ARG:NH1  | 1.69                     | 1.03              |
| 1:J:165:GLU:CA   | 1:O:241:LYS:O    | 2.01                     | 1.03              |
| 1:M:169:PHE:C    | 1:N:79:THR:HB    | 1.75                     | 1.03              |
| 1:B:211:ILE:HA   | 1:B:220:LEU:HD23 | 1.37                     | 1.03              |
| 1:B:229:GLU:N    | 1:G:308:ASN:HB3  | 1.38                     | 1.03              |
| 1:D:211:ILE:HA   | 1:D:220:LEU:HD23 | 1.37                     | 1.03              |
| 1:E:226:ILE:N    | 1:F:303:ASN:HB2  | 1.57                     | 1.03              |
| 1:F:37:ILE:HG13  | 1:F:312:TRP:CZ2  | 1.93                     | 1.03              |
| 1:F:226:ILE:N    | 1:G:303:ASN:HB2  | 1.57                     | 1.03              |
| 1:H:52:ILE:H     | 1:H:74:GLU:HG2   | 1.21                     | 1.03              |
| 1:I:37:ILE:HG13  | 1:I:312:TRP:CZ2  | 1.92                     | 1.03              |
| 1:I:211:ILE:HA   | 1:I:220:LEU:HD23 | 1.37                     | 1.03              |
| 1:N:52:ILE:H     | 1:N:74:GLU:HG2   | 1.21                     | 1.03              |
| 1:P:20:LYS:HG3   | 1:P:37:ILE:HG12  | 1.40                     | 1.03              |
| 1:P:37:ILE:HG13  | 1:P:312:TRP:CZ2  | 1.93                     | 1.03              |
| 1:B:241:LYS:O    | 1:G:165:GLU:CA   | 2.04                     | 1.03              |
| 1:G:218:THR:CB   | 1:H:278:GLN:CD   | 2.24                     | 1.03              |
| 1:H:199:ARG:O    | 1:K:201:ILE:HG23 | 1.55                     | 1.03              |
| 1:I:26:LYS:HB2   | 1:I:97:VAL:HG13  | 1.36                     | 1.03              |
| 1:K:52:ILE:CD1   | 1:O:247:ASP:O    | 2.05                     | 1.03              |
| 1:A:79:THR:HB    | 1:B:169:PHE:C    | 1.76                     | 1.03              |
| 1:B:218:THR:HG1  | 1:C:277:ASP:CB   | 1.69                     | 1.03              |
| 1:C:241:LYS:O    | 1:H:165:GLU:CG   | 2.06                     | 1.03              |
| 1:E:218:THR:CB   | 1:F:278:GLN:CD   | 2.24                     | 1.03              |
| 1:F:198:GLU:CA   | 1:I:203:GLU:HB2  | 1.88                     | 1.03              |
| 1:G:37:ILE:HG13  | 1:G:312:TRP:CZ2  | 1.93                     | 1.03              |
| 1:H:26:LYS:HB2   | 1:H:97:VAL:HG13  | 1.36                     | 1.03              |
| 1:I:95:THR:HG22  | 1:I:136:ILE:HD13 | 1.37                     | 1.03              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:K:324:ALA:HB1 | 1:L:46:GLU:HG2   | 1.34                     | 1.03              |
| 1:O:52:ILE:H    | 1:O:74:GLU:HG2   | 1.20                     | 1.03              |
| 1:A:308:ASN:OD1 | 1:E:231:ALA:HB2  | 0.86                     | 1.03              |
| 1:B:246:ILE:HA  | 1:F:50:ILE:C     | 1.78                     | 1.03              |
| 1:C:241:LYS:CB  | 1:H:166:GLN:NE2  | 2.11                     | 1.03              |
| 1:E:226:ILE:H   | 1:F:303:ASN:HB2  | 1.10                     | 1.03              |
| 1:F:203:GLU:CB  | 1:I:198:GLU:HG2  | 1.89                     | 1.03              |
| 1:G:198:GLU:HG2 | 1:J:203:GLU:CB   | 1.89                     | 1.03              |
| 1:K:74:GLU:C    | 1:O:245:GLU:HB3  | 1.79                     | 1.03              |
| 1:L:26:LYS:HB2  | 1:L:97:VAL:HG13  | 1.36                     | 1.03              |
| 1:M:300:TYR:HA  | 1:N:227:THR:CG2  | 1.77                     | 1.03              |
| 1:B:46:GLU:HB2  | 1:C:324:ALA:HB1  | 1.15                     | 1.02              |
| 1:B:246:ILE:CD1 | 1:G:323:VAL:CG1  | 2.38                     | 1.02              |
| 1:C:242:LYS:CB  | 1:H:166:GLN:HB3  | 1.89                     | 1.02              |
| 1:E:49:TYR:CD1  | 1:F:320:LYS:HB3  | 1.93                     | 1.02              |
| 1:G:272:ARG:NH1 | 1:J:201:ILE:CG1  | 2.15                     | 1.02              |
| 1:I:276:LEU:O   | 1:J:224:ASN:O    | 1.63                     | 1.02              |
| 1:J:26:LYS:HB2  | 1:J:97:VAL:HG13  | 1.36                     | 1.02              |
| 1:K:75:ASP:HA   | 1:O:245:GLU:HB3  | 1.24                     | 1.02              |
| 1:L:95:THR:HG22 | 1:L:136:ILE:HD13 | 1.37                     | 1.02              |
| 1:O:20:LYS:HG3  | 1:O:37:ILE:HG12  | 1.40                     | 1.02              |
| 1:A:241:LYS:C   | 1:F:166:GLN:CD   | 2.08                     | 1.02              |
| 1:B:179:PHE:HB3 | 1:B:288:THR:HB   | 1.38                     | 1.02              |
| 1:B:240:MET:HE2 | 1:F:73:VAL:CB    | 1.78                     | 1.02              |
| 1:C:20:LYS:HG3  | 1:C:37:ILE:HG12  | 1.40                     | 1.02              |
| 1:C:179:PHE:HB3 | 1:C:288:THR:HB   | 1.38                     | 1.02              |
| 1:F:49:TYR:CD1  | 1:G:320:LYS:HB3  | 1.94                     | 1.02              |
| 1:H:202:GLU:HA  | 1:K:272:ARG:CG   | 1.89                     | 1.02              |
| 1:I:75:ASP:N    | 1:M:245:GLU:CB   | 2.21                     | 1.02              |
| 1:I:278:GLN:HB3 | 1:J:218:THR:HA   | 1.03                     | 1.02              |
| 1:J:95:THR:HG22 | 1:J:136:ILE:HD13 | 1.37                     | 1.02              |
| 1:J:278:GLN:HB3 | 1:K:218:THR:HA   | 1.03                     | 1.02              |
| 1:M:52:ILE:H    | 1:M:74:GLU:HG2   | 1.21                     | 1.02              |
| 1:M:211:ILE:HA  | 1:M:220:LEU:HD23 | 1.37                     | 1.02              |
| 1:M:324:ALA:CB  | 1:N:46:GLU:HA    | 1.83                     | 1.02              |
| 1:O:131:LYS:HA  | 1:O:149:ILE:CD1  | 1.90                     | 1.02              |
| 1:O:275:LYS:HZ1 | 1:P:219:ASP:CG   | 1.62                     | 1.02              |
| 1:P:131:LYS:HA  | 1:P:149:ILE:CD1  | 1.90                     | 1.02              |
| 1:A:46:GLU:HA   | 1:B:324:ALA:CB   | 1.83                     | 1.02              |
| 1:A:52:ILE:H    | 1:A:74:GLU:HG2   | 1.20                     | 1.02              |
| 1:A:308:ASN:CG  | 1:E:231:ALA:HB2  | 1.80                     | 1.02              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:131:LYS:HA   | 1:C:149:ILE:CD1  | 1.90                     | 1.02              |
| 1:D:131:LYS:HA   | 1:D:149:ILE:CD1  | 1.90                     | 1.02              |
| 1:E:46:GLU:HG2   | 1:F:324:ALA:HB1  | 1.34                     | 1.02              |
| 1:E:218:THR:HA   | 1:F:278:GLN:HB3  | 1.03                     | 1.02              |
| 1:F:218:THR:HA   | 1:G:278:GLN:HB3  | 1.03                     | 1.02              |
| 1:G:49:TYR:CD1   | 1:H:320:LYS:HB3  | 1.93                     | 1.02              |
| 1:H:203:GLU:CA   | 1:K:197:SER:O    | 2.06                     | 1.02              |
| 1:I:320:LYS:HA   | 1:N:246:ILE:HD12 | 1.04                     | 1.02              |
| 1:J:324:ALA:HB1  | 1:K:46:GLU:HG2   | 1.34                     | 1.02              |
| 1:K:278:GLN:HB3  | 1:L:218:THR:HA   | 1.03                     | 1.02              |
| 1:L:52:ILE:CG2   | 1:P:247:ASP:O    | 2.07                     | 1.02              |
| 1:M:179:PHE:HB3  | 1:M:288:THR:HB   | 1.38                     | 1.02              |
| 1:N:131:LYS:HA   | 1:N:149:ILE:CD1  | 1.90                     | 1.02              |
| 1:N:179:PHE:HB3  | 1:N:288:THR:HB   | 1.38                     | 1.02              |
| 1:B:131:LYS:HA   | 1:B:149:ILE:CD1  | 1.90                     | 1.02              |
| 1:D:179:PHE:HB3  | 1:D:288:THR:HB   | 1.38                     | 1.02              |
| 1:F:197:SER:HB3  | 1:I:183:ASN:HD21 | 0.91                     | 1.02              |
| 1:F:202:GLU:HG3  | 1:I:271:LYS:HE3  | 1.40                     | 1.02              |
| 1:F:211:ILE:HA   | 1:F:220:LEU:HD23 | 1.37                     | 1.02              |
| 1:H:203:GLU:CG   | 1:K:198:GLU:HG2  | 1.86                     | 1.02              |
| 1:K:26:LYS:HB2   | 1:K:97:VAL:HG13  | 1.36                     | 1.02              |
| 1:M:131:LYS:HA   | 1:M:149:ILE:CD1  | 1.90                     | 1.02              |
| 1:P:52:ILE:H     | 1:P:74:GLU:HG2   | 1.20                     | 1.02              |
| 1:A:179:PHE:HB3  | 1:A:288:THR:HB   | 1.38                     | 1.02              |
| 1:A:246:ILE:HD12 | 1:F:320:LYS:HA   | 1.03                     | 1.02              |
| 1:C:246:ILE:HD13 | 1:H:323:VAL:CG1  | 1.89                     | 1.02              |
| 1:H:272:ARG:HH12 | 1:K:201:ILE:HG13 | 0.86                     | 1.02              |
| 1:J:303:ASN:HB2  | 1:K:226:ILE:H    | 1.10                     | 1.02              |
| 1:K:75:ASP:N     | 1:O:245:GLU:CB   | 2.21                     | 1.02              |
| 1:K:95:THR:HG22  | 1:K:136:ILE:HD13 | 1.37                     | 1.02              |
| 1:A:131:LYS:HA   | 1:A:149:ILE:CD1  | 1.90                     | 1.01              |
| 1:A:231:ALA:H    | 1:F:308:ASN:ND2  | 1.53                     | 1.01              |
| 1:A:248:THR:CA   | 1:E:52:ILE:HG23  | 1.87                     | 1.01              |
| 1:C:211:ILE:HA   | 1:C:220:LEU:HD23 | 1.37                     | 1.01              |
| 1:C:245:GLU:CB   | 1:G:75:ASP:CA    | 2.37                     | 1.01              |
| 1:G:131:LYS:HA   | 1:G:149:ILE:CD1  | 1.90                     | 1.01              |
| 1:G:203:GLU:CB   | 1:J:198:GLU:HG2  | 1.90                     | 1.01              |
| 1:G:218:THR:HA   | 1:H:278:GLN:HB3  | 1.03                     | 1.01              |
| 1:H:131:LYS:HA   | 1:H:149:ILE:CD1  | 1.90                     | 1.01              |
| 1:I:320:LYS:HB3  | 1:J:49:TYR:CD1   | 1.94                     | 1.01              |
| 1:J:165:GLU:HA   | 1:O:241:LYS:O    | 1.56                     | 1.01              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:320:LYS:HB3  | 1:K:49:TYR:CD1   | 1.93                     | 1.01              |
| 1:K:52:ILE:HD12  | 1:O:247:ASP:O    | 1.58                     | 1.01              |
| 1:C:242:LYS:HB2  | 1:H:166:GLN:HB3  | 1.41                     | 1.01              |
| 1:D:52:ILE:H     | 1:D:74:GLU:HG2   | 1.21                     | 1.01              |
| 1:L:131:LYS:HA   | 1:L:149:ILE:CD1  | 1.90                     | 1.01              |
| 1:O:179:PHE:HB3  | 1:O:288:THR:HB   | 1.38                     | 1.01              |
| 1:B:79:THR:HB    | 1:C:169:PHE:C    | 1.76                     | 1.01              |
| 1:C:79:THR:HB    | 1:D:169:PHE:C    | 1.75                     | 1.01              |
| 1:C:246:ILE:CA   | 1:G:50:ILE:O     | 2.07                     | 1.01              |
| 1:E:181:GLY:HA2  | 1:E:206:VAL:HG12 | 1.43                     | 1.01              |
| 1:F:131:LYS:HA   | 1:F:149:ILE:CD1  | 1.90                     | 1.01              |
| 1:H:183:ASN:HD21 | 1:K:197:SER:CB   | 1.73                     | 1.01              |
| 1:I:277:ASP:O    | 1:J:224:ASN:HA   | 1.18                     | 1.01              |
| 1:J:52:ILE:H     | 1:J:74:GLU:HG2   | 1.21                     | 1.01              |
| 1:K:278:GLN:CD   | 1:L:218:THR:CB   | 2.24                     | 1.01              |
| 1:K:320:LYS:HB3  | 1:L:49:TYR:CD1   | 1.93                     | 1.01              |
| 1:L:52:ILE:HD12  | 1:P:247:ASP:O    | 1.58                     | 1.01              |
| 1:A:20:LYS:HG3   | 1:A:37:ILE:HG12  | 1.40                     | 1.01              |
| 1:A:246:ILE:O    | 1:E:52:ILE:HD13  | 1.58                     | 1.01              |
| 1:C:46:GLU:HB2   | 1:D:324:ALA:HB1  | 1.15                     | 1.01              |
| 1:C:49:TYR:C     | 1:D:320:LYS:HG2  | 1.79                     | 1.01              |
| 1:C:308:ASN:OD1  | 1:G:231:ALA:CB   | 2.08                     | 1.01              |
| 1:E:131:LYS:HA   | 1:E:149:ILE:CD1  | 1.90                     | 1.01              |
| 1:F:181:GLY:HA2  | 1:F:206:VAL:HG12 | 1.43                     | 1.01              |
| 1:I:181:GLY:HA2  | 1:I:206:VAL:HG12 | 1.43                     | 1.01              |
| 1:J:181:GLY:HA2  | 1:J:206:VAL:HG12 | 1.43                     | 1.01              |
| 1:K:131:LYS:HA   | 1:K:149:ILE:CD1  | 1.90                     | 1.01              |
| 1:B:241:LYS:CA   | 1:G:165:GLU:OE2  | 2.08                     | 1.01              |
| 1:E:211:ILE:HA   | 1:E:220:LEU:CD2  | 1.91                     | 1.01              |
| 1:F:201:ILE:HG22 | 1:I:199:ARG:O    | 1.57                     | 1.01              |
| 1:H:43:TYR:CE2   | 1:H:67:LEU:HB3   | 1.96                     | 1.01              |
| 1:J:320:LYS:CA   | 1:O:246:ILE:HD12 | 1.90                     | 1.01              |
| 1:K:181:GLY:HA2  | 1:K:206:VAL:HG12 | 1.43                     | 1.01              |
| 1:M:20:LYS:HG3   | 1:M:37:ILE:HG12  | 1.40                     | 1.01              |
| 1:O:320:LYS:HG2  | 1:P:49:TYR:C     | 1.79                     | 1.01              |
| 1:P:179:PHE:HB3  | 1:P:288:THR:HB   | 1.38                     | 1.01              |
| 1:B:49:TYR:C     | 1:C:320:LYS:HG2  | 1.79                     | 1.00              |
| 1:G:211:ILE:HA   | 1:G:220:LEU:CD2  | 1.91                     | 1.00              |
| 1:H:265:ALA:HA   | 1:K:271:LYS:NZ   | 1.74                     | 1.00              |
| 1:I:50:ILE:O     | 1:M:246:ILE:CA   | 2.08                     | 1.00              |
| 1:I:131:LYS:HA   | 1:I:149:ILE:CD1  | 1.90                     | 1.00              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:131:LYS:HA   | 1:J:149:ILE:CD1  | 1.90                     | 1.00              |
| 1:J:168:ASN:ND2  | 1:K:71:GLN:CD    | 1.99                     | 1.00              |
| 1:J:211:ILE:HA   | 1:J:220:LEU:CD2  | 1.91                     | 1.00              |
| 1:K:307:THR:O    | 1:P:230:GLN:HB2  | 1.60                     | 1.00              |
| 1:M:320:LYS:HG2  | 1:N:49:TYR:C     | 1.79                     | 1.00              |
| 1:N:20:LYS:HG3   | 1:N:37:ILE:HG12  | 1.40                     | 1.00              |
| 1:B:240:MET:HE1  | 1:F:73:VAL:CB    | 1.88                     | 1.00              |
| 1:G:181:GLY:HA2  | 1:G:206:VAL:HG12 | 1.43                     | 1.00              |
| 1:H:181:GLY:HA2  | 1:H:206:VAL:HG12 | 1.43                     | 1.00              |
| 1:K:43:TYR:CE2   | 1:K:67:LEU:HB3   | 1.96                     | 1.00              |
| 1:N:320:LYS:HG2  | 1:O:49:TYR:C     | 1.79                     | 1.00              |
| 1:P:133:ASN:HD22 | 1:P:148:GLU:HA   | 1.27                     | 1.00              |
| 1:B:20:LYS:HG3   | 1:B:37:ILE:HG12  | 1.40                     | 1.00              |
| 1:B:181:GLY:HA2  | 1:B:206:VAL:HG12 | 1.43                     | 1.00              |
| 1:B:241:LYS:O    | 1:G:165:GLU:HG2  | 1.62                     | 1.00              |
| 1:C:43:TYR:CE2   | 1:C:67:LEU:HB3   | 1.96                     | 1.00              |
| 1:D:43:TYR:CE2   | 1:D:67:LEU:HB3   | 1.97                     | 1.00              |
| 1:F:267:LYS:HD3  | 1:I:267:LYS:HD3  | 1.42                     | 1.00              |
| 1:G:43:TYR:CE2   | 1:G:67:LEU:HB3   | 1.97                     | 1.00              |
| 1:G:49:TYR:HB2   | 1:H:321:VAL:HA   | 1.43                     | 1.00              |
| 1:H:211:ILE:HA   | 1:H:220:LEU:CD2  | 1.91                     | 1.00              |
| 1:I:75:ASP:CA    | 1:M:245:GLU:HB3  | 1.91                     | 1.00              |
| 1:I:165:GLU:OE2  | 1:N:241:LYS:HA   | 1.61                     | 1.00              |
| 1:I:168:ASN:ND2  | 1:J:71:GLN:CD    | 1.99                     | 1.00              |
| 1:K:211:ILE:HA   | 1:K:220:LEU:CD2  | 1.91                     | 1.00              |
| 1:K:323:VAL:HG13 | 1:L:50:ILE:HG23  | 1.41                     | 1.00              |
| 1:L:20:LYS:HG3   | 1:L:37:ILE:HG12  | 1.40                     | 1.00              |
| 1:L:181:GLY:HA2  | 1:L:206:VAL:HG12 | 1.43                     | 1.00              |
| 1:L:211:ILE:HA   | 1:L:220:LEU:CD2  | 1.91                     | 1.00              |
| 1:A:181:GLY:HA2  | 1:A:206:VAL:HG12 | 1.43                     | 1.00              |
| 1:C:241:LYS:N    | 1:H:166:GLN:NE2  | 1.88                     | 1.00              |
| 1:E:219:ASP:CB   | 1:F:277:ASP:HB3  | 1.92                     | 1.00              |
| 1:F:133:ASN:HD22 | 1:F:148:GLU:HA   | 1.27                     | 1.00              |
| 1:F:203:GLU:CG   | 1:I:198:GLU:HG3  | 1.78                     | 1.00              |
| 1:F:219:ASP:CB   | 1:G:277:ASP:HB3  | 1.92                     | 1.00              |
| 1:F:268:LEU:HA   | 1:I:268:LEU:HD11 | 1.41                     | 1.00              |
| 1:L:43:TYR:CE2   | 1:L:67:LEU:HB3   | 1.97                     | 1.00              |
| 1:B:43:TYR:CE2   | 1:B:67:LEU:HB3   | 1.97                     | 1.00              |
| 1:E:133:ASN:HD22 | 1:E:148:GLU:HA   | 1.27                     | 1.00              |
| 1:G:219:ASP:CB   | 1:H:277:ASP:HB3  | 1.92                     | 1.00              |
| 1:G:224:ASN:HA   | 1:H:277:ASP:O    | 1.18                     | 1.00              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:166:GLN:CA   | 1:N:242:LYS:C    | 2.23                     | 1.00              |
| 1:J:43:TYR:CE2   | 1:J:67:LEU:HB3   | 1.96                     | 1.00              |
| 1:J:323:VAL:HG13 | 1:K:50:ILE:HG23  | 1.41                     | 1.00              |
| 1:O:133:ASN:HD22 | 1:O:148:GLU:HA   | 1.27                     | 1.00              |
| 1:A:43:TYR:CE2   | 1:A:67:LEU:HB3   | 1.96                     | 1.00              |
| 1:B:211:ILE:HA   | 1:B:220:LEU:CD2  | 1.91                     | 1.00              |
| 1:B:245:GLU:CB   | 1:F:75:ASP:N     | 2.24                     | 1.00              |
| 1:B:246:ILE:HD12 | 1:F:50:ILE:HG23  | 1.37                     | 1.00              |
| 1:C:181:GLY:HA2  | 1:C:206:VAL:HG12 | 1.43                     | 1.00              |
| 1:E:43:TYR:CE2   | 1:E:67:LEU:HB3   | 1.97                     | 1.00              |
| 1:F:49:TYR:HB2   | 1:G:321:VAL:HA   | 1.43                     | 1.00              |
| 1:H:20:LYS:HG3   | 1:H:37:ILE:HG12  | 1.40                     | 1.00              |
| 1:K:20:LYS:HG3   | 1:K:37:ILE:HG12  | 1.40                     | 1.00              |
| 1:C:133:ASN:HD22 | 1:C:148:GLU:HA   | 1.27                     | 1.00              |
| 1:G:20:LYS:HG3   | 1:G:37:ILE:HG12  | 1.40                     | 1.00              |
| 1:H:199:ARG:O    | 1:K:201:ILE:HG22 | 1.60                     | 1.00              |
| 1:A:49:TYR:C     | 1:B:320:LYS:HG2  | 1.79                     | 0.99              |
| 1:B:246:ILE:CD1  | 1:G:320:LYS:CA   | 2.36                     | 0.99              |
| 1:G:133:ASN:HD22 | 1:G:148:GLU:HA   | 1.27                     | 0.99              |
| 1:K:277:ASP:HB3  | 1:L:219:ASP:CB   | 1.92                     | 0.99              |
| 1:M:43:TYR:CE2   | 1:M:67:LEU:HB3   | 1.96                     | 0.99              |
| 1:D:181:GLY:HA2  | 1:D:206:VAL:HG12 | 1.43                     | 0.99              |
| 1:D:211:ILE:HA   | 1:D:220:LEU:CD2  | 1.91                     | 0.99              |
| 1:F:50:ILE:HG23  | 1:G:323:VAL:HG13 | 1.41                     | 0.99              |
| 1:H:271:LYS:O    | 1:K:204:HIS:CE1  | 2.15                     | 0.99              |
| 1:K:308:ASN:ND2  | 1:P:232:GLU:H    | 1.53                     | 0.99              |
| 1:N:43:TYR:CE2   | 1:N:67:LEU:HB3   | 1.96                     | 0.99              |
| 1:A:224:ASN:HA   | 1:B:277:ASP:OD2  | 1.62                     | 0.99              |
| 1:B:224:ASN:HA   | 1:C:277:ASP:OD2  | 1.62                     | 0.99              |
| 1:C:211:ILE:HA   | 1:C:220:LEU:CD2  | 1.91                     | 0.99              |
| 1:C:224:ASN:HA   | 1:D:277:ASP:OD2  | 1.62                     | 0.99              |
| 1:E:50:ILE:HG23  | 1:F:323:VAL:HG13 | 1.41                     | 0.99              |
| 1:H:198:GLU:HG2  | 1:K:203:GLU:CB   | 1.91                     | 0.99              |
| 1:H:203:GLU:HB2  | 1:K:197:SER:C    | 1.81                     | 0.99              |
| 1:I:211:ILE:HA   | 1:I:220:LEU:CD2  | 1.91                     | 0.99              |
| 1:I:323:VAL:HG13 | 1:J:50:ILE:HG23  | 1.41                     | 0.99              |
| 1:J:322:ALA:CA   | 1:K:48:GLY:HA2   | 1.93                     | 0.99              |
| 1:C:219:ASP:CG   | 1:D:275:LYS:HZ1  | 1.66                     | 0.99              |
| 1:J:277:ASP:HB3  | 1:K:219:ASP:CB   | 1.92                     | 0.99              |
| 1:N:211:ILE:HA   | 1:N:220:LEU:CD2  | 1.92                     | 0.99              |
| 1:O:43:TYR:CE2   | 1:O:67:LEU:HB3   | 1.96                     | 0.99              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:211:ILE:HA   | 1:A:220:LEU:CD2  | 1.91                     | 0.99              |
| 1:B:133:ASN:HD22 | 1:B:148:GLU:HA   | 1.27                     | 0.99              |
| 1:D:246:ILE:CG1  | 1:H:50:ILE:H     | 1.76                     | 0.99              |
| 1:F:201:ILE:HG13 | 1:I:272:ARG:HH12 | 0.85                     | 0.99              |
| 1:F:211:ILE:HA   | 1:F:220:LEU:CD2  | 1.91                     | 0.99              |
| 1:G:50:ILE:HG23  | 1:H:323:VAL:HG13 | 1.41                     | 0.99              |
| 1:H:133:ASN:HD22 | 1:H:148:GLU:HA   | 1.27                     | 0.99              |
| 1:H:268:LEU:HD11 | 1:K:268:LEU:HA   | 1.43                     | 0.99              |
| 1:I:278:GLN:CD   | 1:J:218:THR:CB   | 2.24                     | 0.99              |
| 1:J:277:ASP:O    | 1:K:224:ASN:HA   | 1.18                     | 0.99              |
| 1:K:322:ALA:CA   | 1:L:48:GLY:HA2   | 1.93                     | 0.99              |
| 1:M:181:GLY:HA2  | 1:M:206:VAL:HG12 | 1.43                     | 0.99              |
| 1:M:192:CYS:HB3  | 1:N:79:THR:HG23  | 1.01                     | 0.99              |
| 1:E:224:ASN:HA   | 1:F:277:ASP:O    | 1.18                     | 0.99              |
| 1:F:43:TYR:CE2   | 1:F:67:LEU:HB3   | 1.96                     | 0.99              |
| 1:I:43:TYR:CE2   | 1:I:67:LEU:HB3   | 1.97                     | 0.99              |
| 1:J:20:LYS:HG3   | 1:J:37:ILE:HG12  | 1.40                     | 0.99              |
| 1:N:192:CYS:HB3  | 1:O:79:THR:HG23  | 1.01                     | 0.99              |
| 1:A:218:THR:HG1  | 1:B:277:ASP:CB   | 1.74                     | 0.99              |
| 1:F:49:TYR:O     | 1:G:324:ALA:N    | 1.96                     | 0.99              |
| 1:H:203:GLU:HB2  | 1:K:198:GLU:HA   | 1.39                     | 0.99              |
| 1:I:321:VAL:HA   | 1:J:49:TYR:HB2   | 1.43                     | 0.99              |
| 1:B:240:MET:CE   | 1:F:73:VAL:HG23  | 1.84                     | 0.99              |
| 1:I:277:ASP:HB3  | 1:J:219:ASP:CB   | 1.92                     | 0.99              |
| 1:M:211:ILE:HA   | 1:M:220:LEU:CD2  | 1.91                     | 0.99              |
| 1:M:277:ASP:CB   | 1:N:218:THR:HG1  | 1.72                     | 0.99              |
| 1:N:169:PHE:C    | 1:O:79:THR:HB    | 1.75                     | 0.99              |
| 1:O:211:ILE:HA   | 1:O:220:LEU:CD2  | 1.91                     | 0.99              |
| 1:F:225:LEU:HB3  | 1:G:300:TYR:HD2  | 1.26                     | 0.99              |
| 1:G:274:PHE:HD1  | 1:J:204:HIS:NE2  | 1.54                     | 0.99              |
| 1:H:203:GLU:HB2  | 1:K:198:GLU:CA   | 1.93                     | 0.99              |
| 1:I:278:GLN:CB   | 1:J:218:THR:HA   | 1.93                     | 0.99              |
| 1:I:322:ALA:CA   | 1:J:48:GLY:HA2   | 1.93                     | 0.99              |
| 1:O:192:CYS:HB3  | 1:P:79:THR:HG23  | 1.01                     | 0.99              |
| 1:I:324:ALA:N    | 1:J:49:TYR:O     | 1.96                     | 0.98              |
| 1:J:278:GLN:CB   | 1:K:218:THR:HA   | 1.93                     | 0.98              |
| 1:N:181:GLY:HA2  | 1:N:206:VAL:HG12 | 1.43                     | 0.98              |
| 1:P:43:TYR:CE2   | 1:P:67:LEU:HB3   | 1.96                     | 0.98              |
| 1:C:240:MET:HE2  | 1:G:73:VAL:CG2   | 1.91                     | 0.98              |
| 1:C:246:ILE:HD11 | 1:H:320:LYS:HA   | 1.43                     | 0.98              |
| 1:E:20:LYS:HG3   | 1:E:37:ILE:HG12  | 1.40                     | 0.98              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:324:ALA:N    | 1:L:49:TYR:O     | 1.96                     | 0.98              |
| 1:P:211:ILE:HA   | 1:P:220:LEU:CD2  | 1.92                     | 0.98              |
| 1:E:49:TYR:O     | 1:F:324:ALA:N    | 1.96                     | 0.98              |
| 1:E:49:TYR:HB2   | 1:F:321:VAL:HA   | 1.43                     | 0.98              |
| 1:F:197:SER:C    | 1:I:203:GLU:HB2  | 1.82                     | 0.98              |
| 1:G:218:THR:HG1  | 1:H:278:GLN:HG2  | 1.19                     | 0.98              |
| 1:H:267:LYS:HD3  | 1:K:267:LYS:HD3  | 1.45                     | 0.98              |
| 1:J:309:ASN:O    | 1:O:229:GLU:CD   | 1.95                     | 0.98              |
| 1:O:277:ASP:OD2  | 1:P:224:ASN:HA   | 1.62                     | 0.98              |
| 1:G:49:TYR:O     | 1:H:324:ALA:N    | 1.96                     | 0.98              |
| 1:J:320:LYS:HA   | 1:O:246:ILE:HD12 | 0.99                     | 0.98              |
| 1:K:165:GLU:OE2  | 1:P:241:LYS:CA   | 2.10                     | 0.98              |
| 1:K:168:ASN:ND2  | 1:L:71:GLN:CD    | 1.99                     | 0.98              |
| 1:K:278:GLN:CB   | 1:L:218:THR:HA   | 1.93                     | 0.98              |
| 1:E:48:GLY:HA2   | 1:F:322:ALA:CA   | 1.93                     | 0.98              |
| 1:F:224:ASN:O    | 1:G:276:LEU:O    | 1.64                     | 0.98              |
| 1:H:271:LYS:HG2  | 1:K:202:GLU:HG3  | 1.46                     | 0.98              |
| 1:K:277:ASP:O    | 1:L:224:ASN:HA   | 1.18                     | 0.98              |
| 1:O:275:LYS:NZ   | 1:P:219:ASP:CG   | 2.17                     | 0.98              |
| 1:A:244:GLY:N    | 1:F:320:LYS:HZ2  | 1.42                     | 0.98              |
| 1:E:218:THR:HA   | 1:F:278:GLN:CB   | 1.93                     | 0.98              |
| 1:G:48:GLY:HA2   | 1:H:322:ALA:CA   | 1.93                     | 0.98              |
| 1:G:202:GLU:HG3  | 1:J:271:LYS:HE3  | 1.44                     | 0.98              |
| 1:I:20:LYS:HG3   | 1:I:37:ILE:HG12  | 1.40                     | 0.98              |
| 1:L:75:ASP:HA    | 1:P:245:GLU:HB3  | 1.17                     | 0.98              |
| 1:M:133:ASN:HD22 | 1:M:148:GLU:HA   | 1.27                     | 0.98              |
| 1:N:277:ASP:OD2  | 1:O:224:ASN:HA   | 1.62                     | 0.98              |
| 1:O:181:GLY:HA2  | 1:O:206:VAL:HG12 | 1.43                     | 0.98              |
| 1:A:227:THR:HG23 | 1:B:300:TYR:C    | 1.84                     | 0.98              |
| 1:F:20:LYS:HG3   | 1:F:37:ILE:HG12  | 1.40                     | 0.98              |
| 1:G:218:THR:HA   | 1:H:278:GLN:CB   | 1.93                     | 0.98              |
| 1:G:267:LYS:HD3  | 1:J:267:LYS:HD3  | 1.45                     | 0.98              |
| 1:K:219:ASP:HB3  | 1:K:224:ASN:HD22 | 1.29                     | 0.98              |
| 1:L:75:ASP:N     | 1:P:245:GLU:CB   | 2.25                     | 0.98              |
| 1:B:219:ASP:HB3  | 1:B:224:ASN:HD22 | 1.29                     | 0.98              |
| 1:D:133:ASN:HD22 | 1:D:148:GLU:HA   | 1.27                     | 0.98              |
| 1:F:218:THR:CB   | 1:G:278:GLN:CD   | 2.24                     | 0.98              |
| 1:F:218:THR:HA   | 1:G:278:GLN:CB   | 1.93                     | 0.98              |
| 1:F:224:ASN:HA   | 1:G:277:ASP:O    | 1.18                     | 0.98              |
| 1:N:275:LYS:NZ   | 1:O:219:ASP:CG   | 2.17                     | 0.98              |
| 1:A:79:THR:HG23  | 1:B:192:CYS:HB3  | 1.01                     | 0.98              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:219:ASP:CG   | 1:B:275:LYS:NZ   | 2.17                     | 0.98              |
| 1:C:246:ILE:CD1  | 1:H:323:VAL:HG21 | 1.93                     | 0.98              |
| 1:F:202:GLU:HG3  | 1:I:271:LYS:HG2  | 1.45                     | 0.98              |
| 1:G:198:GLU:HA   | 1:J:203:GLU:HB2  | 1.42                     | 0.98              |
| 1:A:219:ASP:CG   | 1:B:275:LYS:HZ1  | 1.67                     | 0.98              |
| 1:A:229:GLU:OE2  | 1:F:309:ASN:O    | 1.81                     | 0.98              |
| 1:F:198:GLU:HG2  | 1:I:203:GLU:HB3  | 1.43                     | 0.98              |
| 1:J:219:ASP:HB3  | 1:J:224:ASN:HD22 | 1.29                     | 0.98              |
| 1:J:278:GLN:CB   | 1:K:218:THR:CB   | 2.41                     | 0.98              |
| 1:C:219:ASP:HB3  | 1:C:224:ASN:HD22 | 1.29                     | 0.97              |
| 1:E:218:THR:CB   | 1:F:278:GLN:CB   | 2.41                     | 0.97              |
| 1:F:204:HIS:CE1  | 1:I:271:LYS:O    | 2.17                     | 0.97              |
| 1:F:218:THR:HG1  | 1:G:278:GLN:HG2  | 1.19                     | 0.97              |
| 1:F:219:ASP:HB3  | 1:F:224:ASN:HD22 | 1.29                     | 0.97              |
| 1:J:170:LYS:CE   | 1:K:79:THR:HA    | 1.94                     | 0.97              |
| 1:K:75:ASP:CA    | 1:O:245:GLU:CG   | 2.27                     | 0.97              |
| 1:L:219:ASP:HB3  | 1:L:224:ASN:HD22 | 1.29                     | 0.97              |
| 1:N:133:ASN:HD22 | 1:N:148:GLU:HA   | 1.27                     | 0.97              |
| 1:O:163:PHE:O    | 1:P:49:TYR:CE1   | 2.17                     | 0.97              |
| 1:B:227:THR:HG23 | 1:C:300:TYR:C    | 1.84                     | 0.97              |
| 1:C:49:TYR:CE1   | 1:D:163:PHE:O    | 2.17                     | 0.97              |
| 1:F:47:ASP:C     | 1:G:323:VAL:C    | 2.23                     | 0.97              |
| 1:G:47:ASP:C     | 1:H:323:VAL:C    | 2.23                     | 0.97              |
| 1:G:203:GLU:HB2  | 1:J:198:GLU:HA   | 1.42                     | 0.97              |
| 1:I:52:ILE:HG21  | 1:M:247:ASP:O    | 1.64                     | 0.97              |
| 1:I:323:VAL:C    | 1:J:47:ASP:C     | 2.23                     | 0.97              |
| 1:L:52:ILE:HA    | 1:P:248:THR:HG22 | 1.45                     | 0.97              |
| 1:M:275:LYS:NZ   | 1:N:219:ASP:CG   | 2.17                     | 0.97              |
| 1:N:163:PHE:O    | 1:O:49:TYR:CE1   | 2.17                     | 0.97              |
| 1:O:169:PHE:C    | 1:P:79:THR:HB    | 1.75                     | 0.97              |
| 1:C:219:ASP:CG   | 1:D:275:LYS:NZ   | 2.17                     | 0.97              |
| 1:D:248:THR:HG22 | 1:H:52:ILE:HG23  | 1.43                     | 0.97              |
| 1:G:272:ARG:CG   | 1:J:202:GLU:HA   | 1.95                     | 0.97              |
| 1:I:308:ASN:ND2  | 1:N:230:GLN:C    | 2.17                     | 0.97              |
| 1:J:52:ILE:HG12  | 1:N:245:GLU:O    | 1.63                     | 0.97              |
| 1:M:277:ASP:OD2  | 1:N:224:ASN:HA   | 1.62                     | 0.97              |
| 1:A:219:ASP:HB3  | 1:A:224:ASN:HD22 | 1.29                     | 0.97              |
| 1:B:241:LYS:O    | 1:G:165:GLU:CG   | 2.12                     | 0.97              |
| 1:G:219:ASP:HB3  | 1:G:224:ASN:HD22 | 1.29                     | 0.97              |
| 1:I:170:LYS:CE   | 1:J:79:THR:HA    | 1.94                     | 0.97              |
| 1:J:323:VAL:C    | 1:K:47:ASP:C     | 2.23                     | 0.97              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:323:VAL:C    | 1:L:47:ASP:C     | 2.23                     | 0.97              |
| 1:A:49:TYR:CE1   | 1:B:163:PHE:O    | 2.17                     | 0.97              |
| 1:B:79:THR:HG23  | 1:C:192:CYS:HB3  | 1.01                     | 0.97              |
| 1:E:47:ASP:C     | 1:F:323:VAL:C    | 2.23                     | 0.97              |
| 1:F:226:ILE:H    | 1:G:303:ASN:HB2  | 1.10                     | 0.97              |
| 1:J:324:ALA:N    | 1:K:49:TYR:O     | 1.96                     | 0.97              |
| 1:B:219:ASP:CG   | 1:C:275:LYS:NZ   | 2.17                     | 0.97              |
| 1:C:227:THR:HG23 | 1:D:300:TYR:C    | 1.84                     | 0.97              |
| 1:D:219:ASP:HB3  | 1:D:224:ASN:HD22 | 1.29                     | 0.97              |
| 1:F:203:GLU:HB2  | 1:I:198:GLU:HA   | 1.44                     | 0.97              |
| 1:J:321:VAL:HA   | 1:K:49:TYR:HB2   | 1.43                     | 0.97              |
| 1:L:52:ILE:HG13  | 1:P:247:ASP:O    | 1.59                     | 0.97              |
| 1:P:181:GLY:HA2  | 1:P:206:VAL:HG12 | 1.43                     | 0.97              |
| 1:E:219:ASP:HB3  | 1:E:224:ASN:HD22 | 1.29                     | 0.97              |
| 1:A:133:ASN:HD22 | 1:A:148:GLU:HA   | 1.27                     | 0.97              |
| 1:G:109:VAL:HB   | 1:G:322:ALA:HB2  | 1.47                     | 0.97              |
| 1:G:202:GLU:HA   | 1:J:272:ARG:CG   | 1.95                     | 0.97              |
| 1:K:321:VAL:HA   | 1:L:49:TYR:HB2   | 1.43                     | 0.97              |
| 1:A:227:THR:HG23 | 1:B:300:TYR:HA   | 0.97                     | 0.97              |
| 1:F:48:GLY:HA2   | 1:G:322:ALA:CA   | 1.93                     | 0.97              |
| 1:L:133:ASN:HD22 | 1:L:148:GLU:HA   | 1.27                     | 0.97              |
| 1:O:219:ASP:HB3  | 1:O:224:ASN:HD22 | 1.29                     | 0.97              |
| 1:O:300:TYR:C    | 1:P:227:THR:HG23 | 1.84                     | 0.97              |
| 1:P:219:ASP:HB3  | 1:P:224:ASN:HD22 | 1.29                     | 0.97              |
| 1:B:227:THR:HG23 | 1:C:300:TYR:HA   | 0.97                     | 0.97              |
| 1:B:242:LYS:C    | 1:G:166:GLN:CA   | 2.25                     | 0.97              |
| 1:C:227:THR:HG23 | 1:D:300:TYR:HA   | 0.97                     | 0.97              |
| 1:C:246:ILE:HD13 | 1:H:323:VAL:HG11 | 1.47                     | 0.97              |
| 1:E:79:THR:HA    | 1:F:170:LYS:CE   | 1.94                     | 0.97              |
| 1:H:203:GLU:OE1  | 1:K:274:PHE:CZ   | 2.18                     | 0.97              |
| 1:J:245:GLU:OE2  | 1:O:51:ASP:O     | 1.83                     | 0.97              |
| 1:K:170:LYS:CE   | 1:L:79:THR:HA    | 1.94                     | 0.97              |
| 1:M:300:TYR:C    | 1:N:227:THR:HG23 | 1.84                     | 0.97              |
| 1:B:49:TYR:CE1   | 1:C:163:PHE:O    | 2.17                     | 0.96              |
| 1:G:79:THR:HA    | 1:H:170:LYS:CE   | 1.94                     | 0.96              |
| 1:H:109:VAL:HB   | 1:H:322:ALA:HB2  | 1.47                     | 0.96              |
| 1:M:163:PHE:O    | 1:N:49:TYR:CE1   | 2.17                     | 0.96              |
| 1:O:300:TYR:HA   | 1:P:227:THR:HG23 | 0.97                     | 0.96              |
| 1:C:79:THR:HG23  | 1:D:192:CYS:HB3  | 1.01                     | 0.96              |
| 1:C:245:GLU:HB3  | 1:G:74:GLU:C     | 1.84                     | 0.96              |
| 1:D:109:VAL:HB   | 1:D:322:ALA:HB2  | 1.47                     | 0.96              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:246:ILE:HD11 | 1:H:50:ILE:N     | 1.77                     | 0.96              |
| 1:E:109:VAL:HB   | 1:E:322:ALA:HB2  | 1.47                     | 0.96              |
| 1:F:79:THR:HA    | 1:G:170:LYS:CE   | 1.94                     | 0.96              |
| 1:F:109:VAL:HB   | 1:F:322:ALA:HB2  | 1.47                     | 0.96              |
| 1:G:218:THR:CB   | 1:H:278:GLN:CB   | 2.41                     | 0.96              |
| 1:I:219:ASP:HB3  | 1:I:224:ASN:HD22 | 1.29                     | 0.96              |
| 1:B:247:ASP:O    | 1:F:52:ILE:CD1   | 2.10                     | 0.96              |
| 1:C:246:ILE:CD1  | 1:G:50:ILE:CG2   | 2.01                     | 0.96              |
| 1:J:300:TYR:HD2  | 1:K:225:LEU:HB3  | 1.26                     | 0.96              |
| 1:K:133:ASN:HD22 | 1:K:148:GLU:HA   | 1.27                     | 0.96              |
| 1:N:300:TYR:HA   | 1:O:227:THR:HG23 | 0.97                     | 0.96              |
| 1:O:105:LYS:HD2  | 1:O:148:GLU:HB2  | 1.47                     | 0.96              |
| 1:B:248:THR:HG22 | 1:F:52:ILE:HA    | 1.45                     | 0.96              |
| 1:C:109:VAL:HB   | 1:C:322:ALA:HB2  | 1.47                     | 0.96              |
| 1:G:225:LEU:HB3  | 1:H:300:TYR:HD2  | 1.26                     | 0.96              |
| 1:N:105:LYS:HD2  | 1:N:148:GLU:HB2  | 1.48                     | 0.96              |
| 1:N:219:ASP:HB3  | 1:N:224:ASN:HD22 | 1.29                     | 0.96              |
| 1:N:275:LYS:HZ1  | 1:O:219:ASP:CG   | 1.69                     | 0.96              |
| 1:N:300:TYR:C    | 1:O:227:THR:HG23 | 1.84                     | 0.96              |
| 1:P:105:LYS:HD2  | 1:P:148:GLU:HB2  | 1.48                     | 0.96              |
| 1:C:247:ASP:O    | 1:G:52:ILE:HG21  | 1.65                     | 0.96              |
| 1:L:74:GLU:C     | 1:P:245:GLU:HB3  | 1.86                     | 0.96              |
| 1:M:105:LYS:HD2  | 1:M:148:GLU:HB2  | 1.48                     | 0.96              |
| 1:M:300:TYR:HA   | 1:N:227:THR:HG23 | 0.97                     | 0.96              |
| 1:B:109:VAL:HB   | 1:B:322:ALA:HB2  | 1.47                     | 0.96              |
| 1:B:245:GLU:CG   | 1:F:75:ASP:CA    | 2.33                     | 0.96              |
| 1:H:219:ASP:HB3  | 1:H:224:ASN:HD22 | 1.29                     | 0.96              |
| 1:L:105:LYS:HD2  | 1:L:148:GLU:HB2  | 1.48                     | 0.96              |
| 1:L:109:VAL:HB   | 1:L:322:ALA:HB2  | 1.47                     | 0.96              |
| 1:G:197:SER:O    | 1:J:203:GLU:CB   | 2.14                     | 0.96              |
| 1:G:203:GLU:CB   | 1:J:197:SER:O    | 2.13                     | 0.96              |
| 1:G:271:LYS:HE3  | 1:J:202:GLU:HG3  | 1.45                     | 0.96              |
| 1:A:27:LYS:HE2   | 1:A:35:ARG:HG2   | 1.48                     | 0.96              |
| 1:B:247:ASP:O    | 1:F:52:ILE:HG13  | 1.62                     | 0.96              |
| 1:C:248:THR:HA   | 1:G:52:ILE:HG23  | 1.47                     | 0.96              |
| 1:D:246:ILE:HD11 | 1:H:50:ILE:H     | 1.26                     | 0.96              |
| 1:I:52:ILE:CG1   | 1:M:245:GLU:O    | 2.13                     | 0.96              |
| 1:A:109:VAL:HB   | 1:A:322:ALA:HB2  | 1.47                     | 0.96              |
| 1:A:232:GLU:N    | 1:F:308:ASN:ND2  | 2.14                     | 0.96              |
| 1:K:105:LYS:HD2  | 1:K:148:GLU:HB2  | 1.48                     | 0.96              |
| 1:B:241:LYS:O    | 1:G:165:GLU:HA   | 1.64                     | 0.95              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:105:LYS:HD2  | 1:J:148:GLU:HB2  | 1.48                     | 0.95              |
| 1:K:109:VAL:HB   | 1:K:322:ALA:HB2  | 1.47                     | 0.95              |
| 1:L:49:TYR:CE2   | 1:P:245:GLU:C    | 2.33                     | 0.95              |
| 1:L:75:ASP:CA    | 1:P:245:GLU:CG   | 2.28                     | 0.95              |
| 1:N:27:LYS:HE2   | 1:N:35:ARG:HG2   | 1.48                     | 0.95              |
| 1:P:109:VAL:HB   | 1:P:322:ALA:HB2  | 1.47                     | 0.95              |
| 1:F:204:HIS:HD2  | 1:I:274:PHE:HE1  | 0.97                     | 0.95              |
| 1:J:52:ILE:HD12  | 1:N:247:ASP:O    | 1.64                     | 0.95              |
| 1:M:27:LYS:HE2   | 1:M:35:ARG:HG2   | 1.48                     | 0.95              |
| 1:O:27:LYS:HE2   | 1:O:35:ARG:HG2   | 1.48                     | 0.95              |
| 1:D:27:LYS:HE2   | 1:D:35:ARG:HG2   | 1.48                     | 0.95              |
| 1:M:219:ASP:HB3  | 1:M:224:ASN:HD22 | 1.29                     | 0.95              |
| 1:A:241:LYS:HB2  | 1:F:166:GLN:HE22 | 1.28                     | 0.95              |
| 1:B:27:LYS:HE2   | 1:B:35:ARG:HG2   | 1.48                     | 0.95              |
| 1:C:245:GLU:CB   | 1:G:75:ASP:N     | 2.28                     | 0.95              |
| 1:O:109:VAL:HB   | 1:O:322:ALA:HB2  | 1.47                     | 0.95              |
| 1:A:241:LYS:O    | 1:F:165:GLU:CG   | 2.14                     | 0.95              |
| 1:F:202:GLU:CG   | 1:I:271:LYS:HG2  | 1.96                     | 0.95              |
| 1:I:105:LYS:HD2  | 1:I:148:GLU:HB2  | 1.48                     | 0.95              |
| 1:I:277:ASP:O    | 1:J:224:ASN:CA   | 2.14                     | 0.95              |
| 1:J:109:VAL:HB   | 1:J:322:ALA:HB2  | 1.47                     | 0.95              |
| 1:J:133:ASN:HD22 | 1:J:148:GLU:HA   | 1.27                     | 0.95              |
| 1:N:109:VAL:HB   | 1:N:322:ALA:HB2  | 1.47                     | 0.95              |
| 1:C:27:LYS:HE2   | 1:C:35:ARG:HG2   | 1.48                     | 0.95              |
| 1:C:230:GLN:HB3  | 1:H:306:ILE:HG23 | 1.45                     | 0.95              |
| 1:K:308:ASN:ND2  | 1:P:231:ALA:H    | 1.51                     | 0.95              |
| 1:P:27:LYS:HE2   | 1:P:35:ARG:HG2   | 1.48                     | 0.95              |
| 1:H:105:LYS:HD2  | 1:H:148:GLU:HB2  | 1.48                     | 0.95              |
| 1:M:275:LYS:HZ1  | 1:N:219:ASP:CG   | 1.70                     | 0.95              |
| 1:C:241:LYS:N    | 1:H:166:GLN:HE21 | 1.56                     | 0.95              |
| 1:H:271:LYS:HG2  | 1:K:202:GLU:CG   | 1.96                     | 0.95              |
| 1:I:75:ASP:CA    | 1:M:245:GLU:CB   | 2.43                     | 0.95              |
| 1:M:109:VAL:HB   | 1:M:322:ALA:HB2  | 1.47                     | 0.95              |
| 1:B:245:GLU:HB3  | 1:F:74:GLU:C     | 1.86                     | 0.95              |
| 1:D:245:GLU:O    | 1:H:74:GLU:HA    | 1.67                     | 0.95              |
| 1:E:225:LEU:HB3  | 1:F:300:TYR:HD2  | 1.26                     | 0.95              |
| 1:I:109:VAL:HB   | 1:I:322:ALA:HB2  | 1.47                     | 0.95              |
| 1:A:229:GLU:N    | 1:F:308:ASN:HB3  | 1.55                     | 0.95              |
| 1:D:256:LYS:HA   | 1:D:256:LYS:HE3  | 1.49                     | 0.95              |
| 1:F:50:ILE:HG23  | 1:G:323:VAL:HG11 | 1.20                     | 0.95              |
| 1:I:133:ASN:HD22 | 1:I:148:GLU:HA   | 1.27                     | 0.95              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:G:105:LYS:HD2 | 1:G:148:GLU:HB2  | 1.48                     | 0.94              |
| 1:H:274:PHE:HE1 | 1:K:204:HIS:HD2  | 0.99                     | 0.94              |
| 1:J:52:ILE:CG1  | 1:N:247:ASP:O    | 2.15                     | 0.94              |
| 1:B:105:LYS:HD2 | 1:B:148:GLU:HB2  | 1.48                     | 0.94              |
| 1:C:105:LYS:HD2 | 1:C:148:GLU:HB2  | 1.48                     | 0.94              |
| 1:D:105:LYS:HD2 | 1:D:148:GLU:HB2  | 1.48                     | 0.94              |
| 1:F:274:PHE:CZ  | 1:I:203:GLU:OE1  | 2.19                     | 0.94              |
| 1:A:105:LYS:HD2 | 1:A:148:GLU:HB2  | 1.48                     | 0.94              |
| 1:A:241:LYS:HZ1 | 1:F:305:ILE:HG22 | 1.26                     | 0.94              |
| 1:E:224:ASN:CA  | 1:F:277:ASP:O    | 2.14                     | 0.94              |
| 1:F:224:ASN:OD1 | 1:F:233:SER:HB3  | 1.68                     | 0.94              |
| 1:G:224:ASN:OD1 | 1:G:233:SER:HB3  | 1.68                     | 0.94              |
| 1:C:256:LYS:HA  | 1:C:256:LYS:HE3  | 1.49                     | 0.94              |
| 1:D:224:ASN:OD1 | 1:D:233:SER:HB3  | 1.68                     | 0.94              |
| 1:G:50:ILE:HG23 | 1:H:323:VAL:HG11 | 1.20                     | 0.94              |
| 1:H:224:ASN:OD1 | 1:H:233:SER:HB3  | 1.68                     | 0.94              |
| 1:I:300:TYR:HD2 | 1:J:225:LEU:HB3  | 1.26                     | 0.94              |
| 1:J:27:LYS:HE2  | 1:J:35:ARG:HG2   | 1.48                     | 0.94              |
| 1:E:224:ASN:OD1 | 1:E:233:SER:HB3  | 1.68                     | 0.94              |
| 1:H:198:GLU:HA  | 1:K:203:GLU:HB2  | 1.46                     | 0.94              |
| 1:J:224:ASN:OD1 | 1:J:233:SER:HB3  | 1.68                     | 0.94              |
| 1:K:224:ASN:OD1 | 1:K:233:SER:HB3  | 1.68                     | 0.94              |
| 1:K:278:GLN:CB  | 1:L:218:THR:CB   | 2.41                     | 0.94              |
| 1:A:256:LYS:HA  | 1:A:256:LYS:HE3  | 1.49                     | 0.94              |
| 1:C:241:LYS:HB2 | 1:H:166:GLN:HE22 | 1.25                     | 0.94              |
| 1:F:105:LYS:HD2 | 1:F:148:GLU:HB2  | 1.48                     | 0.94              |
| 1:K:320:LYS:HA  | 1:P:246:ILE:HD12 | 0.95                     | 0.94              |
| 1:K:320:LYS:CA  | 1:P:246:ILE:CD1  | 2.45                     | 0.94              |
| 1:C:78:GLU:HG2  | 1:D:170:LYS:H    | 1.33                     | 0.94              |
| 1:I:224:ASN:OD1 | 1:I:233:SER:HB3  | 1.68                     | 0.94              |
| 1:L:224:ASN:OD1 | 1:L:233:SER:HB3  | 1.68                     | 0.94              |
| 1:A:245:GLU:O   | 1:E:74:GLU:O     | 1.86                     | 0.94              |
| 1:B:256:LYS:HA  | 1:B:256:LYS:HE3  | 1.49                     | 0.94              |
| 1:E:131:LYS:CA  | 1:E:149:ILE:HD11 | 1.98                     | 0.94              |
| 1:G:131:LYS:CA  | 1:G:149:ILE:HD11 | 1.98                     | 0.94              |
| 1:G:224:ASN:CA  | 1:H:277:ASP:O    | 2.14                     | 0.94              |
| 1:H:131:LYS:CA  | 1:H:149:ILE:HD11 | 1.98                     | 0.94              |
| 1:K:131:LYS:CA  | 1:K:149:ILE:HD11 | 1.98                     | 0.94              |
| 1:L:131:LYS:CA  | 1:L:149:ILE:HD11 | 1.98                     | 0.94              |
| 1:M:300:TYR:N   | 1:N:227:THR:HG23 | 1.64                     | 0.94              |
| 1:B:242:LYS:C   | 1:G:166:GLN:HA   | 1.87                     | 0.94              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:224:ASN:OD1  | 1:C:233:SER:HB3  | 1.68                     | 0.94              |
| 1:F:131:LYS:CA   | 1:F:149:ILE:HD11 | 1.98                     | 0.94              |
| 1:H:188:LEU:H    | 1:H:199:ARG:HG2  | 1.33                     | 0.94              |
| 1:O:131:LYS:CA   | 1:O:149:ILE:HD11 | 1.98                     | 0.94              |
| 1:P:131:LYS:CA   | 1:P:149:ILE:HD11 | 1.98                     | 0.94              |
| 1:E:105:LYS:HD2  | 1:E:148:GLU:HB2  | 1.48                     | 0.94              |
| 1:K:188:LEU:H    | 1:K:199:ARG:HG2  | 1.33                     | 0.94              |
| 1:K:300:TYR:HD2  | 1:L:225:LEU:HB3  | 1.26                     | 0.94              |
| 1:O:168:ASN:CA   | 1:P:72:GLY:HA3   | 1.98                     | 0.94              |
| 1:C:247:ASP:O    | 1:G:52:ILE:CG2   | 2.16                     | 0.93              |
| 1:G:268:LEU:HD11 | 1:J:268:LEU:HA   | 1.51                     | 0.93              |
| 1:J:131:LYS:CA   | 1:J:149:ILE:HD11 | 1.98                     | 0.93              |
| 1:N:131:LYS:CA   | 1:N:149:ILE:HD11 | 1.98                     | 0.93              |
| 1:B:131:LYS:CA   | 1:B:149:ILE:HD11 | 1.98                     | 0.93              |
| 1:I:27:LYS:HE2   | 1:I:35:ARG:HG2   | 1.48                     | 0.93              |
| 1:K:309:ASN:O    | 1:P:229:GLU:OE2  | 1.87                     | 0.93              |
| 1:N:256:LYS:HA   | 1:N:256:LYS:HE3  | 1.49                     | 0.93              |
| 1:A:131:LYS:CA   | 1:A:149:ILE:HD11 | 1.98                     | 0.93              |
| 1:C:131:LYS:CA   | 1:C:149:ILE:HD11 | 1.98                     | 0.93              |
| 1:C:133:ASN:ND2  | 1:C:148:GLU:HA   | 1.84                     | 0.93              |
| 1:D:133:ASN:ND2  | 1:D:148:GLU:HA   | 1.84                     | 0.93              |
| 1:F:198:GLU:CG   | 1:I:203:GLU:CB   | 2.43                     | 0.93              |
| 1:G:201:ILE:CG1  | 1:J:272:ARG:NH1  | 2.16                     | 0.93              |
| 1:H:133:ASN:ND2  | 1:H:148:GLU:HA   | 1.84                     | 0.93              |
| 1:I:131:LYS:CA   | 1:I:149:ILE:HD11 | 1.98                     | 0.93              |
| 1:M:131:LYS:CA   | 1:M:149:ILE:HD11 | 1.98                     | 0.93              |
| 1:O:170:LYS:H    | 1:P:78:GLU:HG2   | 1.33                     | 0.93              |
| 1:P:224:ASN:OD1  | 1:P:233:SER:HB3  | 1.68                     | 0.93              |
| 1:A:241:LYS:HB2  | 1:F:166:GLN:CD   | 1.89                     | 0.93              |
| 1:H:274:PHE:HD1  | 1:K:204:HIS:NE2  | 1.44                     | 0.93              |
| 1:M:256:LYS:HE3  | 1:M:256:LYS:HA   | 1.49                     | 0.93              |
| 1:F:202:GLU:HA   | 1:I:272:ARG:CG   | 1.97                     | 0.93              |
| 1:I:43:TYR:CZ    | 1:I:67:LEU:HB3   | 2.04                     | 0.93              |
| 1:K:27:LYS:HE2   | 1:K:35:ARG:HG2   | 1.48                     | 0.93              |
| 1:L:52:ILE:CD1   | 1:P:247:ASP:CA   | 2.40                     | 0.93              |
| 1:M:168:ASN:CA   | 1:N:72:GLY:HA3   | 1.98                     | 0.93              |
| 1:N:224:ASN:OD1  | 1:N:233:SER:HB3  | 1.68                     | 0.93              |
| 1:O:256:LYS:HA   | 1:O:256:LYS:HE3  | 1.49                     | 0.93              |
| 1:B:241:LYS:HB2  | 1:G:166:GLN:HE22 | 1.15                     | 0.93              |
| 1:G:268:LEU:HA   | 1:J:268:LEU:HD11 | 1.51                     | 0.93              |
| 1:I:278:GLN:CB   | 1:J:218:THR:CB   | 2.41                     | 0.93              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:165:GLU:HG2  | 1:P:241:LYS:O    | 1.67                     | 0.93              |
| 1:K:322:ALA:HA   | 1:L:48:GLY:CA    | 1.99                     | 0.93              |
| 1:A:133:ASN:ND2  | 1:A:148:GLU:HA   | 1.84                     | 0.93              |
| 1:B:133:ASN:ND2  | 1:B:148:GLU:HA   | 1.84                     | 0.93              |
| 1:B:245:GLU:C    | 1:F:49:TYR:CE2   | 2.38                     | 0.93              |
| 1:D:131:LYS:CA   | 1:D:149:ILE:HD11 | 1.98                     | 0.93              |
| 1:F:133:ASN:ND2  | 1:F:148:GLU:HA   | 1.84                     | 0.93              |
| 1:G:133:ASN:ND2  | 1:G:148:GLU:HA   | 1.84                     | 0.93              |
| 1:K:165:GLU:CG   | 1:P:241:LYS:O    | 2.15                     | 0.93              |
| 1:K:305:ILE:HG22 | 1:P:241:LYS:NZ   | 1.82                     | 0.93              |
| 1:L:53:GLU:HG3   | 1:P:252:THR:HG21 | 1.51                     | 0.93              |
| 1:L:188:LEU:H    | 1:L:199:ARG:HG2  | 1.33                     | 0.93              |
| 1:E:133:ASN:ND2  | 1:E:148:GLU:HA   | 1.84                     | 0.93              |
| 1:E:274:PHE:HD2  | 1:E:278:GLN:HE22 | 1.17                     | 0.93              |
| 1:F:43:TYR:CZ    | 1:F:67:LEU:HB3   | 2.04                     | 0.93              |
| 1:F:256:LYS:HA   | 1:F:256:LYS:HE3  | 1.49                     | 0.93              |
| 1:K:133:ASN:ND2  | 1:K:148:GLU:HA   | 1.84                     | 0.93              |
| 1:O:98:LEU:HD11  | 1:O:147:PHE:CD1  | 2.04                     | 0.93              |
| 1:B:78:GLU:HG2   | 1:C:170:LYS:H    | 1.33                     | 0.93              |
| 1:C:98:LEU:HD11  | 1:C:147:PHE:CD1  | 2.04                     | 0.93              |
| 1:D:98:LEU:HD11  | 1:D:147:PHE:CD1  | 2.04                     | 0.93              |
| 1:E:43:TYR:CZ    | 1:E:67:LEU:HB3   | 2.04                     | 0.93              |
| 1:E:98:LEU:HD11  | 1:E:147:PHE:CD1  | 2.04                     | 0.93              |
| 1:F:218:THR:CB   | 1:G:278:GLN:CB   | 2.41                     | 0.93              |
| 1:G:188:LEU:H    | 1:G:199:ARG:HG2  | 1.33                     | 0.93              |
| 1:H:43:TYR:CZ    | 1:H:67:LEU:HB3   | 2.04                     | 0.93              |
| 1:H:98:LEU:HD11  | 1:H:147:PHE:CD1  | 2.04                     | 0.93              |
| 1:J:188:LEU:H    | 1:J:199:ARG:HG2  | 1.33                     | 0.93              |
| 1:K:43:TYR:CZ    | 1:K:67:LEU:HB3   | 2.04                     | 0.93              |
| 1:K:50:ILE:CG2   | 1:O:246:ILE:CD1  | 1.94                     | 0.93              |
| 1:L:43:TYR:CZ    | 1:L:67:LEU:HB3   | 2.04                     | 0.93              |
| 1:B:50:ILE:HG13  | 1:C:320:LYS:HE2  | 1.51                     | 0.93              |
| 1:F:98:LEU:HD11  | 1:F:147:PHE:CD1  | 2.04                     | 0.93              |
| 1:F:274:PHE:HD2  | 1:F:278:GLN:HE22 | 1.16                     | 0.93              |
| 1:G:27:LYS:HE2   | 1:G:35:ARG:HG2   | 1.48                     | 0.93              |
| 1:G:98:LEU:HD11  | 1:G:147:PHE:CD1  | 2.04                     | 0.93              |
| 1:I:98:LEU:HD11  | 1:I:147:PHE:CD1  | 2.04                     | 0.93              |
| 1:J:73:VAL:CB    | 1:N:240:MET:HE2  | 1.97                     | 0.93              |
| 1:L:133:ASN:ND2  | 1:L:148:GLU:HA   | 1.84                     | 0.93              |
| 1:N:133:ASN:ND2  | 1:N:148:GLU:HA   | 1.83                     | 0.93              |
| 1:O:224:ASN:OD1  | 1:O:233:SER:HB3  | 1.68                     | 0.93              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:43:TYR:CZ    | 1:A:67:LEU:HB3   | 2.04                     | 0.92              |
| 1:C:43:TYR:CZ    | 1:C:67:LEU:HB3   | 2.04                     | 0.92              |
| 1:E:256:LYS:HE3  | 1:E:256:LYS:HA   | 1.49                     | 0.92              |
| 1:F:200:PHE:HB2  | 1:I:200:PHE:HB2  | 1.50                     | 0.92              |
| 1:G:43:TYR:CZ    | 1:G:67:LEU:HB3   | 2.04                     | 0.92              |
| 1:I:133:ASN:ND2  | 1:I:148:GLU:HA   | 1.84                     | 0.92              |
| 1:J:133:ASN:ND2  | 1:J:148:GLU:HA   | 1.84                     | 0.92              |
| 1:M:133:ASN:ND2  | 1:M:148:GLU:HA   | 1.84                     | 0.92              |
| 1:N:98:LEU:HD11  | 1:N:147:PHE:CD1  | 2.04                     | 0.92              |
| 1:P:256:LYS:HA   | 1:P:256:LYS:HE3  | 1.49                     | 0.92              |
| 1:E:218:THR:CB   | 1:F:278:GLN:HB3  | 2.00                     | 0.92              |
| 1:J:278:GLN:HB3  | 1:K:218:THR:CB   | 2.00                     | 0.92              |
| 1:N:170:LYS:H    | 1:O:78:GLU:HG2   | 1.33                     | 0.92              |
| 1:O:133:ASN:ND2  | 1:O:148:GLU:HA   | 1.84                     | 0.92              |
| 1:A:98:LEU:HD11  | 1:A:147:PHE:CD1  | 2.04                     | 0.92              |
| 1:A:224:ASN:OD1  | 1:A:233:SER:HB3  | 1.68                     | 0.92              |
| 1:A:246:ILE:CD1  | 1:E:50:ILE:CG2   | 2.17                     | 0.92              |
| 1:B:43:TYR:CZ    | 1:B:67:LEU:HB3   | 2.04                     | 0.92              |
| 1:C:50:ILE:HG13  | 1:D:320:LYS:HE2  | 1.51                     | 0.92              |
| 1:D:43:TYR:CZ    | 1:D:67:LEU:HB3   | 2.04                     | 0.92              |
| 1:G:256:LYS:HA   | 1:G:256:LYS:HE3  | 1.49                     | 0.92              |
| 1:J:43:TYR:CZ    | 1:J:67:LEU:HB3   | 2.04                     | 0.92              |
| 1:K:98:LEU:HD11  | 1:K:147:PHE:CD1  | 2.04                     | 0.92              |
| 1:L:256:LYS:HA   | 1:L:256:LYS:HE3  | 1.49                     | 0.92              |
| 1:N:277:ASP:CB   | 1:O:218:THR:HG1  | 1.78                     | 0.92              |
| 1:B:98:LEU:HD11  | 1:B:147:PHE:CD1  | 2.04                     | 0.92              |
| 1:D:188:LEU:H    | 1:D:199:ARG:HG2  | 1.33                     | 0.92              |
| 1:D:246:ILE:HD13 | 1:H:50:ILE:HG23  | 0.94                     | 0.92              |
| 1:E:188:LEU:H    | 1:E:199:ARG:HG2  | 1.33                     | 0.92              |
| 1:J:307:THR:O    | 1:O:230:GLN:HB2  | 1.70                     | 0.92              |
| 1:K:53:GLU:HG3   | 1:O:252:THR:HG21 | 1.52                     | 0.92              |
| 1:K:278:GLN:HB3  | 1:L:218:THR:CB   | 2.00                     | 0.92              |
| 1:P:133:ASN:ND2  | 1:P:148:GLU:HA   | 1.84                     | 0.92              |
| 1:F:27:LYS:HE2   | 1:F:35:ARG:HG2   | 1.48                     | 0.92              |
| 1:I:278:GLN:HB3  | 1:J:218:THR:CB   | 2.00                     | 0.92              |
| 1:J:308:ASN:HD21 | 1:O:231:ALA:H    | 1.15                     | 0.92              |
| 1:L:173:ASN:ND2  | 1:L:279:LEU:HD23 | 1.85                     | 0.92              |
| 1:P:188:LEU:H    | 1:P:199:ARG:HG2  | 1.33                     | 0.92              |
| 1:B:224:ASN:OD1  | 1:B:233:SER:HB3  | 1.68                     | 0.92              |
| 1:C:110:LEU:HA   | 1:C:318:LEU:HD13 | 1.52                     | 0.92              |
| 1:G:199:ARG:O    | 1:J:201:ILE:HG22 | 1.68                     | 0.92              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:98:LEU:HD11  | 1:J:147:PHE:CD1  | 2.04                     | 0.92              |
| 1:M:98:LEU:HD11  | 1:M:147:PHE:CD1  | 2.04                     | 0.92              |
| 1:A:274:PHE:HD2  | 1:A:278:GLN:HE22 | 1.17                     | 0.92              |
| 1:B:110:LEU:HA   | 1:B:318:LEU:HD13 | 1.52                     | 0.92              |
| 1:B:173:ASN:ND2  | 1:B:279:LEU:HD23 | 1.85                     | 0.92              |
| 1:D:110:LEU:HA   | 1:D:318:LEU:HD13 | 1.51                     | 0.92              |
| 1:D:246:ILE:HG12 | 1:H:50:ILE:O     | 1.69                     | 0.92              |
| 1:I:183:ASN:HB3  | 1:I:201:ILE:HD11 | 1.52                     | 0.92              |
| 1:J:278:GLN:CA   | 1:K:218:THR:OG1  | 2.18                     | 0.92              |
| 1:K:256:LYS:HA   | 1:K:256:LYS:HE3  | 1.49                     | 0.92              |
| 1:M:224:ASN:OD1  | 1:M:233:SER:HB3  | 1.68                     | 0.92              |
| 1:O:320:LYS:HE2  | 1:P:50:ILE:HG13  | 1.51                     | 0.92              |
| 1:F:46:GLU:CG    | 1:G:324:ALA:CB   | 2.34                     | 0.92              |
| 1:F:218:THR:OG1  | 1:G:278:GLN:CA   | 2.18                     | 0.92              |
| 1:K:173:ASN:ND2  | 1:K:279:LEU:HD23 | 1.85                     | 0.92              |
| 1:P:183:ASN:HB3  | 1:P:201:ILE:HD11 | 1.52                     | 0.92              |
| 1:E:218:THR:OG1  | 1:F:278:GLN:CA   | 2.18                     | 0.92              |
| 1:G:274:PHE:HD2  | 1:G:278:GLN:HE22 | 1.17                     | 0.92              |
| 1:H:204:HIS:NE2  | 1:K:274:PHE:HD1  | 1.66                     | 0.92              |
| 1:I:110:LEU:HA   | 1:I:318:LEU:HD13 | 1.52                     | 0.92              |
| 1:I:278:GLN:CA   | 1:J:218:THR:OG1  | 2.18                     | 0.92              |
| 1:J:52:ILE:HG21  | 1:N:247:ASP:O    | 1.66                     | 0.92              |
| 1:L:183:ASN:HB3  | 1:L:201:ILE:HD11 | 1.52                     | 0.92              |
| 1:P:98:LEU:HD11  | 1:P:147:PHE:CD1  | 2.04                     | 0.92              |
| 1:A:188:LEU:H    | 1:A:199:ARG:HG2  | 1.33                     | 0.92              |
| 1:C:173:ASN:ND2  | 1:C:279:LEU:HD23 | 1.85                     | 0.92              |
| 1:C:183:ASN:ND2  | 1:C:203:GLU:HA   | 1.85                     | 0.92              |
| 1:F:202:GLU:HA   | 1:I:272:ARG:HB2  | 1.49                     | 0.92              |
| 1:I:256:LYS:HA   | 1:I:256:LYS:HE3  | 1.49                     | 0.92              |
| 1:J:110:LEU:HA   | 1:J:318:LEU:HD13 | 1.52                     | 0.92              |
| 1:M:274:PHE:HD2  | 1:M:278:GLN:HE22 | 1.16                     | 0.92              |
| 1:B:240:MET:HE1  | 1:F:73:VAL:HB    | 1.49                     | 0.91              |
| 1:E:110:LEU:HA   | 1:E:318:LEU:HD13 | 1.52                     | 0.91              |
| 1:E:183:ASN:ND2  | 1:E:203:GLU:HA   | 1.85                     | 0.91              |
| 1:F:218:THR:CB   | 1:G:278:GLN:HB3  | 2.00                     | 0.91              |
| 1:G:48:GLY:CA    | 1:H:322:ALA:CA   | 2.48                     | 0.91              |
| 1:H:197:SER:HB3  | 1:K:183:ASN:HD21 | 1.32                     | 0.91              |
| 1:H:204:HIS:HD2  | 1:K:274:PHE:CE1  | 1.86                     | 0.91              |
| 1:J:256:LYS:HA   | 1:J:256:LYS:HE3  | 1.49                     | 0.91              |
| 1:K:278:GLN:CA   | 1:L:218:THR:OG1  | 2.18                     | 0.91              |
| 1:M:183:ASN:HB3  | 1:M:201:ILE:HD11 | 1.52                     | 0.91              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:183:ASN:HB3  | 1:N:201:ILE:HD11 | 1.52                     | 0.91              |
| 1:A:232:GLU:H    | 1:F:308:ASN:HD22 | 0.95                     | 0.91              |
| 1:F:110:LEU:HA   | 1:F:318:LEU:HD13 | 1.52                     | 0.91              |
| 1:F:183:ASN:ND2  | 1:F:203:GLU:HA   | 1.85                     | 0.91              |
| 1:G:204:HIS:HD2  | 1:J:274:PHE:HE1  | 1.08                     | 0.91              |
| 1:J:50:ILE:C     | 1:N:246:ILE:HA   | 1.90                     | 0.91              |
| 1:L:98:LEU:HD11  | 1:L:147:PHE:CD1  | 2.04                     | 0.91              |
| 1:N:323:VAL:HG22 | 1:O:47:ASP:C     | 1.91                     | 0.91              |
| 1:P:43:TYR:CZ    | 1:P:67:LEU:HB3   | 2.04                     | 0.91              |
| 1:A:50:ILE:HG13  | 1:B:320:LYS:HE2  | 1.51                     | 0.91              |
| 1:G:49:TYR:N     | 1:H:323:VAL:N    | 2.18                     | 0.91              |
| 1:G:183:ASN:ND2  | 1:G:203:GLU:HA   | 1.85                     | 0.91              |
| 1:G:218:THR:OG1  | 1:H:278:GLN:CA   | 2.18                     | 0.91              |
| 1:H:27:LYS:HE2   | 1:H:35:ARG:HG2   | 1.48                     | 0.91              |
| 1:H:203:GLU:HB3  | 1:K:198:GLU:HG2  | 1.46                     | 0.91              |
| 1:J:324:ALA:HB2  | 1:K:49:TYR:HB3   | 0.92                     | 0.91              |
| 1:K:110:LEU:HA   | 1:K:318:LEU:HD13 | 1.52                     | 0.91              |
| 1:M:110:LEU:HA   | 1:M:318:LEU:HD13 | 1.52                     | 0.91              |
| 1:N:188:LEU:H    | 1:N:199:ARG:HG2  | 1.33                     | 0.91              |
| 1:O:43:TYR:CZ    | 1:O:67:LEU:HB3   | 2.04                     | 0.91              |
| 1:A:110:LEU:HA   | 1:A:318:LEU:HD13 | 1.52                     | 0.91              |
| 1:B:241:LYS:HA   | 1:G:166:GLN:O    | 1.68                     | 0.91              |
| 1:B:274:PHE:HD2  | 1:B:278:GLN:HE22 | 1.16                     | 0.91              |
| 1:C:242:LYS:CA   | 1:H:166:GLN:CB   | 2.34                     | 0.91              |
| 1:D:274:PHE:HD2  | 1:D:278:GLN:HE22 | 1.16                     | 0.91              |
| 1:E:183:ASN:HB3  | 1:E:201:ILE:HD11 | 1.52                     | 0.91              |
| 1:F:48:GLY:CA    | 1:G:322:ALA:CA   | 2.48                     | 0.91              |
| 1:G:227:THR:O    | 1:H:300:TYR:HA   | 1.70                     | 0.91              |
| 1:G:265:ALA:HA   | 1:J:271:LYS:HZ2  | 1.36                     | 0.91              |
| 1:G:274:PHE:HE1  | 1:J:204:HIS:HD2  | 1.07                     | 0.91              |
| 1:H:173:ASN:ND2  | 1:H:279:LEU:HD23 | 1.85                     | 0.91              |
| 1:I:274:PHE:HD2  | 1:I:278:GLN:HE22 | 1.16                     | 0.91              |
| 1:K:323:VAL:C    | 1:L:47:ASP:O     | 2.09                     | 0.91              |
| 1:K:324:ALA:HB2  | 1:L:49:TYR:HB3   | 0.92                     | 0.91              |
| 1:M:188:LEU:H    | 1:M:199:ARG:HG2  | 1.33                     | 0.91              |
| 1:C:241:LYS:CA   | 1:H:165:GLU:OE2  | 2.18                     | 0.91              |
| 1:D:183:ASN:ND2  | 1:D:203:GLU:HA   | 1.85                     | 0.91              |
| 1:F:183:ASN:HD21 | 1:I:197:SER:HB3  | 1.32                     | 0.91              |
| 1:H:183:ASN:ND2  | 1:H:203:GLU:HA   | 1.85                     | 0.91              |
| 1:J:173:ASN:ND2  | 1:J:279:LEU:HD23 | 1.85                     | 0.91              |
| 1:K:183:ASN:ND2  | 1:K:203:GLU:HA   | 1.85                     | 0.91              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:110:LEU:HA   | 1:L:318:LEU:HD13 | 1.52                     | 0.91              |
| 1:L:183:ASN:ND2  | 1:L:203:GLU:HA   | 1.85                     | 0.91              |
| 1:L:274:PHE:HD2  | 1:L:278:GLN:HE22 | 1.16                     | 0.91              |
| 1:M:173:ASN:ND2  | 1:M:279:LEU:HD23 | 1.85                     | 0.91              |
| 1:B:47:ASP:CG    | 1:C:322:ALA:O    | 2.00                     | 0.91              |
| 1:C:59:ILE:HG21  | 1:C:92:THR:HG22  | 1.53                     | 0.91              |
| 1:G:110:LEU:HA   | 1:G:318:LEU:HD13 | 1.52                     | 0.91              |
| 1:J:59:ILE:HG21  | 1:J:92:THR:HG22  | 1.53                     | 0.91              |
| 1:J:323:VAL:C    | 1:K:47:ASP:O     | 2.09                     | 0.91              |
| 1:K:323:VAL:N    | 1:L:49:TYR:N     | 2.18                     | 0.91              |
| 1:N:43:TYR:CZ    | 1:N:67:LEU:HB3   | 2.04                     | 0.91              |
| 1:N:110:LEU:HA   | 1:N:318:LEU:HD13 | 1.52                     | 0.91              |
| 1:A:173:ASN:ND2  | 1:A:279:LEU:HD23 | 1.85                     | 0.91              |
| 1:B:72:GLY:HA3   | 1:C:168:ASN:CA   | 1.98                     | 0.91              |
| 1:C:47:ASP:C     | 1:D:323:VAL:HG22 | 1.91                     | 0.91              |
| 1:E:27:LYS:HE2   | 1:E:35:ARG:HG2   | 1.48                     | 0.91              |
| 1:E:59:ILE:HG21  | 1:E:92:THR:HG22  | 1.53                     | 0.91              |
| 1:F:204:HIS:NE2  | 1:I:274:PHE:HD1  | 1.42                     | 0.91              |
| 1:G:173:ASN:ND2  | 1:G:279:LEU:HD23 | 1.85                     | 0.91              |
| 1:G:224:ASN:HD21 | 1:H:275:LYS:HZ2  | 1.11                     | 0.91              |
| 1:H:256:LYS:HA   | 1:H:256:LYS:HE3  | 1.49                     | 0.91              |
| 1:K:52:ILE:HG13  | 1:O:247:ASP:O    | 1.67                     | 0.91              |
| 1:O:183:ASN:HB3  | 1:O:201:ILE:HD11 | 1.52                     | 0.91              |
| 1:D:59:ILE:HG21  | 1:D:92:THR:HG22  | 1.53                     | 0.91              |
| 1:F:268:LEU:CA   | 1:I:268:LEU:HD11 | 1.96                     | 0.91              |
| 1:G:47:ASP:O     | 1:H:323:VAL:C    | 2.09                     | 0.91              |
| 1:H:200:PHE:HB2  | 1:K:200:PHE:HB2  | 1.53                     | 0.91              |
| 1:H:272:ARG:CG   | 1:K:202:GLU:HA   | 2.00                     | 0.91              |
| 1:I:323:VAL:C    | 1:J:47:ASP:O     | 2.09                     | 0.91              |
| 1:I:323:VAL:N    | 1:J:49:TYR:N     | 2.18                     | 0.91              |
| 1:J:277:ASP:O    | 1:K:224:ASN:CA   | 2.14                     | 0.91              |
| 1:M:43:TYR:CZ    | 1:M:67:LEU:HB3   | 2.04                     | 0.91              |
| 1:N:168:ASN:CA   | 1:O:72:GLY:HA3   | 1.98                     | 0.91              |
| 1:P:183:ASN:ND2  | 1:P:203:GLU:HA   | 1.85                     | 0.91              |
| 1:F:188:LEU:H    | 1:F:199:ARG:HG2  | 1.33                     | 0.91              |
| 1:H:274:PHE:HD2  | 1:H:278:GLN:HE22 | 1.17                     | 0.91              |
| 1:I:188:LEU:H    | 1:I:199:ARG:HG2  | 1.33                     | 0.91              |
| 1:I:324:ALA:HB2  | 1:J:49:TYR:HB3   | 0.92                     | 0.91              |
| 1:K:274:PHE:HD2  | 1:K:278:GLN:HE22 | 1.16                     | 0.91              |
| 1:K:300:TYR:HA   | 1:L:227:THR:O    | 1.70                     | 0.91              |
| 1:M:170:LYS:H    | 1:N:78:GLU:HG2   | 1.33                     | 0.91              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:323:VAL:HG22 | 1:P:47:ASP:C     | 1.91                     | 0.91              |
| 1:A:183:ASN:HB3  | 1:A:201:ILE:HD11 | 1.52                     | 0.91              |
| 1:F:47:ASP:O     | 1:G:323:VAL:C    | 2.08                     | 0.91              |
| 1:F:49:TYR:N     | 1:G:323:VAL:N    | 2.18                     | 0.91              |
| 1:G:71:GLN:OE1   | 1:H:168:ASN:ND2  | 2.01                     | 0.91              |
| 1:G:218:THR:CB   | 1:H:278:GLN:HB3  | 2.00                     | 0.91              |
| 1:H:106:VAL:HG21 | 1:H:147:PHE:CZ   | 2.07                     | 0.91              |
| 1:H:110:LEU:HA   | 1:H:318:LEU:HD13 | 1.52                     | 0.91              |
| 1:H:183:ASN:HB3  | 1:H:201:ILE:HD11 | 1.52                     | 0.91              |
| 1:I:300:TYR:HA   | 1:J:227:THR:O    | 1.70                     | 0.91              |
| 1:J:183:ASN:ND2  | 1:J:203:GLU:HA   | 1.85                     | 0.91              |
| 1:J:183:ASN:HB3  | 1:J:201:ILE:HD11 | 1.52                     | 0.91              |
| 1:K:52:ILE:HG21  | 1:O:247:ASP:O    | 1.71                     | 0.91              |
| 1:A:59:ILE:HG21  | 1:A:92:THR:HG22  | 1.53                     | 0.90              |
| 1:A:78:GLU:HG2   | 1:B:170:LYS:H    | 1.33                     | 0.90              |
| 1:B:183:ASN:HB3  | 1:B:201:ILE:HD11 | 1.52                     | 0.90              |
| 1:D:173:ASN:ND2  | 1:D:279:LEU:HD23 | 1.85                     | 0.90              |
| 1:D:179:PHE:CB   | 1:D:288:THR:HB   | 2.01                     | 0.90              |
| 1:E:173:ASN:ND2  | 1:E:279:LEU:HD23 | 1.85                     | 0.90              |
| 1:F:106:VAL:HG21 | 1:F:147:PHE:CZ   | 2.07                     | 0.90              |
| 1:I:59:ILE:HG21  | 1:I:92:THR:HG22  | 1.53                     | 0.90              |
| 1:I:106:VAL:HG21 | 1:I:147:PHE:CZ   | 2.07                     | 0.90              |
| 1:J:166:GLN:O    | 1:O:241:LYS:HA   | 1.71                     | 0.90              |
| 1:J:308:ASN:ND2  | 1:O:231:ALA:H    | 1.52                     | 0.90              |
| 1:K:179:PHE:CB   | 1:K:288:THR:HB   | 2.01                     | 0.90              |
| 1:K:308:ASN:CG   | 1:P:230:GLN:CA   | 2.38                     | 0.90              |
| 1:L:27:LYS:HE2   | 1:L:35:ARG:HG2   | 1.48                     | 0.90              |
| 1:N:59:ILE:HG21  | 1:N:92:THR:HG22  | 1.53                     | 0.90              |
| 1:O:110:LEU:HA   | 1:O:318:LEU:HD13 | 1.52                     | 0.90              |
| 1:B:183:ASN:ND2  | 1:B:203:GLU:HA   | 1.85                     | 0.90              |
| 1:B:188:LEU:H    | 1:B:199:ARG:HG2  | 1.33                     | 0.90              |
| 1:C:274:PHE:HD2  | 1:C:278:GLN:HE22 | 1.16                     | 0.90              |
| 1:H:179:PHE:CB   | 1:H:288:THR:HB   | 2.01                     | 0.90              |
| 1:I:275:LYS:HZ2  | 1:J:224:ASN:HD22 | 0.91                     | 0.90              |
| 1:K:106:VAL:HG21 | 1:K:147:PHE:CZ   | 2.07                     | 0.90              |
| 1:M:323:VAL:HG22 | 1:N:47:ASP:C     | 1.91                     | 0.90              |
| 1:N:274:PHE:HD2  | 1:N:278:GLN:HE22 | 1.17                     | 0.90              |
| 1:O:183:ASN:ND2  | 1:O:203:GLU:HA   | 1.85                     | 0.90              |
| 1:O:188:LEU:H    | 1:O:199:ARG:HG2  | 1.33                     | 0.90              |
| 1:P:179:PHE:CB   | 1:P:288:THR:HB   | 2.01                     | 0.90              |
| 1:P:274:PHE:HD2  | 1:P:278:GLN:HE22 | 1.17                     | 0.90              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:49:TYR:HB3   | 1:F:324:ALA:HB2  | 0.92                     | 0.90              |
| 1:I:320:LYS:CA   | 1:N:246:ILE:HD12 | 1.98                     | 0.90              |
| 1:P:173:ASN:ND2  | 1:P:279:LEU:HD23 | 1.85                     | 0.90              |
| 1:A:183:ASN:ND2  | 1:A:203:GLU:HA   | 1.86                     | 0.90              |
| 1:B:59:ILE:HG21  | 1:B:92:THR:HG22  | 1.53                     | 0.90              |
| 1:E:179:PHE:CB   | 1:E:288:THR:HB   | 2.01                     | 0.90              |
| 1:F:49:TYR:HB3   | 1:G:324:ALA:HB2  | 0.92                     | 0.90              |
| 1:F:179:PHE:CB   | 1:F:288:THR:HB   | 2.01                     | 0.90              |
| 1:F:202:GLU:HA   | 1:I:272:ARG:CB   | 2.00                     | 0.90              |
| 1:G:49:TYR:HB3   | 1:H:324:ALA:HB2  | 0.92                     | 0.90              |
| 1:I:183:ASN:ND2  | 1:I:203:GLU:HA   | 1.85                     | 0.90              |
| 1:J:179:PHE:CB   | 1:J:288:THR:HB   | 2.01                     | 0.90              |
| 1:K:59:ILE:HG21  | 1:K:92:THR:HG22  | 1.53                     | 0.90              |
| 1:K:168:ASN:HB3  | 1:L:71:GLN:CD    | 1.91                     | 0.90              |
| 1:N:106:VAL:HG21 | 1:N:147:PHE:CZ   | 2.07                     | 0.90              |
| 1:O:173:ASN:ND2  | 1:O:279:LEU:HD23 | 1.85                     | 0.90              |
| 1:O:179:PHE:CB   | 1:O:288:THR:HB   | 2.01                     | 0.90              |
| 1:P:106:VAL:HG21 | 1:P:147:PHE:CZ   | 2.07                     | 0.90              |
| 1:B:106:VAL:HG21 | 1:B:147:PHE:CZ   | 2.06                     | 0.90              |
| 1:C:179:PHE:CB   | 1:C:288:THR:HB   | 2.01                     | 0.90              |
| 1:D:219:ASP:CB   | 1:D:224:ASN:HD22 | 1.85                     | 0.90              |
| 1:E:47:ASP:O     | 1:F:323:VAL:C    | 2.09                     | 0.90              |
| 1:F:203:GLU:N    | 1:I:272:ARG:CG   | 2.15                     | 0.90              |
| 1:G:200:PHE:HB2  | 1:J:200:PHE:HB2  | 1.52                     | 0.90              |
| 1:J:274:PHE:HD2  | 1:J:278:GLN:HE22 | 1.16                     | 0.90              |
| 1:M:59:ILE:HG21  | 1:M:92:THR:HG22  | 1.53                     | 0.90              |
| 1:O:59:ILE:HG21  | 1:O:92:THR:HG22  | 1.53                     | 0.90              |
| 1:A:228:ASN:C    | 1:F:308:ASN:HB3  | 1.92                     | 0.90              |
| 1:B:219:ASP:CB   | 1:B:224:ASN:HD22 | 1.85                     | 0.90              |
| 1:C:219:ASP:CB   | 1:C:224:ASN:HD22 | 1.85                     | 0.90              |
| 1:F:173:ASN:ND2  | 1:F:279:LEU:HD23 | 1.85                     | 0.90              |
| 1:H:202:GLU:HG3  | 1:K:271:LYS:HE3  | 1.54                     | 0.90              |
| 1:K:324:ALA:CB   | 1:L:46:GLU:CG    | 2.34                     | 0.90              |
| 1:M:219:ASP:CB   | 1:M:224:ASN:HD22 | 1.85                     | 0.90              |
| 1:M:320:LYS:HE2  | 1:N:50:ILE:HG13  | 1.51                     | 0.90              |
| 1:N:219:ASP:CB   | 1:N:224:ASN:HD22 | 1.85                     | 0.90              |
| 1:O:274:PHE:HD2  | 1:O:278:GLN:HE22 | 1.16                     | 0.90              |
| 1:P:59:ILE:HG21  | 1:P:92:THR:HG22  | 1.53                     | 0.90              |
| 1:A:106:VAL:HG21 | 1:A:147:PHE:CZ   | 2.07                     | 0.90              |
| 1:D:106:VAL:HG21 | 1:D:147:PHE:CZ   | 2.06                     | 0.90              |
| 1:E:49:TYR:N     | 1:F:323:VAL:N    | 2.18                     | 0.90              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:46:GLU:HG3   | 1:H:324:ALA:HB3  | 1.53                     | 0.90              |
| 1:G:106:VAL:HG21 | 1:G:147:PHE:CZ   | 2.06                     | 0.90              |
| 1:G:201:ILE:HG22 | 1:J:199:ARG:O    | 1.69                     | 0.90              |
| 1:I:173:ASN:ND2  | 1:I:279:LEU:HD23 | 1.85                     | 0.90              |
| 1:I:322:ALA:HA   | 1:J:48:GLY:CA    | 1.99                     | 0.90              |
| 1:J:168:ASN:HB3  | 1:K:71:GLN:CD    | 1.91                     | 0.90              |
| 1:J:323:VAL:N    | 1:K:49:TYR:N     | 2.18                     | 0.90              |
| 1:M:322:ALA:O    | 1:N:47:ASP:CG    | 2.00                     | 0.90              |
| 1:N:183:ASN:ND2  | 1:N:203:GLU:HA   | 1.85                     | 0.90              |
| 1:N:320:LYS:HE2  | 1:O:50:ILE:HG13  | 1.51                     | 0.90              |
| 1:O:219:ASP:CB   | 1:O:224:ASN:HD22 | 1.85                     | 0.90              |
| 1:A:47:ASP:C     | 1:B:323:VAL:HG22 | 1.91                     | 0.90              |
| 1:A:219:ASP:CB   | 1:A:224:ASN:HD22 | 1.85                     | 0.90              |
| 1:B:47:ASP:C     | 1:C:323:VAL:HG22 | 1.91                     | 0.90              |
| 1:C:183:ASN:HB3  | 1:C:201:ILE:HD11 | 1.52                     | 0.90              |
| 1:C:247:ASP:C    | 1:G:52:ILE:CD1   | 2.40                     | 0.90              |
| 1:E:224:ASN:HD22 | 1:F:275:LYS:HZ2  | 0.90                     | 0.90              |
| 1:F:227:THR:O    | 1:G:300:TYR:HA   | 1.70                     | 0.90              |
| 1:F:274:PHE:CE1  | 1:I:204:HIS:HD2  | 1.83                     | 0.90              |
| 1:I:165:GLU:HA   | 1:N:241:LYS:O    | 1.72                     | 0.90              |
| 1:I:166:GLN:HA   | 1:N:242:LYS:C    | 1.90                     | 0.90              |
| 1:I:183:ASN:HD22 | 1:I:203:GLU:HA   | 1.37                     | 0.90              |
| 1:I:324:ALA:CB   | 1:J:46:GLU:CG    | 2.34                     | 0.90              |
| 1:I:324:ALA:HB3  | 1:J:46:GLU:HG3   | 1.53                     | 0.90              |
| 1:J:73:VAL:CB    | 1:N:240:MET:HE1  | 1.99                     | 0.90              |
| 1:J:106:VAL:HG21 | 1:J:147:PHE:CZ   | 2.07                     | 0.90              |
| 1:J:183:ASN:HD22 | 1:J:203:GLU:HA   | 1.37                     | 0.90              |
| 1:M:106:VAL:HG21 | 1:M:147:PHE:CZ   | 2.07                     | 0.90              |
| 1:N:173:ASN:ND2  | 1:N:279:LEU:HD23 | 1.85                     | 0.90              |
| 1:P:110:LEU:HA   | 1:P:318:LEU:HD13 | 1.52                     | 0.90              |
| 1:P:183:ASN:HD22 | 1:P:203:GLU:HA   | 1.37                     | 0.90              |
| 1:A:179:PHE:CB   | 1:A:288:THR:HB   | 2.01                     | 0.90              |
| 1:A:183:ASN:HD22 | 1:A:203:GLU:HA   | 1.37                     | 0.90              |
| 1:B:183:ASN:HD22 | 1:B:203:GLU:HA   | 1.37                     | 0.90              |
| 1:B:247:ASP:O    | 1:F:52:ILE:HG21  | 1.70                     | 0.90              |
| 1:C:188:LEU:H    | 1:C:199:ARG:HG2  | 1.33                     | 0.90              |
| 1:K:183:ASN:HB3  | 1:K:201:ILE:HD11 | 1.52                     | 0.90              |
| 1:K:183:ASN:HD22 | 1:K:203:GLU:HA   | 1.37                     | 0.90              |
| 1:A:241:LYS:HA   | 1:F:166:GLN:C    | 1.87                     | 0.90              |
| 1:C:240:MET:HE3  | 1:G:73:VAL:CG2   | 1.87                     | 0.90              |
| 1:E:106:VAL:HG21 | 1:E:147:PHE:CZ   | 2.06                     | 0.90              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:59:ILE:HG21  | 1:F:92:THR:HG22  | 1.53                     | 0.90              |
| 1:H:183:ASN:HD22 | 1:H:203:GLU:HA   | 1.37                     | 0.90              |
| 1:I:50:ILE:O     | 1:M:246:ILE:CG1  | 2.20                     | 0.90              |
| 1:I:179:PHE:CB   | 1:I:288:THR:HB   | 2.01                     | 0.90              |
| 1:J:165:GLU:OE2  | 1:O:241:LYS:CA   | 2.18                     | 0.90              |
| 1:P:219:ASP:CB   | 1:P:224:ASN:HD22 | 1.85                     | 0.90              |
| 1:C:183:ASN:HD22 | 1:C:203:GLU:HA   | 1.37                     | 0.89              |
| 1:D:183:ASN:HB3  | 1:D:201:ILE:HD11 | 1.52                     | 0.89              |
| 1:G:183:ASN:HD22 | 1:G:203:GLU:HA   | 1.37                     | 0.89              |
| 1:H:59:ILE:HG21  | 1:H:92:THR:HG22  | 1.53                     | 0.89              |
| 1:O:183:ASN:HD22 | 1:O:203:GLU:HA   | 1.37                     | 0.89              |
| 1:C:47:ASP:CA    | 1:D:323:VAL:HG23 | 1.95                     | 0.89              |
| 1:F:71:GLN:CD    | 1:G:168:ASN:HB3  | 1.91                     | 0.89              |
| 1:F:219:ASP:CG   | 1:G:275:LYS:NZ   | 2.25                     | 0.89              |
| 1:G:46:GLU:CG    | 1:H:324:ALA:CB   | 2.34                     | 0.89              |
| 1:H:203:GLU:CB   | 1:K:198:GLU:CG   | 2.47                     | 0.89              |
| 1:J:275:LYS:CE   | 1:K:219:ASP:OD2  | 1.95                     | 0.89              |
| 1:M:179:PHE:CB   | 1:M:288:THR:HB   | 2.01                     | 0.89              |
| 1:N:179:PHE:CB   | 1:N:288:THR:HB   | 2.01                     | 0.89              |
| 1:A:72:GLY:HA3   | 1:B:168:ASN:CA   | 1.98                     | 0.89              |
| 1:B:179:PHE:CB   | 1:B:288:THR:HB   | 2.01                     | 0.89              |
| 1:B:247:ASP:O    | 1:F:52:ILE:HD12  | 1.66                     | 0.89              |
| 1:E:183:ASN:HD22 | 1:E:203:GLU:HA   | 1.37                     | 0.89              |
| 1:F:183:ASN:HB3  | 1:F:201:ILE:HD11 | 1.52                     | 0.89              |
| 1:G:197:SER:HB3  | 1:J:183:ASN:ND2  | 1.87                     | 0.89              |
| 1:I:168:ASN:HB3  | 1:J:71:GLN:CD    | 1.91                     | 0.89              |
| 1:K:52:ILE:HA    | 1:O:248:THR:HG22 | 1.52                     | 0.89              |
| 1:K:275:LYS:HZ2  | 1:L:224:ASN:HD21 | 1.15                     | 0.89              |
| 1:K:324:ALA:CB   | 1:L:49:TYR:CB    | 2.46                     | 0.89              |
| 1:L:179:PHE:CB   | 1:L:288:THR:HB   | 2.01                     | 0.89              |
| 1:C:106:VAL:HG21 | 1:C:147:PHE:CZ   | 2.06                     | 0.89              |
| 1:C:245:GLU:N    | 1:H:320:LYS:HD3  | 1.85                     | 0.89              |
| 1:D:183:ASN:HD22 | 1:D:203:GLU:HA   | 1.37                     | 0.89              |
| 1:G:224:ASN:HD22 | 1:H:275:LYS:HZ2  | 0.94                     | 0.89              |
| 1:I:52:ILE:CD1   | 1:M:247:ASP:C    | 2.40                     | 0.89              |
| 1:L:106:VAL:HG21 | 1:L:147:PHE:CZ   | 2.07                     | 0.89              |
| 1:M:183:ASN:ND2  | 1:M:203:GLU:HA   | 1.85                     | 0.89              |
| 1:N:183:ASN:HD22 | 1:N:203:GLU:HA   | 1.37                     | 0.89              |
| 1:E:71:GLN:CD    | 1:F:168:ASN:HB3  | 1.91                     | 0.89              |
| 1:E:227:THR:O    | 1:F:300:TYR:HA   | 1.70                     | 0.89              |
| 1:G:179:PHE:CB   | 1:G:288:THR:HB   | 2.01                     | 0.89              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:219:ASP:CG   | 1:H:275:LYS:NZ   | 2.25                     | 0.89              |
| 1:H:272:ARG:HB2  | 1:K:202:GLU:HA   | 1.52                     | 0.89              |
| 1:J:300:TYR:HA   | 1:K:227:THR:O    | 1.70                     | 0.89              |
| 1:J:324:ALA:CB   | 1:K:49:TYR:CB    | 2.46                     | 0.89              |
| 1:L:219:ASP:CB   | 1:L:224:ASN:HD22 | 1.85                     | 0.89              |
| 1:B:241:LYS:NZ   | 1:G:305:ILE:HG22 | 1.88                     | 0.89              |
| 1:D:308:ASN:OD1  | 1:H:231:ALA:HB2  | 1.71                     | 0.89              |
| 1:F:71:GLN:OE1   | 1:G:168:ASN:ND2  | 2.01                     | 0.89              |
| 1:F:203:GLU:HB2  | 1:I:197:SER:O    | 1.73                     | 0.89              |
| 1:G:48:GLY:CA    | 1:H:322:ALA:HA   | 1.99                     | 0.89              |
| 1:G:183:ASN:HB3  | 1:G:201:ILE:HD11 | 1.52                     | 0.89              |
| 1:O:106:VAL:HG21 | 1:O:147:PHE:CZ   | 2.07                     | 0.89              |
| 1:F:46:GLU:HG3   | 1:G:324:ALA:HB3  | 1.53                     | 0.89              |
| 1:G:271:LYS:NZ   | 1:J:265:ALA:HA   | 1.87                     | 0.89              |
| 1:I:168:ASN:ND2  | 1:J:71:GLN:OE1   | 2.01                     | 0.89              |
| 1:J:320:LYS:CA   | 1:O:246:ILE:CD1  | 2.50                     | 0.89              |
| 1:J:324:ALA:HB3  | 1:K:46:GLU:HG3   | 1.53                     | 0.89              |
| 1:K:52:ILE:CD1   | 1:O:247:ASP:CA   | 2.39                     | 0.89              |
| 1:C:72:GLY:HA3   | 1:D:168:ASN:CA   | 1.98                     | 0.89              |
| 1:G:204:HIS:NE2  | 1:J:274:PHE:HD1  | 1.55                     | 0.89              |
| 1:K:219:ASP:CB   | 1:K:224:ASN:HD22 | 1.85                     | 0.89              |
| 1:P:82:THR:HB    | 1:P:84:LEU:HD23  | 1.55                     | 0.89              |
| 1:A:47:ASP:CG    | 1:B:322:ALA:O    | 2.00                     | 0.89              |
| 1:C:82:THR:HB    | 1:C:84:LEU:HD23  | 1.55                     | 0.89              |
| 1:E:48:GLY:CA    | 1:F:322:ALA:CA   | 2.48                     | 0.89              |
| 1:E:219:ASP:OD2  | 1:F:275:LYS:CE   | 1.95                     | 0.89              |
| 1:F:183:ASN:HD22 | 1:F:203:GLU:HA   | 1.37                     | 0.89              |
| 1:G:49:TYR:CB    | 1:H:324:ALA:CB   | 2.46                     | 0.89              |
| 1:G:71:GLN:CD    | 1:H:168:ASN:HB3  | 1.91                     | 0.89              |
| 1:G:186:PHE:CD2  | 1:G:269:ILE:HD11 | 2.08                     | 0.89              |
| 1:H:272:ARG:CB   | 1:K:202:GLU:HA   | 2.03                     | 0.89              |
| 1:M:183:ASN:HD22 | 1:M:203:GLU:HA   | 1.37                     | 0.89              |
| 1:A:82:THR:HB    | 1:A:84:LEU:HD23  | 1.55                     | 0.89              |
| 1:B:82:THR:HB    | 1:B:84:LEU:HD23  | 1.55                     | 0.89              |
| 1:B:241:LYS:CA   | 1:G:166:GLN:NE2  | 2.22                     | 0.89              |
| 1:F:48:GLY:CA    | 1:G:322:ALA:HA   | 1.99                     | 0.89              |
| 1:H:186:PHE:CD2  | 1:H:269:ILE:HD11 | 2.08                     | 0.89              |
| 1:H:197:SER:O    | 1:K:203:GLU:HB2  | 1.71                     | 0.89              |
| 1:I:278:GLN:N    | 1:J:219:ASP:H    | 1.71                     | 0.89              |
| 1:J:219:ASP:CB   | 1:J:224:ASN:HD22 | 1.85                     | 0.89              |
| 1:M:82:THR:HB    | 1:M:84:LEU:HD23  | 1.55                     | 0.89              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:320:LYS:HD3  | 1:N:49:TYR:CE1   | 2.08                     | 0.89              |
| 1:O:82:THR:HB    | 1:O:84:LEU:HD23  | 1.55                     | 0.89              |
| 1:A:49:TYR:CE1   | 1:B:320:LYS:HD3  | 2.08                     | 0.88              |
| 1:B:49:TYR:CE1   | 1:C:320:LYS:HD3  | 2.08                     | 0.88              |
| 1:F:274:PHE:HD1  | 1:I:204:HIS:NE2  | 1.63                     | 0.88              |
| 1:J:278:GLN:N    | 1:K:219:ASP:H    | 1.71                     | 0.88              |
| 1:J:322:ALA:CA   | 1:K:48:GLY:CA    | 2.48                     | 0.88              |
| 1:A:186:PHE:CD2  | 1:A:269:ILE:HD11 | 2.08                     | 0.88              |
| 1:C:186:PHE:CD2  | 1:C:269:ILE:HD11 | 2.08                     | 0.88              |
| 1:D:82:THR:HB    | 1:D:84:LEU:HD23  | 1.55                     | 0.88              |
| 1:F:224:ASN:HD22 | 1:G:275:LYS:HZ2  | 0.91                     | 0.88              |
| 1:F:225:LEU:HD12 | 1:G:300:TYR:HE2  | 1.38                     | 0.88              |
| 1:J:165:GLU:HG2  | 1:O:241:LYS:O    | 1.72                     | 0.88              |
| 1:N:82:THR:HB    | 1:N:84:LEU:HD23  | 1.55                     | 0.88              |
| 1:B:186:PHE:CD2  | 1:B:269:ILE:HD11 | 2.08                     | 0.88              |
| 1:G:265:ALA:HA   | 1:J:271:LYS:NZ   | 1.87                     | 0.88              |
| 1:H:271:LYS:CE   | 1:K:202:GLU:HG3  | 2.03                     | 0.88              |
| 1:I:324:ALA:CB   | 1:J:49:TYR:CB    | 2.46                     | 0.88              |
| 1:J:275:LYS:HZ2  | 1:K:224:ASN:HD22 | 0.91                     | 0.88              |
| 1:J:309:ASN:O    | 1:O:229:GLU:OE2  | 1.90                     | 0.88              |
| 1:K:278:GLN:N    | 1:L:219:ASP:H    | 1.71                     | 0.88              |
| 1:L:59:ILE:HG21  | 1:L:92:THR:HG22  | 1.53                     | 0.88              |
| 1:O:320:LYS:HE3  | 1:P:50:ILE:HG12  | 1.53                     | 0.88              |
| 1:A:227:THR:HG23 | 1:B:300:TYR:N    | 1.64                     | 0.88              |
| 1:E:46:GLU:CG    | 1:F:324:ALA:CB   | 2.34                     | 0.88              |
| 1:F:271:LYS:HE3  | 1:I:202:GLU:HG3  | 1.55                     | 0.88              |
| 1:N:320:LYS:HD3  | 1:O:49:TYR:CE1   | 2.08                     | 0.88              |
| 1:G:233:SER:O    | 1:H:277:ASP:OD2  | 1.91                     | 0.88              |
| 1:I:219:ASP:CB   | 1:I:224:ASN:HD22 | 1.85                     | 0.88              |
| 1:J:168:ASN:CB   | 1:K:71:GLN:CD    | 2.42                     | 0.88              |
| 1:K:300:TYR:HE2  | 1:L:225:LEU:HD12 | 1.38                     | 0.88              |
| 1:C:76:SER:OG    | 1:D:163:PHE:HA   | 1.74                     | 0.88              |
| 1:E:219:ASP:CB   | 1:E:224:ASN:HD22 | 1.85                     | 0.88              |
| 1:F:71:GLN:CD    | 1:G:168:ASN:CB   | 2.42                     | 0.88              |
| 1:F:197:SER:OG   | 1:I:183:ASN:OD1  | 1.91                     | 0.88              |
| 1:F:202:GLU:HG3  | 1:I:271:LYS:CE   | 2.02                     | 0.88              |
| 1:F:233:SER:O    | 1:G:277:ASP:OD2  | 1.91                     | 0.88              |
| 1:G:219:ASP:OD2  | 1:H:275:LYS:CE   | 1.95                     | 0.88              |
| 1:I:186:PHE:CD2  | 1:I:269:ILE:HD11 | 2.08                     | 0.88              |
| 1:I:275:LYS:CE   | 1:J:219:ASP:OD2  | 1.95                     | 0.88              |
| 1:K:324:ALA:HB3  | 1:L:46:GLU:HG3   | 1.53                     | 0.88              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:323:VAL:HG23 | 1:N:47:ASP:CA    | 1.95                     | 0.88              |
| 1:A:76:SER:OG    | 1:B:163:PHE:HA   | 1.74                     | 0.88              |
| 1:B:248:THR:HA   | 1:F:52:ILE:CG2   | 2.03                     | 0.88              |
| 1:B:252:THR:HG21 | 1:F:53:GLU:HG3   | 1.55                     | 0.88              |
| 1:C:49:TYR:CE1   | 1:D:320:LYS:HD3  | 2.08                     | 0.88              |
| 1:E:46:GLU:HG3   | 1:F:324:ALA:HB3  | 1.53                     | 0.88              |
| 1:E:233:SER:O    | 1:F:277:ASP:OD2  | 1.91                     | 0.88              |
| 1:I:166:GLN:O    | 1:N:241:LYS:HA   | 1.73                     | 0.88              |
| 1:I:275:LYS:NZ   | 1:J:219:ASP:CG   | 2.25                     | 0.88              |
| 1:J:275:LYS:NZ   | 1:K:219:ASP:CG   | 2.25                     | 0.88              |
| 1:O:170:LYS:NZ   | 1:P:79:THR:O     | 1.94                     | 0.88              |
| 1:A:248:THR:HG23 | 1:E:52:ILE:HD13  | 1.54                     | 0.88              |
| 1:F:219:ASP:CB   | 1:F:224:ASN:HD22 | 1.85                     | 0.88              |
| 1:I:322:ALA:CA   | 1:J:48:GLY:CA    | 2.48                     | 0.88              |
| 1:J:322:ALA:HA   | 1:K:48:GLY:CA    | 1.99                     | 0.88              |
| 1:K:166:GLN:HE22 | 1:P:241:LYS:HB2  | 1.12                     | 0.88              |
| 1:K:325:LYS:CE   | 1:L:46:GLU:OE2   | 2.22                     | 0.88              |
| 1:M:163:PHE:HA   | 1:N:76:SER:OG    | 1.74                     | 0.88              |
| 1:B:248:THR:CA   | 1:F:52:ILE:HG23  | 2.04                     | 0.88              |
| 1:F:186:PHE:CD2  | 1:F:269:ILE:HD11 | 2.08                     | 0.88              |
| 1:F:219:ASP:H    | 1:G:278:GLN:N    | 1.71                     | 0.88              |
| 1:G:59:ILE:HG21  | 1:G:92:THR:HG22  | 1.53                     | 0.88              |
| 1:J:52:ILE:HD12  | 1:N:248:THR:N    | 1.89                     | 0.88              |
| 1:J:300:TYR:HE2  | 1:K:225:LEU:HD12 | 1.38                     | 0.88              |
| 1:M:186:PHE:CD2  | 1:M:269:ILE:HD11 | 2.08                     | 0.88              |
| 1:A:222:ASN:HB2  | 1:A:237:ASN:N    | 1.90                     | 0.88              |
| 1:G:219:ASP:CB   | 1:G:224:ASN:HD22 | 1.85                     | 0.88              |
| 1:J:325:LYS:CE   | 1:K:46:GLU:OE2   | 2.22                     | 0.88              |
| 1:L:50:ILE:CG2   | 1:P:246:ILE:CD1  | 2.01                     | 0.88              |
| 1:N:186:PHE:CD2  | 1:N:269:ILE:HD11 | 2.08                     | 0.88              |
| 1:N:323:VAL:HG23 | 1:O:47:ASP:CA    | 1.95                     | 0.88              |
| 1:E:71:GLN:CD    | 1:F:168:ASN:CB   | 2.42                     | 0.87              |
| 1:G:219:ASP:H    | 1:H:278:GLN:N    | 1.71                     | 0.87              |
| 1:H:222:ASN:HB2  | 1:H:237:ASN:N    | 1.90                     | 0.87              |
| 1:I:277:ASP:OD2  | 1:J:233:SER:O    | 1.91                     | 0.87              |
| 1:L:186:PHE:CD2  | 1:L:269:ILE:HD11 | 2.08                     | 0.87              |
| 1:N:163:PHE:HA   | 1:O:76:SER:OG    | 1.74                     | 0.87              |
| 1:O:320:LYS:HD3  | 1:P:49:TYR:CE1   | 2.08                     | 0.87              |
| 1:E:222:ASN:HB2  | 1:E:237:ASN:N    | 1.89                     | 0.87              |
| 1:G:183:ASN:ND2  | 1:J:197:SER:HB3  | 1.87                     | 0.87              |
| 1:I:325:LYS:CE   | 1:J:46:GLU:OE2   | 2.22                     | 0.87              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:186:PHE:CD2  | 1:K:269:ILE:HD11 | 2.08                     | 0.87              |
| 1:K:307:THR:C    | 1:P:230:GLN:HB2  | 1.93                     | 0.87              |
| 1:N:222:ASN:HB2  | 1:N:237:ASN:N    | 1.90                     | 0.87              |
| 1:D:186:PHE:CD2  | 1:D:269:ILE:HD11 | 2.08                     | 0.87              |
| 1:D:289:THR:HG21 | 1:D:306:ILE:HD13 | 1.57                     | 0.87              |
| 1:F:289:THR:HG21 | 1:F:306:ILE:HD13 | 1.57                     | 0.87              |
| 1:K:168:ASN:CB   | 1:L:71:GLN:CD    | 2.42                     | 0.87              |
| 1:L:289:THR:HG21 | 1:L:306:ILE:HD13 | 1.57                     | 0.87              |
| 1:A:32:ASP:HB3   | 1:A:34:LYS:HB2   | 1.56                     | 0.87              |
| 1:B:41:LYS:HE3   | 1:C:170:LYS:HB3  | 1.57                     | 0.87              |
| 1:C:289:THR:HG21 | 1:C:306:ILE:HD13 | 1.57                     | 0.87              |
| 1:E:71:GLN:OE1   | 1:F:168:ASN:ND2  | 2.01                     | 0.87              |
| 1:E:186:PHE:CD2  | 1:E:269:ILE:HD11 | 2.08                     | 0.87              |
| 1:I:165:GLU:HG2  | 1:N:241:LYS:O    | 1.74                     | 0.87              |
| 1:I:168:ASN:CB   | 1:J:71:GLN:CD    | 2.42                     | 0.87              |
| 1:I:289:THR:HG21 | 1:I:306:ILE:HD13 | 1.57                     | 0.87              |
| 1:L:222:ASN:HB2  | 1:L:237:ASN:N    | 1.89                     | 0.87              |
| 1:F:222:ASN:HB2  | 1:F:237:ASN:N    | 1.89                     | 0.87              |
| 1:G:289:THR:HG21 | 1:G:306:ILE:HD13 | 1.57                     | 0.87              |
| 1:H:219:ASP:CB   | 1:H:224:ASN:HD22 | 1.85                     | 0.87              |
| 1:J:186:PHE:CD2  | 1:J:269:ILE:HD11 | 2.08                     | 0.87              |
| 1:J:277:ASP:OD2  | 1:K:233:SER:O    | 1.91                     | 0.87              |
| 1:K:277:ASP:OD2  | 1:L:233:SER:O    | 1.91                     | 0.87              |
| 1:K:289:THR:HG21 | 1:K:306:ILE:HD13 | 1.57                     | 0.87              |
| 1:N:322:ALA:O    | 1:O:47:ASP:CG    | 2.00                     | 0.87              |
| 1:O:323:VAL:HG23 | 1:P:47:ASP:CA    | 1.95                     | 0.87              |
| 1:P:186:PHE:CD2  | 1:P:269:ILE:HD11 | 2.08                     | 0.87              |
| 1:B:32:ASP:HB3   | 1:B:34:LYS:HB2   | 1.56                     | 0.87              |
| 1:C:32:ASP:HB3   | 1:C:34:LYS:HB2   | 1.56                     | 0.87              |
| 1:C:222:ASN:HB2  | 1:C:237:ASN:N    | 1.90                     | 0.87              |
| 1:E:32:ASP:HB3   | 1:E:34:LYS:HB2   | 1.56                     | 0.87              |
| 1:E:219:ASP:CG   | 1:F:275:LYS:NZ   | 2.25                     | 0.87              |
| 1:G:71:GLN:CD    | 1:H:168:ASN:CB   | 2.42                     | 0.87              |
| 1:I:165:GLU:CA   | 1:N:241:LYS:O    | 2.22                     | 0.87              |
| 1:J:168:ASN:ND2  | 1:K:71:GLN:OE1   | 2.01                     | 0.87              |
| 1:K:222:ASN:HB2  | 1:K:237:ASN:N    | 1.89                     | 0.87              |
| 1:O:186:PHE:CD2  | 1:O:269:ILE:HD11 | 2.08                     | 0.87              |
| 1:B:47:ASP:O     | 1:C:319:TYR:O    | 1.93                     | 0.87              |
| 1:B:240:MET:HE2  | 1:F:73:VAL:HB    | 1.44                     | 0.87              |
| 1:C:59:ILE:HG23  | 1:C:66:TYR:HB2   | 1.57                     | 0.87              |
| 1:C:245:GLU:CB   | 1:G:75:ASP:HA    | 2.05                     | 0.87              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:59:ILE:HG23  | 1:D:66:TYR:HB2   | 1.57                     | 0.87              |
| 1:E:82:THR:HB    | 1:E:84:LEU:HD23  | 1.55                     | 0.87              |
| 1:I:308:ASN:OD1  | 1:N:230:GLN:HA   | 1.75                     | 0.87              |
| 1:J:52:ILE:CD1   | 1:N:247:ASP:O    | 2.19                     | 0.87              |
| 1:K:166:GLN:O    | 1:P:241:LYS:HA   | 1.75                     | 0.87              |
| 1:L:82:THR:HB    | 1:L:84:LEU:HD23  | 1.55                     | 0.87              |
| 1:D:248:THR:HG23 | 1:H:52:ILE:HD12  | 1.57                     | 0.87              |
| 1:E:289:THR:HG21 | 1:E:306:ILE:HD13 | 1.57                     | 0.87              |
| 1:F:120:ALA:N    | 1:I:119:ASN:OD1  | 2.08                     | 0.87              |
| 1:G:46:GLU:OE2   | 1:H:325:LYS:CE   | 2.22                     | 0.87              |
| 1:H:268:LEU:HD11 | 1:K:268:LEU:CA   | 1.99                     | 0.87              |
| 1:I:300:TYR:HE2  | 1:J:225:LEU:HD12 | 1.38                     | 0.87              |
| 1:J:322:ALA:C    | 1:K:48:GLY:C     | 2.34                     | 0.87              |
| 1:K:275:LYS:CE   | 1:L:219:ASP:OD2  | 1.95                     | 0.87              |
| 1:K:322:ALA:C    | 1:L:48:GLY:C     | 2.34                     | 0.87              |
| 1:N:300:TYR:N    | 1:O:227:THR:HG23 | 1.64                     | 0.87              |
| 1:O:163:PHE:HA   | 1:P:76:SER:OG    | 1.74                     | 0.87              |
| 1:A:47:ASP:O     | 1:B:319:TYR:O    | 1.93                     | 0.87              |
| 1:C:41:LYS:HE3   | 1:D:170:LYS:HB3  | 1.57                     | 0.87              |
| 1:C:47:ASP:O     | 1:D:319:TYR:O    | 1.93                     | 0.87              |
| 1:C:246:ILE:HG12 | 1:G:50:ILE:O     | 1.75                     | 0.87              |
| 1:E:225:LEU:HD12 | 1:F:300:TYR:HE2  | 1.38                     | 0.87              |
| 1:H:82:THR:HB    | 1:H:84:LEU:HD23  | 1.55                     | 0.87              |
| 1:I:222:ASN:HB2  | 1:I:237:ASN:N    | 1.89                     | 0.87              |
| 1:I:322:ALA:C    | 1:J:48:GLY:C     | 2.34                     | 0.87              |
| 1:J:59:ILE:HG23  | 1:J:66:TYR:HB2   | 1.57                     | 0.87              |
| 1:K:59:ILE:HG23  | 1:K:66:TYR:HB2   | 1.57                     | 0.87              |
| 1:L:59:ILE:HG23  | 1:L:66:TYR:HB2   | 1.57                     | 0.87              |
| 1:N:320:LYS:HE3  | 1:O:50:ILE:HG12  | 1.54                     | 0.87              |
| 1:P:222:ASN:HB2  | 1:P:237:ASN:N    | 1.90                     | 0.87              |
| 1:A:41:LYS:HE3   | 1:B:170:LYS:HB3  | 1.57                     | 0.86              |
| 1:B:59:ILE:HG23  | 1:B:66:TYR:HB2   | 1.57                     | 0.86              |
| 1:C:49:TYR:CE1   | 1:D:320:LYS:CD   | 2.58                     | 0.86              |
| 1:D:32:ASP:HB3   | 1:D:34:LYS:HB2   | 1.56                     | 0.86              |
| 1:D:222:ASN:HB2  | 1:D:237:ASN:N    | 1.90                     | 0.86              |
| 1:E:46:GLU:OE2   | 1:F:325:LYS:CE   | 2.21                     | 0.86              |
| 1:F:272:ARG:NH1  | 1:I:201:ILE:CG1  | 2.33                     | 0.86              |
| 1:H:32:ASP:HB3   | 1:H:34:LYS:HB2   | 1.56                     | 0.86              |
| 1:I:275:LYS:HZ2  | 1:J:224:ASN:HD21 | 1.22                     | 0.86              |
| 1:J:289:THR:HG21 | 1:J:306:ILE:HD13 | 1.57                     | 0.86              |
| 1:F:46:GLU:OE2   | 1:G:325:LYS:CE   | 2.22                     | 0.86              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:82:THR:HB    | 1:F:84:LEU:HD23  | 1.55                     | 0.86              |
| 1:G:218:THR:HG1  | 1:H:278:GLN:H    | 1.23                     | 0.86              |
| 1:J:73:VAL:HG21  | 1:N:240:MET:HE3  | 0.87                     | 0.86              |
| 1:A:59:ILE:HG23  | 1:A:66:TYR:HB2   | 1.57                     | 0.86              |
| 1:E:49:TYR:CB    | 1:F:324:ALA:CB   | 2.46                     | 0.86              |
| 1:F:32:ASP:CB    | 1:F:34:LYS:HB2   | 2.06                     | 0.86              |
| 1:F:59:ILE:HG23  | 1:F:66:TYR:HB2   | 1.57                     | 0.86              |
| 1:F:197:SER:O    | 1:I:203:GLU:HA   | 1.74                     | 0.86              |
| 1:F:272:ARG:HG3  | 1:I:202:GLU:C    | 1.95                     | 0.86              |
| 1:G:32:ASP:CB    | 1:G:34:LYS:HB2   | 2.06                     | 0.86              |
| 1:H:289:THR:HG21 | 1:H:306:ILE:HD13 | 1.57                     | 0.86              |
| 1:I:59:ILE:HG23  | 1:I:66:TYR:HB2   | 1.57                     | 0.86              |
| 1:I:323:VAL:HG11 | 1:N:246:ILE:HD13 | 1.18                     | 0.86              |
| 1:J:170:LYS:HE2  | 1:K:79:THR:CA    | 2.05                     | 0.86              |
| 1:K:275:LYS:HZ2  | 1:L:224:ASN:HD22 | 0.92                     | 0.86              |
| 1:M:32:ASP:HB3   | 1:M:34:LYS:HB2   | 1.56                     | 0.86              |
| 1:A:50:ILE:CD1   | 1:B:320:LYS:HE2  | 2.05                     | 0.86              |
| 1:E:32:ASP:CB    | 1:E:34:LYS:HB2   | 2.06                     | 0.86              |
| 1:E:59:ILE:HG23  | 1:E:66:TYR:HB2   | 1.57                     | 0.86              |
| 1:F:32:ASP:HB3   | 1:F:34:LYS:HB2   | 1.56                     | 0.86              |
| 1:G:222:ASN:HB2  | 1:G:237:ASN:N    | 1.90                     | 0.86              |
| 1:H:32:ASP:CB    | 1:H:34:LYS:HB2   | 2.06                     | 0.86              |
| 1:H:91:TYR:O     | 1:H:95:THR:HG23  | 1.76                     | 0.86              |
| 1:H:272:ARG:NH1  | 1:K:201:ILE:HG23 | 1.89                     | 0.86              |
| 1:J:91:TYR:O     | 1:J:95:THR:HG23  | 1.76                     | 0.86              |
| 1:J:165:GLU:CG   | 1:O:241:LYS:O    | 2.22                     | 0.86              |
| 1:K:82:THR:HB    | 1:K:84:LEU:HD23  | 1.55                     | 0.86              |
| 1:M:32:ASP:CB    | 1:M:34:LYS:HB2   | 2.06                     | 0.86              |
| 1:P:33:ILE:HD12  | 1:P:312:TRP:HE1  | 1.41                     | 0.86              |
| 1:B:49:TYR:CE1   | 1:C:320:LYS:CD   | 2.58                     | 0.86              |
| 1:B:76:SER:OG    | 1:C:163:PHE:HA   | 1.74                     | 0.86              |
| 1:G:59:ILE:HG23  | 1:G:66:TYR:HB2   | 1.57                     | 0.86              |
| 1:G:82:THR:HB    | 1:G:84:LEU:HD23  | 1.55                     | 0.86              |
| 1:G:91:TYR:O     | 1:G:95:THR:HG23  | 1.76                     | 0.86              |
| 1:I:91:TYR:O     | 1:I:95:THR:HG23  | 1.76                     | 0.86              |
| 1:K:308:ASN:HD21 | 1:P:231:ALA:H    | 1.21                     | 0.86              |
| 1:N:32:ASP:CB    | 1:N:34:LYS:HB2   | 2.06                     | 0.86              |
| 1:O:33:ILE:HD12  | 1:O:312:TRP:HE1  | 1.41                     | 0.86              |
| 1:O:320:LYS:CD   | 1:P:49:TYR:CE1   | 2.58                     | 0.86              |
| 1:A:244:GLY:H    | 1:F:320:LYS:HZ3  | 1.21                     | 0.86              |
| 1:B:50:ILE:CD1   | 1:C:320:LYS:HE2  | 2.05                     | 0.86              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:246:ILE:HD12 | 1:G:320:LYS:HA   | 0.87                     | 0.86              |
| 1:E:48:GLY:C     | 1:F:322:ALA:C    | 2.34                     | 0.86              |
| 1:F:48:GLY:C     | 1:G:322:ALA:C    | 2.34                     | 0.86              |
| 1:F:91:TYR:O     | 1:F:95:THR:HG23  | 1.76                     | 0.86              |
| 1:F:199:ARG:O    | 1:I:201:ILE:HG22 | 1.74                     | 0.86              |
| 1:F:274:PHE:CD1  | 1:I:204:HIS:CE1  | 2.63                     | 0.86              |
| 1:I:32:ASP:CB    | 1:I:34:LYS:HB2   | 2.06                     | 0.86              |
| 1:J:32:ASP:CB    | 1:J:34:LYS:HB2   | 2.06                     | 0.86              |
| 1:J:222:ASN:HB2  | 1:J:237:ASN:N    | 1.89                     | 0.86              |
| 1:J:307:THR:C    | 1:O:230:GLN:HB2  | 1.96                     | 0.86              |
| 1:O:32:ASP:CB    | 1:O:34:LYS:HB2   | 2.06                     | 0.86              |
| 1:P:32:ASP:CB    | 1:P:34:LYS:HB2   | 2.06                     | 0.86              |
| 1:A:33:ILE:HD12  | 1:A:312:TRP:HE1  | 1.41                     | 0.86              |
| 1:B:33:ILE:HD12  | 1:B:312:TRP:HE1  | 1.41                     | 0.86              |
| 1:B:50:ILE:HG12  | 1:C:320:LYS:CD   | 2.06                     | 0.86              |
| 1:B:289:THR:HG21 | 1:B:306:ILE:HD13 | 1.57                     | 0.86              |
| 1:C:32:ASP:CB    | 1:C:34:LYS:HB2   | 2.06                     | 0.86              |
| 1:C:50:ILE:HG12  | 1:D:320:LYS:CD   | 2.06                     | 0.86              |
| 1:C:50:ILE:CD1   | 1:D:320:LYS:HE2  | 2.05                     | 0.86              |
| 1:C:230:GLN:HB2  | 1:H:306:ILE:HG13 | 1.58                     | 0.86              |
| 1:D:91:TYR:O     | 1:D:95:THR:HG23  | 1.76                     | 0.86              |
| 1:G:48:GLY:C     | 1:H:322:ALA:C    | 2.34                     | 0.86              |
| 1:H:59:ILE:HG23  | 1:H:66:TYR:HB2   | 1.57                     | 0.86              |
| 1:H:272:ARG:CG   | 1:K:203:GLU:N    | 2.17                     | 0.86              |
| 1:J:32:ASP:HB3   | 1:J:34:LYS:HB2   | 1.56                     | 0.86              |
| 1:J:82:THR:HB    | 1:J:84:LEU:HD23  | 1.55                     | 0.86              |
| 1:J:308:ASN:HD21 | 1:O:231:ALA:N    | 1.70                     | 0.86              |
| 1:K:32:ASP:CB    | 1:K:34:LYS:HB2   | 2.06                     | 0.86              |
| 1:L:52:ILE:HG21  | 1:P:247:ASP:O    | 1.76                     | 0.86              |
| 1:G:225:LEU:HD12 | 1:H:300:TYR:HE2  | 1.38                     | 0.86              |
| 1:K:91:TYR:O     | 1:K:95:THR:HG23  | 1.76                     | 0.86              |
| 1:K:278:GLN:HG2  | 1:L:218:THR:HG1  | 1.06                     | 0.86              |
| 1:N:320:LYS:CD   | 1:O:50:ILE:HG12  | 2.06                     | 0.86              |
| 1:O:320:LYS:CD   | 1:P:50:ILE:HG12  | 2.06                     | 0.86              |
| 1:P:91:TYR:O     | 1:P:95:THR:HG23  | 1.76                     | 0.86              |
| 1:A:41:LYS:CE    | 1:B:170:LYS:HB3  | 2.06                     | 0.86              |
| 1:B:41:LYS:CE    | 1:C:170:LYS:HB3  | 2.06                     | 0.86              |
| 1:I:32:ASP:HB3   | 1:I:34:LYS:HB2   | 1.56                     | 0.86              |
| 1:I:170:LYS:HE2  | 1:J:79:THR:CA    | 2.05                     | 0.86              |
| 1:I:320:LYS:CB   | 1:J:49:TYR:CD1   | 2.59                     | 0.86              |
| 1:J:73:VAL:HB    | 1:N:240:MET:CE   | 2.03                     | 0.86              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:322:ALA:CA   | 1:L:48:GLY:CA    | 2.48                     | 0.86              |
| 1:L:32:ASP:CB    | 1:L:34:LYS:HB2   | 2.06                     | 0.86              |
| 1:L:183:ASN:HD22 | 1:L:203:GLU:HA   | 1.37                     | 0.86              |
| 1:M:319:TYR:O    | 1:N:47:ASP:O     | 1.93                     | 0.86              |
| 1:N:33:ILE:HD12  | 1:N:312:TRP:HE1  | 1.41                     | 0.86              |
| 1:O:91:TYR:O     | 1:O:95:THR:HG23  | 1.76                     | 0.86              |
| 1:P:289:THR:HG21 | 1:P:306:ILE:HD13 | 1.57                     | 0.86              |
| 1:A:32:ASP:CB    | 1:A:34:LYS:HB2   | 2.06                     | 0.86              |
| 1:B:36:VAL:HG11  | 1:B:96:GLN:NE2   | 1.91                     | 0.86              |
| 1:B:231:ALA:H    | 1:G:308:ASN:ND2  | 1.70                     | 0.86              |
| 1:C:91:TYR:O     | 1:C:95:THR:HG23  | 1.76                     | 0.86              |
| 1:F:49:TYR:CB    | 1:G:324:ALA:CB   | 2.46                     | 0.86              |
| 1:F:201:ILE:HG23 | 1:I:272:ARG:NH1  | 1.91                     | 0.86              |
| 1:G:198:GLU:CA   | 1:J:203:GLU:HB2  | 2.06                     | 0.86              |
| 1:K:275:LYS:NZ   | 1:L:219:ASP:CG   | 2.25                     | 0.86              |
| 1:N:91:TYR:O     | 1:N:95:THR:HG23  | 1.76                     | 0.86              |
| 1:O:222:ASN:HB2  | 1:O:237:ASN:N    | 1.90                     | 0.86              |
| 1:A:49:TYR:CE1   | 1:B:320:LYS:CD   | 2.58                     | 0.85              |
| 1:C:33:ILE:HD12  | 1:C:312:TRP:HE1  | 1.41                     | 0.85              |
| 1:C:41:LYS:CE    | 1:D:170:LYS:HB3  | 2.06                     | 0.85              |
| 1:C:227:THR:HG23 | 1:D:300:TYR:N    | 1.64                     | 0.85              |
| 1:C:240:MET:C    | 1:H:166:GLN:CG   | 2.19                     | 0.85              |
| 1:C:245:GLU:O    | 1:G:74:GLU:HA    | 1.76                     | 0.85              |
| 1:C:275:LYS:O    | 1:C:278:GLN:HG2  | 1.76                     | 0.85              |
| 1:D:33:ILE:HD12  | 1:D:312:TRP:HE1  | 1.41                     | 0.85              |
| 1:E:91:TYR:O     | 1:E:95:THR:HG23  | 1.76                     | 0.85              |
| 1:G:203:GLU:HB2  | 1:J:198:GLU:CA   | 2.06                     | 0.85              |
| 1:I:82:THR:HB    | 1:I:84:LEU:HD23  | 1.55                     | 0.85              |
| 1:J:275:LYS:NZ   | 1:K:224:ASN:HD21 | 1.72                     | 0.85              |
| 1:M:33:ILE:HD12  | 1:M:312:TRP:HE1  | 1.41                     | 0.85              |
| 1:M:36:VAL:HG11  | 1:M:96:GLN:NE2   | 1.91                     | 0.85              |
| 1:M:170:LYS:HB3  | 1:N:41:LYS:HE3   | 1.57                     | 0.85              |
| 1:M:320:LYS:CD   | 1:N:50:ILE:HG12  | 2.06                     | 0.85              |
| 1:N:170:LYS:HB3  | 1:O:41:LYS:CE    | 2.06                     | 0.85              |
| 1:O:289:THR:HG21 | 1:O:306:ILE:HD13 | 1.57                     | 0.85              |
| 1:B:91:TYR:O     | 1:B:95:THR:HG23  | 1.76                     | 0.85              |
| 1:B:246:ILE:N    | 1:F:49:TYR:CZ    | 2.43                     | 0.85              |
| 1:B:247:ASP:CA   | 1:F:52:ILE:CD1   | 2.44                     | 0.85              |
| 1:D:246:ILE:HA   | 1:H:50:ILE:O     | 1.76                     | 0.85              |
| 1:E:48:GLY:CA    | 1:F:322:ALA:HA   | 1.99                     | 0.85              |
| 1:E:219:ASP:H    | 1:F:278:GLN:N    | 1.71                     | 0.85              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:F:36:VAL:HG11 | 1:F:96:GLN:NE2   | 1.91                     | 0.85              |
| 1:F:272:ARG:HB2 | 1:I:202:GLU:HG2  | 1.58                     | 0.85              |
| 1:F:275:LYS:O   | 1:F:278:GLN:HG2  | 1.76                     | 0.85              |
| 1:I:74:GLU:HA   | 1:M:245:GLU:O    | 1.75                     | 0.85              |
| 1:J:166:GLN:HA  | 1:O:242:LYS:C    | 1.95                     | 0.85              |
| 1:K:32:ASP:HB3  | 1:K:34:LYS:HB2   | 1.56                     | 0.85              |
| 1:L:91:TYR:O    | 1:L:95:THR:HG23  | 1.76                     | 0.85              |
| 1:M:91:TYR:O    | 1:M:95:THR:HG23  | 1.76                     | 0.85              |
| 1:M:170:LYS:HB3 | 1:N:41:LYS:CE    | 2.06                     | 0.85              |
| 1:N:32:ASP:HB3  | 1:N:34:LYS:HB2   | 1.56                     | 0.85              |
| 1:B:242:LYS:O   | 1:G:166:GLN:HA   | 1.76                     | 0.85              |
| 1:E:49:TYR:CD1  | 1:F:320:LYS:CB   | 2.59                     | 0.85              |
| 1:E:275:LYS:O   | 1:E:278:GLN:HG2  | 1.76                     | 0.85              |
| 1:H:36:VAL:HG11 | 1:H:96:GLN:NE2   | 1.91                     | 0.85              |
| 1:L:33:ILE:HD12 | 1:L:312:TRP:HE1  | 1.41                     | 0.85              |
| 1:M:320:LYS:CD  | 1:N:49:TYR:CE1   | 2.58                     | 0.85              |
| 1:O:170:LYS:HB3 | 1:P:41:LYS:CE    | 2.06                     | 0.85              |
| 1:A:230:GLN:CA  | 1:F:308:ASN:CG   | 2.43                     | 0.85              |
| 1:B:222:ASN:HB2 | 1:B:237:ASN:N    | 1.90                     | 0.85              |
| 1:B:275:LYS:O   | 1:B:278:GLN:HG2  | 1.76                     | 0.85              |
| 1:E:36:VAL:HG11 | 1:E:96:GLN:NE2   | 1.91                     | 0.85              |
| 1:E:79:THR:CA   | 1:F:170:LYS:HE2  | 2.05                     | 0.85              |
| 1:F:43:TYR:CE1  | 1:F:70:GLU:HG2   | 2.12                     | 0.85              |
| 1:G:275:LYS:O   | 1:G:278:GLN:HG2  | 1.76                     | 0.85              |
| 1:H:43:TYR:CE1  | 1:H:70:GLU:HG2   | 2.12                     | 0.85              |
| 1:J:278:GLN:HG2 | 1:K:218:THR:HG1  | 1.06                     | 0.85              |
| 1:J:324:ALA:CB  | 1:K:46:GLU:CG    | 2.34                     | 0.85              |
| 1:K:166:GLN:CA  | 1:P:242:LYS:C    | 2.38                     | 0.85              |
| 1:N:319:TYR:O   | 1:O:47:ASP:O     | 1.93                     | 0.85              |
| 1:O:169:PHE:O   | 1:P:79:THR:CB    | 2.25                     | 0.85              |
| 1:E:33:ILE:HD12 | 1:E:312:TRP:HE1  | 1.41                     | 0.85              |
| 1:F:49:TYR:CD1  | 1:G:320:LYS:CB   | 2.59                     | 0.85              |
| 1:G:79:THR:CA   | 1:H:170:LYS:HE2  | 2.05                     | 0.85              |
| 1:H:272:ARG:NH1 | 1:K:201:ILE:CG1  | 1.95                     | 0.85              |
| 1:I:36:VAL:HG11 | 1:I:96:GLN:NE2   | 1.91                     | 0.85              |
| 1:M:222:ASN:HB2 | 1:M:237:ASN:N    | 1.90                     | 0.85              |
| 1:N:36:VAL:HG11 | 1:N:96:GLN:NE2   | 1.91                     | 0.85              |
| 1:N:320:LYS:CD  | 1:O:49:TYR:CE1   | 2.58                     | 0.85              |
| 1:P:32:ASP:HB3  | 1:P:34:LYS:HB2   | 1.56                     | 0.85              |
| 1:A:47:ASP:CA   | 1:B:323:VAL:HG23 | 1.95                     | 0.85              |
| 1:A:91:TYR:O    | 1:A:95:THR:HG23  | 1.76                     | 0.85              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:32:ASP:CB    | 1:B:34:LYS:HB2   | 2.06                     | 0.85              |
| 1:C:36:VAL:HG11  | 1:C:96:GLN:NE2   | 1.91                     | 0.85              |
| 1:C:52:ILE:N     | 1:C:74:GLU:HG2   | 1.92                     | 0.85              |
| 1:F:224:ASN:HD21 | 1:G:275:LYS:NZ   | 1.73                     | 0.85              |
| 1:I:52:ILE:N     | 1:I:74:GLU:HG2   | 1.92                     | 0.85              |
| 1:J:43:TYR:CE1   | 1:J:70:GLU:HG2   | 2.12                     | 0.85              |
| 1:K:43:TYR:CE1   | 1:K:70:GLU:HG2   | 2.12                     | 0.85              |
| 1:K:52:ILE:HG12  | 1:O:245:GLU:O    | 1.77                     | 0.85              |
| 1:L:43:TYR:CE1   | 1:L:70:GLU:HG2   | 2.12                     | 0.85              |
| 1:N:169:PHE:O    | 1:O:79:THR:CB    | 2.25                     | 0.85              |
| 1:O:32:ASP:HB3   | 1:O:34:LYS:HB2   | 1.56                     | 0.85              |
| 1:A:232:GLU:H    | 1:F:308:ASN:ND2  | 1.75                     | 0.85              |
| 1:C:45:LEU:HB2   | 1:C:67:LEU:HD11  | 1.58                     | 0.85              |
| 1:E:36:VAL:HG21  | 1:E:38:PHE:CE2   | 2.12                     | 0.85              |
| 1:E:52:ILE:N     | 1:E:74:GLU:HG2   | 1.92                     | 0.85              |
| 1:F:79:THR:CA    | 1:G:170:LYS:HE2  | 2.05                     | 0.85              |
| 1:K:170:LYS:HE2  | 1:L:79:THR:CA    | 2.05                     | 0.85              |
| 1:L:275:LYS:O    | 1:L:278:GLN:HG2  | 1.76                     | 0.85              |
| 1:O:319:TYR:O    | 1:P:47:ASP:O     | 1.93                     | 0.85              |
| 1:A:36:VAL:HG11  | 1:A:96:GLN:NE2   | 1.91                     | 0.85              |
| 1:C:47:ASP:CG    | 1:D:322:ALA:O    | 2.00                     | 0.85              |
| 1:D:45:LEU:HB2   | 1:D:67:LEU:HD11  | 1.58                     | 0.85              |
| 1:G:49:TYR:CD1   | 1:H:320:LYS:CB   | 2.59                     | 0.85              |
| 1:I:43:TYR:CE1   | 1:I:70:GLU:HG2   | 2.12                     | 0.85              |
| 1:I:320:LYS:CA   | 1:N:246:ILE:CD1  | 2.54                     | 0.85              |
| 1:J:52:ILE:N     | 1:J:74:GLU:HG2   | 1.92                     | 0.85              |
| 1:K:33:ILE:HD12  | 1:K:312:TRP:HE1  | 1.41                     | 0.85              |
| 1:K:168:ASN:ND2  | 1:L:71:GLN:OE1   | 2.01                     | 0.85              |
| 1:M:275:LYS:O    | 1:M:278:GLN:HG2  | 1.76                     | 0.85              |
| 1:P:43:TYR:CE1   | 1:P:70:GLU:HG2   | 2.12                     | 0.85              |
| 1:A:36:VAL:HG21  | 1:A:38:PHE:CE2   | 2.12                     | 0.85              |
| 1:A:79:THR:CB    | 1:B:192:CYS:HB3  | 2.06                     | 0.85              |
| 1:A:222:ASN:ND2  | 1:A:237:ASN:HB2  | 1.92                     | 0.85              |
| 1:B:45:LEU:HB2   | 1:B:67:LEU:HD11  | 1.58                     | 0.85              |
| 1:B:47:ASP:CA    | 1:C:323:VAL:HG23 | 1.95                     | 0.85              |
| 1:B:79:THR:CB    | 1:C:192:CYS:HB3  | 2.06                     | 0.85              |
| 1:C:186:PHE:CE2  | 1:C:269:ILE:HD11 | 2.12                     | 0.85              |
| 1:F:36:VAL:HG21  | 1:F:38:PHE:CE2   | 2.12                     | 0.85              |
| 1:H:119:ASN:OD1  | 1:K:120:ALA:N    | 2.10                     | 0.85              |
| 1:K:186:PHE:CE2  | 1:K:269:ILE:HD11 | 2.12                     | 0.85              |
| 1:K:275:LYS:O    | 1:K:278:GLN:HG2  | 1.76                     | 0.85              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:32:ASP:CB    | 1:D:34:LYS:HB2   | 2.06                     | 0.85              |
| 1:M:59:ILE:HG23  | 1:M:66:TYR:HB2   | 1.57                     | 0.85              |
| 1:M:186:PHE:CE2  | 1:M:269:ILE:HD11 | 2.12                     | 0.85              |
| 1:M:289:THR:HG21 | 1:M:306:ILE:HD13 | 1.57                     | 0.85              |
| 1:O:192:CYS:HB3  | 1:P:79:THR:CB    | 2.06                     | 0.85              |
| 1:B:222:ASN:ND2  | 1:B:237:ASN:HB2  | 1.92                     | 0.84              |
| 1:C:308:ASN:ND2  | 1:G:241:LYS:O    | 2.09                     | 0.84              |
| 1:D:36:VAL:HG21  | 1:D:38:PHE:CE2   | 2.12                     | 0.84              |
| 1:D:245:GLU:HB3  | 1:H:75:ASP:CA    | 2.07                     | 0.84              |
| 1:F:52:ILE:N     | 1:F:74:GLU:HG2   | 1.91                     | 0.84              |
| 1:F:222:ASN:ND2  | 1:F:237:ASN:HB2  | 1.92                     | 0.84              |
| 1:G:32:ASP:HB3   | 1:G:34:LYS:HB2   | 1.56                     | 0.84              |
| 1:H:33:ILE:HD12  | 1:H:312:TRP:HE1  | 1.41                     | 0.84              |
| 1:H:275:LYS:O    | 1:H:278:GLN:HG2  | 1.76                     | 0.84              |
| 1:I:222:ASN:ND2  | 1:I:237:ASN:HB2  | 1.92                     | 0.84              |
| 1:K:36:VAL:HG21  | 1:K:38:PHE:CE2   | 2.12                     | 0.84              |
| 1:M:170:LYS:NZ   | 1:N:79:THR:O     | 1.94                     | 0.84              |
| 1:M:192:CYS:HB3  | 1:N:79:THR:CB    | 2.06                     | 0.84              |
| 1:O:19:THR:HG23  | 1:O:40:THR:HG22  | 1.58                     | 0.84              |
| 1:O:43:TYR:CE1   | 1:O:70:GLU:HG2   | 2.12                     | 0.84              |
| 1:P:36:VAL:HG11  | 1:P:96:GLN:NE2   | 1.91                     | 0.84              |
| 1:C:79:THR:O     | 1:D:170:LYS:NZ   | 1.94                     | 0.84              |
| 1:C:240:MET:HE2  | 1:G:73:VAL:HG23  | 1.58                     | 0.84              |
| 1:C:246:ILE:CD1  | 1:H:323:VAL:HG22 | 1.80                     | 0.84              |
| 1:D:275:LYS:O    | 1:D:278:GLN:HG2  | 1.76                     | 0.84              |
| 1:F:45:LEU:HB2   | 1:F:67:LEU:HD11  | 1.58                     | 0.84              |
| 1:I:45:LEU:HB2   | 1:I:67:LEU:HD11  | 1.58                     | 0.84              |
| 1:I:186:PHE:CE2  | 1:I:269:ILE:HD11 | 2.12                     | 0.84              |
| 1:L:36:VAL:HG21  | 1:L:38:PHE:CE2   | 2.12                     | 0.84              |
| 1:N:19:THR:HG23  | 1:N:40:THR:HG22  | 1.58                     | 0.84              |
| 1:N:36:VAL:HG21  | 1:N:38:PHE:CE2   | 2.12                     | 0.84              |
| 1:N:170:LYS:NZ   | 1:O:79:THR:O     | 1.94                     | 0.84              |
| 1:N:186:PHE:CE2  | 1:N:269:ILE:HD11 | 2.12                     | 0.84              |
| 1:A:45:LEU:HB2   | 1:A:67:LEU:HD11  | 1.58                     | 0.84              |
| 1:A:275:LYS:O    | 1:A:278:GLN:HG2  | 1.76                     | 0.84              |
| 1:C:79:THR:CB    | 1:D:192:CYS:HB3  | 2.06                     | 0.84              |
| 1:C:222:ASN:ND2  | 1:C:237:ASN:HB2  | 1.92                     | 0.84              |
| 1:F:201:ILE:CG1  | 1:I:272:ARG:NH1  | 1.93                     | 0.84              |
| 1:G:36:VAL:HG11  | 1:G:96:GLN:NE2   | 1.91                     | 0.84              |
| 1:I:309:ASN:O    | 1:N:229:GLU:CD   | 2.11                     | 0.84              |
| 1:J:275:LYS:O    | 1:J:278:GLN:HG2  | 1.76                     | 0.84              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:32:ASP:HB3   | 1:L:34:LYS:HB2   | 1.56                     | 0.84              |
| 1:L:36:VAL:HG11  | 1:L:96:GLN:NE2   | 1.91                     | 0.84              |
| 1:L:49:TYR:CZ    | 1:P:246:ILE:N    | 2.43                     | 0.84              |
| 1:L:222:ASN:ND2  | 1:L:237:ASN:HB2  | 1.92                     | 0.84              |
| 1:M:320:LYS:HE3  | 1:N:50:ILE:HG12  | 1.54                     | 0.84              |
| 1:N:43:TYR:CE1   | 1:N:70:GLU:HG2   | 2.12                     | 0.84              |
| 1:N:59:ILE:HG23  | 1:N:66:TYR:HB2   | 1.57                     | 0.84              |
| 1:O:170:LYS:HB3  | 1:P:41:LYS:HE3   | 1.57                     | 0.84              |
| 1:O:284:PHE:CE2  | 1:O:296:ILE:HG21 | 2.13                     | 0.84              |
| 1:P:19:THR:HG23  | 1:P:40:THR:HG22  | 1.58                     | 0.84              |
| 1:P:284:PHE:CE2  | 1:P:296:ILE:HG21 | 2.13                     | 0.84              |
| 1:D:19:THR:HG23  | 1:D:40:THR:HG22  | 1.58                     | 0.84              |
| 1:E:45:LEU:HB2   | 1:E:67:LEU:HD11  | 1.58                     | 0.84              |
| 1:E:284:PHE:CE2  | 1:E:296:ILE:HG21 | 2.13                     | 0.84              |
| 1:F:33:ILE:HD12  | 1:F:312:TRP:HE1  | 1.41                     | 0.84              |
| 1:F:202:GLU:C    | 1:I:272:ARG:HG3  | 1.97                     | 0.84              |
| 1:F:218:THR:HG1  | 1:G:278:GLN:H    | 1.23                     | 0.84              |
| 1:G:186:PHE:CE2  | 1:G:269:ILE:HD11 | 2.12                     | 0.84              |
| 1:H:19:THR:HG23  | 1:H:40:THR:HG22  | 1.57                     | 0.84              |
| 1:H:36:VAL:HG21  | 1:H:38:PHE:CE2   | 2.12                     | 0.84              |
| 1:I:75:ASP:HA    | 1:M:245:GLU:CB   | 2.07                     | 0.84              |
| 1:I:231:ALA:CB   | 1:M:308:ASN:OD1  | 2.24                     | 0.84              |
| 1:N:52:ILE:N     | 1:N:74:GLU:HG2   | 1.92                     | 0.84              |
| 1:N:284:PHE:CE2  | 1:N:296:ILE:HG21 | 2.13                     | 0.84              |
| 1:N:289:THR:HG21 | 1:N:306:ILE:HD13 | 1.57                     | 0.84              |
| 1:O:222:ASN:ND2  | 1:O:237:ASN:HB2  | 1.92                     | 0.84              |
| 1:B:36:VAL:HG21  | 1:B:38:PHE:CE2   | 2.12                     | 0.84              |
| 1:D:52:ILE:N     | 1:D:74:GLU:HG2   | 1.92                     | 0.84              |
| 1:D:186:PHE:CE2  | 1:D:269:ILE:HD11 | 2.12                     | 0.84              |
| 1:E:186:PHE:CE2  | 1:E:269:ILE:HD11 | 2.12                     | 0.84              |
| 1:E:222:ASN:ND2  | 1:E:237:ASN:HB2  | 1.92                     | 0.84              |
| 1:F:204:HIS:CG   | 1:I:271:LYS:O    | 2.29                     | 0.84              |
| 1:G:19:THR:HG23  | 1:G:40:THR:HG22  | 1.57                     | 0.84              |
| 1:G:45:LEU:HB2   | 1:G:67:LEU:HD11  | 1.58                     | 0.84              |
| 1:H:45:LEU:HB2   | 1:H:67:LEU:HD11  | 1.58                     | 0.84              |
| 1:H:204:HIS:CE1  | 1:K:274:PHE:CD1  | 2.66                     | 0.84              |
| 1:K:52:ILE:N     | 1:K:74:GLU:HG2   | 1.92                     | 0.84              |
| 1:O:59:ILE:HG23  | 1:O:66:TYR:HB2   | 1.57                     | 0.84              |
| 1:A:43:TYR:CE1   | 1:A:70:GLU:HG2   | 2.12                     | 0.84              |
| 1:A:50:ILE:HG12  | 1:B:320:LYS:HE3  | 1.53                     | 0.84              |
| 1:B:186:PHE:CE2  | 1:B:269:ILE:HD11 | 2.12                     | 0.84              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:247:ASP:O    | 1:H:52:ILE:HG21  | 1.77                     | 0.84              |
| 1:G:33:ILE:HD12  | 1:G:312:TRP:HE1  | 1.41                     | 0.84              |
| 1:G:284:PHE:CE2  | 1:G:296:ILE:HG21 | 2.13                     | 0.84              |
| 1:I:275:LYS:O    | 1:I:278:GLN:HG2  | 1.76                     | 0.84              |
| 1:I:284:PHE:CE2  | 1:I:296:ILE:HG21 | 2.13                     | 0.84              |
| 1:J:45:LEU:HB2   | 1:J:67:LEU:HD11  | 1.58                     | 0.84              |
| 1:J:186:PHE:CE2  | 1:J:269:ILE:HD11 | 2.12                     | 0.84              |
| 1:J:308:ASN:ND2  | 1:O:230:GLN:C    | 2.31                     | 0.84              |
| 1:K:36:VAL:HG11  | 1:K:96:GLN:NE2   | 1.91                     | 0.84              |
| 1:O:186:PHE:CE2  | 1:O:269:ILE:HD11 | 2.12                     | 0.84              |
| 1:P:36:VAL:HG21  | 1:P:38:PHE:CE2   | 2.12                     | 0.84              |
| 1:P:222:ASN:ND2  | 1:P:237:ASN:HB2  | 1.92                     | 0.84              |
| 1:A:52:ILE:N     | 1:A:74:GLU:HG2   | 1.92                     | 0.84              |
| 1:A:78:GLU:HG2   | 1:B:170:LYS:N    | 1.93                     | 0.84              |
| 1:B:43:TYR:CE1   | 1:B:70:GLU:HG2   | 2.12                     | 0.84              |
| 1:B:52:ILE:N     | 1:B:74:GLU:HG2   | 1.92                     | 0.84              |
| 1:C:36:VAL:HG21  | 1:C:38:PHE:CE2   | 2.12                     | 0.84              |
| 1:C:43:TYR:CE1   | 1:C:70:GLU:HG2   | 2.12                     | 0.84              |
| 1:D:43:TYR:CE1   | 1:D:70:GLU:HG2   | 2.12                     | 0.84              |
| 1:F:19:THR:HG23  | 1:F:40:THR:HG22  | 1.58                     | 0.84              |
| 1:F:186:PHE:CE2  | 1:F:269:ILE:HD11 | 2.12                     | 0.84              |
| 1:G:271:LYS:C    | 1:J:202:GLU:OE2  | 2.15                     | 0.84              |
| 1:H:222:ASN:ND2  | 1:H:237:ASN:HB2  | 1.92                     | 0.84              |
| 1:J:33:ILE:HD12  | 1:J:312:TRP:HE1  | 1.41                     | 0.84              |
| 1:K:49:TYR:CE2   | 1:O:245:GLU:C    | 2.40                     | 0.84              |
| 1:M:19:THR:HG23  | 1:M:40:THR:HG22  | 1.58                     | 0.84              |
| 1:M:52:ILE:N     | 1:M:74:GLU:HG2   | 1.92                     | 0.84              |
| 1:M:277:ASP:HB2  | 1:N:218:THR:OG1  | 1.78                     | 0.84              |
| 1:N:222:ASN:ND2  | 1:N:237:ASN:HB2  | 1.92                     | 0.84              |
| 1:P:52:ILE:N     | 1:P:74:GLU:HG2   | 1.92                     | 0.84              |
| 1:A:218:THR:OG1  | 1:B:277:ASP:HB2  | 1.78                     | 0.84              |
| 1:A:289:THR:HG21 | 1:A:306:ILE:HD13 | 1.57                     | 0.84              |
| 1:B:218:THR:OG1  | 1:C:277:ASP:HB2  | 1.78                     | 0.84              |
| 1:C:79:THR:CB    | 1:D:169:PHE:O    | 2.25                     | 0.84              |
| 1:D:222:ASN:ND2  | 1:D:237:ASN:HB2  | 1.92                     | 0.84              |
| 1:F:202:GLU:HG3  | 1:I:271:LYS:CG   | 2.08                     | 0.84              |
| 1:G:95:THR:CG2   | 1:G:136:ILE:HG21 | 2.08                     | 0.84              |
| 1:I:278:GLN:HG2  | 1:J:218:THR:HG1  | 1.05                     | 0.84              |
| 1:J:36:VAL:HG11  | 1:J:96:GLN:NE2   | 1.91                     | 0.84              |
| 1:J:70:GLU:OE1   | 1:J:74:GLU:HB3   | 1.78                     | 0.84              |
| 1:K:95:THR:CG2   | 1:K:136:ILE:HG21 | 2.08                     | 0.84              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:95:THR:CG2   | 1:L:136:ILE:HG21 | 2.08                     | 0.84              |
| 1:M:43:TYR:CE1   | 1:M:70:GLU:HG2   | 2.12                     | 0.84              |
| 1:M:284:PHE:CE2  | 1:M:296:ILE:HG21 | 2.13                     | 0.84              |
| 1:N:70:GLU:OE1   | 1:N:74:GLU:HB3   | 1.78                     | 0.84              |
| 1:N:170:LYS:HB3  | 1:O:41:LYS:HE3   | 1.57                     | 0.84              |
| 1:O:36:VAL:HG11  | 1:O:96:GLN:NE2   | 1.91                     | 0.84              |
| 1:O:320:LYS:HE2  | 1:P:50:ILE:CD1   | 2.05                     | 0.84              |
| 1:C:284:PHE:CE2  | 1:C:296:ILE:HG21 | 2.13                     | 0.84              |
| 1:D:284:PHE:CE2  | 1:D:296:ILE:HG21 | 2.13                     | 0.84              |
| 1:E:19:THR:HG23  | 1:E:40:THR:HG22  | 1.58                     | 0.84              |
| 1:G:36:VAL:HG21  | 1:G:38:PHE:CE2   | 2.12                     | 0.84              |
| 1:I:19:THR:HG23  | 1:I:40:THR:HG22  | 1.58                     | 0.84              |
| 1:I:95:THR:CG2   | 1:I:136:ILE:HG21 | 2.08                     | 0.84              |
| 1:J:36:VAL:HG21  | 1:J:38:PHE:CE2   | 2.12                     | 0.84              |
| 1:J:305:ILE:HG22 | 1:O:241:LYS:NZ   | 1.92                     | 0.84              |
| 1:K:284:PHE:CE2  | 1:K:296:ILE:HG21 | 2.13                     | 0.84              |
| 1:L:52:ILE:N     | 1:L:74:GLU:HG2   | 1.92                     | 0.84              |
| 1:M:170:LYS:N    | 1:N:78:GLU:HG2   | 1.93                     | 0.84              |
| 1:P:59:ILE:HG23  | 1:P:66:TYR:HB2   | 1.57                     | 0.84              |
| 1:P:95:THR:CG2   | 1:P:136:ILE:HG21 | 2.08                     | 0.84              |
| 1:P:275:LYS:O    | 1:P:278:GLN:HG2  | 1.76                     | 0.84              |
| 1:A:19:THR:HG23  | 1:A:40:THR:HG22  | 1.58                     | 0.84              |
| 1:E:218:THR:HG1  | 1:F:278:GLN:HG2  | 1.04                     | 0.84              |
| 1:F:70:GLU:OE1   | 1:F:74:GLU:HB3   | 1.78                     | 0.84              |
| 1:F:268:LEU:HD11 | 1:I:268:LEU:HA   | 1.58                     | 0.84              |
| 1:H:284:PHE:CE2  | 1:H:296:ILE:HG21 | 2.13                     | 0.84              |
| 1:I:36:VAL:HG21  | 1:I:38:PHE:CE2   | 2.12                     | 0.84              |
| 1:J:19:THR:HG23  | 1:J:40:THR:HG22  | 1.58                     | 0.84              |
| 1:J:95:THR:CG2   | 1:J:136:ILE:HG21 | 2.08                     | 0.84              |
| 1:K:45:LEU:HB2   | 1:K:67:LEU:HD11  | 1.58                     | 0.84              |
| 1:K:222:ASN:ND2  | 1:K:237:ASN:HB2  | 1.92                     | 0.84              |
| 1:N:95:THR:CG2   | 1:N:136:ILE:HG21 | 2.08                     | 0.84              |
| 1:N:192:CYS:HB3  | 1:O:79:THR:CB    | 2.06                     | 0.84              |
| 1:O:322:ALA:O    | 1:P:47:ASP:CG    | 2.00                     | 0.84              |
| 1:P:45:LEU:HB2   | 1:P:67:LEU:HD11  | 1.58                     | 0.84              |
| 1:A:186:PHE:CE2  | 1:A:269:ILE:HD11 | 2.12                     | 0.83              |
| 1:B:78:GLU:HG2   | 1:C:170:LYS:N    | 1.93                     | 0.83              |
| 1:B:284:PHE:CE2  | 1:B:296:ILE:HG21 | 2.13                     | 0.83              |
| 1:C:19:THR:HG23  | 1:C:40:THR:HG22  | 1.58                     | 0.83              |
| 1:C:245:GLU:HB3  | 1:G:75:ASP:HA    | 1.60                     | 0.83              |
| 1:E:95:THR:CG2   | 1:E:136:ILE:HG21 | 2.08                     | 0.83              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:G:222:ASN:ND2 | 1:G:237:ASN:HB2  | 1.92                     | 0.83              |
| 1:G:271:LYS:HZ2 | 1:J:265:ALA:HA   | 1.40                     | 0.83              |
| 1:H:198:GLU:HG3 | 1:K:203:GLU:HG3  | 0.84                     | 0.83              |
| 1:I:73:VAL:HG23 | 1:M:240:MET:HE2  | 1.56                     | 0.83              |
| 1:J:222:ASN:ND2 | 1:J:237:ASN:HB2  | 1.92                     | 0.83              |
| 1:L:186:PHE:CE2 | 1:L:269:ILE:HD11 | 2.12                     | 0.83              |
| 1:N:320:LYS:HE2 | 1:O:50:ILE:CD1   | 2.05                     | 0.83              |
| 1:O:70:GLU:OE1  | 1:O:74:GLU:HB3   | 1.78                     | 0.83              |
| 1:O:95:THR:CG2  | 1:O:136:ILE:HG21 | 2.08                     | 0.83              |
| 1:P:186:PHE:CE2 | 1:P:269:ILE:HD11 | 2.12                     | 0.83              |
| 1:C:78:GLU:HG2  | 1:D:170:LYS:N    | 1.93                     | 0.83              |
| 1:C:229:GLU:OE2 | 1:H:309:ASN:O    | 1.69                     | 0.83              |
| 1:D:36:VAL:HG11 | 1:D:96:GLN:NE2   | 1.91                     | 0.83              |
| 1:G:48:GLY:CA   | 1:H:322:ALA:C    | 2.46                     | 0.83              |
| 1:G:52:ILE:N    | 1:G:74:GLU:HG2   | 1.92                     | 0.83              |
| 1:K:19:THR:HG23 | 1:K:40:THR:HG22  | 1.58                     | 0.83              |
| 1:K:322:ALA:C   | 1:L:48:GLY:CA    | 2.46                     | 0.83              |
| 1:L:45:LEU:HB2  | 1:L:67:LEU:HD11  | 1.58                     | 0.83              |
| 1:N:170:LYS:N   | 1:O:78:GLU:HG2   | 1.93                     | 0.83              |
| 1:A:22:ILE:HG22 | 1:A:35:ARG:HB3   | 1.60                     | 0.83              |
| 1:A:70:GLU:OE1  | 1:A:74:GLU:HB3   | 1.78                     | 0.83              |
| 1:C:22:ILE:HG22 | 1:C:35:ARG:HB3   | 1.60                     | 0.83              |
| 1:E:43:TYR:CE1  | 1:E:70:GLU:HG2   | 2.12                     | 0.83              |
| 1:G:32:ASP:HB3  | 1:G:34:LYS:CD    | 2.09                     | 0.83              |
| 1:H:32:ASP:HB3  | 1:H:34:LYS:CD    | 2.09                     | 0.83              |
| 1:I:11:THR:HG21 | 1:I:315:CYS:O    | 1.79                     | 0.83              |
| 1:J:284:PHE:CE2 | 1:J:296:ILE:HG21 | 2.13                     | 0.83              |
| 1:J:320:LYS:C   | 1:K:49:TYR:HD1   | 1.81                     | 0.83              |
| 1:L:19:THR:HG23 | 1:L:40:THR:HG22  | 1.58                     | 0.83              |
| 1:M:36:VAL:HG21 | 1:M:38:PHE:CE2   | 2.12                     | 0.83              |
| 1:M:70:GLU:OE1  | 1:M:74:GLU:HB3   | 1.78                     | 0.83              |
| 1:M:222:ASN:ND2 | 1:M:237:ASN:HB2  | 1.92                     | 0.83              |
| 1:N:275:LYS:O   | 1:N:278:GLN:HG2  | 1.76                     | 0.83              |
| 1:A:11:THR:HG21 | 1:A:315:CYS:O    | 1.79                     | 0.83              |
| 1:A:95:THR:CG2  | 1:A:136:ILE:HG21 | 2.08                     | 0.83              |
| 1:A:284:PHE:CE2 | 1:A:296:ILE:HG21 | 2.13                     | 0.83              |
| 1:C:95:THR:CG2  | 1:C:136:ILE:HG21 | 2.08                     | 0.83              |
| 1:D:308:ASN:ND2 | 1:H:241:LYS:C    | 2.32                     | 0.83              |
| 1:E:48:GLY:CA   | 1:F:322:ALA:C    | 2.46                     | 0.83              |
| 1:F:32:ASP:HB3  | 1:F:34:LYS:CD    | 2.09                     | 0.83              |
| 1:H:52:ILE:N    | 1:H:74:GLU:HG2   | 1.92                     | 0.83              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:186:PHE:CE2  | 1:H:269:ILE:HD11 | 2.12                     | 0.83              |
| 1:I:73:VAL:CG2   | 1:M:240:MET:HE3  | 1.89                     | 0.83              |
| 1:I:320:LYS:C    | 1:J:49:TYR:HD1   | 1.82                     | 0.83              |
| 1:K:320:LYS:C    | 1:L:49:TYR:HD1   | 1.81                     | 0.83              |
| 1:M:45:LEU:HB2   | 1:M:67:LEU:HD11  | 1.58                     | 0.83              |
| 1:M:95:THR:CG2   | 1:M:136:ILE:HG21 | 2.08                     | 0.83              |
| 1:M:320:LYS:HE2  | 1:N:50:ILE:CD1   | 2.05                     | 0.83              |
| 1:N:22:ILE:HG22  | 1:N:35:ARG:HB3   | 1.60                     | 0.83              |
| 1:O:52:ILE:N     | 1:O:74:GLU:HG2   | 1.91                     | 0.83              |
| 1:O:170:LYS:N    | 1:P:78:GLU:HG2   | 1.92                     | 0.83              |
| 1:A:248:THR:HA   | 1:E:52:ILE:HG23  | 0.93                     | 0.83              |
| 1:A:308:ASN:CG   | 1:E:231:ALA:CB   | 2.42                     | 0.83              |
| 1:B:11:THR:HG21  | 1:B:315:CYS:O    | 1.79                     | 0.83              |
| 1:B:70:GLU:OE1   | 1:B:74:GLU:HB3   | 1.78                     | 0.83              |
| 1:B:79:THR:CB    | 1:C:169:PHE:O    | 2.25                     | 0.83              |
| 1:G:70:GLU:OE1   | 1:G:74:GLU:HB3   | 1.78                     | 0.83              |
| 1:G:202:GLU:OE2  | 1:J:271:LYS:C    | 2.16                     | 0.83              |
| 1:O:275:LYS:O    | 1:O:278:GLN:HG2  | 1.76                     | 0.83              |
| 1:A:241:LYS:CA   | 1:F:166:GLN:C    | 2.44                     | 0.83              |
| 1:A:244:GLY:N    | 1:F:320:LYS:HZ3  | 1.67                     | 0.83              |
| 1:D:246:ILE:HG12 | 1:H:50:ILE:N     | 1.88                     | 0.83              |
| 1:E:32:ASP:HB3   | 1:E:34:LYS:CD    | 2.09                     | 0.83              |
| 1:F:284:PHE:CE2  | 1:F:296:ILE:HG21 | 2.12                     | 0.83              |
| 1:G:43:TYR:CE1   | 1:G:70:GLU:HG2   | 2.12                     | 0.83              |
| 1:I:322:ALA:C    | 1:J:48:GLY:CA    | 2.46                     | 0.83              |
| 1:J:32:ASP:HB3   | 1:J:34:LYS:CD    | 2.08                     | 0.83              |
| 1:K:32:ASP:HB3   | 1:K:34:LYS:CD    | 2.09                     | 0.83              |
| 1:L:32:ASP:HB3   | 1:L:34:LYS:CD    | 2.09                     | 0.83              |
| 1:M:11:THR:HG21  | 1:M:315:CYS:O    | 1.79                     | 0.83              |
| 1:B:19:THR:HG23  | 1:B:40:THR:HG22  | 1.58                     | 0.83              |
| 1:C:240:MET:CE   | 1:G:73:VAL:CB    | 2.57                     | 0.83              |
| 1:D:95:THR:CG2   | 1:D:136:ILE:HG21 | 2.08                     | 0.83              |
| 1:N:10:MET:HB3   | 1:N:108:LEU:HD23 | 1.61                     | 0.83              |
| 1:N:45:LEU:HB2   | 1:N:67:LEU:HD11  | 1.58                     | 0.83              |
| 1:O:10:MET:HB3   | 1:O:108:LEU:HD23 | 1.61                     | 0.83              |
| 1:P:32:ASP:HB3   | 1:P:34:LYS:CD    | 2.09                     | 0.83              |
| 1:A:10:MET:HB3   | 1:A:108:LEU:HD23 | 1.61                     | 0.83              |
| 1:A:241:LYS:O    | 1:F:165:GLU:HG2  | 1.79                     | 0.83              |
| 1:D:10:MET:HB3   | 1:D:108:LEU:HD23 | 1.61                     | 0.83              |
| 1:E:70:GLU:OE1   | 1:E:74:GLU:HB3   | 1.78                     | 0.83              |
| 1:G:272:ARG:O    | 1:J:203:GLU:HB3  | 1.78                     | 0.83              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:271:LYS:O    | 1:K:204:HIS:CG   | 2.31                     | 0.83              |
| 1:I:33:ILE:HD12  | 1:I:312:TRP:HE1  | 1.41                     | 0.83              |
| 1:I:73:VAL:CB    | 1:M:240:MET:HE2  | 2.09                     | 0.83              |
| 1:I:325:LYS:HG2  | 1:J:48:GLY:HA3   | 0.83                     | 0.83              |
| 1:K:70:GLU:OE1   | 1:K:74:GLU:HB3   | 1.78                     | 0.83              |
| 1:L:284:PHE:CE2  | 1:L:296:ILE:HG21 | 2.13                     | 0.83              |
| 1:M:10:MET:HB3   | 1:M:108:LEU:HD23 | 1.61                     | 0.83              |
| 1:M:169:PHE:O    | 1:N:79:THR:CB    | 2.25                     | 0.83              |
| 1:N:277:ASP:HB2  | 1:O:218:THR:OG1  | 1.78                     | 0.83              |
| 1:O:36:VAL:HG21  | 1:O:38:PHE:CE2   | 2.12                     | 0.83              |
| 1:B:43:TYR:CD2   | 1:B:67:LEU:HB3   | 2.14                     | 0.83              |
| 1:E:48:GLY:HA3   | 1:F:325:LYS:HG2  | 0.83                     | 0.83              |
| 1:E:224:ASN:HD21 | 1:F:275:LYS:NZ   | 1.72                     | 0.83              |
| 1:F:95:THR:CG2   | 1:F:136:ILE:HG21 | 2.08                     | 0.83              |
| 1:H:11:THR:HG21  | 1:H:315:CYS:O    | 1.79                     | 0.83              |
| 1:H:95:THR:CG2   | 1:H:136:ILE:HG21 | 2.08                     | 0.83              |
| 1:I:32:ASP:HB3   | 1:I:34:LYS:CD    | 2.09                     | 0.83              |
| 1:J:11:THR:HG21  | 1:J:315:CYS:O    | 1.79                     | 0.83              |
| 1:K:320:LYS:CB   | 1:L:49:TYR:CD1   | 2.59                     | 0.83              |
| 1:N:32:ASP:HB3   | 1:N:34:LYS:CD    | 2.09                     | 0.83              |
| 1:O:32:ASP:HB3   | 1:O:34:LYS:CD    | 2.09                     | 0.83              |
| 1:P:22:ILE:HG22  | 1:P:35:ARG:HB3   | 1.60                     | 0.83              |
| 1:P:153:THR:HG21 | 1:P:325:LYS:CG   | 2.09                     | 0.83              |
| 1:A:43:TYR:CD2   | 1:A:67:LEU:HB3   | 2.14                     | 0.83              |
| 1:A:153:THR:HG21 | 1:A:325:LYS:CG   | 2.09                     | 0.83              |
| 1:B:10:MET:HB3   | 1:B:108:LEU:HD23 | 1.61                     | 0.83              |
| 1:B:79:THR:O     | 1:C:170:LYS:NZ   | 1.94                     | 0.83              |
| 1:B:95:THR:CG2   | 1:B:136:ILE:HG21 | 2.08                     | 0.83              |
| 1:C:43:TYR:CD2   | 1:C:67:LEU:HB3   | 2.14                     | 0.83              |
| 1:C:70:GLU:OE1   | 1:C:74:GLU:HB3   | 1.78                     | 0.83              |
| 1:D:32:ASP:HB3   | 1:D:34:LYS:CD    | 2.09                     | 0.83              |
| 1:H:271:LYS:CG   | 1:K:202:GLU:HG3  | 2.08                     | 0.83              |
| 1:J:322:ALA:C    | 1:K:48:GLY:CA    | 2.46                     | 0.83              |
| 1:K:166:GLN:HA   | 1:P:242:LYS:C    | 1.98                     | 0.83              |
| 1:M:32:ASP:HB3   | 1:M:34:LYS:CD    | 2.09                     | 0.83              |
| 1:O:45:LEU:HB2   | 1:O:67:LEU:HD11  | 1.58                     | 0.83              |
| 1:P:10:MET:HB3   | 1:P:108:LEU:HD23 | 1.61                     | 0.83              |
| 1:D:70:GLU:OE1   | 1:D:74:GLU:HB3   | 1.78                     | 0.82              |
| 1:F:47:ASP:OD2   | 1:G:7:GLU:OE1    | 1.97                     | 0.82              |
| 1:F:48:GLY:CA    | 1:G:322:ALA:C    | 2.46                     | 0.82              |
| 1:H:70:GLU:OE1   | 1:H:74:GLU:HB3   | 1.78                     | 0.82              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:201:ILE:HG22 | 1:K:199:ARG:O    | 1.77                     | 0.82              |
| 1:I:70:GLU:OE1   | 1:I:74:GLU:HB3   | 1.78                     | 0.82              |
| 1:N:11:THR:HG21  | 1:N:315:CYS:O    | 1.79                     | 0.82              |
| 1:N:43:TYR:CD2   | 1:N:67:LEU:HB3   | 2.14                     | 0.82              |
| 1:P:70:GLU:OE1   | 1:P:74:GLU:HB3   | 1.78                     | 0.82              |
| 1:B:32:ASP:HB3   | 1:B:34:LYS:CD    | 2.09                     | 0.82              |
| 1:C:10:MET:HB3   | 1:C:108:LEU:HD23 | 1.61                     | 0.82              |
| 1:C:218:THR:OG1  | 1:D:277:ASP:HB2  | 1.78                     | 0.82              |
| 1:D:43:TYR:CD2   | 1:D:67:LEU:HB3   | 2.14                     | 0.82              |
| 1:D:219:ASP:C    | 1:D:220:LEU:HD12 | 2.00                     | 0.82              |
| 1:G:11:THR:HG21  | 1:G:315:CYS:O    | 1.79                     | 0.82              |
| 1:I:275:LYS:NZ   | 1:J:224:ASN:HD21 | 1.72                     | 0.82              |
| 1:J:325:LYS:HG2  | 1:K:48:GLY:HA3   | 0.83                     | 0.82              |
| 1:N:219:ASP:C    | 1:N:220:LEU:HD12 | 2.00                     | 0.82              |
| 1:O:43:TYR:CD2   | 1:O:67:LEU:HB3   | 2.14                     | 0.82              |
| 1:O:153:THR:HG21 | 1:O:325:LYS:CG   | 2.09                     | 0.82              |
| 1:C:32:ASP:HB3   | 1:C:34:LYS:CD    | 2.09                     | 0.82              |
| 1:G:47:ASP:OD2   | 1:H:7:GLU:OE1    | 1.97                     | 0.82              |
| 1:G:203:GLU:HB3  | 1:J:198:GLU:HG2  | 1.61                     | 0.82              |
| 1:G:203:GLU:HB3  | 1:J:272:ARG:O    | 1.78                     | 0.82              |
| 1:G:268:LEU:HD11 | 1:J:268:LEU:CA   | 2.07                     | 0.82              |
| 1:H:219:ASP:C    | 1:H:220:LEU:HD12 | 2.00                     | 0.82              |
| 1:I:73:VAL:HG21  | 1:M:240:MET:HE1  | 1.60                     | 0.82              |
| 1:L:70:GLU:OE1   | 1:L:74:GLU:HB3   | 1.78                     | 0.82              |
| 1:M:43:TYR:CD2   | 1:M:67:LEU:HB3   | 2.14                     | 0.82              |
| 1:O:219:ASP:C    | 1:O:220:LEU:HD12 | 2.00                     | 0.82              |
| 1:P:43:TYR:CD2   | 1:P:67:LEU:HB3   | 2.14                     | 0.82              |
| 1:P:219:ASP:C    | 1:P:220:LEU:HD12 | 2.00                     | 0.82              |
| 1:A:164:LEU:CD1  | 1:A:313:THR:HA   | 2.10                     | 0.82              |
| 1:C:11:THR:HG21  | 1:C:315:CYS:O    | 1.79                     | 0.82              |
| 1:C:219:ASP:C    | 1:C:220:LEU:HD12 | 2.00                     | 0.82              |
| 1:F:48:GLY:HA3   | 1:G:325:LYS:HG2  | 0.83                     | 0.82              |
| 1:F:234:ALA:HB1  | 1:F:235:LEU:HA   | 1.61                     | 0.82              |
| 1:G:198:GLU:HG2  | 1:J:203:GLU:HB3  | 1.60                     | 0.82              |
| 1:K:219:ASP:C    | 1:K:220:LEU:HD12 | 2.00                     | 0.82              |
| 1:M:219:ASP:C    | 1:M:220:LEU:HD12 | 2.00                     | 0.82              |
| 1:B:153:THR:HG21 | 1:B:325:LYS:CG   | 2.09                     | 0.82              |
| 1:C:246:ILE:HD11 | 1:H:320:LYS:O    | 1.80                     | 0.82              |
| 1:E:47:ASP:OD2   | 1:F:7:GLU:OE1    | 1.97                     | 0.82              |
| 1:G:234:ALA:HB1  | 1:G:235:LEU:HA   | 1.61                     | 0.82              |
| 1:H:44:ASN:HB2   | 1:H:64:LYS:HZ1   | 1.43                     | 0.82              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:32:ASP:HB3   | 1:A:34:LYS:CD    | 2.09                     | 0.82              |
| 1:C:44:ASN:HB2   | 1:C:64:LYS:HZ1   | 1.42                     | 0.82              |
| 1:D:11:THR:HG21  | 1:D:315:CYS:O    | 1.79                     | 0.82              |
| 1:D:308:ASN:OD1  | 1:H:231:ALA:CB   | 2.26                     | 0.82              |
| 1:E:11:THR:HG21  | 1:E:315:CYS:O    | 1.78                     | 0.82              |
| 1:G:219:ASP:CG   | 1:H:275:LYS:HZ3  | 1.80                     | 0.82              |
| 1:H:203:GLU:HA   | 1:K:197:SER:O    | 1.78                     | 0.82              |
| 1:M:192:CYS:HB3  | 1:N:79:THR:HG21  | 1.61                     | 0.82              |
| 1:A:47:ASP:CA    | 1:B:323:VAL:HG22 | 2.10                     | 0.82              |
| 1:A:79:THR:CB    | 1:B:169:PHE:O    | 2.25                     | 0.82              |
| 1:B:164:LEU:CD1  | 1:B:313:THR:HA   | 2.10                     | 0.82              |
| 1:G:219:ASP:C    | 1:G:220:LEU:HD12 | 2.00                     | 0.82              |
| 1:J:219:ASP:C    | 1:J:220:LEU:HD12 | 2.00                     | 0.82              |
| 1:K:11:THR:HG21  | 1:K:315:CYS:O    | 1.79                     | 0.82              |
| 1:L:10:MET:HB3   | 1:L:108:LEU:HD23 | 1.61                     | 0.82              |
| 1:L:219:ASP:C    | 1:L:220:LEU:HD12 | 2.00                     | 0.82              |
| 1:N:153:THR:HG21 | 1:N:325:LYS:CG   | 2.09                     | 0.82              |
| 1:O:36:VAL:H     | 1:O:312:TRP:HH2  | 1.28                     | 0.82              |
| 1:O:139:LYS:HB2  | 1:O:142:ASP:HB2  | 1.61                     | 0.82              |
| 1:P:139:LYS:HB2  | 1:P:142:ASP:HB2  | 1.61                     | 0.82              |
| 1:A:246:ILE:CD1  | 1:F:320:LYS:CA   | 2.48                     | 0.82              |
| 1:B:219:ASP:C    | 1:B:220:LEU:HD12 | 2.00                     | 0.82              |
| 1:C:47:ASP:CA    | 1:D:323:VAL:HG22 | 2.10                     | 0.82              |
| 1:E:22:ILE:HG22  | 1:E:35:ARG:HB3   | 1.60                     | 0.82              |
| 1:E:234:ALA:HB1  | 1:E:235:LEU:HA   | 1.61                     | 0.82              |
| 1:F:11:THR:HG21  | 1:F:315:CYS:O    | 1.79                     | 0.82              |
| 1:F:271:LYS:HZ2  | 1:I:265:ALA:CA   | 1.89                     | 0.82              |
| 1:G:153:THR:HG21 | 1:G:325:LYS:CG   | 2.09                     | 0.82              |
| 1:J:234:ALA:HB1  | 1:J:235:LEU:HA   | 1.61                     | 0.82              |
| 1:M:68:ILE:HD13  | 1:M:92:THR:CB    | 2.06                     | 0.82              |
| 1:P:36:VAL:H     | 1:P:312:TRP:HH2  | 1.28                     | 0.82              |
| 1:C:234:ALA:HB1  | 1:C:235:LEU:HA   | 1.61                     | 0.82              |
| 1:D:164:LEU:CD1  | 1:D:313:THR:HA   | 2.10                     | 0.82              |
| 1:D:234:ALA:HB1  | 1:D:235:LEU:HA   | 1.61                     | 0.82              |
| 1:H:183:ASN:OD1  | 1:K:197:SER:OG   | 1.96                     | 0.82              |
| 1:H:234:ALA:HB1  | 1:H:235:LEU:HA   | 1.61                     | 0.82              |
| 1:J:44:ASN:HB2   | 1:J:64:LYS:HZ1   | 1.43                     | 0.82              |
| 1:J:75:ASP:CA    | 1:N:245:GLU:CG   | 2.33                     | 0.82              |
| 1:K:166:GLN:HB3  | 1:P:242:LYS:CA   | 1.98                     | 0.82              |
| 1:K:308:ASN:HD22 | 1:P:231:ALA:C    | 1.83                     | 0.82              |
| 1:L:22:ILE:HG22  | 1:L:35:ARG:HB3   | 1.60                     | 0.82              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:164:LEU:CD1  | 1:L:313:THR:HA   | 2.10                     | 0.82              |
| 1:M:36:VAL:H     | 1:M:312:TRP:HH2  | 1.28                     | 0.82              |
| 1:N:139:LYS:HB2  | 1:N:142:ASP:HB2  | 1.62                     | 0.82              |
| 1:O:11:THR:HG21  | 1:O:315:CYS:O    | 1.78                     | 0.82              |
| 1:O:277:ASP:HB2  | 1:P:218:THR:OG1  | 1.78                     | 0.82              |
| 1:O:324:ALA:HB1  | 1:P:46:GLU:CA    | 1.92                     | 0.82              |
| 1:C:153:THR:HG21 | 1:C:325:LYS:CG   | 2.09                     | 0.82              |
| 1:E:219:ASP:C    | 1:E:220:LEU:HD12 | 2.00                     | 0.82              |
| 1:F:153:THR:HG21 | 1:F:325:LYS:CG   | 2.09                     | 0.82              |
| 1:G:164:LEU:CD1  | 1:G:313:THR:HA   | 2.10                     | 0.82              |
| 1:H:22:ILE:HG22  | 1:H:35:ARG:HB3   | 1.60                     | 0.82              |
| 1:H:153:THR:HG21 | 1:H:325:LYS:CG   | 2.09                     | 0.82              |
| 1:H:268:LEU:HA   | 1:K:268:LEU:HD11 | 1.60                     | 0.82              |
| 1:J:43:TYR:CD2   | 1:J:67:LEU:HB3   | 2.14                     | 0.82              |
| 1:J:320:LYS:CB   | 1:K:49:TYR:CD1   | 2.59                     | 0.82              |
| 1:M:22:ILE:HG22  | 1:M:35:ARG:HB3   | 1.60                     | 0.82              |
| 1:N:192:CYS:HB3  | 1:O:79:THR:HG21  | 1.61                     | 0.82              |
| 1:B:234:ALA:HB1  | 1:B:235:LEU:HA   | 1.61                     | 0.81              |
| 1:C:164:LEU:CD1  | 1:C:313:THR:HA   | 2.10                     | 0.81              |
| 1:F:44:ASN:HB2   | 1:F:64:LYS:HZ1   | 1.45                     | 0.81              |
| 1:F:203:GLU:HG3  | 1:I:198:GLU:HG3  | 0.82                     | 0.81              |
| 1:I:22:ILE:HG22  | 1:I:35:ARG:HB3   | 1.60                     | 0.81              |
| 1:I:153:THR:HG21 | 1:I:325:LYS:CG   | 2.09                     | 0.81              |
| 1:I:234:ALA:HB1  | 1:I:235:LEU:HA   | 1.61                     | 0.81              |
| 1:K:10:MET:HB3   | 1:K:108:LEU:HD23 | 1.61                     | 0.81              |
| 1:K:22:ILE:HG22  | 1:K:35:ARG:HB3   | 1.60                     | 0.81              |
| 1:K:153:THR:HG21 | 1:K:325:LYS:CG   | 2.09                     | 0.81              |
| 1:L:43:TYR:CD2   | 1:L:67:LEU:HB3   | 2.14                     | 0.81              |
| 1:M:139:LYS:HB2  | 1:M:142:ASP:HB2  | 1.62                     | 0.81              |
| 1:A:36:VAL:H     | 1:A:312:TRP:HH2  | 1.28                     | 0.81              |
| 1:A:219:ASP:C    | 1:A:220:LEU:HD12 | 2.00                     | 0.81              |
| 1:A:234:ALA:HB1  | 1:A:235:LEU:HA   | 1.61                     | 0.81              |
| 1:G:43:TYR:CD2   | 1:G:67:LEU:HB3   | 2.14                     | 0.81              |
| 1:G:48:GLY:HA3   | 1:H:325:LYS:HG2  | 0.83                     | 0.81              |
| 1:G:272:ARG:HG3  | 1:J:202:GLU:C    | 2.00                     | 0.81              |
| 1:H:12:LEU:HB2   | 1:H:110:LEU:HD12 | 1.62                     | 0.81              |
| 1:K:7:GLU:OE1    | 1:L:47:ASP:OD2   | 1.97                     | 0.81              |
| 1:K:12:LEU:HB2   | 1:K:110:LEU:HD12 | 1.62                     | 0.81              |
| 1:K:234:ALA:HB1  | 1:K:235:LEU:HA   | 1.61                     | 0.81              |
| 1:N:36:VAL:H     | 1:N:312:TRP:HH2  | 1.28                     | 0.81              |
| 1:P:164:LEU:CD1  | 1:P:313:THR:HA   | 2.10                     | 0.81              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:68:ILE:HD13  | 1:A:92:THR:CB    | 2.07                     | 0.81              |
| 1:A:76:SER:O     | 1:B:169:PHE:CD2  | 2.34                     | 0.81              |
| 1:F:43:TYR:CD2   | 1:F:67:LEU:HB3   | 2.14                     | 0.81              |
| 1:G:71:GLN:HE21  | 1:H:168:ASN:HB3  | 0.67                     | 0.81              |
| 1:I:7:GLU:OE1    | 1:J:47:ASP:OD2   | 1.97                     | 0.81              |
| 1:I:12:LEU:HD21  | 1:I:21:LEU:HD12  | 1.63                     | 0.81              |
| 1:J:7:GLU:OE1    | 1:K:47:ASP:OD2   | 1.97                     | 0.81              |
| 1:J:10:MET:HB3   | 1:J:108:LEU:HD23 | 1.61                     | 0.81              |
| 1:J:22:ILE:HG22  | 1:J:35:ARG:HB3   | 1.60                     | 0.81              |
| 1:J:153:THR:HG21 | 1:J:325:LYS:CG   | 2.09                     | 0.81              |
| 1:J:164:LEU:CD1  | 1:J:313:THR:HA   | 2.10                     | 0.81              |
| 1:K:164:LEU:CD1  | 1:K:313:THR:HA   | 2.10                     | 0.81              |
| 1:K:325:LYS:HG2  | 1:L:48:GLY:HA3   | 0.83                     | 0.81              |
| 1:L:12:LEU:HB2   | 1:L:110:LEU:HD12 | 1.62                     | 0.81              |
| 1:L:52:ILE:CG2   | 1:P:248:THR:HA   | 2.06                     | 0.81              |
| 1:M:153:THR:HG21 | 1:M:325:LYS:CG   | 2.09                     | 0.81              |
| 1:M:234:ALA:HB1  | 1:M:235:LEU:HA   | 1.61                     | 0.81              |
| 1:N:68:ILE:HD13  | 1:N:92:THR:CB    | 2.07                     | 0.81              |
| 1:N:169:PHE:CD2  | 1:O:76:SER:O     | 2.34                     | 0.81              |
| 1:N:323:VAL:HG22 | 1:O:47:ASP:CA    | 2.10                     | 0.81              |
| 1:O:169:PHE:CD2  | 1:P:76:SER:O     | 2.34                     | 0.81              |
| 1:E:12:LEU:HD21  | 1:E:21:LEU:HD12  | 1.63                     | 0.81              |
| 1:F:12:LEU:HD21  | 1:F:21:LEU:HD12  | 1.63                     | 0.81              |
| 1:F:22:ILE:HG22  | 1:F:35:ARG:HB3   | 1.60                     | 0.81              |
| 1:F:164:LEU:CD1  | 1:F:313:THR:HA   | 2.10                     | 0.81              |
| 1:H:164:LEU:CD1  | 1:H:313:THR:HA   | 2.10                     | 0.81              |
| 1:I:164:LEU:CD1  | 1:I:313:THR:HA   | 2.10                     | 0.81              |
| 1:I:219:ASP:C    | 1:I:220:LEU:HD12 | 2.00                     | 0.81              |
| 1:O:164:LEU:CD1  | 1:O:313:THR:HA   | 2.10                     | 0.81              |
| 1:A:139:LYS:HB2  | 1:A:142:ASP:HB2  | 1.62                     | 0.81              |
| 1:A:241:LYS:CB   | 1:F:166:GLN:CD   | 2.28                     | 0.81              |
| 1:C:79:THR:HG21  | 1:D:192:CYS:HB3  | 1.61                     | 0.81              |
| 1:E:153:THR:HG21 | 1:E:325:LYS:CG   | 2.09                     | 0.81              |
| 1:E:164:LEU:CD1  | 1:E:313:THR:HA   | 2.10                     | 0.81              |
| 1:F:219:ASP:C    | 1:F:220:LEU:HD12 | 2.00                     | 0.81              |
| 1:G:12:LEU:HB2   | 1:G:110:LEU:HD12 | 1.62                     | 0.81              |
| 1:G:22:ILE:HG22  | 1:G:35:ARG:HB3   | 1.60                     | 0.81              |
| 1:H:43:TYR:CD2   | 1:H:67:LEU:HB3   | 2.14                     | 0.81              |
| 1:I:43:TYR:CD2   | 1:I:67:LEU:HB3   | 2.14                     | 0.81              |
| 1:J:12:LEU:HB2   | 1:J:110:LEU:HD12 | 1.63                     | 0.81              |
| 1:J:53:GLU:HG3   | 1:N:252:THR:HG21 | 1.62                     | 0.81              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:44:ASN:HB2   | 1:K:64:LYS:HZ1   | 1.44                     | 0.81              |
| 1:L:11:THR:HG21  | 1:L:315:CYS:O    | 1.79                     | 0.81              |
| 1:L:153:THR:HG21 | 1:L:325:LYS:CG   | 2.09                     | 0.81              |
| 1:L:234:ALA:HB1  | 1:L:235:LEU:HA   | 1.61                     | 0.81              |
| 1:N:164:LEU:CD1  | 1:N:313:THR:HA   | 2.10                     | 0.81              |
| 1:N:234:ALA:HB1  | 1:N:235:LEU:HA   | 1.61                     | 0.81              |
| 1:A:50:ILE:HG12  | 1:B:320:LYS:CD   | 2.06                     | 0.81              |
| 1:B:22:ILE:HG22  | 1:B:35:ARG:HB3   | 1.60                     | 0.81              |
| 1:B:36:VAL:H     | 1:B:312:TRP:HH2  | 1.28                     | 0.81              |
| 1:G:202:GLU:C    | 1:J:272:ARG:HG3  | 2.01                     | 0.81              |
| 1:G:268:LEU:CA   | 1:J:268:LEU:HD11 | 2.07                     | 0.81              |
| 1:I:10:MET:HB3   | 1:I:108:LEU:HD23 | 1.61                     | 0.81              |
| 1:K:68:ILE:HD13  | 1:K:92:THR:CB    | 2.07                     | 0.81              |
| 1:K:305:ILE:HG22 | 1:P:241:LYS:HZ1  | 1.42                     | 0.81              |
| 1:M:164:LEU:CD1  | 1:M:313:THR:HA   | 2.10                     | 0.81              |
| 1:O:234:ALA:HB1  | 1:O:235:LEU:HA   | 1.61                     | 0.81              |
| 1:P:11:THR:HG21  | 1:P:315:CYS:O    | 1.79                     | 0.81              |
| 1:C:76:SER:O     | 1:D:169:PHE:CD2  | 2.34                     | 0.81              |
| 1:C:246:ILE:HG12 | 1:G:50:ILE:N     | 1.43                     | 0.81              |
| 1:D:153:THR:HG21 | 1:D:325:LYS:CG   | 2.09                     | 0.81              |
| 1:E:43:TYR:CD2   | 1:E:67:LEU:HB3   | 2.14                     | 0.81              |
| 1:E:44:ASN:HB2   | 1:E:64:LYS:HZ1   | 1.46                     | 0.81              |
| 1:G:49:TYR:HD1   | 1:H:320:LYS:C    | 1.82                     | 0.81              |
| 1:H:10:MET:HB3   | 1:H:108:LEU:HD23 | 1.61                     | 0.81              |
| 1:H:202:GLU:C    | 1:K:272:ARG:HG3  | 1.99                     | 0.81              |
| 1:J:12:LEU:HD21  | 1:J:21:LEU:HD12  | 1.63                     | 0.81              |
| 1:O:68:ILE:HD13  | 1:O:92:THR:CB    | 2.06                     | 0.81              |
| 1:O:192:CYS:HB3  | 1:P:79:THR:HG21  | 1.61                     | 0.81              |
| 1:C:246:ILE:HD12 | 1:G:50:ILE:HG23  | 1.62                     | 0.81              |
| 1:C:246:ILE:HG12 | 1:G:50:ILE:C     | 1.66                     | 0.81              |
| 1:E:12:LEU:HB2   | 1:E:110:LEU:HD12 | 1.63                     | 0.81              |
| 1:E:179:PHE:CE1  | 1:E:261:PHE:HE2  | 1.99                     | 0.81              |
| 1:F:12:LEU:HB2   | 1:F:110:LEU:HD12 | 1.62                     | 0.81              |
| 1:G:197:SER:O    | 1:J:203:GLU:CA   | 2.29                     | 0.81              |
| 1:I:12:LEU:HB2   | 1:I:110:LEU:HD12 | 1.62                     | 0.81              |
| 1:J:68:ILE:HD13  | 1:J:92:THR:CB    | 2.07                     | 0.81              |
| 1:J:75:ASP:HA    | 1:N:245:GLU:HB3  | 1.44                     | 0.81              |
| 1:N:44:ASN:HB2   | 1:N:64:LYS:HZ1   | 1.43                     | 0.81              |
| 1:A:243:GLY:O    | 1:F:163:PHE:CA   | 2.25                     | 0.81              |
| 1:A:276:LEU:HD12 | 1:A:300:TYR:CZ   | 2.16                     | 0.81              |
| 1:C:276:LEU:HD12 | 1:C:300:TYR:CZ   | 2.16                     | 0.81              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:276:LEU:HD12 | 1:D:300:TYR:CZ   | 2.16                     | 0.81              |
| 1:E:36:VAL:H     | 1:E:312:TRP:HH2  | 1.28                     | 0.81              |
| 1:F:36:VAL:H     | 1:F:312:TRP:HH2  | 1.28                     | 0.81              |
| 1:F:179:PHE:CE1  | 1:F:261:PHE:HE2  | 1.99                     | 0.81              |
| 1:F:276:LEU:HD12 | 1:F:300:TYR:CZ   | 2.16                     | 0.81              |
| 1:G:10:MET:HB3   | 1:G:108:LEU:HD23 | 1.61                     | 0.81              |
| 1:H:272:ARG:NH1  | 1:K:201:ILE:CG2  | 2.33                     | 0.81              |
| 1:H:276:LEU:HD12 | 1:H:300:TYR:CZ   | 2.16                     | 0.81              |
| 1:I:139:LYS:HB2  | 1:I:142:ASP:HB2  | 1.62                     | 0.81              |
| 1:I:179:PHE:CE1  | 1:I:261:PHE:HE2  | 1.99                     | 0.81              |
| 1:M:169:PHE:CD2  | 1:N:76:SER:O     | 2.34                     | 0.81              |
| 1:O:22:ILE:HG22  | 1:O:35:ARG:HB3   | 1.60                     | 0.81              |
| 1:P:276:LEU:HD12 | 1:P:300:TYR:CZ   | 2.16                     | 0.81              |
| 1:B:79:THR:HG21  | 1:C:192:CYS:HB3  | 1.61                     | 0.81              |
| 1:B:139:LYS:HB2  | 1:B:142:ASP:HB2  | 1.61                     | 0.81              |
| 1:E:10:MET:HB3   | 1:E:108:LEU:HD23 | 1.61                     | 0.81              |
| 1:F:10:MET:HB3   | 1:F:108:LEU:HD23 | 1.61                     | 0.81              |
| 1:F:49:TYR:HD1   | 1:G:320:LYS:C    | 1.82                     | 0.81              |
| 1:F:71:GLN:HE21  | 1:G:168:ASN:HB3  | 0.67                     | 0.81              |
| 1:H:274:PHE:CE1  | 1:K:203:GLU:OE1  | 2.34                     | 0.81              |
| 1:I:68:ILE:HD13  | 1:I:92:THR:CB    | 2.06                     | 0.81              |
| 1:N:276:LEU:HD12 | 1:N:300:TYR:CZ   | 2.16                     | 0.81              |
| 1:P:224:ASN:CG   | 1:P:233:SER:HB3  | 2.01                     | 0.81              |
| 1:P:234:ALA:HB1  | 1:P:235:LEU:HA   | 1.61                     | 0.81              |
| 1:A:44:ASN:HB2   | 1:A:64:LYS:HZ1   | 1.44                     | 0.80              |
| 1:A:79:THR:O     | 1:B:170:LYS:NZ   | 1.94                     | 0.80              |
| 1:B:276:LEU:HD12 | 1:B:300:TYR:CZ   | 2.17                     | 0.80              |
| 1:D:68:ILE:HD13  | 1:D:92:THR:CB    | 2.07                     | 0.80              |
| 1:D:179:PHE:CE1  | 1:D:261:PHE:HE2  | 1.99                     | 0.80              |
| 1:G:36:VAL:H     | 1:G:312:TRP:HH2  | 1.28                     | 0.80              |
| 1:G:203:GLU:CA   | 1:J:197:SER:O    | 2.29                     | 0.80              |
| 1:K:43:TYR:CD2   | 1:K:67:LEU:HB3   | 2.14                     | 0.80              |
| 1:L:231:ALA:HB2  | 1:P:308:ASN:CG   | 1.98                     | 0.80              |
| 1:N:12:LEU:HD21  | 1:N:21:LEU:HD12  | 1.63                     | 0.80              |
| 1:C:36:VAL:H     | 1:C:312:TRP:HH2  | 1.27                     | 0.80              |
| 1:F:59:ILE:CD1   | 1:F:95:THR:HG21  | 2.12                     | 0.80              |
| 1:H:201:ILE:CG1  | 1:K:272:ARG:NH1  | 2.34                     | 0.80              |
| 1:I:276:LEU:HD12 | 1:I:300:TYR:CZ   | 2.16                     | 0.80              |
| 1:J:139:LYS:HB2  | 1:J:142:ASP:HB2  | 1.62                     | 0.80              |
| 1:J:179:PHE:CE1  | 1:J:261:PHE:HE2  | 1.99                     | 0.80              |
| 1:K:139:LYS:HB2  | 1:K:142:ASP:HB2  | 1.61                     | 0.80              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:276:LEU:HD12 | 1:K:300:TYR:CZ   | 2.16                     | 0.80              |
| 1:L:52:ILE:HG23  | 1:P:248:THR:CA   | 2.06                     | 0.80              |
| 1:A:47:ASP:OD2   | 1:B:326:TYR:HB2  | 1.80                     | 0.80              |
| 1:A:179:PHE:CE1  | 1:A:261:PHE:HE2  | 1.99                     | 0.80              |
| 1:B:12:LEU:HD21  | 1:B:21:LEU:HD12  | 1.63                     | 0.80              |
| 1:B:47:ASP:CA    | 1:C:323:VAL:HG22 | 2.10                     | 0.80              |
| 1:D:22:ILE:HG22  | 1:D:35:ARG:HB3   | 1.60                     | 0.80              |
| 1:E:139:LYS:HB2  | 1:E:142:ASP:HB2  | 1.62                     | 0.80              |
| 1:F:272:ARG:HA   | 1:I:202:GLU:OE2  | 1.81                     | 0.80              |
| 1:H:139:LYS:HB2  | 1:H:142:ASP:HB2  | 1.62                     | 0.80              |
| 1:H:202:GLU:HG2  | 1:K:272:ARG:HB2  | 1.62                     | 0.80              |
| 1:I:73:VAL:HG23  | 1:M:240:MET:CE   | 2.11                     | 0.80              |
| 1:L:177:ILE:HD11 | 1:L:284:PHE:CD2  | 2.17                     | 0.80              |
| 1:L:224:ASN:CG   | 1:L:233:SER:HB3  | 2.01                     | 0.80              |
| 1:M:177:ILE:HD11 | 1:M:284:PHE:CD2  | 2.17                     | 0.80              |
| 1:O:12:LEU:HD21  | 1:O:21:LEU:HD12  | 1.63                     | 0.80              |
| 1:P:164:LEU:HD11 | 1:P:316:GLU:OE1  | 1.82                     | 0.80              |
| 1:A:12:LEU:HD21  | 1:A:21:LEU:HD12  | 1.63                     | 0.80              |
| 1:B:47:ASP:OD2   | 1:C:326:TYR:HB2  | 1.80                     | 0.80              |
| 1:B:68:ILE:HD13  | 1:B:92:THR:CB    | 2.06                     | 0.80              |
| 1:B:177:ILE:HD11 | 1:B:284:PHE:CD2  | 2.17                     | 0.80              |
| 1:C:68:ILE:HD13  | 1:C:92:THR:CB    | 2.07                     | 0.80              |
| 1:C:177:ILE:HD11 | 1:C:284:PHE:CD2  | 2.17                     | 0.80              |
| 1:D:36:VAL:H     | 1:D:312:TRP:HH2  | 1.28                     | 0.80              |
| 1:J:36:VAL:H     | 1:J:312:TRP:HH2  | 1.28                     | 0.80              |
| 1:M:43:TYR:CE2   | 1:M:67:LEU:HD13  | 2.17                     | 0.80              |
| 1:O:164:LEU:HD11 | 1:O:316:GLU:OE1  | 1.82                     | 0.80              |
| 1:P:68:ILE:HD13  | 1:P:92:THR:CB    | 2.07                     | 0.80              |
| 1:A:79:THR:HG21  | 1:B:192:CYS:HB3  | 1.61                     | 0.80              |
| 1:B:44:ASN:HB2   | 1:B:64:LYS:HZ1   | 1.46                     | 0.80              |
| 1:C:12:LEU:HD21  | 1:C:21:LEU:HD12  | 1.63                     | 0.80              |
| 1:C:43:TYR:CE2   | 1:C:67:LEU:HD13  | 2.17                     | 0.80              |
| 1:D:177:ILE:HD11 | 1:D:284:PHE:CD2  | 2.17                     | 0.80              |
| 1:D:284:PHE:CE2  | 1:D:296:ILE:HG12 | 2.17                     | 0.80              |
| 1:G:12:LEU:HD21  | 1:G:21:LEU:HD12  | 1.63                     | 0.80              |
| 1:J:73:VAL:HB    | 1:N:240:MET:HE1  | 1.62                     | 0.80              |
| 1:J:177:ILE:HD11 | 1:J:284:PHE:CD2  | 2.17                     | 0.80              |
| 1:K:36:VAL:H     | 1:K:312:TRP:HH2  | 1.28                     | 0.80              |
| 1:L:179:PHE:CE1  | 1:L:261:PHE:HE2  | 1.99                     | 0.80              |
| 1:M:12:LEU:HD21  | 1:M:21:LEU:HD12  | 1.63                     | 0.80              |
| 1:M:59:ILE:CD1   | 1:M:95:THR:HG21  | 2.12                     | 0.80              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:164:LEU:HD11 | 1:M:316:GLU:OE1  | 1.82                     | 0.80              |
| 1:M:224:ASN:CG   | 1:M:233:SER:HB3  | 2.01                     | 0.80              |
| 1:O:34:LYS:N     | 1:O:35:ARG:HB2   | 1.97                     | 0.80              |
| 1:P:43:TYR:CE2   | 1:P:67:LEU:HD13  | 2.17                     | 0.80              |
| 1:A:177:ILE:HD11 | 1:A:284:PHE:CD2  | 2.17                     | 0.80              |
| 1:C:284:PHE:CE2  | 1:C:296:ILE:HG12 | 2.17                     | 0.80              |
| 1:E:276:LEU:HD12 | 1:E:300:TYR:CZ   | 2.16                     | 0.80              |
| 1:F:268:LEU:HD11 | 1:I:268:LEU:CA   | 2.12                     | 0.80              |
| 1:G:179:PHE:CE1  | 1:G:261:PHE:HE2  | 1.99                     | 0.80              |
| 1:I:168:ASN:HB3  | 1:J:71:GLN:HE21  | 0.67                     | 0.80              |
| 1:J:59:ILE:CD1   | 1:J:95:THR:HG21  | 2.12                     | 0.80              |
| 1:J:276:LEU:HD12 | 1:J:300:TYR:CZ   | 2.16                     | 0.80              |
| 1:K:224:ASN:CG   | 1:K:233:SER:HB3  | 2.01                     | 0.80              |
| 1:K:307:THR:HA   | 1:P:231:ALA:HB2  | 1.63                     | 0.80              |
| 1:L:36:VAL:H     | 1:L:312:TRP:HH2  | 1.28                     | 0.80              |
| 1:L:139:LYS:HB2  | 1:L:142:ASP:HB2  | 1.62                     | 0.80              |
| 1:N:59:ILE:CD1   | 1:N:95:THR:HG21  | 2.12                     | 0.80              |
| 1:N:164:LEU:HD11 | 1:N:316:GLU:OE1  | 1.82                     | 0.80              |
| 1:P:179:PHE:CE1  | 1:P:261:PHE:HE2  | 1.99                     | 0.80              |
| 1:C:46:GLU:CA    | 1:D:324:ALA:HB1  | 1.92                     | 0.80              |
| 1:C:47:ASP:OD2   | 1:D:326:TYR:HB2  | 1.80                     | 0.80              |
| 1:C:241:LYS:O    | 1:H:166:GLN:N    | 2.03                     | 0.80              |
| 1:H:272:ARG:HG3  | 1:K:202:GLU:C    | 2.00                     | 0.80              |
| 1:J:43:TYR:CE2   | 1:J:67:LEU:HD13  | 2.17                     | 0.80              |
| 1:K:34:LYS:N     | 1:K:35:ARG:HB2   | 1.97                     | 0.80              |
| 1:K:43:TYR:CE2   | 1:K:67:LEU:HD13  | 2.17                     | 0.80              |
| 1:K:59:ILE:CD1   | 1:K:95:THR:HG21  | 2.12                     | 0.80              |
| 1:K:284:PHE:CE2  | 1:K:296:ILE:HG12 | 2.17                     | 0.80              |
| 1:L:12:LEU:HD21  | 1:L:21:LEU:HD12  | 1.63                     | 0.80              |
| 1:M:44:ASN:HB2   | 1:M:64:LYS:HZ1   | 1.44                     | 0.80              |
| 1:N:34:LYS:N     | 1:N:35:ARG:HB2   | 1.97                     | 0.80              |
| 1:N:43:TYR:CE2   | 1:N:67:LEU:HD13  | 2.17                     | 0.80              |
| 1:O:59:ILE:CD1   | 1:O:95:THR:HG21  | 2.12                     | 0.80              |
| 1:O:177:ILE:HD11 | 1:O:284:PHE:CD2  | 2.17                     | 0.80              |
| 1:O:179:PHE:CE1  | 1:O:261:PHE:HE2  | 1.99                     | 0.80              |
| 1:P:34:LYS:N     | 1:P:35:ARG:HB2   | 1.97                     | 0.80              |
| 1:A:164:LEU:HD11 | 1:A:316:GLU:OE1  | 1.82                     | 0.80              |
| 1:A:224:ASN:CG   | 1:A:233:SER:HB3  | 2.01                     | 0.80              |
| 1:B:76:SER:O     | 1:C:169:PHE:CD2  | 2.33                     | 0.80              |
| 1:B:76:SER:O     | 1:C:169:PHE:HD2  | 1.65                     | 0.80              |
| 1:B:164:LEU:HD11 | 1:B:316:GLU:OE1  | 1.82                     | 0.80              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:179:PHE:CE1  | 1:B:261:PHE:HE2  | 1.99                     | 0.80              |
| 1:C:224:ASN:CG   | 1:C:233:SER:HB3  | 2.01                     | 0.80              |
| 1:D:240:MET:CE   | 1:H:73:VAL:CG2   | 2.60                     | 0.80              |
| 1:F:139:LYS:HB2  | 1:F:142:ASP:HB2  | 1.62                     | 0.80              |
| 1:G:139:LYS:HB2  | 1:G:142:ASP:HB2  | 1.62                     | 0.80              |
| 1:H:179:PHE:CE1  | 1:H:261:PHE:HE2  | 1.99                     | 0.80              |
| 1:H:271:LYS:HE3  | 1:K:202:GLU:CG   | 2.11                     | 0.80              |
| 1:L:43:TYR:CE2   | 1:L:67:LEU:HD13  | 2.17                     | 0.80              |
| 1:M:34:LYS:N     | 1:M:35:ARG:HB2   | 1.97                     | 0.80              |
| 1:A:43:TYR:CE2   | 1:A:67:LEU:HD13  | 2.17                     | 0.80              |
| 1:A:245:GLU:HB3  | 1:E:74:GLU:C     | 2.02                     | 0.80              |
| 1:A:251:SER:O    | 1:A:254:ILE:HG12 | 1.82                     | 0.80              |
| 1:B:224:ASN:CG   | 1:B:233:SER:HB3  | 2.01                     | 0.80              |
| 1:B:251:SER:O    | 1:B:254:ILE:HG12 | 1.82                     | 0.80              |
| 1:C:139:LYS:HB2  | 1:C:142:ASP:HB2  | 1.62                     | 0.80              |
| 1:D:12:LEU:HB2   | 1:D:110:LEU:HD12 | 1.63                     | 0.80              |
| 1:D:224:ASN:CG   | 1:D:233:SER:HB3  | 2.01                     | 0.80              |
| 1:E:164:LEU:HD11 | 1:E:316:GLU:OE1  | 1.82                     | 0.80              |
| 1:F:164:LEU:HD11 | 1:F:316:GLU:OE1  | 1.82                     | 0.80              |
| 1:G:59:ILE:CD1   | 1:G:95:THR:HG21  | 2.12                     | 0.80              |
| 1:H:68:ILE:HD13  | 1:H:92:THR:CB    | 2.06                     | 0.80              |
| 1:I:43:TYR:CE2   | 1:I:67:LEU:HD13  | 2.17                     | 0.80              |
| 1:J:308:ASN:OD1  | 1:O:230:GLN:HA   | 1.80                     | 0.80              |
| 1:K:12:LEU:HD21  | 1:K:21:LEU:HD12  | 1.63                     | 0.80              |
| 1:P:12:LEU:HD21  | 1:P:21:LEU:HD12  | 1.63                     | 0.80              |
| 1:P:59:ILE:CD1   | 1:P:95:THR:HG21  | 2.12                     | 0.80              |
| 1:P:177:ILE:HD11 | 1:P:284:PHE:CD2  | 2.17                     | 0.80              |
| 1:B:43:TYR:CE2   | 1:B:67:LEU:HD13  | 2.17                     | 0.80              |
| 1:C:50:ILE:H     | 1:D:320:LYS:HD3  | 1.45                     | 0.80              |
| 1:E:71:GLN:HE21  | 1:F:168:ASN:HB3  | 0.67                     | 0.80              |
| 1:E:177:ILE:HD11 | 1:E:284:PHE:CD2  | 2.17                     | 0.80              |
| 1:F:203:GLU:OE1  | 1:I:274:PHE:CE1  | 2.34                     | 0.80              |
| 1:H:177:ILE:HD11 | 1:H:284:PHE:CD2  | 2.17                     | 0.80              |
| 1:I:36:VAL:H     | 1:I:312:TRP:HH2  | 1.28                     | 0.80              |
| 1:K:179:PHE:CE1  | 1:K:261:PHE:HE2  | 1.99                     | 0.80              |
| 1:O:43:TYR:CE2   | 1:O:67:LEU:HD13  | 2.17                     | 0.80              |
| 1:C:12:LEU:HB2   | 1:C:110:LEU:HD12 | 1.63                     | 0.79              |
| 1:C:59:ILE:CD1   | 1:C:95:THR:HG21  | 2.12                     | 0.79              |
| 1:C:251:SER:O    | 1:C:254:ILE:HG12 | 1.82                     | 0.79              |
| 1:D:251:SER:O    | 1:D:254:ILE:HG12 | 1.82                     | 0.79              |
| 1:E:49:TYR:HD1   | 1:F:320:LYS:C    | 1.81                     | 0.79              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:224:ASN:CG   | 1:E:233:SER:HB3  | 2.01                     | 0.79              |
| 1:F:177:ILE:HD11 | 1:F:284:PHE:CD2  | 2.17                     | 0.79              |
| 1:F:274:PHE:HD1  | 1:I:204:HIS:CE1  | 2.00                     | 0.79              |
| 1:G:47:ASP:O     | 1:H:323:VAL:CA   | 2.30                     | 0.79              |
| 1:G:68:ILE:HD13  | 1:G:92:THR:CB    | 2.07                     | 0.79              |
| 1:G:164:LEU:HD11 | 1:G:316:GLU:OE1  | 1.82                     | 0.79              |
| 1:G:276:LEU:HD12 | 1:G:300:TYR:CZ   | 2.16                     | 0.79              |
| 1:H:36:VAL:H     | 1:H:312:TRP:HH2  | 1.28                     | 0.79              |
| 1:H:59:ILE:CD1   | 1:H:95:THR:HG21  | 2.12                     | 0.79              |
| 1:J:224:ASN:CG   | 1:J:233:SER:HB3  | 2.01                     | 0.79              |
| 1:N:12:LEU:HB2   | 1:N:110:LEU:HD12 | 1.62                     | 0.79              |
| 1:N:177:ILE:HD11 | 1:N:284:PHE:CD2  | 2.17                     | 0.79              |
| 1:A:76:SER:O     | 1:B:169:PHE:HD2  | 1.65                     | 0.79              |
| 1:B:12:LEU:HB2   | 1:B:110:LEU:HD12 | 1.62                     | 0.79              |
| 1:C:76:SER:O     | 1:D:169:PHE:HD2  | 1.65                     | 0.79              |
| 1:D:139:LYS:HB2  | 1:D:142:ASP:HB2  | 1.62                     | 0.79              |
| 1:E:320:LYS:O    | 1:E:323:VAL:HG22 | 1.82                     | 0.79              |
| 1:F:224:ASN:CG   | 1:F:233:SER:HB3  | 2.01                     | 0.79              |
| 1:G:224:ASN:CG   | 1:G:233:SER:HB3  | 2.01                     | 0.79              |
| 1:H:34:LYS:N     | 1:H:35:ARG:HB2   | 1.97                     | 0.79              |
| 1:I:284:PHE:CE2  | 1:I:296:ILE:HG12 | 2.17                     | 0.79              |
| 1:K:177:ILE:HD11 | 1:K:284:PHE:CE2  | 2.18                     | 0.79              |
| 1:L:177:ILE:HD11 | 1:L:284:PHE:CE2  | 2.17                     | 0.79              |
| 1:N:179:PHE:CE1  | 1:N:261:PHE:HE2  | 1.99                     | 0.79              |
| 1:O:12:LEU:HB2   | 1:O:110:LEU:HD12 | 1.62                     | 0.79              |
| 1:P:12:LEU:HB2   | 1:P:110:LEU:HD12 | 1.62                     | 0.79              |
| 1:A:34:LYS:N     | 1:A:35:ARG:HB2   | 1.97                     | 0.79              |
| 1:B:284:PHE:CE2  | 1:B:296:ILE:HG12 | 2.17                     | 0.79              |
| 1:C:164:LEU:HD11 | 1:C:316:GLU:OE1  | 1.82                     | 0.79              |
| 1:F:68:ILE:HD13  | 1:F:92:THR:CB    | 2.07                     | 0.79              |
| 1:G:177:ILE:HD11 | 1:G:284:PHE:CD2  | 2.17                     | 0.79              |
| 1:H:164:LEU:HD11 | 1:H:316:GLU:OE1  | 1.82                     | 0.79              |
| 1:I:177:ILE:HD11 | 1:I:284:PHE:CE2  | 2.17                     | 0.79              |
| 1:J:177:ILE:HD11 | 1:J:284:PHE:CE2  | 2.18                     | 0.79              |
| 1:J:251:SER:O    | 1:J:254:ILE:HG12 | 1.82                     | 0.79              |
| 1:L:75:ASP:HA    | 1:P:245:GLU:HB2  | 1.63                     | 0.79              |
| 1:L:251:SER:O    | 1:L:254:ILE:HG12 | 1.82                     | 0.79              |
| 1:M:12:LEU:HB2   | 1:M:110:LEU:HD12 | 1.62                     | 0.79              |
| 1:M:63:GLY:O     | 1:M:64:LYS:HB3   | 1.83                     | 0.79              |
| 1:M:276:LEU:HD12 | 1:M:300:TYR:CZ   | 2.16                     | 0.79              |
| 1:O:276:LEU:HD12 | 1:O:300:TYR:CZ   | 2.16                     | 0.79              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:179:PHE:CE1  | 1:C:261:PHE:HE2  | 1.99                     | 0.79              |
| 1:E:43:TYR:CE2   | 1:E:67:LEU:HD13  | 2.17                     | 0.79              |
| 1:E:59:ILE:CD1   | 1:E:95:THR:HG21  | 2.12                     | 0.79              |
| 1:E:68:ILE:HD13  | 1:E:92:THR:CB    | 2.06                     | 0.79              |
| 1:F:219:ASP:HA   | 1:F:224:ASN:HB2  | 0.86                     | 0.79              |
| 1:G:44:ASN:HB2   | 1:G:64:LYS:HZ1   | 1.47                     | 0.79              |
| 1:G:219:ASP:HA   | 1:G:224:ASN:HB2  | 0.86                     | 0.79              |
| 1:H:12:LEU:HD21  | 1:H:21:LEU:HD12  | 1.63                     | 0.79              |
| 1:H:224:ASN:CG   | 1:H:233:SER:HB3  | 2.01                     | 0.79              |
| 1:I:251:SER:O    | 1:I:254:ILE:HG12 | 1.82                     | 0.79              |
| 1:K:251:SER:O    | 1:K:254:ILE:HG12 | 1.82                     | 0.79              |
| 1:L:276:LEU:HD12 | 1:L:300:TYR:CZ   | 2.16                     | 0.79              |
| 1:O:284:PHE:CE2  | 1:O:296:ILE:HG12 | 2.17                     | 0.79              |
| 1:P:284:PHE:CE2  | 1:P:296:ILE:HG12 | 2.17                     | 0.79              |
| 1:A:246:ILE:C    | 1:E:52:ILE:CG1   | 2.51                     | 0.79              |
| 1:A:290:GLN:HB3  | 1:E:230:GLN:HE22 | 1.47                     | 0.79              |
| 1:D:59:ILE:CD1   | 1:D:95:THR:HG21  | 2.11                     | 0.79              |
| 1:D:320:LYS:O    | 1:D:323:VAL:HG22 | 1.82                     | 0.79              |
| 1:E:34:LYS:N     | 1:E:35:ARG:HB2   | 1.97                     | 0.79              |
| 1:E:284:PHE:CE2  | 1:E:296:ILE:HG12 | 2.17                     | 0.79              |
| 1:F:43:TYR:CE2   | 1:F:67:LEU:HD13  | 2.17                     | 0.79              |
| 1:F:284:PHE:CE2  | 1:F:296:ILE:HG12 | 2.17                     | 0.79              |
| 1:G:43:TYR:CE2   | 1:G:67:LEU:HD13  | 2.17                     | 0.79              |
| 1:G:49:TYR:CD1   | 1:H:320:LYS:O    | 2.26                     | 0.79              |
| 1:G:284:PHE:CE2  | 1:G:296:ILE:HG12 | 2.17                     | 0.79              |
| 1:H:284:PHE:CE2  | 1:H:296:ILE:HG12 | 2.17                     | 0.79              |
| 1:J:168:ASN:HB3  | 1:K:71:GLN:HE21  | 0.67                     | 0.79              |
| 1:A:12:LEU:HB2   | 1:A:110:LEU:HD12 | 1.62                     | 0.79              |
| 1:C:63:GLY:O     | 1:C:64:LYS:HB3   | 1.83                     | 0.79              |
| 1:C:177:ILE:HD11 | 1:C:284:PHE:CE2  | 2.17                     | 0.79              |
| 1:D:12:LEU:HD21  | 1:D:21:LEU:HD12  | 1.63                     | 0.79              |
| 1:I:224:ASN:CG   | 1:I:233:SER:HB3  | 2.01                     | 0.79              |
| 1:L:284:PHE:CE2  | 1:L:296:ILE:HG12 | 2.17                     | 0.79              |
| 1:M:179:PHE:CE1  | 1:M:261:PHE:HE2  | 1.99                     | 0.79              |
| 1:A:59:ILE:CD1   | 1:A:95:THR:HG21  | 2.12                     | 0.79              |
| 1:A:284:PHE:CE2  | 1:A:296:ILE:HG12 | 2.17                     | 0.79              |
| 1:B:63:GLY:O     | 1:B:64:LYS:HB3   | 1.83                     | 0.79              |
| 1:B:241:LYS:CA   | 1:G:166:GLN:O    | 2.29                     | 0.79              |
| 1:C:320:LYS:O    | 1:C:323:VAL:HG22 | 1.82                     | 0.79              |
| 1:D:34:LYS:N     | 1:D:35:ARG:HB2   | 1.97                     | 0.79              |
| 1:D:164:LEU:HD11 | 1:D:316:GLU:OE1  | 1.82                     | 0.79              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:43:TYR:CE2   | 1:H:67:LEU:HD13  | 2.17                     | 0.79              |
| 1:J:284:PHE:CE2  | 1:J:296:ILE:HG12 | 2.17                     | 0.79              |
| 1:N:224:ASN:CG   | 1:N:233:SER:HB3  | 2.01                     | 0.79              |
| 1:O:320:LYS:HD3  | 1:P:50:ILE:H     | 1.45                     | 0.79              |
| 1:A:177:ILE:HD11 | 1:A:284:PHE:CE2  | 2.17                     | 0.79              |
| 1:A:241:LYS:CB   | 1:F:165:GLU:OE2  | 2.29                     | 0.79              |
| 1:F:34:LYS:N     | 1:F:35:ARG:HB2   | 1.97                     | 0.79              |
| 1:G:34:LYS:N     | 1:G:35:ARG:HB2   | 1.97                     | 0.79              |
| 1:I:34:LYS:N     | 1:I:35:ARG:HB2   | 1.97                     | 0.79              |
| 1:I:59:ILE:CD1   | 1:I:95:THR:HG21  | 2.12                     | 0.79              |
| 1:L:34:LYS:N     | 1:L:35:ARG:HB2   | 1.97                     | 0.79              |
| 1:M:284:PHE:CE2  | 1:M:296:ILE:HG12 | 2.17                     | 0.79              |
| 1:N:284:PHE:CE2  | 1:N:296:ILE:HG12 | 2.17                     | 0.79              |
| 1:B:50:ILE:H     | 1:C:320:LYS:HD3  | 1.45                     | 0.79              |
| 1:I:26:LYS:CB    | 1:I:97:VAL:HG13  | 2.13                     | 0.79              |
| 1:I:52:ILE:HD12  | 1:M:247:ASP:O    | 1.82                     | 0.79              |
| 1:I:166:GLN:HA   | 1:N:242:LYS:O    | 1.82                     | 0.79              |
| 1:J:34:LYS:N     | 1:J:35:ARG:HB2   | 1.97                     | 0.79              |
| 1:L:63:GLY:O     | 1:L:64:LYS:HB3   | 1.83                     | 0.79              |
| 1:L:320:LYS:O    | 1:L:323:VAL:HG22 | 1.82                     | 0.79              |
| 1:N:169:PHE:HD2  | 1:O:76:SER:O     | 1.65                     | 0.79              |
| 1:N:251:SER:O    | 1:N:254:ILE:HG12 | 1.82                     | 0.79              |
| 1:O:177:ILE:HD11 | 1:O:284:PHE:CE2  | 2.18                     | 0.79              |
| 1:O:251:SER:O    | 1:O:254:ILE:HG12 | 1.82                     | 0.79              |
| 1:P:177:ILE:HD11 | 1:P:284:PHE:CE2  | 2.17                     | 0.79              |
| 1:B:34:LYS:N     | 1:B:35:ARG:HB2   | 1.97                     | 0.79              |
| 1:B:320:LYS:O    | 1:B:323:VAL:HG22 | 1.82                     | 0.79              |
| 1:C:227:THR:CG2  | 1:D:299:THR:O    | 2.14                     | 0.79              |
| 1:F:47:ASP:O     | 1:G:323:VAL:CA   | 2.30                     | 0.79              |
| 1:F:265:ALA:HA   | 1:I:271:LYS:NZ   | 1.97                     | 0.79              |
| 1:I:308:ASN:HB3  | 1:N:229:GLU:N    | 1.51                     | 0.79              |
| 1:J:164:LEU:HD11 | 1:J:316:GLU:OE1  | 1.82                     | 0.79              |
| 1:K:63:GLY:O     | 1:K:64:LYS:HB3   | 1.83                     | 0.79              |
| 1:L:59:ILE:CD1   | 1:L:95:THR:HG21  | 2.12                     | 0.79              |
| 1:M:26:LYS:CB    | 1:M:97:VAL:HG13  | 2.13                     | 0.79              |
| 1:N:177:ILE:HD11 | 1:N:284:PHE:CE2  | 2.18                     | 0.79              |
| 1:B:59:ILE:CD1   | 1:B:95:THR:HG21  | 2.12                     | 0.78              |
| 1:B:230:GLN:HB2  | 1:G:307:THR:O    | 1.82                     | 0.78              |
| 1:C:245:GLU:O    | 1:G:52:ILE:HG12  | 1.83                     | 0.78              |
| 1:F:200:PHE:HB3  | 1:I:201:ILE:O    | 1.83                     | 0.78              |
| 1:G:272:ARG:CG   | 1:J:203:GLU:N    | 2.19                     | 0.78              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:323:VAL:CA   | 1:K:47:ASP:O     | 2.30                     | 0.78              |
| 1:K:22:ILE:HB    | 1:K:27:LYS:CE    | 2.14                     | 0.78              |
| 1:O:224:ASN:CG   | 1:O:233:SER:HB3  | 2.01                     | 0.78              |
| 1:P:44:ASN:HB2   | 1:P:64:LYS:HZ1   | 1.44                     | 0.78              |
| 1:P:251:SER:O    | 1:P:254:ILE:HG12 | 1.82                     | 0.78              |
| 1:D:43:TYR:CE2   | 1:D:67:LEU:HD13  | 2.17                     | 0.78              |
| 1:D:63:GLY:O     | 1:D:64:LYS:HB3   | 1.83                     | 0.78              |
| 1:E:219:ASP:HA   | 1:E:224:ASN:HB2  | 0.86                     | 0.78              |
| 1:F:272:ARG:HG3  | 1:I:202:GLU:CA   | 2.13                     | 0.78              |
| 1:G:177:ILE:HD11 | 1:G:284:PHE:CE2  | 2.17                     | 0.78              |
| 1:H:59:ILE:CG2   | 1:H:66:TYR:HB2   | 2.14                     | 0.78              |
| 1:H:177:ILE:HD11 | 1:H:284:PHE:CE2  | 2.18                     | 0.78              |
| 1:I:164:LEU:HD11 | 1:I:316:GLU:OE1  | 1.82                     | 0.78              |
| 1:J:59:ILE:CG2   | 1:J:66:TYR:HB2   | 2.14                     | 0.78              |
| 1:K:59:ILE:CG2   | 1:K:66:TYR:HB2   | 2.14                     | 0.78              |
| 1:L:59:ILE:CG2   | 1:L:66:TYR:HB2   | 2.14                     | 0.78              |
| 1:M:177:ILE:HD11 | 1:M:284:PHE:CE2  | 2.18                     | 0.78              |
| 1:N:26:LYS:CB    | 1:N:97:VAL:HG13  | 2.13                     | 0.78              |
| 1:N:63:GLY:O     | 1:N:64:LYS:HB3   | 1.83                     | 0.78              |
| 1:P:320:LYS:O    | 1:P:323:VAL:HG22 | 1.82                     | 0.78              |
| 1:F:198:GLU:HA   | 1:I:203:GLU:CB   | 2.12                     | 0.78              |
| 1:F:202:GLU:CG   | 1:I:271:LYS:HE3  | 2.12                     | 0.78              |
| 1:G:204:HIS:HD2  | 1:J:274:PHE:CE1  | 1.84                     | 0.78              |
| 1:I:59:ILE:CG2   | 1:I:66:TYR:HB2   | 2.14                     | 0.78              |
| 1:K:75:ASP:HA    | 1:O:245:GLU:HB2  | 1.64                     | 0.78              |
| 1:N:22:ILE:HB    | 1:N:27:LYS:CE    | 2.13                     | 0.78              |
| 1:P:63:GLY:O     | 1:P:64:LYS:HB3   | 1.83                     | 0.78              |
| 1:A:320:LYS:O    | 1:A:323:VAL:HG22 | 1.82                     | 0.78              |
| 1:C:34:LYS:N     | 1:C:35:ARG:HB2   | 1.97                     | 0.78              |
| 1:C:231:ALA:N    | 1:H:308:ASN:HD21 | 1.79                     | 0.78              |
| 1:E:177:ILE:HD11 | 1:E:284:PHE:CE2  | 2.17                     | 0.78              |
| 1:F:59:ILE:CG2   | 1:F:66:TYR:HB2   | 2.14                     | 0.78              |
| 1:G:59:ILE:CG2   | 1:G:66:TYR:HB2   | 2.14                     | 0.78              |
| 1:H:27:LYS:HE2   | 1:H:35:ARG:HE    | 1.49                     | 0.78              |
| 1:H:197:SER:O    | 1:K:203:GLU:CB   | 2.32                     | 0.78              |
| 1:I:22:ILE:HB    | 1:I:27:LYS:CE    | 2.14                     | 0.78              |
| 1:I:44:ASN:HB2   | 1:I:64:LYS:HZ1   | 1.47                     | 0.78              |
| 1:O:320:LYS:O    | 1:O:323:VAL:HG22 | 1.82                     | 0.78              |
| 1:A:61:LEU:HB3   | 1:A:66:TYR:CE1   | 2.19                     | 0.78              |
| 1:B:27:LYS:HE2   | 1:B:35:ARG:HE    | 1.49                     | 0.78              |
| 1:B:227:THR:CG2  | 1:C:299:THR:O    | 2.14                     | 0.78              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:22:ILE:HB    | 1:E:27:LYS:CE    | 2.14                     | 0.78              |
| 1:E:59:ILE:CG2   | 1:E:66:TYR:HB2   | 2.14                     | 0.78              |
| 1:F:177:ILE:HD11 | 1:F:284:PHE:CE2  | 2.17                     | 0.78              |
| 1:H:114:LEU:HG   | 1:H:156:ALA:HB1  | 1.66                     | 0.78              |
| 1:I:177:ILE:HD11 | 1:I:284:PHE:CD2  | 2.17                     | 0.78              |
| 1:K:323:VAL:CA   | 1:L:47:ASP:O     | 2.30                     | 0.78              |
| 1:L:164:LEU:HD12 | 1:L:316:GLU:HB2  | 1.66                     | 0.78              |
| 1:M:27:LYS:HE2   | 1:M:35:ARG:HE    | 1.49                     | 0.78              |
| 1:F:49:TYR:CD1   | 1:G:320:LYS:O    | 2.26                     | 0.78              |
| 1:G:22:ILE:HB    | 1:G:27:LYS:CE    | 2.14                     | 0.78              |
| 1:G:48:GLY:HA2   | 1:H:322:ALA:C    | 2.04                     | 0.78              |
| 1:G:114:LEU:HG   | 1:G:156:ALA:HB1  | 1.66                     | 0.78              |
| 1:G:251:SER:O    | 1:G:254:ILE:HG12 | 1.82                     | 0.78              |
| 1:I:54:GLY:HA3   | 1:I:56:SER:N     | 1.99                     | 0.78              |
| 1:K:52:ILE:HG23  | 1:O:248:THR:CA   | 2.10                     | 0.78              |
| 1:K:164:LEU:HD11 | 1:K:316:GLU:OE1  | 1.82                     | 0.78              |
| 1:K:177:ILE:HD11 | 1:K:284:PHE:CD2  | 2.17                     | 0.78              |
| 1:K:322:ALA:C    | 1:L:48:GLY:HA2   | 2.04                     | 0.78              |
| 1:M:54:GLY:HA3   | 1:M:56:SER:N     | 1.99                     | 0.78              |
| 1:M:326:TYR:HB2  | 1:N:47:ASP:OD2   | 1.80                     | 0.78              |
| 1:N:320:LYS:O    | 1:N:323:VAL:HG22 | 1.82                     | 0.78              |
| 1:N:326:TYR:HB2  | 1:O:47:ASP:OD2   | 1.80                     | 0.78              |
| 1:A:63:GLY:O     | 1:A:64:LYS:HB3   | 1.83                     | 0.78              |
| 1:B:177:ILE:HD11 | 1:B:284:PHE:CE2  | 2.17                     | 0.78              |
| 1:C:22:ILE:HB    | 1:C:27:LYS:CE    | 2.14                     | 0.78              |
| 1:D:177:ILE:HD11 | 1:D:284:PHE:CE2  | 2.17                     | 0.78              |
| 1:E:48:GLY:HA2   | 1:F:322:ALA:C    | 2.04                     | 0.78              |
| 1:F:54:GLY:HA3   | 1:F:56:SER:N     | 1.99                     | 0.78              |
| 1:I:308:ASN:CG   | 1:N:230:GLN:C    | 2.39                     | 0.78              |
| 1:I:322:ALA:C    | 1:J:48:GLY:HA2   | 2.04                     | 0.78              |
| 1:J:322:ALA:C    | 1:K:48:GLY:HA2   | 2.04                     | 0.78              |
| 1:K:54:GLY:HA3   | 1:K:56:SER:N     | 1.99                     | 0.78              |
| 1:L:61:LEU:HB3   | 1:L:66:TYR:CE1   | 2.19                     | 0.78              |
| 1:L:164:LEU:HD11 | 1:L:316:GLU:OE1  | 1.82                     | 0.78              |
| 1:M:251:SER:O    | 1:M:254:ILE:HG12 | 1.82                     | 0.78              |
| 1:M:301:PRO:HG3  | 1:N:228:ASN:H    | 1.49                     | 0.78              |
| 1:M:320:LYS:O    | 1:M:323:VAL:HG22 | 1.82                     | 0.78              |
| 1:O:61:LEU:HB3   | 1:O:66:TYR:CE1   | 2.19                     | 0.78              |
| 1:P:22:ILE:HB    | 1:P:27:LYS:CE    | 2.14                     | 0.78              |
| 1:A:27:LYS:HE2   | 1:A:35:ARG:HE    | 1.49                     | 0.78              |
| 1:A:241:LYS:HB3  | 1:F:165:GLU:HG2  | 1.64                     | 0.78              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:44:ASN:HB2   | 1:D:64:LYS:HZ1   | 1.48                     | 0.78              |
| 1:D:54:GLY:HA3   | 1:D:56:SER:N     | 1.99                     | 0.78              |
| 1:F:48:GLY:HA2   | 1:G:322:ALA:C    | 2.04                     | 0.78              |
| 1:F:114:LEU:HG   | 1:F:156:ALA:HB1  | 1.66                     | 0.78              |
| 1:G:27:LYS:HE2   | 1:G:35:ARG:HE    | 1.49                     | 0.78              |
| 1:G:164:LEU:HD12 | 1:G:316:GLU:HB2  | 1.66                     | 0.78              |
| 1:I:61:LEU:HB3   | 1:I:66:TYR:CE1   | 2.19                     | 0.78              |
| 1:K:49:TYR:CZ    | 1:O:246:ILE:N    | 2.51                     | 0.78              |
| 1:K:164:LEU:HD12 | 1:K:316:GLU:HB2  | 1.66                     | 0.78              |
| 1:K:168:ASN:HB3  | 1:L:71:GLN:HE21  | 0.67                     | 0.78              |
| 1:L:68:ILE:HD13  | 1:L:92:THR:CB    | 2.06                     | 0.78              |
| 1:M:169:PHE:HD2  | 1:N:76:SER:O     | 1.65                     | 0.78              |
| 1:M:320:LYS:HD3  | 1:N:50:ILE:H     | 1.45                     | 0.78              |
| 1:A:26:LYS:CB    | 1:A:97:VAL:HG13  | 2.13                     | 0.78              |
| 1:A:242:LYS:HA   | 1:F:164:LEU:O    | 1.84                     | 0.78              |
| 1:B:22:ILE:HB    | 1:B:27:LYS:CE    | 2.14                     | 0.78              |
| 1:B:54:GLY:HA3   | 1:B:56:SER:N     | 1.99                     | 0.78              |
| 1:B:131:LYS:HD2  | 1:B:149:ILE:CD1  | 2.14                     | 0.78              |
| 1:B:230:GLN:HB3  | 1:G:306:ILE:HG23 | 1.65                     | 0.78              |
| 1:B:231:ALA:H    | 1:G:308:ASN:HD21 | 1.29                     | 0.78              |
| 1:B:246:ILE:CD1  | 1:G:323:VAL:HG13 | 2.14                     | 0.78              |
| 1:C:131:LYS:HD2  | 1:C:149:ILE:CD1  | 2.14                     | 0.78              |
| 1:E:61:LEU:HB3   | 1:E:66:TYR:CE1   | 2.19                     | 0.78              |
| 1:E:131:LYS:HD2  | 1:E:149:ILE:CD1  | 2.14                     | 0.78              |
| 1:F:27:LYS:HE2   | 1:F:35:ARG:HE    | 1.49                     | 0.78              |
| 1:F:164:LEU:HD12 | 1:F:316:GLU:HB2  | 1.66                     | 0.78              |
| 1:G:203:GLU:HB2  | 1:J:197:SER:C    | 2.04                     | 0.78              |
| 1:H:164:LEU:HD12 | 1:H:316:GLU:HB2  | 1.66                     | 0.78              |
| 1:I:114:LEU:HG   | 1:I:156:ALA:HB1  | 1.66                     | 0.78              |
| 1:J:164:LEU:HD12 | 1:J:316:GLU:HB2  | 1.66                     | 0.78              |
| 1:K:278:GLN:H    | 1:L:218:THR:HG1  | 1.31                     | 0.78              |
| 1:L:114:LEU:HG   | 1:L:156:ALA:HB1  | 1.66                     | 0.78              |
| 1:N:61:LEU:HB3   | 1:N:66:TYR:CE1   | 2.19                     | 0.78              |
| 1:N:320:LYS:HD3  | 1:O:50:ILE:H     | 1.45                     | 0.78              |
| 1:O:54:GLY:HA3   | 1:O:56:SER:N     | 1.99                     | 0.78              |
| 1:P:54:GLY:HA3   | 1:P:56:SER:N     | 1.99                     | 0.78              |
| 1:P:131:LYS:HD2  | 1:P:149:ILE:CD1  | 2.14                     | 0.78              |
| 1:B:61:LEU:HB3   | 1:B:66:TYR:CE1   | 2.19                     | 0.78              |
| 1:B:228:ASN:C    | 1:G:308:ASN:HB3  | 2.03                     | 0.78              |
| 1:E:114:LEU:HG   | 1:E:156:ALA:HB1  | 1.66                     | 0.78              |
| 1:E:164:LEU:HD12 | 1:E:316:GLU:HB2  | 1.66                     | 0.78              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:202:GLU:HG3  | 1:J:271:LYS:HG2  | 1.65                     | 0.78              |
| 1:H:131:LYS:HD2  | 1:H:149:ILE:CD1  | 2.14                     | 0.78              |
| 1:J:73:VAL:CG2   | 1:N:240:MET:HE3  | 1.70                     | 0.78              |
| 1:M:131:LYS:HD2  | 1:M:149:ILE:CD1  | 2.14                     | 0.78              |
| 1:O:323:VAL:HG22 | 1:P:47:ASP:CA    | 2.10                     | 0.78              |
| 1:A:22:ILE:HB    | 1:A:27:LYS:CE    | 2.13                     | 0.77              |
| 1:A:131:LYS:HD2  | 1:A:149:ILE:CD1  | 2.14                     | 0.77              |
| 1:D:131:LYS:HD2  | 1:D:149:ILE:CD1  | 2.14                     | 0.77              |
| 1:D:164:LEU:HD12 | 1:D:316:GLU:HB2  | 1.66                     | 0.77              |
| 1:I:164:LEU:HD12 | 1:I:316:GLU:HB2  | 1.66                     | 0.77              |
| 1:J:131:LYS:HD2  | 1:J:149:ILE:CD1  | 2.14                     | 0.77              |
| 1:L:52:ILE:HG12  | 1:P:245:GLU:O    | 1.84                     | 0.77              |
| 1:E:26:LYS:CB    | 1:E:97:VAL:HG13  | 2.13                     | 0.77              |
| 1:F:251:SER:O    | 1:F:254:ILE:HG12 | 1.82                     | 0.77              |
| 1:G:54:GLY:HA3   | 1:G:56:SER:N     | 1.99                     | 0.77              |
| 1:G:131:LYS:HD2  | 1:G:149:ILE:CD1  | 2.14                     | 0.77              |
| 1:H:22:ILE:HB    | 1:H:27:LYS:CE    | 2.13                     | 0.77              |
| 1:H:54:GLY:HA3   | 1:H:56:SER:N     | 1.99                     | 0.77              |
| 1:H:251:SER:O    | 1:H:254:ILE:HG12 | 1.82                     | 0.77              |
| 1:I:245:GLU:OE2  | 1:N:51:ASP:O     | 2.02                     | 0.77              |
| 1:J:114:LEU:HG   | 1:J:156:ALA:HB1  | 1.66                     | 0.77              |
| 1:L:131:LYS:HD2  | 1:L:149:ILE:CD1  | 2.14                     | 0.77              |
| 1:M:22:ILE:HB    | 1:M:27:LYS:CE    | 2.14                     | 0.77              |
| 1:O:169:PHE:HD2  | 1:P:76:SER:O     | 1.65                     | 0.77              |
| 1:O:326:TYR:HB2  | 1:P:47:ASP:OD2   | 1.80                     | 0.77              |
| 1:B:26:LYS:CB    | 1:B:97:VAL:HG13  | 2.13                     | 0.77              |
| 1:C:164:LEU:HD12 | 1:C:316:GLU:HB2  | 1.66                     | 0.77              |
| 1:I:165:GLU:CG   | 1:N:241:LYS:O    | 2.31                     | 0.77              |
| 1:K:114:LEU:HG   | 1:K:156:ALA:HB1  | 1.66                     | 0.77              |
| 1:K:275:LYS:NZ   | 1:L:224:ASN:HD21 | 1.72                     | 0.77              |
| 1:M:61:LEU:HB3   | 1:M:66:TYR:CE1   | 2.19                     | 0.77              |
| 1:N:131:LYS:HD2  | 1:N:149:ILE:CD1  | 2.14                     | 0.77              |
| 1:N:322:ALA:O    | 1:O:47:ASP:CB    | 2.31                     | 0.77              |
| 1:P:61:LEU:HB3   | 1:P:66:TYR:CE1   | 2.19                     | 0.77              |
| 1:A:54:GLY:HA3   | 1:A:56:SER:N     | 1.99                     | 0.77              |
| 1:A:228:ASN:H    | 1:B:301:PRO:HG3  | 1.49                     | 0.77              |
| 1:C:27:LYS:HE2   | 1:C:35:ARG:HE    | 1.49                     | 0.77              |
| 1:L:27:LYS:CE    | 1:L:35:ARG:HE    | 1.98                     | 0.77              |
| 1:L:54:GLY:HA3   | 1:L:56:SER:N     | 1.99                     | 0.77              |
| 1:N:301:PRO:HG3  | 1:O:228:ASN:H    | 1.49                     | 0.77              |
| 1:A:227:THR:CG2  | 1:B:299:THR:O    | 2.14                     | 0.77              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:D:61:LEU:HB3  | 1:D:66:TYR:CE1   | 2.19                     | 0.77              |
| 1:E:27:LYS:HE2  | 1:E:35:ARG:HE    | 1.49                     | 0.77              |
| 1:F:22:ILE:HB   | 1:F:27:LYS:CE    | 2.14                     | 0.77              |
| 1:F:26:LYS:CB   | 1:F:97:VAL:HG13  | 2.13                     | 0.77              |
| 1:G:61:LEU:HB3  | 1:G:66:TYR:CE1   | 2.19                     | 0.77              |
| 1:G:63:GLY:O    | 1:G:64:LYS:HB3   | 1.83                     | 0.77              |
| 1:H:61:LEU:HB3  | 1:H:66:TYR:CE1   | 2.19                     | 0.77              |
| 1:H:271:LYS:NZ  | 1:K:265:ALA:HA   | 1.99                     | 0.77              |
| 1:H:274:PHE:CZ  | 1:K:203:GLU:CD   | 2.58                     | 0.77              |
| 1:I:308:ASN:OD1 | 1:N:230:GLN:CA   | 2.25                     | 0.77              |
| 1:M:114:LEU:HG  | 1:M:156:ALA:HB1  | 1.66                     | 0.77              |
| 1:N:27:LYS:HE2  | 1:N:35:ARG:HE    | 1.49                     | 0.77              |
| 1:P:59:ILE:CG2  | 1:P:66:TYR:HB2   | 2.14                     | 0.77              |
| 1:A:59:ILE:CG2  | 1:A:66:TYR:HB2   | 2.14                     | 0.77              |
| 1:A:231:ALA:N   | 1:F:308:ASN:HD22 | 1.80                     | 0.77              |
| 1:C:26:LYS:CB   | 1:C:97:VAL:HG13  | 2.13                     | 0.77              |
| 1:C:27:LYS:CE   | 1:C:35:ARG:HE    | 1.98                     | 0.77              |
| 1:D:245:GLU:OE2 | 1:H:76:SER:CA    | 2.30                     | 0.77              |
| 1:E:54:GLY:HA3  | 1:E:56:SER:N     | 1.99                     | 0.77              |
| 1:E:218:THR:HG1 | 1:F:278:GLN:H    | 1.33                     | 0.77              |
| 1:E:251:SER:O   | 1:E:254:ILE:HG12 | 1.82                     | 0.77              |
| 1:H:271:LYS:NZ  | 1:K:268:LEU:HD22 | 1.99                     | 0.77              |
| 1:I:63:GLY:O    | 1:I:64:LYS:HB3   | 1.83                     | 0.77              |
| 1:J:27:LYS:CE   | 1:J:35:ARG:HE    | 1.98                     | 0.77              |
| 1:J:61:LEU:HB3  | 1:J:66:TYR:CE1   | 2.19                     | 0.77              |
| 1:J:63:GLY:O    | 1:J:64:LYS:HB3   | 1.83                     | 0.77              |
| 1:N:114:LEU:HG  | 1:N:156:ALA:HB1  | 1.66                     | 0.77              |
| 1:B:47:ASP:CB   | 1:C:322:ALA:O    | 2.31                     | 0.77              |
| 1:C:54:GLY:HA3  | 1:C:56:SER:N     | 1.99                     | 0.77              |
| 1:C:228:ASN:H   | 1:D:301:PRO:HG3  | 1.49                     | 0.77              |
| 1:D:22:ILE:HB   | 1:D:27:LYS:CE    | 2.13                     | 0.77              |
| 1:D:59:ILE:CG2  | 1:D:66:TYR:HB2   | 2.14                     | 0.77              |
| 1:E:47:ASP:O    | 1:F:323:VAL:CA   | 2.30                     | 0.77              |
| 1:F:131:LYS:HD2 | 1:F:149:ILE:CD1  | 2.14                     | 0.77              |
| 1:G:271:LYS:HG2 | 1:J:202:GLU:HG3  | 1.65                     | 0.77              |
| 1:H:63:GLY:O    | 1:H:64:LYS:HB3   | 1.83                     | 0.77              |
| 1:I:278:GLN:H   | 1:J:218:THR:HG1  | 1.32                     | 0.77              |
| 1:M:250:SER:HB3 | 1:M:253:VAL:CB   | 2.14                     | 0.77              |
| 1:N:250:SER:HB3 | 1:N:253:VAL:CB   | 2.14                     | 0.77              |
| 1:O:22:ILE:HB   | 1:O:27:LYS:CE    | 2.14                     | 0.77              |
| 1:O:63:GLY:O    | 1:O:64:LYS:HB3   | 1.83                     | 0.77              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:219:ASP:HA   | 1:D:224:ASN:HB2  | 0.86                     | 0.77              |
| 1:G:49:TYR:CE2   | 1:G:75:ASP:HA    | 2.20                     | 0.77              |
| 1:H:202:GLU:OE2  | 1:K:272:ARG:HA   | 1.85                     | 0.77              |
| 1:H:268:LEU:CA   | 1:K:268:LEU:HD11 | 2.15                     | 0.77              |
| 1:K:61:LEU:HB3   | 1:K:66:TYR:CE1   | 2.19                     | 0.77              |
| 1:M:322:ALA:O    | 1:N:47:ASP:CB    | 2.31                     | 0.77              |
| 1:N:54:GLY:HA3   | 1:N:56:SER:N     | 1.99                     | 0.77              |
| 1:O:114:LEU:HG   | 1:O:156:ALA:HB1  | 1.66                     | 0.77              |
| 1:P:27:LYS:HE2   | 1:P:35:ARG:HE    | 1.49                     | 0.77              |
| 1:B:164:LEU:HD12 | 1:B:316:GLU:HB2  | 1.66                     | 0.77              |
| 1:C:61:LEU:HB3   | 1:C:66:TYR:CE1   | 2.19                     | 0.77              |
| 1:C:232:GLU:N    | 1:H:308:ASN:HD21 | 1.82                     | 0.77              |
| 1:F:27:LYS:CE    | 1:F:35:ARG:HE    | 1.98                     | 0.77              |
| 1:G:26:LYS:CB    | 1:G:97:VAL:HG13  | 2.13                     | 0.77              |
| 1:I:52:ILE:HG23  | 1:M:248:THR:HA   | 1.64                     | 0.77              |
| 1:I:131:LYS:HD2  | 1:I:149:ILE:CD1  | 2.14                     | 0.77              |
| 1:J:22:ILE:HB    | 1:J:27:LYS:CE    | 2.14                     | 0.77              |
| 1:J:54:GLY:HA3   | 1:J:56:SER:N     | 1.99                     | 0.77              |
| 1:M:27:LYS:CE    | 1:M:35:ARG:HE    | 1.98                     | 0.77              |
| 1:O:44:ASN:HB2   | 1:O:64:LYS:HZ1   | 1.47                     | 0.77              |
| 1:O:131:LYS:HD2  | 1:O:149:ILE:CD1  | 2.14                     | 0.77              |
| 1:A:27:LYS:CE    | 1:A:35:ARG:HE    | 1.98                     | 0.77              |
| 1:A:231:ALA:H    | 1:F:308:ASN:HD21 | 1.32                     | 0.77              |
| 1:B:59:ILE:CG2   | 1:B:66:TYR:HB2   | 2.14                     | 0.77              |
| 1:D:26:LYS:CB    | 1:D:97:VAL:HG13  | 2.13                     | 0.77              |
| 1:D:246:ILE:HG12 | 1:H:50:ILE:C     | 1.94                     | 0.77              |
| 1:E:27:LYS:CE    | 1:E:35:ARG:HE    | 1.98                     | 0.77              |
| 1:F:203:GLU:CD   | 1:I:274:PHE:CZ   | 2.57                     | 0.77              |
| 1:G:27:LYS:CE    | 1:G:35:ARG:HE    | 1.98                     | 0.77              |
| 1:J:52:ILE:HG23  | 1:N:247:ASP:O    | 1.85                     | 0.77              |
| 1:L:22:ILE:HB    | 1:L:27:LYS:CE    | 2.14                     | 0.77              |
| 1:L:230:GLN:HE22 | 1:P:290:GLN:HB3  | 1.50                     | 0.77              |
| 1:O:59:ILE:CG2   | 1:O:66:TYR:HB2   | 2.14                     | 0.77              |
| 1:O:250:SER:HB3  | 1:O:253:VAL:CB   | 2.14                     | 0.77              |
| 1:A:51:ASP:O     | 1:F:245:GLU:OE2  | 2.03                     | 0.76              |
| 1:A:114:LEU:HG   | 1:A:156:ALA:HB1  | 1.66                     | 0.76              |
| 1:A:248:THR:CG2  | 1:E:52:ILE:HA    | 2.08                     | 0.76              |
| 1:B:246:ILE:HD13 | 1:F:50:ILE:HG23  | 0.84                     | 0.76              |
| 1:C:59:ILE:CG2   | 1:C:66:TYR:HB2   | 2.13                     | 0.76              |
| 1:I:49:TYR:CE2   | 1:I:75:ASP:HA    | 2.20                     | 0.76              |
| 1:K:234:ALA:CB   | 1:K:235:LEU:HA   | 2.15                     | 0.76              |

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| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:L:44:ASN:HB2   | 1:L:64:LYS:HZ1  | 1.48                     | 0.76              |
| 1:M:59:ILE:CG2   | 1:M:66:TYR:HB2  | 2.14                     | 0.76              |
| 1:O:322:ALA:O    | 1:P:47:ASP:CB   | 2.31                     | 0.76              |
| 1:A:229:GLU:N    | 1:F:309:ASN:OD1 | 2.18                     | 0.76              |
| 1:A:245:GLU:CB   | 1:E:75:ASP:N    | 2.29                     | 0.76              |
| 1:C:219:ASP:HA   | 1:C:224:ASN:HB2 | 0.86                     | 0.76              |
| 1:G:197:SER:C    | 1:J:203:GLU:HB2 | 2.05                     | 0.76              |
| 1:H:27:LYS:CE    | 1:H:35:ARG:HE   | 1.98                     | 0.76              |
| 1:K:49:TYR:CE2   | 1:K:75:ASP:HA   | 2.20                     | 0.76              |
| 1:K:131:LYS:HD2  | 1:K:149:ILE:CD1 | 2.14                     | 0.76              |
| 1:P:114:LEU:HG   | 1:P:156:ALA:HB1 | 1.66                     | 0.76              |
| 1:A:50:ILE:H     | 1:B:320:LYS:HD3 | 1.45                     | 0.76              |
| 1:B:114:LEU:HG   | 1:B:156:ALA:HB1 | 1.66                     | 0.76              |
| 1:D:27:LYS:CE    | 1:D:35:ARG:HE   | 1.98                     | 0.76              |
| 1:D:116:VAL:CG2  | 1:D:121:LYS:HG3 | 2.16                     | 0.76              |
| 1:F:63:GLY:O     | 1:F:64:LYS:HB3  | 1.83                     | 0.76              |
| 1:N:116:VAL:CG2  | 1:N:121:LYS:HG3 | 2.16                     | 0.76              |
| 1:O:116:VAL:CG2  | 1:O:121:LYS:HG3 | 2.16                     | 0.76              |
| 1:A:164:LEU:HD12 | 1:A:316:GLU:HB2 | 1.66                     | 0.76              |
| 1:B:228:ASN:H    | 1:C:301:PRO:HG3 | 1.49                     | 0.76              |
| 1:B:246:ILE:CG1  | 1:G:320:LYS:HA  | 2.16                     | 0.76              |
| 1:E:63:GLY:O     | 1:E:64:LYS:HB3  | 1.83                     | 0.76              |
| 1:F:61:LEU:HB3   | 1:F:66:TYR:CE1  | 2.19                     | 0.76              |
| 1:F:218:THR:CA   | 1:G:278:GLN:OE1 | 2.34                     | 0.76              |
| 1:H:49:TYR:CE2   | 1:H:75:ASP:HA   | 2.20                     | 0.76              |
| 1:H:204:HIS:CE1  | 1:K:274:PHE:HD1 | 2.02                     | 0.76              |
| 1:J:308:ASN:HD22 | 1:O:231:ALA:C   | 1.89                     | 0.76              |
| 1:K:308:ASN:HB3  | 1:P:229:GLU:N   | 1.58                     | 0.76              |
| 1:P:250:SER:HB3  | 1:P:253:VAL:CB  | 2.14                     | 0.76              |
| 1:B:27:LYS:CE    | 1:B:35:ARG:HE   | 1.98                     | 0.76              |
| 1:B:49:TYR:C     | 1:C:320:LYS:CG  | 2.21                     | 0.76              |
| 1:E:49:TYR:CD1   | 1:F:320:LYS:O   | 2.26                     | 0.76              |
| 1:F:183:ASN:ND2  | 1:I:197:SER:HB3 | 2.01                     | 0.76              |
| 1:G:218:THR:CA   | 1:H:278:GLN:OE1 | 2.34                     | 0.76              |
| 1:H:26:LYS:CB    | 1:H:97:VAL:HG13 | 2.13                     | 0.76              |
| 1:I:58:LYS:NZ    | 1:I:65:GLU:HG2  | 2.01                     | 0.76              |
| 1:J:222:ASN:HB2  | 1:J:237:ASN:HB2 | 1.68                     | 0.76              |
| 1:L:222:ASN:HB2  | 1:L:237:ASN:HB2 | 1.68                     | 0.76              |
| 1:N:27:LYS:CE    | 1:N:35:ARG:HE   | 1.98                     | 0.76              |
| 1:N:59:ILE:CG2   | 1:N:66:TYR:HB2  | 2.13                     | 0.76              |
| 1:P:26:LYS:CB    | 1:P:97:VAL:HG13 | 2.13                     | 0.76              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:A:49:TYR:CE2  | 1:A:75:ASP:HA    | 2.20                     | 0.76              |
| 1:A:58:LYS:NZ   | 1:A:65:GLU:HG2   | 2.01                     | 0.76              |
| 1:A:116:VAL:CG2 | 1:A:121:LYS:HG3  | 2.16                     | 0.76              |
| 1:A:246:ILE:CG1 | 1:F:320:LYS:HA   | 2.16                     | 0.76              |
| 1:B:219:ASP:HA  | 1:B:224:ASN:HB2  | 0.86                     | 0.76              |
| 1:C:47:ASP:C    | 1:D:320:LYS:C    | 2.44                     | 0.76              |
| 1:C:234:ALA:CB  | 1:C:235:LEU:HA   | 2.15                     | 0.76              |
| 1:D:58:LYS:NZ   | 1:D:65:GLU:HG2   | 2.01                     | 0.76              |
| 1:E:234:ALA:CB  | 1:E:235:LEU:HA   | 2.16                     | 0.76              |
| 1:F:58:LYS:NZ   | 1:F:65:GLU:HG2   | 2.01                     | 0.76              |
| 1:F:198:GLU:N   | 1:I:203:GLU:HB2  | 1.99                     | 0.76              |
| 1:F:203:GLU:HB2 | 1:I:198:GLU:CA   | 2.15                     | 0.76              |
| 1:G:197:SER:CB  | 1:J:183:ASN:HD21 | 1.96                     | 0.76              |
| 1:H:265:ALA:CA  | 1:K:271:LYS:HZ2  | 1.95                     | 0.76              |
| 1:I:27:LYS:CE   | 1:I:35:ARG:HE    | 1.98                     | 0.76              |
| 1:I:278:GLN:OE1 | 1:J:218:THR:CA   | 2.34                     | 0.76              |
| 1:K:27:LYS:CE   | 1:K:35:ARG:HE    | 1.97                     | 0.76              |
| 1:K:222:ASN:HB2 | 1:K:237:ASN:HB2  | 1.68                     | 0.76              |
| 1:L:49:TYR:CE2  | 1:L:75:ASP:HA    | 2.20                     | 0.76              |
| 1:M:49:TYR:CE2  | 1:M:75:ASP:HA    | 2.20                     | 0.76              |
| 1:M:168:ASN:HA  | 1:N:72:GLY:HA3   | 1.67                     | 0.76              |
| 1:M:222:ASN:HB2 | 1:M:237:ASN:HB2  | 1.68                     | 0.76              |
| 1:N:49:TYR:CE2  | 1:N:75:ASP:HA    | 2.20                     | 0.76              |
| 1:N:58:LYS:NZ   | 1:N:65:GLU:HG2   | 2.01                     | 0.76              |
| 1:N:322:ALA:O   | 1:O:47:ASP:HB3   | 1.85                     | 0.76              |
| 1:O:322:ALA:O   | 1:P:47:ASP:HB3   | 1.85                     | 0.76              |
| 1:B:222:ASN:HB2 | 1:B:237:ASN:HB2  | 1.68                     | 0.76              |
| 1:C:116:VAL:CG2 | 1:C:121:LYS:HG3  | 2.16                     | 0.76              |
| 1:D:27:LYS:HE2  | 1:D:35:ARG:HE    | 1.49                     | 0.76              |
| 1:D:248:THR:CG2 | 1:H:52:ILE:HG23  | 2.16                     | 0.76              |
| 1:E:58:LYS:NZ   | 1:E:65:GLU:HG2   | 2.01                     | 0.76              |
| 1:E:218:THR:CA  | 1:F:278:GLN:OE1  | 2.34                     | 0.76              |
| 1:G:202:GLU:HA  | 1:J:272:ARG:CB   | 2.16                     | 0.76              |
| 1:H:116:VAL:CG2 | 1:H:121:LYS:HG3  | 2.16                     | 0.76              |
| 1:H:201:ILE:O   | 1:K:200:PHE:HB3  | 1.85                     | 0.76              |
| 1:I:27:LYS:HE2  | 1:I:35:ARG:HE    | 1.49                     | 0.76              |
| 1:I:73:VAL:CB   | 1:M:240:MET:CE   | 2.63                     | 0.76              |
| 1:I:165:GLU:OE2 | 1:N:241:LYS:CA   | 2.32                     | 0.76              |
| 1:I:234:ALA:CB  | 1:I:235:LEU:HA   | 2.16                     | 0.76              |
| 1:I:323:VAL:CA  | 1:J:47:ASP:O     | 2.30                     | 0.76              |
| 1:J:278:GLN:OE1 | 1:K:218:THR:CA   | 2.34                     | 0.76              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:27:LYS:HE2   | 1:K:35:ARG:HE    | 1.49                     | 0.76              |
| 1:M:116:VAL:CG2  | 1:M:121:LYS:HG3  | 2.16                     | 0.76              |
| 1:N:164:LEU:HD12 | 1:N:316:GLU:HB2  | 1.66                     | 0.76              |
| 1:N:299:THR:O    | 1:O:227:THR:CG2  | 2.14                     | 0.76              |
| 1:O:164:LEU:HD12 | 1:O:316:GLU:HB2  | 1.66                     | 0.76              |
| 1:O:299:THR:O    | 1:P:227:THR:CG2  | 2.14                     | 0.76              |
| 1:O:301:PRO:HG3  | 1:P:228:ASN:H    | 1.49                     | 0.76              |
| 1:P:27:LYS:CE    | 1:P:35:ARG:HE    | 1.98                     | 0.76              |
| 1:P:116:VAL:CG2  | 1:P:121:LYS:HG3  | 2.16                     | 0.76              |
| 1:A:219:ASP:HA   | 1:A:224:ASN:HB2  | 0.86                     | 0.76              |
| 1:A:222:ASN:HB2  | 1:A:237:ASN:HB2  | 1.68                     | 0.76              |
| 1:A:231:ALA:HB2  | 1:F:307:THR:HA   | 1.67                     | 0.76              |
| 1:A:246:ILE:CD1  | 1:F:320:LYS:O    | 2.33                     | 0.76              |
| 1:B:47:ASP:HB3   | 1:C:322:ALA:O    | 1.85                     | 0.76              |
| 1:C:47:ASP:HB3   | 1:D:322:ALA:O    | 1.85                     | 0.76              |
| 1:C:222:ASN:HB2  | 1:C:237:ASN:HB2  | 1.68                     | 0.76              |
| 1:G:116:VAL:CG2  | 1:G:121:LYS:HG3  | 2.16                     | 0.76              |
| 1:H:222:ASN:HB2  | 1:H:237:ASN:HB2  | 1.68                     | 0.76              |
| 1:I:222:ASN:HB2  | 1:I:237:ASN:HB2  | 1.68                     | 0.76              |
| 1:J:27:LYS:HE2   | 1:J:35:ARG:HE    | 1.49                     | 0.76              |
| 1:L:250:SER:HB3  | 1:L:253:VAL:CB   | 2.14                     | 0.76              |
| 1:M:164:LEU:HD12 | 1:M:316:GLU:HB2  | 1.66                     | 0.76              |
| 1:M:322:ALA:O    | 1:N:47:ASP:HB3   | 1.86                     | 0.76              |
| 1:N:168:ASN:HA   | 1:O:72:GLY:HA3   | 1.67                     | 0.76              |
| 1:P:164:LEU:HD12 | 1:P:316:GLU:HB2  | 1.66                     | 0.76              |
| 1:A:47:ASP:HB3   | 1:B:322:ALA:O    | 1.86                     | 0.76              |
| 1:A:230:GLN:CB   | 1:F:306:ILE:HG13 | 2.11                     | 0.76              |
| 1:A:234:ALA:CB   | 1:A:235:LEU:HA   | 2.15                     | 0.76              |
| 1:C:114:LEU:HG   | 1:C:156:ALA:HB1  | 1.66                     | 0.76              |
| 1:D:222:ASN:HB2  | 1:D:237:ASN:HB2  | 1.68                     | 0.76              |
| 1:D:245:GLU:HB3  | 1:H:74:GLU:C     | 2.05                     | 0.76              |
| 1:E:222:ASN:HB2  | 1:E:237:ASN:HB2  | 1.68                     | 0.76              |
| 1:E:225:LEU:HD13 | 1:F:300:TYR:CZ   | 2.20                     | 0.76              |
| 1:G:58:LYS:NZ    | 1:G:65:GLU:HG2   | 2.01                     | 0.76              |
| 1:H:234:ALA:CB   | 1:H:235:LEU:HA   | 2.16                     | 0.76              |
| 1:I:116:VAL:CG2  | 1:I:121:LYS:HG3  | 2.16                     | 0.76              |
| 1:I:250:SER:HB3  | 1:I:253:VAL:CB   | 2.14                     | 0.76              |
| 1:J:250:SER:HB3  | 1:J:253:VAL:CB   | 2.14                     | 0.76              |
| 1:K:164:LEU:HD13 | 1:K:313:THR:HA   | 1.68                     | 0.76              |
| 1:K:168:ASN:CG   | 1:L:71:GLN:HE22  | 1.70                     | 0.76              |
| 1:K:250:SER:HB3  | 1:K:253:VAL:CB   | 2.14                     | 0.76              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:27:LYS:CE    | 1:O:35:ARG:HE    | 1.98                     | 0.76              |
| 1:O:49:TYR:CE2   | 1:O:75:ASP:HA    | 2.20                     | 0.76              |
| 1:O:168:ASN:HA   | 1:P:72:GLY:HA3   | 1.67                     | 0.76              |
| 1:P:49:TYR:CE2   | 1:P:75:ASP:HA    | 2.20                     | 0.76              |
| 1:P:58:LYS:NZ    | 1:P:65:GLU:HG2   | 2.01                     | 0.76              |
| 1:B:240:MET:HE3  | 1:F:73:VAL:HG21  | 0.76                     | 0.76              |
| 1:C:50:ILE:CA    | 1:D:320:LYS:HG2  | 2.16                     | 0.76              |
| 1:J:58:LYS:NZ    | 1:J:65:GLU:HG2   | 2.01                     | 0.76              |
| 1:K:166:GLN:HB3  | 1:P:242:LYS:CB   | 2.15                     | 0.76              |
| 1:K:284:PHE:CZ   | 1:K:296:ILE:HG12 | 2.21                     | 0.76              |
| 1:N:222:ASN:HB2  | 1:N:237:ASN:HB2  | 1.68                     | 0.76              |
| 1:P:234:ALA:CB   | 1:P:235:LEU:HA   | 2.15                     | 0.76              |
| 1:A:46:GLU:CA    | 1:B:324:ALA:HB1  | 1.92                     | 0.75              |
| 1:C:49:TYR:CE2   | 1:C:75:ASP:HA    | 2.20                     | 0.75              |
| 1:C:240:MET:CE   | 1:G:73:VAL:HB    | 2.16                     | 0.75              |
| 1:C:246:ILE:HD12 | 1:H:320:LYS:HA   | 0.76                     | 0.75              |
| 1:F:116:VAL:CG2  | 1:F:121:LYS:HG3  | 2.16                     | 0.75              |
| 1:G:222:ASN:HB2  | 1:G:237:ASN:HB2  | 1.68                     | 0.75              |
| 1:G:272:ARG:CB   | 1:J:202:GLU:HA   | 2.16                     | 0.75              |
| 1:H:58:LYS:NZ    | 1:H:65:GLU:HG2   | 2.01                     | 0.75              |
| 1:I:52:ILE:HG23  | 1:M:247:ASP:O    | 1.85                     | 0.75              |
| 1:K:308:ASN:HD22 | 1:P:232:GLU:H    | 0.78                     | 0.75              |
| 1:K:308:ASN:HD21 | 1:P:231:ALA:N    | 1.79                     | 0.75              |
| 1:K:308:ASN:OD1  | 1:P:230:GLN:HA   | 1.86                     | 0.75              |
| 1:L:234:ALA:CB   | 1:L:235:LEU:HA   | 2.16                     | 0.75              |
| 1:M:299:THR:O    | 1:N:227:THR:CG2  | 2.14                     | 0.75              |
| 1:M:320:LYS:HG2  | 1:N:50:ILE:CA    | 2.16                     | 0.75              |
| 1:M:323:VAL:HG22 | 1:N:47:ASP:CA    | 2.10                     | 0.75              |
| 1:O:58:LYS:NZ    | 1:O:65:GLU:HG2   | 2.01                     | 0.75              |
| 1:B:50:ILE:CA    | 1:C:320:LYS:HG2  | 2.16                     | 0.75              |
| 1:B:234:ALA:CB   | 1:B:235:LEU:HA   | 2.15                     | 0.75              |
| 1:B:245:GLU:O    | 1:F:52:ILE:HG12  | 1.86                     | 0.75              |
| 1:B:258:LYS:CE   | 1:B:295:GLN:HG3  | 2.17                     | 0.75              |
| 1:C:50:ILE:HG23  | 1:D:320:LYS:HG2  | 1.68                     | 0.75              |
| 1:D:49:TYR:CE2   | 1:D:75:ASP:HA    | 2.20                     | 0.75              |
| 1:D:240:MET:CE   | 1:H:73:VAL:HG21  | 2.16                     | 0.75              |
| 1:F:203:GLU:CB   | 1:I:197:SER:O    | 2.33                     | 0.75              |
| 1:G:234:ALA:CB   | 1:G:235:LEU:HA   | 2.16                     | 0.75              |
| 1:J:116:VAL:CG2  | 1:J:121:LYS:HG3  | 2.16                     | 0.75              |
| 1:J:234:ALA:CB   | 1:J:235:LEU:HA   | 2.15                     | 0.75              |
| 1:K:278:GLN:OE1  | 1:L:218:THR:CA   | 2.34                     | 0.75              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:116:VAL:CG2  | 1:L:121:LYS:HG3  | 2.16                     | 0.75              |
| 1:N:320:LYS:HG2  | 1:O:50:ILE:CA    | 2.16                     | 0.75              |
| 1:O:26:LYS:CB    | 1:O:97:VAL:HG13  | 2.13                     | 0.75              |
| 1:O:27:LYS:HE2   | 1:O:35:ARG:HE    | 1.49                     | 0.75              |
| 1:F:222:ASN:HB2  | 1:F:237:ASN:HB2  | 1.68                     | 0.75              |
| 1:F:224:ASN:CA   | 1:G:277:ASP:O    | 2.14                     | 0.75              |
| 1:G:183:ASN:HD21 | 1:J:197:SER:CB   | 1.97                     | 0.75              |
| 1:K:56:SER:HB2   | 1:K:70:GLU:HB3   | 1.69                     | 0.75              |
| 1:L:12:LEU:CB    | 1:L:110:LEU:HD12 | 2.16                     | 0.75              |
| 1:L:26:LYS:CB    | 1:L:97:VAL:HG13  | 2.13                     | 0.75              |
| 1:M:320:LYS:HG2  | 1:N:50:ILE:HG23  | 1.68                     | 0.75              |
| 1:O:222:ASN:HB2  | 1:O:237:ASN:HB2  | 1.68                     | 0.75              |
| 1:P:27:LYS:HZ3   | 1:P:35:ARG:HH21  | 1.35                     | 0.75              |
| 1:P:222:ASN:HB2  | 1:P:237:ASN:HB2  | 1.68                     | 0.75              |
| 1:B:116:VAL:CG2  | 1:B:121:LYS:HG3  | 2.16                     | 0.75              |
| 1:D:284:PHE:CZ   | 1:D:296:ILE:HG12 | 2.22                     | 0.75              |
| 1:F:234:ALA:CB   | 1:F:235:LEU:HA   | 2.16                     | 0.75              |
| 1:H:56:SER:HB2   | 1:H:70:GLU:HB3   | 1.69                     | 0.75              |
| 1:I:284:PHE:CZ   | 1:I:296:ILE:HG12 | 2.22                     | 0.75              |
| 1:J:12:LEU:CB    | 1:J:110:LEU:HD12 | 2.17                     | 0.75              |
| 1:J:49:TYR:CE2   | 1:J:75:ASP:HA    | 2.20                     | 0.75              |
| 1:J:56:SER:HB2   | 1:J:70:GLU:HB3   | 1.69                     | 0.75              |
| 1:J:278:GLN:H    | 1:K:218:THR:HG1  | 1.31                     | 0.75              |
| 1:K:116:VAL:HG22 | 1:K:122:ALA:HB3  | 1.69                     | 0.75              |
| 1:K:300:TYR:CZ   | 1:L:225:LEU:HD13 | 2.20                     | 0.75              |
| 1:L:56:SER:HB2   | 1:L:70:GLU:HB3   | 1.69                     | 0.75              |
| 1:M:58:LYS:NZ    | 1:M:65:GLU:HG2   | 2.01                     | 0.75              |
| 1:M:258:LYS:CE   | 1:M:295:GLN:HG3  | 2.17                     | 0.75              |
| 1:A:164:LEU:HD13 | 1:A:313:THR:HA   | 1.68                     | 0.75              |
| 1:B:49:TYR:CE2   | 1:B:75:ASP:HA    | 2.20                     | 0.75              |
| 1:C:58:LYS:NZ    | 1:C:65:GLU:HG2   | 2.01                     | 0.75              |
| 1:E:116:VAL:CG2  | 1:E:121:LYS:HG3  | 2.16                     | 0.75              |
| 1:F:49:TYR:CE2   | 1:F:75:ASP:HA    | 2.20                     | 0.75              |
| 1:G:56:SER:HB2   | 1:G:70:GLU:HB3   | 1.69                     | 0.75              |
| 1:G:271:LYS:CE   | 1:J:202:GLU:HG3  | 2.17                     | 0.75              |
| 1:H:202:GLU:CA   | 1:K:272:ARG:HG3  | 2.16                     | 0.75              |
| 1:I:56:SER:HB2   | 1:I:70:GLU:HB3   | 1.69                     | 0.75              |
| 1:I:308:ASN:ND2  | 1:N:231:ALA:CA   | 2.49                     | 0.75              |
| 1:I:309:ASN:O    | 1:N:229:GLU:OE2  | 1.96                     | 0.75              |
| 1:L:27:LYS:HE2   | 1:L:35:ARG:HE    | 1.49                     | 0.75              |
| 1:L:58:LYS:NZ    | 1:L:65:GLU:HG2   | 2.01                     | 0.75              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:116:VAL:HG22 | 1:L:122:ALA:HB3  | 1.69                     | 0.75              |
| 1:N:320:LYS:C    | 1:O:47:ASP:C     | 2.44                     | 0.75              |
| 1:O:258:LYS:CE   | 1:O:295:GLN:HG3  | 2.17                     | 0.75              |
| 1:P:258:LYS:CE   | 1:P:295:GLN:HG3  | 2.17                     | 0.75              |
| 1:A:50:ILE:CA    | 1:B:320:LYS:HG2  | 2.16                     | 0.75              |
| 1:C:284:PHE:CZ   | 1:C:296:ILE:HG12 | 2.22                     | 0.75              |
| 1:D:258:LYS:CE   | 1:D:295:GLN:HG3  | 2.17                     | 0.75              |
| 1:E:79:THR:HA    | 1:F:170:LYS:CD   | 2.16                     | 0.75              |
| 1:F:12:LEU:CB    | 1:F:110:LEU:HD12 | 2.16                     | 0.75              |
| 1:F:56:SER:HB2   | 1:F:70:GLU:HB3   | 1.69                     | 0.75              |
| 1:H:116:VAL:HG22 | 1:H:122:ALA:HB3  | 1.69                     | 0.75              |
| 1:H:116:VAL:HG23 | 1:H:121:LYS:HG3  | 1.69                     | 0.75              |
| 1:I:300:TYR:CZ   | 1:J:225:LEU:HD13 | 2.20                     | 0.75              |
| 1:J:116:VAL:HG22 | 1:J:122:ALA:HB3  | 1.69                     | 0.75              |
| 1:M:234:ALA:CB   | 1:M:235:LEU:HA   | 2.15                     | 0.75              |
| 1:M:284:PHE:CZ   | 1:M:296:ILE:HG12 | 2.22                     | 0.75              |
| 1:M:320:LYS:CE   | 1:N:50:ILE:CD1   | 2.64                     | 0.75              |
| 1:N:234:ALA:CB   | 1:N:235:LEU:HA   | 2.15                     | 0.75              |
| 1:O:12:LEU:CB    | 1:O:110:LEU:HD12 | 2.17                     | 0.75              |
| 1:O:234:ALA:CB   | 1:O:235:LEU:HA   | 2.15                     | 0.75              |
| 1:A:12:LEU:CB    | 1:A:110:LEU:HD12 | 2.16                     | 0.75              |
| 1:C:12:LEU:CB    | 1:C:110:LEU:HD12 | 2.17                     | 0.75              |
| 1:C:47:ASP:CB    | 1:D:322:ALA:O    | 2.31                     | 0.75              |
| 1:D:114:LEU:HG   | 1:D:156:ALA:HB1  | 1.66                     | 0.75              |
| 1:E:12:LEU:CB    | 1:E:110:LEU:HD12 | 2.17                     | 0.75              |
| 1:F:164:LEU:HD13 | 1:F:313:THR:HA   | 1.68                     | 0.75              |
| 1:G:116:VAL:HG22 | 1:G:122:ALA:HB3  | 1.69                     | 0.75              |
| 1:H:197:SER:HB3  | 1:K:183:ASN:ND2  | 2.02                     | 0.75              |
| 1:H:284:PHE:CZ   | 1:H:296:ILE:HG12 | 2.21                     | 0.75              |
| 1:I:164:LEU:HD13 | 1:I:313:THR:HA   | 1.68                     | 0.75              |
| 1:I:170:LYS:CD   | 1:J:79:THR:HA    | 2.16                     | 0.75              |
| 1:J:164:LEU:HD13 | 1:J:313:THR:HA   | 1.68                     | 0.75              |
| 1:K:116:VAL:CG2  | 1:K:121:LYS:HG3  | 2.16                     | 0.75              |
| 1:L:258:LYS:CE   | 1:L:295:GLN:HG3  | 2.17                     | 0.75              |
| 1:N:284:PHE:CZ   | 1:N:296:ILE:HG12 | 2.22                     | 0.75              |
| 1:P:284:PHE:CZ   | 1:P:296:ILE:HG12 | 2.22                     | 0.75              |
| 1:A:258:LYS:CE   | 1:A:295:GLN:HG3  | 2.17                     | 0.75              |
| 1:B:164:LEU:HD13 | 1:B:313:THR:HA   | 1.68                     | 0.75              |
| 1:C:231:ALA:C    | 1:H:308:ASN:ND2  | 2.40                     | 0.75              |
| 1:C:246:ILE:HD13 | 1:H:323:VAL:CG2  | 2.01                     | 0.75              |
| 1:E:56:SER:HB2   | 1:E:70:GLU:HB3   | 1.69                     | 0.75              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:116:VAL:HG22 | 1:I:122:ALA:HB3  | 1.69                     | 0.75              |
| 1:J:258:LYS:CE   | 1:J:295:GLN:HG3  | 2.17                     | 0.75              |
| 1:K:26:LYS:CB    | 1:K:97:VAL:HG13  | 2.13                     | 0.75              |
| 1:K:58:LYS:NZ    | 1:K:65:GLU:HG2   | 2.01                     | 0.75              |
| 1:O:320:LYS:CE   | 1:P:50:ILE:CD1   | 2.64                     | 0.75              |
| 1:P:11:THR:HB    | 1:P:22:ILE:CG1   | 2.17                     | 0.75              |
| 1:B:50:ILE:HG23  | 1:C:320:LYS:HG2  | 1.68                     | 0.75              |
| 1:B:58:LYS:NZ    | 1:B:65:GLU:HG2   | 2.01                     | 0.75              |
| 1:B:284:PHE:CZ   | 1:B:296:ILE:HG12 | 2.22                     | 0.75              |
| 1:E:116:VAL:HG22 | 1:E:122:ALA:HB3  | 1.69                     | 0.75              |
| 1:G:12:LEU:CB    | 1:G:110:LEU:HD12 | 2.17                     | 0.75              |
| 1:G:116:VAL:HG23 | 1:G:121:LYS:HG3  | 1.69                     | 0.75              |
| 1:H:12:LEU:CB    | 1:H:110:LEU:HD12 | 2.16                     | 0.75              |
| 1:L:219:ASP:HA   | 1:L:224:ASN:HB2  | 0.86                     | 0.75              |
| 1:M:12:LEU:CB    | 1:M:110:LEU:HD12 | 2.17                     | 0.75              |
| 1:O:320:LYS:HG2  | 1:P:50:ILE:CA    | 2.16                     | 0.75              |
| 1:B:230:GLN:HB2  | 1:G:307:THR:C    | 2.07                     | 0.74              |
| 1:C:258:LYS:CE   | 1:C:295:GLN:HG3  | 2.17                     | 0.74              |
| 1:D:116:VAL:HG22 | 1:D:122:ALA:HB3  | 1.69                     | 0.74              |
| 1:D:234:ALA:CB   | 1:D:235:LEU:HA   | 2.15                     | 0.74              |
| 1:E:284:PHE:CZ   | 1:E:296:ILE:HG12 | 2.21                     | 0.74              |
| 1:F:79:THR:HA    | 1:G:170:LYS:CD   | 2.16                     | 0.74              |
| 1:F:116:VAL:HG22 | 1:F:122:ALA:HB3  | 1.69                     | 0.74              |
| 1:G:198:GLU:CG   | 1:J:203:GLU:CB   | 2.57                     | 0.74              |
| 1:G:203:GLU:CB   | 1:J:198:GLU:CG   | 2.58                     | 0.74              |
| 1:G:284:PHE:CZ   | 1:G:296:ILE:HG12 | 2.22                     | 0.74              |
| 1:H:120:ALA:O    | 1:H:124:GLU:HG2  | 1.87                     | 0.74              |
| 1:J:52:ILE:CG1   | 1:N:245:GLU:O    | 2.35                     | 0.74              |
| 1:L:164:LEU:HD13 | 1:L:313:THR:HA   | 1.68                     | 0.74              |
| 1:N:11:THR:HB    | 1:N:22:ILE:CG1   | 2.17                     | 0.74              |
| 1:O:284:PHE:CZ   | 1:O:296:ILE:HG12 | 2.22                     | 0.74              |
| 1:C:116:VAL:HG22 | 1:C:122:ALA:HB3  | 1.69                     | 0.74              |
| 1:D:12:LEU:CB    | 1:D:110:LEU:HD12 | 2.17                     | 0.74              |
| 1:G:120:ALA:O    | 1:G:124:GLU:HG2  | 1.87                     | 0.74              |
| 1:H:164:LEU:HD13 | 1:H:313:THR:HA   | 1.68                     | 0.74              |
| 1:H:203:GLU:HB2  | 1:K:198:GLU:N    | 2.02                     | 0.74              |
| 1:J:166:GLN:CA   | 1:O:242:LYS:C    | 2.34                     | 0.74              |
| 1:J:308:ASN:HB3  | 1:O:229:GLU:N    | 1.55                     | 0.74              |
| 1:K:51:ASP:HA    | 1:K:74:GLU:OE2   | 1.88                     | 0.74              |
| 1:L:27:LYS:NZ    | 1:L:35:ARG:HH21  | 1.85                     | 0.74              |
| 1:O:299:THR:CA   | 1:P:227:THR:HG21 | 2.16                     | 0.74              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:12:LEU:CB    | 1:P:110:LEU:HD12 | 2.16                     | 0.74              |
| 1:P:27:LYS:NZ    | 1:P:35:ARG:HH21  | 1.85                     | 0.74              |
| 1:A:47:ASP:CB    | 1:B:322:ALA:O    | 2.31                     | 0.74              |
| 1:A:131:LYS:HD2  | 1:A:149:ILE:HD12 | 1.70                     | 0.74              |
| 1:A:245:GLU:HB3  | 1:E:75:ASP:N     | 1.59                     | 0.74              |
| 1:A:284:PHE:CZ   | 1:A:296:ILE:HG12 | 2.22                     | 0.74              |
| 1:B:50:ILE:HG12  | 1:C:320:LYS:HE3  | 1.53                     | 0.74              |
| 1:B:50:ILE:CD1   | 1:C:320:LYS:CE   | 2.64                     | 0.74              |
| 1:B:116:VAL:HG22 | 1:B:122:ALA:HB3  | 1.69                     | 0.74              |
| 1:B:230:GLN:C    | 1:G:308:ASN:ND2  | 2.41                     | 0.74              |
| 1:D:27:LYS:NZ    | 1:D:35:ARG:HH21  | 1.85                     | 0.74              |
| 1:F:258:LYS:CE   | 1:F:295:GLN:HG3  | 2.17                     | 0.74              |
| 1:G:131:LYS:HD2  | 1:G:149:ILE:HD12 | 1.69                     | 0.74              |
| 1:H:131:LYS:HD2  | 1:H:149:ILE:HD12 | 1.70                     | 0.74              |
| 1:J:170:LYS:CD   | 1:K:79:THR:HA    | 2.16                     | 0.74              |
| 1:K:170:LYS:CD   | 1:L:79:THR:HA    | 2.16                     | 0.74              |
| 1:M:51:ASP:HA    | 1:M:74:GLU:OE2   | 1.88                     | 0.74              |
| 1:A:49:TYR:CG    | 1:B:320:LYS:CD   | 2.55                     | 0.74              |
| 1:A:120:ALA:O    | 1:A:124:GLU:HG2  | 1.87                     | 0.74              |
| 1:B:131:LYS:HD2  | 1:B:149:ILE:HD12 | 1.70                     | 0.74              |
| 1:C:131:LYS:HD2  | 1:C:149:ILE:HD12 | 1.70                     | 0.74              |
| 1:D:11:THR:HB    | 1:D:22:ILE:CG1   | 2.17                     | 0.74              |
| 1:D:250:SER:HB3  | 1:D:253:VAL:CB   | 2.14                     | 0.74              |
| 1:E:27:LYS:NZ    | 1:E:35:ARG:HH21  | 1.85                     | 0.74              |
| 1:G:79:THR:HA    | 1:H:170:LYS:CD   | 2.16                     | 0.74              |
| 1:G:258:LYS:CE   | 1:G:295:GLN:HG3  | 2.17                     | 0.74              |
| 1:H:258:LYS:CE   | 1:H:295:GLN:HG3  | 2.17                     | 0.74              |
| 1:K:258:LYS:CE   | 1:K:295:GLN:HG3  | 2.17                     | 0.74              |
| 1:M:320:LYS:CD   | 1:N:49:TYR:CG    | 2.55                     | 0.74              |
| 1:O:27:LYS:NZ    | 1:O:35:ARG:HH21  | 1.85                     | 0.74              |
| 1:P:164:LEU:HD13 | 1:P:313:THR:HA   | 1.68                     | 0.74              |
| 1:A:56:SER:HB2   | 1:A:70:GLU:HB3   | 1.69                     | 0.74              |
| 1:A:116:VAL:HG22 | 1:A:122:ALA:HB3  | 1.69                     | 0.74              |
| 1:B:12:LEU:CB    | 1:B:110:LEU:HD12 | 2.16                     | 0.74              |
| 1:D:51:ASP:HA    | 1:D:74:GLU:OE2   | 1.88                     | 0.74              |
| 1:D:131:LYS:HD2  | 1:D:149:ILE:HD12 | 1.70                     | 0.74              |
| 1:F:268:LEU:HD22 | 1:I:271:LYS:NZ   | 2.03                     | 0.74              |
| 1:F:284:PHE:CZ   | 1:F:296:ILE:HG12 | 2.22                     | 0.74              |
| 1:G:202:GLU:HG3  | 1:J:271:LYS:CE   | 2.17                     | 0.74              |
| 1:I:75:ASP:OD2   | 1:I:77:SER:HB3   | 1.88                     | 0.74              |
| 1:I:120:ALA:O    | 1:I:124:GLU:HG2  | 1.87                     | 0.74              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:300:TYR:CZ   | 1:K:225:LEU:HD13 | 2.20                     | 0.74              |
| 1:M:116:VAL:HG22 | 1:M:122:ALA:HB3  | 1.69                     | 0.74              |
| 1:N:56:SER:HB2   | 1:N:70:GLU:HB3   | 1.69                     | 0.74              |
| 1:N:116:VAL:HG22 | 1:N:122:ALA:HB3  | 1.69                     | 0.74              |
| 1:N:258:LYS:CE   | 1:N:295:GLN:HG3  | 2.17                     | 0.74              |
| 1:O:56:SER:HB2   | 1:O:70:GLU:HB3   | 1.69                     | 0.74              |
| 1:B:11:THR:HB    | 1:B:22:ILE:CG1   | 2.17                     | 0.74              |
| 1:B:56:SER:HB2   | 1:B:70:GLU:HB3   | 1.69                     | 0.74              |
| 1:B:120:ALA:O    | 1:B:124:GLU:HG2  | 1.87                     | 0.74              |
| 1:C:51:ASP:HA    | 1:C:74:GLU:OE2   | 1.88                     | 0.74              |
| 1:C:72:GLY:HA3   | 1:D:168:ASN:HA   | 1.67                     | 0.74              |
| 1:C:250:SER:HB3  | 1:C:253:VAL:CB   | 2.14                     | 0.74              |
| 1:E:258:LYS:CE   | 1:E:295:GLN:HG3  | 2.17                     | 0.74              |
| 1:H:198:GLU:CA   | 1:K:203:GLU:HB2  | 2.18                     | 0.74              |
| 1:I:51:ASP:HA    | 1:I:74:GLU:OE2   | 1.87                     | 0.74              |
| 1:J:284:PHE:CZ   | 1:J:296:ILE:HG12 | 2.21                     | 0.74              |
| 1:K:27:LYS:NZ    | 1:K:35:ARG:HH21  | 1.85                     | 0.74              |
| 1:L:116:VAL:HG23 | 1:L:121:LYS:HG3  | 1.69                     | 0.74              |
| 1:M:120:ALA:O    | 1:M:124:GLU:HG2  | 1.87                     | 0.74              |
| 1:B:47:ASP:C     | 1:C:320:LYS:C    | 2.44                     | 0.74              |
| 1:B:250:SER:HB3  | 1:B:253:VAL:CB   | 2.14                     | 0.74              |
| 1:D:11:THR:HB    | 1:D:22:ILE:HG12  | 1.70                     | 0.74              |
| 1:D:116:VAL:HG23 | 1:D:121:LYS:HG3  | 1.69                     | 0.74              |
| 1:F:11:THR:HB    | 1:F:22:ILE:CG1   | 2.17                     | 0.74              |
| 1:G:164:LEU:HD13 | 1:G:313:THR:HA   | 1.68                     | 0.74              |
| 1:I:33:ILE:O     | 1:I:35:ARG:HB2   | 1.88                     | 0.74              |
| 1:I:58:LYS:HB3   | 1:I:65:GLU:OE2   | 1.88                     | 0.74              |
| 1:J:275:LYS:O    | 1:K:218:THR:CB   | 2.29                     | 0.74              |
| 1:K:33:ILE:O     | 1:K:35:ARG:HB2   | 1.88                     | 0.74              |
| 1:K:131:LYS:HD2  | 1:K:149:ILE:HD12 | 1.70                     | 0.74              |
| 1:L:11:THR:HB    | 1:L:22:ILE:CG1   | 2.17                     | 0.74              |
| 1:L:33:ILE:O     | 1:L:35:ARG:HB2   | 1.88                     | 0.74              |
| 1:L:131:LYS:HD2  | 1:L:149:ILE:HD12 | 1.70                     | 0.74              |
| 1:M:11:THR:HB    | 1:M:22:ILE:CG1   | 2.17                     | 0.74              |
| 1:M:56:SER:HB2   | 1:M:70:GLU:HB3   | 1.69                     | 0.74              |
| 1:N:27:LYS:NZ    | 1:N:35:ARG:HH21  | 1.85                     | 0.74              |
| 1:O:116:VAL:HG22 | 1:O:122:ALA:HB3  | 1.69                     | 0.74              |
| 1:P:56:SER:HB2   | 1:P:70:GLU:HB3   | 1.69                     | 0.74              |
| 1:P:116:VAL:HG22 | 1:P:122:ALA:HB3  | 1.69                     | 0.74              |
| 1:A:22:ILE:HB    | 1:A:27:LYS:HE2   | 1.70                     | 0.74              |
| 1:A:27:LYS:NZ    | 1:A:35:ARG:HH21  | 1.85                     | 0.74              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:50:ILE:HG23  | 1:B:320:LYS:HG2  | 1.68                     | 0.74              |
| 1:B:230:GLN:CB   | 1:G:306:ILE:HG13 | 2.18                     | 0.74              |
| 1:B:245:GLU:HB2  | 1:F:75:ASP:HA    | 1.65                     | 0.74              |
| 1:C:11:THR:HB    | 1:C:22:ILE:HG12  | 1.70                     | 0.74              |
| 1:C:58:LYS:HB3   | 1:C:65:GLU:OE2   | 1.88                     | 0.74              |
| 1:D:58:LYS:HB3   | 1:D:65:GLU:OE2   | 1.88                     | 0.74              |
| 1:E:164:LEU:HD13 | 1:E:313:THR:HA   | 1.68                     | 0.74              |
| 1:G:75:ASP:OD2   | 1:G:77:SER:HB3   | 1.88                     | 0.74              |
| 1:H:11:THR:HB    | 1:H:22:ILE:CG1   | 2.17                     | 0.74              |
| 1:I:258:LYS:CE   | 1:I:295:GLN:HG3  | 2.17                     | 0.74              |
| 1:J:26:LYS:CB    | 1:J:97:VAL:HG13  | 2.13                     | 0.74              |
| 1:J:33:ILE:O     | 1:J:35:ARG:HB2   | 1.88                     | 0.74              |
| 1:J:52:ILE:HA    | 1:N:248:THR:HG22 | 1.69                     | 0.74              |
| 1:J:58:LYS:HB3   | 1:J:65:GLU:OE2   | 1.88                     | 0.74              |
| 1:J:166:GLN:HA   | 1:O:242:LYS:O    | 1.87                     | 0.74              |
| 1:M:131:LYS:HD2  | 1:M:149:ILE:HD12 | 1.70                     | 0.74              |
| 1:M:164:LEU:HD13 | 1:M:313:THR:HA   | 1.68                     | 0.74              |
| 1:O:320:LYS:HG2  | 1:P:50:ILE:HG23  | 1.68                     | 0.74              |
| 1:A:11:THR:HB    | 1:A:22:ILE:CG1   | 2.17                     | 0.74              |
| 1:B:11:THR:HB    | 1:B:22:ILE:HG12  | 1.70                     | 0.74              |
| 1:B:72:GLY:HA3   | 1:C:168:ASN:HA   | 1.68                     | 0.74              |
| 1:D:258:LYS:HE3  | 1:D:295:GLN:HG3  | 1.70                     | 0.74              |
| 1:F:33:ILE:O     | 1:F:35:ARG:HB2   | 1.88                     | 0.74              |
| 1:F:75:ASP:OD2   | 1:F:77:SER:HB3   | 1.88                     | 0.74              |
| 1:F:116:VAL:HG23 | 1:F:121:LYS:HG3  | 1.69                     | 0.74              |
| 1:G:27:LYS:NZ    | 1:G:35:ARG:HH21  | 1.85                     | 0.74              |
| 1:G:51:ASP:HA    | 1:G:74:GLU:OE2   | 1.88                     | 0.74              |
| 1:I:12:LEU:CB    | 1:I:110:LEU:HD12 | 2.17                     | 0.74              |
| 1:K:58:LYS:HB3   | 1:K:65:GLU:OE2   | 1.88                     | 0.74              |
| 1:K:166:GLN:HA   | 1:P:242:LYS:O    | 1.87                     | 0.74              |
| 1:L:231:ALA:CB   | 1:P:308:ASN:CG   | 2.55                     | 0.74              |
| 1:M:27:LYS:NZ    | 1:M:35:ARG:HH21  | 1.85                     | 0.74              |
| 1:N:12:LEU:CB    | 1:N:110:LEU:HD12 | 2.17                     | 0.74              |
| 1:O:131:LYS:HD2  | 1:O:149:ILE:HD12 | 1.70                     | 0.74              |
| 1:P:33:ILE:O     | 1:P:35:ARG:HB2   | 1.88                     | 0.74              |
| 1:P:131:LYS:HD2  | 1:P:149:ILE:HD12 | 1.70                     | 0.74              |
| 1:A:72:GLY:HA3   | 1:B:168:ASN:HA   | 1.67                     | 0.74              |
| 1:A:250:SER:HB3  | 1:A:253:VAL:CB   | 2.14                     | 0.74              |
| 1:B:58:LYS:HB3   | 1:B:65:GLU:OE2   | 1.88                     | 0.74              |
| 1:C:56:SER:HB2   | 1:C:70:GLU:HB3   | 1.69                     | 0.74              |
| 1:C:116:VAL:HG23 | 1:C:121:LYS:HG3  | 1.69                     | 0.74              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:120:ALA:O    | 1:C:124:GLU:HG2  | 1.87                     | 0.74              |
| 1:F:27:LYS:NZ    | 1:F:35:ARG:HH21  | 1.85                     | 0.74              |
| 1:F:120:ALA:O    | 1:F:124:GLU:HG2  | 1.87                     | 0.74              |
| 1:F:271:LYS:C    | 1:I:202:GLU:OE2  | 2.26                     | 0.74              |
| 1:J:27:LYS:NZ    | 1:J:35:ARG:HH21  | 1.85                     | 0.74              |
| 1:K:11:THR:HB    | 1:K:22:ILE:CG1   | 2.17                     | 0.74              |
| 1:K:116:VAL:HG23 | 1:K:121:LYS:HG3  | 1.69                     | 0.74              |
| 1:L:284:PHE:CZ   | 1:L:296:ILE:HG12 | 2.22                     | 0.74              |
| 1:N:131:LYS:HD2  | 1:N:149:ILE:HD12 | 1.70                     | 0.74              |
| 1:P:84:LEU:HG    | 1:P:88:LEU:HD11  | 1.70                     | 0.74              |
| 1:P:120:ALA:O    | 1:P:124:GLU:HG2  | 1.87                     | 0.74              |
| 1:P:219:ASP:HA   | 1:P:224:ASN:HB2  | 0.86                     | 0.74              |
| 1:A:11:THR:HB    | 1:A:22:ILE:HG12  | 1.70                     | 0.73              |
| 1:A:116:VAL:HG23 | 1:A:121:LYS:HG3  | 1.69                     | 0.73              |
| 1:B:22:ILE:HB    | 1:B:27:LYS:HE2   | 1.70                     | 0.73              |
| 1:C:164:LEU:HD13 | 1:C:313:THR:HA   | 1.68                     | 0.73              |
| 1:F:11:THR:HB    | 1:F:22:ILE:HG12  | 1.70                     | 0.73              |
| 1:F:51:ASP:HA    | 1:F:74:GLU:OE2   | 1.88                     | 0.73              |
| 1:G:11:THR:HB    | 1:G:22:ILE:HG12  | 1.70                     | 0.73              |
| 1:G:33:ILE:O     | 1:G:35:ARG:HB2   | 1.88                     | 0.73              |
| 1:H:27:LYS:NZ    | 1:H:35:ARG:HH21  | 1.85                     | 0.73              |
| 1:H:33:ILE:O     | 1:H:35:ARG:HB2   | 1.88                     | 0.73              |
| 1:I:73:VAL:HB    | 1:M:240:MET:HE2  | 1.70                     | 0.73              |
| 1:J:75:ASP:OD2   | 1:J:77:SER:HB3   | 1.88                     | 0.73              |
| 1:K:308:ASN:ND2  | 1:P:230:GLN:C    | 2.41                     | 0.73              |
| 1:L:58:LYS:HB3   | 1:L:65:GLU:OE2   | 1.88                     | 0.73              |
| 1:L:120:ALA:O    | 1:L:124:GLU:HG2  | 1.87                     | 0.73              |
| 1:O:11:THR:HB    | 1:O:22:ILE:CG1   | 2.17                     | 0.73              |
| 1:A:47:ASP:HB3   | 1:B:325:LYS:N    | 2.03                     | 0.73              |
| 1:A:58:LYS:HB3   | 1:A:65:GLU:OE2   | 1.88                     | 0.73              |
| 1:A:75:ASP:OD2   | 1:A:77:SER:HB3   | 1.88                     | 0.73              |
| 1:B:49:TYR:CG    | 1:C:320:LYS:CD   | 2.55                     | 0.73              |
| 1:C:258:LYS:HE3  | 1:C:295:GLN:HG3  | 1.70                     | 0.73              |
| 1:D:22:ILE:HB    | 1:D:27:LYS:HE2   | 1.70                     | 0.73              |
| 1:D:120:ALA:O    | 1:D:124:GLU:HG2  | 1.87                     | 0.73              |
| 1:D:164:LEU:HD13 | 1:D:313:THR:HA   | 1.68                     | 0.73              |
| 1:E:51:ASP:HA    | 1:E:74:GLU:OE2   | 1.88                     | 0.73              |
| 1:F:58:LYS:HB3   | 1:F:65:GLU:OE2   | 1.88                     | 0.73              |
| 1:G:225:LEU:HD13 | 1:H:300:TYR:CZ   | 2.20                     | 0.73              |
| 1:L:75:ASP:OD2   | 1:L:77:SER:HB3   | 1.88                     | 0.73              |
| 1:M:325:LYS:N    | 1:N:47:ASP:HB3   | 2.03                     | 0.73              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:320:LYS:HG2  | 1:O:50:ILE:HG23  | 1.68                     | 0.73              |
| 1:O:33:ILE:O     | 1:O:35:ARG:HB2   | 1.88                     | 0.73              |
| 1:A:51:ASP:HA    | 1:A:74:GLU:OE2   | 1.88                     | 0.73              |
| 1:B:116:VAL:HG23 | 1:B:121:LYS:HG3  | 1.69                     | 0.73              |
| 1:B:246:ILE:HD11 | 1:G:320:LYS:O    | 1.71                     | 0.73              |
| 1:C:27:LYS:NZ    | 1:C:35:ARG:HH21  | 1.85                     | 0.73              |
| 1:D:33:ILE:O     | 1:D:35:ARG:HB2   | 1.88                     | 0.73              |
| 1:G:58:LYS:HB3   | 1:G:65:GLU:OE2   | 1.88                     | 0.73              |
| 1:I:11:THR:HB    | 1:I:22:ILE:HG12  | 1.70                     | 0.73              |
| 1:J:308:ASN:HD22 | 1:O:232:GLU:H    | 0.75                     | 0.73              |
| 1:K:12:LEU:CB    | 1:K:110:LEU:HD12 | 2.17                     | 0.73              |
| 1:K:75:ASP:OD2   | 1:K:77:SER:HB3   | 1.88                     | 0.73              |
| 1:K:120:ALA:O    | 1:K:124:GLU:HG2  | 1.87                     | 0.73              |
| 1:N:51:ASP:HA    | 1:N:74:GLU:OE2   | 1.88                     | 0.73              |
| 1:N:84:LEU:HG    | 1:N:88:LEU:HD11  | 1.70                     | 0.73              |
| 1:N:120:ALA:O    | 1:N:124:GLU:HG2  | 1.87                     | 0.73              |
| 1:O:158:GLY:O    | 1:O:161:VAL:HG22 | 1.89                     | 0.73              |
| 1:B:27:LYS:NZ    | 1:B:35:ARG:HH21  | 1.85                     | 0.73              |
| 1:B:75:ASP:OD2   | 1:B:77:SER:HB3   | 1.88                     | 0.73              |
| 1:C:11:THR:HB    | 1:C:22:ILE:CG1   | 2.17                     | 0.73              |
| 1:C:49:TYR:CG    | 1:D:320:LYS:CD   | 2.55                     | 0.73              |
| 1:C:246:ILE:CG1  | 1:H:320:LYS:HA   | 2.17                     | 0.73              |
| 1:C:246:ILE:HD11 | 1:H:320:LYS:C    | 2.08                     | 0.73              |
| 1:E:11:THR:HB    | 1:E:22:ILE:HG12  | 1.70                     | 0.73              |
| 1:E:33:ILE:O     | 1:E:35:ARG:HB2   | 1.88                     | 0.73              |
| 1:E:84:LEU:HG    | 1:E:88:LEU:HD11  | 1.70                     | 0.73              |
| 1:H:75:ASP:OD2   | 1:H:77:SER:HB3   | 1.88                     | 0.73              |
| 1:I:75:ASP:N     | 1:M:245:GLU:CG   | 2.51                     | 0.73              |
| 1:J:11:THR:HB    | 1:J:22:ILE:CG1   | 2.17                     | 0.73              |
| 1:J:120:ALA:O    | 1:J:124:GLU:HG2  | 1.87                     | 0.73              |
| 1:J:131:LYS:HD2  | 1:J:149:ILE:HD12 | 1.70                     | 0.73              |
| 1:K:308:ASN:HB3  | 1:P:228:ASN:C    | 2.09                     | 0.73              |
| 1:M:84:LEU:HG    | 1:M:88:LEU:HD11  | 1.70                     | 0.73              |
| 1:O:84:LEU:HG    | 1:O:88:LEU:HD11  | 1.70                     | 0.73              |
| 1:P:22:ILE:HB    | 1:P:27:LYS:HE2   | 1.70                     | 0.73              |
| 1:P:51:ASP:HA    | 1:P:74:GLU:OE2   | 1.88                     | 0.73              |
| 1:P:75:ASP:OD2   | 1:P:77:SER:HB3   | 1.88                     | 0.73              |
| 1:C:22:ILE:HB    | 1:C:27:LYS:HE2   | 1.70                     | 0.73              |
| 1:E:11:THR:HB    | 1:E:22:ILE:CG1   | 2.17                     | 0.73              |
| 1:E:75:ASP:OD2   | 1:E:77:SER:HB3   | 1.88                     | 0.73              |
| 1:E:120:ALA:O    | 1:E:124:GLU:HG2  | 1.87                     | 0.73              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:131:LYS:HD2  | 1:E:149:ILE:HD12 | 1.70                     | 0.73              |
| 1:H:203:GLU:CB   | 1:K:197:SER:C    | 2.53                     | 0.73              |
| 1:M:11:THR:HB    | 1:M:22:ILE:HG12  | 1.70                     | 0.73              |
| 1:N:11:THR:HB    | 1:N:22:ILE:HG12  | 1.70                     | 0.73              |
| 1:N:158:GLY:O    | 1:N:161:VAL:HG22 | 1.89                     | 0.73              |
| 1:O:11:THR:HB    | 1:O:22:ILE:HG12  | 1.70                     | 0.73              |
| 1:O:120:ALA:O    | 1:O:124:GLU:HG2  | 1.87                     | 0.73              |
| 1:O:258:LYS:HE3  | 1:O:295:GLN:HG3  | 1.70                     | 0.73              |
| 1:P:158:GLY:O    | 1:P:161:VAL:HG22 | 1.89                     | 0.73              |
| 1:A:27:LYS:HZ3   | 1:A:35:ARG:HH21  | 1.37                     | 0.73              |
| 1:A:33:ILE:O     | 1:A:35:ARG:HB2   | 1.88                     | 0.73              |
| 1:C:33:ILE:O     | 1:C:35:ARG:HB2   | 1.88                     | 0.73              |
| 1:C:75:ASP:OD2   | 1:C:77:SER:HB3   | 1.88                     | 0.73              |
| 1:D:56:SER:HB2   | 1:D:70:GLU:HB3   | 1.69                     | 0.73              |
| 1:D:84:LEU:HG    | 1:D:88:LEU:HD11  | 1.70                     | 0.73              |
| 1:E:22:ILE:HB    | 1:E:27:LYS:HE2   | 1.70                     | 0.73              |
| 1:E:258:LYS:HE3  | 1:E:295:GLN:HG3  | 1.70                     | 0.73              |
| 1:G:84:LEU:HG    | 1:G:88:LEU:HD11  | 1.70                     | 0.73              |
| 1:G:158:GLY:O    | 1:G:161:VAL:HG22 | 1.89                     | 0.73              |
| 1:I:116:VAL:HG23 | 1:I:121:LYS:HG3  | 1.69                     | 0.73              |
| 1:J:51:ASP:HA    | 1:J:74:GLU:OE2   | 1.88                     | 0.73              |
| 1:M:75:ASP:OD2   | 1:M:77:SER:HB3   | 1.88                     | 0.73              |
| 1:B:158:GLY:O    | 1:B:161:VAL:HG22 | 1.89                     | 0.73              |
| 1:C:84:LEU:HG    | 1:C:88:LEU:HD11  | 1.70                     | 0.73              |
| 1:C:158:GLY:O    | 1:C:161:VAL:HG22 | 1.89                     | 0.73              |
| 1:D:158:GLY:O    | 1:D:161:VAL:HG22 | 1.89                     | 0.73              |
| 1:F:22:ILE:HB    | 1:F:27:LYS:HE2   | 1.70                     | 0.73              |
| 1:F:84:LEU:HG    | 1:F:88:LEU:HD11  | 1.70                     | 0.73              |
| 1:F:131:LYS:HD2  | 1:F:149:ILE:HD12 | 1.70                     | 0.73              |
| 1:H:84:LEU:HG    | 1:H:88:LEU:HD11  | 1.70                     | 0.73              |
| 1:H:289:THR:HG21 | 1:H:306:ILE:CD1  | 2.19                     | 0.73              |
| 1:I:27:LYS:NZ    | 1:I:35:ARG:HH21  | 1.85                     | 0.73              |
| 1:I:258:LYS:HE3  | 1:I:295:GLN:HG3  | 1.70                     | 0.73              |
| 1:L:51:ASP:HA    | 1:L:74:GLU:OE2   | 1.87                     | 0.73              |
| 1:L:258:LYS:HE3  | 1:L:295:GLN:HG3  | 1.70                     | 0.73              |
| 1:M:33:ILE:O     | 1:M:35:ARG:HB2   | 1.88                     | 0.73              |
| 1:M:299:THR:CA   | 1:N:227:THR:HG21 | 2.16                     | 0.73              |
| 1:M:320:LYS:C    | 1:N:47:ASP:C     | 2.44                     | 0.73              |
| 1:O:219:ASP:HA   | 1:O:224:ASN:HB2  | 0.86                     | 0.73              |
| 1:P:258:LYS:HE3  | 1:P:295:GLN:HG3  | 1.71                     | 0.73              |
| 1:A:227:THR:HG21 | 1:B:299:THR:CA   | 2.16                     | 0.73              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:33:ILE:O     | 1:B:35:ARG:HB2   | 1.88                     | 0.73              |
| 1:D:75:ASP:OD2   | 1:D:77:SER:HB3   | 1.88                     | 0.73              |
| 1:F:258:LYS:HE3  | 1:F:295:GLN:HG3  | 1.70                     | 0.73              |
| 1:I:158:GLY:O    | 1:I:161:VAL:HG22 | 1.89                     | 0.73              |
| 1:J:64:LYS:HG2   | 1:J:66:TYR:CZ    | 2.24                     | 0.73              |
| 1:J:168:ASN:CG   | 1:K:71:GLN:HE22  | 1.70                     | 0.73              |
| 1:J:258:LYS:HE3  | 1:J:295:GLN:HG3  | 1.70                     | 0.73              |
| 1:K:64:LYS:HG2   | 1:K:66:TYR:CZ    | 2.24                     | 0.73              |
| 1:L:184:MET:CG   | 1:L:202:GLU:HB3  | 2.19                     | 0.73              |
| 1:M:158:GLY:O    | 1:M:161:VAL:HG22 | 1.89                     | 0.73              |
| 1:N:33:ILE:O     | 1:N:35:ARG:HB2   | 1.88                     | 0.73              |
| 1:O:320:LYS:C    | 1:P:47:ASP:C     | 2.44                     | 0.73              |
| 1:P:11:THR:HB    | 1:P:22:ILE:HG12  | 1.70                     | 0.73              |
| 1:A:158:GLY:O    | 1:A:161:VAL:HG22 | 1.89                     | 0.73              |
| 1:A:289:THR:HG21 | 1:A:306:ILE:CD1  | 2.19                     | 0.73              |
| 1:B:51:ASP:HA    | 1:B:74:GLU:OE2   | 1.88                     | 0.73              |
| 1:C:50:ILE:HG12  | 1:D:320:LYS:HE3  | 1.54                     | 0.73              |
| 1:C:246:ILE:HB   | 1:H:320:LYS:HG2  | 1.69                     | 0.73              |
| 1:F:184:MET:CG   | 1:F:202:GLU:HB3  | 2.19                     | 0.73              |
| 1:G:64:LYS:HG2   | 1:G:66:TYR:CZ    | 2.24                     | 0.73              |
| 1:G:289:THR:HG21 | 1:G:306:ILE:CD1  | 2.19                     | 0.73              |
| 1:I:11:THR:HB    | 1:I:22:ILE:CG1   | 2.17                     | 0.73              |
| 1:J:74:GLU:HA    | 1:N:245:GLU:O    | 1.88                     | 0.73              |
| 1:L:289:THR:HG21 | 1:L:306:ILE:CD1  | 2.19                     | 0.73              |
| 1:O:164:LEU:HD13 | 1:O:313:THR:HA   | 1.68                     | 0.73              |
| 1:B:289:THR:HG21 | 1:B:306:ILE:CD1  | 2.19                     | 0.73              |
| 1:D:27:LYS:HZ3   | 1:D:35:ARG:HH21  | 1.36                     | 0.73              |
| 1:D:64:LYS:HG2   | 1:D:66:TYR:CZ    | 2.24                     | 0.73              |
| 1:E:58:LYS:HB3   | 1:E:65:GLU:OE2   | 1.88                     | 0.73              |
| 1:F:197:SER:C    | 1:I:203:GLU:CB   | 2.52                     | 0.73              |
| 1:F:289:THR:HG21 | 1:F:306:ILE:CD1  | 2.19                     | 0.73              |
| 1:G:11:THR:HB    | 1:G:22:ILE:CG1   | 2.17                     | 0.73              |
| 1:G:22:ILE:HB    | 1:G:27:LYS:HE2   | 1.70                     | 0.73              |
| 1:H:58:LYS:HB3   | 1:H:65:GLU:OE2   | 1.88                     | 0.73              |
| 1:H:203:GLU:CB   | 1:K:198:GLU:HA   | 2.15                     | 0.73              |
| 1:I:276:LEU:O    | 1:J:225:LEU:HA   | 1.89                     | 0.73              |
| 1:J:11:THR:HB    | 1:J:22:ILE:HG12  | 1.70                     | 0.73              |
| 1:J:289:THR:HG21 | 1:J:306:ILE:CD1  | 2.19                     | 0.73              |
| 1:K:289:THR:HG21 | 1:K:306:ILE:CD1  | 2.19                     | 0.73              |
| 1:O:325:LYS:N    | 1:P:47:ASP:HB3   | 2.04                     | 0.73              |
| 1:A:212:ARG:HD2  | 1:A:257:VAL:HG23 | 1.71                     | 0.72              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:64:LYS:HG2   | 1:B:66:TYR:CZ    | 2.24                     | 0.72              |
| 1:C:64:LYS:HG2   | 1:C:66:TYR:CZ    | 2.24                     | 0.72              |
| 1:C:240:MET:CE   | 1:G:73:VAL:HG23  | 2.09                     | 0.72              |
| 1:C:289:THR:HG21 | 1:C:306:ILE:CD1  | 2.19                     | 0.72              |
| 1:E:64:LYS:HG2   | 1:E:66:TYR:CZ    | 2.24                     | 0.72              |
| 1:F:158:GLY:O    | 1:F:161:VAL:HG22 | 1.89                     | 0.72              |
| 1:G:225:LEU:CB   | 1:H:300:TYR:CD2  | 2.72                     | 0.72              |
| 1:H:158:GLY:O    | 1:H:161:VAL:HG22 | 1.89                     | 0.72              |
| 1:H:250:SER:HB3  | 1:H:253:VAL:CB   | 2.14                     | 0.72              |
| 1:H:258:LYS:HE3  | 1:H:295:GLN:HG3  | 1.70                     | 0.72              |
| 1:I:289:THR:HG21 | 1:I:306:ILE:CD1  | 2.19                     | 0.72              |
| 1:J:52:ILE:HG13  | 1:N:247:ASP:O    | 1.87                     | 0.72              |
| 1:M:116:VAL:HG23 | 1:M:121:LYS:HG3  | 1.69                     | 0.72              |
| 1:M:184:MET:CG   | 1:M:202:GLU:HB3  | 2.19                     | 0.72              |
| 1:N:75:ASP:OD2   | 1:N:77:SER:HB3   | 1.88                     | 0.72              |
| 1:N:320:LYS:CD   | 1:O:49:TYR:CG    | 2.55                     | 0.72              |
| 1:N:325:LYS:N    | 1:O:47:ASP:HB3   | 2.04                     | 0.72              |
| 1:P:58:LYS:HB3   | 1:P:65:GLU:OE2   | 1.88                     | 0.72              |
| 1:P:116:VAL:HG23 | 1:P:121:LYS:HG3  | 1.69                     | 0.72              |
| 1:A:184:MET:CG   | 1:A:202:GLU:HB3  | 2.19                     | 0.72              |
| 1:A:241:LYS:NZ   | 1:F:305:ILE:CG2  | 2.51                     | 0.72              |
| 1:B:212:ARG:HD2  | 1:B:257:VAL:HG23 | 1.71                     | 0.72              |
| 1:B:258:LYS:HE3  | 1:B:295:GLN:HG3  | 1.70                     | 0.72              |
| 1:E:289:THR:HG21 | 1:E:306:ILE:CD1  | 2.19                     | 0.72              |
| 1:F:225:LEU:HA   | 1:G:276:LEU:O    | 1.89                     | 0.72              |
| 1:F:226:ILE:H    | 1:G:303:ASN:CB   | 1.97                     | 0.72              |
| 1:H:22:ILE:HB    | 1:H:27:LYS:HE2   | 1.70                     | 0.72              |
| 1:I:22:ILE:HB    | 1:I:27:LYS:HE2   | 1.70                     | 0.72              |
| 1:I:184:MET:CG   | 1:I:202:GLU:HB3  | 2.19                     | 0.72              |
| 1:J:116:VAL:HG23 | 1:J:121:LYS:HG3  | 1.69                     | 0.72              |
| 1:J:184:MET:CG   | 1:J:202:GLU:HB3  | 2.19                     | 0.72              |
| 1:L:52:ILE:HD13  | 1:P:248:THR:HG23 | 1.70                     | 0.72              |
| 1:L:64:LYS:HG2   | 1:L:66:TYR:CZ    | 2.24                     | 0.72              |
| 1:M:64:LYS:HG2   | 1:M:66:TYR:CZ    | 2.24                     | 0.72              |
| 1:N:58:LYS:HB3   | 1:N:65:GLU:OE2   | 1.88                     | 0.72              |
| 1:N:116:VAL:HG23 | 1:N:121:LYS:HG3  | 1.69                     | 0.72              |
| 1:N:164:LEU:HD13 | 1:N:313:THR:HA   | 1.68                     | 0.72              |
| 1:N:184:MET:CG   | 1:N:202:GLU:HB3  | 2.19                     | 0.72              |
| 1:O:64:LYS:HG2   | 1:O:66:TYR:CZ    | 2.24                     | 0.72              |
| 1:O:167:GLU:C    | 1:P:72:GLY:O     | 2.28                     | 0.72              |
| 1:A:64:LYS:HG2   | 1:A:66:TYR:CZ    | 2.24                     | 0.72              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:117:LEU:HD23 | 1:B:117:LEU:O    | 1.90                     | 0.72              |
| 1:C:47:ASP:HB3   | 1:D:325:LYS:N    | 2.04                     | 0.72              |
| 1:C:212:ARG:HD2  | 1:C:257:VAL:HG23 | 1.72                     | 0.72              |
| 1:D:212:ARG:HD2  | 1:D:257:VAL:HG23 | 1.71                     | 0.72              |
| 1:D:289:THR:HG21 | 1:D:306:ILE:CD1  | 2.19                     | 0.72              |
| 1:G:258:LYS:HE3  | 1:G:295:GLN:HG3  | 1.70                     | 0.72              |
| 1:H:219:ASP:HA   | 1:H:224:ASN:HB2  | 0.86                     | 0.72              |
| 1:J:22:ILE:HB    | 1:J:27:LYS:HE2   | 1.70                     | 0.72              |
| 1:J:84:LEU:HG    | 1:J:88:LEU:HD11  | 1.70                     | 0.72              |
| 1:J:117:LEU:O    | 1:J:117:LEU:HD23 | 1.90                     | 0.72              |
| 1:K:84:LEU:HG    | 1:K:88:LEU:HD11  | 1.70                     | 0.72              |
| 1:M:58:LYS:HB3   | 1:M:65:GLU:OE2   | 1.88                     | 0.72              |
| 1:N:64:LYS:HG2   | 1:N:66:TYR:CZ    | 2.24                     | 0.72              |
| 1:N:117:LEU:O    | 1:N:117:LEU:HD23 | 1.90                     | 0.72              |
| 1:N:258:LYS:HE3  | 1:N:295:GLN:HG3  | 1.70                     | 0.72              |
| 1:O:117:LEU:O    | 1:O:117:LEU:HD23 | 1.90                     | 0.72              |
| 1:P:64:LYS:HG2   | 1:P:66:TYR:CZ    | 2.24                     | 0.72              |
| 1:B:47:ASP:HB3   | 1:C:325:LYS:N    | 2.03                     | 0.72              |
| 1:B:84:LEU:HG    | 1:B:88:LEU:HD11  | 1.70                     | 0.72              |
| 1:C:117:LEU:HD23 | 1:C:117:LEU:O    | 1.90                     | 0.72              |
| 1:E:116:VAL:HG23 | 1:E:121:LYS:HG3  | 1.69                     | 0.72              |
| 1:E:117:LEU:HD23 | 1:E:117:LEU:O    | 1.90                     | 0.72              |
| 1:E:212:ARG:HD2  | 1:E:257:VAL:HG23 | 1.72                     | 0.72              |
| 1:E:225:LEU:CB   | 1:F:300:TYR:CD2  | 2.72                     | 0.72              |
| 1:G:117:LEU:O    | 1:G:117:LEU:HD23 | 1.89                     | 0.72              |
| 1:G:184:MET:CG   | 1:G:202:GLU:HB3  | 2.19                     | 0.72              |
| 1:G:202:GLU:CG   | 1:J:271:LYS:HG2  | 2.20                     | 0.72              |
| 1:G:272:ARG:NH1  | 1:J:201:ILE:HG23 | 2.05                     | 0.72              |
| 1:H:51:ASP:HA    | 1:H:74:GLU:OE2   | 1.88                     | 0.72              |
| 1:H:204:HIS:HD2  | 1:K:274:PHE:HE1  | 1.19                     | 0.72              |
| 1:I:84:LEU:HG    | 1:I:88:LEU:HD11  | 1.70                     | 0.72              |
| 1:J:75:ASP:N     | 1:N:245:GLU:CG   | 2.50                     | 0.72              |
| 1:K:117:LEU:HD23 | 1:K:117:LEU:O    | 1.90                     | 0.72              |
| 1:K:258:LYS:HE3  | 1:K:295:GLN:HG3  | 1.70                     | 0.72              |
| 1:K:308:ASN:ND2  | 1:P:231:ALA:CA   | 2.52                     | 0.72              |
| 1:L:158:GLY:O    | 1:L:161:VAL:HG22 | 1.89                     | 0.72              |
| 1:M:289:THR:HG21 | 1:M:306:ILE:CD1  | 2.19                     | 0.72              |
| 1:N:167:GLU:C    | 1:O:72:GLY:O     | 2.28                     | 0.72              |
| 1:N:289:THR:HG21 | 1:N:306:ILE:CD1  | 2.19                     | 0.72              |
| 1:N:324:ALA:HB1  | 1:O:46:GLU:CA    | 1.92                     | 0.72              |
| 1:O:58:LYS:HB3   | 1:O:65:GLU:OE2   | 1.88                     | 0.72              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:75:ASP:OD2   | 1:O:77:SER:HB3   | 1.88                     | 0.72              |
| 1:O:116:VAL:HG23 | 1:O:121:LYS:HG3  | 1.69                     | 0.72              |
| 1:O:184:MET:CG   | 1:O:202:GLU:HB3  | 2.19                     | 0.72              |
| 1:O:289:THR:HG21 | 1:O:306:ILE:CD1  | 2.19                     | 0.72              |
| 1:P:117:LEU:HD23 | 1:P:117:LEU:O    | 1.90                     | 0.72              |
| 1:A:117:LEU:O    | 1:A:117:LEU:HD23 | 1.90                     | 0.72              |
| 1:B:184:MET:CG   | 1:B:202:GLU:HB3  | 2.19                     | 0.72              |
| 1:C:184:MET:CG   | 1:C:202:GLU:HB3  | 2.19                     | 0.72              |
| 1:E:71:GLN:HE22  | 1:F:168:ASN:CG   | 1.70                     | 0.72              |
| 1:E:218:THR:CB   | 1:F:275:LYS:O    | 2.29                     | 0.72              |
| 1:F:117:LEU:O    | 1:F:117:LEU:HD23 | 1.90                     | 0.72              |
| 1:H:184:MET:CG   | 1:H:202:GLU:HB3  | 2.19                     | 0.72              |
| 1:I:64:LYS:HG2   | 1:I:66:TYR:CZ    | 2.24                     | 0.72              |
| 1:I:131:LYS:HD2  | 1:I:149:ILE:HD12 | 1.70                     | 0.72              |
| 1:J:59:ILE:HD12  | 1:J:95:THR:HG21  | 1.72                     | 0.72              |
| 1:K:184:MET:CG   | 1:K:202:GLU:HB3  | 2.19                     | 0.72              |
| 1:K:231:ALA:HB2  | 1:O:308:ASN:CG   | 2.05                     | 0.72              |
| 1:L:52:ILE:HD11  | 1:P:247:ASP:CA   | 1.89                     | 0.72              |
| 1:L:59:ILE:HD12  | 1:L:95:THR:HG21  | 1.72                     | 0.72              |
| 1:L:84:LEU:HG    | 1:L:88:LEU:HD11  | 1.70                     | 0.72              |
| 1:M:22:ILE:HB    | 1:M:27:LYS:HE2   | 1.70                     | 0.72              |
| 1:M:320:LYS:HE2  | 1:N:50:ILE:CB    | 2.13                     | 0.72              |
| 1:B:248:THR:HG23 | 1:F:52:ILE:HD13  | 1.70                     | 0.72              |
| 1:D:117:LEU:O    | 1:D:117:LEU:HD23 | 1.90                     | 0.72              |
| 1:D:184:MET:CG   | 1:D:202:GLU:HB3  | 2.19                     | 0.72              |
| 1:D:248:THR:HG23 | 1:H:52:ILE:CD1   | 2.19                     | 0.72              |
| 1:E:184:MET:CG   | 1:E:202:GLU:HB3  | 2.19                     | 0.72              |
| 1:F:272:ARG:CG   | 1:I:203:GLU:N    | 2.18                     | 0.72              |
| 1:G:225:LEU:HA   | 1:H:276:LEU:O    | 1.89                     | 0.72              |
| 1:G:250:SER:HB3  | 1:G:253:VAL:CB   | 2.14                     | 0.72              |
| 1:H:11:THR:HB    | 1:H:22:ILE:HG12  | 1.70                     | 0.72              |
| 1:I:241:LYS:O    | 1:M:308:ASN:ND2  | 2.21                     | 0.72              |
| 1:J:158:GLY:O    | 1:J:161:VAL:HG22 | 1.89                     | 0.72              |
| 1:K:275:LYS:HZ3  | 1:L:219:ASP:CG   | 1.87                     | 0.72              |
| 1:L:11:THR:HB    | 1:L:22:ILE:HG12  | 1.70                     | 0.72              |
| 1:L:117:LEU:O    | 1:L:117:LEU:HD23 | 1.89                     | 0.72              |
| 1:N:219:ASP:HA   | 1:N:224:ASN:HB2  | 0.86                     | 0.72              |
| 1:P:184:MET:CG   | 1:P:202:GLU:HB3  | 2.19                     | 0.72              |
| 1:P:289:THR:HG21 | 1:P:306:ILE:CD1  | 2.19                     | 0.72              |
| 1:A:84:LEU:HG    | 1:A:88:LEU:HD11  | 1.70                     | 0.72              |
| 1:A:258:LYS:HE3  | 1:A:295:GLN:HG3  | 1.70                     | 0.72              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:59:ILE:HD12  | 1:D:95:THR:HG21  | 1.71                     | 0.72              |
| 1:E:225:LEU:HA   | 1:F:276:LEU:O    | 1.89                     | 0.72              |
| 1:F:59:ILE:HD12  | 1:F:95:THR:HG21  | 1.72                     | 0.72              |
| 1:F:212:ARG:HD2  | 1:F:257:VAL:HG23 | 1.72                     | 0.72              |
| 1:G:212:ARG:HD2  | 1:G:257:VAL:HG23 | 1.72                     | 0.72              |
| 1:H:222:ASN:CG   | 1:H:237:ASN:HB2  | 2.10                     | 0.72              |
| 1:I:307:THR:C    | 1:N:230:GLN:HB2  | 2.10                     | 0.72              |
| 1:J:33:ILE:HB    | 1:J:312:TRP:NE1  | 2.05                     | 0.72              |
| 1:M:117:LEU:HD23 | 1:M:117:LEU:O    | 1.90                     | 0.72              |
| 1:O:51:ASP:HA    | 1:O:74:GLU:OE2   | 1.88                     | 0.72              |
| 1:C:246:ILE:HD13 | 1:G:50:ILE:HG23  | 0.73                     | 0.72              |
| 1:F:64:LYS:HG2   | 1:F:66:TYR:CZ    | 2.24                     | 0.72              |
| 1:F:175:ALA:HB3  | 1:F:282:LEU:CD2  | 2.20                     | 0.72              |
| 1:F:267:LYS:CD   | 1:I:267:LYS:HD3  | 2.17                     | 0.72              |
| 1:G:201:ILE:HG23 | 1:J:272:ARG:NH1  | 2.05                     | 0.72              |
| 1:H:117:LEU:HD23 | 1:H:117:LEU:O    | 1.90                     | 0.72              |
| 1:H:271:LYS:CE   | 1:K:268:LEU:HD22 | 2.20                     | 0.72              |
| 1:I:117:LEU:O    | 1:I:117:LEU:HD23 | 1.90                     | 0.72              |
| 1:I:303:ASN:CB   | 1:J:226:ILE:H    | 1.97                     | 0.72              |
| 1:J:166:GLN:O    | 1:O:241:LYS:CA   | 2.36                     | 0.72              |
| 1:J:276:LEU:O    | 1:K:225:LEU:HA   | 1.89                     | 0.72              |
| 1:J:320:LYS:O    | 1:K:49:TYR:CD1   | 2.26                     | 0.72              |
| 1:K:22:ILE:HB    | 1:K:27:LYS:HE2   | 1.70                     | 0.72              |
| 1:N:320:LYS:HE2  | 1:O:50:ILE:CB    | 2.13                     | 0.72              |
| 1:P:175:ALA:HB3  | 1:P:282:LEU:CD2  | 2.20                     | 0.72              |
| 1:B:46:GLU:OE2   | 1:C:321:VAL:HG23 | 1.90                     | 0.72              |
| 1:C:72:GLY:O     | 1:D:167:GLU:C    | 2.28                     | 0.72              |
| 1:E:158:GLY:O    | 1:E:161:VAL:HG22 | 1.89                     | 0.72              |
| 1:F:225:LEU:HD13 | 1:G:300:TYR:CZ   | 2.20                     | 0.72              |
| 1:G:33:ILE:HB    | 1:G:312:TRP:NE1  | 2.05                     | 0.72              |
| 1:G:222:ASN:CG   | 1:G:237:ASN:HB2  | 2.10                     | 0.72              |
| 1:H:212:ARG:HD2  | 1:H:257:VAL:HG23 | 1.72                     | 0.72              |
| 1:I:212:ARG:HD2  | 1:I:257:VAL:HG23 | 1.71                     | 0.72              |
| 1:K:320:LYS:HA   | 1:P:246:ILE:CG1  | 2.19                     | 0.72              |
| 1:N:175:ALA:HB3  | 1:N:282:LEU:CD2  | 2.20                     | 0.72              |
| 1:O:175:ALA:HB3  | 1:O:282:LEU:CD2  | 2.20                     | 0.72              |
| 1:B:72:GLY:O     | 1:C:167:GLU:C    | 2.28                     | 0.72              |
| 1:B:230:GLN:HB2  | 1:G:306:ILE:HG13 | 1.71                     | 0.72              |
| 1:C:227:THR:HG21 | 1:D:299:THR:CA   | 2.16                     | 0.72              |
| 1:F:250:SER:HB3  | 1:F:253:VAL:CB   | 2.14                     | 0.72              |
| 1:H:175:ALA:HB3  | 1:H:282:LEU:CD2  | 2.20                     | 0.72              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:222:ASN:CG   | 1:I:237:ASN:HB2  | 2.10                     | 0.72              |
| 1:J:49:TYR:CE2   | 1:N:245:GLU:C    | 2.61                     | 0.72              |
| 1:L:74:GLU:O     | 1:P:245:GLU:O    | 2.07                     | 0.72              |
| 1:N:321:VAL:HG23 | 1:O:46:GLU:OE2   | 1.90                     | 0.72              |
| 1:P:222:ASN:CG   | 1:P:237:ASN:HB2  | 2.10                     | 0.72              |
| 1:A:33:ILE:HB    | 1:A:312:TRP:NE1  | 2.05                     | 0.71              |
| 1:A:45:LEU:HD21  | 1:A:51:ASP:HB3   | 1.72                     | 0.71              |
| 1:B:45:LEU:HD21  | 1:B:51:ASP:HB3   | 1.72                     | 0.71              |
| 1:E:32:ASP:O     | 1:E:34:LYS:HA    | 1.90                     | 0.71              |
| 1:E:33:ILE:HB    | 1:E:312:TRP:NE1  | 2.05                     | 0.71              |
| 1:F:33:ILE:HB    | 1:F:312:TRP:NE1  | 2.05                     | 0.71              |
| 1:G:274:PHE:HD1  | 1:J:204:HIS:CE1  | 2.07                     | 0.71              |
| 1:J:308:ASN:ND2  | 1:O:231:ALA:CA   | 2.52                     | 0.71              |
| 1:M:212:ARG:HD2  | 1:M:257:VAL:HG23 | 1.72                     | 0.71              |
| 1:N:22:ILE:HB    | 1:N:27:LYS:HE2   | 1.70                     | 0.71              |
| 1:N:212:ARG:HD2  | 1:N:257:VAL:HG23 | 1.71                     | 0.71              |
| 1:P:168:ASN:O    | 1:P:172:LYS:HD2  | 1.90                     | 0.71              |
| 1:B:33:ILE:HB    | 1:B:312:TRP:NE1  | 2.05                     | 0.71              |
| 1:B:241:LYS:CB   | 1:G:166:GLN:CD   | 2.41                     | 0.71              |
| 1:C:32:ASP:HB3   | 1:C:34:LYS:HD3   | 1.73                     | 0.71              |
| 1:C:45:LEU:HD21  | 1:C:51:ASP:HB3   | 1.72                     | 0.71              |
| 1:C:200:PHE:CD1  | 1:C:272:ARG:HD2  | 2.25                     | 0.71              |
| 1:E:250:SER:HB3  | 1:E:253:VAL:CB   | 2.14                     | 0.71              |
| 1:G:32:ASP:HB3   | 1:G:34:LYS:HD3   | 1.73                     | 0.71              |
| 1:G:59:ILE:HD12  | 1:G:95:THR:HG21  | 1.72                     | 0.71              |
| 1:G:226:ILE:HD12 | 1:H:303:ASN:O    | 1.90                     | 0.71              |
| 1:G:271:LYS:HG2  | 1:J:202:GLU:CG   | 2.19                     | 0.71              |
| 1:H:33:ILE:HB    | 1:H:312:TRP:NE1  | 2.05                     | 0.71              |
| 1:H:64:LYS:HG2   | 1:H:66:TYR:CZ    | 2.24                     | 0.71              |
| 1:J:33:ILE:CD1   | 1:J:312:TRP:HE1  | 2.03                     | 0.71              |
| 1:J:212:ARG:HD2  | 1:J:257:VAL:HG23 | 1.72                     | 0.71              |
| 1:K:59:ILE:HD12  | 1:K:95:THR:HG21  | 1.72                     | 0.71              |
| 1:L:22:ILE:HB    | 1:L:27:LYS:HE2   | 1.70                     | 0.71              |
| 1:L:112:CYS:SG   | 1:L:122:ALA:HB1  | 2.30                     | 0.71              |
| 1:M:45:LEU:HD21  | 1:M:51:ASP:HB3   | 1.72                     | 0.71              |
| 1:M:167:GLU:C    | 1:N:72:GLY:O     | 2.28                     | 0.71              |
| 1:M:175:ALA:HB3  | 1:M:282:LEU:CD2  | 2.20                     | 0.71              |
| 1:O:33:ILE:HB    | 1:O:312:TRP:NE1  | 2.05                     | 0.71              |
| 1:O:320:LYS:CD   | 1:P:49:TYR:CG    | 2.55                     | 0.71              |
| 1:A:221:ASN:ND2  | 1:B:277:ASP:OD1  | 2.23                     | 0.71              |
| 1:C:46:GLU:OE2   | 1:D:321:VAL:HG23 | 1.90                     | 0.71              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:221:ASN:ND2  | 1:D:277:ASP:OD1  | 2.23                     | 0.71              |
| 1:D:32:ASP:HB3   | 1:D:34:LYS:HD3   | 1.72                     | 0.71              |
| 1:G:218:THR:CB   | 1:H:275:LYS:O    | 2.29                     | 0.71              |
| 1:K:276:LEU:O    | 1:L:225:LEU:HA   | 1.89                     | 0.71              |
| 1:N:45:LEU:HD21  | 1:N:51:ASP:HB3   | 1.72                     | 0.71              |
| 1:O:212:ARG:HD2  | 1:O:257:VAL:HG23 | 1.72                     | 0.71              |
| 1:O:320:LYS:HE2  | 1:P:50:ILE:CB    | 2.13                     | 0.71              |
| 1:P:32:ASP:HB3   | 1:P:34:LYS:HD3   | 1.73                     | 0.71              |
| 1:A:72:GLY:O     | 1:B:167:GLU:C    | 2.28                     | 0.71              |
| 1:B:175:ALA:HB3  | 1:B:282:LEU:CD2  | 2.20                     | 0.71              |
| 1:C:27:LYS:HZ3   | 1:C:35:ARG:HH21  | 1.38                     | 0.71              |
| 1:C:33:ILE:HB    | 1:C:312:TRP:NE1  | 2.05                     | 0.71              |
| 1:C:175:ALA:HB3  | 1:C:282:LEU:CD2  | 2.20                     | 0.71              |
| 1:D:33:ILE:HB    | 1:D:312:TRP:NE1  | 2.05                     | 0.71              |
| 1:D:246:ILE:HA   | 1:H:52:ILE:HG12  | 1.72                     | 0.71              |
| 1:F:32:ASP:HB3   | 1:F:34:LYS:HD3   | 1.73                     | 0.71              |
| 1:G:201:ILE:O    | 1:J:200:PHE:HB3  | 1.91                     | 0.71              |
| 1:J:175:ALA:HB3  | 1:J:282:LEU:CD2  | 2.20                     | 0.71              |
| 1:K:112:CYS:SG   | 1:K:122:ALA:HB1  | 2.30                     | 0.71              |
| 1:K:158:GLY:O    | 1:K:161:VAL:HG22 | 1.89                     | 0.71              |
| 1:K:306:ILE:HG13 | 1:P:230:GLN:CB   | 2.18                     | 0.71              |
| 1:L:33:ILE:HB    | 1:L:312:TRP:NE1  | 2.05                     | 0.71              |
| 1:M:200:PHE:CD1  | 1:M:272:ARG:HD2  | 2.25                     | 0.71              |
| 1:M:277:ASP:OD1  | 1:N:221:ASN:ND2  | 2.23                     | 0.71              |
| 1:N:275:LYS:CE   | 1:O:219:ASP:CG   | 2.59                     | 0.71              |
| 1:O:22:ILE:HB    | 1:O:27:LYS:HE2   | 1.70                     | 0.71              |
| 1:O:275:LYS:CE   | 1:P:219:ASP:CG   | 2.59                     | 0.71              |
| 1:P:33:ILE:CD1   | 1:P:312:TRP:HE1  | 2.03                     | 0.71              |
| 1:P:212:ARG:HD2  | 1:P:257:VAL:HG23 | 1.71                     | 0.71              |
| 1:A:50:ILE:HG23  | 1:B:320:LYS:CG   | 2.20                     | 0.71              |
| 1:A:79:THR:HG21  | 1:B:192:CYS:CB   | 2.17                     | 0.71              |
| 1:A:175:ALA:HB3  | 1:A:282:LEU:CD2  | 2.20                     | 0.71              |
| 1:C:66:TYR:HE2   | 1:C:88:LEU:HD13  | 1.56                     | 0.71              |
| 1:C:79:THR:HG21  | 1:D:192:CYS:CB   | 2.17                     | 0.71              |
| 1:D:175:ALA:HB3  | 1:D:282:LEU:CD2  | 2.20                     | 0.71              |
| 1:E:200:PHE:CD1  | 1:E:272:ARG:HD2  | 2.25                     | 0.71              |
| 1:F:200:PHE:CD1  | 1:F:272:ARG:HD2  | 2.25                     | 0.71              |
| 1:F:222:ASN:CG   | 1:F:237:ASN:HB2  | 2.10                     | 0.71              |
| 1:G:66:TYR:HE2   | 1:G:88:LEU:HD13  | 1.56                     | 0.71              |
| 1:I:32:ASP:HB3   | 1:I:34:LYS:HD3   | 1.73                     | 0.71              |
| 1:I:112:CYS:SG   | 1:I:122:ALA:HB1  | 2.30                     | 0.71              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:33:ILE:HB    | 1:K:312:TRP:NE1  | 2.05                     | 0.71              |
| 1:K:164:LEU:C    | 1:P:243:GLY:N    | 2.43                     | 0.71              |
| 1:K:212:ARG:HD2  | 1:K:257:VAL:HG23 | 1.72                     | 0.71              |
| 1:M:258:LYS:HE3  | 1:M:295:GLN:HG3  | 1.71                     | 0.71              |
| 1:N:200:PHE:CD1  | 1:N:272:ARG:HD2  | 2.25                     | 0.71              |
| 1:N:222:ASN:CG   | 1:N:237:ASN:HB2  | 2.10                     | 0.71              |
| 1:N:277:ASP:OD1  | 1:O:221:ASN:ND2  | 2.23                     | 0.71              |
| 1:O:32:ASP:HB3   | 1:O:34:LYS:HD3   | 1.73                     | 0.71              |
| 1:O:45:LEU:HD21  | 1:O:51:ASP:HB3   | 1.72                     | 0.71              |
| 1:O:321:VAL:HG23 | 1:P:46:GLU:OE2   | 1.90                     | 0.71              |
| 1:P:66:TYR:HE2   | 1:P:88:LEU:HD13  | 1.56                     | 0.71              |
| 1:A:200:PHE:CD1  | 1:A:272:ARG:HD2  | 2.25                     | 0.71              |
| 1:A:219:ASP:CG   | 1:B:275:LYS:CE   | 2.59                     | 0.71              |
| 1:B:221:ASN:ND2  | 1:C:277:ASP:OD1  | 2.23                     | 0.71              |
| 1:B:245:GLU:O    | 1:F:74:GLU:O     | 2.08                     | 0.71              |
| 1:C:59:ILE:HD12  | 1:C:95:THR:HG21  | 1.72                     | 0.71              |
| 1:C:246:ILE:CG1  | 1:G:50:ILE:O     | 2.38                     | 0.71              |
| 1:F:204:HIS:HD2  | 1:I:274:PHE:CE1  | 1.79                     | 0.71              |
| 1:F:224:ASN:HD22 | 1:G:275:LYS:NZ   | 1.76                     | 0.71              |
| 1:H:32:ASP:HB3   | 1:H:34:LYS:HD3   | 1.73                     | 0.71              |
| 1:I:200:PHE:CD1  | 1:I:272:ARG:HD2  | 2.25                     | 0.71              |
| 1:J:300:TYR:CD2  | 1:K:225:LEU:CB   | 2.72                     | 0.71              |
| 1:K:11:THR:HB    | 1:K:22:ILE:HG12  | 1.70                     | 0.71              |
| 1:K:166:GLN:HB3  | 1:P:242:LYS:HB2  | 1.71                     | 0.71              |
| 1:L:222:ASN:CG   | 1:L:237:ASN:HB2  | 2.10                     | 0.71              |
| 1:M:66:TYR:HE2   | 1:M:88:LEU:HD13  | 1.56                     | 0.71              |
| 1:M:219:ASP:HA   | 1:M:224:ASN:HB2  | 0.86                     | 0.71              |
| 1:N:27:LYS:HZ3   | 1:N:35:ARG:HH21  | 1.39                     | 0.71              |
| 1:A:66:TYR:HE2   | 1:A:88:LEU:HD13  | 1.56                     | 0.71              |
| 1:B:50:ILE:HG23  | 1:C:320:LYS:CG   | 2.20                     | 0.71              |
| 1:C:66:TYR:CE2   | 1:C:88:LEU:HD13  | 2.26                     | 0.71              |
| 1:D:45:LEU:HD21  | 1:D:51:ASP:HB3   | 1.73                     | 0.71              |
| 1:D:200:PHE:CD1  | 1:D:272:ARG:HD2  | 2.25                     | 0.71              |
| 1:F:66:TYR:CZ    | 1:F:88:LEU:HD22  | 2.26                     | 0.71              |
| 1:G:200:PHE:CD1  | 1:G:272:ARG:HD2  | 2.25                     | 0.71              |
| 1:H:66:TYR:HE2   | 1:H:88:LEU:HD13  | 1.56                     | 0.71              |
| 1:K:66:TYR:HE2   | 1:K:88:LEU:HD13  | 1.56                     | 0.71              |
| 1:L:33:ILE:CD1   | 1:L:312:TRP:HE1  | 2.03                     | 0.71              |
| 1:L:212:ARG:HD2  | 1:L:257:VAL:HG23 | 1.72                     | 0.71              |
| 1:M:168:ASN:O    | 1:M:172:LYS:HD2  | 1.90                     | 0.71              |
| 1:O:168:ASN:O    | 1:O:172:LYS:HD2  | 1.90                     | 0.71              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:277:ASP:OD1  | 1:P:221:ASN:ND2  | 2.23                     | 0.71              |
| 1:P:66:TYR:CZ    | 1:P:88:LEU:HD22  | 2.26                     | 0.71              |
| 1:P:200:PHE:CD1  | 1:P:272:ARG:HD2  | 2.25                     | 0.71              |
| 1:B:222:ASN:CG   | 1:B:237:ASN:HB2  | 2.10                     | 0.71              |
| 1:C:112:CYS:SG   | 1:C:122:ALA:HB1  | 2.30                     | 0.71              |
| 1:D:112:CYS:SG   | 1:D:122:ALA:HB1  | 2.30                     | 0.71              |
| 1:G:32:ASP:O     | 1:G:34:LYS:HA    | 1.91                     | 0.71              |
| 1:G:204:HIS:CE1  | 1:J:274:PHE:HD1  | 2.07                     | 0.71              |
| 1:I:168:ASN:O    | 1:I:172:LYS:HD2  | 1.90                     | 0.71              |
| 1:I:219:ASP:HA   | 1:I:224:ASN:HB2  | 0.86                     | 0.71              |
| 1:I:303:ASN:O    | 1:J:226:ILE:HD12 | 1.90                     | 0.71              |
| 1:I:320:LYS:O    | 1:J:49:TYR:CD1   | 2.26                     | 0.71              |
| 1:J:168:ASN:O    | 1:J:172:LYS:HD2  | 1.90                     | 0.71              |
| 1:K:175:ALA:HB3  | 1:K:282:LEU:CD2  | 2.20                     | 0.71              |
| 1:M:222:ASN:CG   | 1:M:237:ASN:HB2  | 2.10                     | 0.71              |
| 1:N:320:LYS:CE   | 1:O:50:ILE:CD1   | 2.64                     | 0.71              |
| 1:P:33:ILE:HB    | 1:P:312:TRP:NE1  | 2.05                     | 0.71              |
| 1:A:66:TYR:CZ    | 1:A:88:LEU:HD22  | 2.26                     | 0.71              |
| 1:A:66:TYR:CE2   | 1:A:88:LEU:HD13  | 2.26                     | 0.71              |
| 1:B:32:ASP:HB3   | 1:B:34:LYS:HD3   | 1.73                     | 0.71              |
| 1:B:66:TYR:CE2   | 1:B:88:LEU:HD13  | 2.26                     | 0.71              |
| 1:B:246:ILE:HD13 | 1:G:323:VAL:HG13 | 1.65                     | 0.71              |
| 1:C:50:ILE:HG23  | 1:D:320:LYS:CG   | 2.20                     | 0.71              |
| 1:D:66:TYR:CE2   | 1:D:88:LEU:HD13  | 2.26                     | 0.71              |
| 1:F:32:ASP:O     | 1:F:34:LYS:HA    | 1.91                     | 0.71              |
| 1:F:33:ILE:CD1   | 1:F:312:TRP:HE1  | 2.03                     | 0.71              |
| 1:G:175:ALA:HB3  | 1:G:282:LEU:CD2  | 2.20                     | 0.71              |
| 1:G:203:GLU:HG3  | 1:J:198:GLU:HG3  | 0.71                     | 0.71              |
| 1:I:175:ALA:HB3  | 1:I:282:LEU:CD2  | 2.20                     | 0.71              |
| 1:J:200:PHE:CD1  | 1:J:272:ARG:HD2  | 2.25                     | 0.71              |
| 1:K:168:ASN:O    | 1:K:172:LYS:HD2  | 1.90                     | 0.71              |
| 1:L:175:ALA:HB3  | 1:L:282:LEU:CD2  | 2.20                     | 0.71              |
| 1:M:32:ASP:O     | 1:M:34:LYS:HA    | 1.90                     | 0.71              |
| 1:M:33:ILE:HB    | 1:M:312:TRP:NE1  | 2.05                     | 0.71              |
| 1:N:168:ASN:O    | 1:N:172:LYS:HD2  | 1.90                     | 0.71              |
| 1:O:33:ILE:CD1   | 1:O:312:TRP:HE1  | 2.03                     | 0.71              |
| 1:P:45:LEU:HD21  | 1:P:51:ASP:HB3   | 1.72                     | 0.71              |
| 1:P:59:ILE:HD12  | 1:P:95:THR:HG21  | 1.72                     | 0.71              |
| 1:P:66:TYR:CE2   | 1:P:88:LEU:HD13  | 2.26                     | 0.71              |
| 1:A:32:ASP:O     | 1:A:34:LYS:HA    | 1.91                     | 0.71              |
| 1:A:168:ASN:O    | 1:A:172:LYS:HD2  | 1.90                     | 0.71              |

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| Atom-1           | Atom-2          | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:B:219:ASP:CG   | 1:C:275:LYS:CE  | 2.59                     | 0.71              |
| 1:C:219:ASP:CG   | 1:D:275:LYS:CE  | 2.59                     | 0.71              |
| 1:C:222:ASN:CG   | 1:C:237:ASN:HB2 | 2.10                     | 0.71              |
| 1:D:66:TYR:CZ    | 1:D:88:LEU:HD22 | 2.26                     | 0.71              |
| 1:D:66:TYR:HE2   | 1:D:88:LEU:HD13 | 1.56                     | 0.71              |
| 1:F:203:GLU:HB3  | 1:I:198:GLU:HG2 | 1.73                     | 0.71              |
| 1:H:66:TYR:CZ    | 1:H:88:LEU:HD22 | 2.26                     | 0.71              |
| 1:J:32:ASP:O     | 1:J:34:LYS:HA   | 1.91                     | 0.71              |
| 1:J:75:ASP:HA    | 1:N:245:GLU:HB2 | 1.71                     | 0.71              |
| 1:K:222:ASN:CG   | 1:K:237:ASN:HB2 | 2.10                     | 0.71              |
| 1:L:200:PHE:CD1  | 1:L:272:ARG:HD2 | 2.25                     | 0.71              |
| 1:N:33:ILE:HB    | 1:N:312:TRP:NE1 | 2.05                     | 0.71              |
| 1:A:50:ILE:CD1   | 1:B:320:LYS:CE  | 2.64                     | 0.70              |
| 1:A:246:ILE:HD11 | 1:F:320:LYS:O   | 1.64                     | 0.70              |
| 1:B:79:THR:HG21  | 1:C:192:CYS:CB  | 2.17                     | 0.70              |
| 1:C:246:ILE:CD1  | 1:H:323:VAL:CG1 | 2.68                     | 0.70              |
| 1:E:66:TYR:CZ    | 1:E:88:LEU:HD22 | 2.26                     | 0.70              |
| 1:E:66:TYR:CE2   | 1:E:88:LEU:HD13 | 2.26                     | 0.70              |
| 1:F:66:TYR:CE2   | 1:F:88:LEU:HD13 | 2.26                     | 0.70              |
| 1:G:66:TYR:CE2   | 1:G:88:LEU:HD13 | 2.26                     | 0.70              |
| 1:G:272:ARG:HB2  | 1:J:202:GLU:HA  | 1.71                     | 0.70              |
| 1:H:32:ASP:O     | 1:H:34:LYS:HA   | 1.91                     | 0.70              |
| 1:H:66:TYR:CE2   | 1:H:88:LEU:HD13 | 2.26                     | 0.70              |
| 1:H:168:ASN:O    | 1:H:172:LYS:HD2 | 1.90                     | 0.70              |
| 1:I:32:ASP:O     | 1:I:34:LYS:HA   | 1.91                     | 0.70              |
| 1:K:33:ILE:CD1   | 1:K:312:TRP:HE1 | 2.03                     | 0.70              |
| 1:M:320:LYS:CG   | 1:N:50:ILE:HG23 | 2.20                     | 0.70              |
| 1:O:66:TYR:CZ    | 1:O:88:LEU:HD22 | 2.26                     | 0.70              |
| 1:O:66:TYR:CE2   | 1:O:88:LEU:HD13 | 2.26                     | 0.70              |
| 1:O:112:CYS:SG   | 1:O:122:ALA:HB1 | 2.30                     | 0.70              |
| 1:A:112:CYS:SG   | 1:A:122:ALA:HB1 | 2.30                     | 0.70              |
| 1:B:79:THR:OG1   | 1:C:192:CYS:N   | 2.24                     | 0.70              |
| 1:E:32:ASP:HB3   | 1:E:34:LYS:HD3  | 1.73                     | 0.70              |
| 1:E:112:CYS:SG   | 1:E:122:ALA:HB1 | 2.30                     | 0.70              |
| 1:F:219:ASP:OD2  | 1:G:275:LYS:CE  | 1.95                     | 0.70              |
| 1:F:226:ILE:HD12 | 1:G:303:ASN:O   | 1.90                     | 0.70              |
| 1:G:66:TYR:CZ    | 1:G:88:LEU:HD22 | 2.26                     | 0.70              |
| 1:G:200:PHE:HB3  | 1:J:201:ILE:O   | 1.91                     | 0.70              |
| 1:H:112:CYS:SG   | 1:H:122:ALA:HB1 | 2.30                     | 0.70              |
| 1:J:32:ASP:HB3   | 1:J:34:LYS:HD3  | 1.72                     | 0.70              |
| 1:J:66:TYR:CZ    | 1:J:88:LEU:HD22 | 2.26                     | 0.70              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:112:CYS:SG   | 1:J:122:ALA:HB1  | 2.30                     | 0.70              |
| 1:L:66:TYR:HE2   | 1:L:88:LEU:HD13  | 1.56                     | 0.70              |
| 1:L:168:ASN:O    | 1:L:172:LYS:HD2  | 1.90                     | 0.70              |
| 1:L:179:PHE:CE1  | 1:L:261:PHE:CE2  | 2.79                     | 0.70              |
| 1:M:66:TYR:CZ    | 1:M:88:LEU:HD22  | 2.26                     | 0.70              |
| 1:M:275:LYS:CE   | 1:N:219:ASP:CG   | 2.59                     | 0.70              |
| 1:N:66:TYR:CE2   | 1:N:88:LEU:HD13  | 2.26                     | 0.70              |
| 1:N:66:TYR:HE2   | 1:N:88:LEU:HD13  | 1.56                     | 0.70              |
| 1:N:112:CYS:SG   | 1:N:122:ALA:HB1  | 2.30                     | 0.70              |
| 1:N:320:LYS:CG   | 1:O:50:ILE:HG23  | 2.20                     | 0.70              |
| 1:O:59:ILE:HD12  | 1:O:95:THR:HG21  | 1.72                     | 0.70              |
| 1:B:32:ASP:O     | 1:B:34:LYS:HA    | 1.90                     | 0.70              |
| 1:B:200:PHE:CD1  | 1:B:272:ARG:HD2  | 2.25                     | 0.70              |
| 1:C:179:PHE:CE1  | 1:C:261:PHE:CE2  | 2.79                     | 0.70              |
| 1:D:168:ASN:O    | 1:D:172:LYS:HD2  | 1.90                     | 0.70              |
| 1:D:222:ASN:CG   | 1:D:237:ASN:HB2  | 2.10                     | 0.70              |
| 1:E:175:ALA:HB3  | 1:E:282:LEU:CD2  | 2.20                     | 0.70              |
| 1:E:222:ASN:CG   | 1:E:237:ASN:HB2  | 2.10                     | 0.70              |
| 1:F:265:ALA:HA   | 1:I:271:LYS:HZ2  | 1.54                     | 0.70              |
| 1:F:268:LEU:HD22 | 1:I:271:LYS:CE   | 2.21                     | 0.70              |
| 1:J:66:TYR:HE2   | 1:J:88:LEU:HD13  | 1.56                     | 0.70              |
| 1:K:179:PHE:CE1  | 1:K:261:PHE:CE2  | 2.79                     | 0.70              |
| 1:L:66:TYR:CZ    | 1:L:88:LEU:HD22  | 2.26                     | 0.70              |
| 1:M:66:TYR:CE2   | 1:M:88:LEU:HD13  | 2.26                     | 0.70              |
| 1:M:321:VAL:HG23 | 1:N:46:GLU:OE2   | 1.90                     | 0.70              |
| 1:N:32:ASP:HB3   | 1:N:34:LYS:HD3   | 1.72                     | 0.70              |
| 1:A:79:THR:OG1   | 1:B:192:CYS:N    | 2.24                     | 0.70              |
| 1:B:112:CYS:SG   | 1:B:122:ALA:HB1  | 2.30                     | 0.70              |
| 1:C:168:ASN:O    | 1:C:172:LYS:HD2  | 1.90                     | 0.70              |
| 1:D:32:ASP:O     | 1:D:34:LYS:HA    | 1.90                     | 0.70              |
| 1:D:33:ILE:CD1   | 1:D:312:TRP:HE1  | 2.03                     | 0.70              |
| 1:G:271:LYS:NZ   | 1:J:268:LEU:HD22 | 2.06                     | 0.70              |
| 1:H:200:PHE:CD1  | 1:H:272:ARG:HD2  | 2.25                     | 0.70              |
| 1:I:59:ILE:HD12  | 1:I:95:THR:HG21  | 1.72                     | 0.70              |
| 1:K:66:TYR:CE2   | 1:K:88:LEU:HD13  | 2.26                     | 0.70              |
| 1:M:192:CYS:N    | 1:N:79:THR:OG1   | 2.24                     | 0.70              |
| 1:O:32:ASP:O     | 1:O:34:LYS:HA    | 1.91                     | 0.70              |
| 1:O:320:LYS:CG   | 1:P:50:ILE:HG23  | 2.20                     | 0.70              |
| 1:A:7:GLU:HG3    | 1:A:326:TYR:CZ   | 2.27                     | 0.70              |
| 1:A:33:ILE:CD1   | 1:A:312:TRP:HE1  | 2.03                     | 0.70              |
| 1:A:245:GLU:O    | 1:E:74:GLU:C     | 2.30                     | 0.70              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:245:GLU:OE1  | 1:E:75:ASP:CG    | 2.29                     | 0.70              |
| 1:C:50:ILE:CD1   | 1:D:320:LYS:CE   | 2.64                     | 0.70              |
| 1:C:52:ILE:CD1   | 1:H:245:GLU:OE2  | 2.39                     | 0.70              |
| 1:C:241:LYS:NZ   | 1:H:305:ILE:HG22 | 2.06                     | 0.70              |
| 1:C:247:ASP:O    | 1:G:52:ILE:CG1   | 2.39                     | 0.70              |
| 1:E:226:ILE:HD12 | 1:F:303:ASN:O    | 1.90                     | 0.70              |
| 1:F:66:TYR:HE2   | 1:F:88:LEU:HD13  | 1.56                     | 0.70              |
| 1:F:112:CYS:SG   | 1:F:122:ALA:HB1  | 2.30                     | 0.70              |
| 1:F:225:LEU:CB   | 1:G:300:TYR:CD2  | 2.72                     | 0.70              |
| 1:F:267:LYS:HD3  | 1:I:267:LYS:CD   | 2.18                     | 0.70              |
| 1:I:33:ILE:HB    | 1:I:312:TRP:NE1  | 2.05                     | 0.70              |
| 1:I:33:ILE:CD1   | 1:I:312:TRP:HE1  | 2.03                     | 0.70              |
| 1:J:66:TYR:CE2   | 1:J:88:LEU:HD13  | 2.26                     | 0.70              |
| 1:L:66:TYR:CE2   | 1:L:88:LEU:HD13  | 2.26                     | 0.70              |
| 1:P:112:CYS:SG   | 1:P:122:ALA:HB1  | 2.30                     | 0.70              |
| 1:B:59:ILE:HD12  | 1:B:95:THR:HG21  | 1.71                     | 0.70              |
| 1:C:79:THR:OG1   | 1:D:192:CYS:N    | 2.24                     | 0.70              |
| 1:G:112:CYS:SG   | 1:G:122:ALA:HB1  | 2.30                     | 0.70              |
| 1:H:33:ILE:CD1   | 1:H:312:TRP:HE1  | 2.03                     | 0.70              |
| 1:H:45:LEU:HD21  | 1:H:51:ASP:HB3   | 1.72                     | 0.70              |
| 1:H:59:ILE:HD12  | 1:H:95:THR:HG21  | 1.72                     | 0.70              |
| 1:I:66:TYR:CE2   | 1:I:88:LEU:HD13  | 2.26                     | 0.70              |
| 1:I:168:ASN:CG   | 1:J:71:GLN:HE22  | 1.70                     | 0.70              |
| 1:I:307:THR:O    | 1:N:230:GLN:HB2  | 1.92                     | 0.70              |
| 1:I:308:ASN:HD22 | 1:N:231:ALA:C    | 1.95                     | 0.70              |
| 1:K:50:ILE:O     | 1:O:246:ILE:N    | 2.24                     | 0.70              |
| 1:K:66:TYR:CZ    | 1:K:88:LEU:HD22  | 2.26                     | 0.70              |
| 1:K:200:PHE:CD1  | 1:K:272:ARG:HD2  | 2.25                     | 0.70              |
| 1:L:32:ASP:HB3   | 1:L:34:LYS:HD3   | 1.73                     | 0.70              |
| 1:N:192:CYS:CB   | 1:O:79:THR:HG21  | 2.17                     | 0.70              |
| 1:O:200:PHE:CD1  | 1:O:272:ARG:HD2  | 2.25                     | 0.70              |
| 1:O:222:ASN:CG   | 1:O:237:ASN:HB2  | 2.10                     | 0.70              |
| 1:A:46:GLU:OE2   | 1:B:321:VAL:HG23 | 1.90                     | 0.70              |
| 1:A:179:PHE:CE1  | 1:A:261:PHE:CE2  | 2.79                     | 0.70              |
| 1:A:230:GLN:CB   | 1:F:307:THR:O    | 2.31                     | 0.70              |
| 1:A:230:GLN:HA   | 1:F:308:ASN:CG   | 2.11                     | 0.70              |
| 1:B:66:TYR:CZ    | 1:B:88:LEU:HD22  | 2.26                     | 0.70              |
| 1:B:168:ASN:O    | 1:B:172:LYS:HD2  | 1.90                     | 0.70              |
| 1:B:179:PHE:CE1  | 1:B:261:PHE:CE2  | 2.79                     | 0.70              |
| 1:C:241:LYS:HA   | 1:H:166:GLN:O    | 1.90                     | 0.70              |
| 1:D:179:PHE:CE1  | 1:D:261:PHE:CE2  | 2.79                     | 0.70              |

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| Atom-1          | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|------------------|--------------------------|-------------------|
| 1:F:202:GLU:CD  | 1:I:271:LYS:HG2  | 2.11                     | 0.70              |
| 1:G:7:GLU:HG3   | 1:G:326:TYR:CZ   | 2.27                     | 0.70              |
| 1:G:33:ILE:CD1  | 1:G:312:TRP:HE1  | 2.03                     | 0.70              |
| 1:G:201:ILE:CG2 | 1:J:272:ARG:NH1  | 2.53                     | 0.70              |
| 1:I:27:LYS:HZ3  | 1:I:35:ARG:HH21  | 1.37                     | 0.70              |
| 1:M:32:ASP:HB3  | 1:M:34:LYS:HD3   | 1.73                     | 0.70              |
| 1:N:33:ILE:CD1  | 1:N:312:TRP:HE1  | 2.03                     | 0.70              |
| 1:N:320:LYS:HD3 | 1:O:49:TYR:CD2   | 2.27                     | 0.70              |
| 1:P:32:ASP:O    | 1:P:34:LYS:HA    | 1.91                     | 0.70              |
| 1:A:47:ASP:C    | 1:B:320:LYS:C    | 2.44                     | 0.70              |
| 1:A:222:ASN:CG  | 1:A:237:ASN:HB2  | 2.10                     | 0.70              |
| 1:B:7:GLU:HG3   | 1:B:326:TYR:CZ   | 2.27                     | 0.70              |
| 1:C:66:TYR:CZ   | 1:C:88:LEU:HD22  | 2.26                     | 0.70              |
| 1:G:168:ASN:O   | 1:G:172:LYS:HD2  | 1.90                     | 0.70              |
| 1:I:66:TYR:CZ   | 1:I:88:LEU:HD22  | 2.26                     | 0.70              |
| 1:J:219:ASP:HA  | 1:J:224:ASN:HB2  | 0.86                     | 0.70              |
| 1:J:222:ASN:CG  | 1:J:237:ASN:HB2  | 2.10                     | 0.70              |
| 1:J:303:ASN:O   | 1:K:226:ILE:HD12 | 1.90                     | 0.70              |
| 1:K:32:ASP:O    | 1:K:34:LYS:HA    | 1.91                     | 0.70              |
| 1:N:59:ILE:HD12 | 1:N:95:THR:HG21  | 1.72                     | 0.70              |
| 1:N:192:CYS:N   | 1:O:79:THR:OG1   | 2.24                     | 0.70              |
| 1:A:49:TYR:CD2  | 1:B:320:LYS:HD3  | 2.27                     | 0.70              |
| 1:C:232:GLU:HG3 | 1:H:308:ASN:HB2  | 1.72                     | 0.70              |
| 1:C:248:THR:N   | 1:G:52:ILE:HD12  | 2.06                     | 0.70              |
| 1:E:7:GLU:HG3   | 1:E:326:TYR:CZ   | 2.27                     | 0.70              |
| 1:E:45:LEU:HD21 | 1:E:51:ASP:HB3   | 1.72                     | 0.70              |
| 1:F:45:LEU:HD21 | 1:F:51:ASP:HB3   | 1.72                     | 0.70              |
| 1:G:33:ILE:O    | 1:G:312:TRP:CZ2  | 2.45                     | 0.70              |
| 1:G:45:LEU:HD21 | 1:G:51:ASP:HB3   | 1.72                     | 0.70              |
| 1:H:202:GLU:OE2 | 1:K:271:LYS:C    | 2.29                     | 0.70              |
| 1:I:74:GLU:C    | 1:M:245:GLU:CB   | 2.52                     | 0.70              |
| 1:I:179:PHE:CE1 | 1:I:261:PHE:CE2  | 2.79                     | 0.70              |
| 1:J:27:LYS:HZ3  | 1:J:35:ARG:HH21  | 1.38                     | 0.70              |
| 1:J:307:THR:HA  | 1:O:231:ALA:HB2  | 1.73                     | 0.70              |
| 1:K:309:ASN:OD1 | 1:P:229:GLU:N    | 2.24                     | 0.70              |
| 1:M:179:PHE:CE1 | 1:M:261:PHE:CE2  | 2.79                     | 0.70              |
| 1:N:32:ASP:O    | 1:N:34:LYS:HA    | 1.90                     | 0.70              |
| 1:O:66:TYR:HE2  | 1:O:88:LEU:HD13  | 1.56                     | 0.70              |
| 1:O:192:CYS:N   | 1:P:79:THR:OG1   | 2.24                     | 0.70              |
| 1:O:320:LYS:HD3 | 1:P:49:TYR:CD2   | 2.27                     | 0.70              |
| 1:P:7:GLU:HG3   | 1:P:326:TYR:CZ   | 2.27                     | 0.70              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:59:ILE:HD12  | 1:A:95:THR:HG21  | 1.71                     | 0.70              |
| 1:C:7:GLU:HG3    | 1:C:326:TYR:CZ   | 2.27                     | 0.70              |
| 1:F:33:ILE:O     | 1:F:312:TRP:CZ2  | 2.45                     | 0.70              |
| 1:G:179:PHE:CE1  | 1:G:261:PHE:CE2  | 2.79                     | 0.70              |
| 1:G:268:LEU:HD22 | 1:J:271:LYS:NZ   | 2.07                     | 0.70              |
| 1:G:272:ARG:NH1  | 1:J:201:ILE:CG2  | 2.53                     | 0.70              |
| 1:H:271:LYS:HZ2  | 1:K:265:ALA:HA   | 1.53                     | 0.70              |
| 1:I:7:GLU:HG3    | 1:I:326:TYR:CZ   | 2.27                     | 0.70              |
| 1:I:33:ILE:O     | 1:I:312:TRP:CZ2  | 2.45                     | 0.70              |
| 1:K:307:THR:HA   | 1:P:231:ALA:CB   | 2.22                     | 0.70              |
| 1:M:112:CYS:SG   | 1:M:122:ALA:HB1  | 2.30                     | 0.70              |
| 1:N:66:TYR:CZ    | 1:N:88:LEU:HD22  | 2.26                     | 0.70              |
| 1:O:7:GLU:HG3    | 1:O:326:TYR:CZ   | 2.27                     | 0.70              |
| 1:B:33:ILE:CD1   | 1:B:312:TRP:HE1  | 2.03                     | 0.69              |
| 1:D:33:ILE:O     | 1:D:312:TRP:CZ2  | 2.45                     | 0.69              |
| 1:E:33:ILE:CD1   | 1:E:312:TRP:HE1  | 2.03                     | 0.69              |
| 1:E:59:ILE:HD12  | 1:E:95:THR:HG21  | 1.72                     | 0.69              |
| 1:F:179:PHE:CE1  | 1:F:261:PHE:CE2  | 2.79                     | 0.69              |
| 1:H:33:ILE:O     | 1:H:312:TRP:CZ2  | 2.45                     | 0.69              |
| 1:J:179:PHE:CE1  | 1:J:261:PHE:CE2  | 2.79                     | 0.69              |
| 1:N:7:GLU:HG3    | 1:N:326:TYR:CZ   | 2.27                     | 0.69              |
| 1:O:207:LYS:O    | 1:O:211:ILE:HG23 | 1.92                     | 0.69              |
| 1:H:179:PHE:CE1  | 1:H:261:PHE:CE2  | 2.79                     | 0.69              |
| 1:H:183:ASN:ND2  | 1:K:197:SER:CB   | 2.44                     | 0.69              |
| 1:J:33:ILE:O     | 1:J:312:TRP:CZ2  | 2.45                     | 0.69              |
| 1:K:303:ASN:O    | 1:L:226:ILE:HD12 | 1.90                     | 0.69              |
| 1:M:7:GLU:HG3    | 1:M:326:TYR:CZ   | 2.27                     | 0.69              |
| 1:P:179:PHE:CE1  | 1:P:261:PHE:CE2  | 2.79                     | 0.69              |
| 1:B:308:ASN:HD21 | 1:F:241:LYS:HB2  | 1.55                     | 0.69              |
| 1:C:32:ASP:O     | 1:C:34:LYS:HA    | 1.91                     | 0.69              |
| 1:E:168:ASN:O    | 1:E:172:LYS:HD2  | 1.90                     | 0.69              |
| 1:F:71:GLN:HE22  | 1:G:168:ASN:CG   | 1.70                     | 0.69              |
| 1:H:7:GLU:HG3    | 1:H:326:TYR:CZ   | 2.27                     | 0.69              |
| 1:K:7:GLU:HG3    | 1:K:326:TYR:CZ   | 2.27                     | 0.69              |
| 1:B:207:LYS:O    | 1:B:211:ILE:HG23 | 1.92                     | 0.69              |
| 1:C:248:THR:HG23 | 1:G:52:ILE:CD1   | 2.23                     | 0.69              |
| 1:E:179:PHE:CE1  | 1:E:261:PHE:CE2  | 2.79                     | 0.69              |
| 1:E:226:ILE:H    | 1:F:303:ASN:CB   | 1.97                     | 0.69              |
| 1:F:168:ASN:O    | 1:F:172:LYS:HD2  | 1.90                     | 0.69              |
| 1:G:202:GLU:HA   | 1:J:272:ARG:HB2  | 1.72                     | 0.69              |
| 1:H:310:SER:HA   | 1:H:313:THR:HG23 | 1.75                     | 0.69              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:52:ILE:CG2   | 1:O:248:THR:HA   | 2.11                     | 0.69              |
| 1:K:207:LYS:O    | 1:K:211:ILE:HG23 | 1.92                     | 0.69              |
| 1:K:303:ASN:CB   | 1:L:226:ILE:H    | 1.97                     | 0.69              |
| 1:M:33:ILE:CD1   | 1:M:312:TRP:HE1  | 2.03                     | 0.69              |
| 1:M:59:ILE:HD12  | 1:M:95:THR:HG21  | 1.71                     | 0.69              |
| 1:M:192:CYS:CB   | 1:N:79:THR:HG21  | 2.17                     | 0.69              |
| 1:A:32:ASP:HB3   | 1:A:34:LYS:HD3   | 1.73                     | 0.69              |
| 1:A:207:LYS:O    | 1:A:211:ILE:HG23 | 1.92                     | 0.69              |
| 1:E:33:ILE:O     | 1:E:312:TRP:CZ2  | 2.45                     | 0.69              |
| 1:G:198:GLU:HG3  | 1:J:203:GLU:HG3  | 0.70                     | 0.69              |
| 1:I:66:TYR:HE2   | 1:I:88:LEU:HD13  | 1.56                     | 0.69              |
| 1:J:74:GLU:C     | 1:N:245:GLU:CB   | 2.55                     | 0.69              |
| 1:K:74:GLU:O     | 1:O:245:GLU:O    | 2.10                     | 0.69              |
| 1:L:32:ASP:O     | 1:L:34:LYS:HA    | 1.90                     | 0.69              |
| 1:M:33:ILE:O     | 1:M:312:TRP:CZ2  | 2.45                     | 0.69              |
| 1:N:179:PHE:CE1  | 1:N:261:PHE:CE2  | 2.79                     | 0.69              |
| 1:O:179:PHE:CE1  | 1:O:261:PHE:CE2  | 2.79                     | 0.69              |
| 1:P:33:ILE:O     | 1:P:312:TRP:CZ2  | 2.45                     | 0.69              |
| 1:C:33:ILE:O     | 1:C:312:TRP:CZ2  | 2.45                     | 0.69              |
| 1:C:49:TYR:CD2   | 1:D:320:LYS:HD3  | 2.27                     | 0.69              |
| 1:C:52:ILE:HD11  | 1:H:245:GLU:OE2  | 1.93                     | 0.69              |
| 1:D:7:GLU:HG3    | 1:D:326:TYR:CZ   | 2.27                     | 0.69              |
| 1:E:207:LYS:O    | 1:E:211:ILE:HG23 | 1.92                     | 0.69              |
| 1:F:7:GLU:HG3    | 1:F:326:TYR:CZ   | 2.27                     | 0.69              |
| 1:K:33:ILE:O     | 1:K:312:TRP:CZ2  | 2.45                     | 0.69              |
| 1:K:219:ASP:HA   | 1:K:224:ASN:HB2  | 0.86                     | 0.69              |
| 1:K:275:LYS:O    | 1:L:218:THR:CB   | 2.28                     | 0.69              |
| 1:C:33:ILE:CD1   | 1:C:312:TRP:HE1  | 2.03                     | 0.69              |
| 1:E:47:ASP:C     | 1:F:324:ALA:N    | 2.46                     | 0.69              |
| 1:G:310:SER:HA   | 1:G:313:THR:HG23 | 1.75                     | 0.69              |
| 1:H:198:GLU:HG2  | 1:K:203:GLU:HB3  | 1.74                     | 0.69              |
| 1:I:45:LEU:HD21  | 1:I:51:ASP:HB3   | 1.73                     | 0.69              |
| 1:I:245:GLU:OE2  | 1:N:52:ILE:HD13  | 1.93                     | 0.69              |
| 1:K:166:GLN:C    | 1:P:241:LYS:HA   | 2.13                     | 0.69              |
| 1:N:33:ILE:O     | 1:N:312:TRP:CZ2  | 2.45                     | 0.69              |
| 1:A:33:ILE:O     | 1:A:312:TRP:CZ2  | 2.45                     | 0.69              |
| 1:B:33:ILE:O     | 1:B:312:TRP:CZ2  | 2.45                     | 0.69              |
| 1:B:66:TYR:HE2   | 1:B:88:LEU:HD13  | 1.56                     | 0.69              |
| 1:D:274:PHE:HB2  | 1:D:278:GLN:NE2  | 2.08                     | 0.69              |
| 1:E:224:ASN:HD22 | 1:F:275:LYS:NZ   | 1.76                     | 0.69              |
| 1:F:197:SER:CB   | 1:I:183:ASN:ND2  | 2.41                     | 0.69              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:207:LYS:O    | 1:F:211:ILE:HG23 | 1.92                     | 0.69              |
| 1:F:272:ARG:CB   | 1:I:202:GLU:HG2  | 2.23                     | 0.69              |
| 1:F:274:PHE:HB2  | 1:F:278:GLN:NE2  | 2.08                     | 0.69              |
| 1:F:310:SER:HA   | 1:F:313:THR:HG23 | 1.75                     | 0.69              |
| 1:G:47:ASP:C     | 1:H:324:ALA:N    | 2.46                     | 0.69              |
| 1:G:272:ARG:HG3  | 1:J:202:GLU:CA   | 2.22                     | 0.69              |
| 1:H:271:LYS:HG2  | 1:K:202:GLU:CD   | 2.12                     | 0.69              |
| 1:I:274:PHE:HB2  | 1:I:278:GLN:NE2  | 2.08                     | 0.69              |
| 1:J:274:PHE:HB2  | 1:J:278:GLN:NE2  | 2.08                     | 0.69              |
| 1:K:27:LYS:HZ3   | 1:K:35:ARG:HH21  | 1.39                     | 0.69              |
| 1:K:32:ASP:HB3   | 1:K:34:LYS:HD3   | 1.73                     | 0.69              |
| 1:K:52:ILE:HD11  | 1:O:247:ASP:CA   | 1.91                     | 0.69              |
| 1:K:324:ALA:N    | 1:L:47:ASP:C     | 2.46                     | 0.69              |
| 1:L:207:LYS:O    | 1:L:211:ILE:HG23 | 1.92                     | 0.69              |
| 1:M:207:LYS:O    | 1:M:211:ILE:HG23 | 1.92                     | 0.69              |
| 1:M:320:LYS:HD3  | 1:N:49:TYR:CD2   | 2.27                     | 0.69              |
| 1:N:207:LYS:O    | 1:N:211:ILE:HG23 | 1.92                     | 0.69              |
| 1:O:27:LYS:HZ3   | 1:O:35:ARG:HH21  | 1.41                     | 0.69              |
| 1:O:274:PHE:HB2  | 1:O:278:GLN:NE2  | 2.08                     | 0.69              |
| 1:A:248:THR:HG23 | 1:E:52:ILE:CD1   | 2.23                     | 0.69              |
| 1:B:274:PHE:HB2  | 1:B:278:GLN:NE2  | 2.08                     | 0.69              |
| 1:C:274:PHE:HB2  | 1:C:278:GLN:NE2  | 2.08                     | 0.69              |
| 1:D:207:LYS:O    | 1:D:211:ILE:HG23 | 1.92                     | 0.69              |
| 1:G:274:PHE:CE1  | 1:J:204:HIS:HD2  | 1.83                     | 0.69              |
| 1:G:274:PHE:HB2  | 1:G:278:GLN:NE2  | 2.08                     | 0.69              |
| 1:J:45:LEU:HD21  | 1:J:51:ASP:HB3   | 1.73                     | 0.69              |
| 1:J:310:SER:HA   | 1:J:313:THR:HG23 | 1.75                     | 0.69              |
| 1:M:27:LYS:HZ3   | 1:M:35:ARG:HH21  | 1.40                     | 0.69              |
| 1:O:33:ILE:O     | 1:O:312:TRP:CZ2  | 2.45                     | 0.69              |
| 1:A:274:PHE:HB2  | 1:A:278:GLN:NE2  | 2.08                     | 0.69              |
| 1:E:274:PHE:HB2  | 1:E:278:GLN:NE2  | 2.08                     | 0.69              |
| 1:E:310:SER:HA   | 1:E:313:THR:HG23 | 1.75                     | 0.69              |
| 1:G:48:GLY:HA2   | 1:H:322:ALA:O    | 1.93                     | 0.69              |
| 1:G:226:ILE:H    | 1:H:303:ASN:CB   | 1.97                     | 0.69              |
| 1:I:310:SER:HA   | 1:I:313:THR:HG23 | 1.75                     | 0.69              |
| 1:I:324:ALA:N    | 1:J:47:ASP:C     | 2.46                     | 0.69              |
| 1:L:7:GLU:HG3    | 1:L:326:TYR:CZ   | 2.27                     | 0.69              |
| 1:N:299:THR:CA   | 1:O:227:THR:HG21 | 2.16                     | 0.69              |
| 1:G:203:GLU:N    | 1:J:272:ARG:CG   | 2.20                     | 0.68              |
| 1:H:264:ASP:O    | 1:H:268:LEU:HD13 | 1.94                     | 0.68              |
| 1:I:300:TYR:CD2  | 1:J:225:LEU:CB   | 2.72                     | 0.68              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:274:PHE:HB2  | 1:K:278:GLN:NE2  | 2.08                     | 0.68              |
| 1:A:230:GLN:CB   | 1:F:307:THR:C    | 2.40                     | 0.68              |
| 1:B:229:GLU:OE2  | 1:G:309:ASN:C    | 2.20                     | 0.68              |
| 1:E:164:LEU:CD1  | 1:E:316:GLU:HB2  | 2.23                     | 0.68              |
| 1:F:164:LEU:CD1  | 1:F:316:GLU:HB2  | 2.23                     | 0.68              |
| 1:J:207:LYS:O    | 1:J:211:ILE:HG23 | 1.92                     | 0.68              |
| 1:K:45:LEU:HD21  | 1:K:51:ASP:HB3   | 1.72                     | 0.68              |
| 1:K:277:ASP:O    | 1:L:224:ASN:CA   | 2.14                     | 0.68              |
| 1:L:33:ILE:O     | 1:L:312:TRP:CZ2  | 2.45                     | 0.68              |
| 1:M:164:LEU:CD1  | 1:M:316:GLU:HB2  | 2.23                     | 0.68              |
| 1:F:173:ASN:HD22 | 1:F:279:LEU:HD23 | 1.59                     | 0.68              |
| 1:G:164:LEU:CD1  | 1:G:316:GLU:HB2  | 2.23                     | 0.68              |
| 1:G:264:ASP:O    | 1:G:268:LEU:HD13 | 1.94                     | 0.68              |
| 1:H:164:LEU:CD1  | 1:H:316:GLU:HB2  | 2.23                     | 0.68              |
| 1:K:264:ASP:O    | 1:K:268:LEU:HD13 | 1.94                     | 0.68              |
| 1:K:310:SER:HA   | 1:K:313:THR:HG23 | 1.75                     | 0.68              |
| 1:L:45:LEU:HD21  | 1:L:51:ASP:HB3   | 1.72                     | 0.68              |
| 1:L:264:ASP:O    | 1:L:268:LEU:HD13 | 1.94                     | 0.68              |
| 1:O:192:CYS:CB   | 1:P:79:THR:HG21  | 2.17                     | 0.68              |
| 1:P:110:LEU:HD23 | 1:P:111:ALA:N    | 2.08                     | 0.68              |
| 1:A:47:ASP:C     | 1:B:323:VAL:CG2  | 2.57                     | 0.68              |
| 1:C:230:GLN:CB   | 1:H:306:ILE:HG13 | 2.24                     | 0.68              |
| 1:C:248:THR:HG22 | 1:G:52:ILE:HA    | 1.74                     | 0.68              |
| 1:C:310:SER:HA   | 1:C:313:THR:HG23 | 1.75                     | 0.68              |
| 1:E:66:TYR:HE2   | 1:E:88:LEU:HD13  | 1.56                     | 0.68              |
| 1:F:47:ASP:C     | 1:G:324:ALA:N    | 2.46                     | 0.68              |
| 1:F:48:GLY:HA2   | 1:G:322:ALA:O    | 1.93                     | 0.68              |
| 1:F:264:ASP:O    | 1:F:268:LEU:HD13 | 1.94                     | 0.68              |
| 1:H:267:LYS:HD3  | 1:K:267:LYS:CD   | 2.21                     | 0.68              |
| 1:I:110:LEU:HD23 | 1:I:111:ALA:N    | 2.08                     | 0.68              |
| 1:I:173:ASN:HD22 | 1:I:279:LEU:HD23 | 1.59                     | 0.68              |
| 1:I:264:ASP:O    | 1:I:268:LEU:HD13 | 1.94                     | 0.68              |
| 1:A:11:THR:HG23  | 1:A:318:LEU:HB2  | 1.76                     | 0.68              |
| 1:A:164:LEU:CD1  | 1:A:316:GLU:HB2  | 2.23                     | 0.68              |
| 1:B:290:GLN:HB3  | 1:F:230:GLN:HE22 | 1.58                     | 0.68              |
| 1:E:264:ASP:O    | 1:E:268:LEU:HD13 | 1.94                     | 0.68              |
| 1:H:274:PHE:HB2  | 1:H:278:GLN:NE2  | 2.08                     | 0.68              |
| 1:J:264:ASP:O    | 1:J:268:LEU:HD13 | 1.94                     | 0.68              |
| 1:K:173:ASN:HD22 | 1:K:279:LEU:HD23 | 1.59                     | 0.68              |
| 1:L:310:SER:HA   | 1:L:313:THR:HG23 | 1.75                     | 0.68              |
| 1:N:11:THR:HG23  | 1:N:318:LEU:HB2  | 1.76                     | 0.68              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:164:LEU:CD1  | 1:N:316:GLU:HB2  | 2.23                     | 0.68              |
| 1:P:264:ASP:O    | 1:P:268:LEU:HD13 | 1.94                     | 0.68              |
| 1:A:33:ILE:O     | 1:A:312:TRP:CE2  | 2.47                     | 0.68              |
| 1:A:110:LEU:HD23 | 1:A:111:ALA:N    | 2.08                     | 0.68              |
| 1:B:310:SER:HA   | 1:B:313:THR:HG23 | 1.75                     | 0.68              |
| 1:C:33:ILE:O     | 1:C:312:TRP:CE2  | 2.47                     | 0.68              |
| 1:C:110:LEU:HD23 | 1:C:111:ALA:N    | 2.08                     | 0.68              |
| 1:J:7:GLU:HG3    | 1:J:326:TYR:CZ   | 2.27                     | 0.68              |
| 1:J:110:LEU:HD23 | 1:J:111:ALA:N    | 2.09                     | 0.68              |
| 1:J:200:PHE:HD1  | 1:J:272:ARG:HD2  | 1.59                     | 0.68              |
| 1:N:274:PHE:HB2  | 1:N:278:GLN:NE2  | 2.08                     | 0.68              |
| 1:O:164:LEU:CD1  | 1:O:316:GLU:HB2  | 2.23                     | 0.68              |
| 1:P:207:LYS:O    | 1:P:211:ILE:HG23 | 1.92                     | 0.68              |
| 1:D:11:THR:HG23  | 1:D:318:LEU:HB2  | 1.76                     | 0.68              |
| 1:D:310:SER:HA   | 1:D:313:THR:HG23 | 1.75                     | 0.68              |
| 1:E:45:LEU:HD22  | 1:E:58:LYS:HZ3   | 1.59                     | 0.68              |
| 1:F:47:ASP:C     | 1:G:323:VAL:O    | 2.30                     | 0.68              |
| 1:H:267:LYS:CD   | 1:K:267:LYS:HD3  | 2.22                     | 0.68              |
| 1:J:33:ILE:O     | 1:J:312:TRP:CE2  | 2.47                     | 0.68              |
| 1:L:43:TYR:CZ    | 1:L:70:GLU:CD    | 2.67                     | 0.68              |
| 1:N:33:ILE:O     | 1:N:312:TRP:CE2  | 2.47                     | 0.68              |
| 1:O:200:PHE:HD1  | 1:O:272:ARG:HD2  | 1.59                     | 0.68              |
| 1:P:33:ILE:O     | 1:P:312:TRP:CE2  | 2.47                     | 0.68              |
| 1:P:274:PHE:HB2  | 1:P:278:GLN:NE2  | 2.08                     | 0.68              |
| 1:A:245:GLU:OE2  | 1:E:78:GLU:OE1   | 2.11                     | 0.68              |
| 1:B:200:PHE:HD1  | 1:B:272:ARG:HD2  | 1.59                     | 0.68              |
| 1:B:231:ALA:HB2  | 1:G:307:THR:HA   | 1.76                     | 0.68              |
| 1:B:248:THR:HG23 | 1:F:52:ILE:CD1   | 2.24                     | 0.68              |
| 1:C:11:THR:HG23  | 1:C:318:LEU:HB2  | 1.76                     | 0.68              |
| 1:C:43:TYR:CZ    | 1:C:70:GLU:CD    | 2.67                     | 0.68              |
| 1:C:44:ASN:CB    | 1:C:64:LYS:HZ1   | 2.07                     | 0.68              |
| 1:C:164:LEU:CD1  | 1:C:316:GLU:HB2  | 2.23                     | 0.68              |
| 1:C:230:GLN:C    | 1:H:308:ASN:ND2  | 2.47                     | 0.68              |
| 1:D:164:LEU:CD1  | 1:D:316:GLU:HB2  | 2.23                     | 0.68              |
| 1:D:264:ASP:O    | 1:D:268:LEU:HD13 | 1.94                     | 0.68              |
| 1:F:200:PHE:HD1  | 1:F:272:ARG:HD2  | 1.59                     | 0.68              |
| 1:G:202:GLU:CA   | 1:J:272:ARG:HG3  | 2.22                     | 0.68              |
| 1:H:173:ASN:HD22 | 1:H:279:LEU:HD23 | 1.59                     | 0.68              |
| 1:I:275:LYS:NZ   | 1:J:224:ASN:HD22 | 1.76                     | 0.68              |
| 1:J:322:ALA:O    | 1:K:48:GLY:HA2   | 1.93                     | 0.68              |
| 1:K:33:ILE:O     | 1:K:312:TRP:CE2  | 2.47                     | 0.68              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:322:ALA:O    | 1:L:48:GLY:HA2   | 1.93                     | 0.68              |
| 1:L:33:ILE:O     | 1:L:312:TRP:CE2  | 2.47                     | 0.68              |
| 1:L:110:LEU:HD23 | 1:L:111:ALA:N    | 2.09                     | 0.68              |
| 1:L:274:PHE:HB2  | 1:L:278:GLN:NE2  | 2.08                     | 0.68              |
| 1:M:11:THR:HG23  | 1:M:318:LEU:HB2  | 1.76                     | 0.68              |
| 1:M:33:ILE:O     | 1:M:312:TRP:CE2  | 2.47                     | 0.68              |
| 1:M:43:TYR:CZ    | 1:M:70:GLU:CD    | 2.67                     | 0.68              |
| 1:P:164:LEU:CD1  | 1:P:316:GLU:HB2  | 2.23                     | 0.68              |
| 1:A:43:TYR:CZ    | 1:A:70:GLU:CD    | 2.68                     | 0.68              |
| 1:B:11:THR:HG23  | 1:B:318:LEU:HB2  | 1.76                     | 0.68              |
| 1:C:207:LYS:O    | 1:C:211:ILE:HG23 | 1.92                     | 0.68              |
| 1:D:240:MET:HE3  | 1:H:73:VAL:HG21  | 1.75                     | 0.68              |
| 1:D:245:GLU:CB   | 1:H:75:ASP:N     | 2.46                     | 0.68              |
| 1:F:110:LEU:HD23 | 1:F:111:ALA:N    | 2.08                     | 0.68              |
| 1:G:33:ILE:O     | 1:G:312:TRP:CE2  | 2.47                     | 0.68              |
| 1:G:267:LYS:HD3  | 1:J:267:LYS:CD   | 2.22                     | 0.68              |
| 1:H:43:TYR:CZ    | 1:H:70:GLU:CD    | 2.67                     | 0.68              |
| 1:I:322:ALA:O    | 1:J:48:GLY:HA2   | 1.93                     | 0.68              |
| 1:J:277:ASP:CB   | 1:K:219:ASP:CG   | 2.61                     | 0.68              |
| 1:K:43:TYR:CZ    | 1:K:70:GLU:CD    | 2.67                     | 0.68              |
| 1:L:52:ILE:CB    | 1:P:247:ASP:O    | 2.42                     | 0.68              |
| 1:M:110:LEU:HD23 | 1:M:111:ALA:N    | 2.08                     | 0.68              |
| 1:O:11:THR:HG23  | 1:O:318:LEU:HB2  | 1.76                     | 0.68              |
| 1:P:11:THR:HG23  | 1:P:318:LEU:HB2  | 1.76                     | 0.68              |
| 1:P:43:TYR:CZ    | 1:P:70:GLU:CD    | 2.67                     | 0.68              |
| 1:P:310:SER:HA   | 1:P:313:THR:HG23 | 1.75                     | 0.68              |
| 1:A:310:SER:HA   | 1:A:313:THR:HG23 | 1.75                     | 0.68              |
| 1:D:33:ILE:O     | 1:D:312:TRP:CE2  | 2.47                     | 0.68              |
| 1:G:207:LYS:O    | 1:G:211:ILE:HG23 | 1.92                     | 0.68              |
| 1:H:33:ILE:O     | 1:H:312:TRP:CE2  | 2.47                     | 0.68              |
| 1:J:166:GLN:C    | 1:O:241:LYS:HA   | 2.14                     | 0.68              |
| 1:J:324:ALA:N    | 1:K:47:ASP:C     | 2.45                     | 0.68              |
| 1:K:110:LEU:HD23 | 1:K:111:ALA:N    | 2.08                     | 0.68              |
| 1:M:274:PHE:HB2  | 1:M:278:GLN:NE2  | 2.08                     | 0.68              |
| 1:N:43:TYR:CZ    | 1:N:70:GLU:CD    | 2.67                     | 0.68              |
| 1:O:33:ILE:O     | 1:O:312:TRP:CE2  | 2.47                     | 0.68              |
| 1:O:138:VAL:HG21 | 1:O:145:TYR:CE2  | 2.30                     | 0.68              |
| 1:P:173:ASN:HD22 | 1:P:279:LEU:HD23 | 1.59                     | 0.68              |
| 1:B:33:ILE:O     | 1:B:312:TRP:CE2  | 2.47                     | 0.67              |
| 1:C:264:ASP:O    | 1:C:268:LEU:HD13 | 1.94                     | 0.67              |
| 1:D:43:TYR:CZ    | 1:D:70:GLU:CD    | 2.67                     | 0.67              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:188:LEU:H    | 1:D:199:ARG:CG   | 2.08                     | 0.67              |
| 1:D:245:GLU:CB   | 1:H:75:ASP:CA    | 2.72                     | 0.67              |
| 1:E:33:ILE:O     | 1:E:312:TRP:CE2  | 2.47                     | 0.67              |
| 1:E:110:LEU:HD23 | 1:E:111:ALA:N    | 2.09                     | 0.67              |
| 1:E:119:ASN:O    | 1:E:123:LYS:HB3  | 1.95                     | 0.67              |
| 1:F:33:ILE:O     | 1:F:312:TRP:CE2  | 2.47                     | 0.67              |
| 1:F:119:ASN:O    | 1:F:123:LYS:HB3  | 1.95                     | 0.67              |
| 1:G:110:LEU:HD23 | 1:G:111:ALA:N    | 2.08                     | 0.67              |
| 1:H:11:THR:HG23  | 1:H:318:LEU:HB2  | 1.76                     | 0.67              |
| 1:H:207:LYS:O    | 1:H:211:ILE:HG23 | 1.92                     | 0.67              |
| 1:I:265:ALA:O    | 1:I:269:ILE:HG12 | 1.94                     | 0.67              |
| 1:L:119:ASN:O    | 1:L:123:LYS:HB3  | 1.95                     | 0.67              |
| 1:L:265:ALA:O    | 1:L:269:ILE:HG12 | 1.94                     | 0.67              |
| 1:M:138:VAL:HG21 | 1:M:145:TYR:CE2  | 2.29                     | 0.67              |
| 1:N:110:LEU:HD23 | 1:N:111:ALA:N    | 2.09                     | 0.67              |
| 1:N:138:VAL:HG21 | 1:N:145:TYR:CE2  | 2.30                     | 0.67              |
| 1:P:138:VAL:HG21 | 1:P:145:TYR:CE2  | 2.30                     | 0.67              |
| 1:B:49:TYR:CD2   | 1:C:320:LYS:HD3  | 2.27                     | 0.67              |
| 1:B:164:LEU:CD1  | 1:B:316:GLU:HB2  | 2.23                     | 0.67              |
| 1:E:177:ILE:HD11 | 1:E:284:PHE:CG   | 2.30                     | 0.67              |
| 1:G:43:TYR:CZ    | 1:G:70:GLU:CD    | 2.67                     | 0.67              |
| 1:G:119:ASN:O    | 1:G:123:LYS:HB3  | 1.95                     | 0.67              |
| 1:I:43:TYR:CZ    | 1:I:70:GLU:CD    | 2.67                     | 0.67              |
| 1:I:277:ASP:HB3  | 1:J:219:ASP:C    | 2.11                     | 0.67              |
| 1:J:308:ASN:HB3  | 1:O:228:ASN:C    | 2.13                     | 0.67              |
| 1:K:308:ASN:CG   | 1:P:230:GLN:HA   | 2.15                     | 0.67              |
| 1:O:110:LEU:HD23 | 1:O:111:ALA:N    | 2.08                     | 0.67              |
| 1:O:310:SER:HA   | 1:O:313:THR:HG23 | 1.75                     | 0.67              |
| 1:A:119:ASN:O    | 1:A:123:LYS:HB3  | 1.95                     | 0.67              |
| 1:A:243:GLY:N    | 1:F:164:LEU:C    | 2.47                     | 0.67              |
| 1:A:308:ASN:HD21 | 1:E:241:LYS:HB2  | 1.59                     | 0.67              |
| 1:B:43:TYR:CZ    | 1:B:70:GLU:CD    | 2.68                     | 0.67              |
| 1:C:188:LEU:H    | 1:C:199:ARG:CG   | 2.08                     | 0.67              |
| 1:E:43:TYR:CZ    | 1:E:70:GLU:CD    | 2.67                     | 0.67              |
| 1:E:179:PHE:HB3  | 1:E:288:THR:CB   | 2.22                     | 0.67              |
| 1:E:265:ALA:O    | 1:E:269:ILE:HG12 | 1.94                     | 0.67              |
| 1:G:47:ASP:C     | 1:H:323:VAL:O    | 2.30                     | 0.67              |
| 1:H:119:ASN:O    | 1:H:123:LYS:HB3  | 1.95                     | 0.67              |
| 1:I:177:ILE:HD11 | 1:I:284:PHE:CG   | 2.29                     | 0.67              |
| 1:I:207:LYS:O    | 1:I:211:ILE:HG23 | 1.92                     | 0.67              |
| 1:J:138:VAL:HG21 | 1:J:145:TYR:CE2  | 2.30                     | 0.67              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:230:GLN:HE22 | 1:O:290:GLN:HB3  | 1.59                     | 0.67              |
| 1:N:325:LYS:H    | 1:O:47:ASP:HB3   | 1.59                     | 0.67              |
| 1:O:43:TYR:CZ    | 1:O:70:GLU:CD    | 2.67                     | 0.67              |
| 1:O:264:ASP:O    | 1:O:268:LEU:HD13 | 1.94                     | 0.67              |
| 1:A:138:VAL:HG21 | 1:A:145:TYR:CE2  | 2.30                     | 0.67              |
| 1:B:39:LYS:CE    | 1:B:41:LYS:HD2   | 2.25                     | 0.67              |
| 1:B:119:ASN:O    | 1:B:123:LYS:HB3  | 1.95                     | 0.67              |
| 1:B:241:LYS:HA   | 1:G:166:GLN:C    | 2.14                     | 0.67              |
| 1:D:39:LYS:CE    | 1:D:41:LYS:HD2   | 2.25                     | 0.67              |
| 1:D:110:LEU:HD23 | 1:D:111:ALA:N    | 2.09                     | 0.67              |
| 1:D:222:ASN:CB   | 1:D:237:ASN:HB2  | 2.25                     | 0.67              |
| 1:E:222:ASN:CB   | 1:E:237:ASN:HB2  | 2.25                     | 0.67              |
| 1:G:226:ILE:HD11 | 1:H:280:ASP:O    | 1.94                     | 0.67              |
| 1:G:267:LYS:CD   | 1:J:267:LYS:HD3  | 2.22                     | 0.67              |
| 1:J:320:LYS:HA   | 1:O:246:ILE:CG1  | 2.25                     | 0.67              |
| 1:K:177:ILE:HD11 | 1:K:284:PHE:CG   | 2.30                     | 0.67              |
| 1:M:188:LEU:H    | 1:M:199:ARG:CG   | 2.08                     | 0.67              |
| 1:M:325:LYS:H    | 1:N:47:ASP:HB3   | 1.59                     | 0.67              |
| 1:N:39:LYS:CE    | 1:N:41:LYS:HD2   | 2.25                     | 0.67              |
| 1:N:264:ASP:O    | 1:N:268:LEU:HD13 | 1.94                     | 0.67              |
| 1:O:39:LYS:CE    | 1:O:41:LYS:HD2   | 2.25                     | 0.67              |
| 1:C:119:ASN:O    | 1:C:123:LYS:HB3  | 1.95                     | 0.67              |
| 1:C:138:VAL:HG21 | 1:C:145:TYR:CE2  | 2.30                     | 0.67              |
| 1:C:240:MET:HE2  | 1:G:73:VAL:CB    | 2.19                     | 0.67              |
| 1:C:241:LYS:O    | 1:H:165:GLU:CA   | 2.43                     | 0.67              |
| 1:E:138:VAL:HG21 | 1:E:145:TYR:CE2  | 2.30                     | 0.67              |
| 1:G:177:ILE:HD11 | 1:G:284:PHE:CG   | 2.30                     | 0.67              |
| 1:G:219:ASP:C    | 1:H:277:ASP:HB3  | 2.11                     | 0.67              |
| 1:G:265:ALA:O    | 1:G:269:ILE:HG12 | 1.95                     | 0.67              |
| 1:H:274:PHE:CE1  | 1:K:204:HIS:HD2  | 1.81                     | 0.67              |
| 1:J:177:ILE:HD11 | 1:J:284:PHE:CG   | 2.30                     | 0.67              |
| 1:J:265:ALA:O    | 1:J:269:ILE:HG12 | 1.94                     | 0.67              |
| 1:J:308:ASN:CG   | 1:O:230:GLN:C    | 2.49                     | 0.67              |
| 1:L:164:LEU:CD1  | 1:L:316:GLU:HB2  | 2.23                     | 0.67              |
| 1:L:177:ILE:HD11 | 1:L:284:PHE:CG   | 2.30                     | 0.67              |
| 1:M:39:LYS:CE    | 1:M:41:LYS:HD2   | 2.25                     | 0.67              |
| 1:M:264:ASP:O    | 1:M:268:LEU:HD13 | 1.94                     | 0.67              |
| 1:B:222:ASN:CB   | 1:B:237:ASN:HB2  | 2.25                     | 0.67              |
| 1:B:231:ALA:C    | 1:G:308:ASN:HD22 | 1.95                     | 0.67              |
| 1:C:47:ASP:HB3   | 1:D:325:LYS:H    | 1.59                     | 0.67              |
| 1:C:222:ASN:CB   | 1:C:237:ASN:HB2  | 2.25                     | 0.67              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:240:MET:HE2  | 1:G:73:VAL:HB    | 1.75                     | 0.67              |
| 1:D:200:PHE:HD1  | 1:D:272:ARG:HD2  | 1.59                     | 0.67              |
| 1:F:177:ILE:HD11 | 1:F:284:PHE:CG   | 2.30                     | 0.67              |
| 1:F:222:ASN:CB   | 1:F:237:ASN:HB2  | 2.25                     | 0.67              |
| 1:H:177:ILE:HD11 | 1:H:284:PHE:CG   | 2.30                     | 0.67              |
| 1:I:119:ASN:O    | 1:I:123:LYS:HB3  | 1.95                     | 0.67              |
| 1:J:50:ILE:C     | 1:N:246:ILE:CA   | 2.57                     | 0.67              |
| 1:K:280:ASP:O    | 1:L:226:ILE:HD11 | 1.94                     | 0.67              |
| 1:O:325:LYS:H    | 1:P:47:ASP:HB3   | 1.59                     | 0.67              |
| 1:P:119:ASN:O    | 1:P:123:LYS:HB3  | 1.95                     | 0.67              |
| 1:A:39:LYS:CE    | 1:A:41:LYS:HD2   | 2.25                     | 0.67              |
| 1:A:222:ASN:CB   | 1:A:237:ASN:HB2  | 2.25                     | 0.67              |
| 1:A:231:ALA:C    | 1:F:308:ASN:HD22 | 1.98                     | 0.67              |
| 1:D:138:VAL:HG21 | 1:D:145:TYR:CE2  | 2.30                     | 0.67              |
| 1:E:139:LYS:H    | 1:E:143:LYS:H    | 1.43                     | 0.67              |
| 1:F:272:ARG:CB   | 1:I:202:GLU:HA   | 2.25                     | 0.67              |
| 1:G:222:ASN:CB   | 1:G:237:ASN:HB2  | 2.25                     | 0.67              |
| 1:H:110:LEU:HD23 | 1:H:111:ALA:N    | 2.08                     | 0.67              |
| 1:H:200:PHE:HD1  | 1:H:272:ARG:HD2  | 1.59                     | 0.67              |
| 1:I:139:LYS:H    | 1:I:143:LYS:H    | 1.43                     | 0.67              |
| 1:I:164:LEU:CD1  | 1:I:316:GLU:HB2  | 2.23                     | 0.67              |
| 1:J:43:TYR:CZ    | 1:J:70:GLU:CD    | 2.67                     | 0.67              |
| 1:K:309:ASN:O    | 1:P:229:GLU:OE1  | 2.12                     | 0.67              |
| 1:L:139:LYS:H    | 1:L:143:LYS:H    | 1.43                     | 0.67              |
| 1:N:200:PHE:HD1  | 1:N:272:ARG:HD2  | 1.59                     | 0.67              |
| 1:N:310:SER:HA   | 1:N:313:THR:HG23 | 1.75                     | 0.67              |
| 1:A:248:THR:HG22 | 1:E:52:ILE:CA    | 2.14                     | 0.67              |
| 1:B:47:ASP:HB3   | 1:C:325:LYS:H    | 1.59                     | 0.67              |
| 1:B:138:VAL:HG21 | 1:B:145:TYR:CE2  | 2.29                     | 0.67              |
| 1:B:188:LEU:H    | 1:B:199:ARG:CG   | 2.08                     | 0.67              |
| 1:C:248:THR:CA   | 1:G:52:ILE:HG23  | 2.25                     | 0.67              |
| 1:F:43:TYR:CZ    | 1:F:70:GLU:CD    | 2.67                     | 0.67              |
| 1:G:219:ASP:CG   | 1:H:277:ASP:CB   | 2.61                     | 0.67              |
| 1:H:265:ALA:O    | 1:H:269:ILE:HG12 | 1.94                     | 0.67              |
| 1:I:280:ASP:O    | 1:J:226:ILE:HD11 | 1.94                     | 0.67              |
| 1:I:308:ASN:ND2  | 1:N:231:ALA:C    | 2.48                     | 0.67              |
| 1:K:119:ASN:O    | 1:K:123:LYS:HB3  | 1.95                     | 0.67              |
| 1:K:164:LEU:CD1  | 1:K:316:GLU:HB2  | 2.23                     | 0.67              |
| 1:K:300:TYR:CD2  | 1:L:225:LEU:CB   | 2.72                     | 0.67              |
| 1:N:177:ILE:HG13 | 1:N:284:PHE:HA   | 1.77                     | 0.67              |
| 1:O:300:TYR:CZ   | 1:P:225:LEU:HD22 | 2.20                     | 0.67              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:39:LYS:CE    | 1:P:41:LYS:HD2   | 2.25                     | 0.67              |
| 1:P:177:ILE:HG13 | 1:P:284:PHE:HA   | 1.77                     | 0.67              |
| 1:A:200:PHE:HD1  | 1:A:272:ARG:HD2  | 1.59                     | 0.67              |
| 1:B:110:LEU:HD23 | 1:B:111:ALA:N    | 2.08                     | 0.67              |
| 1:C:200:PHE:HD1  | 1:C:272:ARG:HD2  | 1.59                     | 0.67              |
| 1:F:203:GLU:CB   | 1:I:198:GLU:CG   | 2.64                     | 0.67              |
| 1:H:222:ASN:CB   | 1:H:237:ASN:HB2  | 2.25                     | 0.67              |
| 1:I:138:VAL:HG21 | 1:I:145:TYR:CE2  | 2.30                     | 0.67              |
| 1:J:139:LYS:H    | 1:J:143:LYS:H    | 1.43                     | 0.67              |
| 1:K:52:ILE:CB    | 1:O:247:ASP:O    | 2.42                     | 0.67              |
| 1:K:138:VAL:HG21 | 1:K:145:TYR:CE2  | 2.30                     | 0.67              |
| 1:M:119:ASN:O    | 1:M:123:LYS:HB3  | 1.95                     | 0.67              |
| 1:M:177:ILE:HG13 | 1:M:284:PHE:HA   | 1.77                     | 0.67              |
| 1:M:179:PHE:HB3  | 1:M:288:THR:CB   | 2.22                     | 0.67              |
| 1:M:265:ALA:O    | 1:M:269:ILE:HG12 | 1.94                     | 0.67              |
| 1:N:265:ALA:O    | 1:N:269:ILE:HG12 | 1.94                     | 0.67              |
| 1:N:300:TYR:CZ   | 1:O:225:LEU:HD22 | 2.20                     | 0.67              |
| 1:O:177:ILE:HG13 | 1:O:284:PHE:HA   | 1.77                     | 0.67              |
| 1:A:47:ASP:HB3   | 1:B:325:LYS:H    | 1.59                     | 0.67              |
| 1:B:227:THR:HG21 | 1:C:299:THR:CA   | 2.16                     | 0.67              |
| 1:B:264:ASP:O    | 1:B:268:LEU:HD13 | 1.94                     | 0.67              |
| 1:C:248:THR:HA   | 1:G:52:ILE:CG2   | 2.23                     | 0.67              |
| 1:C:265:ALA:O    | 1:C:269:ILE:HG12 | 1.94                     | 0.67              |
| 1:D:58:LYS:HZ2   | 1:D:65:GLU:HG2   | 1.60                     | 0.67              |
| 1:D:119:ASN:O    | 1:D:123:LYS:HB3  | 1.95                     | 0.67              |
| 1:E:48:GLY:HA2   | 1:F:322:ALA:O    | 1.93                     | 0.67              |
| 1:F:139:LYS:H    | 1:F:143:LYS:H    | 1.43                     | 0.67              |
| 1:F:226:ILE:HD11 | 1:G:280:ASP:O    | 1.94                     | 0.67              |
| 1:G:173:ASN:HD22 | 1:G:279:LEU:HD23 | 1.59                     | 0.67              |
| 1:I:33:ILE:O     | 1:I:312:TRP:CE2  | 2.47                     | 0.67              |
| 1:J:280:ASP:O    | 1:K:226:ILE:HD11 | 1.94                     | 0.67              |
| 1:K:11:THR:HG23  | 1:K:318:LEU:HB2  | 1.76                     | 0.67              |
| 1:K:200:PHE:HD1  | 1:K:272:ARG:HD2  | 1.59                     | 0.67              |
| 1:L:39:LYS:CE    | 1:L:41:LYS:HD2   | 2.25                     | 0.67              |
| 1:M:200:PHE:HD1  | 1:M:272:ARG:HD2  | 1.59                     | 0.67              |
| 1:N:177:ILE:HD11 | 1:N:284:PHE:CG   | 2.30                     | 0.67              |
| 1:N:188:LEU:H    | 1:N:199:ARG:CG   | 2.08                     | 0.67              |
| 1:O:119:ASN:O    | 1:O:123:LYS:HB3  | 1.95                     | 0.67              |
| 1:A:265:ALA:O    | 1:A:269:ILE:HG12 | 1.94                     | 0.66              |
| 1:C:177:ILE:HG13 | 1:C:284:PHE:HA   | 1.77                     | 0.66              |
| 1:D:177:ILE:HG13 | 1:D:284:PHE:HA   | 1.77                     | 0.66              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:27:LYS:HZ3   | 1:H:35:ARG:HH21  | 1.40                     | 0.66              |
| 1:I:222:ASN:CB   | 1:I:237:ASN:HB2  | 2.25                     | 0.66              |
| 1:J:119:ASN:O    | 1:J:123:LYS:HB3  | 1.95                     | 0.66              |
| 1:J:179:PHE:HB3  | 1:J:288:THR:CB   | 2.22                     | 0.66              |
| 1:J:275:LYS:HZ2  | 1:K:219:ASP:CG   | 1.97                     | 0.66              |
| 1:K:45:LEU:HD22  | 1:K:58:LYS:HZ3   | 1.59                     | 0.66              |
| 1:K:323:VAL:O    | 1:L:47:ASP:C     | 2.30                     | 0.66              |
| 1:M:310:SER:HA   | 1:M:313:THR:HG23 | 1.75                     | 0.66              |
| 1:N:323:VAL:CG2  | 1:O:47:ASP:C     | 2.57                     | 0.66              |
| 1:O:45:LEU:HD22  | 1:O:58:LYS:HZ3   | 1.60                     | 0.66              |
| 1:O:177:ILE:HD11 | 1:O:284:PHE:CG   | 2.30                     | 0.66              |
| 1:O:265:ALA:O    | 1:O:269:ILE:HG12 | 1.95                     | 0.66              |
| 1:A:177:ILE:HG13 | 1:A:284:PHE:HA   | 1.77                     | 0.66              |
| 1:A:231:ALA:CB   | 1:F:307:THR:HA   | 2.25                     | 0.66              |
| 1:A:243:GLY:O    | 1:F:163:PHE:HA   | 1.94                     | 0.66              |
| 1:B:265:ALA:O    | 1:B:269:ILE:HG12 | 1.94                     | 0.66              |
| 1:C:247:ASP:O    | 1:G:52:ILE:HG13  | 1.95                     | 0.66              |
| 1:D:265:ALA:O    | 1:D:269:ILE:HG12 | 1.95                     | 0.66              |
| 1:F:198:GLU:CA   | 1:I:203:GLU:CB   | 2.69                     | 0.66              |
| 1:F:201:ILE:O    | 1:I:200:PHE:HB3  | 1.94                     | 0.66              |
| 1:F:274:PHE:HE1  | 1:I:204:HIS:HD2  | 1.17                     | 0.66              |
| 1:G:11:THR:HG23  | 1:G:318:LEU:HB2  | 1.76                     | 0.66              |
| 1:G:39:LYS:CE    | 1:G:41:LYS:HD2   | 2.25                     | 0.66              |
| 1:G:268:LEU:HD22 | 1:J:271:LYS:CE   | 2.26                     | 0.66              |
| 1:J:11:THR:HG23  | 1:J:318:LEU:HB2  | 1.76                     | 0.66              |
| 1:J:164:LEU:CD1  | 1:J:316:GLU:HB2  | 2.23                     | 0.66              |
| 1:J:222:ASN:CB   | 1:J:237:ASN:HB2  | 2.25                     | 0.66              |
| 1:J:308:ASN:ND2  | 1:O:231:ALA:C    | 2.48                     | 0.66              |
| 1:K:139:LYS:H    | 1:K:143:LYS:H    | 1.43                     | 0.66              |
| 1:L:45:LEU:HD22  | 1:L:58:LYS:HZ3   | 1.60                     | 0.66              |
| 1:M:45:LEU:HD22  | 1:M:58:LYS:HZ3   | 1.60                     | 0.66              |
| 1:M:177:ILE:HD11 | 1:M:284:PHE:CG   | 2.30                     | 0.66              |
| 1:P:177:ILE:HD11 | 1:P:284:PHE:CG   | 2.30                     | 0.66              |
| 1:A:246:ILE:N    | 1:E:49:TYR:CE2   | 2.39                     | 0.66              |
| 1:A:264:ASP:O    | 1:A:268:LEU:HD13 | 1.94                     | 0.66              |
| 1:B:27:LYS:HZ3   | 1:B:35:ARG:HH21  | 1.41                     | 0.66              |
| 1:B:245:GLU:OE2  | 1:F:78:GLU:OE1   | 2.14                     | 0.66              |
| 1:C:95:THR:CG2   | 1:C:136:ILE:HD13 | 2.22                     | 0.66              |
| 1:C:139:LYS:H    | 1:C:143:LYS:H    | 1.43                     | 0.66              |
| 1:D:177:ILE:HD11 | 1:D:284:PHE:CG   | 2.29                     | 0.66              |
| 1:E:11:THR:HG23  | 1:E:318:LEU:HB2  | 1.76                     | 0.66              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:203:GLU:H    | 1:I:272:ARG:CB   | 2.07                     | 0.66              |
| 1:G:271:LYS:CE   | 1:J:268:LEU:HD22 | 2.25                     | 0.66              |
| 1:P:265:ALA:O    | 1:P:269:ILE:HG12 | 1.94                     | 0.66              |
| 1:A:247:ASP:CG   | 1:F:320:LYS:HE2  | 2.16                     | 0.66              |
| 1:C:177:ILE:HD11 | 1:C:284:PHE:CG   | 2.29                     | 0.66              |
| 1:D:173:ASN:HD22 | 1:D:279:LEU:HD23 | 1.59                     | 0.66              |
| 1:E:200:PHE:HD1  | 1:E:272:ARG:HD2  | 1.59                     | 0.66              |
| 1:E:226:ILE:HD11 | 1:F:280:ASP:O    | 1.94                     | 0.66              |
| 1:F:138:VAL:HG21 | 1:F:145:TYR:CE2  | 2.30                     | 0.66              |
| 1:G:203:GLU:HA   | 1:J:197:SER:O    | 1.94                     | 0.66              |
| 1:H:39:LYS:CE    | 1:H:41:LYS:HD2   | 2.25                     | 0.66              |
| 1:K:39:LYS:CE    | 1:K:41:LYS:HD2   | 2.25                     | 0.66              |
| 1:K:265:ALA:O    | 1:K:269:ILE:HG12 | 1.95                     | 0.66              |
| 1:L:138:VAL:HG21 | 1:L:145:TYR:CE2  | 2.30                     | 0.66              |
| 1:M:300:TYR:CZ   | 1:N:225:LEU:HD22 | 2.20                     | 0.66              |
| 1:N:179:PHE:HB3  | 1:N:288:THR:CB   | 2.22                     | 0.66              |
| 1:A:177:ILE:HD11 | 1:A:284:PHE:CG   | 2.30                     | 0.66              |
| 1:A:188:LEU:H    | 1:A:199:ARG:CG   | 2.08                     | 0.66              |
| 1:B:177:ILE:HD11 | 1:B:284:PHE:CG   | 2.30                     | 0.66              |
| 1:B:177:ILE:HG13 | 1:B:284:PHE:HA   | 1.77                     | 0.66              |
| 1:C:133:ASN:ND2  | 1:C:148:GLU:CA   | 2.59                     | 0.66              |
| 1:D:186:PHE:HD2  | 1:D:269:ILE:HD11 | 1.61                     | 0.66              |
| 1:E:173:ASN:HD22 | 1:E:279:LEU:HD23 | 1.59                     | 0.66              |
| 1:G:271:LYS:HZ1  | 1:J:268:LEU:HD22 | 1.59                     | 0.66              |
| 1:H:45:LEU:CD2   | 1:H:51:ASP:HB3   | 2.26                     | 0.66              |
| 1:L:173:ASN:HD22 | 1:L:279:LEU:HD23 | 1.59                     | 0.66              |
| 1:P:45:LEU:CD2   | 1:P:51:ASP:HB3   | 2.26                     | 0.66              |
| 1:B:46:GLU:O     | 1:C:320:LYS:O    | 2.14                     | 0.66              |
| 1:C:246:ILE:HD11 | 1:H:320:LYS:CA   | 2.05                     | 0.66              |
| 1:D:95:THR:CG2   | 1:D:136:ILE:HD13 | 2.22                     | 0.66              |
| 1:D:139:LYS:H    | 1:D:143:LYS:H    | 1.43                     | 0.66              |
| 1:D:283:ILE:HG22 | 1:D:285:ILE:HG23 | 1.78                     | 0.66              |
| 1:E:39:LYS:CE    | 1:E:41:LYS:HD2   | 2.25                     | 0.66              |
| 1:F:45:LEU:CD2   | 1:F:51:ASP:HB3   | 2.26                     | 0.66              |
| 1:G:197:SER:OG   | 1:J:183:ASN:OD1  | 2.11                     | 0.66              |
| 1:H:139:LYS:H    | 1:H:143:LYS:H    | 1.43                     | 0.66              |
| 1:H:188:LEU:H    | 1:H:199:ARG:CG   | 2.07                     | 0.66              |
| 1:K:110:LEU:HD13 | 1:K:126:TYR:OH   | 1.96                     | 0.66              |
| 1:K:222:ASN:CB   | 1:K:237:ASN:HB2  | 2.25                     | 0.66              |
| 1:L:179:PHE:HB3  | 1:L:288:THR:CB   | 2.22                     | 0.66              |
| 1:M:222:ASN:CB   | 1:M:237:ASN:HB2  | 2.25                     | 0.66              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:45:LEU:CD2   | 1:N:51:ASP:HB3   | 2.26                     | 0.66              |
| 1:O:188:LEU:H    | 1:O:199:ARG:CG   | 2.08                     | 0.66              |
| 1:A:246:ILE:HG13 | 1:E:49:TYR:CG    | 2.31                     | 0.66              |
| 1:C:39:LYS:CE    | 1:C:41:LYS:HD2   | 2.25                     | 0.66              |
| 1:E:27:LYS:HZ3   | 1:E:35:ARG:HH21  | 1.42                     | 0.66              |
| 1:E:47:ASP:C     | 1:F:323:VAL:O    | 2.30                     | 0.66              |
| 1:F:56:SER:CB    | 1:F:70:GLU:HB3   | 2.26                     | 0.66              |
| 1:F:110:LEU:HD13 | 1:F:126:TYR:OH   | 1.96                     | 0.66              |
| 1:G:110:LEU:HD13 | 1:G:126:TYR:OH   | 1.96                     | 0.66              |
| 1:G:138:VAL:HG21 | 1:G:145:TYR:CE2  | 2.30                     | 0.66              |
| 1:H:138:VAL:HG21 | 1:H:145:TYR:CE2  | 2.30                     | 0.66              |
| 1:I:305:ILE:HG22 | 1:N:241:LYS:NZ   | 2.10                     | 0.66              |
| 1:J:275:LYS:NZ   | 1:K:224:ASN:HD22 | 1.76                     | 0.66              |
| 1:L:11:THR:HG23  | 1:L:318:LEU:HB2  | 1.76                     | 0.66              |
| 1:L:222:ASN:CB   | 1:L:237:ASN:HB2  | 2.25                     | 0.66              |
| 1:O:179:PHE:HB3  | 1:O:288:THR:CB   | 2.22                     | 0.66              |
| 1:P:200:PHE:HD1  | 1:P:272:ARG:HD2  | 1.59                     | 0.66              |
| 1:E:56:SER:CB    | 1:E:70:GLU:HB3   | 2.26                     | 0.66              |
| 1:E:110:LEU:HD13 | 1:E:126:TYR:OH   | 1.96                     | 0.66              |
| 1:F:39:LYS:CE    | 1:F:41:LYS:HD2   | 2.25                     | 0.66              |
| 1:G:45:LEU:CD2   | 1:G:51:ASP:HB3   | 2.26                     | 0.66              |
| 1:G:56:SER:CB    | 1:G:70:GLU:HB3   | 2.26                     | 0.66              |
| 1:G:133:ASN:ND2  | 1:G:148:GLU:CA   | 2.59                     | 0.66              |
| 1:G:139:LYS:H    | 1:G:143:LYS:H    | 1.43                     | 0.66              |
| 1:G:272:ARG:HG3  | 1:J:202:GLU:HA   | 1.67                     | 0.66              |
| 1:H:56:SER:CB    | 1:H:70:GLU:HB3   | 2.26                     | 0.66              |
| 1:H:110:LEU:HD13 | 1:H:126:TYR:OH   | 1.96                     | 0.66              |
| 1:H:272:ARG:CB   | 1:K:203:GLU:H    | 2.09                     | 0.66              |
| 1:J:173:ASN:HD22 | 1:J:279:LEU:HD23 | 1.59                     | 0.66              |
| 1:K:56:SER:CB    | 1:K:70:GLU:HB3   | 2.26                     | 0.66              |
| 1:L:56:SER:CB    | 1:L:70:GLU:HB3   | 2.26                     | 0.66              |
| 1:L:110:LEU:HD13 | 1:L:126:TYR:OH   | 1.96                     | 0.66              |
| 1:M:283:ILE:HG22 | 1:M:285:ILE:HG23 | 1.78                     | 0.66              |
| 1:N:119:ASN:O    | 1:N:123:LYS:HB3  | 1.95                     | 0.66              |
| 1:A:208:ASP:HA   | 1:A:211:ILE:CD1  | 2.26                     | 0.66              |
| 1:B:56:SER:CB    | 1:B:70:GLU:HB3   | 2.26                     | 0.66              |
| 1:B:247:ASP:O    | 1:F:52:ILE:CB    | 2.43                     | 0.66              |
| 1:C:47:ASP:C     | 1:D:323:VAL:CG2  | 2.57                     | 0.66              |
| 1:C:56:SER:CB    | 1:C:70:GLU:HB3   | 2.26                     | 0.66              |
| 1:C:246:ILE:N    | 1:G:49:TYR:CZ    | 2.62                     | 0.66              |
| 1:G:200:PHE:HD1  | 1:G:272:ARG:HD2  | 1.59                     | 0.66              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:39:LYS:CE    | 1:I:41:LYS:HD2   | 2.25                     | 0.66              |
| 1:I:43:TYR:CE2   | 1:I:70:GLU:CD    | 2.70                     | 0.66              |
| 1:I:45:LEU:CD2   | 1:I:51:ASP:HB3   | 2.26                     | 0.66              |
| 1:I:308:ASN:O    | 1:N:229:GLU:OE1  | 2.14                     | 0.66              |
| 1:K:277:ASP:HB3  | 1:L:219:ASP:N    | 2.05                     | 0.66              |
| 1:M:173:ASN:HD22 | 1:M:279:LEU:HD23 | 1.59                     | 0.66              |
| 1:M:320:LYS:O    | 1:N:46:GLU:O     | 2.14                     | 0.66              |
| 1:N:222:ASN:CB   | 1:N:237:ASN:HB2  | 2.25                     | 0.66              |
| 1:O:222:ASN:CB   | 1:O:237:ASN:HB2  | 2.25                     | 0.66              |
| 1:P:222:ASN:CB   | 1:P:237:ASN:HB2  | 2.25                     | 0.66              |
| 1:A:45:LEU:CD2   | 1:A:51:ASP:HB3   | 2.26                     | 0.66              |
| 1:A:188:LEU:N    | 1:A:199:ARG:HG2  | 2.10                     | 0.66              |
| 1:B:34:LYS:HG2   | 1:B:36:VAL:HA    | 1.78                     | 0.66              |
| 1:B:46:GLU:CA    | 1:C:324:ALA:HB1  | 1.92                     | 0.66              |
| 1:D:56:SER:CB    | 1:D:70:GLU:HB3   | 2.26                     | 0.66              |
| 1:E:43:TYR:CE2   | 1:E:70:GLU:CD    | 2.70                     | 0.66              |
| 1:E:45:LEU:CD2   | 1:E:51:ASP:HB3   | 2.26                     | 0.66              |
| 1:F:265:ALA:O    | 1:F:269:ILE:HG12 | 1.94                     | 0.66              |
| 1:H:200:PHE:HB3  | 1:K:201:ILE:O    | 1.96                     | 0.66              |
| 1:H:271:LYS:CD   | 1:K:202:GLU:HG3  | 2.26                     | 0.66              |
| 1:I:200:PHE:HD1  | 1:I:272:ARG:HD2  | 1.59                     | 0.66              |
| 1:J:45:LEU:CD2   | 1:J:51:ASP:HB3   | 2.26                     | 0.66              |
| 1:J:74:GLU:O     | 1:N:245:GLU:HB3  | 1.96                     | 0.66              |
| 1:J:110:LEU:HD13 | 1:J:126:TYR:OH   | 1.96                     | 0.66              |
| 1:J:164:LEU:C    | 1:O:243:GLY:N    | 2.48                     | 0.66              |
| 1:K:179:PHE:HB3  | 1:K:288:THR:CB   | 2.22                     | 0.66              |
| 1:K:306:ILE:HD12 | 1:K:307:THR:H    | 1.61                     | 0.66              |
| 1:N:320:LYS:O    | 1:O:46:GLU:O     | 2.14                     | 0.66              |
| 1:P:105:LYS:HZ2  | 1:P:148:GLU:HB3  | 1.61                     | 0.66              |
| 1:A:34:LYS:HG2   | 1:A:36:VAL:HA    | 1.78                     | 0.65              |
| 1:A:56:SER:CB    | 1:A:70:GLU:HB3   | 2.26                     | 0.65              |
| 1:A:139:LYS:H    | 1:A:143:LYS:H    | 1.43                     | 0.65              |
| 1:A:283:ILE:HG22 | 1:A:285:ILE:HG23 | 1.78                     | 0.65              |
| 1:A:306:ILE:HD12 | 1:A:307:THR:H    | 1.61                     | 0.65              |
| 1:B:45:LEU:CD2   | 1:B:51:ASP:HB3   | 2.26                     | 0.65              |
| 1:C:50:ILE:CB    | 1:D:320:LYS:HE2  | 2.13                     | 0.65              |
| 1:G:197:SER:O    | 1:J:203:GLU:HA   | 1.94                     | 0.65              |
| 1:I:11:THR:HG23  | 1:I:318:LEU:HB2  | 1.76                     | 0.65              |
| 1:I:95:THR:HG22  | 1:I:136:ILE:HG21 | 1.78                     | 0.65              |
| 1:I:188:LEU:H    | 1:I:199:ARG:CG   | 2.08                     | 0.65              |
| 1:I:208:ASP:HA   | 1:I:211:ILE:CD1  | 2.27                     | 0.65              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:277:ASP:CB   | 1:J:219:ASP:CG   | 2.61                     | 0.65              |
| 1:J:39:LYS:CE    | 1:J:41:LYS:HD2   | 2.25                     | 0.65              |
| 1:J:56:SER:CB    | 1:J:70:GLU:HB3   | 2.26                     | 0.65              |
| 1:J:208:ASP:HA   | 1:J:211:ILE:CD1  | 2.27                     | 0.65              |
| 1:L:208:ASP:HA   | 1:L:211:ILE:CD1  | 2.27                     | 0.65              |
| 1:M:208:ASP:HA   | 1:M:211:ILE:CD1  | 2.27                     | 0.65              |
| 1:N:43:TYR:CE2   | 1:N:70:GLU:CD    | 2.70                     | 0.65              |
| 1:N:208:ASP:HA   | 1:N:211:ILE:CD1  | 2.26                     | 0.65              |
| 1:N:283:ILE:HG22 | 1:N:285:ILE:HG23 | 1.78                     | 0.65              |
| 1:A:46:GLU:O     | 1:B:320:LYS:O    | 2.14                     | 0.65              |
| 1:B:43:TYR:CE2   | 1:B:70:GLU:CD    | 2.70                     | 0.65              |
| 1:B:46:GLU:HA    | 1:C:324:ALA:HB1  | 1.68                     | 0.65              |
| 1:B:50:ILE:CB    | 1:C:320:LYS:HE2  | 2.13                     | 0.65              |
| 1:B:188:LEU:N    | 1:B:199:ARG:HG2  | 2.10                     | 0.65              |
| 1:B:208:ASP:HA   | 1:B:211:ILE:CD1  | 2.26                     | 0.65              |
| 1:B:229:GLU:OE1  | 1:G:308:ASN:O    | 2.13                     | 0.65              |
| 1:B:229:GLU:OE1  | 1:G:309:ASN:O    | 2.13                     | 0.65              |
| 1:B:306:ILE:HD12 | 1:B:307:THR:H    | 1.61                     | 0.65              |
| 1:C:45:LEU:CD2   | 1:C:51:ASP:HB3   | 2.26                     | 0.65              |
| 1:C:186:PHE:HD2  | 1:C:269:ILE:HD11 | 1.61                     | 0.65              |
| 1:D:179:PHE:HB3  | 1:D:288:THR:CB   | 2.22                     | 0.65              |
| 1:E:208:ASP:HA   | 1:E:211:ILE:CD1  | 2.27                     | 0.65              |
| 1:F:198:GLU:CG   | 1:I:203:GLU:CD   | 2.64                     | 0.65              |
| 1:G:43:TYR:CE2   | 1:G:70:GLU:CD    | 2.70                     | 0.65              |
| 1:G:109:VAL:CB   | 1:G:322:ALA:HB2  | 2.26                     | 0.65              |
| 1:G:119:ASN:OD1  | 1:J:120:ALA:N    | 2.28                     | 0.65              |
| 1:G:208:ASP:HA   | 1:G:211:ILE:CD1  | 2.27                     | 0.65              |
| 1:G:224:ASN:HD21 | 1:H:275:LYS:NZ   | 1.73                     | 0.65              |
| 1:G:283:ILE:HG22 | 1:G:285:ILE:HG23 | 1.78                     | 0.65              |
| 1:I:56:SER:CB    | 1:I:70:GLU:HB3   | 2.26                     | 0.65              |
| 1:I:179:PHE:HB3  | 1:I:288:THR:CB   | 2.22                     | 0.65              |
| 1:J:306:ILE:HD12 | 1:J:307:THR:H    | 1.61                     | 0.65              |
| 1:K:43:TYR:CE2   | 1:K:70:GLU:CD    | 2.70                     | 0.65              |
| 1:L:109:VAL:CB   | 1:L:322:ALA:HB2  | 2.26                     | 0.65              |
| 1:O:133:ASN:ND2  | 1:O:148:GLU:CA   | 2.59                     | 0.65              |
| 1:C:46:GLU:O     | 1:D:320:LYS:O    | 2.14                     | 0.65              |
| 1:C:188:LEU:N    | 1:C:199:ARG:HG2  | 2.10                     | 0.65              |
| 1:D:43:TYR:CE2   | 1:D:70:GLU:CD    | 2.70                     | 0.65              |
| 1:E:306:ILE:HD12 | 1:E:307:THR:H    | 1.61                     | 0.65              |
| 1:F:11:THR:HG23  | 1:F:318:LEU:HB2  | 1.76                     | 0.65              |
| 1:F:202:GLU:CA   | 1:I:272:ARG:HG3  | 2.25                     | 0.65              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:208:ASP:HA   | 1:F:211:ILE:CD1  | 2.27                     | 0.65              |
| 1:G:188:LEU:H    | 1:G:199:ARG:CG   | 2.07                     | 0.65              |
| 1:J:133:ASN:ND2  | 1:J:148:GLU:CA   | 2.59                     | 0.65              |
| 1:J:222:ASN:HB2  | 1:J:237:ASN:CB   | 2.26                     | 0.65              |
| 1:K:45:LEU:CD2   | 1:K:51:ASP:HB3   | 2.26                     | 0.65              |
| 1:K:208:ASP:HA   | 1:K:211:ILE:CD1  | 2.26                     | 0.65              |
| 1:M:222:ASN:HB2  | 1:M:237:ASN:CB   | 2.26                     | 0.65              |
| 1:N:44:ASN:CB    | 1:N:64:LYS:HZ1   | 2.10                     | 0.65              |
| 1:N:324:ALA:HB1  | 1:O:46:GLU:HA    | 1.68                     | 0.65              |
| 1:P:306:ILE:HD12 | 1:P:307:THR:H    | 1.61                     | 0.65              |
| 1:A:246:ILE:CD1  | 1:F:320:LYS:C    | 2.65                     | 0.65              |
| 1:B:95:THR:HG22  | 1:B:136:ILE:HG21 | 1.78                     | 0.65              |
| 1:B:139:LYS:H    | 1:B:143:LYS:H    | 1.43                     | 0.65              |
| 1:C:34:LYS:HG2   | 1:C:36:VAL:HA    | 1.78                     | 0.65              |
| 1:D:45:LEU:CD2   | 1:D:51:ASP:HB3   | 2.26                     | 0.65              |
| 1:E:95:THR:HG22  | 1:E:136:ILE:HG21 | 1.78                     | 0.65              |
| 1:F:27:LYS:HZ3   | 1:F:35:ARG:HH21  | 1.43                     | 0.65              |
| 1:F:283:ILE:HG22 | 1:F:285:ILE:HG23 | 1.78                     | 0.65              |
| 1:H:198:GLU:CG   | 1:K:203:GLU:CB   | 2.67                     | 0.65              |
| 1:H:208:ASP:HA   | 1:H:211:ILE:CD1  | 2.27                     | 0.65              |
| 1:I:110:LEU:HD13 | 1:I:126:TYR:OH   | 1.96                     | 0.65              |
| 1:I:222:ASN:HB2  | 1:I:237:ASN:CB   | 2.26                     | 0.65              |
| 1:J:277:ASP:HB3  | 1:K:219:ASP:C    | 2.11                     | 0.65              |
| 1:K:320:LYS:O    | 1:P:246:ILE:HD11 | 1.73                     | 0.65              |
| 1:L:43:TYR:CE2   | 1:L:70:GLU:CD    | 2.70                     | 0.65              |
| 1:M:186:PHE:HD2  | 1:M:269:ILE:HD11 | 1.61                     | 0.65              |
| 1:A:50:ILE:CB    | 1:B:320:LYS:HE2  | 2.13                     | 0.65              |
| 1:C:308:ASN:HD21 | 1:G:241:LYS:CB   | 2.09                     | 0.65              |
| 1:E:188:LEU:N    | 1:E:199:ARG:HG2  | 2.10                     | 0.65              |
| 1:F:71:GLN:CG    | 1:G:168:ASN:HB3  | 2.27                     | 0.65              |
| 1:G:45:LEU:HD22  | 1:G:58:LYS:HZ3   | 1.61                     | 0.65              |
| 1:H:119:ASN:HD21 | 1:K:119:ASN:HA   | 1.61                     | 0.65              |
| 1:I:277:ASP:CB   | 1:J:219:ASP:CB   | 2.65                     | 0.65              |
| 1:M:45:LEU:CD2   | 1:M:51:ASP:HB3   | 2.26                     | 0.65              |
| 1:M:306:ILE:HD12 | 1:M:307:THR:H    | 1.61                     | 0.65              |
| 1:N:306:ILE:HD12 | 1:N:307:THR:H    | 1.61                     | 0.65              |
| 1:O:306:ILE:HD12 | 1:O:307:THR:H    | 1.61                     | 0.65              |
| 1:P:43:TYR:CE2   | 1:P:70:GLU:CD    | 2.70                     | 0.65              |
| 1:P:188:LEU:H    | 1:P:199:ARG:CG   | 2.07                     | 0.65              |
| 1:D:110:LEU:HD13 | 1:D:126:TYR:OH   | 1.96                     | 0.65              |
| 1:D:188:LEU:N    | 1:D:199:ARG:HG2  | 2.10                     | 0.65              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:34:LYS:HG2   | 1:E:36:VAL:HA    | 1.78                     | 0.65              |
| 1:E:227:THR:O    | 1:F:300:TYR:CA   | 2.35                     | 0.65              |
| 1:F:95:THR:HG22  | 1:F:136:ILE:HG21 | 1.79                     | 0.65              |
| 1:F:133:ASN:ND2  | 1:F:148:GLU:CA   | 2.59                     | 0.65              |
| 1:F:177:ILE:HG13 | 1:F:284:PHE:HA   | 1.77                     | 0.65              |
| 1:F:219:ASP:CB   | 1:G:277:ASP:CB   | 2.65                     | 0.65              |
| 1:G:34:LYS:HG2   | 1:G:36:VAL:HA    | 1.78                     | 0.65              |
| 1:I:168:ASN:HB3  | 1:J:71:GLN:CG    | 2.27                     | 0.65              |
| 1:K:109:VAL:CB   | 1:K:322:ALA:HB2  | 2.26                     | 0.65              |
| 1:K:222:ASN:HB2  | 1:K:237:ASN:CB   | 2.26                     | 0.65              |
| 1:K:308:ASN:CG   | 1:P:230:GLN:C    | 2.55                     | 0.65              |
| 1:N:222:ASN:HB2  | 1:N:237:ASN:CB   | 2.26                     | 0.65              |
| 1:P:110:LEU:HD13 | 1:P:126:TYR:OH   | 1.96                     | 0.65              |
| 1:P:208:ASP:HA   | 1:P:211:ILE:CD1  | 2.27                     | 0.65              |
| 1:A:173:ASN:HD22 | 1:A:279:LEU:HD23 | 1.59                     | 0.65              |
| 1:A:222:ASN:HB2  | 1:A:237:ASN:CB   | 2.26                     | 0.65              |
| 1:A:245:GLU:OE1  | 1:E:75:ASP:OD1   | 2.14                     | 0.65              |
| 1:B:173:ASN:HD22 | 1:B:279:LEU:HD23 | 1.59                     | 0.65              |
| 1:B:186:PHE:HD2  | 1:B:269:ILE:HD11 | 1.61                     | 0.65              |
| 1:B:230:GLN:HA   | 1:G:308:ASN:OD1  | 1.96                     | 0.65              |
| 1:C:43:TYR:CE2   | 1:C:70:GLU:CD    | 2.70                     | 0.65              |
| 1:C:245:GLU:O    | 1:G:52:ILE:CG1   | 2.44                     | 0.65              |
| 1:C:283:ILE:HG22 | 1:C:285:ILE:HG23 | 1.78                     | 0.65              |
| 1:C:306:ILE:HD12 | 1:C:307:THR:H    | 1.62                     | 0.65              |
| 1:D:34:LYS:HG2   | 1:D:36:VAL:HA    | 1.78                     | 0.65              |
| 1:D:95:THR:HG22  | 1:D:136:ILE:HG21 | 1.79                     | 0.65              |
| 1:E:177:ILE:HG13 | 1:E:284:PHE:HA   | 1.78                     | 0.65              |
| 1:F:188:LEU:N    | 1:F:199:ARG:HG2  | 2.10                     | 0.65              |
| 1:F:204:HIS:CE1  | 1:I:274:PHE:HD1  | 2.11                     | 0.65              |
| 1:H:109:VAL:CB   | 1:H:322:ALA:HB2  | 2.26                     | 0.65              |
| 1:H:202:GLU:HG2  | 1:K:272:ARG:CB   | 2.27                     | 0.65              |
| 1:H:306:ILE:HD12 | 1:H:307:THR:H    | 1.62                     | 0.65              |
| 1:J:43:TYR:CE2   | 1:J:70:GLU:CD    | 2.70                     | 0.65              |
| 1:J:95:THR:HG22  | 1:J:136:ILE:HG21 | 1.78                     | 0.65              |
| 1:J:323:VAL:O    | 1:K:47:ASP:C     | 2.30                     | 0.65              |
| 1:L:45:LEU:CD2   | 1:L:51:ASP:HB3   | 2.26                     | 0.65              |
| 1:L:133:ASN:ND2  | 1:L:148:GLU:CA   | 2.59                     | 0.65              |
| 1:L:222:ASN:HB2  | 1:L:237:ASN:CB   | 2.26                     | 0.65              |
| 1:O:43:TYR:CE2   | 1:O:70:GLU:CD    | 2.70                     | 0.65              |
| 1:O:222:ASN:HB2  | 1:O:237:ASN:CB   | 2.26                     | 0.65              |
| 1:B:133:ASN:ND2  | 1:B:148:GLU:CA   | 2.59                     | 0.65              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:222:ASN:HB2  | 1:B:237:ASN:CB   | 2.26                     | 0.65              |
| 1:B:241:LYS:HZ1  | 1:G:305:ILE:HG22 | 1.62                     | 0.65              |
| 1:F:34:LYS:HG2   | 1:F:36:VAL:HA    | 1.78                     | 0.65              |
| 1:F:219:ASP:C    | 1:G:277:ASP:HB3  | 2.11                     | 0.65              |
| 1:G:177:ILE:HG13 | 1:G:284:PHE:HA   | 1.77                     | 0.65              |
| 1:I:308:ASN:HD22 | 1:N:232:GLU:H    | 0.68                     | 0.65              |
| 1:K:177:ILE:HG13 | 1:K:284:PHE:HA   | 1.77                     | 0.65              |
| 1:K:277:ASP:CB   | 1:L:219:ASP:CB   | 2.65                     | 0.65              |
| 1:L:177:ILE:HG13 | 1:L:284:PHE:HA   | 1.77                     | 0.65              |
| 1:O:208:ASP:HA   | 1:O:211:ILE:CD1  | 2.27                     | 0.65              |
| 1:A:43:TYR:CE2   | 1:A:70:GLU:CD    | 2.70                     | 0.65              |
| 1:A:105:LYS:HZ2  | 1:A:148:GLU:HB3  | 1.62                     | 0.65              |
| 1:C:109:VAL:HG21 | 1:C:321:VAL:HG13 | 1.79                     | 0.65              |
| 1:C:222:ASN:HB2  | 1:C:237:ASN:CB   | 2.26                     | 0.65              |
| 1:E:71:GLN:CG    | 1:F:168:ASN:HB3  | 2.27                     | 0.65              |
| 1:G:71:GLN:CG    | 1:H:168:ASN:HB3  | 2.27                     | 0.65              |
| 1:G:120:ALA:N    | 1:J:119:ASN:OD1  | 2.28                     | 0.65              |
| 1:J:188:LEU:H    | 1:J:199:ARG:CG   | 2.08                     | 0.65              |
| 1:L:78:GLU:OE1   | 1:P:245:GLU:OE2  | 2.15                     | 0.65              |
| 1:L:95:THR:HG22  | 1:L:136:ILE:HG21 | 1.78                     | 0.65              |
| 1:L:306:ILE:HD12 | 1:L:307:THR:H    | 1.61                     | 0.65              |
| 1:M:139:LYS:H    | 1:M:143:LYS:H    | 1.43                     | 0.65              |
| 1:P:179:PHE:HB3  | 1:P:288:THR:CB   | 2.22                     | 0.65              |
| 1:P:222:ASN:HB2  | 1:P:237:ASN:CB   | 2.26                     | 0.65              |
| 1:B:246:ILE:HD11 | 1:G:320:LYS:C    | 2.17                     | 0.65              |
| 1:C:110:LEU:HD13 | 1:C:126:TYR:OH   | 1.96                     | 0.65              |
| 1:C:208:ASP:HA   | 1:C:211:ILE:CD1  | 2.27                     | 0.65              |
| 1:D:306:ILE:HD12 | 1:D:307:THR:H    | 1.62                     | 0.65              |
| 1:E:222:ASN:HB2  | 1:E:237:ASN:CB   | 2.26                     | 0.65              |
| 1:F:43:TYR:CE2   | 1:F:70:GLU:CD    | 2.70                     | 0.65              |
| 1:F:203:GLU:H    | 1:I:272:ARG:HG3  | 0.83                     | 0.65              |
| 1:G:188:LEU:N    | 1:G:199:ARG:HG2  | 2.10                     | 0.65              |
| 1:H:34:LYS:HG2   | 1:H:36:VAL:HA    | 1.78                     | 0.65              |
| 1:H:43:TYR:CE2   | 1:H:70:GLU:CD    | 2.70                     | 0.65              |
| 1:H:177:ILE:HG13 | 1:H:284:PHE:HA   | 1.77                     | 0.65              |
| 1:I:177:ILE:HG13 | 1:I:284:PHE:HA   | 1.77                     | 0.65              |
| 1:I:275:LYS:O    | 1:J:218:THR:CB   | 2.28                     | 0.65              |
| 1:J:109:VAL:CB   | 1:J:322:ALA:HB2  | 2.26                     | 0.65              |
| 1:J:177:ILE:HG13 | 1:J:284:PHE:HA   | 1.78                     | 0.65              |
| 1:O:45:LEU:CD2   | 1:O:51:ASP:HB3   | 2.26                     | 0.65              |
| 1:O:95:THR:HG22  | 1:O:136:ILE:HG21 | 1.78                     | 0.65              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:110:LEU:HD13 | 1:A:126:TYR:OH   | 1.96                     | 0.64              |
| 1:B:109:VAL:HG21 | 1:B:321:VAL:HG13 | 1.79                     | 0.64              |
| 1:C:27:LYS:NZ    | 1:C:35:ARG:HE    | 1.96                     | 0.64              |
| 1:C:308:ASN:HD21 | 1:G:241:LYS:HB2  | 1.62                     | 0.64              |
| 1:D:143:LYS:HE3  | 1:D:145:TYR:CE2  | 2.33                     | 0.64              |
| 1:D:208:ASP:HA   | 1:D:211:ILE:CD1  | 2.26                     | 0.64              |
| 1:F:188:LEU:H    | 1:F:199:ARG:CG   | 2.08                     | 0.64              |
| 1:G:27:LYS:HZ3   | 1:G:35:ARG:HH21  | 1.44                     | 0.64              |
| 1:G:203:GLU:CB   | 1:J:198:GLU:HA   | 2.25                     | 0.64              |
| 1:H:188:LEU:N    | 1:H:199:ARG:HG2  | 2.10                     | 0.64              |
| 1:I:306:ILE:HD12 | 1:I:307:THR:H    | 1.61                     | 0.64              |
| 1:J:283:ILE:HG22 | 1:J:285:ILE:HG23 | 1.78                     | 0.64              |
| 1:K:168:ASN:HB3  | 1:L:71:GLN:CG    | 2.27                     | 0.64              |
| 1:N:186:PHE:HD2  | 1:N:269:ILE:HD11 | 1.61                     | 0.64              |
| 1:P:139:LYS:H    | 1:P:143:LYS:H    | 1.43                     | 0.64              |
| 1:B:283:ILE:HG22 | 1:B:285:ILE:HG23 | 1.78                     | 0.64              |
| 1:C:179:PHE:HB3  | 1:C:288:THR:CB   | 2.22                     | 0.64              |
| 1:D:109:VAL:HG21 | 1:D:321:VAL:HG13 | 1.79                     | 0.64              |
| 1:F:202:GLU:HG3  | 1:I:271:LYS:CD   | 2.27                     | 0.64              |
| 1:G:27:LYS:NZ    | 1:G:35:ARG:HE    | 1.96                     | 0.64              |
| 1:J:168:ASN:HB3  | 1:K:71:GLN:CG    | 2.27                     | 0.64              |
| 1:K:82:THR:O     | 1:K:85:ILE:HB    | 1.97                     | 0.64              |
| 1:L:82:THR:O     | 1:L:85:ILE:HB    | 1.97                     | 0.64              |
| 1:M:110:LEU:HD13 | 1:M:126:TYR:OH   | 1.96                     | 0.64              |
| 1:O:143:LYS:HE3  | 1:O:145:TYR:CE2  | 2.33                     | 0.64              |
| 1:O:283:ILE:HG22 | 1:O:285:ILE:HG23 | 1.78                     | 0.64              |
| 1:O:320:LYS:O    | 1:P:46:GLU:O     | 2.14                     | 0.64              |
| 1:P:213:VAL:CG2  | 1:P:257:VAL:HG11 | 2.28                     | 0.64              |
| 1:A:95:THR:HG22  | 1:A:136:ILE:HG21 | 1.78                     | 0.64              |
| 1:A:225:LEU:HD22 | 1:B:300:TYR:CZ   | 2.20                     | 0.64              |
| 1:B:110:LEU:HD13 | 1:B:126:TYR:OH   | 1.96                     | 0.64              |
| 1:B:143:LYS:HE3  | 1:B:145:TYR:CE2  | 2.33                     | 0.64              |
| 1:E:213:VAL:CG2  | 1:E:257:VAL:HG11 | 2.28                     | 0.64              |
| 1:G:95:THR:HG22  | 1:G:136:ILE:HG21 | 1.79                     | 0.64              |
| 1:G:179:PHE:HB3  | 1:G:288:THR:CB   | 2.22                     | 0.64              |
| 1:H:283:ILE:HG22 | 1:H:285:ILE:HG23 | 1.78                     | 0.64              |
| 1:I:34:LYS:HG2   | 1:I:36:VAL:HA    | 1.78                     | 0.64              |
| 1:J:82:THR:O     | 1:J:85:ILE:HB    | 1.97                     | 0.64              |
| 1:J:305:ILE:HG22 | 1:O:241:LYS:HZ1  | 1.60                     | 0.64              |
| 1:M:43:TYR:CE2   | 1:M:70:GLU:CD    | 2.70                     | 0.64              |
| 1:M:143:LYS:HE3  | 1:M:145:TYR:CE2  | 2.33                     | 0.64              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:139:LYS:H    | 1:N:143:LYS:H    | 1.43                     | 0.64              |
| 1:N:143:LYS:HE3  | 1:N:145:TYR:CE2  | 2.33                     | 0.64              |
| 1:N:173:ASN:HD22 | 1:N:279:LEU:HD23 | 1.59                     | 0.64              |
| 1:O:139:LYS:H    | 1:O:143:LYS:H    | 1.43                     | 0.64              |
| 1:O:170:LYS:HZ2  | 1:P:81:LYS:HB3   | 1.61                     | 0.64              |
| 1:A:82:THR:O     | 1:A:85:ILE:HB    | 1.97                     | 0.64              |
| 1:A:229:GLU:OE1  | 1:F:309:ASN:O    | 2.13                     | 0.64              |
| 1:B:82:THR:O     | 1:B:85:ILE:HB    | 1.97                     | 0.64              |
| 1:B:245:GLU:O    | 1:F:74:GLU:C     | 2.36                     | 0.64              |
| 1:C:82:THR:O     | 1:C:85:ILE:HB    | 1.97                     | 0.64              |
| 1:D:27:LYS:NZ    | 1:D:35:ARG:HE    | 1.96                     | 0.64              |
| 1:D:222:ASN:HB2  | 1:D:237:ASN:CB   | 2.26                     | 0.64              |
| 1:F:143:LYS:HE3  | 1:F:145:TYR:CE2  | 2.33                     | 0.64              |
| 1:F:222:ASN:HB2  | 1:F:237:ASN:CB   | 2.26                     | 0.64              |
| 1:F:227:THR:O    | 1:G:300:TYR:CA   | 2.35                     | 0.64              |
| 1:G:143:LYS:HE3  | 1:G:145:TYR:CE2  | 2.33                     | 0.64              |
| 1:I:109:VAL:CB   | 1:I:322:ALA:HB2  | 2.26                     | 0.64              |
| 1:K:165:GLU:CB   | 1:P:241:LYS:O    | 2.45                     | 0.64              |
| 1:L:143:LYS:HE3  | 1:L:145:TYR:CE2  | 2.33                     | 0.64              |
| 1:M:34:LYS:HG2   | 1:M:36:VAL:HA    | 1.78                     | 0.64              |
| 1:M:56:SER:CB    | 1:M:70:GLU:HB3   | 2.26                     | 0.64              |
| 1:O:27:LYS:NZ    | 1:O:35:ARG:HE    | 1.96                     | 0.64              |
| 1:O:301:PRO:HG3  | 1:P:228:ASN:N    | 2.12                     | 0.64              |
| 1:P:27:LYS:NZ    | 1:P:35:ARG:HE    | 1.96                     | 0.64              |
| 1:A:45:LEU:HD22  | 1:A:58:LYS:HZ3   | 1.63                     | 0.64              |
| 1:A:109:VAL:HG21 | 1:A:321:VAL:HG13 | 1.79                     | 0.64              |
| 1:A:230:GLN:HA   | 1:F:308:ASN:OD1  | 1.97                     | 0.64              |
| 1:C:58:LYS:HZ2   | 1:C:65:GLU:HG2   | 1.62                     | 0.64              |
| 1:C:143:LYS:HE3  | 1:C:145:TYR:CE2  | 2.33                     | 0.64              |
| 1:C:241:LYS:O    | 1:H:165:GLU:HA   | 1.97                     | 0.64              |
| 1:D:82:THR:O     | 1:D:85:ILE:HB    | 1.97                     | 0.64              |
| 1:D:110:LEU:HD22 | 1:D:126:TYR:CZ   | 2.33                     | 0.64              |
| 1:F:27:LYS:NZ    | 1:F:35:ARG:HE    | 1.96                     | 0.64              |
| 1:F:213:VAL:CG2  | 1:F:257:VAL:HG11 | 2.28                     | 0.64              |
| 1:G:306:ILE:HD12 | 1:G:307:THR:H    | 1.61                     | 0.64              |
| 1:I:82:THR:O     | 1:I:85:ILE:HB    | 1.97                     | 0.64              |
| 1:I:143:LYS:HE3  | 1:I:145:TYR:CE2  | 2.33                     | 0.64              |
| 1:J:73:VAL:HG21  | 1:N:240:MET:HE1  | 1.64                     | 0.64              |
| 1:K:133:ASN:ND2  | 1:K:148:GLU:CA   | 2.59                     | 0.64              |
| 1:M:82:THR:O     | 1:M:85:ILE:HB    | 1.97                     | 0.64              |
| 1:N:82:THR:O     | 1:N:85:ILE:HB    | 1.97                     | 0.64              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:301:PRO:HG3  | 1:O:228:ASN:N    | 2.12                     | 0.64              |
| 1:O:37:ILE:HD11  | 1:O:312:TRP:CE2  | 2.33                     | 0.64              |
| 1:O:110:LEU:HD22 | 1:O:126:TYR:CZ   | 2.33                     | 0.64              |
| 1:P:37:ILE:HD11  | 1:P:312:TRP:CE2  | 2.33                     | 0.64              |
| 1:P:143:LYS:HE3  | 1:P:145:TYR:CE2  | 2.33                     | 0.64              |
| 1:A:143:LYS:HE3  | 1:A:145:TYR:CE2  | 2.33                     | 0.64              |
| 1:A:213:VAL:CG2  | 1:A:257:VAL:HG11 | 2.28                     | 0.64              |
| 1:A:228:ASN:N    | 1:B:301:PRO:HG3  | 2.12                     | 0.64              |
| 1:B:228:ASN:N    | 1:C:301:PRO:HG3  | 2.12                     | 0.64              |
| 1:C:49:TYR:O     | 1:D:323:VAL:HG21 | 1.98                     | 0.64              |
| 1:C:110:LEU:HD22 | 1:C:126:TYR:CZ   | 2.33                     | 0.64              |
| 1:G:110:LEU:HD22 | 1:G:126:TYR:CZ   | 2.33                     | 0.64              |
| 1:G:222:ASN:HB2  | 1:G:237:ASN:CB   | 2.26                     | 0.64              |
| 1:H:27:LYS:NZ    | 1:H:35:ARG:HE    | 1.96                     | 0.64              |
| 1:H:284:PHE:O    | 1:H:306:ILE:HD13 | 1.98                     | 0.64              |
| 1:J:34:LYS:HG2   | 1:J:36:VAL:HA    | 1.78                     | 0.64              |
| 1:K:283:ILE:HG22 | 1:K:285:ILE:HG23 | 1.78                     | 0.64              |
| 1:L:49:TYR:HE2   | 1:P:245:GLU:C    | 1.98                     | 0.64              |
| 1:N:37:ILE:HD11  | 1:N:312:TRP:CE2  | 2.33                     | 0.64              |
| 1:N:56:SER:CB    | 1:N:70:GLU:HB3   | 2.26                     | 0.64              |
| 1:O:82:THR:O     | 1:O:85:ILE:HB    | 1.97                     | 0.64              |
| 1:O:110:LEU:HD13 | 1:O:126:TYR:OH   | 1.96                     | 0.64              |
| 1:O:213:VAL:CG2  | 1:O:257:VAL:HG11 | 2.28                     | 0.64              |
| 1:P:110:LEU:HD22 | 1:P:126:TYR:CZ   | 2.33                     | 0.64              |
| 1:A:27:LYS:NZ    | 1:A:35:ARG:HE    | 1.96                     | 0.64              |
| 1:B:27:LYS:NZ    | 1:B:35:ARG:HE    | 1.96                     | 0.64              |
| 1:B:49:TYR:O     | 1:C:323:VAL:HG21 | 1.97                     | 0.64              |
| 1:C:245:GLU:CG   | 1:G:75:ASP:CA    | 2.66                     | 0.64              |
| 1:D:247:ASP:O    | 1:H:52:ILE:CG2   | 2.45                     | 0.64              |
| 1:D:247:ASP:C    | 1:H:52:ILE:HD12  | 2.18                     | 0.64              |
| 1:E:143:LYS:HE3  | 1:E:145:TYR:CE2  | 2.33                     | 0.64              |
| 1:E:284:PHE:O    | 1:E:306:ILE:HD13 | 1.98                     | 0.64              |
| 1:F:7:GLU:HG3    | 1:F:326:TYR:OH   | 1.98                     | 0.64              |
| 1:F:284:PHE:O    | 1:F:306:ILE:HD13 | 1.98                     | 0.64              |
| 1:F:306:ILE:HD12 | 1:F:307:THR:H    | 1.61                     | 0.64              |
| 1:G:224:ASN:HD22 | 1:H:275:LYS:NZ   | 1.76                     | 0.64              |
| 1:G:284:PHE:O    | 1:G:306:ILE:HD13 | 1.98                     | 0.64              |
| 1:H:222:ASN:HB2  | 1:H:237:ASN:CB   | 2.26                     | 0.64              |
| 1:J:240:MET:CG   | 1:J:251:SER:HB2  | 2.28                     | 0.64              |
| 1:K:240:MET:CG   | 1:K:251:SER:HB2  | 2.28                     | 0.64              |
| 1:L:52:ILE:CD1   | 1:P:248:THR:HG23 | 2.28                     | 0.64              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:213:VAL:CG2  | 1:L:257:VAL:HG11 | 2.28                     | 0.64              |
| 1:L:240:MET:CG   | 1:L:251:SER:HB2  | 2.28                     | 0.64              |
| 1:M:301:PRO:HG3  | 1:N:228:ASN:N    | 2.12                     | 0.64              |
| 1:O:56:SER:CB    | 1:O:70:GLU:HB3   | 2.26                     | 0.64              |
| 1:O:277:ASP:OD2  | 1:P:224:ASN:CA   | 2.44                     | 0.64              |
| 1:P:82:THR:O     | 1:P:85:ILE:HB    | 1.97                     | 0.64              |
| 1:B:245:GLU:O    | 1:F:74:GLU:HA    | 1.97                     | 0.64              |
| 1:C:173:ASN:HD22 | 1:C:279:LEU:HD23 | 1.59                     | 0.64              |
| 1:C:228:ASN:N    | 1:D:301:PRO:HG3  | 2.12                     | 0.64              |
| 1:F:109:VAL:HG21 | 1:F:321:VAL:HG13 | 1.79                     | 0.64              |
| 1:H:37:ILE:HD11  | 1:H:312:TRP:CE2  | 2.33                     | 0.64              |
| 1:H:143:LYS:HE3  | 1:H:145:TYR:CE2  | 2.33                     | 0.64              |
| 1:H:213:VAL:CG2  | 1:H:257:VAL:HG11 | 2.28                     | 0.64              |
| 1:I:240:MET:CG   | 1:I:251:SER:HB2  | 2.28                     | 0.64              |
| 1:I:283:ILE:HG22 | 1:I:285:ILE:HG23 | 1.78                     | 0.64              |
| 1:K:188:LEU:H    | 1:K:199:ARG:CG   | 2.07                     | 0.64              |
| 1:L:186:PHE:HD2  | 1:L:269:ILE:HD11 | 1.61                     | 0.64              |
| 1:L:200:PHE:HD1  | 1:L:272:ARG:HD2  | 1.59                     | 0.64              |
| 1:L:283:ILE:HG22 | 1:L:285:ILE:HG23 | 1.78                     | 0.64              |
| 1:M:37:ILE:HD11  | 1:M:312:TRP:CE2  | 2.33                     | 0.64              |
| 1:M:109:VAL:HG21 | 1:M:321:VAL:HG13 | 1.79                     | 0.64              |
| 1:M:240:MET:CG   | 1:M:251:SER:HB2  | 2.28                     | 0.64              |
| 1:N:34:LYS:HG2   | 1:N:36:VAL:HA    | 1.78                     | 0.64              |
| 1:N:240:MET:CG   | 1:N:251:SER:HB2  | 2.28                     | 0.64              |
| 1:O:109:VAL:HG21 | 1:O:321:VAL:HG13 | 1.79                     | 0.64              |
| 1:O:186:PHE:HD2  | 1:O:269:ILE:HD11 | 1.61                     | 0.64              |
| 1:O:240:MET:CG   | 1:O:251:SER:HB2  | 2.28                     | 0.64              |
| 1:O:323:VAL:HG21 | 1:P:49:TYR:O     | 1.98                     | 0.64              |
| 1:P:95:THR:HG22  | 1:P:136:ILE:HG21 | 1.78                     | 0.64              |
| 1:P:240:MET:CG   | 1:P:251:SER:HB2  | 2.28                     | 0.64              |
| 1:P:283:ILE:HG22 | 1:P:285:ILE:HG23 | 1.78                     | 0.64              |
| 1:B:213:VAL:CG2  | 1:B:257:VAL:HG11 | 2.28                     | 0.64              |
| 1:D:37:ILE:HD11  | 1:D:312:TRP:CE2  | 2.33                     | 0.64              |
| 1:D:109:VAL:CB   | 1:D:322:ALA:HB2  | 2.26                     | 0.64              |
| 1:F:34:LYS:H     | 1:F:36:VAL:N     | 1.96                     | 0.64              |
| 1:H:179:PHE:HB3  | 1:H:288:THR:CB   | 2.22                     | 0.64              |
| 1:I:7:GLU:HG3    | 1:I:326:TYR:OH   | 1.98                     | 0.64              |
| 1:I:323:VAL:O    | 1:J:47:ASP:C     | 2.30                     | 0.64              |
| 1:J:44:ASN:CB    | 1:J:64:LYS:HZ1   | 2.11                     | 0.64              |
| 1:J:52:ILE:HG23  | 1:N:248:THR:CA   | 2.23                     | 0.64              |
| 1:K:275:LYS:NZ   | 1:L:224:ASN:HD22 | 1.76                     | 0.64              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:95:THR:HG22  | 1:M:136:ILE:HG21 | 1.78                     | 0.64              |
| 1:O:52:ILE:H     | 1:O:74:GLU:CG    | 2.06                     | 0.64              |
| 1:P:56:SER:CB    | 1:P:70:GLU:HB3   | 2.26                     | 0.64              |
| 1:A:186:PHE:HD2  | 1:A:269:ILE:HD11 | 1.61                     | 0.64              |
| 1:A:254:ILE:HG13 | 1:A:255:LYS:N    | 2.13                     | 0.64              |
| 1:B:45:LEU:HD22  | 1:B:58:LYS:HZ3   | 1.63                     | 0.64              |
| 1:C:7:GLU:HG3    | 1:C:326:TYR:OH   | 1.98                     | 0.64              |
| 1:C:246:ILE:HD11 | 1:G:49:TYR:CA    | 2.28                     | 0.64              |
| 1:E:7:GLU:HG3    | 1:E:326:TYR:OH   | 1.98                     | 0.64              |
| 1:E:188:LEU:H    | 1:E:199:ARG:CG   | 2.07                     | 0.64              |
| 1:G:7:GLU:HG3    | 1:G:326:TYR:OH   | 1.98                     | 0.64              |
| 1:G:109:VAL:HG21 | 1:G:321:VAL:HG13 | 1.79                     | 0.64              |
| 1:H:82:THR:O     | 1:H:85:ILE:HB    | 1.97                     | 0.64              |
| 1:I:27:LYS:NZ    | 1:I:35:ARG:HE    | 1.96                     | 0.64              |
| 1:I:213:VAL:CG2  | 1:I:257:VAL:HG11 | 2.28                     | 0.64              |
| 1:J:213:VAL:CG2  | 1:J:257:VAL:HG11 | 2.28                     | 0.64              |
| 1:K:34:LYS:HG2   | 1:K:36:VAL:HA    | 1.78                     | 0.64              |
| 1:K:95:THR:HG22  | 1:K:136:ILE:HG21 | 1.78                     | 0.64              |
| 1:K:143:LYS:HE3  | 1:K:145:TYR:CE2  | 2.33                     | 0.64              |
| 1:K:186:PHE:HD2  | 1:K:269:ILE:HD11 | 1.61                     | 0.64              |
| 1:K:300:TYR:CA   | 1:L:227:THR:O    | 2.35                     | 0.64              |
| 1:N:105:LYS:HZ2  | 1:N:148:GLU:HB3  | 1.63                     | 0.64              |
| 1:N:109:VAL:HG21 | 1:N:321:VAL:HG13 | 1.79                     | 0.64              |
| 1:N:110:LEU:HD13 | 1:N:126:TYR:OH   | 1.96                     | 0.64              |
| 1:N:110:LEU:HD22 | 1:N:126:TYR:CZ   | 2.33                     | 0.64              |
| 1:P:7:GLU:HG3    | 1:P:326:TYR:OH   | 1.98                     | 0.64              |
| 1:P:133:ASN:ND2  | 1:P:148:GLU:CA   | 2.59                     | 0.64              |
| 1:A:46:GLU:HA    | 1:B:324:ALA:HB1  | 1.68                     | 0.63              |
| 1:A:49:TYR:O     | 1:B:323:VAL:HG21 | 1.98                     | 0.63              |
| 1:B:179:PHE:HB3  | 1:B:288:THR:CB   | 2.22                     | 0.63              |
| 1:B:225:LEU:HD22 | 1:C:300:TYR:CZ   | 2.20                     | 0.63              |
| 1:C:240:MET:CA   | 1:H:166:GLN:HG2  | 2.24                     | 0.63              |
| 1:D:213:VAL:CG2  | 1:D:257:VAL:HG11 | 2.28                     | 0.63              |
| 1:E:27:LYS:NZ    | 1:E:35:ARG:HE    | 1.96                     | 0.63              |
| 1:E:110:LEU:HD22 | 1:E:126:TYR:CZ   | 2.33                     | 0.63              |
| 1:E:283:ILE:HG22 | 1:E:285:ILE:HG23 | 1.78                     | 0.63              |
| 1:F:201:ILE:HG13 | 1:I:272:ARG:HH11 | 1.53                     | 0.63              |
| 1:H:272:ARG:HG3  | 1:K:202:GLU:CA   | 2.27                     | 0.63              |
| 1:I:284:PHE:O    | 1:I:306:ILE:HD13 | 1.98                     | 0.63              |
| 1:K:75:ASP:N     | 1:O:245:GLU:CG   | 2.56                     | 0.63              |
| 1:M:36:VAL:HG11  | 1:M:96:GLN:HE21  | 1.63                     | 0.63              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:133:ASN:ND2  | 1:M:148:GLU:CA   | 2.59                     | 0.63              |
| 1:M:320:LYS:CE   | 1:N:50:ILE:CG1   | 1.92                     | 0.63              |
| 1:N:36:VAL:HG11  | 1:N:96:GLN:HE21  | 1.63                     | 0.63              |
| 1:O:7:GLU:HG3    | 1:O:326:TYR:OH   | 1.98                     | 0.63              |
| 1:O:324:ALA:HB1  | 1:P:46:GLU:HA    | 1.68                     | 0.63              |
| 1:A:41:LYS:HE2   | 1:B:170:LYS:HB3  | 1.80                     | 0.63              |
| 1:A:110:LEU:HD22 | 1:A:126:TYR:CZ   | 2.33                     | 0.63              |
| 1:C:37:ILE:HD11  | 1:C:312:TRP:CE2  | 2.33                     | 0.63              |
| 1:C:229:GLU:CD   | 1:H:308:ASN:O    | 2.28                     | 0.63              |
| 1:E:109:VAL:HG21 | 1:E:321:VAL:HG13 | 1.79                     | 0.63              |
| 1:H:7:GLU:HG3    | 1:H:326:TYR:OH   | 1.98                     | 0.63              |
| 1:J:300:TYR:CA   | 1:K:227:THR:O    | 2.35                     | 0.63              |
| 1:K:34:LYS:H     | 1:K:36:VAL:N     | 1.96                     | 0.63              |
| 1:K:213:VAL:CG2  | 1:K:257:VAL:HG11 | 2.28                     | 0.63              |
| 1:L:34:LYS:HG2   | 1:L:36:VAL:HA    | 1.78                     | 0.63              |
| 1:L:37:ILE:HD11  | 1:L:312:TRP:CE2  | 2.33                     | 0.63              |
| 1:L:109:VAL:HG21 | 1:L:321:VAL:HG13 | 1.79                     | 0.63              |
| 1:L:188:LEU:H    | 1:L:199:ARG:CG   | 2.08                     | 0.63              |
| 1:M:7:GLU:HG3    | 1:M:326:TYR:OH   | 1.98                     | 0.63              |
| 1:M:27:LYS:NZ    | 1:M:35:ARG:HE    | 1.96                     | 0.63              |
| 1:M:213:VAL:CG2  | 1:M:257:VAL:HG11 | 2.28                     | 0.63              |
| 1:N:254:ILE:HG13 | 1:N:255:LYS:N    | 2.13                     | 0.63              |
| 1:O:34:LYS:HG2   | 1:O:36:VAL:HA    | 1.78                     | 0.63              |
| 1:O:320:LYS:CE   | 1:P:50:ILE:CG1   | 1.92                     | 0.63              |
| 1:A:246:ILE:C    | 1:E:50:ILE:CD1   | 2.67                     | 0.63              |
| 1:B:37:ILE:HD11  | 1:B:312:TRP:CE2  | 2.33                     | 0.63              |
| 1:B:41:LYS:HE2   | 1:C:170:LYS:HB3  | 1.80                     | 0.63              |
| 1:C:213:VAL:CG2  | 1:C:257:VAL:HG11 | 2.28                     | 0.63              |
| 1:D:7:GLU:HG3    | 1:D:326:TYR:OH   | 1.98                     | 0.63              |
| 1:D:58:LYS:CE    | 1:D:65:GLU:HG2   | 2.29                     | 0.63              |
| 1:D:254:ILE:HG13 | 1:D:255:LYS:N    | 2.13                     | 0.63              |
| 1:E:37:ILE:HD11  | 1:E:312:TRP:CE2  | 2.33                     | 0.63              |
| 1:E:219:ASP:CG   | 1:F:277:ASP:CB   | 2.61                     | 0.63              |
| 1:E:232:GLU:O    | 1:E:233:SER:HB2  | 1.99                     | 0.63              |
| 1:F:240:MET:CG   | 1:F:251:SER:HB2  | 2.28                     | 0.63              |
| 1:G:37:ILE:HD11  | 1:G:312:TRP:CE2  | 2.33                     | 0.63              |
| 1:G:272:ARG:HB2  | 1:J:202:GLU:HG2  | 1.79                     | 0.63              |
| 1:H:133:ASN:ND2  | 1:H:148:GLU:CA   | 2.59                     | 0.63              |
| 1:I:254:ILE:HG13 | 1:I:255:LYS:N    | 2.13                     | 0.63              |
| 1:J:143:LYS:HE3  | 1:J:145:TYR:CE2  | 2.33                     | 0.63              |
| 1:J:186:PHE:HD2  | 1:J:269:ILE:HD11 | 1.61                     | 0.63              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:109:VAL:HG21 | 1:K:321:VAL:HG13 | 1.79                     | 0.63              |
| 1:L:27:LYS:HZ3   | 1:L:35:ARG:HH21  | 1.46                     | 0.63              |
| 1:M:254:ILE:HG13 | 1:M:255:LYS:N    | 2.13                     | 0.63              |
| 1:N:7:GLU:HG3    | 1:N:326:TYR:OH   | 1.98                     | 0.63              |
| 1:N:27:LYS:NZ    | 1:N:35:ARG:HE    | 1.96                     | 0.63              |
| 1:O:36:VAL:HG11  | 1:O:96:GLN:HE21  | 1.63                     | 0.63              |
| 1:A:37:ILE:HD11  | 1:A:312:TRP:CE2  | 2.33                     | 0.63              |
| 1:A:123:LYS:HZ3  | 1:A:127:ARG:NH1  | 1.96                     | 0.63              |
| 1:A:240:MET:CG   | 1:A:251:SER:HB2  | 2.28                     | 0.63              |
| 1:B:58:LYS:CE    | 1:B:65:GLU:HG2   | 2.29                     | 0.63              |
| 1:B:110:LEU:HD22 | 1:B:126:TYR:CZ   | 2.33                     | 0.63              |
| 1:C:41:LYS:HE2   | 1:D:170:LYS:HB3  | 1.80                     | 0.63              |
| 1:C:58:LYS:CE    | 1:C:65:GLU:HG2   | 2.29                     | 0.63              |
| 1:D:52:ILE:H     | 1:D:74:GLU:CG    | 2.06                     | 0.63              |
| 1:F:37:ILE:HD11  | 1:F:312:TRP:CE2  | 2.33                     | 0.63              |
| 1:F:110:LEU:HD22 | 1:F:126:TYR:CZ   | 2.33                     | 0.63              |
| 1:G:82:THR:O     | 1:G:85:ILE:HB    | 1.97                     | 0.63              |
| 1:G:95:THR:CG2   | 1:G:136:ILE:HD13 | 2.23                     | 0.63              |
| 1:G:105:LYS:HZ2  | 1:G:148:GLU:HB3  | 1.64                     | 0.63              |
| 1:G:202:GLU:HG2  | 1:J:272:ARG:HB2  | 1.79                     | 0.63              |
| 1:G:250:SER:HA   | 1:G:252:THR:N    | 2.14                     | 0.63              |
| 1:H:44:ASN:CB    | 1:H:64:LYS:HZ1   | 2.11                     | 0.63              |
| 1:J:232:GLU:O    | 1:J:233:SER:HB2  | 1.99                     | 0.63              |
| 1:J:254:ILE:HG13 | 1:J:255:LYS:N    | 2.13                     | 0.63              |
| 1:J:284:PHE:O    | 1:J:306:ILE:HD13 | 1.98                     | 0.63              |
| 1:J:303:ASN:CB   | 1:K:226:ILE:H    | 1.97                     | 0.63              |
| 1:K:37:ILE:HD11  | 1:K:312:TRP:CE2  | 2.33                     | 0.63              |
| 1:M:219:ASP:C    | 1:M:224:ASN:HB2  | 2.19                     | 0.63              |
| 1:N:250:SER:HA   | 1:N:252:THR:N    | 2.14                     | 0.63              |
| 1:N:323:VAL:HG21 | 1:O:49:TYR:O     | 1.97                     | 0.63              |
| 1:A:58:LYS:CE    | 1:A:65:GLU:HG2   | 2.29                     | 0.63              |
| 1:A:250:SER:HA   | 1:A:252:THR:N    | 2.14                     | 0.63              |
| 1:B:254:ILE:HG13 | 1:B:255:LYS:N    | 2.13                     | 0.63              |
| 1:C:224:ASN:CA   | 1:D:277:ASP:OD2  | 2.44                     | 0.63              |
| 1:D:54:GLY:HA3   | 1:D:56:SER:H     | 1.64                     | 0.63              |
| 1:D:219:ASP:C    | 1:D:224:ASN:HB2  | 2.19                     | 0.63              |
| 1:D:250:SER:HA   | 1:D:252:THR:N    | 2.14                     | 0.63              |
| 1:E:218:THR:O    | 1:F:275:LYS:HG2  | 1.99                     | 0.63              |
| 1:F:82:THR:O     | 1:F:85:ILE:HB    | 1.97                     | 0.63              |
| 1:G:213:VAL:CG2  | 1:G:257:VAL:HG11 | 2.28                     | 0.63              |
| 1:G:227:THR:O    | 1:H:300:TYR:CA   | 2.35                     | 0.63              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:240:MET:CG   | 1:H:251:SER:HB2  | 2.28                     | 0.63              |
| 1:J:27:LYS:NZ    | 1:J:35:ARG:HE    | 1.96                     | 0.63              |
| 1:J:109:VAL:HG21 | 1:J:321:VAL:HG13 | 1.79                     | 0.63              |
| 1:J:275:LYS:HG2  | 1:K:218:THR:O    | 1.99                     | 0.63              |
| 1:K:109:VAL:HG22 | 1:K:318:LEU:HB3  | 1.81                     | 0.63              |
| 1:K:254:ILE:HG13 | 1:K:255:LYS:N    | 2.13                     | 0.63              |
| 1:L:49:TYR:CE2   | 1:P:246:ILE:N    | 2.64                     | 0.63              |
| 1:L:109:VAL:HG22 | 1:L:318:LEU:HB3  | 1.81                     | 0.63              |
| 1:O:219:ASP:C    | 1:O:224:ASN:HB2  | 2.19                     | 0.63              |
| 1:P:34:LYS:HG2   | 1:P:36:VAL:HA    | 1.78                     | 0.63              |
| 1:P:284:PHE:CD2  | 1:P:296:ILE:HG21 | 2.34                     | 0.63              |
| 1:B:7:GLU:HG3    | 1:B:326:TYR:OH   | 1.98                     | 0.63              |
| 1:B:219:ASP:C    | 1:B:224:ASN:HB2  | 2.19                     | 0.63              |
| 1:B:240:MET:CG   | 1:B:251:SER:HB2  | 2.28                     | 0.63              |
| 1:E:109:VAL:HG22 | 1:E:318:LEU:HB3  | 1.81                     | 0.63              |
| 1:F:232:GLU:O    | 1:F:233:SER:HB2  | 1.99                     | 0.63              |
| 1:G:34:LYS:H     | 1:G:36:VAL:N     | 1.96                     | 0.63              |
| 1:H:105:LYS:HZ2  | 1:H:148:GLU:HB3  | 1.64                     | 0.63              |
| 1:H:272:ARG:HG3  | 1:K:203:GLU:H    | 0.84                     | 0.63              |
| 1:I:186:PHE:HD2  | 1:I:269:ILE:HD11 | 1.61                     | 0.63              |
| 1:J:82:THR:CB    | 1:J:84:LEU:HD23  | 2.29                     | 0.63              |
| 1:K:52:ILE:HD13  | 1:O:248:THR:HG23 | 1.79                     | 0.63              |
| 1:L:254:ILE:HG13 | 1:L:255:LYS:N    | 2.13                     | 0.63              |
| 1:N:284:PHE:CD2  | 1:N:296:ILE:HG21 | 2.34                     | 0.63              |
| 1:O:284:PHE:CD2  | 1:O:296:ILE:HG21 | 2.34                     | 0.63              |
| 1:P:34:LYS:H     | 1:P:36:VAL:N     | 1.96                     | 0.63              |
| 1:P:186:PHE:HD2  | 1:P:269:ILE:HD11 | 1.61                     | 0.63              |
| 1:C:225:LEU:HD22 | 1:D:300:TYR:CZ   | 2.20                     | 0.63              |
| 1:F:109:VAL:HG22 | 1:F:318:LEU:HB3  | 1.81                     | 0.63              |
| 1:H:109:VAL:HG21 | 1:H:321:VAL:HG13 | 1.79                     | 0.63              |
| 1:H:110:LEU:HD22 | 1:H:126:TYR:CZ   | 2.33                     | 0.63              |
| 1:I:34:LYS:H     | 1:I:36:VAL:N     | 1.96                     | 0.63              |
| 1:I:37:ILE:HD11  | 1:I:312:TRP:CE2  | 2.33                     | 0.63              |
| 1:I:110:LEU:HD22 | 1:I:126:TYR:CZ   | 2.33                     | 0.63              |
| 1:I:300:TYR:CA   | 1:J:227:THR:O    | 2.35                     | 0.63              |
| 1:J:109:VAL:HG22 | 1:J:318:LEU:HB3  | 1.81                     | 0.63              |
| 1:K:27:LYS:NZ    | 1:K:35:ARG:HE    | 1.96                     | 0.63              |
| 1:K:82:THR:CB    | 1:K:84:LEU:HD23  | 2.29                     | 0.63              |
| 1:K:284:PHE:O    | 1:K:306:ILE:HD13 | 1.98                     | 0.63              |
| 1:L:34:LYS:H     | 1:L:36:VAL:N     | 1.96                     | 0.63              |
| 1:L:68:ILE:CD1   | 1:L:92:THR:HB    | 2.10                     | 0.63              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:82:THR:CB    | 1:L:84:LEU:HD23  | 2.29                     | 0.63              |
| 1:L:284:PHE:O    | 1:L:306:ILE:HD13 | 1.98                     | 0.63              |
| 1:M:323:VAL:HG21 | 1:N:49:TYR:O     | 1.97                     | 0.63              |
| 1:N:213:VAL:CG2  | 1:N:257:VAL:HG11 | 2.28                     | 0.63              |
| 1:O:58:LYS:CE    | 1:O:65:GLU:HG2   | 2.29                     | 0.63              |
| 1:O:95:THR:CG2   | 1:O:136:ILE:HD13 | 2.22                     | 0.63              |
| 1:P:58:LYS:CE    | 1:P:65:GLU:HG2   | 2.29                     | 0.63              |
| 1:P:250:SER:HA   | 1:P:252:THR:N    | 2.14                     | 0.63              |
| 1:A:179:PHE:HB3  | 1:A:288:THR:CB   | 2.22                     | 0.63              |
| 1:A:284:PHE:CD2  | 1:A:296:ILE:HG21 | 2.34                     | 0.63              |
| 1:A:284:PHE:O    | 1:A:306:ILE:HD13 | 1.98                     | 0.63              |
| 1:B:250:SER:HA   | 1:B:252:THR:N    | 2.14                     | 0.63              |
| 1:C:95:THR:HG22  | 1:C:136:ILE:HG21 | 1.78                     | 0.63              |
| 1:C:284:PHE:CD2  | 1:C:296:ILE:HG21 | 2.34                     | 0.63              |
| 1:D:240:MET:CG   | 1:D:251:SER:HB2  | 2.28                     | 0.63              |
| 1:D:284:PHE:CD2  | 1:D:296:ILE:HG21 | 2.34                     | 0.63              |
| 1:E:240:MET:CG   | 1:E:251:SER:HB2  | 2.28                     | 0.63              |
| 1:I:109:VAL:HG21 | 1:I:321:VAL:HG13 | 1.79                     | 0.63              |
| 1:I:232:GLU:O    | 1:I:233:SER:HB2  | 1.99                     | 0.63              |
| 1:J:7:GLU:HG3    | 1:J:326:TYR:OH   | 1.98                     | 0.63              |
| 1:J:37:ILE:HD11  | 1:J:312:TRP:CE2  | 2.33                     | 0.63              |
| 1:J:110:LEU:HD22 | 1:J:126:TYR:CZ   | 2.33                     | 0.63              |
| 1:J:219:ASP:C    | 1:J:224:ASN:HB2  | 2.19                     | 0.63              |
| 1:J:250:SER:HA   | 1:J:252:THR:N    | 2.14                     | 0.63              |
| 1:K:232:GLU:O    | 1:K:233:SER:HB2  | 1.99                     | 0.63              |
| 1:K:277:ASP:HB3  | 1:L:219:ASP:C    | 2.11                     | 0.63              |
| 1:K:308:ASN:ND2  | 1:P:231:ALA:C    | 2.45                     | 0.63              |
| 1:L:284:PHE:CD2  | 1:L:296:ILE:HG21 | 2.34                     | 0.63              |
| 1:M:110:LEU:HD22 | 1:M:126:TYR:CZ   | 2.33                     | 0.63              |
| 1:M:284:PHE:CD2  | 1:M:296:ILE:HG21 | 2.34                     | 0.63              |
| 1:N:58:LYS:CE    | 1:N:65:GLU:HG2   | 2.29                     | 0.63              |
| 1:O:33:ILE:CG1   | 1:O:312:TRP:HE1  | 2.12                     | 0.63              |
| 1:O:173:ASN:HD22 | 1:O:279:LEU:HD23 | 1.59                     | 0.63              |
| 1:P:36:VAL:HG11  | 1:P:96:GLN:HE21  | 1.63                     | 0.63              |
| 1:A:133:ASN:ND2  | 1:A:148:GLU:CA   | 2.59                     | 0.63              |
| 1:A:230:GLN:C    | 1:F:308:ASN:ND2  | 2.53                     | 0.63              |
| 1:B:123:LYS:HZ2  | 1:B:127:ARG:NH1  | 1.97                     | 0.63              |
| 1:B:284:PHE:CD2  | 1:B:296:ILE:HG21 | 2.34                     | 0.63              |
| 1:C:240:MET:CG   | 1:C:251:SER:HB2  | 2.28                     | 0.63              |
| 1:C:247:ASP:O    | 1:G:52:ILE:HD12  | 1.99                     | 0.63              |
| 1:E:82:THR:O     | 1:E:85:ILE:HB    | 1.97                     | 0.63              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:258:LYS:NZ   | 1:F:295:GLN:HG3  | 2.14                     | 0.63              |
| 1:G:109:VAL:HG22 | 1:G:318:LEU:HB3  | 1.81                     | 0.63              |
| 1:H:34:LYS:H     | 1:H:36:VAL:N     | 1.96                     | 0.63              |
| 1:K:284:PHE:CD2  | 1:K:296:ILE:HG21 | 2.34                     | 0.63              |
| 1:L:7:GLU:HG3    | 1:L:326:TYR:OH   | 1.98                     | 0.63              |
| 1:L:27:LYS:NZ    | 1:L:35:ARG:HE    | 1.96                     | 0.63              |
| 1:L:110:LEU:HD22 | 1:L:126:TYR:CZ   | 2.33                     | 0.63              |
| 1:L:219:ASP:C    | 1:L:224:ASN:HB2  | 2.19                     | 0.63              |
| 1:M:58:LYS:CE    | 1:M:65:GLU:HG2   | 2.29                     | 0.63              |
| 1:M:82:THR:CB    | 1:M:84:LEU:HD23  | 2.29                     | 0.63              |
| 1:M:170:LYS:HB3  | 1:N:41:LYS:HE2   | 1.80                     | 0.63              |
| 1:M:323:VAL:CG2  | 1:N:47:ASP:C     | 2.57                     | 0.63              |
| 1:N:33:ILE:CG1   | 1:N:312:TRP:HE1  | 2.12                     | 0.63              |
| 1:N:170:LYS:HB3  | 1:O:41:LYS:HE2   | 1.80                     | 0.63              |
| 1:O:258:LYS:NZ   | 1:O:295:GLN:HG3  | 2.14                     | 0.63              |
| 1:P:254:ILE:HG13 | 1:P:255:LYS:N    | 2.13                     | 0.63              |
| 1:A:33:ILE:CG1   | 1:A:312:TRP:HE1  | 2.12                     | 0.62              |
| 1:B:54:GLY:HA3   | 1:B:56:SER:H     | 1.64                     | 0.62              |
| 1:B:224:ASN:CA   | 1:C:277:ASP:OD2  | 2.44                     | 0.62              |
| 1:B:284:PHE:O    | 1:B:306:ILE:HD13 | 1.98                     | 0.62              |
| 1:D:245:GLU:O    | 1:H:74:GLU:CA    | 2.45                     | 0.62              |
| 1:F:218:THR:CB   | 1:G:275:LYS:O    | 2.28                     | 0.62              |
| 1:F:219:ASP:C    | 1:F:224:ASN:HB2  | 2.19                     | 0.62              |
| 1:F:250:SER:HA   | 1:F:252:THR:N    | 2.14                     | 0.62              |
| 1:H:202:GLU:HA   | 1:K:272:ARG:CB   | 2.28                     | 0.62              |
| 1:I:109:VAL:HG22 | 1:I:318:LEU:HB3  | 1.81                     | 0.62              |
| 1:I:133:ASN:ND2  | 1:I:148:GLU:CA   | 2.59                     | 0.62              |
| 1:I:258:LYS:NZ   | 1:I:295:GLN:HG3  | 2.14                     | 0.62              |
| 1:K:320:LYS:HG2  | 1:L:50:ILE:HG12  | 1.80                     | 0.62              |
| 1:N:82:THR:CB    | 1:N:84:LEU:HD23  | 2.29                     | 0.62              |
| 1:O:34:LYS:H     | 1:O:36:VAL:N     | 1.96                     | 0.62              |
| 1:O:170:LYS:HB3  | 1:P:41:LYS:HE2   | 1.80                     | 0.62              |
| 1:P:284:PHE:O    | 1:P:306:ILE:HD13 | 1.98                     | 0.62              |
| 1:B:52:ILE:H     | 1:B:74:GLU:CG    | 2.06                     | 0.62              |
| 1:C:34:LYS:H     | 1:C:36:VAL:N     | 1.96                     | 0.62              |
| 1:E:133:ASN:ND2  | 1:E:148:GLU:CA   | 2.59                     | 0.62              |
| 1:F:33:ILE:CG1   | 1:F:312:TRP:HE1  | 2.12                     | 0.62              |
| 1:F:105:LYS:HZ2  | 1:F:148:GLU:HB3  | 1.64                     | 0.62              |
| 1:F:203:GLU:OE1  | 1:I:274:PHE:CE2  | 2.49                     | 0.62              |
| 1:G:58:LYS:CE    | 1:G:65:GLU:HG2   | 2.29                     | 0.62              |
| 1:G:61:LEU:HB3   | 1:G:66:TYR:CD1   | 2.35                     | 0.62              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:95:THR:HG22  | 1:H:136:ILE:HG21 | 1.78                     | 0.62              |
| 1:H:274:PHE:HD1  | 1:K:204:HIS:CE1  | 2.13                     | 0.62              |
| 1:J:277:ASP:HB3  | 1:K:219:ASP:N    | 2.05                     | 0.62              |
| 1:K:74:GLU:HA    | 1:O:245:GLU:O    | 1.98                     | 0.62              |
| 1:K:166:GLN:O    | 1:P:241:LYS:CA   | 2.37                     | 0.62              |
| 1:K:231:ALA:CB   | 1:O:308:ASN:CG   | 2.63                     | 0.62              |
| 1:L:61:LEU:HB3   | 1:L:66:TYR:CD1   | 2.34                     | 0.62              |
| 1:L:258:LYS:NZ   | 1:L:295:GLN:HG3  | 2.14                     | 0.62              |
| 1:M:54:GLY:HA3   | 1:M:56:SER:H     | 1.64                     | 0.62              |
| 1:N:133:ASN:ND2  | 1:N:148:GLU:CA   | 2.59                     | 0.62              |
| 1:A:219:ASP:C    | 1:A:224:ASN:HB2  | 2.19                     | 0.62              |
| 1:C:219:ASP:C    | 1:C:224:ASN:HB2  | 2.19                     | 0.62              |
| 1:C:284:PHE:O    | 1:C:306:ILE:HD13 | 1.98                     | 0.62              |
| 1:D:258:LYS:NZ   | 1:D:295:GLN:HG3  | 2.15                     | 0.62              |
| 1:E:33:ILE:CG1   | 1:E:312:TRP:HE1  | 2.12                     | 0.62              |
| 1:E:106:VAL:CG2  | 1:E:147:PHE:CZ   | 2.82                     | 0.62              |
| 1:F:179:PHE:HB3  | 1:F:288:THR:CB   | 2.22                     | 0.62              |
| 1:G:218:THR:O    | 1:H:275:LYS:HG2  | 1.99                     | 0.62              |
| 1:G:240:MET:CG   | 1:G:251:SER:HB2  | 2.28                     | 0.62              |
| 1:H:109:VAL:HG22 | 1:H:318:LEU:HB3  | 1.81                     | 0.62              |
| 1:H:258:LYS:NZ   | 1:H:295:GLN:HG3  | 2.14                     | 0.62              |
| 1:I:61:LEU:HB3   | 1:I:66:TYR:CD1   | 2.34                     | 0.62              |
| 1:I:277:ASP:HB3  | 1:J:219:ASP:N    | 2.05                     | 0.62              |
| 1:J:284:PHE:CD2  | 1:J:296:ILE:HG21 | 2.34                     | 0.62              |
| 1:K:275:LYS:HG2  | 1:L:218:THR:O    | 1.99                     | 0.62              |
| 1:L:188:LEU:N    | 1:L:199:ARG:HG2  | 2.10                     | 0.62              |
| 1:M:131:LYS:C    | 1:M:149:ILE:HD11 | 2.20                     | 0.62              |
| 1:M:258:LYS:NZ   | 1:M:295:GLN:HG3  | 2.15                     | 0.62              |
| 1:O:82:THR:CB    | 1:O:84:LEU:HD23  | 2.29                     | 0.62              |
| 1:O:222:ASN:HB2  | 1:O:237:ASN:H    | 1.64                     | 0.62              |
| 1:O:254:ILE:HG13 | 1:O:255:LYS:N    | 2.13                     | 0.62              |
| 1:O:284:PHE:O    | 1:O:306:ILE:HD13 | 1.98                     | 0.62              |
| 1:P:95:THR:CG2   | 1:P:136:ILE:HD13 | 2.22                     | 0.62              |
| 1:A:36:VAL:HG11  | 1:A:96:GLN:HE21  | 1.63                     | 0.62              |
| 1:B:34:LYS:H     | 1:B:36:VAL:N     | 1.96                     | 0.62              |
| 1:B:231:ALA:C    | 1:G:308:ASN:ND2  | 2.52                     | 0.62              |
| 1:B:258:LYS:NZ   | 1:B:295:GLN:HG3  | 2.14                     | 0.62              |
| 1:C:250:SER:HA   | 1:C:252:THR:N    | 2.14                     | 0.62              |
| 1:D:131:LYS:C    | 1:D:149:ILE:HD11 | 2.20                     | 0.62              |
| 1:F:268:LEU:HD22 | 1:I:271:LYS:HE2  | 1.82                     | 0.62              |
| 1:G:33:ILE:CG1   | 1:G:312:TRP:HE1  | 2.12                     | 0.62              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:106:VAL:CG2  | 1:G:147:PHE:CZ   | 2.82                     | 0.62              |
| 1:H:250:SER:HA   | 1:H:252:THR:N    | 2.14                     | 0.62              |
| 1:J:61:LEU:HB3   | 1:J:66:TYR:CD1   | 2.35                     | 0.62              |
| 1:J:320:LYS:HG2  | 1:K:50:ILE:HG12  | 1.80                     | 0.62              |
| 1:J:321:VAL:N    | 1:K:49:TYR:HD1   | 1.97                     | 0.62              |
| 1:K:110:LEU:HD22 | 1:K:126:TYR:CZ   | 2.33                     | 0.62              |
| 1:K:278:GLN:HB3  | 1:L:218:THR:OG1  | 1.87                     | 0.62              |
| 1:M:250:SER:HA   | 1:M:252:THR:N    | 2.14                     | 0.62              |
| 1:O:61:LEU:HB3   | 1:O:66:TYR:CD1   | 2.34                     | 0.62              |
| 1:O:320:LYS:CG   | 1:P:49:TYR:C     | 2.21                     | 0.62              |
| 1:P:234:ALA:HB3  | 1:P:235:LEU:HD23 | 1.82                     | 0.62              |
| 1:A:34:LYS:H     | 1:A:36:VAL:N     | 1.96                     | 0.62              |
| 1:C:246:ILE:HD11 | 1:G:49:TYR:HA    | 1.80                     | 0.62              |
| 1:C:254:ILE:HG13 | 1:C:255:LYS:N    | 2.13                     | 0.62              |
| 1:D:33:ILE:CG1   | 1:D:312:TRP:HE1  | 2.12                     | 0.62              |
| 1:D:234:ALA:HB3  | 1:D:235:LEU:HD23 | 1.82                     | 0.62              |
| 1:E:34:LYS:H     | 1:E:36:VAL:N     | 1.96                     | 0.62              |
| 1:E:219:ASP:CB   | 1:F:277:ASP:CB   | 2.65                     | 0.62              |
| 1:G:49:TYR:HD1   | 1:H:321:VAL:N    | 1.97                     | 0.62              |
| 1:G:50:ILE:HG12  | 1:H:320:LYS:HG2  | 1.80                     | 0.62              |
| 1:H:232:GLU:O    | 1:H:233:SER:HB2  | 1.99                     | 0.62              |
| 1:H:274:PHE:CE2  | 1:K:203:GLU:OE1  | 2.50                     | 0.62              |
| 1:I:43:TYR:CE2   | 1:I:67:LEU:CB    | 2.81                     | 0.62              |
| 1:I:58:LYS:CE    | 1:I:65:GLU:HG2   | 2.29                     | 0.62              |
| 1:I:284:PHE:CD2  | 1:I:296:ILE:HG21 | 2.34                     | 0.62              |
| 1:J:58:LYS:CE    | 1:J:65:GLU:HG2   | 2.29                     | 0.62              |
| 1:K:7:GLU:HG3    | 1:K:326:TYR:OH   | 1.98                     | 0.62              |
| 1:M:109:VAL:CB   | 1:M:322:ALA:HB2  | 2.26                     | 0.62              |
| 1:N:61:LEU:HB3   | 1:N:66:TYR:CD1   | 2.34                     | 0.62              |
| 1:N:277:ASP:OD2  | 1:O:224:ASN:CA   | 2.44                     | 0.62              |
| 1:N:284:PHE:O    | 1:N:306:ILE:HD13 | 1.98                     | 0.62              |
| 1:P:82:THR:CB    | 1:P:84:LEU:HD23  | 2.29                     | 0.62              |
| 1:A:43:TYR:CE2   | 1:A:67:LEU:CB    | 2.80                     | 0.62              |
| 1:B:109:VAL:CB   | 1:B:322:ALA:HB2  | 2.26                     | 0.62              |
| 1:C:109:VAL:CB   | 1:C:322:ALA:HB2  | 2.26                     | 0.62              |
| 1:C:131:LYS:C    | 1:C:149:ILE:HD11 | 2.20                     | 0.62              |
| 1:C:248:THR:HG23 | 1:G:52:ILE:HD12  | 1.82                     | 0.62              |
| 1:D:284:PHE:O    | 1:D:306:ILE:HD13 | 1.98                     | 0.62              |
| 1:E:61:LEU:HB3   | 1:E:66:TYR:CD1   | 2.34                     | 0.62              |
| 1:F:43:TYR:CE2   | 1:F:67:LEU:CB    | 2.80                     | 0.62              |
| 1:F:58:LYS:CE    | 1:F:65:GLU:HG2   | 2.29                     | 0.62              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:58:LYS:HE3   | 1:F:65:GLU:HG2   | 1.82                     | 0.62              |
| 1:F:61:LEU:HB3   | 1:F:66:TYR:CD1   | 2.34                     | 0.62              |
| 1:G:271:LYS:HE3  | 1:J:202:GLU:CG   | 2.24                     | 0.62              |
| 1:H:284:PHE:CD2  | 1:H:296:ILE:HG21 | 2.34                     | 0.62              |
| 1:I:138:VAL:HB   | 1:I:143:LYS:HB3  | 1.82                     | 0.62              |
| 1:J:33:ILE:CG1   | 1:J:312:TRP:HE1  | 2.12                     | 0.62              |
| 1:J:34:LYS:H     | 1:J:36:VAL:N     | 1.96                     | 0.62              |
| 1:K:138:VAL:HB   | 1:K:143:LYS:HB3  | 1.82                     | 0.62              |
| 1:K:258:LYS:NZ   | 1:K:295:GLN:HG3  | 2.15                     | 0.62              |
| 1:K:321:VAL:N    | 1:L:49:TYR:HD1   | 1.97                     | 0.62              |
| 1:L:138:VAL:HB   | 1:L:143:LYS:HB3  | 1.82                     | 0.62              |
| 1:M:61:LEU:HB3   | 1:M:66:TYR:CD1   | 2.34                     | 0.62              |
| 1:M:232:GLU:O    | 1:M:233:SER:HB2  | 1.99                     | 0.62              |
| 1:P:33:ILE:CG1   | 1:P:312:TRP:HE1  | 2.12                     | 0.62              |
| 1:A:7:GLU:HG3    | 1:A:326:TYR:OH   | 1.98                     | 0.62              |
| 1:A:109:VAL:CB   | 1:A:322:ALA:HB2  | 2.26                     | 0.62              |
| 1:B:231:ALA:CB   | 1:G:307:THR:HA   | 2.29                     | 0.62              |
| 1:B:246:ILE:N    | 1:F:50:ILE:O     | 2.33                     | 0.62              |
| 1:C:279:LEU:HD13 | 1:C:282:LEU:HD21 | 1.82                     | 0.62              |
| 1:D:58:LYS:HE3   | 1:D:65:GLU:HG2   | 1.82                     | 0.62              |
| 1:E:49:TYR:HD1   | 1:F:321:VAL:N    | 1.97                     | 0.62              |
| 1:E:58:LYS:HE3   | 1:E:65:GLU:HG2   | 1.82                     | 0.62              |
| 1:E:279:LEU:HD13 | 1:E:282:LEU:HD21 | 1.82                     | 0.62              |
| 1:F:50:ILE:HG12  | 1:G:320:LYS:HG2  | 1.80                     | 0.62              |
| 1:F:218:THR:O    | 1:G:275:LYS:HG2  | 1.99                     | 0.62              |
| 1:G:284:PHE:CD2  | 1:G:296:ILE:HG21 | 2.34                     | 0.62              |
| 1:H:54:GLY:HA3   | 1:H:56:SER:H     | 1.64                     | 0.62              |
| 1:H:58:LYS:CE    | 1:H:65:GLU:HG2   | 2.29                     | 0.62              |
| 1:I:52:ILE:CG1   | 1:M:247:ASP:O    | 2.47                     | 0.62              |
| 1:I:105:LYS:HZ2  | 1:I:148:GLU:HB3  | 1.65                     | 0.62              |
| 1:I:320:LYS:HG2  | 1:J:50:ILE:HG12  | 1.80                     | 0.62              |
| 1:J:138:VAL:HB   | 1:J:143:LYS:HB3  | 1.82                     | 0.62              |
| 1:J:258:LYS:NZ   | 1:J:295:GLN:HG3  | 2.14                     | 0.62              |
| 1:J:279:LEU:HD13 | 1:J:282:LEU:HD21 | 1.82                     | 0.62              |
| 1:K:33:ILE:CG1   | 1:K:312:TRP:HE1  | 2.12                     | 0.62              |
| 1:K:58:LYS:CE    | 1:K:65:GLU:HG2   | 2.29                     | 0.62              |
| 1:K:78:GLU:OE1   | 1:O:245:GLU:OE2  | 2.17                     | 0.62              |
| 1:K:188:LEU:N    | 1:K:199:ARG:HG2  | 2.10                     | 0.62              |
| 1:L:250:SER:HA   | 1:L:252:THR:N    | 2.14                     | 0.62              |
| 1:M:138:VAL:HG21 | 1:M:145:TYR:HE2  | 1.65                     | 0.62              |
| 1:N:95:THR:CG2   | 1:N:136:ILE:HD13 | 2.22                     | 0.62              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:131:LYS:C    | 1:N:149:ILE:HD11 | 2.20                     | 0.62              |
| 1:P:58:LYS:HE3   | 1:P:65:GLU:HG2   | 1.82                     | 0.62              |
| 1:P:61:LEU:HB3   | 1:P:66:TYR:CD1   | 2.34                     | 0.62              |
| 1:B:33:ILE:CG1   | 1:B:312:TRP:HE1  | 2.12                     | 0.62              |
| 1:B:131:LYS:C    | 1:B:149:ILE:HD11 | 2.20                     | 0.62              |
| 1:D:133:ASN:ND2  | 1:D:148:GLU:CA   | 2.59                     | 0.62              |
| 1:E:58:LYS:CE    | 1:E:65:GLU:HG2   | 2.29                     | 0.62              |
| 1:E:250:SER:HA   | 1:E:252:THR:N    | 2.14                     | 0.62              |
| 1:F:254:ILE:HG13 | 1:F:255:LYS:N    | 2.13                     | 0.62              |
| 1:G:58:LYS:HE3   | 1:G:65:GLU:HG2   | 1.82                     | 0.62              |
| 1:H:138:VAL:HG21 | 1:H:145:TYR:HE2  | 1.65                     | 0.62              |
| 1:H:219:ASP:C    | 1:H:224:ASN:HB2  | 2.19                     | 0.62              |
| 1:I:58:LYS:HE3   | 1:I:65:GLU:HG2   | 1.82                     | 0.62              |
| 1:J:58:LYS:HE3   | 1:J:65:GLU:HG2   | 1.82                     | 0.62              |
| 1:L:36:VAL:HG11  | 1:L:96:GLN:HE21  | 1.63                     | 0.62              |
| 1:N:138:VAL:HG21 | 1:N:145:TYR:HE2  | 1.65                     | 0.62              |
| 1:O:58:LYS:HE3   | 1:O:65:GLU:HG2   | 1.82                     | 0.62              |
| 1:O:250:SER:HA   | 1:O:252:THR:N    | 2.14                     | 0.62              |
| 1:O:279:LEU:HD13 | 1:O:282:LEU:HD21 | 1.82                     | 0.62              |
| 1:P:109:VAL:HG21 | 1:P:321:VAL:HG13 | 1.79                     | 0.62              |
| 1:P:219:ASP:C    | 1:P:224:ASN:HB2  | 2.19                     | 0.62              |
| 1:A:232:GLU:O    | 1:A:233:SER:HB2  | 1.99                     | 0.62              |
| 1:B:227:THR:CG2  | 1:C:301:PRO:HD3  | 2.29                     | 0.62              |
| 1:C:123:LYS:NZ   | 1:C:127:ARG:NH1  | 2.48                     | 0.62              |
| 1:C:234:ALA:HB3  | 1:C:235:LEU:HD23 | 1.82                     | 0.62              |
| 1:D:34:LYS:H     | 1:D:36:VAL:N     | 1.96                     | 0.62              |
| 1:D:138:VAL:HB   | 1:D:143:LYS:HB3  | 1.82                     | 0.62              |
| 1:D:232:GLU:O    | 1:D:233:SER:HB2  | 1.99                     | 0.62              |
| 1:F:45:LEU:HD22  | 1:F:58:LYS:HZ3   | 1.64                     | 0.62              |
| 1:F:105:LYS:CD   | 1:F:148:GLU:HB2  | 2.27                     | 0.62              |
| 1:F:284:PHE:CD2  | 1:F:296:ILE:HG21 | 2.34                     | 0.62              |
| 1:G:138:VAL:HG21 | 1:G:145:TYR:HE2  | 1.65                     | 0.62              |
| 1:H:271:LYS:HE2  | 1:K:268:LEU:HD22 | 1.82                     | 0.62              |
| 1:I:52:ILE:H     | 1:I:74:GLU:CG    | 2.06                     | 0.62              |
| 1:I:219:ASP:C    | 1:I:224:ASN:HB2  | 2.19                     | 0.62              |
| 1:I:222:ASN:HB2  | 1:I:237:ASN:H    | 1.64                     | 0.62              |
| 1:I:275:LYS:HG2  | 1:J:218:THR:O    | 1.99                     | 0.62              |
| 1:J:105:LYS:CD   | 1:J:148:GLU:HB2  | 2.27                     | 0.62              |
| 1:K:250:SER:HA   | 1:K:252:THR:N    | 2.14                     | 0.62              |
| 1:L:58:LYS:CE    | 1:L:65:GLU:HG2   | 2.29                     | 0.62              |
| 1:M:33:ILE:CG1   | 1:M:312:TRP:HE1  | 2.12                     | 0.62              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:284:PHE:O    | 1:M:306:ILE:HD13 | 1.98                     | 0.62              |
| 1:N:58:LYS:HE3   | 1:N:65:GLU:HG2   | 1.82                     | 0.62              |
| 1:N:232:GLU:O    | 1:N:233:SER:HB2  | 1.99                     | 0.62              |
| 1:O:131:LYS:C    | 1:O:149:ILE:HD11 | 2.20                     | 0.62              |
| 1:B:36:VAL:HG11  | 1:B:96:GLN:HE21  | 1.63                     | 0.62              |
| 1:B:58:LYS:HE3   | 1:B:65:GLU:HG2   | 1.82                     | 0.62              |
| 1:B:81:LYS:HB3   | 1:C:170:LYS:NZ   | 2.15                     | 0.62              |
| 1:B:138:VAL:HB   | 1:B:143:LYS:HB3  | 1.82                     | 0.62              |
| 1:B:232:GLU:O    | 1:B:233:SER:HB2  | 1.99                     | 0.62              |
| 1:B:243:GLY:N    | 1:G:164:LEU:C    | 2.52                     | 0.62              |
| 1:B:279:LEU:HD13 | 1:B:282:LEU:HD21 | 1.82                     | 0.62              |
| 1:C:58:LYS:HE3   | 1:C:65:GLU:HG2   | 1.82                     | 0.62              |
| 1:C:165:GLU:HG3  | 1:C:305:ILE:HD12 | 1.82                     | 0.62              |
| 1:D:165:GLU:HG3  | 1:D:305:ILE:HD12 | 1.82                     | 0.62              |
| 1:G:232:GLU:O    | 1:G:233:SER:HB2  | 1.99                     | 0.62              |
| 1:G:254:ILE:HG13 | 1:G:255:LYS:N    | 2.14                     | 0.62              |
| 1:H:58:LYS:HE3   | 1:H:65:GLU:HG2   | 1.82                     | 0.62              |
| 1:H:58:LYS:HZ2   | 1:H:65:GLU:HG2   | 1.65                     | 0.62              |
| 1:I:33:ILE:CG1   | 1:I:312:TRP:HE1  | 2.12                     | 0.62              |
| 1:I:105:LYS:CD   | 1:I:148:GLU:HB2  | 2.27                     | 0.62              |
| 1:I:250:SER:HA   | 1:I:252:THR:N    | 2.14                     | 0.62              |
| 1:I:279:LEU:HD13 | 1:I:282:LEU:HD21 | 1.82                     | 0.62              |
| 1:J:50:ILE:O     | 1:N:246:ILE:N    | 2.31                     | 0.62              |
| 1:J:306:ILE:HG13 | 1:O:230:GLN:CB   | 2.28                     | 0.62              |
| 1:K:58:LYS:HE3   | 1:K:65:GLU:HG2   | 1.82                     | 0.62              |
| 1:K:105:LYS:HZ2  | 1:K:148:GLU:HB3  | 1.64                     | 0.62              |
| 1:K:303:ASN:C    | 1:L:226:ILE:HD12 | 2.11                     | 0.62              |
| 1:L:106:VAL:CG2  | 1:L:147:PHE:CZ   | 2.82                     | 0.62              |
| 1:M:279:LEU:HD13 | 1:M:282:LEU:HD21 | 1.82                     | 0.62              |
| 1:N:219:ASP:C    | 1:N:224:ASN:HB2  | 2.19                     | 0.62              |
| 1:N:279:LEU:HD13 | 1:N:282:LEU:HD21 | 1.82                     | 0.62              |
| 1:O:54:GLY:HA3   | 1:O:56:SER:H     | 1.64                     | 0.62              |
| 1:O:123:LYS:NZ   | 1:O:127:ARG:NH1  | 2.48                     | 0.62              |
| 1:O:138:VAL:HG21 | 1:O:145:TYR:HE2  | 1.65                     | 0.62              |
| 1:O:170:LYS:NZ   | 1:P:81:LYS:HB3   | 2.15                     | 0.62              |
| 1:O:234:ALA:HB3  | 1:O:235:LEU:HD23 | 1.82                     | 0.62              |
| 1:P:279:LEU:HD13 | 1:P:282:LEU:HD21 | 1.82                     | 0.62              |
| 1:A:258:LYS:NZ   | 1:A:295:GLN:HG3  | 2.14                     | 0.61              |
| 1:B:105:LYS:NZ   | 1:B:148:GLU:HB3  | 2.15                     | 0.61              |
| 1:B:179:PHE:HE1  | 1:B:261:PHE:CE2  | 2.18                     | 0.61              |
| 1:C:138:VAL:HB   | 1:C:143:LYS:HB3  | 1.82                     | 0.61              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:232:GLU:O    | 1:C:233:SER:HB2  | 1.99                     | 0.61              |
| 1:D:123:LYS:NZ   | 1:D:127:ARG:NH1  | 2.48                     | 0.61              |
| 1:D:279:LEU:HD13 | 1:D:282:LEU:HD21 | 1.82                     | 0.61              |
| 1:E:32:ASP:HB3   | 1:E:34:LYS:CB    | 2.30                     | 0.61              |
| 1:E:50:ILE:HG12  | 1:F:320:LYS:HG2  | 1.80                     | 0.61              |
| 1:E:138:VAL:HG21 | 1:E:145:TYR:HE2  | 1.65                     | 0.61              |
| 1:E:258:LYS:NZ   | 1:E:295:GLN:HG3  | 2.14                     | 0.61              |
| 1:E:284:PHE:CD2  | 1:E:296:ILE:HG21 | 2.34                     | 0.61              |
| 1:F:138:VAL:HG21 | 1:F:145:TYR:HE2  | 1.65                     | 0.61              |
| 1:F:279:LEU:HD13 | 1:F:282:LEU:HD21 | 1.82                     | 0.61              |
| 1:H:61:LEU:HB3   | 1:H:66:TYR:CD1   | 2.34                     | 0.61              |
| 1:H:203:GLU:CB   | 1:K:198:GLU:CA   | 2.73                     | 0.61              |
| 1:H:240:MET:HG3  | 1:H:251:SER:HB2  | 1.82                     | 0.61              |
| 1:J:106:VAL:CG2  | 1:J:147:PHE:CZ   | 2.82                     | 0.61              |
| 1:L:95:THR:HG22  | 1:L:136:ILE:CD1  | 2.24                     | 0.61              |
| 1:L:232:GLU:O    | 1:L:233:SER:HB2  | 1.99                     | 0.61              |
| 1:M:34:LYS:H     | 1:M:36:VAL:N     | 1.96                     | 0.61              |
| 1:M:95:THR:CG2   | 1:M:136:ILE:HD13 | 2.22                     | 0.61              |
| 1:M:105:LYS:NZ   | 1:M:148:GLU:HB3  | 2.15                     | 0.61              |
| 1:M:170:LYS:NZ   | 1:N:81:LYS:HB3   | 2.15                     | 0.61              |
| 1:N:34:LYS:H     | 1:N:36:VAL:N     | 1.96                     | 0.61              |
| 1:N:105:LYS:NZ   | 1:N:148:GLU:HB3  | 2.15                     | 0.61              |
| 1:O:37:ILE:CG1   | 1:O:312:TRP:CZ2  | 2.79                     | 0.61              |
| 1:A:58:LYS:HE3   | 1:A:65:GLU:HG2   | 1.82                     | 0.61              |
| 1:A:81:LYS:HB3   | 1:B:170:LYS:NZ   | 2.15                     | 0.61              |
| 1:A:105:LYS:CD   | 1:A:148:GLU:HB2  | 2.27                     | 0.61              |
| 1:A:279:LEU:HD13 | 1:A:282:LEU:HD21 | 1.82                     | 0.61              |
| 1:C:81:LYS:HB3   | 1:D:170:LYS:NZ   | 2.15                     | 0.61              |
| 1:C:106:VAL:CG2  | 1:C:147:PHE:CZ   | 2.82                     | 0.61              |
| 1:C:240:MET:HE1  | 1:G:73:VAL:CB    | 2.28                     | 0.61              |
| 1:C:258:LYS:NZ   | 1:C:295:GLN:HG3  | 2.14                     | 0.61              |
| 1:D:61:LEU:HB3   | 1:D:66:TYR:CD1   | 2.34                     | 0.61              |
| 1:E:123:LYS:NZ   | 1:E:127:ARG:NH1  | 2.48                     | 0.61              |
| 1:F:272:ARG:CA   | 1:I:202:GLU:HG2  | 2.31                     | 0.61              |
| 1:G:258:LYS:NZ   | 1:G:295:GLN:HG3  | 2.14                     | 0.61              |
| 1:G:268:LEU:HD22 | 1:J:271:LYS:HZ1  | 1.64                     | 0.61              |
| 1:H:202:GLU:HA   | 1:K:272:ARG:HG3  | 1.59                     | 0.61              |
| 1:I:45:LEU:HD22  | 1:I:58:LYS:HZ3   | 1.64                     | 0.61              |
| 1:I:123:LYS:NZ   | 1:I:127:ARG:NH1  | 2.48                     | 0.61              |
| 1:I:306:ILE:HG23 | 1:N:230:GLN:HB3  | 1.82                     | 0.61              |
| 1:J:188:LEU:N    | 1:J:199:ARG:HG2  | 2.10                     | 0.61              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:36:VAL:HG11  | 1:K:96:GLN:HE21  | 1.62                     | 0.61              |
| 1:L:43:TYR:CG    | 1:L:67:LEU:HB3   | 2.35                     | 0.61              |
| 1:L:58:LYS:HE3   | 1:L:65:GLU:HG2   | 1.82                     | 0.61              |
| 1:L:123:LYS:NZ   | 1:L:127:ARG:NH1  | 2.48                     | 0.61              |
| 1:M:58:LYS:HE3   | 1:M:65:GLU:HG2   | 1.82                     | 0.61              |
| 1:M:165:GLU:HG3  | 1:M:305:ILE:HD12 | 1.82                     | 0.61              |
| 1:N:95:THR:HG22  | 1:N:136:ILE:HG21 | 1.78                     | 0.61              |
| 1:N:170:LYS:NZ   | 1:O:81:LYS:HB3   | 2.15                     | 0.61              |
| 1:P:105:LYS:CD   | 1:P:148:GLU:HB2  | 2.27                     | 0.61              |
| 1:P:109:VAL:HG22 | 1:P:318:LEU:HB3  | 1.81                     | 0.61              |
| 1:A:21:LEU:HD23  | 1:A:22:ILE:N     | 2.16                     | 0.61              |
| 1:A:61:LEU:HB3   | 1:A:66:TYR:CD1   | 2.34                     | 0.61              |
| 1:A:138:VAL:HB   | 1:A:143:LYS:HB3  | 1.82                     | 0.61              |
| 1:B:165:GLU:HG3  | 1:B:305:ILE:HD12 | 1.82                     | 0.61              |
| 1:B:241:LYS:HZ3  | 1:G:305:ILE:HG22 | 1.65                     | 0.61              |
| 1:C:105:LYS:NZ   | 1:C:148:GLU:HB3  | 2.15                     | 0.61              |
| 1:E:95:THR:HG22  | 1:E:136:ILE:CD1  | 2.24                     | 0.61              |
| 1:G:52:ILE:H     | 1:G:74:GLU:CG    | 2.06                     | 0.61              |
| 1:G:54:GLY:HA3   | 1:G:56:SER:H     | 1.64                     | 0.61              |
| 1:G:219:ASP:C    | 1:G:224:ASN:HB2  | 2.19                     | 0.61              |
| 1:H:165:GLU:HG3  | 1:H:305:ILE:HD12 | 1.82                     | 0.61              |
| 1:K:43:TYR:CG    | 1:K:67:LEU:HB3   | 2.35                     | 0.61              |
| 1:K:240:MET:HG3  | 1:K:251:SER:HB2  | 1.82                     | 0.61              |
| 1:L:21:LEU:HD23  | 1:L:22:ILE:N     | 2.16                     | 0.61              |
| 1:L:43:TYR:CE2   | 1:L:67:LEU:CB    | 2.81                     | 0.61              |
| 1:L:138:VAL:HG21 | 1:L:145:TYR:HE2  | 1.65                     | 0.61              |
| 1:N:123:LYS:NZ   | 1:N:127:ARG:NH1  | 2.48                     | 0.61              |
| 1:N:165:GLU:HG3  | 1:N:305:ILE:HD12 | 1.82                     | 0.61              |
| 1:N:258:LYS:NZ   | 1:N:295:GLN:HG3  | 2.14                     | 0.61              |
| 1:O:105:LYS:NZ   | 1:O:148:GLU:HB3  | 2.16                     | 0.61              |
| 1:O:109:VAL:HG22 | 1:O:318:LEU:HB3  | 1.81                     | 0.61              |
| 1:O:240:MET:HG3  | 1:O:251:SER:HB2  | 1.82                     | 0.61              |
| 1:A:54:GLY:HA3   | 1:A:56:SER:H     | 1.64                     | 0.61              |
| 1:A:131:LYS:C    | 1:A:149:ILE:HD11 | 2.20                     | 0.61              |
| 1:A:165:GLU:HG3  | 1:A:305:ILE:HD12 | 1.82                     | 0.61              |
| 1:A:240:MET:HG3  | 1:A:251:SER:HB2  | 1.82                     | 0.61              |
| 1:A:248:THR:CG2  | 1:E:52:ILE:HD13  | 2.28                     | 0.61              |
| 1:B:61:LEU:HB3   | 1:B:66:TYR:CD1   | 2.34                     | 0.61              |
| 1:C:33:ILE:CG1   | 1:C:312:TRP:HE1  | 2.12                     | 0.61              |
| 1:C:43:TYR:CE2   | 1:C:67:LEU:CB    | 2.80                     | 0.61              |
| 1:D:21:LEU:HD23  | 1:D:22:ILE:N     | 2.16                     | 0.61              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:32:ASP:HB3   | 1:D:34:LYS:CB    | 2.30                     | 0.61              |
| 1:D:179:PHE:HE1  | 1:D:261:PHE:CE2  | 2.18                     | 0.61              |
| 1:D:245:GLU:O    | 1:H:52:ILE:CG1   | 2.48                     | 0.61              |
| 1:E:68:ILE:CD1   | 1:E:92:THR:HB    | 2.10                     | 0.61              |
| 1:E:131:LYS:C    | 1:E:149:ILE:HD11 | 2.20                     | 0.61              |
| 1:F:123:LYS:NZ   | 1:F:127:ARG:NH1  | 2.48                     | 0.61              |
| 1:H:271:LYS:HZ1  | 1:K:268:LEU:HD22 | 1.65                     | 0.61              |
| 1:J:45:LEU:HD22  | 1:J:58:LYS:HZ3   | 1.64                     | 0.61              |
| 1:K:277:ASP:CB   | 1:L:219:ASP:CG   | 2.61                     | 0.61              |
| 1:K:279:LEU:HD13 | 1:K:282:LEU:HD21 | 1.82                     | 0.61              |
| 1:L:33:ILE:CG1   | 1:L:312:TRP:HE1  | 2.12                     | 0.61              |
| 1:M:234:ALA:HB3  | 1:M:235:LEU:HD23 | 1.82                     | 0.61              |
| 1:N:43:TYR:CG    | 1:N:67:LEU:HB3   | 2.35                     | 0.61              |
| 1:P:43:TYR:CG    | 1:P:67:LEU:HB3   | 2.35                     | 0.61              |
| 1:P:123:LYS:NZ   | 1:P:127:ARG:NH1  | 2.48                     | 0.61              |
| 1:P:131:LYS:C    | 1:P:149:ILE:HD11 | 2.20                     | 0.61              |
| 1:P:240:MET:HG3  | 1:P:251:SER:HB2  | 1.82                     | 0.61              |
| 1:A:105:LYS:NZ   | 1:A:148:GLU:HB3  | 2.15                     | 0.61              |
| 1:E:222:ASN:HB2  | 1:E:237:ASN:H    | 1.64                     | 0.61              |
| 1:F:105:LYS:NZ   | 1:F:148:GLU:HB3  | 2.16                     | 0.61              |
| 1:G:105:LYS:CD   | 1:G:148:GLU:HB2  | 2.27                     | 0.61              |
| 1:G:165:GLU:HG3  | 1:G:305:ILE:HD12 | 1.82                     | 0.61              |
| 1:G:211:ILE:HA   | 1:G:220:LEU:HD21 | 1.82                     | 0.61              |
| 1:H:95:THR:CG2   | 1:H:136:ILE:HD13 | 2.22                     | 0.61              |
| 1:H:279:LEU:HD13 | 1:H:282:LEU:HD21 | 1.82                     | 0.61              |
| 1:I:179:PHE:HE1  | 1:I:261:PHE:CE2  | 2.18                     | 0.61              |
| 1:I:321:VAL:N    | 1:J:49:TYR:HD1   | 1.97                     | 0.61              |
| 1:I:323:VAL:HG13 | 1:N:246:ILE:CD1  | 2.18                     | 0.61              |
| 1:J:43:TYR:CG    | 1:J:67:LEU:HB3   | 2.35                     | 0.61              |
| 1:J:105:LYS:NZ   | 1:J:148:GLU:HB3  | 2.16                     | 0.61              |
| 1:J:222:ASN:HB2  | 1:J:237:ASN:H    | 1.64                     | 0.61              |
| 1:J:309:ASN:OD1  | 1:O:229:GLU:N    | 2.33                     | 0.61              |
| 1:K:49:TYR:HE2   | 1:O:245:GLU:C    | 2.04                     | 0.61              |
| 1:L:54:GLY:HA3   | 1:L:56:SER:H     | 1.64                     | 0.61              |
| 1:L:240:MET:HG3  | 1:L:251:SER:HB2  | 1.82                     | 0.61              |
| 1:M:21:LEU:HD23  | 1:M:22:ILE:N     | 2.16                     | 0.61              |
| 1:M:37:ILE:CG1   | 1:M:312:TRP:CZ2  | 2.79                     | 0.61              |
| 1:M:138:VAL:HB   | 1:M:143:LYS:HB3  | 1.82                     | 0.61              |
| 1:O:43:TYR:CG    | 1:O:67:LEU:HB3   | 2.35                     | 0.61              |
| 1:O:165:GLU:HG3  | 1:O:305:ILE:HD12 | 1.82                     | 0.61              |
| 1:P:105:LYS:NZ   | 1:P:148:GLU:HB3  | 2.16                     | 0.61              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:165:GLU:HG3  | 1:P:305:ILE:HD12 | 1.82                     | 0.61              |
| 1:P:258:LYS:NZ   | 1:P:295:GLN:HG3  | 2.14                     | 0.61              |
| 1:A:179:PHE:HE1  | 1:A:261:PHE:CE2  | 2.18                     | 0.61              |
| 1:A:234:ALA:HB3  | 1:A:235:LEU:HD23 | 1.82                     | 0.61              |
| 1:C:32:ASP:HB3   | 1:C:34:LYS:CB    | 2.30                     | 0.61              |
| 1:C:61:LEU:HB3   | 1:C:66:TYR:CD1   | 2.34                     | 0.61              |
| 1:C:105:LYS:HZ2  | 1:C:148:GLU:HB3  | 1.66                     | 0.61              |
| 1:F:32:ASP:HB3   | 1:F:34:LYS:CB    | 2.30                     | 0.61              |
| 1:F:95:THR:CG2   | 1:F:136:ILE:HD13 | 2.22                     | 0.61              |
| 1:F:131:LYS:C    | 1:F:149:ILE:HD11 | 2.20                     | 0.61              |
| 1:G:100:SER:OG   | 1:G:101:ASN:HB2  | 2.01                     | 0.61              |
| 1:G:208:ASP:HA   | 1:G:211:ILE:HG12 | 1.83                     | 0.61              |
| 1:H:33:ILE:CG1   | 1:H:312:TRP:HE1  | 2.12                     | 0.61              |
| 1:H:82:THR:CB    | 1:H:84:LEU:HD23  | 2.29                     | 0.61              |
| 1:I:21:LEU:HD23  | 1:I:22:ILE:N     | 2.16                     | 0.61              |
| 1:I:43:TYR:CG    | 1:I:67:LEU:HB3   | 2.35                     | 0.61              |
| 1:J:21:LEU:HD23  | 1:J:22:ILE:N     | 2.16                     | 0.61              |
| 1:J:123:LYS:NZ   | 1:J:127:ARG:NH1  | 2.48                     | 0.61              |
| 1:J:179:PHE:HE1  | 1:J:261:PHE:CE2  | 2.18                     | 0.61              |
| 1:K:21:LEU:HD23  | 1:K:22:ILE:N     | 2.16                     | 0.61              |
| 1:K:61:LEU:HB3   | 1:K:66:TYR:CD1   | 2.35                     | 0.61              |
| 1:K:306:ILE:HG13 | 1:P:230:GLN:HB2  | 1.81                     | 0.61              |
| 1:L:74:GLU:C     | 1:P:245:GLU:O    | 2.38                     | 0.61              |
| 1:M:43:TYR:CG    | 1:M:67:LEU:HB3   | 2.35                     | 0.61              |
| 1:M:179:PHE:HE1  | 1:M:261:PHE:CE2  | 2.18                     | 0.61              |
| 1:N:109:VAL:HG22 | 1:N:318:LEU:HB3  | 1.81                     | 0.61              |
| 1:O:21:LEU:HD23  | 1:O:22:ILE:N     | 2.16                     | 0.61              |
| 1:O:106:VAL:CG2  | 1:O:147:PHE:CZ   | 2.82                     | 0.61              |
| 1:P:21:LEU:HD23  | 1:P:22:ILE:N     | 2.16                     | 0.61              |
| 1:P:106:VAL:CG2  | 1:P:147:PHE:CZ   | 2.82                     | 0.61              |
| 1:P:188:LEU:N    | 1:P:199:ARG:HG2  | 2.10                     | 0.61              |
| 1:B:21:LEU:HD23  | 1:B:22:ILE:N     | 2.16                     | 0.61              |
| 1:B:123:LYS:NZ   | 1:B:127:ARG:NH1  | 2.48                     | 0.61              |
| 1:B:234:ALA:HB3  | 1:B:235:LEU:HD23 | 1.82                     | 0.61              |
| 1:C:36:VAL:HG11  | 1:C:96:GLN:HE21  | 1.63                     | 0.61              |
| 1:C:274:PHE:HB2  | 1:C:278:GLN:CD   | 2.21                     | 0.61              |
| 1:D:82:THR:CB    | 1:D:84:LEU:HD23  | 2.29                     | 0.61              |
| 1:E:219:ASP:CG   | 1:F:275:LYS:HZ2  | 2.04                     | 0.61              |
| 1:E:254:ILE:HG13 | 1:E:255:LYS:N    | 2.13                     | 0.61              |
| 1:G:21:LEU:HD23  | 1:G:22:ILE:N     | 2.16                     | 0.61              |
| 1:G:82:THR:CB    | 1:G:84:LEU:HD23  | 2.29                     | 0.61              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:105:LYS:NZ   | 1:G:148:GLU:HB3  | 2.16                     | 0.61              |
| 1:G:131:LYS:C    | 1:G:149:ILE:HD11 | 2.20                     | 0.61              |
| 1:H:100:SER:OG   | 1:H:101:ASN:HB2  | 2.01                     | 0.61              |
| 1:H:123:LYS:NZ   | 1:H:127:ARG:NH1  | 2.48                     | 0.61              |
| 1:H:203:GLU:CD   | 1:K:198:GLU:CG   | 2.68                     | 0.61              |
| 1:H:208:ASP:HA   | 1:H:211:ILE:HG12 | 1.83                     | 0.61              |
| 1:H:254:ILE:HG13 | 1:H:255:LYS:N    | 2.13                     | 0.61              |
| 1:I:95:THR:CG2   | 1:I:136:ILE:HD13 | 2.22                     | 0.61              |
| 1:I:188:LEU:N    | 1:I:199:ARG:HG2  | 2.10                     | 0.61              |
| 1:J:36:VAL:HG11  | 1:J:96:GLN:HE21  | 1.62                     | 0.61              |
| 1:J:138:VAL:HG21 | 1:J:145:TYR:HE2  | 1.65                     | 0.61              |
| 1:J:240:MET:HG3  | 1:J:251:SER:HB2  | 1.82                     | 0.61              |
| 1:K:138:VAL:HG21 | 1:K:145:TYR:HE2  | 1.65                     | 0.61              |
| 1:K:164:LEU:O    | 1:P:242:LYS:HA   | 2.00                     | 0.61              |
| 1:L:165:GLU:HG3  | 1:L:305:ILE:HD12 | 1.82                     | 0.61              |
| 1:M:109:VAL:HG22 | 1:M:318:LEU:HB3  | 1.81                     | 0.61              |
| 1:N:100:SER:OG   | 1:N:101:ASN:HB2  | 2.01                     | 0.61              |
| 1:N:138:VAL:HB   | 1:N:143:LYS:HB3  | 1.82                     | 0.61              |
| 1:N:240:MET:HG3  | 1:N:251:SER:HB2  | 1.82                     | 0.61              |
| 1:O:179:PHE:HE1  | 1:O:261:PHE:CE2  | 2.18                     | 0.61              |
| 1:O:188:LEU:N    | 1:O:199:ARG:HG2  | 2.10                     | 0.61              |
| 1:P:138:VAL:HB   | 1:P:143:LYS:HB3  | 1.82                     | 0.61              |
| 1:P:232:GLU:O    | 1:P:233:SER:HB2  | 1.99                     | 0.61              |
| 1:A:123:LYS:NZ   | 1:A:127:ARG:NH1  | 2.48                     | 0.61              |
| 1:B:100:SER:OG   | 1:B:101:ASN:HB2  | 2.01                     | 0.61              |
| 1:B:109:VAL:HG22 | 1:B:318:LEU:HB3  | 1.81                     | 0.61              |
| 1:B:274:PHE:HB2  | 1:B:278:GLN:CD   | 2.21                     | 0.61              |
| 1:C:54:GLY:HA3   | 1:C:56:SER:H     | 1.64                     | 0.61              |
| 1:C:82:THR:CB    | 1:C:84:LEU:HD23  | 2.29                     | 0.61              |
| 1:E:36:VAL:HG11  | 1:E:96:GLN:HE21  | 1.63                     | 0.61              |
| 1:E:43:TYR:CG    | 1:E:67:LEU:HB3   | 2.35                     | 0.61              |
| 1:F:82:THR:CB    | 1:F:84:LEU:HD23  | 2.29                     | 0.61              |
| 1:F:100:SER:OG   | 1:F:101:ASN:HB2  | 2.01                     | 0.61              |
| 1:F:138:VAL:HB   | 1:F:143:LYS:HB3  | 1.82                     | 0.61              |
| 1:G:138:VAL:HB   | 1:G:143:LYS:HB3  | 1.82                     | 0.61              |
| 1:G:219:ASP:CB   | 1:H:277:ASP:CB   | 2.65                     | 0.61              |
| 1:H:179:PHE:HE1  | 1:H:261:PHE:CE2  | 2.18                     | 0.61              |
| 1:H:222:ASN:HB2  | 1:H:237:ASN:H    | 1.64                     | 0.61              |
| 1:H:272:ARG:HH11 | 1:K:201:ILE:HG13 | 1.57                     | 0.61              |
| 1:K:68:ILE:CD1   | 1:K:92:THR:HB    | 2.10                     | 0.61              |
| 1:K:105:LYS:NZ   | 1:K:148:GLU:HB3  | 2.16                     | 0.61              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:32:ASP:HB3   | 1:L:34:LYS:CB    | 2.30                     | 0.61              |
| 1:L:208:ASP:HA   | 1:L:211:ILE:HG12 | 1.83                     | 0.61              |
| 1:N:188:LEU:N    | 1:N:199:ARG:HG2  | 2.10                     | 0.61              |
| 1:O:100:SER:OG   | 1:O:101:ASN:HB2  | 2.01                     | 0.61              |
| 1:O:138:VAL:HB   | 1:O:143:LYS:HB3  | 1.82                     | 0.61              |
| 1:O:300:TYR:HE2  | 1:P:225:LEU:HD22 | 0.83                     | 0.61              |
| 1:P:37:ILE:CG1   | 1:P:312:TRP:CZ2  | 2.79                     | 0.61              |
| 1:P:43:TYR:CE2   | 1:P:67:LEU:CB    | 2.80                     | 0.61              |
| 1:P:54:GLY:HA3   | 1:P:56:SER:H     | 1.64                     | 0.61              |
| 1:P:222:ASN:HB2  | 1:P:237:ASN:H    | 1.64                     | 0.61              |
| 1:A:109:VAL:HG22 | 1:A:318:LEU:HB3  | 1.81                     | 0.61              |
| 1:A:138:VAL:HG21 | 1:A:145:TYR:HE2  | 1.65                     | 0.61              |
| 1:B:32:ASP:HB3   | 1:B:34:LYS:CB    | 2.30                     | 0.61              |
| 1:B:105:LYS:CD   | 1:B:148:GLU:HB2  | 2.27                     | 0.61              |
| 1:B:246:ILE:N    | 1:F:49:TYR:CE2   | 2.68                     | 0.61              |
| 1:E:82:THR:CB    | 1:E:84:LEU:HD23  | 2.29                     | 0.61              |
| 1:F:33:ILE:HD12  | 1:F:312:TRP:NE1  | 2.15                     | 0.61              |
| 1:F:43:TYR:CG    | 1:F:67:LEU:HB3   | 2.35                     | 0.61              |
| 1:G:43:TYR:CG    | 1:G:67:LEU:HB3   | 2.35                     | 0.61              |
| 1:G:240:MET:HG3  | 1:G:251:SER:HB2  | 1.83                     | 0.61              |
| 1:H:131:LYS:C    | 1:H:149:ILE:HD11 | 2.20                     | 0.61              |
| 1:H:138:VAL:HB   | 1:H:143:LYS:HB3  | 1.82                     | 0.61              |
| 1:I:52:ILE:CD1   | 1:M:247:ASP:O    | 2.46                     | 0.61              |
| 1:J:211:ILE:HA   | 1:J:220:LEU:HD21 | 1.82                     | 0.61              |
| 1:J:277:ASP:CB   | 1:K:219:ASP:CB   | 2.65                     | 0.61              |
| 1:K:44:ASN:CB    | 1:K:64:LYS:HZ1   | 2.12                     | 0.61              |
| 1:K:54:GLY:HA3   | 1:K:56:SER:H     | 1.64                     | 0.61              |
| 1:K:219:ASP:C    | 1:K:224:ASN:HB2  | 2.19                     | 0.61              |
| 1:M:222:ASN:HB2  | 1:M:237:ASN:H    | 1.64                     | 0.61              |
| 1:N:175:ALA:HB3  | 1:N:282:LEU:HD22 | 1.83                     | 0.61              |
| 1:O:7:GLU:C      | 1:O:326:TYR:HE1  | 2.04                     | 0.61              |
| 1:O:175:ALA:HB3  | 1:O:282:LEU:HD22 | 1.83                     | 0.61              |
| 1:A:32:ASP:HB3   | 1:A:34:LYS:CB    | 2.30                     | 0.61              |
| 1:B:247:ASP:O    | 1:F:52:ILE:HG23  | 1.99                     | 0.61              |
| 1:D:105:LYS:NZ   | 1:D:148:GLU:HB3  | 2.16                     | 0.61              |
| 1:E:100:SER:OG   | 1:E:101:ASN:HB2  | 2.01                     | 0.61              |
| 1:E:138:VAL:HB   | 1:E:143:LYS:HB3  | 1.82                     | 0.61              |
| 1:F:21:LEU:HD23  | 1:F:22:ILE:N     | 2.16                     | 0.61              |
| 1:F:165:GLU:HG3  | 1:F:305:ILE:HD12 | 1.82                     | 0.61              |
| 1:G:32:ASP:HB3   | 1:G:34:LYS:CB    | 2.30                     | 0.61              |
| 1:H:21:LEU:HD23  | 1:H:22:ILE:N     | 2.16                     | 0.61              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:274:PHE:HB2  | 1:H:278:GLN:CD   | 2.21                     | 0.61              |
| 1:I:54:GLY:HA3   | 1:I:56:SER:H     | 1.64                     | 0.61              |
| 1:I:138:VAL:HG21 | 1:I:145:TYR:HE2  | 1.65                     | 0.61              |
| 1:K:32:ASP:HB3   | 1:K:34:LYS:CB    | 2.30                     | 0.61              |
| 1:K:43:TYR:CE2   | 1:K:67:LEU:CB    | 2.80                     | 0.61              |
| 1:K:123:LYS:NZ   | 1:K:127:ARG:NH1  | 2.48                     | 0.61              |
| 1:K:165:GLU:HG3  | 1:K:305:ILE:HD12 | 1.82                     | 0.61              |
| 1:K:208:ASP:HA   | 1:K:211:ILE:HG12 | 1.83                     | 0.61              |
| 1:L:131:LYS:C    | 1:L:149:ILE:HD11 | 2.20                     | 0.61              |
| 1:M:188:LEU:N    | 1:M:199:ARG:HG2  | 2.10                     | 0.61              |
| 1:N:234:ALA:HB3  | 1:N:235:LEU:HD23 | 1.82                     | 0.61              |
| 1:O:232:GLU:O    | 1:O:233:SER:HB2  | 1.99                     | 0.61              |
| 1:P:175:ALA:HB3  | 1:P:282:LEU:HD22 | 1.83                     | 0.61              |
| 1:P:274:PHE:HB2  | 1:P:278:GLN:CD   | 2.21                     | 0.61              |
| 1:C:109:VAL:HG22 | 1:C:318:LEU:HB3  | 1.81                     | 0.60              |
| 1:E:219:ASP:C    | 1:E:224:ASN:HB2  | 2.19                     | 0.60              |
| 1:F:36:VAL:HG11  | 1:F:96:GLN:HE21  | 1.63                     | 0.60              |
| 1:F:49:TYR:HD1   | 1:G:321:VAL:N    | 1.97                     | 0.60              |
| 1:F:54:GLY:HA3   | 1:F:56:SER:H     | 1.64                     | 0.60              |
| 1:F:283:ILE:HG13 | 1:F:305:ILE:HD11 | 1.83                     | 0.60              |
| 1:G:179:PHE:HE1  | 1:G:261:PHE:CE2  | 2.18                     | 0.60              |
| 1:G:222:ASN:HB2  | 1:G:237:ASN:H    | 1.64                     | 0.60              |
| 1:G:234:ALA:HB3  | 1:G:235:LEU:HD23 | 1.82                     | 0.60              |
| 1:G:279:LEU:HD13 | 1:G:282:LEU:HD21 | 1.82                     | 0.60              |
| 1:H:43:TYR:CG    | 1:H:67:LEU:HB3   | 2.35                     | 0.60              |
| 1:K:106:VAL:CG2  | 1:K:147:PHE:CZ   | 2.82                     | 0.60              |
| 1:K:321:VAL:HA   | 1:L:49:TYR:CB    | 2.25                     | 0.60              |
| 1:L:234:ALA:HB3  | 1:L:235:LEU:HD23 | 1.82                     | 0.60              |
| 1:L:274:PHE:HB2  | 1:L:278:GLN:CD   | 2.21                     | 0.60              |
| 1:M:175:ALA:HB3  | 1:M:282:LEU:HD22 | 1.83                     | 0.60              |
| 1:N:21:LEU:HD23  | 1:N:22:ILE:N     | 2.16                     | 0.60              |
| 1:N:37:ILE:CG1   | 1:N:312:TRP:CZ2  | 2.79                     | 0.60              |
| 1:N:43:TYR:CE2   | 1:N:67:LEU:CB    | 2.80                     | 0.60              |
| 1:N:106:VAL:CG2  | 1:N:147:PHE:CZ   | 2.82                     | 0.60              |
| 1:O:105:LYS:CD   | 1:O:148:GLU:HB2  | 2.27                     | 0.60              |
| 1:A:247:ASP:OD2  | 1:F:320:LYS:CE   | 2.49                     | 0.60              |
| 1:B:7:GLU:C      | 1:B:326:TYR:HE1  | 2.04                     | 0.60              |
| 1:B:82:THR:CB    | 1:B:84:LEU:HD23  | 2.29                     | 0.60              |
| 1:B:240:MET:HG3  | 1:B:251:SER:HB2  | 1.82                     | 0.60              |
| 1:D:7:GLU:C      | 1:D:326:TYR:HE1  | 2.04                     | 0.60              |
| 1:D:43:TYR:CG    | 1:D:67:LEU:HB3   | 2.35                     | 0.60              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:240:MET:HG3  | 1:D:251:SER:HB2  | 1.83                     | 0.60              |
| 1:D:274:PHE:HB2  | 1:D:278:GLN:CD   | 2.21                     | 0.60              |
| 1:E:240:MET:HG3  | 1:E:251:SER:HB2  | 1.82                     | 0.60              |
| 1:E:283:ILE:HG13 | 1:E:305:ILE:HD11 | 1.83                     | 0.60              |
| 1:F:44:ASN:CB    | 1:F:64:LYS:HZ1   | 2.13                     | 0.60              |
| 1:F:120:ALA:HB2  | 1:I:120:ALA:CB   | 2.18                     | 0.60              |
| 1:F:222:ASN:HB2  | 1:F:237:ASN:H    | 1.64                     | 0.60              |
| 1:H:234:ALA:HB3  | 1:H:235:LEU:HD23 | 1.82                     | 0.60              |
| 1:I:7:GLU:C      | 1:I:326:TYR:HE1  | 2.04                     | 0.60              |
| 1:I:321:VAL:HA   | 1:J:49:TYR:CB    | 2.25                     | 0.60              |
| 1:J:54:GLY:HA3   | 1:J:56:SER:H     | 1.64                     | 0.60              |
| 1:K:149:ILE:O    | 1:K:149:ILE:HG13 | 2.01                     | 0.60              |
| 1:K:308:ASN:OD1  | 1:P:230:GLN:CA   | 2.48                     | 0.60              |
| 1:M:123:LYS:NZ   | 1:M:127:ARG:NH1  | 2.48                     | 0.60              |
| 1:M:211:ILE:HA   | 1:M:220:LEU:HD21 | 1.82                     | 0.60              |
| 1:M:274:PHE:HB2  | 1:M:278:GLN:CD   | 2.21                     | 0.60              |
| 1:O:274:PHE:HB2  | 1:O:278:GLN:CD   | 2.21                     | 0.60              |
| 1:P:138:VAL:HG21 | 1:P:145:TYR:HE2  | 1.65                     | 0.60              |
| 1:A:230:GLN:HB2  | 1:F:306:ILE:HG13 | 1.82                     | 0.60              |
| 1:D:100:SER:OG   | 1:D:101:ASN:HB2  | 2.01                     | 0.60              |
| 1:D:175:ALA:HB3  | 1:D:282:LEU:HD22 | 1.83                     | 0.60              |
| 1:D:208:ASP:HA   | 1:D:211:ILE:HG12 | 1.83                     | 0.60              |
| 1:E:54:GLY:HA3   | 1:E:56:SER:H     | 1.64                     | 0.60              |
| 1:E:165:GLU:HG3  | 1:E:305:ILE:HD12 | 1.82                     | 0.60              |
| 1:E:211:ILE:HA   | 1:E:220:LEU:HD21 | 1.82                     | 0.60              |
| 1:G:36:VAL:HG11  | 1:G:96:GLN:HE21  | 1.62                     | 0.60              |
| 1:G:274:PHE:HB2  | 1:G:278:GLN:CD   | 2.21                     | 0.60              |
| 1:G:283:ILE:HG13 | 1:G:305:ILE:HD11 | 1.83                     | 0.60              |
| 1:H:36:VAL:HG11  | 1:H:96:GLN:HE21  | 1.63                     | 0.60              |
| 1:I:188:LEU:HD13 | 1:I:198:GLU:HB3  | 1.84                     | 0.60              |
| 1:I:234:ALA:HB3  | 1:I:235:LEU:HD23 | 1.82                     | 0.60              |
| 1:J:9:VAL:HG13   | 1:J:322:ALA:HB1  | 1.83                     | 0.60              |
| 1:J:105:LYS:HZ2  | 1:J:148:GLU:HB3  | 1.66                     | 0.60              |
| 1:J:149:ILE:O    | 1:J:149:ILE:HG13 | 2.01                     | 0.60              |
| 1:J:165:GLU:HG3  | 1:J:305:ILE:HD12 | 1.82                     | 0.60              |
| 1:J:308:ASN:HD22 | 1:O:231:ALA:CA   | 2.14                     | 0.60              |
| 1:J:321:VAL:HA   | 1:K:49:TYR:CB    | 2.25                     | 0.60              |
| 1:K:7:GLU:C      | 1:K:326:TYR:HE1  | 2.04                     | 0.60              |
| 1:K:300:TYR:HD2  | 1:L:225:LEU:CB   | 2.10                     | 0.60              |
| 1:L:149:ILE:HG13 | 1:L:149:ILE:O    | 2.01                     | 0.60              |
| 1:N:149:ILE:HG13 | 1:N:149:ILE:O    | 2.01                     | 0.60              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:179:PHE:HE1  | 1:P:261:PHE:CE2  | 2.18                     | 0.60              |
| 1:A:37:ILE:CG1   | 1:A:312:TRP:CZ2  | 2.79                     | 0.60              |
| 1:A:274:PHE:HB2  | 1:A:278:GLN:CD   | 2.21                     | 0.60              |
| 1:B:43:TYR:CG    | 1:B:67:LEU:HB3   | 2.35                     | 0.60              |
| 1:B:138:VAL:HG21 | 1:B:145:TYR:HE2  | 1.65                     | 0.60              |
| 1:C:208:ASP:HA   | 1:C:211:ILE:HG12 | 1.83                     | 0.60              |
| 1:D:36:VAL:HG11  | 1:D:96:GLN:HE21  | 1.63                     | 0.60              |
| 1:E:21:LEU:HD23  | 1:E:22:ILE:N     | 2.16                     | 0.60              |
| 1:E:149:ILE:O    | 1:E:149:ILE:HG13 | 2.01                     | 0.60              |
| 1:E:186:PHE:HD2  | 1:E:269:ILE:HD11 | 1.61                     | 0.60              |
| 1:F:7:GLU:C      | 1:F:326:TYR:HE1  | 2.04                     | 0.60              |
| 1:F:179:PHE:HE1  | 1:F:261:PHE:CE2  | 2.18                     | 0.60              |
| 1:F:203:GLU:CA   | 1:I:197:SER:O    | 2.50                     | 0.60              |
| 1:F:234:ALA:HB3  | 1:F:235:LEU:HD23 | 1.82                     | 0.60              |
| 1:F:274:PHE:HB2  | 1:F:278:GLN:CD   | 2.21                     | 0.60              |
| 1:I:36:VAL:HG11  | 1:I:96:GLN:HE21  | 1.63                     | 0.60              |
| 1:I:130:ILE:HD11 | 1:I:152:ILE:HD12 | 1.84                     | 0.60              |
| 1:I:283:ILE:HG13 | 1:I:305:ILE:HD11 | 1.83                     | 0.60              |
| 1:J:32:ASP:HB3   | 1:J:34:LYS:CB    | 2.30                     | 0.60              |
| 1:J:320:LYS:O    | 1:O:246:ILE:HD11 | 1.80                     | 0.60              |
| 1:K:52:ILE:HG23  | 1:O:247:ASP:O    | 1.93                     | 0.60              |
| 1:K:93:ALA:O     | 1:K:96:GLN:HG2   | 2.02                     | 0.60              |
| 1:K:131:LYS:C    | 1:K:149:ILE:HD11 | 2.20                     | 0.60              |
| 1:K:179:PHE:HE1  | 1:K:261:PHE:CE2  | 2.18                     | 0.60              |
| 1:K:274:PHE:HB2  | 1:K:278:GLN:CD   | 2.21                     | 0.60              |
| 1:L:100:SER:OG   | 1:L:101:ASN:HB2  | 2.01                     | 0.60              |
| 1:L:211:ILE:HA   | 1:L:220:LEU:HD21 | 1.82                     | 0.60              |
| 1:M:105:LYS:HZ2  | 1:M:148:GLU:HB3  | 1.65                     | 0.60              |
| 1:M:149:ILE:O    | 1:M:149:ILE:HG13 | 2.01                     | 0.60              |
| 1:N:7:GLU:C      | 1:N:326:TYR:HE1  | 2.04                     | 0.60              |
| 1:O:149:ILE:HG13 | 1:O:149:ILE:O    | 2.01                     | 0.60              |
| 1:P:43:TYR:CD2   | 1:P:67:LEU:HD13  | 2.37                     | 0.60              |
| 1:P:149:ILE:O    | 1:P:149:ILE:HG13 | 2.01                     | 0.60              |
| 1:A:43:TYR:CG    | 1:A:67:LEU:HB3   | 2.35                     | 0.60              |
| 1:A:47:ASP:O     | 1:B:320:LYS:C    | 2.40                     | 0.60              |
| 1:A:82:THR:CB    | 1:A:84:LEU:HD23  | 2.29                     | 0.60              |
| 1:B:105:LYS:HZ2  | 1:B:148:GLU:HB3  | 1.65                     | 0.60              |
| 1:B:208:ASP:HA   | 1:B:211:ILE:HG12 | 1.83                     | 0.60              |
| 1:D:109:VAL:HG22 | 1:D:318:LEU:HB3  | 1.81                     | 0.60              |
| 1:E:9:VAL:HG13   | 1:E:322:ALA:HB1  | 1.83                     | 0.60              |
| 1:F:149:ILE:HG13 | 1:F:149:ILE:O    | 2.02                     | 0.60              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:186:PHE:HD2  | 1:F:269:ILE:HD11 | 1.61                     | 0.60              |
| 1:F:208:ASP:HA   | 1:F:211:ILE:HG12 | 1.83                     | 0.60              |
| 1:G:71:GLN:HE22  | 1:H:168:ASN:CG   | 1.70                     | 0.60              |
| 1:H:105:LYS:NZ   | 1:H:148:GLU:HB3  | 2.16                     | 0.60              |
| 1:H:186:PHE:HD2  | 1:H:269:ILE:HD11 | 1.61                     | 0.60              |
| 1:H:283:ILE:HG13 | 1:H:305:ILE:HD11 | 1.84                     | 0.60              |
| 1:J:100:SER:OG   | 1:J:101:ASN:HB2  | 2.01                     | 0.60              |
| 1:K:100:SER:OG   | 1:K:101:ASN:HB2  | 2.01                     | 0.60              |
| 1:K:222:ASN:HB2  | 1:K:237:ASN:H    | 1.64                     | 0.60              |
| 1:M:7:GLU:C      | 1:M:326:TYR:HE1  | 2.04                     | 0.60              |
| 1:N:301:PRO:HD3  | 1:O:227:THR:CG2  | 2.30                     | 0.60              |
| 1:A:208:ASP:HA   | 1:A:211:ILE:HG12 | 1.83                     | 0.60              |
| 1:B:47:ASP:O     | 1:C:320:LYS:C    | 2.40                     | 0.60              |
| 1:C:43:TYR:CG    | 1:C:67:LEU:HB3   | 2.35                     | 0.60              |
| 1:C:47:ASP:O     | 1:D:320:LYS:C    | 2.40                     | 0.60              |
| 1:C:100:SER:OG   | 1:C:101:ASN:HB2  | 2.01                     | 0.60              |
| 1:C:175:ALA:HB3  | 1:C:282:LEU:HD22 | 1.83                     | 0.60              |
| 1:D:222:ASN:HB2  | 1:D:237:ASN:H    | 1.64                     | 0.60              |
| 1:F:130:ILE:HD11 | 1:F:152:ILE:HD12 | 1.84                     | 0.60              |
| 1:F:268:LEU:HD22 | 1:I:271:LYS:HZ1  | 1.66                     | 0.60              |
| 1:G:43:TYR:CE2   | 1:G:67:LEU:CB    | 2.80                     | 0.60              |
| 1:G:149:ILE:HG13 | 1:G:149:ILE:O    | 2.01                     | 0.60              |
| 1:G:186:PHE:HD2  | 1:G:269:ILE:HD11 | 1.61                     | 0.60              |
| 1:H:32:ASP:HB3   | 1:H:34:LYS:CB    | 2.30                     | 0.60              |
| 1:H:93:ALA:O     | 1:H:96:GLN:HG2   | 2.02                     | 0.60              |
| 1:I:9:VAL:HG13   | 1:I:322:ALA:HB1  | 1.83                     | 0.60              |
| 1:I:100:SER:OG   | 1:I:101:ASN:HB2  | 2.01                     | 0.60              |
| 1:J:131:LYS:C    | 1:J:149:ILE:HD11 | 2.20                     | 0.60              |
| 1:J:234:ALA:HB3  | 1:J:235:LEU:HD23 | 1.82                     | 0.60              |
| 1:J:274:PHE:HB2  | 1:J:278:GLN:CD   | 2.21                     | 0.60              |
| 1:J:300:TYR:HD2  | 1:K:225:LEU:CB   | 2.10                     | 0.60              |
| 1:K:188:LEU:HD13 | 1:K:198:GLU:HB3  | 1.84                     | 0.60              |
| 1:L:105:LYS:NZ   | 1:L:148:GLU:HB3  | 2.16                     | 0.60              |
| 1:L:283:ILE:HG13 | 1:L:305:ILE:HD11 | 1.83                     | 0.60              |
| 1:M:240:MET:HG3  | 1:M:251:SER:HB2  | 1.83                     | 0.60              |
| 1:M:323:VAL:HG22 | 1:N:47:ASP:O     | 2.02                     | 0.60              |
| 1:O:93:ALA:O     | 1:O:96:GLN:HG2   | 2.02                     | 0.60              |
| 1:P:7:GLU:C      | 1:P:326:TYR:HE1  | 2.04                     | 0.60              |
| 1:A:93:ALA:O     | 1:A:96:GLN:HG2   | 2.02                     | 0.60              |
| 1:A:241:LYS:HZ3  | 1:F:305:ILE:HG22 | 1.63                     | 0.60              |
| 1:C:21:LEU:HD23  | 1:C:22:ILE:N     | 2.16                     | 0.60              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:105:LYS:CD   | 1:C:148:GLU:HB2  | 2.27                     | 0.60              |
| 1:D:110:LEU:HD22 | 1:D:126:TYR:OH   | 2.02                     | 0.60              |
| 1:D:246:ILE:HG12 | 1:H:50:ILE:H     | 1.49                     | 0.60              |
| 1:E:36:VAL:CG2   | 1:E:38:PHE:CE2   | 2.85                     | 0.60              |
| 1:E:234:ALA:HB3  | 1:E:235:LEU:HD23 | 1.82                     | 0.60              |
| 1:G:49:TYR:CB    | 1:H:321:VAL:HA   | 2.25                     | 0.60              |
| 1:G:123:LYS:NZ   | 1:G:127:ARG:NH1  | 2.48                     | 0.60              |
| 1:G:130:ILE:HD11 | 1:G:152:ILE:HD12 | 1.84                     | 0.60              |
| 1:H:105:LYS:CD   | 1:H:148:GLU:HB2  | 2.27                     | 0.60              |
| 1:H:119:ASN:ND2  | 1:K:119:ASN:HA   | 2.16                     | 0.60              |
| 1:I:32:ASP:HB3   | 1:I:34:LYS:CB    | 2.30                     | 0.60              |
| 1:I:36:VAL:CG2   | 1:I:38:PHE:CE2   | 2.85                     | 0.60              |
| 1:I:149:ILE:HG13 | 1:I:149:ILE:O    | 2.01                     | 0.60              |
| 1:I:165:GLU:HG3  | 1:I:305:ILE:HD12 | 1.82                     | 0.60              |
| 1:J:188:LEU:HD13 | 1:J:198:GLU:HB3  | 1.84                     | 0.60              |
| 1:J:306:ILE:HG23 | 1:O:230:GLN:HB3  | 1.84                     | 0.60              |
| 1:K:125:GLU:O    | 1:K:129:TYR:CD1  | 2.55                     | 0.60              |
| 1:L:279:LEU:HD13 | 1:L:282:LEU:HD21 | 1.82                     | 0.60              |
| 1:N:93:ALA:O     | 1:N:96:GLN:HG2   | 2.02                     | 0.60              |
| 1:N:274:PHE:HB2  | 1:N:278:GLN:CD   | 2.21                     | 0.60              |
| 1:O:43:TYR:CD2   | 1:O:67:LEU:HD13  | 2.37                     | 0.60              |
| 1:O:125:GLU:O    | 1:O:129:TYR:CD1  | 2.55                     | 0.60              |
| 1:O:188:LEU:HD13 | 1:O:198:GLU:HB3  | 1.84                     | 0.60              |
| 1:A:106:VAL:CG2  | 1:A:147:PHE:CZ   | 2.82                     | 0.60              |
| 1:A:246:ILE:HD13 | 1:E:50:ILE:HG23  | 1.07                     | 0.60              |
| 1:B:44:ASN:C     | 1:B:67:LEU:HD12  | 2.22                     | 0.60              |
| 1:B:47:ASP:C     | 1:C:323:VAL:CG2  | 2.57                     | 0.60              |
| 1:B:110:LEU:HD22 | 1:B:126:TYR:OH   | 2.02                     | 0.60              |
| 1:C:245:GLU:O    | 1:G:74:GLU:CA    | 2.49                     | 0.60              |
| 1:D:43:TYR:CD2   | 1:D:67:LEU:HD13  | 2.37                     | 0.60              |
| 1:D:44:ASN:C     | 1:D:67:LEU:HD12  | 2.22                     | 0.60              |
| 1:D:123:LYS:HZ3  | 1:D:127:ARG:NH1  | 1.99                     | 0.60              |
| 1:E:105:LYS:NZ   | 1:E:148:GLU:HB3  | 2.16                     | 0.60              |
| 1:E:130:ILE:HD11 | 1:E:152:ILE:HD12 | 1.84                     | 0.60              |
| 1:E:274:PHE:HB2  | 1:E:278:GLN:CD   | 2.21                     | 0.60              |
| 1:F:93:ALA:O     | 1:F:96:GLN:HG2   | 2.02                     | 0.60              |
| 1:F:106:VAL:CG2  | 1:F:147:PHE:CZ   | 2.82                     | 0.60              |
| 1:G:7:GLU:C      | 1:G:326:TYR:HE1  | 2.04                     | 0.60              |
| 1:G:202:GLU:CG   | 1:J:271:LYS:HE3  | 2.23                     | 0.60              |
| 1:H:125:GLU:O    | 1:H:129:TYR:CD1  | 2.55                     | 0.60              |
| 1:I:34:LYS:H     | 1:I:35:ARG:C     | 2.06                     | 0.60              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:105:LYS:NZ   | 1:I:148:GLU:HB3  | 2.16                     | 0.60              |
| 1:I:131:LYS:C    | 1:I:149:ILE:HD11 | 2.20                     | 0.60              |
| 1:I:240:MET:HG3  | 1:I:251:SER:HB2  | 1.82                     | 0.60              |
| 1:I:274:PHE:HB2  | 1:I:278:GLN:CD   | 2.21                     | 0.60              |
| 1:J:130:ILE:HD11 | 1:J:152:ILE:HD12 | 1.84                     | 0.60              |
| 1:J:208:ASP:HA   | 1:J:211:ILE:HG12 | 1.83                     | 0.60              |
| 1:K:9:VAL:HG13   | 1:K:322:ALA:HB1  | 1.84                     | 0.60              |
| 1:K:109:VAL:HG21 | 1:K:321:VAL:CG1  | 2.32                     | 0.60              |
| 1:K:110:LEU:HD22 | 1:K:126:TYR:OH   | 2.02                     | 0.60              |
| 1:K:196:PRO:HB3  | 1:K:199:ARG:HH21 | 1.67                     | 0.60              |
| 1:K:283:ILE:HG13 | 1:K:305:ILE:HD11 | 1.83                     | 0.60              |
| 1:L:7:GLU:C      | 1:L:326:TYR:HE1  | 2.04                     | 0.60              |
| 1:L:175:ALA:HB3  | 1:L:282:LEU:HD22 | 1.83                     | 0.60              |
| 1:L:188:LEU:HD13 | 1:L:198:GLU:HB3  | 1.84                     | 0.60              |
| 1:M:188:LEU:HD13 | 1:M:198:GLU:HB3  | 1.84                     | 0.60              |
| 1:N:169:PHE:C    | 1:O:79:THR:CB    | 2.64                     | 0.60              |
| 1:N:188:LEU:HD13 | 1:N:198:GLU:HB3  | 1.84                     | 0.60              |
| 1:P:44:ASN:C     | 1:P:67:LEU:HD12  | 2.22                     | 0.60              |
| 1:P:93:ALA:O     | 1:P:96:GLN:HG2   | 2.02                     | 0.60              |
| 1:P:100:SER:OG   | 1:P:101:ASN:HB2  | 2.01                     | 0.60              |
| 1:A:44:ASN:C     | 1:A:67:LEU:HD12  | 2.23                     | 0.60              |
| 1:A:125:GLU:O    | 1:A:129:TYR:CD1  | 2.55                     | 0.60              |
| 1:A:230:GLN:HB3  | 1:F:306:ILE:HG23 | 1.84                     | 0.60              |
| 1:B:47:ASP:O     | 1:C:323:VAL:HG22 | 2.02                     | 0.60              |
| 1:B:125:GLU:O    | 1:B:129:TYR:CD1  | 2.55                     | 0.60              |
| 1:B:175:ALA:HB3  | 1:B:282:LEU:HD22 | 1.83                     | 0.60              |
| 1:C:44:ASN:C     | 1:C:67:LEU:HD12  | 2.23                     | 0.60              |
| 1:C:49:TYR:O     | 1:D:323:VAL:CG2  | 2.50                     | 0.60              |
| 1:C:123:LYS:HZ2  | 1:C:127:ARG:NH1  | 2.00                     | 0.60              |
| 1:C:188:LEU:HD13 | 1:C:198:GLU:HB3  | 1.83                     | 0.60              |
| 1:D:138:VAL:HG21 | 1:D:145:TYR:HE2  | 1.65                     | 0.60              |
| 1:E:44:ASN:C     | 1:E:67:LEU:HD12  | 2.23                     | 0.60              |
| 1:E:93:ALA:O     | 1:E:96:GLN:HG2   | 2.02                     | 0.60              |
| 1:E:125:GLU:O    | 1:E:129:TYR:CD1  | 2.55                     | 0.60              |
| 1:E:218:THR:OG1  | 1:F:278:GLN:HB3  | 1.87                     | 0.60              |
| 1:F:196:PRO:HB3  | 1:F:199:ARG:HH21 | 1.67                     | 0.60              |
| 1:I:109:VAL:HG21 | 1:I:321:VAL:CG1  | 2.32                     | 0.60              |
| 1:I:208:ASP:HA   | 1:I:211:ILE:HG12 | 1.83                     | 0.60              |
| 1:I:275:LYS:HZ2  | 1:J:219:ASP:CG   | 2.03                     | 0.60              |
| 1:J:283:ILE:HG13 | 1:J:305:ILE:HD11 | 1.83                     | 0.60              |
| 1:K:234:ALA:HB3  | 1:K:235:LEU:HD23 | 1.82                     | 0.60              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:110:LEU:HD22 | 1:L:126:TYR:OH   | 2.02                     | 0.60              |
| 1:M:106:VAL:CG2  | 1:M:147:PHE:CZ   | 2.82                     | 0.60              |
| 1:M:277:ASP:OD2  | 1:N:224:ASN:CA   | 2.44                     | 0.60              |
| 1:N:125:GLU:O    | 1:N:129:TYR:CD1  | 2.55                     | 0.60              |
| 1:O:323:VAL:CG2  | 1:P:49:TYR:O     | 2.50                     | 0.60              |
| 1:P:188:LEU:HD13 | 1:P:198:GLU:HB3  | 1.84                     | 0.60              |
| 1:A:49:TYR:O     | 1:B:323:VAL:CG2  | 2.50                     | 0.60              |
| 1:B:188:LEU:HD13 | 1:B:198:GLU:HB3  | 1.84                     | 0.60              |
| 1:C:43:TYR:CD2   | 1:C:67:LEU:HD13  | 2.37                     | 0.60              |
| 1:C:230:GLN:CD   | 1:H:306:ILE:HG21 | 2.22                     | 0.60              |
| 1:E:196:PRO:HB3  | 1:E:199:ARG:HH21 | 1.67                     | 0.60              |
| 1:E:208:ASP:HA   | 1:E:211:ILE:HG12 | 1.83                     | 0.60              |
| 1:F:109:VAL:CB   | 1:F:322:ALA:HB2  | 2.26                     | 0.60              |
| 1:F:110:LEU:HD22 | 1:F:126:TYR:OH   | 2.02                     | 0.60              |
| 1:F:202:GLU:HA   | 1:I:272:ARG:HG3  | 1.76                     | 0.60              |
| 1:G:33:ILE:HD12  | 1:G:312:TRP:NE1  | 2.15                     | 0.60              |
| 1:H:9:VAL:HG13   | 1:H:322:ALA:HB1  | 1.83                     | 0.60              |
| 1:I:44:ASN:C     | 1:I:67:LEU:HD12  | 2.23                     | 0.60              |
| 1:K:175:ALA:HB3  | 1:K:282:LEU:HD22 | 1.83                     | 0.60              |
| 1:L:179:PHE:HE1  | 1:L:261:PHE:CE2  | 2.18                     | 0.60              |
| 1:N:44:ASN:C     | 1:N:67:LEU:HD12  | 2.22                     | 0.60              |
| 1:N:45:LEU:HD22  | 1:N:58:LYS:HZ3   | 1.66                     | 0.60              |
| 1:N:211:ILE:HA   | 1:N:220:LEU:HD21 | 1.82                     | 0.60              |
| 1:O:130:ILE:HD11 | 1:O:152:ILE:HD12 | 1.84                     | 0.60              |
| 1:P:130:ILE:HD11 | 1:P:152:ILE:HD12 | 1.84                     | 0.60              |
| 1:A:188:LEU:HD13 | 1:A:198:GLU:HB3  | 1.84                     | 0.59              |
| 1:A:283:ILE:HG13 | 1:A:305:ILE:HD11 | 1.83                     | 0.59              |
| 1:B:211:ILE:HA   | 1:B:220:LEU:HD21 | 1.82                     | 0.59              |
| 1:C:109:VAL:HG21 | 1:C:321:VAL:CG1  | 2.32                     | 0.59              |
| 1:C:138:VAL:HG21 | 1:C:145:TYR:HE2  | 1.65                     | 0.59              |
| 1:C:211:ILE:HA   | 1:C:220:LEU:HD21 | 1.82                     | 0.59              |
| 1:C:240:MET:HE1  | 1:G:73:VAL:HB    | 1.83                     | 0.59              |
| 1:C:240:MET:HG3  | 1:C:251:SER:HB2  | 1.83                     | 0.59              |
| 1:D:188:LEU:HD13 | 1:D:198:GLU:HB3  | 1.84                     | 0.59              |
| 1:E:44:ASN:CB    | 1:E:64:LYS:HZ1   | 2.15                     | 0.59              |
| 1:F:36:VAL:CG2   | 1:F:38:PHE:CE2   | 2.85                     | 0.59              |
| 1:F:125:GLU:O    | 1:F:129:TYR:CD1  | 2.55                     | 0.59              |
| 1:F:240:MET:HG3  | 1:F:251:SER:HB2  | 1.82                     | 0.59              |
| 1:G:44:ASN:C     | 1:G:67:LEU:HD12  | 2.23                     | 0.59              |
| 1:G:272:ARG:HA   | 1:J:202:GLU:OE2  | 2.02                     | 0.59              |
| 1:H:7:GLU:C      | 1:H:326:TYR:HE1  | 2.04                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:34:LYS:H     | 1:H:35:ARG:C     | 2.06                     | 0.59              |
| 1:H:36:VAL:CG2   | 1:H:38:PHE:CE2   | 2.85                     | 0.59              |
| 1:H:149:ILE:O    | 1:H:149:ILE:HG13 | 2.02                     | 0.59              |
| 1:H:218:THR:O    | 1:H:219:ASP:HB2  | 2.02                     | 0.59              |
| 1:J:34:LYS:H     | 1:J:35:ARG:C     | 2.06                     | 0.59              |
| 1:J:110:LEU:HD22 | 1:J:126:TYR:OH   | 2.02                     | 0.59              |
| 1:J:196:PRO:HB3  | 1:J:199:ARG:HH21 | 1.67                     | 0.59              |
| 1:L:196:PRO:HB3  | 1:L:199:ARG:HH21 | 1.67                     | 0.59              |
| 1:M:44:ASN:C     | 1:M:67:LEU:HD12  | 2.22                     | 0.59              |
| 1:M:110:LEU:HD22 | 1:M:126:TYR:OH   | 2.02                     | 0.59              |
| 1:M:320:LYS:CG   | 1:N:49:TYR:C     | 2.21                     | 0.59              |
| 1:N:105:LYS:CD   | 1:N:148:GLU:HB2  | 2.27                     | 0.59              |
| 1:N:320:LYS:CE   | 1:O:50:ILE:CG1   | 1.92                     | 0.59              |
| 1:N:323:VAL:CG2  | 1:O:49:TYR:O     | 2.50                     | 0.59              |
| 1:O:323:VAL:HG22 | 1:P:47:ASP:O     | 2.02                     | 0.59              |
| 1:A:95:THR:CG2   | 1:A:136:ILE:HD13 | 2.22                     | 0.59              |
| 1:A:100:SER:OG   | 1:A:101:ASN:HB2  | 2.01                     | 0.59              |
| 1:A:175:ALA:HB3  | 1:A:282:LEU:HD22 | 1.83                     | 0.59              |
| 1:A:190:ARG:O    | 1:A:193:VAL:HG12 | 2.03                     | 0.59              |
| 1:A:247:ASP:OD2  | 1:F:320:LYS:HE2  | 2.02                     | 0.59              |
| 1:B:109:VAL:HG21 | 1:B:321:VAL:CG1  | 2.32                     | 0.59              |
| 1:B:283:ILE:HG13 | 1:B:305:ILE:HD11 | 1.83                     | 0.59              |
| 1:C:7:GLU:C      | 1:C:326:TYR:HE1  | 2.04                     | 0.59              |
| 1:C:190:ARG:O    | 1:C:193:VAL:HG12 | 2.03                     | 0.59              |
| 1:D:184:MET:HG3  | 1:D:202:GLU:HB3  | 1.84                     | 0.59              |
| 1:D:190:ARG:O    | 1:D:193:VAL:HG12 | 2.02                     | 0.59              |
| 1:E:7:GLU:C      | 1:E:326:TYR:HE1  | 2.04                     | 0.59              |
| 1:E:179:PHE:HE1  | 1:E:261:PHE:CE2  | 2.18                     | 0.59              |
| 1:F:9:VAL:HG13   | 1:F:322:ALA:HB1  | 1.84                     | 0.59              |
| 1:F:68:ILE:CD1   | 1:F:92:THR:HB    | 2.10                     | 0.59              |
| 1:G:93:ALA:O     | 1:G:96:GLN:HG2   | 2.02                     | 0.59              |
| 1:G:109:VAL:HG21 | 1:G:321:VAL:CG1  | 2.32                     | 0.59              |
| 1:I:50:ILE:C     | 1:M:246:ILE:HA   | 2.20                     | 0.59              |
| 1:I:93:ALA:O     | 1:I:96:GLN:HG2   | 2.02                     | 0.59              |
| 1:I:125:GLU:O    | 1:I:129:TYR:CD1  | 2.55                     | 0.59              |
| 1:J:93:ALA:O     | 1:J:96:GLN:HG2   | 2.02                     | 0.59              |
| 1:K:44:ASN:C     | 1:K:67:LEU:HD12  | 2.23                     | 0.59              |
| 1:P:177:ILE:HG13 | 1:P:177:ILE:O    | 2.03                     | 0.59              |
| 1:A:34:LYS:H     | 1:A:35:ARG:C     | 2.06                     | 0.59              |
| 1:A:109:VAL:HG21 | 1:A:321:VAL:CG1  | 2.32                     | 0.59              |
| 1:B:37:ILE:CG1   | 1:B:312:TRP:CZ2  | 2.79                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:43:TYR:CD2   | 1:B:67:LEU:HD13  | 2.37                     | 0.59              |
| 1:B:190:ARG:O    | 1:B:193:VAL:HG12 | 2.03                     | 0.59              |
| 1:B:231:ALA:CA   | 1:G:308:ASN:ND2  | 2.64                     | 0.59              |
| 1:C:246:ILE:HG13 | 1:H:320:LYS:HB3  | 1.84                     | 0.59              |
| 1:D:34:LYS:H     | 1:D:35:ARG:C     | 2.06                     | 0.59              |
| 1:D:109:VAL:HG21 | 1:D:321:VAL:CG1  | 2.32                     | 0.59              |
| 1:F:44:ASN:C     | 1:F:67:LEU:HD12  | 2.23                     | 0.59              |
| 1:F:49:TYR:CB    | 1:G:321:VAL:HA   | 2.25                     | 0.59              |
| 1:F:109:VAL:HG21 | 1:F:321:VAL:CG1  | 2.32                     | 0.59              |
| 1:F:203:GLU:H    | 1:I:272:ARG:CA   | 2.14                     | 0.59              |
| 1:F:219:ASP:CG   | 1:G:277:ASP:CB   | 2.61                     | 0.59              |
| 1:G:34:LYS:H     | 1:G:35:ARG:C     | 2.06                     | 0.59              |
| 1:H:106:VAL:CG2  | 1:H:147:PHE:CZ   | 2.82                     | 0.59              |
| 1:H:197:SER:O    | 1:K:203:GLU:CA   | 2.50                     | 0.59              |
| 1:J:175:ALA:HB3  | 1:J:282:LEU:HD22 | 1.83                     | 0.59              |
| 1:L:44:ASN:C     | 1:L:67:LEU:HD12  | 2.23                     | 0.59              |
| 1:M:43:TYR:CD2   | 1:M:67:LEU:HD13  | 2.37                     | 0.59              |
| 1:M:100:SER:OG   | 1:M:101:ASN:HB2  | 2.01                     | 0.59              |
| 1:M:320:LYS:C    | 1:N:47:ASP:O     | 2.40                     | 0.59              |
| 1:N:34:LYS:H     | 1:N:35:ARG:C     | 2.06                     | 0.59              |
| 1:N:283:ILE:HG13 | 1:N:305:ILE:HD11 | 1.83                     | 0.59              |
| 1:N:320:LYS:C    | 1:O:47:ASP:O     | 2.40                     | 0.59              |
| 1:O:109:VAL:HG21 | 1:O:321:VAL:CG1  | 2.32                     | 0.59              |
| 1:O:283:ILE:HG13 | 1:O:305:ILE:HD11 | 1.83                     | 0.59              |
| 1:O:320:LYS:C    | 1:P:47:ASP:O     | 2.40                     | 0.59              |
| 1:P:32:ASP:HB3   | 1:P:34:LYS:CB    | 2.30                     | 0.59              |
| 1:P:44:ASN:CB    | 1:P:64:LYS:HZ1   | 2.13                     | 0.59              |
| 1:P:208:ASP:HA   | 1:P:211:ILE:HG12 | 1.83                     | 0.59              |
| 1:B:49:TYR:O     | 1:C:323:VAL:CG2  | 2.50                     | 0.59              |
| 1:B:93:ALA:O     | 1:B:96:GLN:HG2   | 2.02                     | 0.59              |
| 1:C:179:PHE:HE1  | 1:C:261:PHE:CE2  | 2.18                     | 0.59              |
| 1:D:93:ALA:O     | 1:D:96:GLN:HG2   | 2.02                     | 0.59              |
| 1:D:106:VAL:CG2  | 1:D:147:PHE:CZ   | 2.82                     | 0.59              |
| 1:D:211:ILE:HA   | 1:D:220:LEU:HD21 | 1.82                     | 0.59              |
| 1:E:34:LYS:H     | 1:E:35:ARG:C     | 2.06                     | 0.59              |
| 1:E:177:ILE:HG13 | 1:E:177:ILE:O    | 2.02                     | 0.59              |
| 1:E:190:ARG:O    | 1:E:193:VAL:HG12 | 2.03                     | 0.59              |
| 1:F:177:ILE:HG13 | 1:F:177:ILE:O    | 2.02                     | 0.59              |
| 1:F:184:MET:HG3  | 1:F:202:GLU:HB3  | 1.84                     | 0.59              |
| 1:H:175:ALA:HB3  | 1:H:282:LEU:HD22 | 1.83                     | 0.59              |
| 1:J:7:GLU:C      | 1:J:326:TYR:HE1  | 2.04                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:73:VAL:HB    | 1:N:240:MET:HE2  | 1.72                     | 0.59              |
| 1:J:125:GLU:O    | 1:J:129:TYR:CD1  | 2.55                     | 0.59              |
| 1:K:34:LYS:H     | 1:K:35:ARG:C     | 2.06                     | 0.59              |
| 1:K:74:GLU:C     | 1:O:245:GLU:O    | 2.41                     | 0.59              |
| 1:K:306:ILE:HG23 | 1:P:230:GLN:HB3  | 1.84                     | 0.59              |
| 1:L:52:ILE:H     | 1:L:74:GLU:CG    | 2.06                     | 0.59              |
| 1:L:105:LYS:CD   | 1:L:148:GLU:HB2  | 2.27                     | 0.59              |
| 1:L:125:GLU:O    | 1:L:129:TYR:CD1  | 2.55                     | 0.59              |
| 1:M:93:ALA:O     | 1:M:96:GLN:HG2   | 2.02                     | 0.59              |
| 1:M:177:ILE:HG13 | 1:M:177:ILE:O    | 2.03                     | 0.59              |
| 1:M:283:ILE:HG13 | 1:M:305:ILE:HD11 | 1.83                     | 0.59              |
| 1:N:130:ILE:HD11 | 1:N:152:ILE:HD12 | 1.84                     | 0.59              |
| 1:N:179:PHE:HE1  | 1:N:261:PHE:CE2  | 2.18                     | 0.59              |
| 1:P:58:LYS:HZ2   | 1:P:65:GLU:HG2   | 1.65                     | 0.59              |
| 1:A:7:GLU:C      | 1:A:326:TYR:HE1  | 2.04                     | 0.59              |
| 1:A:43:TYR:CD2   | 1:A:67:LEU:HD13  | 2.37                     | 0.59              |
| 1:A:47:ASP:O     | 1:B:323:VAL:HG22 | 2.02                     | 0.59              |
| 1:A:95:THR:HG22  | 1:A:136:ILE:CD1  | 2.24                     | 0.59              |
| 1:A:110:LEU:HD22 | 1:A:126:TYR:OH   | 2.02                     | 0.59              |
| 1:A:211:ILE:HA   | 1:A:220:LEU:HD21 | 1.82                     | 0.59              |
| 1:C:283:ILE:HG13 | 1:C:305:ILE:HD11 | 1.83                     | 0.59              |
| 1:D:105:LYS:CD   | 1:D:148:GLU:HB2  | 2.27                     | 0.59              |
| 1:D:246:ILE:HG13 | 1:H:49:TYR:CZ    | 2.37                     | 0.59              |
| 1:D:246:ILE:CA   | 1:H:52:ILE:CG1   | 2.78                     | 0.59              |
| 1:E:110:LEU:HD22 | 1:E:126:TYR:OH   | 2.02                     | 0.59              |
| 1:E:188:LEU:HD13 | 1:E:198:GLU:HB3  | 1.84                     | 0.59              |
| 1:F:43:TYR:HB3   | 1:F:78:GLU:HA    | 1.85                     | 0.59              |
| 1:G:177:ILE:HG13 | 1:G:177:ILE:O    | 2.02                     | 0.59              |
| 1:G:184:MET:HG3  | 1:G:202:GLU:HB3  | 1.84                     | 0.59              |
| 1:G:196:PRO:HB3  | 1:G:199:ARG:HH21 | 1.67                     | 0.59              |
| 1:H:44:ASN:C     | 1:H:67:LEU:HD12  | 2.23                     | 0.59              |
| 1:H:110:LEU:HD22 | 1:H:126:TYR:OH   | 2.02                     | 0.59              |
| 1:H:177:ILE:HG13 | 1:H:177:ILE:O    | 2.02                     | 0.59              |
| 1:H:184:MET:HG3  | 1:H:202:GLU:HB3  | 1.84                     | 0.59              |
| 1:H:196:PRO:HB3  | 1:H:199:ARG:HH21 | 1.67                     | 0.59              |
| 1:I:50:ILE:O     | 1:M:246:ILE:CB   | 2.51                     | 0.59              |
| 1:I:59:ILE:HD12  | 1:I:92:THR:HA    | 1.85                     | 0.59              |
| 1:I:184:MET:HG3  | 1:I:202:GLU:HB3  | 1.84                     | 0.59              |
| 1:I:196:PRO:HB3  | 1:I:199:ARG:HH21 | 1.67                     | 0.59              |
| 1:I:218:THR:O    | 1:I:219:ASP:HB2  | 2.02                     | 0.59              |
| 1:K:43:TYR:CD2   | 1:K:67:LEU:HD13  | 2.37                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:74:GLU:O     | 1:O:245:GLU:HB3  | 2.01                     | 0.59              |
| 1:L:43:TYR:CD2   | 1:L:67:LEU:HD13  | 2.37                     | 0.59              |
| 1:L:52:ILE:HG23  | 1:P:247:ASP:O    | 2.00                     | 0.59              |
| 1:L:93:ALA:O     | 1:L:96:GLN:HG2   | 2.02                     | 0.59              |
| 1:L:130:ILE:HD11 | 1:L:152:ILE:HD12 | 1.84                     | 0.59              |
| 1:N:36:VAL:CG2   | 1:N:38:PHE:CE2   | 2.85                     | 0.59              |
| 1:N:43:TYR:CD2   | 1:N:67:LEU:HD13  | 2.37                     | 0.59              |
| 1:N:59:ILE:HD12  | 1:N:92:THR:HA    | 1.85                     | 0.59              |
| 1:N:184:MET:HG3  | 1:N:202:GLU:HB3  | 1.84                     | 0.59              |
| 1:O:110:LEU:HD22 | 1:O:126:TYR:OH   | 2.02                     | 0.59              |
| 1:P:109:VAL:HG21 | 1:P:321:VAL:CG1  | 2.32                     | 0.59              |
| 1:P:125:GLU:O    | 1:P:129:TYR:CD1  | 2.55                     | 0.59              |
| 1:A:149:ILE:HG13 | 1:A:149:ILE:O    | 2.01                     | 0.59              |
| 1:A:196:PRO:HB3  | 1:A:199:ARG:HH21 | 1.67                     | 0.59              |
| 1:C:93:ALA:O     | 1:C:96:GLN:HG2   | 2.02                     | 0.59              |
| 1:C:184:MET:HG3  | 1:C:202:GLU:HB3  | 1.84                     | 0.59              |
| 1:E:48:GLY:CA    | 1:F:322:ALA:O    | 2.46                     | 0.59              |
| 1:E:49:TYR:CB    | 1:F:321:VAL:HA   | 2.25                     | 0.59              |
| 1:E:184:MET:HG3  | 1:E:202:GLU:HB3  | 1.84                     | 0.59              |
| 1:F:34:LYS:H     | 1:F:35:ARG:C     | 2.06                     | 0.59              |
| 1:G:175:ALA:HB3  | 1:G:282:LEU:HD22 | 1.83                     | 0.59              |
| 1:G:198:GLU:HA   | 1:J:203:GLU:CB   | 2.24                     | 0.59              |
| 1:H:43:TYR:CD2   | 1:H:67:LEU:HD13  | 2.37                     | 0.59              |
| 1:H:43:TYR:HB3   | 1:H:78:GLU:HA    | 1.85                     | 0.59              |
| 1:H:224:ASN:OD1  | 1:H:233:SER:CB   | 2.48                     | 0.59              |
| 1:I:164:LEU:C    | 1:N:243:GLY:N    | 2.56                     | 0.59              |
| 1:I:245:GLU:OE2  | 1:N:52:ILE:CD1   | 2.50                     | 0.59              |
| 1:J:36:VAL:CG2   | 1:J:38:PHE:CE2   | 2.85                     | 0.59              |
| 1:J:43:TYR:CD2   | 1:J:67:LEU:HD13  | 2.37                     | 0.59              |
| 1:J:68:ILE:CD1   | 1:J:92:THR:HB    | 2.10                     | 0.59              |
| 1:J:95:THR:CG2   | 1:J:136:ILE:HD13 | 2.23                     | 0.59              |
| 1:J:307:THR:HA   | 1:O:231:ALA:CB   | 2.32                     | 0.59              |
| 1:K:184:MET:HG3  | 1:K:202:GLU:HB3  | 1.84                     | 0.59              |
| 1:L:34:LYS:H     | 1:L:35:ARG:C     | 2.06                     | 0.59              |
| 1:L:43:TYR:HB3   | 1:L:78:GLU:HA    | 1.85                     | 0.59              |
| 1:L:222:ASN:HB2  | 1:L:237:ASN:H    | 1.64                     | 0.59              |
| 1:M:59:ILE:HD12  | 1:M:92:THR:HA    | 1.85                     | 0.59              |
| 1:M:109:VAL:HG21 | 1:M:321:VAL:CG1  | 2.32                     | 0.59              |
| 1:N:43:TYR:CE1   | 1:N:67:LEU:C     | 2.76                     | 0.59              |
| 1:N:109:VAL:HG21 | 1:N:321:VAL:CG1  | 2.32                     | 0.59              |
| 1:N:323:VAL:HG22 | 1:O:47:ASP:O     | 2.02                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:9:VAL:HG13   | 1:O:322:ALA:HB1  | 1.83                     | 0.59              |
| 1:P:59:ILE:HD12  | 1:P:92:THR:HA    | 1.85                     | 0.59              |
| 1:P:196:PRO:HB3  | 1:P:199:ARG:HH21 | 1.67                     | 0.59              |
| 1:P:283:ILE:HG13 | 1:P:305:ILE:HD11 | 1.83                     | 0.59              |
| 1:A:43:TYR:CZ    | 1:A:70:GLU:HG2   | 2.38                     | 0.59              |
| 1:A:79:THR:OG1   | 1:B:191:ASN:C    | 2.41                     | 0.59              |
| 1:B:9:VAL:HG13   | 1:B:322:ALA:HB1  | 1.83                     | 0.59              |
| 1:B:106:VAL:CG2  | 1:B:147:PHE:CZ   | 2.82                     | 0.59              |
| 1:B:149:ILE:O    | 1:B:149:ILE:HG13 | 2.01                     | 0.59              |
| 1:B:230:GLN:C    | 1:G:308:ASN:CG   | 2.62                     | 0.59              |
| 1:C:79:THR:OG1   | 1:D:191:ASN:C    | 2.41                     | 0.59              |
| 1:C:125:GLU:O    | 1:C:129:TYR:CD1  | 2.55                     | 0.59              |
| 1:C:227:THR:CG2  | 1:D:301:PRO:HD3  | 2.29                     | 0.59              |
| 1:C:231:ALA:CA   | 1:H:308:ASN:ND2  | 2.64                     | 0.59              |
| 1:D:33:ILE:HD12  | 1:D:312:TRP:NE1  | 2.15                     | 0.59              |
| 1:D:196:PRO:HB3  | 1:D:199:ARG:HH21 | 1.67                     | 0.59              |
| 1:F:218:THR:C    | 1:G:275:LYS:HB3  | 2.08                     | 0.59              |
| 1:G:43:TYR:HB3   | 1:G:78:GLU:HA    | 1.85                     | 0.59              |
| 1:H:119:ASN:ND2  | 1:K:119:ASN:CA   | 2.65                     | 0.59              |
| 1:I:26:LYS:HG2   | 1:I:97:VAL:HG22  | 1.85                     | 0.59              |
| 1:I:43:TYR:CD2   | 1:I:67:LEU:HD13  | 2.37                     | 0.59              |
| 1:I:52:ILE:HG12  | 1:M:245:GLU:C    | 2.21                     | 0.59              |
| 1:I:213:VAL:HG22 | 1:I:257:VAL:HG11 | 1.85                     | 0.59              |
| 1:J:26:LYS:HG2   | 1:J:97:VAL:HG22  | 1.85                     | 0.59              |
| 1:J:59:ILE:HD12  | 1:J:92:THR:HA    | 1.85                     | 0.59              |
| 1:J:184:MET:HG3  | 1:J:202:GLU:HB3  | 1.84                     | 0.59              |
| 1:K:45:LEU:CD2   | 1:K:58:LYS:HZ3   | 2.15                     | 0.59              |
| 1:L:9:VAL:HG13   | 1:L:322:ALA:HB1  | 1.83                     | 0.59              |
| 1:L:33:ILE:HD12  | 1:L:312:TRP:NE1  | 2.15                     | 0.59              |
| 1:L:59:ILE:HD12  | 1:L:92:THR:HA    | 1.85                     | 0.59              |
| 1:L:74:GLU:HA    | 1:P:245:GLU:O    | 2.03                     | 0.59              |
| 1:L:218:THR:O    | 1:L:219:ASP:HB2  | 2.02                     | 0.59              |
| 1:M:184:MET:HG3  | 1:M:202:GLU:HB3  | 1.84                     | 0.59              |
| 1:M:190:ARG:O    | 1:M:193:VAL:HG12 | 2.02                     | 0.59              |
| 1:M:208:ASP:HA   | 1:M:211:ILE:HG12 | 1.83                     | 0.59              |
| 1:N:191:ASN:C    | 1:O:79:THR:OG1   | 2.41                     | 0.59              |
| 1:O:32:ASP:HB3   | 1:O:34:LYS:CB    | 2.30                     | 0.59              |
| 1:O:184:MET:HG3  | 1:O:202:GLU:HB3  | 1.84                     | 0.59              |
| 1:O:208:ASP:HA   | 1:O:211:ILE:HG12 | 1.83                     | 0.59              |
| 1:P:9:VAL:HG13   | 1:P:322:ALA:HB1  | 1.84                     | 0.59              |
| 1:P:43:TYR:CZ    | 1:P:70:GLU:HG2   | 2.38                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:43:TYR:CE1   | 1:P:67:LEU:C     | 2.76                     | 0.59              |
| 1:P:184:MET:HG3  | 1:P:202:GLU:HB3  | 1.84                     | 0.59              |
| 1:A:9:VAL:HG13   | 1:A:322:ALA:HB1  | 1.83                     | 0.59              |
| 1:A:44:ASN:CB    | 1:A:64:LYS:HZ1   | 2.13                     | 0.59              |
| 1:A:59:ILE:HD12  | 1:A:92:THR:HA    | 1.85                     | 0.59              |
| 1:C:34:LYS:H     | 1:C:35:ARG:C     | 2.06                     | 0.59              |
| 1:C:43:TYR:HB3   | 1:C:78:GLU:HA    | 1.85                     | 0.59              |
| 1:C:149:ILE:O    | 1:C:149:ILE:HG13 | 2.01                     | 0.59              |
| 1:C:218:THR:O    | 1:C:219:ASP:HB2  | 2.02                     | 0.59              |
| 1:C:222:ASN:HB2  | 1:C:237:ASN:H    | 1.64                     | 0.59              |
| 1:D:130:ILE:HD11 | 1:D:152:ILE:HD12 | 1.84                     | 0.59              |
| 1:E:43:TYR:CD2   | 1:E:67:LEU:HD13  | 2.37                     | 0.59              |
| 1:E:59:ILE:HD12  | 1:E:92:THR:HA    | 1.85                     | 0.59              |
| 1:F:175:ALA:HB3  | 1:F:282:LEU:HD22 | 1.83                     | 0.59              |
| 1:F:188:LEU:HD13 | 1:F:198:GLU:HB3  | 1.84                     | 0.59              |
| 1:F:190:ARG:O    | 1:F:193:VAL:HG12 | 2.03                     | 0.59              |
| 1:G:36:VAL:CG2   | 1:G:38:PHE:CE2   | 2.85                     | 0.59              |
| 1:G:125:GLU:O    | 1:G:129:TYR:CD1  | 2.55                     | 0.59              |
| 1:H:190:ARG:O    | 1:H:193:VAL:HG12 | 2.03                     | 0.59              |
| 1:I:175:ALA:HB3  | 1:I:282:LEU:HD22 | 1.84                     | 0.59              |
| 1:I:190:ARG:O    | 1:I:193:VAL:HG12 | 2.03                     | 0.59              |
| 1:J:44:ASN:C     | 1:J:67:LEU:HD12  | 2.23                     | 0.59              |
| 1:K:43:TYR:CE1   | 1:K:67:LEU:C     | 2.76                     | 0.59              |
| 1:K:43:TYR:HB3   | 1:K:78:GLU:HA    | 1.85                     | 0.59              |
| 1:K:165:GLU:HG2  | 1:P:241:LYS:HB3  | 1.83                     | 0.59              |
| 1:L:43:TYR:CZ    | 1:L:70:GLU:HG2   | 2.38                     | 0.59              |
| 1:L:43:TYR:CE1   | 1:L:67:LEU:C     | 2.76                     | 0.59              |
| 1:L:184:MET:HG3  | 1:L:202:GLU:HB3  | 1.84                     | 0.59              |
| 1:M:130:ILE:HD11 | 1:M:152:ILE:HD12 | 1.84                     | 0.59              |
| 1:N:9:VAL:HG13   | 1:N:322:ALA:HB1  | 1.83                     | 0.59              |
| 1:P:22:ILE:HD12  | 1:P:27:LYS:HZ1   | 1.67                     | 0.59              |
| 1:A:43:TYR:HB3   | 1:A:78:GLU:HA    | 1.85                     | 0.59              |
| 1:A:177:ILE:HG13 | 1:A:177:ILE:O    | 2.02                     | 0.59              |
| 1:B:26:LYS:HG2   | 1:B:97:VAL:HG22  | 1.85                     | 0.59              |
| 1:B:33:ILE:HD12  | 1:B:312:TRP:NE1  | 2.15                     | 0.59              |
| 1:B:43:TYR:HB3   | 1:B:78:GLU:HA    | 1.85                     | 0.59              |
| 1:B:241:LYS:CA   | 1:G:166:GLN:C    | 2.70                     | 0.59              |
| 1:B:308:ASN:HD21 | 1:F:241:LYS:CB   | 2.16                     | 0.59              |
| 1:C:26:LYS:HG2   | 1:C:97:VAL:HG22  | 1.85                     | 0.59              |
| 1:C:196:PRO:HB3  | 1:C:199:ARG:HH21 | 1.67                     | 0.59              |
| 1:C:241:LYS:C    | 1:H:166:GLN:CA   | 2.57                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:109:VAL:HG21 | 1:E:321:VAL:CG1  | 2.32                     | 0.59              |
| 1:F:36:VAL:N     | 1:F:312:TRP:HH2  | 2.01                     | 0.59              |
| 1:F:50:ILE:CD1   | 1:G:320:LYS:HG2  | 2.33                     | 0.59              |
| 1:F:219:ASP:CG   | 1:G:275:LYS:HZ2  | 2.04                     | 0.59              |
| 1:F:225:LEU:CB   | 1:G:300:TYR:HD2  | 2.10                     | 0.59              |
| 1:G:110:LEU:HD22 | 1:G:126:TYR:OH   | 2.02                     | 0.59              |
| 1:G:202:GLU:OE2  | 1:J:272:ARG:HA   | 2.03                     | 0.59              |
| 1:H:109:VAL:HG21 | 1:H:321:VAL:CG1  | 2.32                     | 0.59              |
| 1:H:130:ILE:HD11 | 1:H:152:ILE:HD12 | 1.84                     | 0.59              |
| 1:H:203:GLU:HB3  | 1:K:272:ARG:O    | 2.02                     | 0.59              |
| 1:I:43:TYR:HB3   | 1:I:78:GLU:HA    | 1.85                     | 0.59              |
| 1:I:110:LEU:HD22 | 1:I:126:TYR:OH   | 2.02                     | 0.59              |
| 1:J:43:TYR:CE1   | 1:J:67:LEU:C     | 2.76                     | 0.59              |
| 1:J:190:ARG:O    | 1:J:193:VAL:HG12 | 2.03                     | 0.59              |
| 1:J:213:VAL:HG22 | 1:J:257:VAL:HG11 | 1.85                     | 0.59              |
| 1:K:26:LYS:HG2   | 1:K:97:VAL:HG22  | 1.85                     | 0.59              |
| 1:L:7:GLU:O      | 1:L:326:TYR:CE1  | 2.56                     | 0.59              |
| 1:M:9:VAL:HG13   | 1:M:322:ALA:HB1  | 1.83                     | 0.59              |
| 1:N:190:ARG:O    | 1:N:193:VAL:HG12 | 2.02                     | 0.59              |
| 1:N:208:ASP:HA   | 1:N:211:ILE:HG12 | 1.83                     | 0.59              |
| 1:O:59:ILE:HD12  | 1:O:92:THR:HA    | 1.85                     | 0.59              |
| 1:O:196:PRO:HB3  | 1:O:199:ARG:HH21 | 1.67                     | 0.59              |
| 1:A:11:THR:CG2   | 1:A:318:LEU:HB2  | 2.33                     | 0.59              |
| 1:A:245:GLU:O    | 1:E:49:TYR:HE2   | 1.74                     | 0.59              |
| 1:B:34:LYS:H     | 1:B:35:ARG:C     | 2.06                     | 0.59              |
| 1:B:43:TYR:CZ    | 1:B:70:GLU:HG2   | 2.38                     | 0.59              |
| 1:B:59:ILE:HD12  | 1:B:92:THR:HA    | 1.85                     | 0.59              |
| 1:B:177:ILE:HG13 | 1:B:177:ILE:O    | 2.02                     | 0.59              |
| 1:B:218:THR:O    | 1:B:219:ASP:HB2  | 2.03                     | 0.59              |
| 1:B:224:ASN:OD1  | 1:B:233:SER:CB   | 2.48                     | 0.59              |
| 1:C:9:VAL:HG13   | 1:C:322:ALA:HB1  | 1.83                     | 0.59              |
| 1:C:33:ILE:HD12  | 1:C:312:TRP:NE1  | 2.16                     | 0.59              |
| 1:C:37:ILE:CG1   | 1:C:312:TRP:CZ2  | 2.79                     | 0.59              |
| 1:C:130:ILE:HD11 | 1:C:152:ILE:HD12 | 1.84                     | 0.59              |
| 1:D:125:GLU:O    | 1:D:129:TYR:CD1  | 2.55                     | 0.59              |
| 1:D:218:THR:O    | 1:D:219:ASP:HB2  | 2.03                     | 0.59              |
| 1:D:283:ILE:HG13 | 1:D:305:ILE:HD11 | 1.83                     | 0.59              |
| 1:E:11:THR:CG2   | 1:E:318:LEU:HB2  | 2.33                     | 0.59              |
| 1:E:43:TYR:CZ    | 1:E:70:GLU:HG2   | 2.38                     | 0.59              |
| 1:E:43:TYR:HB3   | 1:E:78:GLU:HA    | 1.85                     | 0.59              |
| 1:E:50:ILE:CD1   | 1:F:320:LYS:HG2  | 2.33                     | 0.59              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:43:TYR:CZ    | 1:F:70:GLU:HG2   | 2.38                     | 0.59              |
| 1:G:43:TYR:CD2   | 1:G:67:LEU:HD13  | 2.37                     | 0.59              |
| 1:G:213:VAL:HG22 | 1:G:257:VAL:HG11 | 1.85                     | 0.59              |
| 1:I:11:THR:CG2   | 1:I:318:LEU:HB2  | 2.33                     | 0.59              |
| 1:I:74:GLU:O     | 1:M:245:GLU:HB3  | 2.00                     | 0.59              |
| 1:I:303:ASN:C    | 1:J:226:ILE:HD12 | 2.11                     | 0.59              |
| 1:J:11:THR:CG2   | 1:J:318:LEU:HB2  | 2.33                     | 0.59              |
| 1:J:43:TYR:CE2   | 1:J:67:LEU:CB    | 2.80                     | 0.59              |
| 1:J:43:TYR:HB3   | 1:J:78:GLU:HA    | 1.85                     | 0.59              |
| 1:J:245:GLU:OE2  | 1:O:52:ILE:HD13  | 2.03                     | 0.59              |
| 1:K:49:TYR:CE2   | 1:O:246:ILE:N    | 2.71                     | 0.59              |
| 1:K:59:ILE:HD12  | 1:K:92:THR:HA    | 1.85                     | 0.59              |
| 1:K:130:ILE:HD11 | 1:K:152:ILE:HD12 | 1.84                     | 0.59              |
| 1:L:26:LYS:HG2   | 1:L:97:VAL:HG22  | 1.85                     | 0.59              |
| 1:L:109:VAL:HG21 | 1:L:321:VAL:CG1  | 2.32                     | 0.59              |
| 1:M:11:THR:CG2   | 1:M:318:LEU:HB2  | 2.33                     | 0.59              |
| 1:M:34:LYS:H     | 1:M:35:ARG:C     | 2.06                     | 0.59              |
| 1:M:36:VAL:CG2   | 1:M:38:PHE:CE2   | 2.85                     | 0.59              |
| 1:M:44:ASN:CB    | 1:M:64:LYS:HZ1   | 2.12                     | 0.59              |
| 1:M:96:GLN:O     | 1:M:97:VAL:HB    | 2.03                     | 0.59              |
| 1:M:125:GLU:O    | 1:M:129:TYR:CD1  | 2.55                     | 0.59              |
| 1:N:177:ILE:HG13 | 1:N:177:ILE:O    | 2.03                     | 0.59              |
| 1:O:43:TYR:CZ    | 1:O:70:GLU:HG2   | 2.38                     | 0.59              |
| 1:P:11:THR:CG2   | 1:P:318:LEU:HB2  | 2.33                     | 0.59              |
| 1:A:224:ASN:OD1  | 1:A:233:SER:CB   | 2.48                     | 0.58              |
| 1:B:43:TYR:CE1   | 1:B:67:LEU:C     | 2.76                     | 0.58              |
| 1:C:11:THR:CG2   | 1:C:318:LEU:HB2  | 2.33                     | 0.58              |
| 1:C:177:ILE:HG13 | 1:C:177:ILE:O    | 2.02                     | 0.58              |
| 1:C:230:GLN:CB   | 1:H:306:ILE:HG23 | 2.28                     | 0.58              |
| 1:C:231:ALA:CB   | 1:H:307:THR:HA   | 2.32                     | 0.58              |
| 1:C:248:THR:HG22 | 1:G:52:ILE:HG23  | 1.85                     | 0.58              |
| 1:D:149:ILE:HG13 | 1:D:149:ILE:O    | 2.01                     | 0.58              |
| 1:E:225:LEU:CB   | 1:F:300:TYR:HD2  | 2.10                     | 0.58              |
| 1:G:50:ILE:CD1   | 1:H:320:LYS:HG2  | 2.33                     | 0.58              |
| 1:H:7:GLU:O      | 1:H:326:TYR:CE1  | 2.56                     | 0.58              |
| 1:H:43:TYR:CE1   | 1:H:67:LEU:C     | 2.76                     | 0.58              |
| 1:H:213:VAL:HG22 | 1:H:257:VAL:HG11 | 1.85                     | 0.58              |
| 1:I:43:TYR:CE1   | 1:I:67:LEU:C     | 2.76                     | 0.58              |
| 1:I:282:LEU:HG   | 1:I:303:ASN:OD1  | 2.03                     | 0.58              |
| 1:I:300:TYR:HD2  | 1:J:225:LEU:CB   | 2.10                     | 0.58              |
| 1:J:49:TYR:CZ    | 1:N:246:ILE:N    | 2.68                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:43:TYR:CZ    | 1:K:70:GLU:HG2   | 2.38                     | 0.58              |
| 1:L:36:VAL:N     | 1:L:312:TRP:HH2  | 2.01                     | 0.58              |
| 1:M:105:LYS:CD   | 1:M:148:GLU:HB2  | 2.27                     | 0.58              |
| 1:M:323:VAL:CG2  | 1:N:49:TYR:O     | 2.50                     | 0.58              |
| 1:N:11:THR:CG2   | 1:N:318:LEU:HB2  | 2.33                     | 0.58              |
| 1:N:32:ASP:HB3   | 1:N:34:LYS:CB    | 2.30                     | 0.58              |
| 1:N:43:TYR:CE1   | 1:N:67:LEU:HB3   | 2.38                     | 0.58              |
| 1:N:54:GLY:HA3   | 1:N:56:SER:H     | 1.64                     | 0.58              |
| 1:N:96:GLN:O     | 1:N:97:VAL:HB    | 2.03                     | 0.58              |
| 1:N:110:LEU:HD22 | 1:N:126:TYR:OH   | 2.02                     | 0.58              |
| 1:O:34:LYS:H     | 1:O:35:ARG:C     | 2.06                     | 0.58              |
| 1:O:43:TYR:CE1   | 1:O:67:LEU:HB3   | 2.38                     | 0.58              |
| 1:P:45:LEU:HD22  | 1:P:58:LYS:HZ3   | 1.67                     | 0.58              |
| 1:P:110:LEU:HD22 | 1:P:126:TYR:OH   | 2.02                     | 0.58              |
| 1:A:36:VAL:CG2   | 1:A:38:PHE:CE2   | 2.85                     | 0.58              |
| 1:A:173:ASN:OD1  | 1:A:188:LEU:HD21 | 2.04                     | 0.58              |
| 1:A:218:THR:O    | 1:A:219:ASP:HB2  | 2.02                     | 0.58              |
| 1:B:130:ILE:HD11 | 1:B:152:ILE:HD12 | 1.84                     | 0.58              |
| 1:B:196:PRO:HB3  | 1:B:199:ARG:HH21 | 1.67                     | 0.58              |
| 1:B:241:LYS:O    | 1:G:165:GLU:CB   | 2.51                     | 0.58              |
| 1:D:9:VAL:HG13   | 1:D:322:ALA:HB1  | 1.83                     | 0.58              |
| 1:D:43:TYR:HB3   | 1:D:78:GLU:HA    | 1.85                     | 0.58              |
| 1:D:282:LEU:HG   | 1:D:303:ASN:OD1  | 2.04                     | 0.58              |
| 1:E:26:LYS:HG2   | 1:E:97:VAL:HG22  | 1.85                     | 0.58              |
| 1:E:95:THR:CG2   | 1:E:136:ILE:HD13 | 2.22                     | 0.58              |
| 1:F:43:TYR:CD2   | 1:F:67:LEU:HD13  | 2.37                     | 0.58              |
| 1:G:43:TYR:CZ    | 1:G:70:GLU:HG2   | 2.38                     | 0.58              |
| 1:G:49:TYR:N     | 1:H:322:ALA:C    | 2.56                     | 0.58              |
| 1:G:188:LEU:HD13 | 1:G:198:GLU:HB3  | 1.84                     | 0.58              |
| 1:G:190:ARG:O    | 1:G:193:VAL:HG12 | 2.03                     | 0.58              |
| 1:H:26:LYS:HG2   | 1:H:97:VAL:HG22  | 1.85                     | 0.58              |
| 1:H:43:TYR:CE1   | 1:H:67:LEU:HB3   | 2.38                     | 0.58              |
| 1:H:45:LEU:HD22  | 1:H:58:LYS:HZ3   | 1.67                     | 0.58              |
| 1:H:188:LEU:HD13 | 1:H:198:GLU:HB3  | 1.84                     | 0.58              |
| 1:I:177:ILE:HG13 | 1:I:177:ILE:O    | 2.02                     | 0.58              |
| 1:I:322:ALA:C    | 1:J:49:TYR:N     | 2.56                     | 0.58              |
| 1:J:109:VAL:HG21 | 1:J:321:VAL:CG1  | 2.32                     | 0.58              |
| 1:J:275:LYS:HB3  | 1:K:218:THR:C    | 2.08                     | 0.58              |
| 1:J:282:LEU:HG   | 1:J:303:ASN:OD1  | 2.03                     | 0.58              |
| 1:J:320:LYS:HG2  | 1:K:50:ILE:CD1   | 2.33                     | 0.58              |
| 1:K:7:GLU:O      | 1:K:326:TYR:CE1  | 2.56                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:43:TYR:CE1   | 1:K:67:LEU:HB3   | 2.38                     | 0.58              |
| 1:K:173:ASN:OD1  | 1:K:188:LEU:HD21 | 2.03                     | 0.58              |
| 1:K:308:ASN:HD22 | 1:P:231:ALA:CA   | 2.13                     | 0.58              |
| 1:L:43:TYR:CE1   | 1:L:67:LEU:HB3   | 2.38                     | 0.58              |
| 1:M:282:LEU:HG   | 1:M:303:ASN:OD1  | 2.04                     | 0.58              |
| 1:M:320:LYS:O    | 1:N:47:ASP:O     | 2.21                     | 0.58              |
| 1:O:7:GLU:O      | 1:O:326:TYR:CE1  | 2.56                     | 0.58              |
| 1:O:44:ASN:C     | 1:O:67:LEU:HD12  | 2.23                     | 0.58              |
| 1:O:96:GLN:O     | 1:O:97:VAL:HB    | 2.03                     | 0.58              |
| 1:O:320:LYS:O    | 1:P:47:ASP:O     | 2.21                     | 0.58              |
| 1:P:7:GLU:O      | 1:P:326:TYR:CE1  | 2.56                     | 0.58              |
| 1:A:33:ILE:HD12  | 1:A:312:TRP:NE1  | 2.15                     | 0.58              |
| 1:A:246:ILE:C    | 1:E:52:ILE:HG12  | 2.24                     | 0.58              |
| 1:B:173:ASN:OD1  | 1:B:188:LEU:HD21 | 2.04                     | 0.58              |
| 1:B:184:MET:HG3  | 1:B:202:GLU:HB3  | 1.84                     | 0.58              |
| 1:B:248:THR:CG2  | 1:F:52:ILE:HA    | 2.26                     | 0.58              |
| 1:C:282:LEU:HG   | 1:C:303:ASN:OD1  | 2.04                     | 0.58              |
| 1:E:175:ALA:HB3  | 1:E:282:LEU:HD22 | 1.83                     | 0.58              |
| 1:F:11:THR:CG2   | 1:F:318:LEU:HB2  | 2.33                     | 0.58              |
| 1:F:59:ILE:HD12  | 1:F:92:THR:HA    | 1.85                     | 0.58              |
| 1:G:26:LYS:HG2   | 1:G:97:VAL:HG22  | 1.85                     | 0.58              |
| 1:G:59:ILE:HD12  | 1:G:92:THR:HA    | 1.85                     | 0.58              |
| 1:G:183:ASN:OD1  | 1:J:197:SER:OG   | 2.11                     | 0.58              |
| 1:H:59:ILE:HD12  | 1:H:92:THR:HA    | 1.85                     | 0.58              |
| 1:H:203:GLU:HG2  | 1:K:197:SER:CB   | 2.33                     | 0.58              |
| 1:H:203:GLU:HG2  | 1:K:197:SER:HB3  | 1.85                     | 0.58              |
| 1:J:43:TYR:CZ    | 1:J:70:GLU:HG2   | 2.38                     | 0.58              |
| 1:J:43:TYR:CE1   | 1:J:67:LEU:HB3   | 2.38                     | 0.58              |
| 1:J:173:ASN:OD1  | 1:J:188:LEU:HD21 | 2.04                     | 0.58              |
| 1:J:177:ILE:HG13 | 1:J:177:ILE:O    | 2.02                     | 0.58              |
| 1:K:190:ARG:O    | 1:K:193:VAL:HG12 | 2.03                     | 0.58              |
| 1:K:282:LEU:HG   | 1:K:303:ASN:OD1  | 2.03                     | 0.58              |
| 1:K:320:LYS:C    | 1:P:246:ILE:HD11 | 2.24                     | 0.58              |
| 1:K:322:ALA:O    | 1:L:48:GLY:CA    | 2.46                     | 0.58              |
| 1:L:173:ASN:OD1  | 1:L:188:LEU:HD21 | 2.03                     | 0.58              |
| 1:L:213:VAL:HG22 | 1:L:257:VAL:HG11 | 1.85                     | 0.58              |
| 1:L:282:LEU:HG   | 1:L:303:ASN:OD1  | 2.03                     | 0.58              |
| 1:N:43:TYR:CZ    | 1:N:70:GLU:HG2   | 2.38                     | 0.58              |
| 1:O:177:ILE:HG13 | 1:O:177:ILE:O    | 2.03                     | 0.58              |
| 1:O:211:ILE:HA   | 1:O:220:LEU:HD21 | 1.82                     | 0.58              |
| 1:P:26:LYS:HG2   | 1:P:97:VAL:HG22  | 1.85                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:224:ASN:CA   | 1:B:277:ASP:OD2  | 2.43                     | 0.58              |
| 1:B:282:LEU:HG   | 1:B:303:ASN:OD1  | 2.03                     | 0.58              |
| 1:C:43:TYR:CZ    | 1:C:70:GLU:HG2   | 2.38                     | 0.58              |
| 1:C:173:ASN:OD1  | 1:C:188:LEU:HD21 | 2.04                     | 0.58              |
| 1:D:11:THR:CG2   | 1:D:318:LEU:HB2  | 2.33                     | 0.58              |
| 1:D:43:TYR:CE1   | 1:D:67:LEU:C     | 2.76                     | 0.58              |
| 1:E:43:TYR:CE1   | 1:E:67:LEU:HB3   | 2.38                     | 0.58              |
| 1:E:52:ILE:H     | 1:E:74:GLU:CG    | 2.06                     | 0.58              |
| 1:F:43:TYR:CE1   | 1:F:67:LEU:HB3   | 2.38                     | 0.58              |
| 1:G:9:VAL:HG13   | 1:G:322:ALA:HB1  | 1.83                     | 0.58              |
| 1:G:43:TYR:CE1   | 1:G:67:LEU:HB3   | 2.38                     | 0.58              |
| 1:G:161:VAL:HG21 | 1:G:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:H:96:GLN:O     | 1:H:97:VAL:HB    | 2.03                     | 0.58              |
| 1:H:161:VAL:HG21 | 1:H:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:I:36:VAL:N     | 1:I:312:TRP:HH2  | 2.01                     | 0.58              |
| 1:I:106:VAL:CG2  | 1:I:147:PHE:CZ   | 2.82                     | 0.58              |
| 1:K:11:THR:CG2   | 1:K:318:LEU:HB2  | 2.33                     | 0.58              |
| 1:K:218:THR:O    | 1:K:219:ASP:HB2  | 2.02                     | 0.58              |
| 1:M:32:ASP:HB3   | 1:M:34:LYS:CB    | 2.30                     | 0.58              |
| 1:N:196:PRO:HB3  | 1:N:199:ARG:HH21 | 1.67                     | 0.58              |
| 1:N:282:LEU:HG   | 1:N:303:ASN:OD1  | 2.04                     | 0.58              |
| 1:P:96:GLN:O     | 1:P:97:VAL:HB    | 2.04                     | 0.58              |
| 1:P:161:VAL:HG21 | 1:P:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:A:43:TYR:CE1   | 1:A:67:LEU:C     | 2.76                     | 0.58              |
| 1:A:43:TYR:CE1   | 1:A:67:LEU:HB3   | 2.38                     | 0.58              |
| 1:A:282:LEU:HG   | 1:A:303:ASN:OD1  | 2.04                     | 0.58              |
| 1:B:240:MET:HE1  | 1:F:73:VAL:CG1   | 2.32                     | 0.58              |
| 1:B:245:GLU:C    | 1:F:49:TYR:HE2   | 2.04                     | 0.58              |
| 1:C:47:ASP:O     | 1:D:323:VAL:HG22 | 2.02                     | 0.58              |
| 1:C:63:GLY:O     | 1:C:64:LYS:CB    | 2.52                     | 0.58              |
| 1:C:110:LEU:HD22 | 1:C:126:TYR:OH   | 2.02                     | 0.58              |
| 1:D:26:LYS:HG2   | 1:D:97:VAL:HG22  | 1.85                     | 0.58              |
| 1:D:173:ASN:OD1  | 1:D:188:LEU:HD21 | 2.04                     | 0.58              |
| 1:E:45:LEU:CD2   | 1:E:58:LYS:HZ3   | 2.15                     | 0.58              |
| 1:E:219:ASP:C    | 1:F:277:ASP:HB3  | 2.11                     | 0.58              |
| 1:F:26:LYS:HG2   | 1:F:97:VAL:HG22  | 1.85                     | 0.58              |
| 1:F:271:LYS:HG2  | 1:I:202:GLU:HG3  | 1.86                     | 0.58              |
| 1:G:43:TYR:CE1   | 1:G:67:LEU:C     | 2.76                     | 0.58              |
| 1:G:225:LEU:CB   | 1:H:300:TYR:HD2  | 2.09                     | 0.58              |
| 1:G:282:LEU:HG   | 1:G:303:ASN:OD1  | 2.03                     | 0.58              |
| 1:H:203:GLU:N    | 1:K:272:ARG:CG   | 2.21                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:43:TYR:CE1   | 1:I:67:LEU:HB3   | 2.38                     | 0.58              |
| 1:I:173:ASN:OD1  | 1:I:188:LEU:HD21 | 2.04                     | 0.58              |
| 1:K:74:GLU:C     | 1:O:245:GLU:CB   | 2.63                     | 0.58              |
| 1:K:177:ILE:HG13 | 1:K:177:ILE:O    | 2.02                     | 0.58              |
| 1:K:320:LYS:HG2  | 1:L:50:ILE:CD1   | 2.33                     | 0.58              |
| 1:M:26:LYS:HG2   | 1:M:97:VAL:HG22  | 1.85                     | 0.58              |
| 1:M:196:PRO:HB3  | 1:M:199:ARG:HH21 | 1.68                     | 0.58              |
| 1:N:7:GLU:O      | 1:N:326:TYR:CE1  | 2.56                     | 0.58              |
| 1:N:213:VAL:HG22 | 1:N:257:VAL:HG11 | 1.85                     | 0.58              |
| 1:O:43:TYR:CE1   | 1:O:67:LEU:C     | 2.76                     | 0.58              |
| 1:O:190:ARG:O    | 1:O:193:VAL:HG12 | 2.03                     | 0.58              |
| 1:O:282:LEU:HG   | 1:O:303:ASN:OD1  | 2.04                     | 0.58              |
| 1:P:213:VAL:HG22 | 1:P:257:VAL:HG11 | 1.85                     | 0.58              |
| 1:A:130:ILE:HD11 | 1:A:152:ILE:HD12 | 1.84                     | 0.58              |
| 1:B:79:THR:OG1   | 1:C:191:ASN:C    | 2.41                     | 0.58              |
| 1:C:59:ILE:HD12  | 1:C:92:THR:HA    | 1.85                     | 0.58              |
| 1:C:100:SER:CB   | 1:C:101:ASN:HB2  | 2.34                     | 0.58              |
| 1:H:43:TYR:CZ    | 1:H:70:GLU:HG2   | 2.38                     | 0.58              |
| 1:H:173:ASN:OD1  | 1:H:188:LEU:HD21 | 2.04                     | 0.58              |
| 1:H:202:GLU:HG3  | 1:K:271:LYS:HG2  | 1.86                     | 0.58              |
| 1:H:211:ILE:HA   | 1:H:220:LEU:HD21 | 1.82                     | 0.58              |
| 1:I:320:LYS:HG2  | 1:J:50:ILE:CD1   | 2.33                     | 0.58              |
| 1:J:309:ASN:O    | 1:O:229:GLU:OE1  | 2.21                     | 0.58              |
| 1:K:75:ASP:CG    | 1:O:245:GLU:OE1  | 2.41                     | 0.58              |
| 1:L:50:ILE:CD1   | 1:P:246:ILE:C    | 2.71                     | 0.58              |
| 1:L:190:ARG:O    | 1:L:193:VAL:HG12 | 2.03                     | 0.58              |
| 1:M:43:TYR:CE1   | 1:M:67:LEU:HB3   | 2.38                     | 0.58              |
| 1:M:84:LEU:HG    | 1:M:88:LEU:CD1   | 2.34                     | 0.58              |
| 1:N:36:VAL:N     | 1:N:312:TRP:HH2  | 2.01                     | 0.58              |
| 1:O:191:ASN:C    | 1:P:79:THR:OG1   | 2.41                     | 0.58              |
| 1:P:10:MET:HB3   | 1:P:108:LEU:CD2  | 2.33                     | 0.58              |
| 1:A:7:GLU:O      | 1:A:326:TYR:CE1  | 2.56                     | 0.58              |
| 1:A:100:SER:CB   | 1:A:101:ASN:HB2  | 2.34                     | 0.58              |
| 1:B:7:GLU:O      | 1:B:326:TYR:CE1  | 2.56                     | 0.58              |
| 1:B:36:VAL:CG2   | 1:B:38:PHE:CE2   | 2.85                     | 0.58              |
| 1:B:100:SER:CB   | 1:B:101:ASN:HB2  | 2.34                     | 0.58              |
| 1:B:161:VAL:HG21 | 1:B:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:B:232:GLU:H    | 1:G:308:ASN:HD22 | 0.61                     | 0.58              |
| 1:C:43:TYR:CE1   | 1:C:67:LEU:C     | 2.76                     | 0.58              |
| 1:C:161:VAL:HG21 | 1:C:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:D:36:VAL:CG2   | 1:D:38:PHE:CE2   | 2.85                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:96:GLN:O     | 1:D:97:VAL:HB    | 2.03                     | 0.58              |
| 1:D:240:MET:HE3  | 1:H:73:VAL:CG2   | 2.33                     | 0.58              |
| 1:E:36:VAL:N     | 1:E:312:TRP:HH2  | 2.01                     | 0.58              |
| 1:E:43:TYR:CE1   | 1:E:67:LEU:C     | 2.76                     | 0.58              |
| 1:E:219:ASP:N    | 1:F:277:ASP:HB3  | 2.04                     | 0.58              |
| 1:F:7:GLU:O      | 1:F:326:TYR:CE1  | 2.56                     | 0.58              |
| 1:F:161:VAL:HG21 | 1:F:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:F:197:SER:CB   | 1:I:203:GLU:HG2  | 2.34                     | 0.58              |
| 1:G:7:GLU:O      | 1:G:326:TYR:CE1  | 2.56                     | 0.58              |
| 1:G:68:ILE:CD1   | 1:G:92:THR:HB    | 2.10                     | 0.58              |
| 1:H:33:ILE:HD12  | 1:H:312:TRP:NE1  | 2.15                     | 0.58              |
| 1:I:22:ILE:HD12  | 1:I:27:LYS:HZ1   | 1.69                     | 0.58              |
| 1:J:7:GLU:O      | 1:J:326:TYR:CE1  | 2.56                     | 0.58              |
| 1:K:95:THR:CG2   | 1:K:136:ILE:HD13 | 2.22                     | 0.58              |
| 1:K:105:LYS:CD   | 1:K:148:GLU:HB2  | 2.27                     | 0.58              |
| 1:K:161:VAL:HG21 | 1:K:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:L:161:VAL:HG21 | 1:L:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:L:177:ILE:HG13 | 1:L:177:ILE:O    | 2.02                     | 0.58              |
| 1:M:43:TYR:CZ    | 1:M:70:GLU:HG2   | 2.38                     | 0.58              |
| 1:M:191:ASN:C    | 1:N:79:THR:OG1   | 2.41                     | 0.58              |
| 1:O:10:MET:HB3   | 1:O:108:LEU:CD2  | 2.33                     | 0.58              |
| 1:O:26:LYS:HG2   | 1:O:97:VAL:HG22  | 1.85                     | 0.58              |
| 1:O:161:VAL:HG21 | 1:O:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:P:43:TYR:CE1   | 1:P:67:LEU:HB3   | 2.38                     | 0.58              |
| 1:P:119:ASN:HD22 | 1:P:121:LYS:HG2  | 1.69                     | 0.58              |
| 1:A:26:LYS:HG2   | 1:A:97:VAL:HG22  | 1.85                     | 0.58              |
| 1:A:50:ILE:CG1   | 1:B:320:LYS:CE   | 1.92                     | 0.58              |
| 1:A:161:VAL:HG21 | 1:A:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:A:184:MET:HG3  | 1:A:202:GLU:HB3  | 1.84                     | 0.58              |
| 1:B:95:THR:HG22  | 1:B:136:ILE:CD1  | 2.24                     | 0.58              |
| 1:C:7:GLU:O      | 1:C:326:TYR:CE1  | 2.56                     | 0.58              |
| 1:D:59:ILE:HD12  | 1:D:92:THR:HA    | 1.85                     | 0.58              |
| 1:D:63:GLY:O     | 1:D:64:LYS:CB    | 2.52                     | 0.58              |
| 1:D:105:LYS:HZ2  | 1:D:148:GLU:HB3  | 1.67                     | 0.58              |
| 1:D:177:ILE:HG13 | 1:D:177:ILE:O    | 2.03                     | 0.58              |
| 1:D:308:ASN:HD21 | 1:H:241:LYS:CB   | 2.16                     | 0.58              |
| 1:E:7:GLU:O      | 1:E:326:TYR:CE1  | 2.56                     | 0.58              |
| 1:F:48:GLY:CA    | 1:G:322:ALA:O    | 2.46                     | 0.58              |
| 1:F:173:ASN:OD1  | 1:F:188:LEU:HD21 | 2.03                     | 0.58              |
| 1:F:272:ARG:O    | 1:I:203:GLU:HB3  | 2.03                     | 0.58              |
| 1:G:48:GLY:CA    | 1:H:322:ALA:O    | 2.46                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:173:ASN:OD1  | 1:G:188:LEU:HD21 | 2.04                     | 0.58              |
| 1:I:44:ASN:CB    | 1:I:64:LYS:HZ1   | 2.17                     | 0.58              |
| 1:J:84:LEU:HG    | 1:J:88:LEU:CD1   | 2.34                     | 0.58              |
| 1:M:43:TYR:HB3   | 1:M:78:GLU:HA    | 1.85                     | 0.58              |
| 1:M:320:LYS:HG2  | 1:N:50:ILE:CG2   | 2.34                     | 0.58              |
| 1:N:119:ASN:HD22 | 1:N:121:LYS:HG2  | 1.69                     | 0.58              |
| 1:N:161:VAL:HG21 | 1:N:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:O:173:ASN:OD1  | 1:O:188:LEU:HD21 | 2.04                     | 0.58              |
| 1:P:190:ARG:O    | 1:P:193:VAL:HG12 | 2.03                     | 0.58              |
| 1:A:229:GLU:HG3  | 1:F:309:ASN:OD1  | 1.58                     | 0.58              |
| 1:B:63:GLY:O     | 1:B:64:LYS:CB    | 2.51                     | 0.58              |
| 1:C:36:VAL:N     | 1:C:312:TRP:HH2  | 2.01                     | 0.58              |
| 1:C:47:ASP:O     | 1:D:320:LYS:O    | 2.21                     | 0.58              |
| 1:C:119:ASN:HD22 | 1:C:121:LYS:HG2  | 1.69                     | 0.58              |
| 1:D:22:ILE:HD12  | 1:D:27:LYS:HZ1   | 1.68                     | 0.58              |
| 1:D:37:ILE:CG1   | 1:D:312:TRP:CZ2  | 2.79                     | 0.58              |
| 1:E:173:ASN:OD1  | 1:E:188:LEU:HD21 | 2.04                     | 0.58              |
| 1:F:43:TYR:CE1   | 1:F:67:LEU:C     | 2.76                     | 0.58              |
| 1:F:106:VAL:HG21 | 1:F:147:PHE:CE1  | 2.39                     | 0.58              |
| 1:F:282:LEU:HG   | 1:F:303:ASN:OD1  | 2.04                     | 0.58              |
| 1:G:63:GLY:O     | 1:G:64:LYS:CB    | 2.52                     | 0.58              |
| 1:G:84:LEU:HG    | 1:G:88:LEU:CD1   | 2.34                     | 0.58              |
| 1:G:202:GLU:HG3  | 1:J:271:LYS:CG   | 2.32                     | 0.58              |
| 1:H:11:THR:CG2   | 1:H:318:LEU:HB2  | 2.33                     | 0.58              |
| 1:H:84:LEU:HG    | 1:H:88:LEU:CD1   | 2.34                     | 0.58              |
| 1:I:43:TYR:CZ    | 1:I:70:GLU:HG2   | 2.38                     | 0.58              |
| 1:I:161:VAL:HG21 | 1:I:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:J:161:VAL:HG21 | 1:J:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:K:84:LEU:HG    | 1:K:88:LEU:CD1   | 2.34                     | 0.58              |
| 1:L:10:MET:HB3   | 1:L:108:LEU:CD2  | 2.33                     | 0.58              |
| 1:L:133:ASN:HD22 | 1:L:148:GLU:CA   | 2.11                     | 0.58              |
| 1:M:7:GLU:O      | 1:M:326:TYR:CE1  | 2.56                     | 0.58              |
| 1:M:10:MET:HB3   | 1:M:108:LEU:CD2  | 2.33                     | 0.58              |
| 1:M:301:PRO:HD3  | 1:N:227:THR:CG2  | 2.30                     | 0.58              |
| 1:N:10:MET:HB3   | 1:N:108:LEU:CD2  | 2.33                     | 0.58              |
| 1:N:43:TYR:HB3   | 1:N:78:GLU:HA    | 1.85                     | 0.58              |
| 1:N:84:LEU:HG    | 1:N:88:LEU:CD1   | 2.34                     | 0.58              |
| 1:P:95:THR:HG22  | 1:P:136:ILE:CD1  | 2.24                     | 0.58              |
| 1:P:282:LEU:HG   | 1:P:303:ASN:OD1  | 2.04                     | 0.58              |
| 1:A:222:ASN:HB2  | 1:A:237:ASN:H    | 1.64                     | 0.58              |
| 1:B:43:TYR:CE2   | 1:B:67:LEU:CB    | 2.80                     | 0.58              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:50:ILE:CG1   | 1:C:320:LYS:CE   | 1.92                     | 0.58              |
| 1:B:308:ASN:ND2  | 1:F:241:LYS:CB   | 2.67                     | 0.58              |
| 1:C:96:GLN:O     | 1:C:97:VAL:HB    | 2.03                     | 0.58              |
| 1:D:161:VAL:HG21 | 1:D:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:E:109:VAL:CB   | 1:E:322:ALA:HB2  | 2.26                     | 0.58              |
| 1:E:161:VAL:HG21 | 1:E:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:E:213:VAL:HG22 | 1:E:257:VAL:HG11 | 1.85                     | 0.58              |
| 1:E:218:THR:N    | 1:F:278:GLN:OE1  | 2.37                     | 0.58              |
| 1:F:213:VAL:HG22 | 1:F:257:VAL:HG11 | 1.85                     | 0.58              |
| 1:F:218:THR:N    | 1:G:278:GLN:OE1  | 2.37                     | 0.58              |
| 1:H:202:GLU:HG2  | 1:K:272:ARG:CA   | 2.34                     | 0.58              |
| 1:H:282:LEU:HG   | 1:H:303:ASN:OD1  | 2.04                     | 0.58              |
| 1:I:84:LEU:HG    | 1:I:88:LEU:CD1   | 2.34                     | 0.58              |
| 1:J:52:ILE:H     | 1:J:74:GLU:CG    | 2.06                     | 0.58              |
| 1:K:300:TYR:CE2  | 1:L:225:LEU:CB   | 2.87                     | 0.58              |
| 1:K:324:ALA:C    | 1:L:46:GLU:HG3   | 2.24                     | 0.58              |
| 1:M:43:TYR:CE1   | 1:M:67:LEU:C     | 2.76                     | 0.58              |
| 1:M:112:CYS:HG   | 1:M:122:ALA:HB1  | 1.68                     | 0.58              |
| 1:M:119:ASN:HD22 | 1:M:121:LYS:HG2  | 1.69                     | 0.58              |
| 1:M:161:VAL:HG21 | 1:M:176:VAL:HG11 | 1.86                     | 0.58              |
| 1:N:320:LYS:HG2  | 1:O:50:ILE:CG2   | 2.34                     | 0.58              |
| 1:O:106:VAL:HG21 | 1:O:147:PHE:CE1  | 2.39                     | 0.58              |
| 1:O:320:LYS:HG2  | 1:P:50:ILE:CG2   | 2.34                     | 0.58              |
| 1:P:173:ASN:OD1  | 1:P:188:LEU:HD21 | 2.04                     | 0.58              |
| 1:A:47:ASP:O     | 1:B:320:LYS:O    | 2.21                     | 0.57              |
| 1:B:106:VAL:HG21 | 1:B:147:PHE:CE1  | 2.39                     | 0.57              |
| 1:C:68:ILE:CD1   | 1:C:92:THR:HB    | 2.10                     | 0.57              |
| 1:D:7:GLU:O      | 1:D:326:TYR:CE1  | 2.56                     | 0.57              |
| 1:D:43:TYR:CZ    | 1:D:70:GLU:HG2   | 2.38                     | 0.57              |
| 1:D:68:ILE:CD1   | 1:D:92:THR:HB    | 2.10                     | 0.57              |
| 1:E:96:GLN:O     | 1:E:97:VAL:HB    | 2.03                     | 0.57              |
| 1:G:96:GLN:O     | 1:G:97:VAL:HB    | 2.03                     | 0.57              |
| 1:H:106:VAL:HG21 | 1:H:147:PHE:CE1  | 2.39                     | 0.57              |
| 1:I:106:VAL:HG21 | 1:I:147:PHE:CE1  | 2.39                     | 0.57              |
| 1:J:52:ILE:CB    | 1:N:247:ASP:O    | 2.52                     | 0.57              |
| 1:J:300:TYR:CE2  | 1:K:225:LEU:CB   | 2.87                     | 0.57              |
| 1:J:322:ALA:O    | 1:K:48:GLY:CA    | 2.46                     | 0.57              |
| 1:J:324:ALA:C    | 1:K:46:GLU:HG3   | 2.24                     | 0.57              |
| 1:L:11:THR:CG2   | 1:L:318:LEU:HB2  | 2.33                     | 0.57              |
| 1:L:45:LEU:CD2   | 1:L:58:LYS:HZ3   | 2.17                     | 0.57              |
| 1:L:84:LEU:HG    | 1:L:88:LEU:CD1   | 2.34                     | 0.57              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:173:ASN:OD1  | 1:N:188:LEU:HD21 | 2.04                     | 0.57              |
| 1:O:11:THR:CG2   | 1:O:318:LEU:HB2  | 2.33                     | 0.57              |
| 1:O:95:THR:HG22  | 1:O:136:ILE:CD1  | 2.24                     | 0.57              |
| 1:O:213:VAL:HG22 | 1:O:257:VAL:HG11 | 1.85                     | 0.57              |
| 1:P:218:THR:O    | 1:P:219:ASP:HB2  | 2.03                     | 0.57              |
| 1:A:12:LEU:O     | 1:A:110:LEU:HG   | 2.05                     | 0.57              |
| 1:A:106:VAL:HG21 | 1:A:147:PHE:CE1  | 2.39                     | 0.57              |
| 1:B:43:TYR:CE1   | 1:B:67:LEU:HB3   | 2.38                     | 0.57              |
| 1:B:96:GLN:O     | 1:B:97:VAL:HB    | 2.03                     | 0.57              |
| 1:B:246:ILE:HB   | 1:G:320:LYS:HG2  | 1.85                     | 0.57              |
| 1:C:45:LEU:HD22  | 1:C:58:LYS:HZ3   | 1.69                     | 0.57              |
| 1:C:50:ILE:CG2   | 1:D:320:LYS:HG2  | 2.34                     | 0.57              |
| 1:D:100:SER:CB   | 1:D:101:ASN:HB2  | 2.34                     | 0.57              |
| 1:D:224:ASN:OD1  | 1:D:233:SER:CB   | 2.48                     | 0.57              |
| 1:D:246:ILE:CG1  | 1:H:50:ILE:O     | 2.48                     | 0.57              |
| 1:E:218:THR:O    | 1:E:219:ASP:HB2  | 2.02                     | 0.57              |
| 1:F:219:ASP:N    | 1:G:277:ASP:HB3  | 2.05                     | 0.57              |
| 1:G:11:THR:CG2   | 1:G:318:LEU:HB2  | 2.33                     | 0.57              |
| 1:G:218:THR:N    | 1:H:278:GLN:OE1  | 2.37                     | 0.57              |
| 1:G:225:LEU:HB3  | 1:H:300:TYR:CE2  | 2.38                     | 0.57              |
| 1:I:7:GLU:O      | 1:I:326:TYR:CE1  | 2.56                     | 0.57              |
| 1:I:96:GLN:O     | 1:I:97:VAL:HB    | 2.03                     | 0.57              |
| 1:I:324:ALA:C    | 1:J:46:GLU:HG3   | 2.24                     | 0.57              |
| 1:J:100:SER:CB   | 1:J:101:ASN:HB2  | 2.34                     | 0.57              |
| 1:K:100:SER:CB   | 1:K:101:ASN:HB2  | 2.34                     | 0.57              |
| 1:L:100:SER:CB   | 1:L:101:ASN:HB2  | 2.34                     | 0.57              |
| 1:P:34:LYS:H     | 1:P:35:ARG:C     | 2.06                     | 0.57              |
| 1:A:245:GLU:O    | 1:E:52:ILE:HG12  | 2.04                     | 0.57              |
| 1:B:11:THR:CG2   | 1:B:318:LEU:HB2  | 2.33                     | 0.57              |
| 1:B:12:LEU:O     | 1:B:110:LEU:HG   | 2.05                     | 0.57              |
| 1:C:12:LEU:O     | 1:C:110:LEU:HG   | 2.05                     | 0.57              |
| 1:D:119:ASN:HD22 | 1:D:121:LYS:HG2  | 1.69                     | 0.57              |
| 1:E:46:GLU:HG3   | 1:F:324:ALA:C    | 2.24                     | 0.57              |
| 1:E:84:LEU:HG    | 1:E:88:LEU:CD1   | 2.34                     | 0.57              |
| 1:E:219:ASP:CA   | 1:E:224:ASN:HB2  | 1.80                     | 0.57              |
| 1:E:282:LEU:HG   | 1:E:303:ASN:OD1  | 2.03                     | 0.57              |
| 1:F:46:GLU:HG3   | 1:G:324:ALA:C    | 2.24                     | 0.57              |
| 1:F:49:TYR:N     | 1:G:322:ALA:C    | 2.56                     | 0.57              |
| 1:F:84:LEU:HG    | 1:F:88:LEU:CD1   | 2.34                     | 0.57              |
| 1:F:225:LEU:HB3  | 1:G:300:TYR:CE2  | 2.38                     | 0.57              |
| 1:G:224:ASN:OD1  | 1:G:233:SER:CB   | 2.48                     | 0.57              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:225:LEU:CB   | 1:H:300:TYR:CE2  | 2.87                     | 0.57              |
| 1:I:119:ASN:HD22 | 1:I:121:LYS:HG2  | 1.69                     | 0.57              |
| 1:I:300:TYR:CE2  | 1:J:225:LEU:CB   | 2.87                     | 0.57              |
| 1:J:278:GLN:HB3  | 1:K:218:THR:OG1  | 1.87                     | 0.57              |
| 1:K:33:ILE:HD12  | 1:K:312:TRP:NE1  | 2.15                     | 0.57              |
| 1:K:106:VAL:HG21 | 1:K:147:PHE:CE1  | 2.39                     | 0.57              |
| 1:K:278:GLN:OE1  | 1:L:218:THR:N    | 2.37                     | 0.57              |
| 1:L:52:ILE:HA    | 1:P:248:THR:CG2  | 2.27                     | 0.57              |
| 1:L:75:ASP:CG    | 1:P:245:GLU:OE1  | 2.42                     | 0.57              |
| 1:M:100:SER:CB   | 1:M:101:ASN:HB2  | 2.34                     | 0.57              |
| 1:M:324:ALA:HB1  | 1:N:46:GLU:CA    | 1.92                     | 0.57              |
| 1:N:52:ILE:H     | 1:N:74:GLU:CG    | 2.06                     | 0.57              |
| 1:N:95:THR:HG22  | 1:N:136:ILE:CD1  | 2.24                     | 0.57              |
| 1:N:106:VAL:HG21 | 1:N:147:PHE:CE1  | 2.39                     | 0.57              |
| 1:O:43:TYR:HB3   | 1:O:78:GLU:HA    | 1.85                     | 0.57              |
| 1:O:169:PHE:CD2  | 1:P:79:THR:HG22  | 2.40                     | 0.57              |
| 1:A:96:GLN:O     | 1:A:97:VAL:HB    | 2.03                     | 0.57              |
| 1:A:119:ASN:HD22 | 1:A:121:LYS:HG2  | 1.69                     | 0.57              |
| 1:A:227:THR:CG2  | 1:B:301:PRO:HD3  | 2.30                     | 0.57              |
| 1:B:213:VAL:HG22 | 1:B:257:VAL:HG11 | 1.85                     | 0.57              |
| 1:C:241:LYS:O    | 1:H:165:GLU:CD   | 2.42                     | 0.57              |
| 1:D:10:MET:HB3   | 1:D:108:LEU:CD2  | 2.33                     | 0.57              |
| 1:E:191:ASN:O    | 1:E:192:CYS:SG   | 2.62                     | 0.57              |
| 1:H:191:ASN:O    | 1:H:192:CYS:SG   | 2.63                     | 0.57              |
| 1:I:100:SER:CB   | 1:I:101:ASN:HB2  | 2.34                     | 0.57              |
| 1:J:218:THR:O    | 1:J:219:ASP:HB2  | 2.02                     | 0.57              |
| 1:J:278:GLN:OE1  | 1:K:218:THR:N    | 2.37                     | 0.57              |
| 1:K:213:VAL:HG22 | 1:K:257:VAL:HG11 | 1.85                     | 0.57              |
| 1:K:308:ASN:CG   | 1:P:231:ALA:N    | 2.51                     | 0.57              |
| 1:L:75:ASP:N     | 1:P:245:GLU:CG   | 2.61                     | 0.57              |
| 1:M:173:ASN:OD1  | 1:M:188:LEU:HD21 | 2.04                     | 0.57              |
| 1:N:100:SER:CB   | 1:N:101:ASN:HB2  | 2.34                     | 0.57              |
| 1:P:12:LEU:O     | 1:P:110:LEU:HG   | 2.05                     | 0.57              |
| 1:P:109:VAL:CB   | 1:P:322:ALA:HB2  | 2.26                     | 0.57              |
| 1:A:10:MET:HB3   | 1:A:108:LEU:CD2  | 2.33                     | 0.57              |
| 1:A:143:LYS:HE3  | 1:A:145:TYR:HE2  | 1.70                     | 0.57              |
| 1:B:10:MET:HB3   | 1:B:108:LEU:CD2  | 2.33                     | 0.57              |
| 1:B:143:LYS:HE3  | 1:B:145:TYR:HE2  | 1.70                     | 0.57              |
| 1:B:308:ASN:CG   | 1:F:231:ALA:CB   | 2.70                     | 0.57              |
| 1:C:10:MET:HB3   | 1:C:108:LEU:CD2  | 2.33                     | 0.57              |
| 1:D:43:TYR:CE1   | 1:D:67:LEU:HB3   | 2.38                     | 0.57              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:119:ASN:HD22 | 1:E:121:LYS:HG2  | 1.69                     | 0.57              |
| 1:E:225:LEU:HB3  | 1:F:300:TYR:CE2  | 2.38                     | 0.57              |
| 1:G:46:GLU:HG3   | 1:H:324:ALA:C    | 2.24                     | 0.57              |
| 1:G:219:ASP:CA   | 1:G:224:ASN:HB2  | 1.80                     | 0.57              |
| 1:H:95:THR:HG22  | 1:H:136:ILE:CD1  | 2.24                     | 0.57              |
| 1:I:68:ILE:CD1   | 1:I:92:THR:HB    | 2.10                     | 0.57              |
| 1:I:278:GLN:OE1  | 1:J:218:THR:N    | 2.37                     | 0.57              |
| 1:I:320:LYS:HA   | 1:N:246:ILE:CG1  | 2.33                     | 0.57              |
| 1:J:306:ILE:HG13 | 1:O:230:GLN:HB2  | 1.86                     | 0.57              |
| 1:L:105:LYS:HZ2  | 1:L:148:GLU:HB3  | 1.68                     | 0.57              |
| 1:L:106:VAL:HG21 | 1:L:147:PHE:CE1  | 2.39                     | 0.57              |
| 1:M:63:GLY:O     | 1:M:64:LYS:CB    | 2.51                     | 0.57              |
| 1:M:95:THR:HG22  | 1:M:136:ILE:CD1  | 2.24                     | 0.57              |
| 1:M:169:PHE:CD2  | 1:N:79:THR:HG22  | 2.40                     | 0.57              |
| 1:P:100:SER:CB   | 1:P:101:ASN:HB2  | 2.34                     | 0.57              |
| 1:A:242:LYS:O    | 1:F:166:GLN:HA   | 2.01                     | 0.57              |
| 1:B:47:ASP:O     | 1:C:323:VAL:CA   | 2.48                     | 0.57              |
| 1:B:50:ILE:CG2   | 1:C:320:LYS:HG2  | 2.34                     | 0.57              |
| 1:B:79:THR:HG22  | 1:C:169:PHE:CD2  | 2.40                     | 0.57              |
| 1:B:222:ASN:HB2  | 1:B:237:ASN:H    | 1.64                     | 0.57              |
| 1:C:241:LYS:CA   | 1:H:166:GLN:O    | 2.49                     | 0.57              |
| 1:D:12:LEU:O     | 1:D:110:LEU:HG   | 2.05                     | 0.57              |
| 1:D:248:THR:CG2  | 1:H:52:ILE:HD12  | 2.32                     | 0.57              |
| 1:D:248:THR:HA   | 1:H:52:ILE:HG23  | 1.86                     | 0.57              |
| 1:H:43:TYR:CE2   | 1:H:67:LEU:CB    | 2.80                     | 0.57              |
| 1:H:63:GLY:O     | 1:H:64:LYS:CB    | 2.52                     | 0.57              |
| 1:H:268:LEU:HD22 | 1:K:271:LYS:NZ   | 2.20                     | 0.57              |
| 1:H:272:ARG:CG   | 1:K:202:GLU:CA   | 2.79                     | 0.57              |
| 1:J:312:TRP:HE3  | 1:J:315:CYS:SG   | 2.28                     | 0.57              |
| 1:K:191:ASN:O    | 1:K:192:CYS:SG   | 2.63                     | 0.57              |
| 1:L:12:LEU:O     | 1:L:110:LEU:HG   | 2.05                     | 0.57              |
| 1:M:12:LEU:O     | 1:M:110:LEU:HG   | 2.05                     | 0.57              |
| 1:O:45:LEU:CD2   | 1:O:58:LYS:HZ3   | 2.18                     | 0.57              |
| 1:P:43:TYR:HB3   | 1:P:78:GLU:HA    | 1.85                     | 0.57              |
| 1:A:84:LEU:HG    | 1:A:88:LEU:CD1   | 2.34                     | 0.57              |
| 1:B:44:ASN:CB    | 1:B:64:LYS:HZ1   | 2.15                     | 0.57              |
| 1:E:105:LYS:CD   | 1:E:148:GLU:HB2  | 2.27                     | 0.57              |
| 1:E:133:ASN:HD22 | 1:E:148:GLU:CA   | 2.11                     | 0.57              |
| 1:F:104:ASN:OD1  | 1:F:106:VAL:HG13 | 2.05                     | 0.57              |
| 1:F:225:LEU:CB   | 1:G:300:TYR:CE2  | 2.87                     | 0.57              |
| 1:G:191:ASN:O    | 1:G:192:CYS:SG   | 2.63                     | 0.57              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:219:ASP:CB   | 1:I:224:ASN:ND2  | 2.65                     | 0.57              |
| 1:J:36:VAL:N     | 1:J:312:TRP:HH2  | 2.01                     | 0.57              |
| 1:L:96:GLN:O     | 1:L:97:VAL:HB    | 2.03                     | 0.57              |
| 1:L:119:ASN:HD22 | 1:L:121:LYS:HG2  | 1.69                     | 0.57              |
| 1:M:33:ILE:HD12  | 1:M:312:TRP:NE1  | 2.15                     | 0.57              |
| 1:N:169:PHE:CD2  | 1:O:79:THR:HG22  | 2.40                     | 0.57              |
| 1:N:222:ASN:HB2  | 1:N:237:ASN:H    | 1.64                     | 0.57              |
| 1:O:170:LYS:HD3  | 1:P:78:GLU:C     | 2.25                     | 0.57              |
| 1:P:36:VAL:CG2   | 1:P:38:PHE:CE2   | 2.85                     | 0.57              |
| 1:P:106:VAL:HG21 | 1:P:147:PHE:CE1  | 2.39                     | 0.57              |
| 1:B:79:THR:HG23  | 1:C:192:CYS:HB2  | 1.77                     | 0.57              |
| 1:C:95:THR:HG22  | 1:C:136:ILE:CD1  | 2.24                     | 0.57              |
| 1:C:106:VAL:HG21 | 1:C:147:PHE:CE1  | 2.39                     | 0.57              |
| 1:C:213:VAL:HG22 | 1:C:257:VAL:HG11 | 1.85                     | 0.57              |
| 1:C:312:TRP:HE3  | 1:C:315:CYS:SG   | 2.28                     | 0.57              |
| 1:D:104:ASN:OD1  | 1:D:106:VAL:HG13 | 2.05                     | 0.57              |
| 1:E:225:LEU:CB   | 1:F:300:TYR:CE2  | 2.87                     | 0.57              |
| 1:F:191:ASN:O    | 1:F:192:CYS:SG   | 2.63                     | 0.57              |
| 1:H:37:ILE:CG1   | 1:H:312:TRP:CZ2  | 2.79                     | 0.57              |
| 1:H:100:SER:CB   | 1:H:101:ASN:HB2  | 2.34                     | 0.57              |
| 1:H:312:TRP:HE3  | 1:H:315:CYS:SG   | 2.28                     | 0.57              |
| 1:I:211:ILE:HA   | 1:I:220:LEU:HD21 | 1.82                     | 0.57              |
| 1:I:312:TRP:HE3  | 1:I:315:CYS:SG   | 2.28                     | 0.57              |
| 1:J:191:ASN:O    | 1:J:192:CYS:SG   | 2.63                     | 0.57              |
| 1:K:52:ILE:CD1   | 1:O:248:THR:HG23 | 2.35                     | 0.57              |
| 1:K:119:ASN:HD22 | 1:K:121:LYS:HG2  | 1.69                     | 0.57              |
| 1:L:95:THR:CG2   | 1:L:136:ILE:HD13 | 2.22                     | 0.57              |
| 1:L:104:ASN:OD1  | 1:L:106:VAL:HG13 | 2.05                     | 0.57              |
| 1:M:218:THR:O    | 1:M:219:ASP:HB2  | 2.03                     | 0.57              |
| 1:N:26:LYS:HG2   | 1:N:97:VAL:HG22  | 1.85                     | 0.57              |
| 1:N:224:ASN:OD1  | 1:N:233:SER:CB   | 2.48                     | 0.57              |
| 1:N:312:TRP:HE3  | 1:N:315:CYS:SG   | 2.28                     | 0.57              |
| 1:O:12:LEU:O     | 1:O:110:LEU:HG   | 2.05                     | 0.57              |
| 1:O:100:SER:CB   | 1:O:101:ASN:HB2  | 2.34                     | 0.57              |
| 1:A:50:ILE:CG2   | 1:B:320:LYS:HG2  | 2.34                     | 0.57              |
| 1:A:63:GLY:O     | 1:A:64:LYS:CB    | 2.52                     | 0.57              |
| 1:B:36:VAL:N     | 1:B:312:TRP:HH2  | 2.01                     | 0.57              |
| 1:C:143:LYS:HE3  | 1:C:145:TYR:HE2  | 1.70                     | 0.57              |
| 1:C:191:ASN:O    | 1:C:192:CYS:SG   | 2.63                     | 0.57              |
| 1:C:224:ASN:OD1  | 1:C:233:SER:CB   | 2.48                     | 0.57              |
| 1:D:43:TYR:CE2   | 1:D:67:LEU:CB    | 2.80                     | 0.57              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:97:VAL:O     | 1:D:97:VAL:HG12  | 2.05                     | 0.57              |
| 1:E:219:ASP:CB   | 1:E:224:ASN:ND2  | 2.65                     | 0.57              |
| 1:G:104:ASN:OD1  | 1:G:106:VAL:HG13 | 2.05                     | 0.57              |
| 1:G:106:VAL:HG21 | 1:G:147:PHE:CE1  | 2.39                     | 0.57              |
| 1:H:12:LEU:O     | 1:H:110:LEU:HG   | 2.05                     | 0.57              |
| 1:J:22:ILE:HD12  | 1:J:27:LYS:HZ1   | 1.70                     | 0.57              |
| 1:K:36:VAL:CG2   | 1:K:38:PHE:CE2   | 2.85                     | 0.57              |
| 1:M:45:LEU:CD2   | 1:M:58:LYS:HZ3   | 2.18                     | 0.57              |
| 1:M:68:ILE:CD1   | 1:M:92:THR:HB    | 2.10                     | 0.57              |
| 1:M:170:LYS:HD3  | 1:N:78:GLU:C     | 2.25                     | 0.57              |
| 1:M:213:VAL:HG22 | 1:M:257:VAL:HG11 | 1.85                     | 0.57              |
| 1:M:224:ASN:OD1  | 1:M:233:SER:CB   | 2.48                     | 0.57              |
| 1:M:312:TRP:HE3  | 1:M:315:CYS:SG   | 2.28                     | 0.57              |
| 1:N:143:LYS:HE3  | 1:N:145:TYR:HE2  | 1.70                     | 0.57              |
| 1:N:218:THR:O    | 1:N:219:ASP:HB2  | 2.03                     | 0.57              |
| 1:O:43:TYR:CE2   | 1:O:67:LEU:CB    | 2.80                     | 0.57              |
| 1:O:63:GLY:O     | 1:O:64:LYS:CB    | 2.52                     | 0.57              |
| 1:O:312:TRP:HE3  | 1:O:315:CYS:SG   | 2.28                     | 0.57              |
| 1:P:52:ILE:H     | 1:P:74:GLU:CG    | 2.06                     | 0.57              |
| 1:C:245:GLU:OE2  | 1:G:78:GLU:OE1   | 2.22                     | 0.57              |
| 1:D:143:LYS:HE3  | 1:D:145:TYR:HE2  | 1.70                     | 0.57              |
| 1:D:213:VAL:HG22 | 1:D:257:VAL:HG11 | 1.85                     | 0.57              |
| 1:E:100:SER:CB   | 1:E:101:ASN:HB2  | 2.34                     | 0.57              |
| 1:F:312:TRP:HE3  | 1:F:315:CYS:SG   | 2.28                     | 0.57              |
| 1:G:44:ASN:CB    | 1:G:64:LYS:HZ1   | 2.17                     | 0.57              |
| 1:I:7:GLU:OE1    | 1:I:326:TYR:CD1  | 2.58                     | 0.57              |
| 1:I:166:GLN:O    | 1:N:241:LYS:CA   | 2.41                     | 0.57              |
| 1:I:222:ASN:HB2  | 1:I:237:ASN:CA   | 2.35                     | 0.57              |
| 1:J:7:GLU:OE1    | 1:J:326:TYR:CD1  | 2.58                     | 0.57              |
| 1:J:222:ASN:HB2  | 1:J:237:ASN:CA   | 2.35                     | 0.57              |
| 1:K:7:GLU:OE1    | 1:K:326:TYR:CD1  | 2.58                     | 0.57              |
| 1:L:130:ILE:HG13 | 1:L:152:ILE:HG21 | 1.87                     | 0.57              |
| 1:L:312:TRP:HE3  | 1:L:315:CYS:SG   | 2.28                     | 0.57              |
| 1:N:33:ILE:HD12  | 1:N:312:TRP:NE1  | 2.16                     | 0.57              |
| 1:N:58:LYS:HZ2   | 1:N:65:GLU:HG2   | 1.66                     | 0.57              |
| 1:P:63:GLY:O     | 1:P:64:LYS:CB    | 2.52                     | 0.57              |
| 1:P:312:TRP:HE3  | 1:P:315:CYS:SG   | 2.28                     | 0.57              |
| 1:A:22:ILE:HD12  | 1:A:27:LYS:HZ1   | 1.69                     | 0.56              |
| 1:A:52:ILE:H     | 1:A:74:GLU:CG    | 2.06                     | 0.56              |
| 1:C:49:TYR:CE1   | 1:D:320:LYS:HD2  | 2.36                     | 0.56              |
| 1:E:219:ASP:HA   | 1:F:277:ASP:CG   | 2.00                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:312:TRP:HE3  | 1:E:315:CYS:SG   | 2.28                     | 0.56              |
| 1:F:96:GLN:O     | 1:F:97:VAL:HB    | 2.04                     | 0.56              |
| 1:G:100:SER:CB   | 1:G:101:ASN:HB2  | 2.34                     | 0.56              |
| 1:G:202:GLU:HA   | 1:J:272:ARG:HG3  | 1.68                     | 0.56              |
| 1:G:203:GLU:CD   | 1:J:274:PHE:CZ   | 2.78                     | 0.56              |
| 1:G:219:ASP:N    | 1:H:277:ASP:HB3  | 2.05                     | 0.56              |
| 1:G:312:TRP:HE3  | 1:G:315:CYS:SG   | 2.28                     | 0.56              |
| 1:H:36:VAL:N     | 1:H:312:TRP:HH2  | 2.01                     | 0.56              |
| 1:H:68:ILE:CD1   | 1:H:92:THR:HB    | 2.10                     | 0.56              |
| 1:H:119:ASN:HD22 | 1:H:121:LYS:HG2  | 1.69                     | 0.56              |
| 1:H:130:ILE:HG13 | 1:H:152:ILE:HG21 | 1.87                     | 0.56              |
| 1:H:132:GLY:N    | 1:H:149:ILE:HD11 | 2.20                     | 0.56              |
| 1:H:272:ARG:CA   | 1:K:203:GLU:H    | 2.16                     | 0.56              |
| 1:I:104:ASN:OD1  | 1:I:106:VAL:HG13 | 2.05                     | 0.56              |
| 1:I:132:GLY:N    | 1:I:149:ILE:HD11 | 2.20                     | 0.56              |
| 1:K:34:LYS:CA    | 1:K:35:ARG:C     | 2.74                     | 0.56              |
| 1:K:63:GLY:O     | 1:K:64:LYS:CB    | 2.52                     | 0.56              |
| 1:K:222:ASN:HB2  | 1:K:237:ASN:CA   | 2.35                     | 0.56              |
| 1:K:312:TRP:HE3  | 1:K:315:CYS:SG   | 2.28                     | 0.56              |
| 1:L:7:GLU:OE1    | 1:L:326:TYR:CD1  | 2.58                     | 0.56              |
| 1:N:109:VAL:CB   | 1:N:322:ALA:HB2  | 2.26                     | 0.56              |
| 1:O:33:ILE:HD12  | 1:O:312:TRP:NE1  | 2.15                     | 0.56              |
| 1:O:119:ASN:HD22 | 1:O:121:LYS:HG2  | 1.69                     | 0.56              |
| 1:O:143:LYS:HE3  | 1:O:145:TYR:HE2  | 1.70                     | 0.56              |
| 1:O:218:THR:O    | 1:O:219:ASP:HB2  | 2.02                     | 0.56              |
| 1:O:224:ASN:OD1  | 1:O:233:SER:CB   | 2.49                     | 0.56              |
| 1:A:34:LYS:CA    | 1:A:35:ARG:C     | 2.74                     | 0.56              |
| 1:A:213:VAL:HG22 | 1:A:257:VAL:HG11 | 1.85                     | 0.56              |
| 1:A:247:ASP:N    | 1:E:50:ILE:CD1   | 2.68                     | 0.56              |
| 1:B:84:LEU:HG    | 1:B:88:LEU:CD1   | 2.34                     | 0.56              |
| 1:B:132:GLY:N    | 1:B:149:ILE:HD11 | 2.20                     | 0.56              |
| 1:C:7:GLU:OE1    | 1:C:326:TYR:CD1  | 2.58                     | 0.56              |
| 1:C:34:LYS:CA    | 1:C:35:ARG:C     | 2.74                     | 0.56              |
| 1:C:36:VAL:CG2   | 1:C:38:PHE:CE2   | 2.85                     | 0.56              |
| 1:C:43:TYR:CE1   | 1:C:67:LEU:HB3   | 2.38                     | 0.56              |
| 1:C:97:VAL:O     | 1:C:97:VAL:HG12  | 2.05                     | 0.56              |
| 1:C:231:ALA:H    | 1:H:308:ASN:HD21 | 1.51                     | 0.56              |
| 1:D:132:GLY:N    | 1:D:149:ILE:HD11 | 2.20                     | 0.56              |
| 1:D:312:TRP:HE3  | 1:D:315:CYS:SG   | 2.28                     | 0.56              |
| 1:E:43:TYR:CE2   | 1:E:67:LEU:CB    | 2.81                     | 0.56              |
| 1:F:100:SER:CB   | 1:F:101:ASN:HB2  | 2.34                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:12:LEU:O     | 1:G:110:LEU:HG   | 2.05                     | 0.56              |
| 1:G:37:ILE:CG1   | 1:G:312:TRP:CZ2  | 2.79                     | 0.56              |
| 1:G:204:HIS:CE1  | 1:J:274:PHE:CD1  | 2.77                     | 0.56              |
| 1:H:222:ASN:HB2  | 1:H:237:ASN:CA   | 2.35                     | 0.56              |
| 1:I:12:LEU:O     | 1:I:110:LEU:HG   | 2.05                     | 0.56              |
| 1:I:82:THR:CB    | 1:I:84:LEU:HD23  | 2.29                     | 0.56              |
| 1:I:322:ALA:O    | 1:J:48:GLY:CA    | 2.46                     | 0.56              |
| 1:J:63:GLY:O     | 1:J:64:LYS:CB    | 2.52                     | 0.56              |
| 1:J:203:GLU:O    | 1:J:203:GLU:CD   | 2.44                     | 0.56              |
| 1:J:322:ALA:C    | 1:K:49:TYR:N     | 2.56                     | 0.56              |
| 1:M:104:ASN:OD1  | 1:M:106:VAL:HG13 | 2.05                     | 0.56              |
| 1:M:132:GLY:N    | 1:M:149:ILE:HD11 | 2.20                     | 0.56              |
| 1:N:222:ASN:HB2  | 1:N:237:ASN:CA   | 2.35                     | 0.56              |
| 1:O:109:VAL:CB   | 1:O:322:ALA:HB2  | 2.26                     | 0.56              |
| 1:O:222:ASN:HB2  | 1:O:237:ASN:CA   | 2.35                     | 0.56              |
| 1:P:7:GLU:OE1    | 1:P:326:TYR:CD1  | 2.58                     | 0.56              |
| 1:P:132:GLY:N    | 1:P:149:ILE:HD11 | 2.21                     | 0.56              |
| 1:A:222:ASN:HB2  | 1:A:237:ASN:CA   | 2.35                     | 0.56              |
| 1:B:78:GLU:C     | 1:C:170:LYS:HD3  | 2.25                     | 0.56              |
| 1:B:119:ASN:HD22 | 1:B:121:LYS:HG2  | 1.69                     | 0.56              |
| 1:B:312:TRP:HE3  | 1:B:315:CYS:SG   | 2.28                     | 0.56              |
| 1:C:104:ASN:OD1  | 1:C:106:VAL:HG13 | 2.05                     | 0.56              |
| 1:C:246:ILE:CA   | 1:G:52:ILE:HG12  | 2.35                     | 0.56              |
| 1:D:191:ASN:O    | 1:D:192:CYS:SG   | 2.62                     | 0.56              |
| 1:D:222:ASN:HB2  | 1:D:237:ASN:CA   | 2.36                     | 0.56              |
| 1:E:97:VAL:O     | 1:E:97:VAL:HG12  | 2.05                     | 0.56              |
| 1:E:104:ASN:OD1  | 1:E:106:VAL:HG13 | 2.05                     | 0.56              |
| 1:E:132:GLY:N    | 1:E:149:ILE:HD11 | 2.21                     | 0.56              |
| 1:F:34:LYS:CA    | 1:F:35:ARG:C     | 2.74                     | 0.56              |
| 1:F:58:LYS:HZ2   | 1:F:65:GLU:HG2   | 1.70                     | 0.56              |
| 1:F:97:VAL:HG12  | 1:F:97:VAL:O     | 2.05                     | 0.56              |
| 1:F:132:GLY:N    | 1:F:149:ILE:HD11 | 2.21                     | 0.56              |
| 1:F:201:ILE:CG2  | 1:I:272:ARG:NH1  | 2.34                     | 0.56              |
| 1:F:222:ASN:HB2  | 1:F:237:ASN:CA   | 2.35                     | 0.56              |
| 1:G:132:GLY:N    | 1:G:149:ILE:HD11 | 2.20                     | 0.56              |
| 1:G:203:GLU:OE1  | 1:J:274:PHE:CE1  | 2.56                     | 0.56              |
| 1:G:222:ASN:HB2  | 1:G:237:ASN:CA   | 2.35                     | 0.56              |
| 1:H:34:LYS:CA    | 1:H:35:ARG:C     | 2.74                     | 0.56              |
| 1:H:52:ILE:H     | 1:H:74:GLU:CG    | 2.06                     | 0.56              |
| 1:I:53:GLU:HG3   | 1:M:252:THR:HG21 | 1.87                     | 0.56              |
| 1:I:63:GLY:O     | 1:I:64:LYS:CB    | 2.52                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:168:ASN:HB3  | 1:J:71:GLN:HG3   | 1.86                     | 0.56              |
| 1:I:191:ASN:O    | 1:I:192:CYS:SG   | 2.63                     | 0.56              |
| 1:J:96:GLN:O     | 1:J:97:VAL:HB    | 2.04                     | 0.56              |
| 1:J:132:GLY:N    | 1:J:149:ILE:HD11 | 2.20                     | 0.56              |
| 1:K:7:GLU:CG     | 1:K:326:TYR:CE1  | 2.89                     | 0.56              |
| 1:K:12:LEU:O     | 1:K:110:LEU:HG   | 2.05                     | 0.56              |
| 1:K:96:GLN:O     | 1:K:97:VAL:HB    | 2.03                     | 0.56              |
| 1:K:104:ASN:OD1  | 1:K:106:VAL:HG13 | 2.05                     | 0.56              |
| 1:K:132:GLY:N    | 1:K:149:ILE:HD11 | 2.21                     | 0.56              |
| 1:K:133:ASN:HD22 | 1:K:148:GLU:CA   | 2.11                     | 0.56              |
| 1:K:203:GLU:CD   | 1:K:203:GLU:O    | 2.44                     | 0.56              |
| 1:L:63:GLY:O     | 1:L:64:LYS:CB    | 2.52                     | 0.56              |
| 1:L:119:ASN:CG   | 1:L:120:ALA:H    | 2.09                     | 0.56              |
| 1:L:186:PHE:HE2  | 1:L:269:ILE:HD11 | 1.70                     | 0.56              |
| 1:L:203:GLU:O    | 1:L:203:GLU:CD   | 2.44                     | 0.56              |
| 1:L:219:ASP:CA   | 1:L:224:ASN:HB2  | 1.80                     | 0.56              |
| 1:L:222:ASN:HB2  | 1:L:237:ASN:CA   | 2.35                     | 0.56              |
| 1:L:224:ASN:OD1  | 1:L:233:SER:CB   | 2.48                     | 0.56              |
| 1:M:7:GLU:OE1    | 1:M:326:TYR:CD1  | 2.58                     | 0.56              |
| 1:M:34:LYS:CA    | 1:M:35:ARG:C     | 2.74                     | 0.56              |
| 1:M:97:VAL:O     | 1:M:97:VAL:HG12  | 2.05                     | 0.56              |
| 1:M:130:ILE:HG13 | 1:M:152:ILE:HG21 | 1.87                     | 0.56              |
| 1:M:192:CYS:HB2  | 1:N:79:THR:HG23  | 1.77                     | 0.56              |
| 1:N:12:LEU:O     | 1:N:110:LEU:HG   | 2.05                     | 0.56              |
| 1:N:63:GLY:O     | 1:N:64:LYS:CB    | 2.51                     | 0.56              |
| 1:N:130:ILE:HG13 | 1:N:152:ILE:HG21 | 1.87                     | 0.56              |
| 1:O:36:VAL:N     | 1:O:312:TRP:HH2  | 2.01                     | 0.56              |
| 1:O:130:ILE:HG13 | 1:O:152:ILE:HG21 | 1.87                     | 0.56              |
| 1:O:323:VAL:CA   | 1:P:47:ASP:O     | 2.48                     | 0.56              |
| 1:P:104:ASN:OD1  | 1:P:106:VAL:HG13 | 2.05                     | 0.56              |
| 1:P:211:ILE:HA   | 1:P:220:LEU:HD21 | 1.82                     | 0.56              |
| 1:P:224:ASN:OD1  | 1:P:233:SER:CB   | 2.48                     | 0.56              |
| 1:A:219:ASP:CB   | 1:A:224:ASN:ND2  | 2.64                     | 0.56              |
| 1:A:312:TRP:HE3  | 1:A:315:CYS:SG   | 2.28                     | 0.56              |
| 1:B:7:GLU:OE1    | 1:B:326:TYR:CD1  | 2.58                     | 0.56              |
| 1:C:84:LEU:HG    | 1:C:88:LEU:CD1   | 2.34                     | 0.56              |
| 1:D:7:GLU:OE1    | 1:D:326:TYR:CD1  | 2.58                     | 0.56              |
| 1:D:203:GLU:O    | 1:D:203:GLU:CD   | 2.44                     | 0.56              |
| 1:E:109:VAL:HG21 | 1:E:318:LEU:O    | 2.05                     | 0.56              |
| 1:E:222:ASN:HB2  | 1:E:237:ASN:CA   | 2.35                     | 0.56              |
| 1:F:203:GLU:CD   | 1:F:203:GLU:O    | 2.44                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:203:GLU:CD   | 1:G:203:GLU:O    | 2.44                     | 0.56              |
| 1:H:97:VAL:O     | 1:H:97:VAL:HG12  | 2.05                     | 0.56              |
| 1:H:104:ASN:OD1  | 1:H:106:VAL:HG13 | 2.05                     | 0.56              |
| 1:H:202:GLU:HG3  | 1:K:271:LYS:CE   | 2.33                     | 0.56              |
| 1:I:7:GLU:CG     | 1:I:326:TYR:CE1  | 2.89                     | 0.56              |
| 1:I:277:ASP:CG   | 1:J:219:ASP:HA   | 2.00                     | 0.56              |
| 1:J:109:VAL:HG21 | 1:J:318:LEU:O    | 2.06                     | 0.56              |
| 1:J:168:ASN:HB3  | 1:K:71:GLN:HG3   | 1.86                     | 0.56              |
| 1:K:130:ILE:HG13 | 1:K:152:ILE:HG21 | 1.87                     | 0.56              |
| 1:K:168:ASN:HB3  | 1:L:71:GLN:HG3   | 1.86                     | 0.56              |
| 1:M:106:VAL:HG21 | 1:M:147:PHE:CE1  | 2.39                     | 0.56              |
| 1:M:203:GLU:CD   | 1:M:203:GLU:O    | 2.44                     | 0.56              |
| 1:N:109:VAL:HG21 | 1:N:318:LEU:O    | 2.06                     | 0.56              |
| 1:P:33:ILE:HD12  | 1:P:312:TRP:NE1  | 2.15                     | 0.56              |
| 1:P:34:LYS:CA    | 1:P:35:ARG:C     | 2.74                     | 0.56              |
| 1:P:130:ILE:HG13 | 1:P:152:ILE:HG21 | 1.87                     | 0.56              |
| 1:A:241:LYS:HB3  | 1:F:165:GLU:CG   | 2.35                     | 0.56              |
| 1:B:109:VAL:HG21 | 1:B:318:LEU:O    | 2.06                     | 0.56              |
| 1:C:232:GLU:CG   | 1:H:308:ASN:HB2  | 2.35                     | 0.56              |
| 1:D:95:THR:HG22  | 1:D:136:ILE:CD1  | 2.24                     | 0.56              |
| 1:D:106:VAL:HG21 | 1:D:147:PHE:CE1  | 2.39                     | 0.56              |
| 1:E:36:VAL:CG1   | 1:E:96:GLN:NE2   | 2.68                     | 0.56              |
| 1:F:22:ILE:HG22  | 1:F:35:ARG:CB    | 2.35                     | 0.56              |
| 1:F:211:ILE:HA   | 1:F:220:LEU:HD21 | 1.82                     | 0.56              |
| 1:G:97:VAL:O     | 1:G:97:VAL:HG12  | 2.05                     | 0.56              |
| 1:I:119:ASN:CG   | 1:I:120:ALA:H    | 2.09                     | 0.56              |
| 1:K:10:MET:HB3   | 1:K:108:LEU:CD2  | 2.33                     | 0.56              |
| 1:K:37:ILE:CG1   | 1:K:312:TRP:CZ2  | 2.79                     | 0.56              |
| 1:K:143:LYS:HE3  | 1:K:145:TYR:HE2  | 1.70                     | 0.56              |
| 1:M:143:LYS:HE3  | 1:M:145:TYR:HE2  | 1.70                     | 0.56              |
| 1:N:104:ASN:OD1  | 1:N:106:VAL:HG13 | 2.05                     | 0.56              |
| 1:N:132:GLY:N    | 1:N:149:ILE:HD11 | 2.21                     | 0.56              |
| 1:N:203:GLU:O    | 1:N:203:GLU:CD   | 2.44                     | 0.56              |
| 1:N:240:MET:SD   | 1:N:251:SER:HB2  | 2.46                     | 0.56              |
| 1:O:34:LYS:CA    | 1:O:35:ARG:C     | 2.74                     | 0.56              |
| 1:O:109:VAL:HG21 | 1:O:318:LEU:O    | 2.06                     | 0.56              |
| 1:O:132:GLY:N    | 1:O:149:ILE:HD11 | 2.20                     | 0.56              |
| 1:O:192:CYS:HB2  | 1:P:79:THR:HG23  | 1.77                     | 0.56              |
| 1:P:203:GLU:O    | 1:P:203:GLU:CD   | 2.44                     | 0.56              |
| 1:P:240:MET:SD   | 1:P:251:SER:HB2  | 2.46                     | 0.56              |
| 1:A:132:GLY:N    | 1:A:149:ILE:HD11 | 2.21                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:203:GLU:O    | 1:A:203:GLU:CD   | 2.44                     | 0.56              |
| 1:B:51:ASP:O     | 1:G:245:GLU:OE2  | 2.24                     | 0.56              |
| 1:B:97:VAL:O     | 1:B:97:VAL:HG12  | 2.05                     | 0.56              |
| 1:B:203:GLU:O    | 1:B:203:GLU:CD   | 2.44                     | 0.56              |
| 1:B:240:MET:SD   | 1:B:251:SER:HB2  | 2.46                     | 0.56              |
| 1:D:246:ILE:HG13 | 1:H:49:TYR:CE1   | 2.40                     | 0.56              |
| 1:E:7:GLU:OE1    | 1:E:326:TYR:CD1  | 2.58                     | 0.56              |
| 1:E:12:LEU:O     | 1:E:110:LEU:HG   | 2.05                     | 0.56              |
| 1:E:203:GLU:O    | 1:E:203:GLU:CD   | 2.44                     | 0.56              |
| 1:F:12:LEU:O     | 1:F:110:LEU:HG   | 2.05                     | 0.56              |
| 1:F:119:ASN:HD22 | 1:F:121:LYS:HG2  | 1.69                     | 0.56              |
| 1:G:45:LEU:CD2   | 1:G:58:LYS:HZ3   | 2.19                     | 0.56              |
| 1:G:130:ILE:HG13 | 1:G:152:ILE:HG21 | 1.87                     | 0.56              |
| 1:G:271:LYS:CG   | 1:J:202:GLU:HG3  | 2.32                     | 0.56              |
| 1:I:37:ILE:HG13  | 1:I:312:TRP:HZ2  | 1.65                     | 0.56              |
| 1:I:95:THR:HG22  | 1:I:136:ILE:CD1  | 2.24                     | 0.56              |
| 1:J:166:GLN:C    | 1:O:241:LYS:CA   | 2.74                     | 0.56              |
| 1:L:43:TYR:CZ    | 1:L:67:LEU:CB    | 2.87                     | 0.56              |
| 1:L:143:LYS:HE3  | 1:L:145:TYR:HE2  | 1.70                     | 0.56              |
| 1:M:222:ASN:HB2  | 1:M:237:ASN:CA   | 2.35                     | 0.56              |
| 1:N:34:LYS:CA    | 1:N:35:ARG:C     | 2.74                     | 0.56              |
| 1:N:97:VAL:HG12  | 1:N:97:VAL:O     | 2.05                     | 0.56              |
| 1:N:191:ASN:O    | 1:N:192:CYS:SG   | 2.63                     | 0.56              |
| 1:O:7:GLU:OE1    | 1:O:326:TYR:CD1  | 2.58                     | 0.56              |
| 1:O:119:ASN:CG   | 1:O:120:ALA:H    | 2.09                     | 0.56              |
| 1:P:222:ASN:HB2  | 1:P:237:ASN:CA   | 2.35                     | 0.56              |
| 1:A:104:ASN:OD1  | 1:A:106:VAL:HG13 | 2.05                     | 0.56              |
| 1:A:109:VAL:HG21 | 1:A:318:LEU:O    | 2.06                     | 0.56              |
| 1:C:79:THR:HG23  | 1:D:192:CYS:HB2  | 1.77                     | 0.56              |
| 1:D:119:ASN:CG   | 1:D:120:ALA:H    | 2.09                     | 0.56              |
| 1:F:71:GLN:HG3   | 1:G:168:ASN:HB3  | 1.86                     | 0.56              |
| 1:F:197:SER:HB3  | 1:I:203:GLU:HG2  | 1.88                     | 0.56              |
| 1:F:271:LYS:CE   | 1:I:202:GLU:HG3  | 2.34                     | 0.56              |
| 1:G:274:PHE:CZ   | 1:J:203:GLU:CD   | 2.78                     | 0.56              |
| 1:I:240:MET:SD   | 1:I:251:SER:HB2  | 2.46                     | 0.56              |
| 1:J:104:ASN:OD1  | 1:J:106:VAL:HG13 | 2.05                     | 0.56              |
| 1:J:143:LYS:HE3  | 1:J:145:TYR:HE2  | 1.70                     | 0.56              |
| 1:J:240:MET:SD   | 1:J:251:SER:HB2  | 2.46                     | 0.56              |
| 1:K:166:GLN:C    | 1:P:241:LYS:CA   | 2.72                     | 0.56              |
| 1:K:240:MET:SD   | 1:K:251:SER:HB2  | 2.46                     | 0.56              |
| 1:M:52:ILE:H     | 1:M:74:GLU:CG    | 2.06                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:109:VAL:HG21 | 1:M:318:LEU:O    | 2.06                     | 0.56              |
| 1:M:191:ASN:O    | 1:M:192:CYS:SG   | 2.62                     | 0.56              |
| 1:N:7:GLU:OE1    | 1:N:326:TYR:CD1  | 2.58                     | 0.56              |
| 1:O:7:GLU:CG     | 1:O:326:TYR:CE1  | 2.89                     | 0.56              |
| 1:P:7:GLU:CG     | 1:P:326:TYR:CE1  | 2.89                     | 0.56              |
| 1:A:130:ILE:HG13 | 1:A:152:ILE:HG21 | 1.87                     | 0.56              |
| 1:B:52:ILE:O     | 1:B:74:GLU:HG3   | 2.06                     | 0.56              |
| 1:B:104:ASN:OD1  | 1:B:106:VAL:HG13 | 2.05                     | 0.56              |
| 1:B:130:ILE:HG13 | 1:B:152:ILE:HG21 | 1.87                     | 0.56              |
| 1:C:219:ASP:CB   | 1:C:224:ASN:ND2  | 2.65                     | 0.56              |
| 1:E:71:GLN:HG3   | 1:F:168:ASN:HB3  | 1.86                     | 0.56              |
| 1:E:106:VAL:HG21 | 1:E:147:PHE:CE1  | 2.39                     | 0.56              |
| 1:F:109:VAL:HG21 | 1:F:318:LEU:O    | 2.06                     | 0.56              |
| 1:G:71:GLN:HG3   | 1:H:168:ASN:HB3  | 1.86                     | 0.56              |
| 1:H:203:GLU:CD   | 1:H:203:GLU:O    | 2.44                     | 0.56              |
| 1:I:165:GLU:HG3  | 1:I:305:ILE:CD1  | 2.36                     | 0.56              |
| 1:I:224:ASN:OD1  | 1:I:233:SER:CB   | 2.49                     | 0.56              |
| 1:J:34:LYS:CA    | 1:J:35:ARG:C     | 2.74                     | 0.56              |
| 1:J:97:VAL:O     | 1:J:97:VAL:HG12  | 2.05                     | 0.56              |
| 1:K:109:VAL:HG21 | 1:K:318:LEU:O    | 2.06                     | 0.56              |
| 1:K:211:ILE:HA   | 1:K:220:LEU:HD21 | 1.82                     | 0.56              |
| 1:K:288:THR:CG2  | 1:K:292:LEU:HD13 | 2.36                     | 0.56              |
| 1:L:37:ILE:HD11  | 1:L:312:TRP:NE1  | 2.21                     | 0.56              |
| 1:L:240:MET:SD   | 1:L:251:SER:HB2  | 2.46                     | 0.56              |
| 1:N:52:ILE:O     | 1:N:74:GLU:HG3   | 2.06                     | 0.56              |
| 1:N:68:ILE:CD1   | 1:N:92:THR:HB    | 2.10                     | 0.56              |
| 1:N:170:LYS:HD3  | 1:O:78:GLU:C     | 2.25                     | 0.56              |
| 1:P:109:VAL:HG21 | 1:P:318:LEU:O    | 2.06                     | 0.56              |
| 1:P:119:ASN:CG   | 1:P:120:ALA:H    | 2.09                     | 0.56              |
| 1:P:143:LYS:HE3  | 1:P:145:TYR:HE2  | 1.70                     | 0.56              |
| 1:A:52:ILE:O     | 1:A:74:GLU:HG3   | 2.06                     | 0.56              |
| 1:A:79:THR:HG22  | 1:B:169:PHE:CD2  | 2.39                     | 0.56              |
| 1:C:52:ILE:H     | 1:C:74:GLU:CG    | 2.06                     | 0.56              |
| 1:C:222:ASN:HB2  | 1:C:237:ASN:CA   | 2.35                     | 0.56              |
| 1:C:240:MET:SD   | 1:C:251:SER:HB2  | 2.46                     | 0.56              |
| 1:D:7:GLU:CG     | 1:D:326:TYR:CE1  | 2.89                     | 0.56              |
| 1:D:34:LYS:CA    | 1:D:35:ARG:C     | 2.74                     | 0.56              |
| 1:D:165:GLU:HG3  | 1:D:305:ILE:CD1  | 2.36                     | 0.56              |
| 1:D:240:MET:SD   | 1:D:251:SER:HB2  | 2.46                     | 0.56              |
| 1:E:33:ILE:C     | 1:E:35:ARG:HB2   | 2.27                     | 0.56              |
| 1:E:48:GLY:C     | 1:F:323:VAL:N    | 2.58                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:130:ILE:HG13 | 1:E:152:ILE:HG21 | 1.87                     | 0.56              |
| 1:F:7:GLU:CG     | 1:F:326:TYR:CE1  | 2.89                     | 0.56              |
| 1:F:33:ILE:C     | 1:F:35:ARG:HB2   | 2.27                     | 0.56              |
| 1:F:37:ILE:HD11  | 1:F:312:TRP:NE1  | 2.21                     | 0.56              |
| 1:F:52:ILE:H     | 1:F:74:GLU:CG    | 2.06                     | 0.56              |
| 1:F:133:ASN:HD22 | 1:F:148:GLU:CA   | 2.11                     | 0.56              |
| 1:F:218:THR:O    | 1:F:219:ASP:HB2  | 2.02                     | 0.56              |
| 1:F:219:ASP:HA   | 1:G:277:ASP:CG   | 2.00                     | 0.56              |
| 1:G:219:ASP:HA   | 1:H:277:ASP:CG   | 2.00                     | 0.56              |
| 1:H:109:VAL:HG21 | 1:H:318:LEU:O    | 2.06                     | 0.56              |
| 1:I:22:ILE:HG22  | 1:I:35:ARG:CB    | 2.35                     | 0.56              |
| 1:I:37:ILE:HD11  | 1:I:312:TRP:NE1  | 2.21                     | 0.56              |
| 1:I:97:VAL:O     | 1:I:97:VAL:HG12  | 2.05                     | 0.56              |
| 1:I:203:GLU:CD   | 1:I:203:GLU:O    | 2.44                     | 0.56              |
| 1:I:288:THR:CG2  | 1:I:292:LEU:HD13 | 2.36                     | 0.56              |
| 1:I:300:TYR:CE2  | 1:J:225:LEU:HB3  | 2.38                     | 0.56              |
| 1:J:37:ILE:HG13  | 1:J:312:TRP:HZ2  | 1.65                     | 0.56              |
| 1:J:165:GLU:HG3  | 1:J:305:ILE:CD1  | 2.36                     | 0.56              |
| 1:L:7:GLU:CG     | 1:L:326:TYR:CE1  | 2.89                     | 0.56              |
| 1:L:34:LYS:CA    | 1:L:35:ARG:C     | 2.74                     | 0.56              |
| 1:M:52:ILE:O     | 1:M:74:GLU:HG3   | 2.06                     | 0.56              |
| 1:N:192:CYS:HB2  | 1:O:79:THR:HG23  | 1.77                     | 0.56              |
| 1:O:36:VAL:CG2   | 1:O:38:PHE:CE2   | 2.85                     | 0.56              |
| 1:O:97:VAL:O     | 1:O:97:VAL:HG12  | 2.05                     | 0.56              |
| 1:A:78:GLU:C     | 1:B:170:LYS:HD3  | 2.25                     | 0.56              |
| 1:B:288:THR:CG2  | 1:B:292:LEU:HD13 | 2.36                     | 0.56              |
| 1:C:119:ASN:CG   | 1:C:120:ALA:H    | 2.09                     | 0.56              |
| 1:C:130:ILE:HG13 | 1:C:152:ILE:HG21 | 1.87                     | 0.56              |
| 1:C:132:GLY:N    | 1:C:149:ILE:HD11 | 2.21                     | 0.56              |
| 1:C:203:GLU:O    | 1:C:203:GLU:CD   | 2.44                     | 0.56              |
| 1:C:246:ILE:CB   | 1:G:50:ILE:O     | 2.54                     | 0.56              |
| 1:D:37:ILE:HG13  | 1:D:312:TRP:HZ2  | 1.65                     | 0.56              |
| 1:D:245:GLU:HG2  | 1:H:72:GLY:O     | 2.05                     | 0.56              |
| 1:E:22:ILE:HG22  | 1:E:35:ARG:CB    | 2.35                     | 0.56              |
| 1:E:240:MET:SD   | 1:E:251:SER:HB2  | 2.46                     | 0.56              |
| 1:G:7:GLU:OE1    | 1:G:326:TYR:CD1  | 2.58                     | 0.56              |
| 1:G:33:ILE:C     | 1:G:35:ARG:HB2   | 2.27                     | 0.56              |
| 1:G:109:VAL:HG21 | 1:G:318:LEU:O    | 2.06                     | 0.56              |
| 1:G:219:ASP:CB   | 1:G:224:ASN:ND2  | 2.65                     | 0.56              |
| 1:H:7:GLU:OE1    | 1:H:326:TYR:CD1  | 2.58                     | 0.56              |
| 1:H:33:ILE:C     | 1:H:35:ARG:HB2   | 2.27                     | 0.56              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:119:ASN:CG   | 1:H:120:ALA:H    | 2.09                     | 0.56              |
| 1:I:143:LYS:HE3  | 1:I:145:TYR:HE2  | 1.70                     | 0.56              |
| 1:I:275:LYS:HZ3  | 1:J:219:ASP:CG   | 1.98                     | 0.56              |
| 1:J:7:GLU:CG     | 1:J:326:TYR:CE1  | 2.89                     | 0.56              |
| 1:J:10:MET:HB3   | 1:J:108:LEU:CD2  | 2.33                     | 0.56              |
| 1:J:130:ILE:HG13 | 1:J:152:ILE:HG21 | 1.87                     | 0.56              |
| 1:L:36:VAL:CG2   | 1:L:38:PHE:CE2   | 2.85                     | 0.56              |
| 1:L:37:ILE:CG1   | 1:L:312:TRP:CZ2  | 2.79                     | 0.56              |
| 1:L:259:GLU:OE2  | 1:L:263:LYS:HE3  | 2.06                     | 0.56              |
| 1:O:104:ASN:OD1  | 1:O:106:VAL:HG13 | 2.05                     | 0.56              |
| 1:O:203:GLU:O    | 1:O:203:GLU:CD   | 2.44                     | 0.56              |
| 1:A:37:ILE:HD11  | 1:A:312:TRP:NE1  | 2.21                     | 0.55              |
| 1:B:34:LYS:CA    | 1:B:35:ARG:C     | 2.74                     | 0.55              |
| 1:C:47:ASP:C     | 1:D:322:ALA:C    | 2.62                     | 0.55              |
| 1:C:229:GLU:OE1  | 1:H:309:ASN:O    | 2.12                     | 0.55              |
| 1:C:240:MET:HE1  | 1:G:73:VAL:HG21  | 1.80                     | 0.55              |
| 1:C:288:THR:CG2  | 1:C:292:LEU:HD13 | 2.36                     | 0.55              |
| 1:D:84:LEU:HG    | 1:D:88:LEU:CD1   | 2.34                     | 0.55              |
| 1:D:130:ILE:HG13 | 1:D:152:ILE:HG21 | 1.87                     | 0.55              |
| 1:D:288:THR:CG2  | 1:D:292:LEU:HD13 | 2.36                     | 0.55              |
| 1:E:7:GLU:CG     | 1:E:326:TYR:CE1  | 2.89                     | 0.55              |
| 1:E:34:LYS:CA    | 1:E:35:ARG:C     | 2.74                     | 0.55              |
| 1:E:119:ASN:CG   | 1:E:120:ALA:H    | 2.09                     | 0.55              |
| 1:F:7:GLU:OE1    | 1:F:326:TYR:CD1  | 2.58                     | 0.55              |
| 1:G:240:MET:SD   | 1:G:251:SER:HB2  | 2.46                     | 0.55              |
| 1:H:37:ILE:HG13  | 1:H:312:TRP:HZ2  | 1.65                     | 0.55              |
| 1:H:268:LEU:HD22 | 1:K:271:LYS:CE   | 2.36                     | 0.55              |
| 1:H:288:THR:CG2  | 1:H:292:LEU:HD13 | 2.36                     | 0.55              |
| 1:I:33:ILE:C     | 1:I:35:ARG:HB2   | 2.27                     | 0.55              |
| 1:I:75:ASP:HA    | 1:M:245:GLU:HB3  | 1.75                     | 0.55              |
| 1:I:109:VAL:HG21 | 1:I:318:LEU:O    | 2.06                     | 0.55              |
| 1:J:12:LEU:O     | 1:J:110:LEU:HG   | 2.05                     | 0.55              |
| 1:J:33:ILE:C     | 1:J:35:ARG:HB2   | 2.27                     | 0.55              |
| 1:J:36:VAL:CG1   | 1:J:96:GLN:NE2   | 2.68                     | 0.55              |
| 1:J:43:TYR:CZ    | 1:J:67:LEU:CB    | 2.87                     | 0.55              |
| 1:J:74:GLU:O     | 1:N:245:GLU:O    | 2.24                     | 0.55              |
| 1:J:224:ASN:OD1  | 1:J:233:SER:CB   | 2.48                     | 0.55              |
| 1:K:97:VAL:O     | 1:K:97:VAL:HG12  | 2.05                     | 0.55              |
| 1:K:165:GLU:HG3  | 1:K:305:ILE:CD1  | 2.36                     | 0.55              |
| 1:L:44:ASN:CB    | 1:L:64:LYS:HZ1   | 2.19                     | 0.55              |
| 1:L:97:VAL:O     | 1:L:97:VAL:HG12  | 2.05                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:7:GLU:CG     | 1:N:326:TYR:CE1  | 2.89                     | 0.55              |
| 1:O:49:TYR:HE2   | 1:O:74:GLU:O     | 1.90                     | 0.55              |
| 1:A:7:GLU:OE1    | 1:A:326:TYR:CD1  | 2.58                     | 0.55              |
| 1:A:97:VAL:O     | 1:A:97:VAL:HG12  | 2.05                     | 0.55              |
| 1:B:222:ASN:HB2  | 1:B:237:ASN:CA   | 2.35                     | 0.55              |
| 1:B:241:LYS:CB   | 1:G:165:GLU:OE2  | 2.55                     | 0.55              |
| 1:B:246:ILE:C    | 1:F:50:ILE:CD1   | 2.75                     | 0.55              |
| 1:C:22:ILE:HD12  | 1:C:27:LYS:HZ1   | 1.70                     | 0.55              |
| 1:C:79:THR:HG22  | 1:D:169:PHE:CD2  | 2.40                     | 0.55              |
| 1:C:245:GLU:O    | 1:G:74:GLU:C     | 2.45                     | 0.55              |
| 1:C:248:THR:HG23 | 1:G:52:ILE:HD13  | 1.88                     | 0.55              |
| 1:D:109:VAL:HG21 | 1:D:318:LEU:O    | 2.06                     | 0.55              |
| 1:F:36:VAL:CG1   | 1:F:96:GLN:NE2   | 2.68                     | 0.55              |
| 1:F:37:ILE:CG1   | 1:F:312:TRP:CZ2  | 2.79                     | 0.55              |
| 1:G:34:LYS:CA    | 1:G:35:ARG:C     | 2.74                     | 0.55              |
| 1:H:7:GLU:CG     | 1:H:326:TYR:CE1  | 2.89                     | 0.55              |
| 1:I:320:LYS:O    | 1:N:246:ILE:HD11 | 1.93                     | 0.55              |
| 1:J:106:VAL:HG21 | 1:J:147:PHE:CE1  | 2.39                     | 0.55              |
| 1:J:293:LYS:O    | 1:J:296:ILE:HG22 | 2.07                     | 0.55              |
| 1:K:33:ILE:C     | 1:K:35:ARG:HB2   | 2.27                     | 0.55              |
| 1:L:165:GLU:HG3  | 1:L:305:ILE:CD1  | 2.36                     | 0.55              |
| 1:L:219:ASP:CB   | 1:L:224:ASN:ND2  | 2.64                     | 0.55              |
| 1:M:7:GLU:CG     | 1:M:326:TYR:CE1  | 2.89                     | 0.55              |
| 1:M:37:ILE:HD11  | 1:M:312:TRP:NE1  | 2.21                     | 0.55              |
| 1:A:36:VAL:CG1   | 1:A:96:GLN:NE2   | 2.68                     | 0.55              |
| 1:A:79:THR:OG1   | 1:B:192:CYS:HB3  | 2.07                     | 0.55              |
| 1:A:288:THR:CG2  | 1:A:292:LEU:HD13 | 2.36                     | 0.55              |
| 1:B:7:GLU:CG     | 1:B:326:TYR:CE1  | 2.89                     | 0.55              |
| 1:B:37:ILE:HD11  | 1:B:312:TRP:NE1  | 2.21                     | 0.55              |
| 1:C:7:GLU:CG     | 1:C:326:TYR:CE1  | 2.89                     | 0.55              |
| 1:C:50:ILE:CG1   | 1:D:320:LYS:CE   | 1.92                     | 0.55              |
| 1:C:109:VAL:HG21 | 1:C:318:LEU:O    | 2.06                     | 0.55              |
| 1:E:35:ARG:NH2   | 1:E:316:GLU:HG2  | 2.22                     | 0.55              |
| 1:E:37:ILE:HD11  | 1:E:312:TRP:NE1  | 2.21                     | 0.55              |
| 1:E:63:GLY:O     | 1:E:64:LYS:CB    | 2.52                     | 0.55              |
| 1:E:288:THR:CG2  | 1:E:292:LEU:HD13 | 2.36                     | 0.55              |
| 1:F:35:ARG:NH2   | 1:F:316:GLU:HG2  | 2.22                     | 0.55              |
| 1:F:240:MET:SD   | 1:F:251:SER:HB2  | 2.46                     | 0.55              |
| 1:G:37:ILE:HD11  | 1:G:312:TRP:NE1  | 2.21                     | 0.55              |
| 1:G:288:THR:CG2  | 1:G:292:LEU:HD13 | 2.36                     | 0.55              |
| 1:J:277:ASP:CG   | 1:K:219:ASP:HA   | 2.00                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:300:TYR:CE2  | 1:K:225:LEU:HB3  | 2.38                     | 0.55              |
| 1:K:37:ILE:HG13  | 1:K:312:TRP:HZ2  | 1.65                     | 0.55              |
| 1:K:300:TYR:CE2  | 1:L:225:LEU:HB3  | 2.38                     | 0.55              |
| 1:L:33:ILE:C     | 1:L:35:ARG:HB2   | 2.27                     | 0.55              |
| 1:L:36:VAL:CG1   | 1:L:96:GLN:NE2   | 2.68                     | 0.55              |
| 1:L:109:VAL:HG21 | 1:L:318:LEU:O    | 2.05                     | 0.55              |
| 1:L:132:GLY:N    | 1:L:149:ILE:HD11 | 2.20                     | 0.55              |
| 1:O:43:TYR:CZ    | 1:O:67:LEU:CB    | 2.87                     | 0.55              |
| 1:P:97:VAL:O     | 1:P:97:VAL:HG12  | 2.05                     | 0.55              |
| 1:P:165:GLU:HG3  | 1:P:305:ILE:CD1  | 2.36                     | 0.55              |
| 1:A:79:THR:HG23  | 1:B:192:CYS:HB2  | 1.77                     | 0.55              |
| 1:C:37:ILE:HD11  | 1:C:312:TRP:NE1  | 2.21                     | 0.55              |
| 1:C:78:GLU:C     | 1:D:170:LYS:HD3  | 2.25                     | 0.55              |
| 1:C:79:THR:OG1   | 1:D:192:CYS:HB3  | 2.07                     | 0.55              |
| 1:E:37:ILE:CG1   | 1:E:312:TRP:CZ2  | 2.79                     | 0.55              |
| 1:E:49:TYR:N     | 1:F:322:ALA:C    | 2.56                     | 0.55              |
| 1:E:293:LYS:O    | 1:E:296:ILE:HG22 | 2.07                     | 0.55              |
| 1:F:63:GLY:O     | 1:F:64:LYS:CB    | 2.52                     | 0.55              |
| 1:F:165:GLU:HG3  | 1:F:305:ILE:CD1  | 2.36                     | 0.55              |
| 1:F:218:THR:OG1  | 1:G:278:GLN:HB3  | 1.88                     | 0.55              |
| 1:F:224:ASN:OD1  | 1:F:233:SER:CB   | 2.48                     | 0.55              |
| 1:G:7:GLU:CG     | 1:G:326:TYR:CE1  | 2.89                     | 0.55              |
| 1:H:35:ARG:NH2   | 1:H:316:GLU:HG2  | 2.22                     | 0.55              |
| 1:H:143:LYS:HE3  | 1:H:145:TYR:HE2  | 1.70                     | 0.55              |
| 1:H:194:VAL:HG22 | 1:H:199:ARG:NE   | 2.22                     | 0.55              |
| 1:I:60:GLU:H     | 1:I:137:THR:HG22 | 1.72                     | 0.55              |
| 1:I:259:GLU:OE2  | 1:I:263:LYS:HE3  | 2.06                     | 0.55              |
| 1:J:33:ILE:HD12  | 1:J:312:TRP:NE1  | 2.15                     | 0.55              |
| 1:J:37:ILE:CG1   | 1:J:312:TRP:CZ2  | 2.79                     | 0.55              |
| 1:M:35:ARG:NH2   | 1:M:316:GLU:HG2  | 2.22                     | 0.55              |
| 1:M:60:GLU:H     | 1:M:137:THR:HG22 | 1.72                     | 0.55              |
| 1:N:37:ILE:HD11  | 1:N:312:TRP:NE1  | 2.21                     | 0.55              |
| 1:N:60:GLU:H     | 1:N:137:THR:HG22 | 1.72                     | 0.55              |
| 1:N:165:GLU:HG3  | 1:N:305:ILE:CD1  | 2.36                     | 0.55              |
| 1:O:52:ILE:O     | 1:O:74:GLU:HG3   | 2.06                     | 0.55              |
| 1:O:165:GLU:HG3  | 1:O:305:ILE:CD1  | 2.36                     | 0.55              |
| 1:A:308:ASN:ND2  | 1:E:241:LYS:HB2  | 2.21                     | 0.55              |
| 1:B:119:ASN:CG   | 1:B:120:ALA:H    | 2.09                     | 0.55              |
| 1:C:52:ILE:O     | 1:C:74:GLU:HG3   | 2.06                     | 0.55              |
| 1:E:155:LYS:HG3  | 1:E:156:ALA:H    | 1.72                     | 0.55              |
| 1:F:155:LYS:HG3  | 1:F:156:ALA:H    | 1.72                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:288:THR:CG2  | 1:F:292:LEU:HD13 | 2.36                     | 0.55              |
| 1:F:293:LYS:O    | 1:F:296:ILE:HG22 | 2.07                     | 0.55              |
| 1:G:35:ARG:NH2   | 1:G:316:GLU:HG2  | 2.22                     | 0.55              |
| 1:G:43:TYR:CZ    | 1:G:70:GLU:OE1   | 2.60                     | 0.55              |
| 1:G:274:PHE:CE1  | 1:J:203:GLU:OE1  | 2.56                     | 0.55              |
| 1:G:293:LYS:O    | 1:G:296:ILE:HG22 | 2.07                     | 0.55              |
| 1:H:165:GLU:HG3  | 1:H:305:ILE:CD1  | 2.36                     | 0.55              |
| 1:H:240:MET:SD   | 1:H:251:SER:HB2  | 2.46                     | 0.55              |
| 1:H:293:LYS:O    | 1:H:296:ILE:HG22 | 2.07                     | 0.55              |
| 1:I:130:ILE:HG13 | 1:I:152:ILE:HG21 | 1.87                     | 0.55              |
| 1:I:307:THR:HA   | 1:N:231:ALA:HB2  | 1.87                     | 0.55              |
| 1:J:259:GLU:OE2  | 1:J:263:LYS:HE3  | 2.06                     | 0.55              |
| 1:K:7:GLU:HG3    | 1:K:326:TYR:CE1  | 2.42                     | 0.55              |
| 1:K:22:ILE:HD12  | 1:K:27:LYS:HZ1   | 1.72                     | 0.55              |
| 1:K:224:ASN:OD1  | 1:K:233:SER:CB   | 2.48                     | 0.55              |
| 1:L:7:GLU:HG3    | 1:L:326:TYR:CE1  | 2.42                     | 0.55              |
| 1:L:37:ILE:HG13  | 1:L:312:TRP:HZ2  | 1.65                     | 0.55              |
| 1:M:43:TYR:CE2   | 1:M:67:LEU:CB    | 2.80                     | 0.55              |
| 1:M:49:TYR:HE2   | 1:M:74:GLU:O     | 1.90                     | 0.55              |
| 1:M:165:GLU:HG3  | 1:M:305:ILE:CD1  | 2.36                     | 0.55              |
| 1:M:194:VAL:HG22 | 1:M:199:ARG:NE   | 2.22                     | 0.55              |
| 1:M:240:MET:SD   | 1:M:251:SER:HB2  | 2.46                     | 0.55              |
| 1:N:123:LYS:HZ3  | 1:N:127:ARG:HH12 | 1.55                     | 0.55              |
| 1:N:194:VAL:HG22 | 1:N:199:ARG:NE   | 2.22                     | 0.55              |
| 1:O:37:ILE:HD11  | 1:O:312:TRP:NE1  | 2.21                     | 0.55              |
| 1:O:60:GLU:H     | 1:O:137:THR:HG22 | 1.72                     | 0.55              |
| 1:P:37:ILE:HD11  | 1:P:312:TRP:NE1  | 2.21                     | 0.55              |
| 1:A:49:TYR:CE1   | 1:B:320:LYS:HD2  | 2.36                     | 0.55              |
| 1:A:191:ASN:O    | 1:A:192:CYS:SG   | 2.63                     | 0.55              |
| 1:A:217:LEU:O    | 1:A:217:LEU:HD23 | 2.07                     | 0.55              |
| 1:D:37:ILE:HD11  | 1:D:312:TRP:NE1  | 2.21                     | 0.55              |
| 1:E:37:ILE:HG13  | 1:E:312:TRP:HZ2  | 1.65                     | 0.55              |
| 1:E:50:ILE:HG12  | 1:F:320:LYS:HA   | 1.88                     | 0.55              |
| 1:E:159:SER:O    | 1:E:163:PHE:CD1  | 2.60                     | 0.55              |
| 1:F:37:ILE:HG13  | 1:F:312:TRP:HZ2  | 1.65                     | 0.55              |
| 1:F:197:SER:CB   | 1:I:183:ASN:OD1  | 2.54                     | 0.55              |
| 1:G:49:TYR:HE2   | 1:G:74:GLU:O     | 1.90                     | 0.55              |
| 1:G:259:GLU:OE2  | 1:G:263:LYS:HE3  | 2.06                     | 0.55              |
| 1:H:43:TYR:CZ    | 1:H:70:GLU:OE1   | 2.60                     | 0.55              |
| 1:H:60:GLU:H     | 1:H:137:THR:HG22 | 1.72                     | 0.55              |
| 1:H:217:LEU:HD23 | 1:H:217:LEU:O    | 2.07                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:7:GLU:HG3    | 1:I:326:TYR:CE1  | 2.42                     | 0.55              |
| 1:I:10:MET:HB3   | 1:I:108:LEU:CD2  | 2.33                     | 0.55              |
| 1:I:36:VAL:CG1   | 1:I:96:GLN:NE2   | 2.68                     | 0.55              |
| 1:I:37:ILE:CG1   | 1:I:312:TRP:CZ2  | 2.79                     | 0.55              |
| 1:I:58:LYS:HZ2   | 1:I:65:GLU:HG2   | 1.70                     | 0.55              |
| 1:J:49:TYR:HE2   | 1:J:74:GLU:O     | 1.90                     | 0.55              |
| 1:J:159:SER:O    | 1:J:163:PHE:CD1  | 2.60                     | 0.55              |
| 1:K:52:ILE:O     | 1:K:74:GLU:HG3   | 2.06                     | 0.55              |
| 1:K:259:GLU:OE2  | 1:K:263:LYS:HE3  | 2.06                     | 0.55              |
| 1:K:293:LYS:O    | 1:K:296:ILE:HG22 | 2.07                     | 0.55              |
| 1:L:159:SER:O    | 1:L:163:PHE:CD1  | 2.60                     | 0.55              |
| 1:M:119:ASN:CG   | 1:M:120:ALA:H    | 2.09                     | 0.55              |
| 1:M:217:LEU:HD23 | 1:M:217:LEU:O    | 2.07                     | 0.55              |
| 1:M:288:THR:CG2  | 1:M:292:LEU:HD13 | 2.36                     | 0.55              |
| 1:M:324:ALA:HB1  | 1:N:46:GLU:HA    | 1.68                     | 0.55              |
| 1:N:35:ARG:NH2   | 1:N:316:GLU:HG2  | 2.22                     | 0.55              |
| 1:N:119:ASN:CG   | 1:N:120:ALA:H    | 2.09                     | 0.55              |
| 1:N:192:CYS:HB3  | 1:O:79:THR:OG1   | 2.07                     | 0.55              |
| 1:N:288:THR:CG2  | 1:N:292:LEU:HD13 | 2.36                     | 0.55              |
| 1:O:35:ARG:NH2   | 1:O:316:GLU:HG2  | 2.22                     | 0.55              |
| 1:O:43:TYR:CZ    | 1:O:70:GLU:OE1   | 2.60                     | 0.55              |
| 1:O:192:CYS:HB3  | 1:P:79:THR:OG1   | 2.07                     | 0.55              |
| 1:O:194:VAL:HG22 | 1:O:199:ARG:NE   | 2.22                     | 0.55              |
| 1:O:240:MET:SD   | 1:O:251:SER:HB2  | 2.46                     | 0.55              |
| 1:P:52:ILE:O     | 1:P:74:GLU:HG3   | 2.06                     | 0.55              |
| 1:P:60:GLU:H     | 1:P:137:THR:HG22 | 1.72                     | 0.55              |
| 1:P:194:VAL:HG22 | 1:P:199:ARG:NE   | 2.22                     | 0.55              |
| 1:A:7:GLU:CG     | 1:A:326:TYR:CE1  | 2.89                     | 0.55              |
| 1:A:43:TYR:CZ    | 1:A:70:GLU:OE1   | 2.60                     | 0.55              |
| 1:A:60:GLU:H     | 1:A:137:THR:HG22 | 1.72                     | 0.55              |
| 1:A:119:ASN:CG   | 1:A:120:ALA:H    | 2.09                     | 0.55              |
| 1:A:194:VAL:HG22 | 1:A:199:ARG:NE   | 2.22                     | 0.55              |
| 1:A:240:MET:SD   | 1:A:251:SER:HB2  | 2.46                     | 0.55              |
| 1:B:60:GLU:H     | 1:B:137:THR:HG22 | 1.72                     | 0.55              |
| 1:B:131:LYS:HB2  | 1:B:152:ILE:HD13 | 1.89                     | 0.55              |
| 1:C:240:MET:O    | 1:H:166:GLN:HG2  | 1.95                     | 0.55              |
| 1:D:222:ASN:ND2  | 1:D:237:ASN:HD22 | 2.05                     | 0.55              |
| 1:E:49:TYR:HE2   | 1:E:74:GLU:O     | 1.90                     | 0.55              |
| 1:E:165:GLU:HG3  | 1:E:305:ILE:CD1  | 2.36                     | 0.55              |
| 1:F:130:ILE:HG13 | 1:F:152:ILE:HG21 | 1.87                     | 0.55              |
| 1:F:219:ASP:CB   | 1:F:224:ASN:ND2  | 2.65                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:49:TYR:CA    | 1:H:323:VAL:N    | 2.70                     | 0.55              |
| 1:G:60:GLU:H     | 1:G:137:THR:HG22 | 1.72                     | 0.55              |
| 1:G:159:SER:O    | 1:G:163:PHE:CD1  | 2.60                     | 0.55              |
| 1:G:194:VAL:HG22 | 1:G:199:ARG:NE   | 2.22                     | 0.55              |
| 1:I:34:LYS:CA    | 1:I:35:ARG:C     | 2.74                     | 0.55              |
| 1:I:275:LYS:NZ   | 1:J:219:ASP:CB   | 2.70                     | 0.55              |
| 1:J:60:GLU:H     | 1:J:137:THR:HG22 | 1.72                     | 0.55              |
| 1:J:275:LYS:NZ   | 1:K:219:ASP:CB   | 2.70                     | 0.55              |
| 1:K:36:VAL:N     | 1:K:312:TRP:HH2  | 2.01                     | 0.55              |
| 1:M:161:VAL:HG11 | 1:M:285:ILE:HD13 | 1.89                     | 0.55              |
| 1:N:217:LEU:O    | 1:N:217:LEU:HD23 | 2.07                     | 0.55              |
| 1:O:68:ILE:CD1   | 1:O:92:THR:HB    | 2.10                     | 0.55              |
| 1:P:36:VAL:CG1   | 1:P:96:GLN:NE2   | 2.68                     | 0.55              |
| 1:P:43:TYR:CZ    | 1:P:70:GLU:OE1   | 2.60                     | 0.55              |
| 1:P:84:LEU:HG    | 1:P:88:LEU:CD1   | 2.34                     | 0.55              |
| 1:A:43:TYR:OH    | 1:A:67:LEU:HD22  | 2.07                     | 0.55              |
| 1:A:68:ILE:CD1   | 1:A:92:THR:HB    | 2.10                     | 0.55              |
| 1:B:43:TYR:CZ    | 1:B:70:GLU:OE1   | 2.60                     | 0.55              |
| 1:B:49:TYR:HE2   | 1:B:74:GLU:O     | 1.90                     | 0.55              |
| 1:B:217:LEU:HD23 | 1:B:217:LEU:O    | 2.07                     | 0.55              |
| 1:B:246:ILE:CD1  | 1:G:320:LYS:C    | 2.73                     | 0.55              |
| 1:C:47:ASP:O     | 1:D:323:VAL:CA   | 2.48                     | 0.55              |
| 1:C:49:TYR:HE2   | 1:C:74:GLU:O     | 1.90                     | 0.55              |
| 1:C:165:GLU:HG3  | 1:C:305:ILE:CD1  | 2.36                     | 0.55              |
| 1:D:35:ARG:NH2   | 1:D:316:GLU:HG2  | 2.22                     | 0.55              |
| 1:D:248:THR:HG22 | 1:H:52:ILE:CG2   | 2.27                     | 0.55              |
| 1:E:60:GLU:H     | 1:E:137:THR:HG22 | 1.72                     | 0.55              |
| 1:E:74:GLU:O     | 1:E:74:GLU:CD    | 2.46                     | 0.55              |
| 1:G:7:GLU:HG3    | 1:G:326:TYR:CE1  | 2.42                     | 0.55              |
| 1:G:165:GLU:HG3  | 1:G:305:ILE:CD1  | 2.36                     | 0.55              |
| 1:H:7:GLU:HG3    | 1:H:326:TYR:CE1  | 2.42                     | 0.55              |
| 1:I:43:TYR:CZ    | 1:I:70:GLU:OE1   | 2.60                     | 0.55              |
| 1:J:22:ILE:HG22  | 1:J:35:ARG:CB    | 2.35                     | 0.55              |
| 1:J:37:ILE:HD11  | 1:J:312:TRP:NE1  | 2.21                     | 0.55              |
| 1:K:60:GLU:H     | 1:K:137:THR:HG22 | 1.72                     | 0.55              |
| 1:K:74:GLU:O     | 1:K:74:GLU:CD    | 2.46                     | 0.55              |
| 1:L:52:ILE:O     | 1:L:74:GLU:HG3   | 2.06                     | 0.55              |
| 1:L:74:GLU:O     | 1:L:74:GLU:CD    | 2.46                     | 0.55              |
| 1:M:43:TYR:CZ    | 1:M:67:LEU:CB    | 2.87                     | 0.55              |
| 1:M:275:LYS:NZ   | 1:N:218:THR:OG1  | 2.40                     | 0.55              |
| 1:N:43:TYR:CZ    | 1:N:70:GLU:OE1   | 2.60                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:131:LYS:HB2  | 1:N:152:ILE:HD13 | 1.89                     | 0.55              |
| 1:N:161:VAL:HG11 | 1:N:285:ILE:HD13 | 1.89                     | 0.55              |
| 1:N:275:LYS:NZ   | 1:O:218:THR:OG1  | 2.40                     | 0.55              |
| 1:O:219:ASP:CB   | 1:O:224:ASN:ND2  | 2.65                     | 0.55              |
| 1:O:288:THR:CG2  | 1:O:292:LEU:HD13 | 2.36                     | 0.55              |
| 1:A:131:LYS:HB2  | 1:A:152:ILE:HD13 | 1.89                     | 0.55              |
| 1:A:222:ASN:ND2  | 1:A:237:ASN:HD22 | 2.05                     | 0.55              |
| 1:B:191:ASN:O    | 1:B:192:CYS:SG   | 2.62                     | 0.55              |
| 1:B:194:VAL:HG22 | 1:B:199:ARG:NE   | 2.22                     | 0.55              |
| 1:B:246:ILE:CD1  | 1:G:320:LYS:O    | 2.50                     | 0.55              |
| 1:D:7:GLU:HG3    | 1:D:326:TYR:CE1  | 2.42                     | 0.55              |
| 1:D:155:LYS:HG3  | 1:D:156:ALA:H    | 1.72                     | 0.55              |
| 1:E:7:GLU:HG3    | 1:E:326:TYR:CE1  | 2.42                     | 0.55              |
| 1:E:52:ILE:O     | 1:E:74:GLU:HG3   | 2.06                     | 0.55              |
| 1:F:7:GLU:HG3    | 1:F:326:TYR:CE1  | 2.42                     | 0.55              |
| 1:F:43:TYR:CZ    | 1:F:70:GLU:OE1   | 2.60                     | 0.55              |
| 1:F:49:TYR:CA    | 1:G:323:VAL:N    | 2.70                     | 0.55              |
| 1:G:37:ILE:HG13  | 1:G:312:TRP:HZ2  | 1.65                     | 0.55              |
| 1:G:155:LYS:HG3  | 1:G:156:ALA:H    | 1.72                     | 0.55              |
| 1:G:217:LEU:O    | 1:G:217:LEU:HD23 | 2.07                     | 0.55              |
| 1:H:74:GLU:O     | 1:H:74:GLU:CD    | 2.46                     | 0.55              |
| 1:H:259:GLU:OE2  | 1:H:263:LYS:HE3  | 2.06                     | 0.55              |
| 1:I:52:ILE:O     | 1:I:74:GLU:HG3   | 2.06                     | 0.55              |
| 1:I:166:GLN:C    | 1:N:241:LYS:HA   | 2.26                     | 0.55              |
| 1:I:293:LYS:O    | 1:I:296:ILE:HG22 | 2.07                     | 0.55              |
| 1:J:7:GLU:HG3    | 1:J:326:TYR:CE1  | 2.42                     | 0.55              |
| 1:J:52:ILE:O     | 1:J:74:GLU:HG3   | 2.06                     | 0.55              |
| 1:J:288:THR:CG2  | 1:J:292:LEU:HD13 | 2.36                     | 0.55              |
| 1:K:275:LYS:NZ   | 1:L:219:ASP:CB   | 2.70                     | 0.55              |
| 1:L:43:TYR:OH    | 1:L:67:LEU:HD22  | 2.07                     | 0.55              |
| 1:L:217:LEU:O    | 1:L:217:LEU:HD23 | 2.07                     | 0.55              |
| 1:L:293:LYS:O    | 1:L:296:ILE:HG22 | 2.07                     | 0.55              |
| 1:M:131:LYS:HB2  | 1:M:152:ILE:HD13 | 1.89                     | 0.55              |
| 1:M:153:THR:CG2  | 1:M:325:LYS:HE3  | 2.37                     | 0.55              |
| 1:M:219:ASP:CB   | 1:M:224:ASN:ND2  | 2.64                     | 0.55              |
| 1:N:320:LYS:O    | 1:O:47:ASP:O     | 2.21                     | 0.55              |
| 1:O:153:THR:CG2  | 1:O:325:LYS:HE3  | 2.37                     | 0.55              |
| 1:P:35:ARG:NH2   | 1:P:316:GLU:HG2  | 2.22                     | 0.55              |
| 1:A:49:TYR:HE2   | 1:A:74:GLU:O     | 1.90                     | 0.55              |
| 1:A:218:THR:OG1  | 1:B:275:LYS:NZ   | 2.40                     | 0.55              |
| 1:A:293:LYS:O    | 1:A:296:ILE:HG22 | 2.07                     | 0.55              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:36:VAL:CG1   | 1:B:96:GLN:NE2   | 2.68                     | 0.55              |
| 1:B:43:TYR:OH    | 1:B:67:LEU:HD22  | 2.07                     | 0.55              |
| 1:C:60:GLU:H     | 1:C:137:THR:HG22 | 1.72                     | 0.55              |
| 1:C:242:LYS:CG   | 1:H:166:GLN:OE1  | 2.54                     | 0.55              |
| 1:D:58:LYS:HZ2   | 1:D:65:GLU:CG    | 2.21                     | 0.55              |
| 1:D:245:GLU:O    | 1:H:52:ILE:HG12  | 2.06                     | 0.55              |
| 1:D:259:GLU:OE2  | 1:D:263:LYS:HE3  | 2.06                     | 0.55              |
| 1:E:43:TYR:CZ    | 1:E:70:GLU:OE1   | 2.60                     | 0.55              |
| 1:F:74:GLU:O     | 1:F:74:GLU:CD    | 2.46                     | 0.55              |
| 1:F:259:GLU:OE2  | 1:F:263:LYS:HE3  | 2.06                     | 0.55              |
| 1:G:74:GLU:O     | 1:G:74:GLU:CD    | 2.46                     | 0.55              |
| 1:H:52:ILE:O     | 1:H:74:GLU:HG3   | 2.06                     | 0.55              |
| 1:H:155:LYS:HG3  | 1:H:156:ALA:H    | 1.72                     | 0.55              |
| 1:I:43:TYR:CE2   | 1:I:70:GLU:OE2   | 2.60                     | 0.55              |
| 1:J:58:LYS:HZ2   | 1:J:65:GLU:HG2   | 1.70                     | 0.55              |
| 1:J:73:VAL:HG23  | 1:N:240:MET:CE   | 1.91                     | 0.55              |
| 1:J:74:GLU:O     | 1:J:74:GLU:CD    | 2.46                     | 0.55              |
| 1:L:49:TYR:HE2   | 1:L:74:GLU:O     | 1.90                     | 0.55              |
| 1:L:288:THR:CG2  | 1:L:292:LEU:HD13 | 2.36                     | 0.55              |
| 1:M:43:TYR:CZ    | 1:M:70:GLU:OE1   | 2.60                     | 0.55              |
| 1:N:43:TYR:OH    | 1:N:67:LEU:HD22  | 2.07                     | 0.55              |
| 1:N:222:ASN:ND2  | 1:N:237:ASN:HD22 | 2.05                     | 0.55              |
| 1:O:84:LEU:HG    | 1:O:88:LEU:CD1   | 2.34                     | 0.55              |
| 1:P:161:VAL:HG11 | 1:P:285:ILE:HD13 | 1.89                     | 0.55              |
| 1:P:288:THR:CG2  | 1:P:292:LEU:HD13 | 2.36                     | 0.55              |
| 1:A:153:THR:CG2  | 1:A:325:LYS:HE3  | 2.37                     | 0.54              |
| 1:A:165:GLU:HG3  | 1:A:305:ILE:CD1  | 2.36                     | 0.54              |
| 1:B:7:GLU:HG3    | 1:B:326:TYR:CE1  | 2.42                     | 0.54              |
| 1:B:43:TYR:CE2   | 1:B:70:GLU:OE2   | 2.61                     | 0.54              |
| 1:B:218:THR:OG1  | 1:C:275:LYS:NZ   | 2.40                     | 0.54              |
| 1:B:241:LYS:O    | 1:G:165:GLU:CD   | 2.44                     | 0.54              |
| 1:B:293:LYS:O    | 1:B:296:ILE:HG22 | 2.07                     | 0.54              |
| 1:C:155:LYS:HG3  | 1:C:156:ALA:H    | 1.72                     | 0.54              |
| 1:C:194:VAL:HG22 | 1:C:199:ARG:NE   | 2.22                     | 0.54              |
| 1:C:293:LYS:O    | 1:C:296:ILE:HG22 | 2.07                     | 0.54              |
| 1:E:33:ILE:HD12  | 1:E:312:TRP:NE1  | 2.15                     | 0.54              |
| 1:F:50:ILE:HG12  | 1:G:320:LYS:HA   | 1.89                     | 0.54              |
| 1:F:197:SER:O    | 1:I:203:GLU:N    | 2.40                     | 0.54              |
| 1:H:123:LYS:HZ3  | 1:H:127:ARG:NH1  | 2.04                     | 0.54              |
| 1:H:222:ASN:ND2  | 1:H:237:ASN:HD22 | 2.05                     | 0.54              |
| 1:I:153:THR:CG2  | 1:I:325:LYS:HE3  | 2.37                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:222:ASN:ND2  | 1:I:237:ASN:HD22 | 2.05                     | 0.54              |
| 1:J:222:ASN:ND2  | 1:J:237:ASN:HD22 | 2.05                     | 0.54              |
| 1:K:222:ASN:ND2  | 1:K:237:ASN:HD22 | 2.05                     | 0.54              |
| 1:K:277:ASP:CG   | 1:L:219:ASP:HA   | 2.00                     | 0.54              |
| 1:M:43:TYR:CE2   | 1:M:70:GLU:OE2   | 2.61                     | 0.54              |
| 1:M:43:TYR:OH    | 1:M:67:LEU:HD22  | 2.07                     | 0.54              |
| 1:M:259:GLU:OE2  | 1:M:263:LYS:HE3  | 2.06                     | 0.54              |
| 1:M:293:LYS:O    | 1:M:296:ILE:HG22 | 2.07                     | 0.54              |
| 1:N:74:GLU:O     | 1:N:74:GLU:CD    | 2.46                     | 0.54              |
| 1:N:153:THR:CG2  | 1:N:325:LYS:HE3  | 2.38                     | 0.54              |
| 1:O:43:TYR:OH    | 1:O:67:LEU:HD22  | 2.07                     | 0.54              |
| 1:O:74:GLU:O     | 1:O:74:GLU:CD    | 2.46                     | 0.54              |
| 1:O:161:VAL:HG11 | 1:O:285:ILE:HD13 | 1.89                     | 0.54              |
| 1:P:33:ILE:C     | 1:P:35:ARG:HB2   | 2.27                     | 0.54              |
| 1:P:153:THR:CG2  | 1:P:325:LYS:HE3  | 2.37                     | 0.54              |
| 1:A:43:TYR:CE2   | 1:A:70:GLU:OE2   | 2.61                     | 0.54              |
| 1:A:43:TYR:HE2   | 1:A:74:GLU:OE1   | 1.90                     | 0.54              |
| 1:B:68:ILE:CD1   | 1:B:92:THR:HB    | 2.10                     | 0.54              |
| 1:B:153:THR:CG2  | 1:B:325:LYS:HE3  | 2.37                     | 0.54              |
| 1:C:43:TYR:HE2   | 1:C:74:GLU:OE1   | 1.91                     | 0.54              |
| 1:C:48:GLY:O     | 1:D:320:LYS:HB2  | 2.07                     | 0.54              |
| 1:E:43:TYR:OH    | 1:E:67:LEU:HD22  | 2.07                     | 0.54              |
| 1:E:49:TYR:CA    | 1:F:323:VAL:N    | 2.70                     | 0.54              |
| 1:F:49:TYR:HE2   | 1:F:74:GLU:O     | 1.90                     | 0.54              |
| 1:F:60:GLU:H     | 1:F:137:THR:HG22 | 1.72                     | 0.54              |
| 1:F:143:LYS:HE3  | 1:F:145:TYR:HE2  | 1.70                     | 0.54              |
| 1:F:203:GLU:HA   | 1:I:197:SER:O    | 2.08                     | 0.54              |
| 1:G:43:TYR:CE2   | 1:G:70:GLU:OE2   | 2.61                     | 0.54              |
| 1:H:265:ALA:CA   | 1:K:271:LYS:NZ   | 2.61                     | 0.54              |
| 1:I:35:ARG:NH2   | 1:I:316:GLU:HG2  | 2.22                     | 0.54              |
| 1:I:161:VAL:HG11 | 1:I:285:ILE:HD13 | 1.89                     | 0.54              |
| 1:I:194:VAL:HG22 | 1:I:199:ARG:NE   | 2.22                     | 0.54              |
| 1:I:323:VAL:N    | 1:J:48:GLY:C     | 2.58                     | 0.54              |
| 1:J:43:TYR:CE2   | 1:J:70:GLU:OE2   | 2.60                     | 0.54              |
| 1:J:43:TYR:CZ    | 1:J:70:GLU:OE1   | 2.60                     | 0.54              |
| 1:J:219:ASP:CB   | 1:J:224:ASN:ND2  | 2.65                     | 0.54              |
| 1:J:254:ILE:O    | 1:J:257:VAL:HG12 | 2.07                     | 0.54              |
| 1:K:153:THR:CG2  | 1:K:325:LYS:HE3  | 2.37                     | 0.54              |
| 1:K:165:GLU:OE2  | 1:P:241:LYS:CB   | 2.55                     | 0.54              |
| 1:K:320:LYS:O    | 1:P:246:ILE:CD1  | 2.49                     | 0.54              |
| 1:L:35:ARG:NH2   | 1:L:316:GLU:HG2  | 2.22                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:43:TYR:HE2   | 1:L:74:GLU:OE1   | 1.91                     | 0.54              |
| 1:L:60:GLU:H     | 1:L:137:THR:HG22 | 1.72                     | 0.54              |
| 1:L:153:THR:CG2  | 1:L:325:LYS:HE3  | 2.37                     | 0.54              |
| 1:L:222:ASN:ND2  | 1:L:237:ASN:HD22 | 2.05                     | 0.54              |
| 1:L:254:ILE:O    | 1:L:257:VAL:HG12 | 2.07                     | 0.54              |
| 1:M:155:LYS:HG3  | 1:M:156:ALA:H    | 1.72                     | 0.54              |
| 1:O:217:LEU:O    | 1:O:217:LEU:HD23 | 2.07                     | 0.54              |
| 1:P:36:VAL:N     | 1:P:312:TRP:HH2  | 2.01                     | 0.54              |
| 1:P:43:TYR:HE2   | 1:P:74:GLU:OE1   | 1.91                     | 0.54              |
| 1:P:49:TYR:HE2   | 1:P:74:GLU:O     | 1.90                     | 0.54              |
| 1:A:7:GLU:HG3    | 1:A:326:TYR:CE1  | 2.42                     | 0.54              |
| 1:B:58:LYS:HZ2   | 1:B:65:GLU:HG2   | 1.71                     | 0.54              |
| 1:B:165:GLU:HG3  | 1:B:305:ILE:CD1  | 2.36                     | 0.54              |
| 1:C:43:TYR:CE2   | 1:C:70:GLU:OE2   | 2.60                     | 0.54              |
| 1:C:43:TYR:CZ    | 1:C:70:GLU:OE1   | 2.60                     | 0.54              |
| 1:C:131:LYS:HB2  | 1:C:152:ILE:HD13 | 1.89                     | 0.54              |
| 1:C:254:ILE:O    | 1:C:257:VAL:HG12 | 2.08                     | 0.54              |
| 1:D:159:SER:O    | 1:D:163:PHE:CD1  | 2.60                     | 0.54              |
| 1:E:143:LYS:HE3  | 1:E:145:TYR:HE2  | 1.70                     | 0.54              |
| 1:F:217:LEU:O    | 1:F:217:LEU:HD23 | 2.07                     | 0.54              |
| 1:G:36:VAL:N     | 1:G:312:TRP:HH2  | 2.01                     | 0.54              |
| 1:G:48:GLY:C     | 1:H:323:VAL:N    | 2.58                     | 0.54              |
| 1:I:73:VAL:HB    | 1:M:240:MET:CE   | 2.32                     | 0.54              |
| 1:I:254:ILE:O    | 1:I:257:VAL:HG12 | 2.07                     | 0.54              |
| 1:J:35:ARG:NH2   | 1:J:316:GLU:HG2  | 2.22                     | 0.54              |
| 1:J:303:ASN:C    | 1:K:226:ILE:HD12 | 2.11                     | 0.54              |
| 1:K:35:ARG:NH2   | 1:K:316:GLU:HG2  | 2.22                     | 0.54              |
| 1:K:43:TYR:CZ    | 1:K:70:GLU:OE1   | 2.60                     | 0.54              |
| 1:K:123:LYS:HZ3  | 1:K:127:ARG:NH1  | 2.04                     | 0.54              |
| 1:K:155:LYS:HG3  | 1:K:156:ALA:H    | 1.72                     | 0.54              |
| 1:K:217:LEU:HD23 | 1:K:217:LEU:O    | 2.07                     | 0.54              |
| 1:K:254:ILE:O    | 1:K:257:VAL:HG12 | 2.07                     | 0.54              |
| 1:L:155:LYS:HG3  | 1:L:156:ALA:H    | 1.72                     | 0.54              |
| 1:M:7:GLU:HG3    | 1:M:326:TYR:CE1  | 2.42                     | 0.54              |
| 1:M:43:TYR:HE2   | 1:M:74:GLU:OE1   | 1.91                     | 0.54              |
| 1:M:222:ASN:ND2  | 1:M:237:ASN:HD22 | 2.05                     | 0.54              |
| 1:N:7:GLU:HG3    | 1:N:326:TYR:CE1  | 2.42                     | 0.54              |
| 1:N:49:TYR:HE2   | 1:N:74:GLU:O     | 1.90                     | 0.54              |
| 1:N:159:SER:O    | 1:N:163:PHE:CD1  | 2.60                     | 0.54              |
| 1:N:263:LYS:O    | 1:N:267:LYS:HG3  | 2.08                     | 0.54              |
| 1:O:7:GLU:HG3    | 1:O:326:TYR:CE1  | 2.42                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:159:SER:O    | 1:O:163:PHE:CD1  | 2.60                     | 0.54              |
| 1:O:259:GLU:OE2  | 1:O:263:LYS:HE3  | 2.06                     | 0.54              |
| 1:P:74:GLU:O     | 1:P:74:GLU:CD    | 2.46                     | 0.54              |
| 1:P:263:LYS:O    | 1:P:267:LYS:HG3  | 2.07                     | 0.54              |
| 1:A:81:LYS:HB3   | 1:B:170:LYS:HZ2  | 1.71                     | 0.54              |
| 1:A:259:GLU:OE2  | 1:A:263:LYS:HE3  | 2.06                     | 0.54              |
| 1:B:35:ARG:NH2   | 1:B:316:GLU:HG2  | 2.22                     | 0.54              |
| 1:B:48:GLY:O     | 1:C:320:LYS:HB2  | 2.07                     | 0.54              |
| 1:C:35:ARG:NH2   | 1:C:316:GLU:HG2  | 2.22                     | 0.54              |
| 1:C:290:GLN:HB3  | 1:G:230:GLN:HE22 | 1.71                     | 0.54              |
| 1:D:45:LEU:HD22  | 1:D:58:LYS:HZ3   | 1.71                     | 0.54              |
| 1:D:60:GLU:H     | 1:D:137:THR:HG22 | 1.72                     | 0.54              |
| 1:D:194:VAL:HG22 | 1:D:199:ARG:NE   | 2.22                     | 0.54              |
| 1:D:293:LYS:O    | 1:D:296:ILE:HG22 | 2.07                     | 0.54              |
| 1:E:50:ILE:CG1   | 1:F:320:LYS:HG2  | 2.37                     | 0.54              |
| 1:F:52:ILE:O     | 1:F:74:GLU:HG3   | 2.06                     | 0.54              |
| 1:F:153:THR:CG2  | 1:F:325:LYS:HE3  | 2.38                     | 0.54              |
| 1:F:194:VAL:HG22 | 1:F:199:ARG:NE   | 2.22                     | 0.54              |
| 1:G:52:ILE:O     | 1:G:74:GLU:HG3   | 2.06                     | 0.54              |
| 1:G:143:LYS:HE3  | 1:G:145:TYR:HE2  | 1.70                     | 0.54              |
| 1:G:222:ASN:ND2  | 1:G:237:ASN:HD22 | 2.05                     | 0.54              |
| 1:H:37:ILE:HD11  | 1:H:312:TRP:NE1  | 2.21                     | 0.54              |
| 1:H:43:TYR:HE2   | 1:H:74:GLU:OE1   | 1.90                     | 0.54              |
| 1:H:159:SER:O    | 1:H:163:PHE:CD1  | 2.60                     | 0.54              |
| 1:H:254:ILE:O    | 1:H:257:VAL:HG12 | 2.07                     | 0.54              |
| 1:I:74:GLU:O     | 1:I:74:GLU:CD    | 2.46                     | 0.54              |
| 1:I:217:LEU:O    | 1:I:217:LEU:HD23 | 2.07                     | 0.54              |
| 1:J:161:VAL:HG11 | 1:J:285:ILE:HD13 | 1.89                     | 0.54              |
| 1:K:161:VAL:HG11 | 1:K:285:ILE:HD13 | 1.89                     | 0.54              |
| 1:K:245:GLU:OE2  | 1:P:52:ILE:HD13  | 2.07                     | 0.54              |
| 1:L:43:TYR:CZ    | 1:L:70:GLU:OE1   | 2.60                     | 0.54              |
| 1:M:192:CYS:HB3  | 1:N:79:THR:OG1   | 2.07                     | 0.54              |
| 1:N:22:ILE:HD12  | 1:N:27:LYS:HZ1   | 1.72                     | 0.54              |
| 1:O:43:TYR:CE2   | 1:O:70:GLU:OE2   | 2.61                     | 0.54              |
| 1:O:131:LYS:HB2  | 1:O:152:ILE:HD13 | 1.89                     | 0.54              |
| 1:O:275:LYS:NZ   | 1:P:218:THR:OG1  | 2.40                     | 0.54              |
| 1:O:301:PRO:HD3  | 1:P:227:THR:CG2  | 2.29                     | 0.54              |
| 1:A:241:LYS:O    | 1:F:165:GLU:CD   | 2.46                     | 0.54              |
| 1:B:43:TYR:HE2   | 1:B:74:GLU:OE1   | 1.90                     | 0.54              |
| 1:B:213:VAL:HG13 | 1:B:253:VAL:HG12 | 1.90                     | 0.54              |
| 1:C:153:THR:CG2  | 1:C:325:LYS:HE3  | 2.37                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:217:LEU:HD23 | 1:C:217:LEU:O    | 2.07                     | 0.54              |
| 1:C:222:ASN:ND2  | 1:C:237:ASN:HD22 | 2.05                     | 0.54              |
| 1:D:43:TYR:CZ    | 1:D:70:GLU:OE1   | 2.60                     | 0.54              |
| 1:D:153:THR:CG2  | 1:D:325:LYS:HE3  | 2.37                     | 0.54              |
| 1:D:254:ILE:O    | 1:D:257:VAL:HG12 | 2.08                     | 0.54              |
| 1:E:43:TYR:CE2   | 1:E:70:GLU:OE2   | 2.60                     | 0.54              |
| 1:E:218:THR:C    | 1:F:275:LYS:HB3  | 2.08                     | 0.54              |
| 1:E:224:ASN:OD1  | 1:E:233:SER:CB   | 2.49                     | 0.54              |
| 1:F:43:TYR:HE2   | 1:F:74:GLU:OE1   | 1.90                     | 0.54              |
| 1:F:202:GLU:CA   | 1:I:272:ARG:CG   | 2.76                     | 0.54              |
| 1:F:222:ASN:ND2  | 1:F:237:ASN:HD22 | 2.05                     | 0.54              |
| 1:F:263:LYS:O    | 1:F:267:LYS:HG3  | 2.08                     | 0.54              |
| 1:G:133:ASN:HD22 | 1:G:148:GLU:CA   | 2.11                     | 0.54              |
| 1:H:49:TYR:HE2   | 1:H:74:GLU:O     | 1.90                     | 0.54              |
| 1:H:153:THR:CG2  | 1:H:325:LYS:HE3  | 2.37                     | 0.54              |
| 1:I:263:LYS:O    | 1:I:267:LYS:HG3  | 2.08                     | 0.54              |
| 1:K:37:ILE:HD11  | 1:K:312:TRP:NE1  | 2.21                     | 0.54              |
| 1:K:43:TYR:CE2   | 1:K:70:GLU:OE2   | 2.60                     | 0.54              |
| 1:K:43:TYR:OH    | 1:K:67:LEU:HD22  | 2.07                     | 0.54              |
| 1:K:49:TYR:HE2   | 1:K:74:GLU:O     | 1.90                     | 0.54              |
| 1:K:320:LYS:HA   | 1:L:50:ILE:HG12  | 1.88                     | 0.54              |
| 1:M:33:ILE:C     | 1:M:35:ARG:HB2   | 2.27                     | 0.54              |
| 1:M:74:GLU:O     | 1:M:74:GLU:CD    | 2.46                     | 0.54              |
| 1:N:259:GLU:OE2  | 1:N:263:LYS:HE3  | 2.06                     | 0.54              |
| 1:O:5:THR:HG23   | 1:O:7:GLU:HG2    | 1.89                     | 0.54              |
| 1:O:33:ILE:C     | 1:O:35:ARG:HB2   | 2.27                     | 0.54              |
| 1:O:36:VAL:CG1   | 1:O:96:GLN:NE2   | 2.68                     | 0.54              |
| 1:O:254:ILE:O    | 1:O:257:VAL:HG12 | 2.08                     | 0.54              |
| 1:P:159:SER:O    | 1:P:163:PHE:CD1  | 2.60                     | 0.54              |
| 1:P:254:ILE:O    | 1:P:257:VAL:HG12 | 2.08                     | 0.54              |
| 1:A:35:ARG:NH2   | 1:A:316:GLU:HG2  | 2.22                     | 0.54              |
| 1:A:36:VAL:N     | 1:A:312:TRP:HH2  | 2.01                     | 0.54              |
| 1:A:74:GLU:O     | 1:A:74:GLU:CD    | 2.46                     | 0.54              |
| 1:B:263:LYS:O    | 1:B:267:LYS:HG3  | 2.07                     | 0.54              |
| 1:C:116:VAL:HG22 | 1:C:121:LYS:O    | 2.08                     | 0.54              |
| 1:D:36:VAL:N     | 1:D:312:TRP:HH2  | 2.01                     | 0.54              |
| 1:D:43:TYR:CE2   | 1:D:70:GLU:OE2   | 2.60                     | 0.54              |
| 1:D:49:TYR:HE2   | 1:D:74:GLU:O     | 1.90                     | 0.54              |
| 1:D:52:ILE:O     | 1:D:74:GLU:HG3   | 2.06                     | 0.54              |
| 1:E:161:VAL:HG11 | 1:E:285:ILE:HD13 | 1.89                     | 0.54              |
| 1:F:159:SER:O    | 1:F:163:PHE:CD1  | 2.60                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:254:ILE:O    | 1:G:257:VAL:HG12 | 2.07                     | 0.54              |
| 1:H:43:TYR:CE2   | 1:H:70:GLU:OE2   | 2.60                     | 0.54              |
| 1:H:263:LYS:O    | 1:H:267:LYS:HG3  | 2.08                     | 0.54              |
| 1:I:43:TYR:HE2   | 1:I:74:GLU:OE1   | 1.90                     | 0.54              |
| 1:I:52:ILE:CG1   | 1:M:245:GLU:C    | 2.75                     | 0.54              |
| 1:I:159:SER:O    | 1:I:163:PHE:CD1  | 2.60                     | 0.54              |
| 1:I:186:PHE:HE2  | 1:I:269:ILE:HD11 | 1.70                     | 0.54              |
| 1:I:308:ASN:HD22 | 1:N:231:ALA:N    | 1.80                     | 0.54              |
| 1:I:323:VAL:N    | 1:J:49:TYR:CA    | 2.70                     | 0.54              |
| 1:J:78:GLU:OE1   | 1:N:245:GLU:OE2  | 2.24                     | 0.54              |
| 1:J:194:VAL:HG22 | 1:J:199:ARG:NE   | 2.22                     | 0.54              |
| 1:J:263:LYS:O    | 1:J:267:LYS:HG3  | 2.07                     | 0.54              |
| 1:L:161:VAL:HG11 | 1:L:285:ILE:HD13 | 1.89                     | 0.54              |
| 1:M:213:VAL:HG13 | 1:M:253:VAL:HG12 | 1.90                     | 0.54              |
| 1:M:320:LYS:HD2  | 1:N:49:TYR:CE1   | 2.36                     | 0.54              |
| 1:N:43:TYR:CE2   | 1:N:70:GLU:OE2   | 2.60                     | 0.54              |
| 1:N:43:TYR:HE2   | 1:N:74:GLU:OE1   | 1.91                     | 0.54              |
| 1:N:155:LYS:HG3  | 1:N:156:ALA:H    | 1.72                     | 0.54              |
| 1:N:163:PHE:HA   | 1:O:76:SER:HG    | 1.70                     | 0.54              |
| 1:O:43:TYR:HE2   | 1:O:74:GLU:OE1   | 1.91                     | 0.54              |
| 1:P:7:GLU:HG3    | 1:P:326:TYR:CE1  | 2.42                     | 0.54              |
| 1:P:43:TYR:OH    | 1:P:67:LEU:HD22  | 2.07                     | 0.54              |
| 1:A:159:SER:O    | 1:A:163:PHE:CD1  | 2.60                     | 0.54              |
| 1:B:254:ILE:O    | 1:B:257:VAL:HG12 | 2.07                     | 0.54              |
| 1:C:7:GLU:HG3    | 1:C:326:TYR:CE1  | 2.42                     | 0.54              |
| 1:C:43:TYR:OH    | 1:C:67:LEU:HD22  | 2.07                     | 0.54              |
| 1:D:43:TYR:HE2   | 1:D:74:GLU:OE1   | 1.90                     | 0.54              |
| 1:E:222:ASN:ND2  | 1:E:237:ASN:HD22 | 2.05                     | 0.54              |
| 1:E:254:ILE:O    | 1:E:257:VAL:HG12 | 2.07                     | 0.54              |
| 1:E:263:LYS:O    | 1:E:267:LYS:HG3  | 2.08                     | 0.54              |
| 1:F:43:TYR:CE2   | 1:F:70:GLU:OE2   | 2.60                     | 0.54              |
| 1:F:43:TYR:OH    | 1:F:67:LEU:HD22  | 2.07                     | 0.54              |
| 1:F:202:GLU:HG2  | 1:I:272:ARG:N    | 2.23                     | 0.54              |
| 1:F:267:LYS:O    | 1:I:264:ASP:OD1  | 2.25                     | 0.54              |
| 1:G:36:VAL:CG1   | 1:G:96:GLN:NE2   | 2.68                     | 0.54              |
| 1:J:155:LYS:HG3  | 1:J:156:ALA:H    | 1.72                     | 0.54              |
| 1:J:323:VAL:N    | 1:K:48:GLY:C     | 2.58                     | 0.54              |
| 1:K:323:VAL:N    | 1:L:48:GLY:C     | 2.58                     | 0.54              |
| 1:L:191:ASN:O    | 1:L:192:CYS:SG   | 2.63                     | 0.54              |
| 1:M:159:SER:O    | 1:M:163:PHE:CD1  | 2.60                     | 0.54              |
| 1:O:293:LYS:O    | 1:O:296:ILE:HG22 | 2.07                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:43:TYR:CE2   | 1:P:70:GLU:OE2   | 2.61                     | 0.54              |
| 1:P:222:ASN:ND2  | 1:P:237:ASN:HD22 | 2.05                     | 0.54              |
| 1:P:293:LYS:O    | 1:P:296:ILE:HG22 | 2.07                     | 0.54              |
| 1:A:33:ILE:C     | 1:A:35:ARG:HB2   | 2.27                     | 0.54              |
| 1:A:263:LYS:O    | 1:A:267:LYS:HG3  | 2.07                     | 0.54              |
| 1:B:33:ILE:C     | 1:B:35:ARG:HB2   | 2.27                     | 0.54              |
| 1:B:116:VAL:HG22 | 1:B:121:LYS:O    | 2.08                     | 0.54              |
| 1:B:155:LYS:HG3  | 1:B:156:ALA:H    | 1.72                     | 0.54              |
| 1:B:159:SER:O    | 1:B:163:PHE:CD1  | 2.60                     | 0.54              |
| 1:C:36:VAL:CG1   | 1:C:96:GLN:NE2   | 2.68                     | 0.54              |
| 1:C:213:VAL:HG13 | 1:C:253:VAL:HG12 | 1.90                     | 0.54              |
| 1:C:218:THR:OG1  | 1:D:275:LYS:NZ   | 2.40                     | 0.54              |
| 1:E:43:TYR:CZ    | 1:E:67:LEU:CB    | 2.87                     | 0.54              |
| 1:E:194:VAL:HG22 | 1:E:199:ARG:NE   | 2.22                     | 0.54              |
| 1:F:161:VAL:HG11 | 1:F:285:ILE:HD13 | 1.89                     | 0.54              |
| 1:F:254:ILE:O    | 1:F:257:VAL:HG12 | 2.08                     | 0.54              |
| 1:H:22:ILE:HD12  | 1:H:27:LYS:HZ1   | 1.73                     | 0.54              |
| 1:I:241:LYS:CB   | 1:M:308:ASN:HD21 | 2.21                     | 0.54              |
| 1:J:153:THR:CG2  | 1:J:325:LYS:HE3  | 2.38                     | 0.54              |
| 1:K:159:SER:O    | 1:K:163:PHE:CD1  | 2.60                     | 0.54              |
| 1:K:323:VAL:N    | 1:L:49:TYR:CA    | 2.70                     | 0.54              |
| 1:M:116:VAL:HG22 | 1:M:121:LYS:O    | 2.08                     | 0.54              |
| 1:M:123:LYS:HZ1  | 1:M:127:ARG:HH12 | 1.56                     | 0.54              |
| 1:N:5:THR:HG23   | 1:N:7:GLU:HG2    | 1.89                     | 0.54              |
| 1:O:263:LYS:O    | 1:O:267:LYS:HG3  | 2.07                     | 0.54              |
| 1:P:139:LYS:H    | 1:P:143:LYS:N    | 2.06                     | 0.54              |
| 1:B:74:GLU:O     | 1:B:74:GLU:CD    | 2.46                     | 0.54              |
| 1:C:245:GLU:C    | 1:G:49:TYR:CE2   | 2.79                     | 0.54              |
| 1:C:247:ASP:O    | 1:G:52:ILE:CD1   | 2.52                     | 0.54              |
| 1:C:263:LYS:O    | 1:C:267:LYS:HG3  | 2.08                     | 0.54              |
| 1:C:308:ASN:ND2  | 1:G:241:LYS:CB   | 2.70                     | 0.54              |
| 1:D:217:LEU:O    | 1:D:217:LEU:HD23 | 2.07                     | 0.54              |
| 1:E:43:TYR:HE2   | 1:E:74:GLU:OE1   | 1.90                     | 0.54              |
| 1:E:153:THR:CG2  | 1:E:325:LYS:HE3  | 2.37                     | 0.54              |
| 1:F:49:TYR:CD1   | 1:G:320:LYS:CA   | 2.91                     | 0.54              |
| 1:G:202:GLU:CA   | 1:J:272:ARG:CG   | 2.77                     | 0.54              |
| 1:G:219:ASP:CB   | 1:H:275:LYS:NZ   | 2.70                     | 0.54              |
| 1:G:274:PHE:CE2  | 1:J:203:GLU:OE1  | 2.57                     | 0.54              |
| 1:H:219:ASP:CB   | 1:H:224:ASN:ND2  | 2.65                     | 0.54              |
| 1:I:155:LYS:HG3  | 1:I:156:ALA:H    | 1.72                     | 0.54              |
| 1:I:320:LYS:CA   | 1:J:49:TYR:CD1   | 2.91                     | 0.54              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:43:TYR:HE2   | 1:J:74:GLU:OE1   | 1.90                     | 0.54              |
| 1:J:165:GLU:CB   | 1:O:241:LYS:O    | 2.55                     | 0.54              |
| 1:M:320:LYS:HB2  | 1:N:48:GLY:O     | 2.07                     | 0.54              |
| 1:N:293:LYS:O    | 1:N:296:ILE:HG22 | 2.07                     | 0.54              |
| 1:O:39:LYS:NZ    | 1:O:41:LYS:HD2   | 2.23                     | 0.54              |
| 1:O:139:LYS:H    | 1:O:143:LYS:N    | 2.06                     | 0.54              |
| 1:P:5:THR:HG23   | 1:P:7:GLU:HG2    | 1.89                     | 0.54              |
| 1:P:39:LYS:NZ    | 1:P:41:LYS:HD2   | 2.23                     | 0.54              |
| 1:P:259:GLU:OE2  | 1:P:263:LYS:HE3  | 2.06                     | 0.54              |
| 1:A:161:VAL:HG11 | 1:A:285:ILE:HD13 | 1.89                     | 0.54              |
| 1:B:245:GLU:CG   | 1:F:75:ASP:N     | 2.63                     | 0.54              |
| 1:C:33:ILE:C     | 1:C:35:ARG:HB2   | 2.27                     | 0.54              |
| 1:C:246:ILE:HD13 | 1:H:323:VAL:CB   | 2.37                     | 0.54              |
| 1:C:259:GLU:OE2  | 1:C:263:LYS:HE3  | 2.06                     | 0.54              |
| 1:D:33:ILE:C     | 1:D:35:ARG:HB2   | 2.27                     | 0.54              |
| 1:D:213:VAL:HG13 | 1:D:253:VAL:HG12 | 1.90                     | 0.54              |
| 1:E:259:GLU:OE2  | 1:E:263:LYS:HE3  | 2.06                     | 0.54              |
| 1:G:47:ASP:CA    | 1:H:323:VAL:C    | 2.71                     | 0.54              |
| 1:G:203:GLU:OE1  | 1:J:274:PHE:CE2  | 2.57                     | 0.54              |
| 1:G:217:LEU:HD22 | 1:H:274:PHE:CD2  | 2.43                     | 0.54              |
| 1:J:43:TYR:HH    | 1:J:56:SER:HG    | 1.56                     | 0.54              |
| 1:J:116:VAL:HG22 | 1:J:121:LYS:O    | 2.08                     | 0.54              |
| 1:J:217:LEU:HD23 | 1:J:217:LEU:O    | 2.07                     | 0.54              |
| 1:J:308:ASN:CG   | 1:O:231:ALA:N    | 2.52                     | 0.54              |
| 1:K:39:LYS:NZ    | 1:K:41:LYS:HD2   | 2.23                     | 0.54              |
| 1:L:43:TYR:CE2   | 1:L:70:GLU:OE2   | 2.60                     | 0.54              |
| 1:L:194:VAL:HG22 | 1:L:199:ARG:NE   | 2.22                     | 0.54              |
| 1:M:59:ILE:HD11  | 1:M:95:THR:HG21  | 1.89                     | 0.54              |
| 1:N:33:ILE:C     | 1:N:35:ARG:HB2   | 2.27                     | 0.54              |
| 1:P:68:ILE:CD1   | 1:P:92:THR:HB    | 2.10                     | 0.54              |
| 1:P:217:LEU:HD23 | 1:P:217:LEU:O    | 2.07                     | 0.54              |
| 1:A:39:LYS:NZ    | 1:A:41:LYS:HD2   | 2.23                     | 0.53              |
| 1:A:139:LYS:H    | 1:A:143:LYS:N    | 2.06                     | 0.53              |
| 1:B:39:LYS:NZ    | 1:B:41:LYS:HD2   | 2.23                     | 0.53              |
| 1:B:79:THR:OG1   | 1:C:192:CYS:HB3  | 2.07                     | 0.53              |
| 1:B:219:ASP:CB   | 1:B:224:ASN:ND2  | 2.65                     | 0.53              |
| 1:C:59:ILE:HD11  | 1:C:95:THR:HG21  | 1.89                     | 0.53              |
| 1:C:159:SER:O    | 1:C:163:PHE:CD1  | 2.60                     | 0.53              |
| 1:C:230:GLN:C    | 1:H:308:ASN:CG   | 2.67                     | 0.53              |
| 1:D:59:ILE:HD11  | 1:D:95:THR:HG21  | 1.89                     | 0.53              |
| 1:D:74:GLU:O     | 1:D:74:GLU:CD    | 2.46                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:217:LEU:HD23 | 1:E:217:LEU:O    | 2.07                     | 0.53              |
| 1:F:219:ASP:CB   | 1:G:275:LYS:NZ   | 2.70                     | 0.53              |
| 1:G:123:LYS:HZ3  | 1:G:127:ARG:NH1  | 2.04                     | 0.53              |
| 1:G:131:LYS:HB2  | 1:G:152:ILE:HD13 | 1.89                     | 0.53              |
| 1:G:161:VAL:HG11 | 1:G:285:ILE:HD13 | 1.89                     | 0.53              |
| 1:G:218:THR:O    | 1:G:219:ASP:HB2  | 2.02                     | 0.53              |
| 1:H:22:ILE:HG22  | 1:H:35:ARG:CB    | 2.35                     | 0.53              |
| 1:I:49:TYR:HE2   | 1:I:74:GLU:O     | 1.90                     | 0.53              |
| 1:J:39:LYS:NZ    | 1:J:41:LYS:HD2   | 2.23                     | 0.53              |
| 1:J:43:TYR:OH    | 1:J:67:LEU:HD22  | 2.07                     | 0.53              |
| 1:J:320:LYS:HA   | 1:K:50:ILE:HG12  | 1.89                     | 0.53              |
| 1:K:22:ILE:HG22  | 1:K:35:ARG:CB    | 2.35                     | 0.53              |
| 1:K:194:VAL:HG22 | 1:K:199:ARG:NE   | 2.22                     | 0.53              |
| 1:M:5:THR:HG23   | 1:M:7:GLU:HG2    | 1.89                     | 0.53              |
| 1:M:263:LYS:O    | 1:M:267:LYS:HG3  | 2.08                     | 0.53              |
| 1:N:123:LYS:HZ3  | 1:N:127:ARG:NH1  | 2.06                     | 0.53              |
| 1:N:213:VAL:HG13 | 1:N:253:VAL:HG12 | 1.90                     | 0.53              |
| 1:N:254:ILE:O    | 1:N:257:VAL:HG12 | 2.07                     | 0.53              |
| 1:N:320:LYS:HB2  | 1:O:48:GLY:O     | 2.07                     | 0.53              |
| 1:O:222:ASN:ND2  | 1:O:237:ASN:HD22 | 2.05                     | 0.53              |
| 1:A:5:THR:HG23   | 1:A:7:GLU:HG2    | 1.89                     | 0.53              |
| 1:A:155:LYS:HG3  | 1:A:156:ALA:H    | 1.72                     | 0.53              |
| 1:B:81:LYS:HB3   | 1:C:170:LYS:HZ1  | 1.71                     | 0.53              |
| 1:B:95:THR:CG2   | 1:B:136:ILE:HD13 | 2.22                     | 0.53              |
| 1:B:259:GLU:OE2  | 1:B:263:LYS:HE3  | 2.06                     | 0.53              |
| 1:C:74:GLU:O     | 1:C:74:GLU:CD    | 2.46                     | 0.53              |
| 1:C:161:VAL:HG11 | 1:C:285:ILE:HD13 | 1.89                     | 0.53              |
| 1:D:39:LYS:NZ    | 1:D:41:LYS:HD2   | 2.23                     | 0.53              |
| 1:D:43:TYR:OH    | 1:D:67:LEU:HD22  | 2.07                     | 0.53              |
| 1:E:49:TYR:CD1   | 1:F:320:LYS:CA   | 2.91                     | 0.53              |
| 1:F:39:LYS:NZ    | 1:F:41:LYS:HD2   | 2.23                     | 0.53              |
| 1:F:48:GLY:C     | 1:G:323:VAL:N    | 2.58                     | 0.53              |
| 1:F:109:VAL:CG1  | 1:F:322:ALA:HB2  | 2.39                     | 0.53              |
| 1:F:203:GLU:N    | 1:I:272:ARG:HA   | 2.23                     | 0.53              |
| 1:G:43:TYR:OH    | 1:G:67:LEU:HD22  | 2.07                     | 0.53              |
| 1:H:131:LYS:HB2  | 1:H:152:ILE:HD13 | 1.89                     | 0.53              |
| 1:H:213:VAL:HG13 | 1:H:253:VAL:HG12 | 1.90                     | 0.53              |
| 1:J:219:ASP:CA   | 1:J:224:ASN:HB2  | 1.80                     | 0.53              |
| 1:J:275:LYS:HZ2  | 1:K:219:ASP:CB   | 2.21                     | 0.53              |
| 1:J:320:LYS:CA   | 1:K:49:TYR:CD1   | 2.91                     | 0.53              |
| 1:K:5:THR:HG23   | 1:K:7:GLU:HG2    | 1.89                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:275:LYS:HB3  | 1:L:218:THR:C    | 2.08                     | 0.53              |
| 1:K:320:LYS:CA   | 1:L:49:TYR:CD1   | 2.91                     | 0.53              |
| 1:K:320:LYS:HG2  | 1:L:50:ILE:CG1   | 2.37                     | 0.53              |
| 1:K:320:LYS:HG2  | 1:L:50:ILE:HD11  | 1.89                     | 0.53              |
| 1:L:123:LYS:HZ3  | 1:L:127:ARG:NH1  | 2.05                     | 0.53              |
| 1:L:263:LYS:O    | 1:L:267:LYS:HG3  | 2.07                     | 0.53              |
| 1:M:39:LYS:NZ    | 1:M:41:LYS:HD2   | 2.23                     | 0.53              |
| 1:N:39:LYS:NZ    | 1:N:41:LYS:HD2   | 2.23                     | 0.53              |
| 1:N:59:ILE:HD11  | 1:N:95:THR:HG21  | 1.89                     | 0.53              |
| 1:N:116:VAL:HG22 | 1:N:121:LYS:O    | 2.08                     | 0.53              |
| 1:O:155:LYS:HG3  | 1:O:156:ALA:H    | 1.72                     | 0.53              |
| 1:A:213:VAL:HG13 | 1:A:253:VAL:HG12 | 1.90                     | 0.53              |
| 1:A:241:LYS:HA   | 1:F:165:GLU:CD   | 2.23                     | 0.53              |
| 1:B:139:LYS:H    | 1:B:143:LYS:N    | 2.06                     | 0.53              |
| 1:B:161:VAL:HG11 | 1:B:285:ILE:HD13 | 1.89                     | 0.53              |
| 1:B:222:ASN:ND2  | 1:B:237:ASN:HD22 | 2.05                     | 0.53              |
| 1:C:51:ASP:O     | 1:C:52:ILE:HD13  | 2.09                     | 0.53              |
| 1:D:51:ASP:O     | 1:D:52:ILE:HD13  | 2.09                     | 0.53              |
| 1:D:116:VAL:HG22 | 1:D:121:LYS:O    | 2.08                     | 0.53              |
| 1:E:46:GLU:OE2   | 1:F:325:LYS:CD   | 2.55                     | 0.53              |
| 1:E:219:ASP:CB   | 1:F:275:LYS:NZ   | 2.70                     | 0.53              |
| 1:F:34:LYS:CA    | 1:F:35:ARG:O     | 2.57                     | 0.53              |
| 1:F:131:LYS:HB2  | 1:F:152:ILE:HD13 | 1.89                     | 0.53              |
| 1:G:43:TYR:CZ    | 1:G:67:LEU:CB    | 2.87                     | 0.53              |
| 1:I:43:TYR:OH    | 1:I:67:LEU:HD22  | 2.07                     | 0.53              |
| 1:I:116:VAL:HG22 | 1:I:121:LYS:O    | 2.08                     | 0.53              |
| 1:I:308:ASN:HD22 | 1:N:231:ALA:CA   | 2.16                     | 0.53              |
| 1:I:320:LYS:HA   | 1:J:50:ILE:HG12  | 1.89                     | 0.53              |
| 1:J:95:THR:HG22  | 1:J:136:ILE:CD1  | 2.24                     | 0.53              |
| 1:K:52:ILE:CG1   | 1:O:245:GLU:O    | 2.53                     | 0.53              |
| 1:K:274:PHE:CD2  | 1:L:217:LEU:HD22 | 2.43                     | 0.53              |
| 1:M:254:ILE:O    | 1:M:257:VAL:HG12 | 2.08                     | 0.53              |
| 1:N:139:LYS:H    | 1:N:143:LYS:N    | 2.06                     | 0.53              |
| 1:N:323:VAL:CA   | 1:O:47:ASP:O     | 2.48                     | 0.53              |
| 1:O:34:LYS:CA    | 1:O:35:ARG:O     | 2.57                     | 0.53              |
| 1:O:44:ASN:CB    | 1:O:64:LYS:HZ1   | 2.17                     | 0.53              |
| 1:P:34:LYS:CA    | 1:P:35:ARG:O     | 2.57                     | 0.53              |
| 1:P:131:LYS:HB2  | 1:P:152:ILE:HD13 | 1.89                     | 0.53              |
| 1:A:48:GLY:O     | 1:B:320:LYS:HB2  | 2.07                     | 0.53              |
| 1:A:116:VAL:HG22 | 1:A:121:LYS:O    | 2.08                     | 0.53              |
| 1:B:59:ILE:HD11  | 1:B:95:THR:HG21  | 1.89                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:81:LYS:HB3   | 1:D:170:LYS:HZ2  | 1.71                     | 0.53              |
| 1:D:263:LYS:O    | 1:D:267:LYS:HG3  | 2.08                     | 0.53              |
| 1:E:5:THR:HG23   | 1:E:7:GLU:HG2    | 1.89                     | 0.53              |
| 1:E:39:LYS:NZ    | 1:E:41:LYS:HD2   | 2.23                     | 0.53              |
| 1:E:217:LEU:HD22 | 1:F:274:PHE:CD2  | 2.43                     | 0.53              |
| 1:F:5:THR:HG23   | 1:F:7:GLU:HG2    | 1.89                     | 0.53              |
| 1:F:43:TYR:CZ    | 1:F:67:LEU:CB    | 2.87                     | 0.53              |
| 1:G:213:VAL:HG13 | 1:G:253:VAL:HG12 | 1.90                     | 0.53              |
| 1:G:218:THR:C    | 1:H:275:LYS:HB3  | 2.08                     | 0.53              |
| 1:G:263:LYS:O    | 1:G:267:LYS:HG3  | 2.07                     | 0.53              |
| 1:H:34:LYS:CA    | 1:H:35:ARG:O     | 2.57                     | 0.53              |
| 1:H:197:SER:C    | 1:K:203:GLU:HB2  | 2.28                     | 0.53              |
| 1:I:39:LYS:NZ    | 1:I:41:LYS:HD2   | 2.23                     | 0.53              |
| 1:I:109:VAL:CG1  | 1:I:322:ALA:HB2  | 2.39                     | 0.53              |
| 1:J:5:THR:HG23   | 1:J:7:GLU:HG2    | 1.89                     | 0.53              |
| 1:J:109:VAL:CG1  | 1:J:322:ALA:HB2  | 2.39                     | 0.53              |
| 1:K:43:TYR:HE2   | 1:K:74:GLU:OE1   | 1.90                     | 0.53              |
| 1:K:109:VAL:CG1  | 1:K:322:ALA:HB2  | 2.39                     | 0.53              |
| 1:K:263:LYS:O    | 1:K:267:LYS:HG3  | 2.08                     | 0.53              |
| 1:L:5:THR:HG23   | 1:L:7:GLU:HG2    | 1.89                     | 0.53              |
| 1:M:36:VAL:N     | 1:M:312:TRP:HH2  | 2.01                     | 0.53              |
| 1:N:34:LYS:CA    | 1:N:35:ARG:O     | 2.57                     | 0.53              |
| 1:N:167:GLU:O    | 1:O:72:GLY:O     | 2.27                     | 0.53              |
| 1:A:43:TYR:CZ    | 1:A:67:LEU:CB    | 2.86                     | 0.53              |
| 1:A:72:GLY:O     | 1:B:167:GLU:O    | 2.26                     | 0.53              |
| 1:A:254:ILE:O    | 1:A:257:VAL:HG12 | 2.08                     | 0.53              |
| 1:B:5:THR:HG23   | 1:B:7:GLU:HG2    | 1.89                     | 0.53              |
| 1:B:47:ASP:O     | 1:C:320:LYS:O    | 2.21                     | 0.53              |
| 1:C:139:LYS:H    | 1:C:143:LYS:N    | 2.06                     | 0.53              |
| 1:C:246:ILE:HA   | 1:G:52:ILE:HG12  | 1.89                     | 0.53              |
| 1:D:5:THR:HG23   | 1:D:7:GLU:HG2    | 1.89                     | 0.53              |
| 1:E:50:ILE:HD11  | 1:F:320:LYS:HG2  | 1.89                     | 0.53              |
| 1:E:131:LYS:HB2  | 1:E:152:ILE:HD13 | 1.89                     | 0.53              |
| 1:F:46:GLU:OE2   | 1:G:325:LYS:CD   | 2.55                     | 0.53              |
| 1:G:10:MET:HB3   | 1:G:108:LEU:CD2  | 2.33                     | 0.53              |
| 1:H:161:VAL:HG11 | 1:H:285:ILE:HD13 | 1.89                     | 0.53              |
| 1:I:274:PHE:CD2  | 1:J:217:LEU:HD22 | 2.43                     | 0.53              |
| 1:J:323:VAL:N    | 1:K:49:TYR:CA    | 2.70                     | 0.53              |
| 1:K:116:VAL:HG22 | 1:K:121:LYS:O    | 2.08                     | 0.53              |
| 1:K:325:LYS:CD   | 1:L:46:GLU:OE2   | 2.55                     | 0.53              |
| 1:M:34:LYS:CA    | 1:M:35:ARG:O     | 2.57                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:36:VAL:CG1   | 1:N:96:GLN:NE2   | 2.68                     | 0.53              |
| 1:O:43:TYR:CE2   | 1:O:67:LEU:CD1   | 2.91                     | 0.53              |
| 1:O:116:VAL:HG22 | 1:O:121:LYS:O    | 2.08                     | 0.53              |
| 1:P:43:TYR:CE2   | 1:P:67:LEU:CD1   | 2.91                     | 0.53              |
| 1:P:133:ASN:ND2  | 1:P:148:GLU:CB   | 2.72                     | 0.53              |
| 1:A:47:ASP:OD1   | 1:B:9:VAL:HG21   | 2.09                     | 0.53              |
| 1:B:229:GLU:HB2  | 1:G:308:ASN:CB   | 2.35                     | 0.53              |
| 1:C:39:LYS:NZ    | 1:C:41:LYS:HD2   | 2.23                     | 0.53              |
| 1:C:72:GLY:O     | 1:D:167:GLU:O    | 2.27                     | 0.53              |
| 1:C:247:ASP:CA   | 1:G:52:ILE:CD1   | 2.78                     | 0.53              |
| 1:F:123:LYS:HZ3  | 1:F:127:ARG:NH1  | 2.06                     | 0.53              |
| 1:G:39:LYS:NZ    | 1:G:41:LYS:HD2   | 2.23                     | 0.53              |
| 1:G:153:THR:CG2  | 1:G:325:LYS:HE3  | 2.37                     | 0.53              |
| 1:H:10:MET:HB3   | 1:H:108:LEU:CD2  | 2.33                     | 0.53              |
| 1:H:43:TYR:OH    | 1:H:67:LEU:HD22  | 2.07                     | 0.53              |
| 1:H:202:GLU:HA   | 1:K:272:ARG:CD   | 2.08                     | 0.53              |
| 1:I:5:THR:HG23   | 1:I:7:GLU:HG2    | 1.89                     | 0.53              |
| 1:I:51:ASP:O     | 1:I:52:ILE:HD13  | 2.09                     | 0.53              |
| 1:I:320:LYS:HG2  | 1:J:50:ILE:HD11  | 1.89                     | 0.53              |
| 1:J:51:ASP:O     | 1:J:52:ILE:HD13  | 2.08                     | 0.53              |
| 1:J:320:LYS:HG2  | 1:K:50:ILE:HD11  | 1.90                     | 0.53              |
| 1:L:208:ASP:O    | 1:L:211:ILE:HG12 | 2.09                     | 0.53              |
| 1:M:167:GLU:O    | 1:N:72:GLY:O     | 2.27                     | 0.53              |
| 1:M:301:PRO:CD   | 1:N:227:THR:HG23 | 2.38                     | 0.53              |
| 1:N:133:ASN:ND2  | 1:N:148:GLU:CB   | 2.72                     | 0.53              |
| 1:O:9:VAL:HG21   | 1:P:47:ASP:OD1   | 2.09                     | 0.53              |
| 1:O:320:LYS:HD2  | 1:P:49:TYR:CE1   | 2.36                     | 0.53              |
| 1:O:320:LYS:HB2  | 1:P:48:GLY:O     | 2.07                     | 0.53              |
| 1:A:308:ASN:ND2  | 1:E:241:LYS:CB   | 2.71                     | 0.53              |
| 1:C:47:ASP:OD1   | 1:D:9:VAL:HG21   | 2.09                     | 0.53              |
| 1:C:133:ASN:ND2  | 1:C:148:GLU:CB   | 2.72                     | 0.53              |
| 1:D:131:LYS:HB2  | 1:D:152:ILE:HD13 | 1.89                     | 0.53              |
| 1:D:161:VAL:HG11 | 1:D:285:ILE:HD13 | 1.89                     | 0.53              |
| 1:E:116:VAL:HG22 | 1:E:121:LYS:O    | 2.08                     | 0.53              |
| 1:E:213:VAL:HG13 | 1:E:253:VAL:HG12 | 1.90                     | 0.53              |
| 1:F:10:MET:HB3   | 1:F:108:LEU:CD2  | 2.33                     | 0.53              |
| 1:F:203:GLU:HB2  | 1:I:197:SER:C    | 2.29                     | 0.53              |
| 1:F:271:LYS:CE   | 1:I:268:LEU:HD22 | 2.38                     | 0.53              |
| 1:G:46:GLU:OE2   | 1:H:325:LYS:CD   | 2.55                     | 0.53              |
| 1:G:208:ASP:O    | 1:G:211:ILE:HG12 | 2.09                     | 0.53              |
| 1:H:109:VAL:CG1  | 1:H:322:ALA:HB2  | 2.39                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:33:ILE:HD12  | 1:I:312:TRP:NE1  | 2.15                     | 0.53              |
| 1:I:59:ILE:HD11  | 1:I:95:THR:HG21  | 1.89                     | 0.53              |
| 1:I:320:LYS:HG2  | 1:J:50:ILE:CG1   | 2.37                     | 0.53              |
| 1:J:208:ASP:O    | 1:J:211:ILE:HG12 | 2.09                     | 0.53              |
| 1:J:320:LYS:HG2  | 1:K:50:ILE:CG1   | 2.37                     | 0.53              |
| 1:J:325:LYS:CD   | 1:K:46:GLU:OE2   | 2.55                     | 0.53              |
| 1:K:36:VAL:CG1   | 1:K:96:GLN:NE2   | 2.68                     | 0.53              |
| 1:K:322:ALA:C    | 1:L:49:TYR:N     | 2.56                     | 0.53              |
| 1:L:34:LYS:CA    | 1:L:35:ARG:O     | 2.57                     | 0.53              |
| 1:L:177:ILE:HD11 | 1:L:284:PHE:CZ   | 2.44                     | 0.53              |
| 1:M:9:VAL:HG21   | 1:N:47:ASP:OD1   | 2.09                     | 0.53              |
| 1:M:139:LYS:H    | 1:M:143:LYS:N    | 2.06                     | 0.53              |
| 1:O:301:PRO:CD   | 1:P:227:THR:HG23 | 2.38                     | 0.53              |
| 1:P:109:VAL:CG1  | 1:P:322:ALA:HB2  | 2.39                     | 0.53              |
| 1:A:51:ASP:O     | 1:A:52:ILE:HD13  | 2.09                     | 0.53              |
| 1:A:231:ALA:CA   | 1:F:308:ASN:ND2  | 2.72                     | 0.53              |
| 1:B:51:ASP:O     | 1:B:52:ILE:HD13  | 2.09                     | 0.53              |
| 1:B:133:ASN:ND2  | 1:B:148:GLU:CB   | 2.72                     | 0.53              |
| 1:D:36:VAL:CG1   | 1:D:96:GLN:NE2   | 2.68                     | 0.53              |
| 1:E:10:MET:HB3   | 1:E:108:LEU:CD2  | 2.33                     | 0.53              |
| 1:F:271:LYS:NZ   | 1:I:268:LEU:HD22 | 2.23                     | 0.53              |
| 1:G:5:THR:HG23   | 1:G:7:GLU:HG2    | 1.89                     | 0.53              |
| 1:G:49:TYR:CD1   | 1:H:320:LYS:CA   | 2.91                     | 0.53              |
| 1:G:51:ASP:O     | 1:G:52:ILE:HD13  | 2.08                     | 0.53              |
| 1:H:5:THR:HG23   | 1:H:7:GLU:HG2    | 1.89                     | 0.53              |
| 1:H:9:VAL:HG13   | 1:H:322:ALA:CB   | 2.39                     | 0.53              |
| 1:H:43:TYR:CZ    | 1:H:67:LEU:CB    | 2.86                     | 0.53              |
| 1:I:213:VAL:HG13 | 1:I:253:VAL:HG12 | 1.90                     | 0.53              |
| 1:J:34:LYS:CA    | 1:J:35:ARG:O     | 2.57                     | 0.53              |
| 1:K:9:VAL:HG13   | 1:K:322:ALA:CB   | 2.39                     | 0.53              |
| 1:K:51:ASP:O     | 1:K:52:ILE:HD13  | 2.09                     | 0.53              |
| 1:O:123:LYS:HZ1  | 1:O:127:ARG:HH12 | 1.57                     | 0.53              |
| 1:O:167:GLU:O    | 1:P:72:GLY:O     | 2.26                     | 0.53              |
| 1:O:322:ALA:C    | 1:P:47:ASP:C     | 2.62                     | 0.53              |
| 1:P:191:ASN:O    | 1:P:192:CYS:SG   | 2.63                     | 0.53              |
| 1:P:213:VAL:HG13 | 1:P:253:VAL:HG12 | 1.90                     | 0.53              |
| 1:A:5:THR:CG2    | 1:A:7:GLU:HG2    | 2.39                     | 0.53              |
| 1:A:59:ILE:HD11  | 1:A:95:THR:HG21  | 1.89                     | 0.53              |
| 1:B:50:ILE:HG13  | 1:B:50:ILE:O     | 2.09                     | 0.53              |
| 1:B:105:LYS:NZ   | 1:B:148:GLU:CB   | 2.72                     | 0.53              |
| 1:C:52:ILE:HD13  | 1:H:245:GLU:OE2  | 2.07                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:241:LYS:HZ1  | 1:H:305:ILE:HG22 | 1.72                     | 0.53              |
| 1:D:109:VAL:CG1  | 1:D:322:ALA:HB2  | 2.39                     | 0.53              |
| 1:D:139:LYS:H    | 1:D:143:LYS:N    | 2.06                     | 0.53              |
| 1:F:50:ILE:CG1   | 1:G:320:LYS:HG2  | 2.37                     | 0.53              |
| 1:F:50:ILE:HD11  | 1:G:320:LYS:HG2  | 1.89                     | 0.53              |
| 1:F:213:VAL:HG13 | 1:F:253:VAL:HG12 | 1.90                     | 0.53              |
| 1:F:217:LEU:HD22 | 1:G:274:PHE:CD2  | 2.44                     | 0.53              |
| 1:H:139:LYS:H    | 1:H:143:LYS:N    | 2.06                     | 0.53              |
| 1:I:5:THR:CG2    | 1:I:7:GLU:HG2    | 2.39                     | 0.53              |
| 1:I:325:LYS:CD   | 1:J:46:GLU:OE2   | 2.55                     | 0.53              |
| 1:J:9:VAL:HG13   | 1:J:322:ALA:CB   | 2.39                     | 0.53              |
| 1:L:74:GLU:O     | 1:P:245:GLU:HB3  | 2.07                     | 0.53              |
| 1:L:131:LYS:HB2  | 1:L:152:ILE:HD13 | 1.89                     | 0.53              |
| 1:L:133:ASN:ND2  | 1:L:148:GLU:CB   | 2.72                     | 0.53              |
| 1:O:59:ILE:HD11  | 1:O:95:THR:HG21  | 1.89                     | 0.53              |
| 1:O:213:VAL:HG13 | 1:O:253:VAL:HG12 | 1.90                     | 0.53              |
| 1:P:116:VAL:HG22 | 1:P:121:LYS:O    | 2.08                     | 0.53              |
| 1:P:208:ASP:O    | 1:P:211:ILE:HG12 | 2.09                     | 0.53              |
| 1:A:45:LEU:CD2   | 1:A:58:LYS:HZ3   | 2.21                     | 0.53              |
| 1:A:133:ASN:ND2  | 1:A:148:GLU:CB   | 2.72                     | 0.53              |
| 1:C:43:TYR:CZ    | 1:C:67:LEU:CB    | 2.87                     | 0.53              |
| 1:C:105:LYS:NZ   | 1:C:148:GLU:CB   | 2.72                     | 0.53              |
| 1:C:231:ALA:HB2  | 1:H:307:THR:HA   | 1.90                     | 0.53              |
| 1:D:5:THR:CG2    | 1:D:7:GLU:HG2    | 2.39                     | 0.53              |
| 1:D:219:ASP:CB   | 1:D:224:ASN:ND2  | 2.64                     | 0.53              |
| 1:E:47:ASP:CA    | 1:F:323:VAL:C    | 2.71                     | 0.53              |
| 1:E:49:TYR:CE2   | 1:E:75:ASP:HA    | 2.20                     | 0.53              |
| 1:F:116:VAL:HG22 | 1:F:121:LYS:O    | 2.08                     | 0.53              |
| 1:G:43:TYR:HE2   | 1:G:74:GLU:OE1   | 1.91                     | 0.53              |
| 1:G:50:ILE:HD11  | 1:H:320:LYS:HG2  | 1.89                     | 0.53              |
| 1:G:109:VAL:CG1  | 1:G:322:ALA:HB2  | 2.39                     | 0.53              |
| 1:G:133:ASN:ND2  | 1:G:148:GLU:CB   | 2.72                     | 0.53              |
| 1:H:197:SER:O    | 1:K:203:GLU:HA   | 2.09                     | 0.53              |
| 1:H:208:ASP:O    | 1:H:211:ILE:HG12 | 2.09                     | 0.53              |
| 1:I:34:LYS:CA    | 1:I:35:ARG:O     | 2.57                     | 0.53              |
| 1:I:105:LYS:NZ   | 1:I:148:GLU:CB   | 2.72                     | 0.53              |
| 1:I:208:ASP:O    | 1:I:211:ILE:HG12 | 2.09                     | 0.53              |
| 1:J:5:THR:CG2    | 1:J:7:GLU:HG2    | 2.39                     | 0.53              |
| 1:J:195:ASN:O    | 1:J:199:ARG:HG3  | 2.09                     | 0.53              |
| 1:K:131:LYS:HB2  | 1:K:152:ILE:HD13 | 1.89                     | 0.53              |
| 1:K:177:ILE:HD11 | 1:K:284:PHE:CZ   | 2.44                     | 0.53              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:27:LYS:HZ1   | 1:L:35:ARG:HE    | 1.57                     | 0.53              |
| 1:L:116:VAL:HG22 | 1:L:121:LYS:O    | 2.08                     | 0.53              |
| 1:M:5:THR:CG2    | 1:M:7:GLU:HG2    | 2.39                     | 0.53              |
| 1:M:105:LYS:NZ   | 1:M:148:GLU:CB   | 2.72                     | 0.53              |
| 1:N:219:ASP:CB   | 1:N:224:ASN:ND2  | 2.65                     | 0.53              |
| 1:O:109:VAL:CG1  | 1:O:322:ALA:HB2  | 2.39                     | 0.53              |
| 1:O:133:ASN:ND2  | 1:O:148:GLU:CB   | 2.72                     | 0.53              |
| 1:P:133:ASN:HD22 | 1:P:148:GLU:CA   | 2.11                     | 0.53              |
| 1:P:155:LYS:HG3  | 1:P:156:ALA:H    | 1.72                     | 0.53              |
| 1:A:50:ILE:HG13  | 1:A:50:ILE:O     | 2.09                     | 0.52              |
| 1:A:105:LYS:NZ   | 1:A:148:GLU:CB   | 2.72                     | 0.52              |
| 1:B:45:LEU:CD2   | 1:B:58:LYS:HZ3   | 2.21                     | 0.52              |
| 1:C:50:ILE:HG13  | 1:C:50:ILE:O     | 2.10                     | 0.52              |
| 1:D:133:ASN:ND2  | 1:D:148:GLU:CB   | 2.72                     | 0.52              |
| 1:E:49:TYR:CB    | 1:F:324:ALA:HB3  | 2.38                     | 0.52              |
| 1:E:105:LYS:NZ   | 1:E:148:GLU:CB   | 2.72                     | 0.52              |
| 1:E:109:VAL:CG1  | 1:E:322:ALA:HB2  | 2.39                     | 0.52              |
| 1:E:133:ASN:ND2  | 1:E:148:GLU:CB   | 2.72                     | 0.52              |
| 1:F:195:ASN:O    | 1:F:199:ARG:HG3  | 2.09                     | 0.52              |
| 1:G:76:SER:HB3   | 1:H:163:PHE:CE2  | 2.45                     | 0.52              |
| 1:H:177:ILE:HD11 | 1:H:284:PHE:CZ   | 2.44                     | 0.52              |
| 1:I:45:LEU:CD2   | 1:I:58:LYS:HZ3   | 2.22                     | 0.52              |
| 1:J:133:ASN:ND2  | 1:J:148:GLU:CB   | 2.72                     | 0.52              |
| 1:J:274:PHE:CD2  | 1:K:217:LEU:HD22 | 2.43                     | 0.52              |
| 1:K:105:LYS:NZ   | 1:K:148:GLU:CB   | 2.72                     | 0.52              |
| 1:L:9:VAL:HG13   | 1:L:322:ALA:CB   | 2.39                     | 0.52              |
| 1:L:39:LYS:NZ    | 1:L:41:LYS:HD2   | 2.23                     | 0.52              |
| 1:L:51:ASP:O     | 1:L:52:ILE:HD13  | 2.09                     | 0.52              |
| 1:N:5:THR:CG2    | 1:N:7:GLU:HG2    | 2.39                     | 0.52              |
| 1:N:105:LYS:NZ   | 1:N:148:GLU:CB   | 2.72                     | 0.52              |
| 1:O:191:ASN:O    | 1:O:192:CYS:SG   | 2.62                     | 0.52              |
| 1:C:5:THR:HG23   | 1:C:7:GLU:HG2    | 1.89                     | 0.52              |
| 1:C:5:THR:CG2    | 1:C:7:GLU:HG2    | 2.39                     | 0.52              |
| 1:C:58:LYS:HZ2   | 1:C:65:GLU:CG    | 2.23                     | 0.52              |
| 1:C:109:VAL:CG1  | 1:C:322:ALA:HB2  | 2.39                     | 0.52              |
| 1:D:34:LYS:CA    | 1:D:35:ARG:O     | 2.57                     | 0.52              |
| 1:D:44:ASN:CB    | 1:D:64:LYS:HZ1   | 2.18                     | 0.52              |
| 1:D:50:ILE:O     | 1:D:50:ILE:HG13  | 2.09                     | 0.52              |
| 1:F:51:ASP:O     | 1:F:52:ILE:HD13  | 2.09                     | 0.52              |
| 1:F:71:GLN:CG    | 1:G:168:ASN:CB   | 2.87                     | 0.52              |
| 1:G:9:VAL:HG13   | 1:G:322:ALA:CB   | 2.39                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:34:LYS:N     | 1:G:35:ARG:CB    | 2.72                     | 0.52              |
| 1:G:34:LYS:CA    | 1:G:35:ARG:O     | 2.57                     | 0.52              |
| 1:G:58:LYS:HZ2   | 1:G:65:GLU:HG2   | 1.74                     | 0.52              |
| 1:I:133:ASN:ND2  | 1:I:148:GLU:CB   | 2.72                     | 0.52              |
| 1:J:21:LEU:HD23  | 1:J:21:LEU:C     | 2.30                     | 0.52              |
| 1:J:59:ILE:HD11  | 1:J:95:THR:HG21  | 1.89                     | 0.52              |
| 1:J:213:VAL:HG13 | 1:J:253:VAL:HG12 | 1.90                     | 0.52              |
| 1:K:5:THR:CG2    | 1:K:7:GLU:HG2    | 2.39                     | 0.52              |
| 1:K:213:VAL:HG13 | 1:K:253:VAL:HG12 | 1.90                     | 0.52              |
| 1:K:320:LYS:C    | 1:P:246:ILE:CD1  | 2.76                     | 0.52              |
| 1:M:50:ILE:O     | 1:M:50:ILE:HG13  | 2.09                     | 0.52              |
| 1:M:133:ASN:ND2  | 1:M:148:GLU:CB   | 2.72                     | 0.52              |
| 1:N:43:TYR:CE2   | 1:N:67:LEU:CD1   | 2.91                     | 0.52              |
| 1:N:51:ASP:O     | 1:N:52:ILE:HD13  | 2.09                     | 0.52              |
| 1:P:123:LYS:HZ1  | 1:P:127:ARG:HH12 | 1.57                     | 0.52              |
| 1:A:21:LEU:HD23  | 1:A:21:LEU:C     | 2.30                     | 0.52              |
| 1:B:5:THR:CG2    | 1:B:7:GLU:HG2    | 2.39                     | 0.52              |
| 1:B:21:LEU:HD23  | 1:B:21:LEU:C     | 2.30                     | 0.52              |
| 1:B:48:GLY:O     | 1:C:317:GLY:O    | 2.28                     | 0.52              |
| 1:B:177:ILE:HD11 | 1:B:284:PHE:CZ   | 2.44                     | 0.52              |
| 1:C:34:LYS:CA    | 1:C:35:ARG:O     | 2.57                     | 0.52              |
| 1:C:308:ASN:ND2  | 1:G:241:LYS:HB3  | 2.25                     | 0.52              |
| 1:D:105:LYS:NZ   | 1:D:148:GLU:CB   | 2.72                     | 0.52              |
| 1:D:177:ILE:HD11 | 1:D:284:PHE:CZ   | 2.44                     | 0.52              |
| 1:D:208:ASP:O    | 1:D:211:ILE:HG12 | 2.09                     | 0.52              |
| 1:E:9:VAL:HG13   | 1:E:322:ALA:CB   | 2.39                     | 0.52              |
| 1:F:76:SER:HB3   | 1:G:163:PHE:CE2  | 2.45                     | 0.52              |
| 1:F:208:ASP:O    | 1:F:211:ILE:HG12 | 2.09                     | 0.52              |
| 1:F:265:ALA:HA   | 1:I:271:LYS:HZ3  | 1.74                     | 0.52              |
| 1:G:177:ILE:HD11 | 1:G:284:PHE:CZ   | 2.44                     | 0.52              |
| 1:G:197:SER:CB   | 1:J:183:ASN:ND2  | 2.64                     | 0.52              |
| 1:H:50:ILE:O     | 1:H:50:ILE:HG13  | 2.09                     | 0.52              |
| 1:H:105:LYS:NZ   | 1:H:148:GLU:CB   | 2.72                     | 0.52              |
| 1:H:116:VAL:HG22 | 1:H:121:LYS:O    | 2.08                     | 0.52              |
| 1:H:133:ASN:ND2  | 1:H:148:GLU:CB   | 2.72                     | 0.52              |
| 1:H:272:ARG:HA   | 1:K:203:GLU:N    | 2.24                     | 0.52              |
| 1:I:9:VAL:HG13   | 1:I:322:ALA:CB   | 2.39                     | 0.52              |
| 1:I:123:LYS:HZ3  | 1:I:127:ARG:NH1  | 2.07                     | 0.52              |
| 1:I:131:LYS:HB2  | 1:I:152:ILE:HD13 | 1.89                     | 0.52              |
| 1:J:131:LYS:HB2  | 1:J:152:ILE:HD13 | 1.89                     | 0.52              |
| 1:J:163:PHE:CE2  | 1:K:76:SER:HB3   | 2.45                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:50:ILE:CD1   | 1:O:246:ILE:C    | 2.78                     | 0.52              |
| 1:K:186:PHE:HE2  | 1:K:269:ILE:HD11 | 1.70                     | 0.52              |
| 1:L:21:LEU:HD23  | 1:L:21:LEU:C     | 2.30                     | 0.52              |
| 1:M:51:ASP:O     | 1:M:52:ILE:HD13  | 2.09                     | 0.52              |
| 1:N:9:VAL:HG21   | 1:O:47:ASP:OD1   | 2.09                     | 0.52              |
| 1:N:50:ILE:HG13  | 1:N:50:ILE:O     | 2.09                     | 0.52              |
| 1:N:109:VAL:CG1  | 1:N:322:ALA:HB2  | 2.39                     | 0.52              |
| 1:B:227:THR:HG23 | 1:C:301:PRO:CD   | 2.38                     | 0.52              |
| 1:C:48:GLY:O     | 1:D:317:GLY:O    | 2.28                     | 0.52              |
| 1:E:208:ASP:O    | 1:E:211:ILE:HG12 | 2.09                     | 0.52              |
| 1:F:105:LYS:NZ   | 1:F:148:GLU:CB   | 2.72                     | 0.52              |
| 1:H:202:GLU:HA   | 1:K:272:ARG:HB2  | 1.91                     | 0.52              |
| 1:I:163:PHE:CE2  | 1:J:76:SER:HB3   | 2.45                     | 0.52              |
| 1:J:45:LEU:CD2   | 1:J:58:LYS:HZ3   | 2.22                     | 0.52              |
| 1:J:133:ASN:HD22 | 1:J:148:GLU:CA   | 2.11                     | 0.52              |
| 1:K:34:LYS:CA    | 1:K:35:ARG:O     | 2.57                     | 0.52              |
| 1:L:5:THR:CG2    | 1:L:7:GLU:HG2    | 2.39                     | 0.52              |
| 1:L:105:LYS:NZ   | 1:L:148:GLU:CB   | 2.72                     | 0.52              |
| 1:A:34:LYS:CA    | 1:A:35:ARG:O     | 2.57                     | 0.52              |
| 1:A:58:LYS:HZ2   | 1:A:65:GLU:HG2   | 1.72                     | 0.52              |
| 1:A:109:VAL:CG1  | 1:A:322:ALA:HB2  | 2.39                     | 0.52              |
| 1:A:290:GLN:CB   | 1:E:230:GLN:HE22 | 2.20                     | 0.52              |
| 1:B:34:LYS:CA    | 1:B:35:ARG:O     | 2.57                     | 0.52              |
| 1:B:72:GLY:O     | 1:C:167:GLU:O    | 2.27                     | 0.52              |
| 1:C:22:ILE:HG22  | 1:C:35:ARG:CB    | 2.35                     | 0.52              |
| 1:C:242:LYS:O    | 1:H:166:GLN:CB   | 2.42                     | 0.52              |
| 1:D:195:ASN:O    | 1:D:199:ARG:HG3  | 2.09                     | 0.52              |
| 1:E:114:LEU:CG   | 1:E:156:ALA:HB1  | 2.38                     | 0.52              |
| 1:F:21:LEU:HD23  | 1:F:21:LEU:C     | 2.30                     | 0.52              |
| 1:F:271:LYS:NZ   | 1:I:265:ALA:CA   | 2.57                     | 0.52              |
| 1:G:50:ILE:CG1   | 1:H:320:LYS:HG2  | 2.37                     | 0.52              |
| 1:G:105:LYS:NZ   | 1:G:148:GLU:CB   | 2.72                     | 0.52              |
| 1:G:127:ARG:HA   | 1:G:130:ILE:HG12 | 1.92                     | 0.52              |
| 1:G:195:ASN:O    | 1:G:199:ARG:HG3  | 2.09                     | 0.52              |
| 1:H:51:ASP:O     | 1:H:52:ILE:HD13  | 2.09                     | 0.52              |
| 1:J:164:LEU:O    | 1:O:242:LYS:HA   | 2.09                     | 0.52              |
| 1:J:320:LYS:C    | 1:O:246:ILE:HD11 | 2.30                     | 0.52              |
| 1:J:324:ALA:HB3  | 1:K:49:TYR:CB    | 2.38                     | 0.52              |
| 1:L:109:VAL:CG1  | 1:L:322:ALA:HB2  | 2.39                     | 0.52              |
| 1:L:127:ARG:HA   | 1:L:130:ILE:HG12 | 1.92                     | 0.52              |
| 1:L:213:VAL:HG13 | 1:L:253:VAL:HG12 | 1.90                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:21:LEU:HD23  | 1:M:21:LEU:C     | 2.30                     | 0.52              |
| 1:M:22:ILE:HD12  | 1:M:27:LYS:NZ    | 2.24                     | 0.52              |
| 1:M:195:ASN:O    | 1:M:199:ARG:HG3  | 2.09                     | 0.52              |
| 1:O:5:THR:CG2    | 1:O:7:GLU:HG2    | 2.39                     | 0.52              |
| 1:O:208:ASP:O    | 1:O:211:ILE:HG12 | 2.09                     | 0.52              |
| 1:C:246:ILE:HG13 | 1:H:320:LYS:CB   | 2.38                     | 0.52              |
| 1:D:21:LEU:HD23  | 1:D:21:LEU:C     | 2.30                     | 0.52              |
| 1:F:45:LEU:CD2   | 1:F:58:LYS:HZ3   | 2.22                     | 0.52              |
| 1:F:204:HIS:CE1  | 1:I:271:LYS:C    | 2.83                     | 0.52              |
| 1:G:49:TYR:CB    | 1:H:324:ALA:HB3  | 2.38                     | 0.52              |
| 1:G:139:LYS:H    | 1:G:143:LYS:N    | 2.06                     | 0.52              |
| 1:H:39:LYS:NZ    | 1:H:41:LYS:HD2   | 2.23                     | 0.52              |
| 1:H:130:ILE:HD12 | 1:H:152:ILE:HB   | 1.92                     | 0.52              |
| 1:I:22:ILE:HD12  | 1:I:27:LYS:NZ    | 2.24                     | 0.52              |
| 1:I:168:ASN:CB   | 1:J:71:GLN:CG    | 2.87                     | 0.52              |
| 1:J:22:ILE:HD12  | 1:J:27:LYS:NZ    | 2.24                     | 0.52              |
| 1:J:105:LYS:NZ   | 1:J:148:GLU:CB   | 2.72                     | 0.52              |
| 1:J:177:ILE:HD11 | 1:J:284:PHE:CZ   | 2.44                     | 0.52              |
| 1:J:321:VAL:CA   | 1:K:49:TYR:HB2   | 2.28                     | 0.52              |
| 1:K:21:LEU:HD23  | 1:K:21:LEU:C     | 2.30                     | 0.52              |
| 1:O:22:ILE:HD12  | 1:O:27:LYS:HZ1   | 1.74                     | 0.52              |
| 1:O:51:ASP:O     | 1:O:52:ILE:HD13  | 2.09                     | 0.52              |
| 1:O:273:GLY:O    | 1:O:274:PHE:CG   | 2.63                     | 0.52              |
| 1:A:241:LYS:CE   | 1:F:305:ILE:CG2  | 2.88                     | 0.52              |
| 1:B:208:ASP:O    | 1:B:211:ILE:HG12 | 2.09                     | 0.52              |
| 1:D:9:VAL:HG13   | 1:D:322:ALA:CB   | 2.39                     | 0.52              |
| 1:E:12:LEU:HD21  | 1:E:21:LEU:CD1   | 2.38                     | 0.52              |
| 1:E:51:ASP:O     | 1:E:52:ILE:HD13  | 2.09                     | 0.52              |
| 1:E:76:SER:HB3   | 1:F:163:PHE:CE2  | 2.45                     | 0.52              |
| 1:E:130:ILE:HD12 | 1:E:152:ILE:HB   | 1.92                     | 0.52              |
| 1:E:177:ILE:HD11 | 1:E:284:PHE:CZ   | 2.44                     | 0.52              |
| 1:F:12:LEU:HD21  | 1:F:21:LEU:CD1   | 2.38                     | 0.52              |
| 1:F:114:LEU:CG   | 1:F:156:ALA:HB1  | 2.38                     | 0.52              |
| 1:F:202:GLU:CB   | 1:I:271:LYS:HE3  | 2.40                     | 0.52              |
| 1:F:272:ARG:HB2  | 1:I:202:GLU:HA   | 1.89                     | 0.52              |
| 1:G:22:ILE:HG22  | 1:G:35:ARG:CB    | 2.35                     | 0.52              |
| 1:H:59:ILE:HD11  | 1:H:95:THR:HG21  | 1.89                     | 0.52              |
| 1:H:127:ARG:HA   | 1:H:130:ILE:HG12 | 1.92                     | 0.52              |
| 1:K:195:ASN:O    | 1:K:199:ARG:HG3  | 2.09                     | 0.52              |
| 1:K:320:LYS:O    | 1:L:49:TYR:CD1   | 2.26                     | 0.52              |
| 1:M:36:VAL:CG1   | 1:M:96:GLN:NE2   | 2.68                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:123:LYS:HZ1  | 1:M:127:ARG:NH1  | 2.08                     | 0.52              |
| 1:M:170:LYS:HZ2  | 1:N:81:LYS:HB3   | 1.74                     | 0.52              |
| 1:M:317:GLY:O    | 1:N:48:GLY:O     | 2.28                     | 0.52              |
| 1:N:170:LYS:HZ2  | 1:O:81:LYS:HB3   | 1.74                     | 0.52              |
| 1:N:177:ILE:HD11 | 1:N:284:PHE:CZ   | 2.44                     | 0.52              |
| 1:O:105:LYS:NZ   | 1:O:148:GLU:CB   | 2.72                     | 0.52              |
| 1:P:51:ASP:O     | 1:P:52:ILE:HD13  | 2.09                     | 0.52              |
| 1:P:59:ILE:HD11  | 1:P:95:THR:HG21  | 1.89                     | 0.52              |
| 1:P:105:LYS:NZ   | 1:P:148:GLU:CB   | 2.72                     | 0.52              |
| 1:P:195:ASN:O    | 1:P:199:ARG:HG3  | 2.09                     | 0.52              |
| 1:A:48:GLY:O     | 1:B:317:GLY:O    | 2.28                     | 0.52              |
| 1:A:246:ILE:HG13 | 1:E:49:TYR:CD2   | 2.45                     | 0.52              |
| 1:C:319:TYR:O    | 1:C:323:VAL:HG13 | 2.10                     | 0.52              |
| 1:E:34:LYS:CA    | 1:E:35:ARG:O     | 2.57                     | 0.52              |
| 1:E:49:TYR:HB2   | 1:F:321:VAL:CA   | 2.28                     | 0.52              |
| 1:F:219:ASP:CA   | 1:F:224:ASN:HB2  | 1.81                     | 0.52              |
| 1:G:22:ILE:HD12  | 1:G:27:LYS:NZ    | 2.24                     | 0.52              |
| 1:G:116:VAL:HG22 | 1:G:121:LYS:O    | 2.08                     | 0.52              |
| 1:G:130:ILE:HD12 | 1:G:152:ILE:HB   | 1.92                     | 0.52              |
| 1:G:183:ASN:ND2  | 1:J:197:SER:CB   | 2.65                     | 0.52              |
| 1:I:12:LEU:HD21  | 1:I:21:LEU:CD1   | 2.38                     | 0.52              |
| 1:I:177:ILE:HD11 | 1:I:284:PHE:CZ   | 2.44                     | 0.52              |
| 1:I:195:ASN:O    | 1:I:199:ARG:HG3  | 2.10                     | 0.52              |
| 1:I:275:LYS:CB   | 1:J:218:THR:C    | 2.78                     | 0.52              |
| 1:I:306:ILE:HG13 | 1:N:230:GLN:HB2  | 1.92                     | 0.52              |
| 1:K:22:ILE:HD12  | 1:K:27:LYS:NZ    | 2.24                     | 0.52              |
| 1:K:133:ASN:ND2  | 1:K:148:GLU:CB   | 2.72                     | 0.52              |
| 1:L:22:ILE:HG22  | 1:L:35:ARG:CB    | 2.35                     | 0.52              |
| 1:M:22:ILE:HD12  | 1:M:27:LYS:HZ1   | 1.74                     | 0.52              |
| 1:M:109:VAL:CG1  | 1:M:322:ALA:HB2  | 2.39                     | 0.52              |
| 1:M:299:THR:O    | 1:N:227:THR:CB   | 2.58                     | 0.52              |
| 1:N:273:GLY:O    | 1:N:274:PHE:CG   | 2.63                     | 0.52              |
| 1:N:299:THR:O    | 1:O:227:THR:CB   | 2.58                     | 0.52              |
| 1:O:169:PHE:CD2  | 1:P:79:THR:CG2   | 2.93                     | 0.52              |
| 1:P:9:VAL:HG13   | 1:P:322:ALA:CB   | 2.39                     | 0.52              |
| 1:P:21:LEU:HD23  | 1:P:21:LEU:C     | 2.30                     | 0.52              |
| 1:A:22:ILE:HD12  | 1:A:27:LYS:NZ    | 2.24                     | 0.52              |
| 1:A:177:ILE:HD11 | 1:A:284:PHE:CZ   | 2.44                     | 0.52              |
| 1:A:195:ASN:O    | 1:A:199:ARG:HG3  | 2.09                     | 0.52              |
| 1:A:208:ASP:O    | 1:A:211:ILE:HG12 | 2.09                     | 0.52              |
| 1:B:47:ASP:OD1   | 1:C:9:VAL:HG21   | 2.09                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:109:VAL:CG1  | 1:B:322:ALA:HB2  | 2.39                     | 0.52              |
| 1:C:195:ASN:O    | 1:C:199:ARG:HG3  | 2.10                     | 0.52              |
| 1:D:22:ILE:HD12  | 1:D:27:LYS:NZ    | 2.24                     | 0.52              |
| 1:D:114:LEU:CG   | 1:D:156:ALA:HB1  | 2.38                     | 0.52              |
| 1:D:127:ARG:HA   | 1:D:130:ILE:HG12 | 1.92                     | 0.52              |
| 1:E:5:THR:CG2    | 1:E:7:GLU:HG2    | 2.39                     | 0.52              |
| 1:E:195:ASN:O    | 1:E:199:ARG:HG3  | 2.10                     | 0.52              |
| 1:F:5:THR:CG2    | 1:F:7:GLU:HG2    | 2.39                     | 0.52              |
| 1:F:133:ASN:ND2  | 1:F:148:GLU:CB   | 2.72                     | 0.52              |
| 1:F:177:ILE:HD11 | 1:F:284:PHE:CZ   | 2.44                     | 0.52              |
| 1:F:196:PRO:HB3  | 1:F:199:ARG:NH2  | 2.25                     | 0.52              |
| 1:G:114:LEU:CG   | 1:G:156:ALA:HB1  | 2.38                     | 0.52              |
| 1:G:196:PRO:HB3  | 1:G:199:ARG:NH2  | 2.25                     | 0.52              |
| 1:H:21:LEU:HD23  | 1:H:21:LEU:C     | 2.30                     | 0.52              |
| 1:H:22:ILE:HD12  | 1:H:27:LYS:NZ    | 2.24                     | 0.52              |
| 1:H:195:ASN:O    | 1:H:199:ARG:HG3  | 2.10                     | 0.52              |
| 1:H:201:ILE:HG23 | 1:K:272:ARG:NH1  | 2.25                     | 0.52              |
| 1:I:21:LEU:HD23  | 1:I:21:LEU:C     | 2.30                     | 0.52              |
| 1:I:130:ILE:HD12 | 1:I:152:ILE:HB   | 1.92                     | 0.52              |
| 1:K:127:ARG:HA   | 1:K:130:ILE:HG12 | 1.92                     | 0.52              |
| 1:K:130:ILE:HD12 | 1:K:152:ILE:HB   | 1.92                     | 0.52              |
| 1:K:168:ASN:CB   | 1:L:71:GLN:CG    | 2.87                     | 0.52              |
| 1:K:321:VAL:CA   | 1:L:49:TYR:HB2   | 2.28                     | 0.52              |
| 1:L:22:ILE:HD12  | 1:L:27:LYS:NZ    | 2.24                     | 0.52              |
| 1:L:114:LEU:CG   | 1:L:156:ALA:HB1  | 2.38                     | 0.52              |
| 1:L:195:ASN:O    | 1:L:199:ARG:HG3  | 2.10                     | 0.52              |
| 1:L:196:PRO:HB3  | 1:L:199:ARG:NH2  | 2.25                     | 0.52              |
| 1:M:273:GLY:O    | 1:M:274:PHE:CG   | 2.63                     | 0.52              |
| 1:N:22:ILE:HD12  | 1:N:27:LYS:NZ    | 2.24                     | 0.52              |
| 1:O:50:ILE:HG13  | 1:O:50:ILE:O     | 2.09                     | 0.52              |
| 1:P:5:THR:CG2    | 1:P:7:GLU:HG2    | 2.39                     | 0.52              |
| 1:A:273:GLY:O    | 1:A:274:PHE:CG   | 2.63                     | 0.52              |
| 1:B:22:ILE:HD12  | 1:B:27:LYS:NZ    | 2.24                     | 0.52              |
| 1:B:273:GLY:O    | 1:B:274:PHE:CG   | 2.63                     | 0.52              |
| 1:C:114:LEU:CG   | 1:C:156:ALA:HB1  | 2.38                     | 0.52              |
| 1:C:130:ILE:HD12 | 1:C:152:ILE:HB   | 1.92                     | 0.52              |
| 1:C:273:GLY:O    | 1:C:274:PHE:CG   | 2.63                     | 0.52              |
| 1:D:319:TYR:O    | 1:D:323:VAL:HG13 | 2.10                     | 0.52              |
| 1:E:164:LEU:HD13 | 1:E:313:THR:CA   | 2.40                     | 0.52              |
| 1:F:22:ILE:HD12  | 1:F:27:LYS:NZ    | 2.24                     | 0.52              |
| 1:F:34:LYS:N     | 1:F:35:ARG:CB    | 2.72                     | 0.52              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:264:ASP:OD1  | 1:I:267:LYS:O    | 2.27                     | 0.52              |
| 1:G:12:LEU:HD21  | 1:G:21:LEU:CD1   | 2.38                     | 0.52              |
| 1:H:36:VAL:CG1   | 1:H:96:GLN:NE2   | 2.68                     | 0.52              |
| 1:H:164:LEU:HD13 | 1:H:313:THR:CA   | 2.40                     | 0.52              |
| 1:I:34:LYS:N     | 1:I:35:ARG:CB    | 2.72                     | 0.52              |
| 1:I:139:LYS:H    | 1:I:143:LYS:N    | 2.06                     | 0.52              |
| 1:J:12:LEU:HD21  | 1:J:21:LEU:CD1   | 2.38                     | 0.52              |
| 1:K:12:LEU:HD21  | 1:K:21:LEU:CD1   | 2.38                     | 0.52              |
| 1:K:43:TYR:CE2   | 1:K:67:LEU:CD1   | 2.91                     | 0.52              |
| 1:K:59:ILE:HD11  | 1:K:95:THR:HG21  | 1.89                     | 0.52              |
| 1:K:114:LEU:CG   | 1:K:156:ALA:HB1  | 2.38                     | 0.52              |
| 1:O:9:VAL:HG13   | 1:O:322:ALA:CB   | 2.39                     | 0.52              |
| 1:O:22:ILE:HD12  | 1:O:27:LYS:NZ    | 2.24                     | 0.52              |
| 1:O:37:ILE:HG13  | 1:O:312:TRP:HZ2  | 1.64                     | 0.52              |
| 1:O:299:THR:O    | 1:P:227:THR:CB   | 2.58                     | 0.52              |
| 1:A:133:ASN:HD22 | 1:A:148:GLU:CA   | 2.11                     | 0.51              |
| 1:C:46:GLU:HA    | 1:D:324:ALA:HB1  | 1.68                     | 0.51              |
| 1:D:130:ILE:HD12 | 1:D:152:ILE:HB   | 1.92                     | 0.51              |
| 1:E:21:LEU:HD23  | 1:E:21:LEU:C     | 2.30                     | 0.51              |
| 1:E:22:ILE:HD12  | 1:E:27:LYS:HZ1   | 1.75                     | 0.51              |
| 1:E:139:LYS:H    | 1:E:143:LYS:N    | 2.06                     | 0.51              |
| 1:F:9:VAL:HG13   | 1:F:322:ALA:CB   | 2.39                     | 0.51              |
| 1:F:130:ILE:HD12 | 1:F:152:ILE:HB   | 1.92                     | 0.51              |
| 1:G:5:THR:CG2    | 1:G:7:GLU:HG2    | 2.39                     | 0.51              |
| 1:I:259:GLU:O    | 1:I:263:LYS:HG3  | 2.11                     | 0.51              |
| 1:J:70:GLU:CD    | 1:J:74:GLU:HB3   | 2.31                     | 0.51              |
| 1:J:130:ILE:HD12 | 1:J:152:ILE:HB   | 1.92                     | 0.51              |
| 1:K:43:TYR:CZ    | 1:K:67:LEU:CB    | 2.86                     | 0.51              |
| 1:L:319:TYR:O    | 1:L:323:VAL:HG13 | 2.10                     | 0.51              |
| 1:M:319:TYR:O    | 1:M:323:VAL:HG13 | 2.10                     | 0.51              |
| 1:N:37:ILE:HG13  | 1:N:312:TRP:HZ2  | 1.65                     | 0.51              |
| 1:N:169:PHE:CD2  | 1:O:79:THR:CG2   | 2.93                     | 0.51              |
| 1:N:195:ASN:O    | 1:N:199:ARG:HG3  | 2.09                     | 0.51              |
| 1:P:34:LYS:N     | 1:P:35:ARG:CB    | 2.72                     | 0.51              |
| 1:P:319:TYR:O    | 1:P:323:VAL:HG13 | 2.10                     | 0.51              |
| 1:A:246:ILE:HD11 | 1:F:320:LYS:C    | 2.22                     | 0.51              |
| 1:B:153:THR:HG21 | 1:B:325:LYS:CD   | 2.41                     | 0.51              |
| 1:B:319:TYR:O    | 1:B:323:VAL:HG13 | 2.10                     | 0.51              |
| 1:C:242:LYS:O    | 1:H:166:GLN:HB3  | 2.10                     | 0.51              |
| 1:C:245:GLU:HB2  | 1:G:75:ASP:HA    | 1.88                     | 0.51              |
| 1:E:319:TYR:O    | 1:E:323:VAL:HG13 | 2.10                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:127:ARG:HA   | 1:F:130:ILE:HG12 | 1.92                     | 0.51              |
| 1:F:259:GLU:O    | 1:F:263:LYS:HG3  | 2.11                     | 0.51              |
| 1:H:36:VAL:CG2   | 1:H:38:PHE:CZ    | 2.94                     | 0.51              |
| 1:H:114:LEU:CG   | 1:H:156:ALA:HB1  | 2.38                     | 0.51              |
| 1:H:133:ASN:HD22 | 1:H:148:GLU:CA   | 2.11                     | 0.51              |
| 1:I:196:PRO:HB3  | 1:I:199:ARG:NH2  | 2.25                     | 0.51              |
| 1:I:275:LYS:HB3  | 1:J:218:THR:C    | 2.08                     | 0.51              |
| 1:J:278:GLN:OE1  | 1:K:217:LEU:HD23 | 2.11                     | 0.51              |
| 1:K:36:VAL:CG2   | 1:K:38:PHE:CZ    | 2.93                     | 0.51              |
| 1:K:52:ILE:HA    | 1:O:248:THR:CG2  | 2.32                     | 0.51              |
| 1:K:163:PHE:CE2  | 1:L:76:SER:HB3   | 2.45                     | 0.51              |
| 1:K:208:ASP:O    | 1:K:211:ILE:HG12 | 2.09                     | 0.51              |
| 1:L:164:LEU:HD12 | 1:L:313:THR:O    | 2.11                     | 0.51              |
| 1:M:169:PHE:CD2  | 1:N:79:THR:CG2   | 2.93                     | 0.51              |
| 1:N:21:LEU:HD23  | 1:N:21:LEU:C     | 2.30                     | 0.51              |
| 1:N:317:GLY:O    | 1:O:48:GLY:O     | 2.28                     | 0.51              |
| 1:N:322:ALA:C    | 1:O:47:ASP:C     | 2.62                     | 0.51              |
| 1:O:70:GLU:CD    | 1:O:74:GLU:HB3   | 2.31                     | 0.51              |
| 1:P:22:ILE:HD12  | 1:P:27:LYS:NZ    | 2.24                     | 0.51              |
| 1:P:219:ASP:CB   | 1:P:224:ASN:ND2  | 2.65                     | 0.51              |
| 1:P:273:GLY:O    | 1:P:274:PHE:CG   | 2.63                     | 0.51              |
| 1:A:9:VAL:HG13   | 1:A:322:ALA:CB   | 2.39                     | 0.51              |
| 1:A:319:TYR:O    | 1:A:323:VAL:HG13 | 2.10                     | 0.51              |
| 1:B:130:ILE:HD12 | 1:B:152:ILE:HB   | 1.92                     | 0.51              |
| 1:B:195:ASN:O    | 1:B:199:ARG:HG3  | 2.09                     | 0.51              |
| 1:B:259:GLU:O    | 1:B:263:LYS:HG3  | 2.11                     | 0.51              |
| 1:C:9:VAL:HG13   | 1:C:322:ALA:CB   | 2.39                     | 0.51              |
| 1:C:36:VAL:CG2   | 1:C:38:PHE:CZ    | 2.94                     | 0.51              |
| 1:D:196:PRO:HB3  | 1:D:199:ARG:NH2  | 2.25                     | 0.51              |
| 1:E:70:GLU:CD    | 1:E:74:GLU:HB3   | 2.31                     | 0.51              |
| 1:E:105:LYS:HZ2  | 1:E:148:GLU:HB3  | 1.74                     | 0.51              |
| 1:E:164:LEU:HD12 | 1:E:313:THR:O    | 2.11                     | 0.51              |
| 1:E:166:GLN:O    | 1:E:166:GLN:HG2  | 2.11                     | 0.51              |
| 1:F:198:GLU:HG2  | 1:I:203:GLU:CD   | 2.27                     | 0.51              |
| 1:F:203:GLU:CB   | 1:I:272:ARG:O    | 2.43                     | 0.51              |
| 1:G:21:LEU:HD23  | 1:G:21:LEU:C     | 2.30                     | 0.51              |
| 1:G:36:VAL:CG2   | 1:G:38:PHE:CZ    | 2.94                     | 0.51              |
| 1:G:271:LYS:HE2  | 1:J:268:LEU:HD22 | 1.91                     | 0.51              |
| 1:H:10:MET:SD    | 1:H:21:LEU:HD21  | 2.51                     | 0.51              |
| 1:H:12:LEU:HD21  | 1:H:21:LEU:CD1   | 2.38                     | 0.51              |
| 1:H:196:PRO:HB3  | 1:H:199:ARG:NH2  | 2.25                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:273:GLY:O    | 1:H:274:PHE:CG   | 2.63                     | 0.51              |
| 1:J:36:VAL:CG2   | 1:J:38:PHE:CZ    | 2.94                     | 0.51              |
| 1:K:39:LYS:HG2   | 1:K:41:LYS:HG3   | 1.93                     | 0.51              |
| 1:L:12:LEU:HD21  | 1:L:21:LEU:CD1   | 2.38                     | 0.51              |
| 1:L:130:ILE:HD12 | 1:L:152:ILE:HB   | 1.92                     | 0.51              |
| 1:L:166:GLN:O    | 1:L:166:GLN:HG2  | 2.11                     | 0.51              |
| 1:M:255:LYS:O    | 1:M:259:GLU:HB2  | 2.11                     | 0.51              |
| 1:O:133:ASN:HD22 | 1:O:148:GLU:CA   | 2.11                     | 0.51              |
| 1:P:127:ARG:HA   | 1:P:130:ILE:HG12 | 1.92                     | 0.51              |
| 1:P:177:ILE:HD11 | 1:P:284:PHE:CZ   | 2.44                     | 0.51              |
| 1:A:36:VAL:CG2   | 1:A:38:PHE:CZ    | 2.94                     | 0.51              |
| 1:A:79:THR:CG2   | 1:B:169:PHE:CD2  | 2.93                     | 0.51              |
| 1:A:255:LYS:O    | 1:A:259:GLU:HB2  | 2.11                     | 0.51              |
| 1:B:114:LEU:CG   | 1:B:156:ALA:HB1  | 2.38                     | 0.51              |
| 1:C:127:ARG:HA   | 1:C:130:ILE:HG12 | 1.92                     | 0.51              |
| 1:C:177:ILE:HD11 | 1:C:284:PHE:CZ   | 2.44                     | 0.51              |
| 1:C:196:PRO:HB3  | 1:C:199:ARG:NH2  | 2.25                     | 0.51              |
| 1:C:241:LYS:CE   | 1:H:305:ILE:HG22 | 2.40                     | 0.51              |
| 1:D:12:LEU:HD21  | 1:D:21:LEU:CD1   | 2.38                     | 0.51              |
| 1:D:147:PHE:CE2  | 1:D:149:ILE:CG2  | 2.94                     | 0.51              |
| 1:D:246:ILE:CA   | 1:H:50:ILE:O     | 2.54                     | 0.51              |
| 1:D:255:LYS:O    | 1:D:259:GLU:HB2  | 2.11                     | 0.51              |
| 1:D:273:GLY:O    | 1:D:274:PHE:CG   | 2.63                     | 0.51              |
| 1:E:22:ILE:HD12  | 1:E:27:LYS:NZ    | 2.24                     | 0.51              |
| 1:F:139:LYS:H    | 1:F:143:LYS:N    | 2.06                     | 0.51              |
| 1:F:164:LEU:HD12 | 1:F:313:THR:O    | 2.11                     | 0.51              |
| 1:G:164:LEU:HD12 | 1:G:313:THR:O    | 2.11                     | 0.51              |
| 1:H:5:THR:CG2    | 1:H:7:GLU:HG2    | 2.39                     | 0.51              |
| 1:H:70:GLU:CD    | 1:H:74:GLU:HB3   | 2.31                     | 0.51              |
| 1:H:259:GLU:O    | 1:H:263:LYS:HG3  | 2.11                     | 0.51              |
| 1:J:75:ASP:CG    | 1:N:245:GLU:OE1  | 2.48                     | 0.51              |
| 1:K:70:GLU:CD    | 1:K:74:GLU:HB3   | 2.31                     | 0.51              |
| 1:K:196:PRO:HB3  | 1:K:199:ARG:NH2  | 2.25                     | 0.51              |
| 1:K:259:GLU:O    | 1:K:263:LYS:HG3  | 2.11                     | 0.51              |
| 1:K:319:TYR:O    | 1:K:323:VAL:HG13 | 2.10                     | 0.51              |
| 1:L:36:VAL:CG2   | 1:L:38:PHE:CZ    | 2.94                     | 0.51              |
| 1:L:39:LYS:HG2   | 1:L:41:LYS:HG3   | 1.93                     | 0.51              |
| 1:L:139:LYS:H    | 1:L:143:LYS:N    | 2.06                     | 0.51              |
| 1:L:219:ASP:CG   | 1:L:224:ASN:ND2  | 2.64                     | 0.51              |
| 1:M:37:ILE:HG13  | 1:M:312:TRP:HZ2  | 1.65                     | 0.51              |
| 1:N:259:GLU:O    | 1:N:263:LYS:HG3  | 2.11                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:177:ILE:HD11 | 1:O:284:PHE:CZ   | 2.44                     | 0.51              |
| 1:P:70:GLU:CD    | 1:P:74:GLU:HB3   | 2.31                     | 0.51              |
| 1:A:34:LYS:N     | 1:A:35:ARG:CB    | 2.72                     | 0.51              |
| 1:A:70:GLU:CD    | 1:A:74:GLU:HB3   | 2.31                     | 0.51              |
| 1:A:147:PHE:CE2  | 1:A:149:ILE:CG2  | 2.94                     | 0.51              |
| 1:A:166:GLN:O    | 1:A:166:GLN:HG2  | 2.11                     | 0.51              |
| 1:A:219:ASP:CG   | 1:A:224:ASN:ND2  | 2.64                     | 0.51              |
| 1:A:242:LYS:CA   | 1:F:164:LEU:O    | 2.57                     | 0.51              |
| 1:B:79:THR:CG2   | 1:C:169:PHE:CD2  | 2.93                     | 0.51              |
| 1:C:12:LEU:HD21  | 1:C:21:LEU:CD1   | 2.38                     | 0.51              |
| 1:C:22:ILE:HD12  | 1:C:27:LYS:NZ    | 2.24                     | 0.51              |
| 1:C:79:THR:CG2   | 1:D:169:PHE:CD2  | 2.93                     | 0.51              |
| 1:D:153:THR:HG21 | 1:D:325:LYS:CD   | 2.41                     | 0.51              |
| 1:E:123:LYS:HZ3  | 1:E:127:ARG:NH1  | 2.08                     | 0.51              |
| 1:F:36:VAL:CG2   | 1:F:38:PHE:CZ    | 2.93                     | 0.51              |
| 1:F:49:TYR:HB2   | 1:G:321:VAL:CA   | 2.28                     | 0.51              |
| 1:F:153:THR:HG21 | 1:F:325:LYS:CD   | 2.41                     | 0.51              |
| 1:F:284:PHE:HE2  | 1:F:296:ILE:HG12 | 1.74                     | 0.51              |
| 1:G:39:LYS:HG2   | 1:G:41:LYS:HG3   | 1.93                     | 0.51              |
| 1:G:59:ILE:HD11  | 1:G:95:THR:HG21  | 1.89                     | 0.51              |
| 1:G:119:ASN:CG   | 1:G:120:ALA:H    | 2.09                     | 0.51              |
| 1:G:272:ARG:CA   | 1:J:202:GLU:HG2  | 2.41                     | 0.51              |
| 1:H:22:ILE:HG22  | 1:H:312:TRP:CZ3  | 2.46                     | 0.51              |
| 1:H:255:LYS:O    | 1:H:259:GLU:HB2  | 2.11                     | 0.51              |
| 1:N:9:VAL:HG13   | 1:N:322:ALA:CB   | 2.39                     | 0.51              |
| 1:N:70:GLU:CD    | 1:N:74:GLU:HB3   | 2.31                     | 0.51              |
| 1:N:153:THR:HG21 | 1:N:325:LYS:CD   | 2.41                     | 0.51              |
| 1:N:219:ASP:CG   | 1:N:224:ASN:ND2  | 2.64                     | 0.51              |
| 1:O:21:LEU:HD23  | 1:O:21:LEU:C     | 2.30                     | 0.51              |
| 1:O:147:PHE:CE2  | 1:O:149:ILE:CG2  | 2.94                     | 0.51              |
| 1:O:195:ASN:O    | 1:O:199:ARG:HG3  | 2.10                     | 0.51              |
| 1:O:259:GLU:O    | 1:O:263:LYS:HG3  | 2.11                     | 0.51              |
| 1:P:37:ILE:HG13  | 1:P:312:TRP:HZ2  | 1.65                     | 0.51              |
| 1:P:166:GLN:HG2  | 1:P:166:GLN:O    | 2.11                     | 0.51              |
| 1:P:255:LYS:O    | 1:P:259:GLU:HB2  | 2.11                     | 0.51              |
| 1:A:39:LYS:HG2   | 1:A:41:LYS:HG3   | 1.93                     | 0.51              |
| 1:C:21:LEU:HD23  | 1:C:21:LEU:C     | 2.30                     | 0.51              |
| 1:C:187:SER:HA   | 1:C:199:ARG:HG2  | 1.93                     | 0.51              |
| 1:C:227:THR:CB   | 1:D:299:THR:O    | 2.58                     | 0.51              |
| 1:E:71:GLN:CG    | 1:F:168:ASN:CB   | 2.87                     | 0.51              |
| 1:E:217:LEU:HD23 | 1:F:278:GLN:OE1  | 2.11                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:273:GLY:O    | 1:E:274:PHE:CG   | 2.63                     | 0.51              |
| 1:F:255:LYS:O    | 1:F:259:GLU:HB2  | 2.11                     | 0.51              |
| 1:F:274:PHE:CE2  | 1:I:203:GLU:OE1  | 2.63                     | 0.51              |
| 1:G:50:ILE:HG12  | 1:H:320:LYS:HA   | 1.89                     | 0.51              |
| 1:G:153:THR:HG21 | 1:G:325:LYS:CD   | 2.41                     | 0.51              |
| 1:G:219:ASP:CG   | 1:G:224:ASN:ND2  | 2.64                     | 0.51              |
| 1:G:284:PHE:HE2  | 1:G:296:ILE:HG12 | 1.74                     | 0.51              |
| 1:H:153:THR:HG21 | 1:H:325:LYS:CD   | 2.41                     | 0.51              |
| 1:H:219:ASP:OD1  | 1:H:225:LEU:HG   | 2.11                     | 0.51              |
| 1:H:271:LYS:HE3  | 1:K:202:GLU:CB   | 2.40                     | 0.51              |
| 1:I:36:VAL:CG2   | 1:I:38:PHE:CZ    | 2.94                     | 0.51              |
| 1:I:70:GLU:CD    | 1:I:74:GLU:HB3   | 2.31                     | 0.51              |
| 1:I:219:ASP:CG   | 1:I:224:ASN:ND2  | 2.64                     | 0.51              |
| 1:J:39:LYS:HG2   | 1:J:41:LYS:HG3   | 1.93                     | 0.51              |
| 1:J:139:LYS:H    | 1:J:143:LYS:N    | 2.06                     | 0.51              |
| 1:J:273:GLY:O    | 1:J:274:PHE:CG   | 2.63                     | 0.51              |
| 1:K:164:LEU:HD12 | 1:K:313:THR:O    | 2.11                     | 0.51              |
| 1:K:273:GLY:O    | 1:K:274:PHE:CG   | 2.63                     | 0.51              |
| 1:K:305:ILE:HG22 | 1:P:241:LYS:CE   | 2.39                     | 0.51              |
| 1:L:22:ILE:HG22  | 1:L:312:TRP:CZ3  | 2.46                     | 0.51              |
| 1:L:153:THR:HG21 | 1:L:325:LYS:CD   | 2.40                     | 0.51              |
| 1:M:208:ASP:O    | 1:M:211:ILE:HG12 | 2.09                     | 0.51              |
| 1:N:147:PHE:CE2  | 1:N:149:ILE:CG2  | 2.94                     | 0.51              |
| 1:N:208:ASP:O    | 1:N:211:ILE:HG12 | 2.09                     | 0.51              |
| 1:O:187:SER:HA   | 1:O:199:ARG:HG2  | 1.93                     | 0.51              |
| 1:P:196:PRO:HB3  | 1:P:199:ARG:NH2  | 2.25                     | 0.51              |
| 1:A:241:LYS:CA   | 1:F:165:GLU:CD   | 2.75                     | 0.51              |
| 1:B:9:VAL:HG13   | 1:B:322:ALA:CB   | 2.39                     | 0.51              |
| 1:B:33:ILE:C     | 1:B:312:TRP:CZ2  | 2.84                     | 0.51              |
| 1:B:39:LYS:HG2   | 1:B:41:LYS:HG3   | 1.93                     | 0.51              |
| 1:B:227:THR:CB   | 1:C:299:THR:O    | 2.58                     | 0.51              |
| 1:C:32:ASP:C     | 1:C:34:LYS:HB2   | 2.31                     | 0.51              |
| 1:C:147:PHE:CE2  | 1:C:149:ILE:CG2  | 2.94                     | 0.51              |
| 1:C:208:ASP:O    | 1:C:211:ILE:HG12 | 2.09                     | 0.51              |
| 1:D:33:ILE:C     | 1:D:312:TRP:CZ2  | 2.84                     | 0.51              |
| 1:E:39:LYS:HG2   | 1:E:41:LYS:HG3   | 1.93                     | 0.51              |
| 1:E:219:ASP:CG   | 1:E:224:ASN:ND2  | 2.64                     | 0.51              |
| 1:F:39:LYS:HG2   | 1:F:41:LYS:HG3   | 1.93                     | 0.51              |
| 1:F:197:SER:CA   | 1:I:183:ASN:ND2  | 2.73                     | 0.51              |
| 1:G:32:ASP:HB3   | 1:G:34:LYS:HD2   | 1.93                     | 0.51              |
| 1:G:32:ASP:C     | 1:G:34:LYS:HB2   | 2.31                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:71:GLN:CG    | 1:H:168:ASN:CB   | 2.87                     | 0.51              |
| 1:G:217:LEU:HD23 | 1:H:278:GLN:OE1  | 2.11                     | 0.51              |
| 1:H:39:LYS:HG2   | 1:H:41:LYS:HG3   | 1.93                     | 0.51              |
| 1:H:203:GLU:N    | 1:K:197:SER:O    | 2.42                     | 0.51              |
| 1:I:43:TYR:CE2   | 1:I:67:LEU:CD1   | 2.91                     | 0.51              |
| 1:I:43:TYR:CZ    | 1:I:67:LEU:CB    | 2.87                     | 0.51              |
| 1:I:133:ASN:HD22 | 1:I:148:GLU:CA   | 2.11                     | 0.51              |
| 1:I:273:GLY:O    | 1:I:274:PHE:CG   | 2.63                     | 0.51              |
| 1:J:153:THR:HG21 | 1:J:325:LYS:CD   | 2.41                     | 0.51              |
| 1:J:168:ASN:CB   | 1:K:71:GLN:CG    | 2.87                     | 0.51              |
| 1:J:255:LYS:O    | 1:J:259:GLU:HB2  | 2.11                     | 0.51              |
| 1:L:33:ILE:C     | 1:L:312:TRP:CZ2  | 2.84                     | 0.51              |
| 1:L:259:GLU:O    | 1:L:263:LYS:HG3  | 2.11                     | 0.51              |
| 1:L:273:GLY:O    | 1:L:274:PHE:CG   | 2.63                     | 0.51              |
| 1:M:9:VAL:HG13   | 1:M:322:ALA:CB   | 2.39                     | 0.51              |
| 1:N:33:ILE:C     | 1:N:312:TRP:CZ2  | 2.84                     | 0.51              |
| 1:N:187:SER:HA   | 1:N:199:ARG:HG2  | 1.93                     | 0.51              |
| 1:N:255:LYS:O    | 1:N:259:GLU:HB2  | 2.11                     | 0.51              |
| 1:O:34:LYS:N     | 1:O:35:ARG:CB    | 2.72                     | 0.51              |
| 1:O:123:LYS:HZ1  | 1:O:127:ARG:NH1  | 2.09                     | 0.51              |
| 1:O:219:ASP:CG   | 1:O:224:ASN:ND2  | 2.64                     | 0.51              |
| 1:O:317:GLY:O    | 1:P:48:GLY:O     | 2.28                     | 0.51              |
| 1:P:10:MET:SD    | 1:P:21:LEU:HD21  | 2.51                     | 0.51              |
| 1:P:33:ILE:C     | 1:P:312:TRP:CZ2  | 2.84                     | 0.51              |
| 1:P:123:LYS:HZ1  | 1:P:127:ARG:NH1  | 2.09                     | 0.51              |
| 1:A:32:ASP:C     | 1:A:34:LYS:HB2   | 2.31                     | 0.51              |
| 1:A:68:ILE:O     | 1:A:68:ILE:HG13  | 2.11                     | 0.51              |
| 1:B:12:LEU:HD21  | 1:B:21:LEU:CD1   | 2.38                     | 0.51              |
| 1:B:68:ILE:HG13  | 1:B:68:ILE:O     | 2.11                     | 0.51              |
| 1:B:70:GLU:CD    | 1:B:74:GLU:HB3   | 2.31                     | 0.51              |
| 1:B:147:PHE:CE2  | 1:B:149:ILE:CG2  | 2.94                     | 0.51              |
| 1:B:196:PRO:HB3  | 1:B:199:ARG:NH2  | 2.25                     | 0.51              |
| 1:C:21:LEU:O     | 1:C:35:ARG:HB3   | 2.11                     | 0.51              |
| 1:C:130:ILE:O    | 1:C:149:ILE:HD13 | 2.11                     | 0.51              |
| 1:C:259:GLU:O    | 1:C:263:LYS:HG3  | 2.11                     | 0.51              |
| 1:C:308:ASN:ND2  | 1:G:241:LYS:C    | 2.64                     | 0.51              |
| 1:D:187:SER:HA   | 1:D:199:ARG:HG2  | 1.93                     | 0.51              |
| 1:E:10:MET:SD    | 1:E:21:LEU:HD21  | 2.51                     | 0.51              |
| 1:E:196:PRO:HB3  | 1:E:199:ARG:NH2  | 2.25                     | 0.51              |
| 1:E:255:LYS:O    | 1:E:259:GLU:HB2  | 2.11                     | 0.51              |
| 1:F:32:ASP:C     | 1:F:34:LYS:HB2   | 2.31                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:10:MET:SD    | 1:G:21:LEU:HD21  | 2.51                     | 0.51              |
| 1:G:147:PHE:CE2  | 1:G:149:ILE:CG2  | 2.94                     | 0.51              |
| 1:H:33:ILE:C     | 1:H:312:TRP:CZ2  | 2.84                     | 0.51              |
| 1:H:164:LEU:HD12 | 1:H:313:THR:O    | 2.11                     | 0.51              |
| 1:H:203:GLU:CD   | 1:K:198:GLU:HG2  | 2.30                     | 0.51              |
| 1:H:219:ASP:CG   | 1:H:224:ASN:ND2  | 2.64                     | 0.51              |
| 1:H:272:ARG:N    | 1:K:202:GLU:HG2  | 2.26                     | 0.51              |
| 1:I:39:LYS:HG2   | 1:I:41:LYS:HG3   | 1.93                     | 0.51              |
| 1:J:10:MET:SD    | 1:J:21:LEU:HD21  | 2.51                     | 0.51              |
| 1:J:33:ILE:C     | 1:J:312:TRP:CZ2  | 2.84                     | 0.51              |
| 1:J:127:ARG:HA   | 1:J:130:ILE:HG12 | 1.92                     | 0.51              |
| 1:J:219:ASP:CG   | 1:J:224:ASN:ND2  | 2.64                     | 0.51              |
| 1:J:230:GLN:HE22 | 1:N:290:GLN:HB3  | 1.74                     | 0.51              |
| 1:K:10:MET:SD    | 1:K:21:LEU:HD21  | 2.51                     | 0.51              |
| 1:K:255:LYS:O    | 1:K:259:GLU:HB2  | 2.11                     | 0.51              |
| 1:L:43:TYR:CE2   | 1:L:67:LEU:CD1   | 2.91                     | 0.51              |
| 1:M:19:THR:CG2   | 1:M:40:THR:HG22  | 2.36                     | 0.51              |
| 1:M:39:LYS:HG2   | 1:M:41:LYS:HG3   | 1.93                     | 0.51              |
| 1:M:177:ILE:HD11 | 1:M:284:PHE:CZ   | 2.44                     | 0.51              |
| 1:M:196:PRO:HB3  | 1:M:199:ARG:NH2  | 2.25                     | 0.51              |
| 1:M:219:ASP:CG   | 1:M:224:ASN:ND2  | 2.64                     | 0.51              |
| 1:M:219:ASP:OD1  | 1:M:225:LEU:HG   | 2.11                     | 0.51              |
| 1:N:155:LYS:HG3  | 1:N:156:ALA:N    | 2.26                     | 0.51              |
| 1:N:319:TYR:O    | 1:N:323:VAL:HG13 | 2.10                     | 0.51              |
| 1:O:10:MET:SD    | 1:O:21:LEU:HD21  | 2.51                     | 0.51              |
| 1:O:319:TYR:O    | 1:O:323:VAL:HG13 | 2.10                     | 0.51              |
| 1:P:12:LEU:HD21  | 1:P:21:LEU:CD1   | 2.38                     | 0.51              |
| 1:A:130:ILE:HD12 | 1:A:152:ILE:HB   | 1.92                     | 0.51              |
| 1:A:153:THR:HG21 | 1:A:325:LYS:CD   | 2.41                     | 0.51              |
| 1:A:155:LYS:HG3  | 1:A:156:ALA:N    | 2.26                     | 0.51              |
| 1:A:227:THR:CB   | 1:B:299:THR:O    | 2.58                     | 0.51              |
| 1:A:259:GLU:O    | 1:A:263:LYS:HG3  | 2.11                     | 0.51              |
| 1:B:21:LEU:O     | 1:B:35:ARG:HB3   | 2.11                     | 0.51              |
| 1:B:219:ASP:CG   | 1:B:224:ASN:ND2  | 2.64                     | 0.51              |
| 1:B:245:GLU:OE1  | 1:F:75:ASP:CG    | 2.49                     | 0.51              |
| 1:C:22:ILE:HG22  | 1:C:312:TRP:CZ3  | 2.46                     | 0.51              |
| 1:C:227:THR:HG23 | 1:D:301:PRO:CD   | 2.38                     | 0.51              |
| 1:D:70:GLU:CD    | 1:D:74:GLU:HB3   | 2.31                     | 0.51              |
| 1:E:153:THR:HG21 | 1:E:325:LYS:CD   | 2.40                     | 0.51              |
| 1:E:186:PHE:HE2  | 1:E:269:ILE:HD11 | 1.70                     | 0.51              |
| 1:E:219:ASP:CG   | 1:F:277:ASP:HB2  | 2.31                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:147:PHE:CE2  | 1:F:149:ILE:CG2  | 2.94                     | 0.51              |
| 1:F:319:TYR:O    | 1:F:323:VAL:HG13 | 2.10                     | 0.51              |
| 1:G:27:LYS:HZ1   | 1:G:35:ARG:HE    | 1.58                     | 0.51              |
| 1:H:32:ASP:C     | 1:H:34:LYS:HB2   | 2.32                     | 0.51              |
| 1:H:120:ALA:CB   | 1:K:120:ALA:HB2  | 2.21                     | 0.51              |
| 1:H:147:PHE:CE2  | 1:H:149:ILE:CG2  | 2.94                     | 0.51              |
| 1:H:166:GLN:HG2  | 1:H:166:GLN:O    | 2.11                     | 0.51              |
| 1:H:183:ASN:OD1  | 1:K:197:SER:CB   | 2.59                     | 0.51              |
| 1:I:75:ASP:HA    | 1:M:245:GLU:HB2  | 1.89                     | 0.51              |
| 1:I:164:LEU:HD12 | 1:I:313:THR:O    | 2.11                     | 0.51              |
| 1:K:22:ILE:HG22  | 1:K:312:TRP:CZ3  | 2.46                     | 0.51              |
| 1:K:139:LYS:H    | 1:K:143:LYS:N    | 2.06                     | 0.51              |
| 1:K:153:THR:HG21 | 1:K:325:LYS:CD   | 2.41                     | 0.51              |
| 1:K:164:LEU:HD13 | 1:K:313:THR:CA   | 2.40                     | 0.51              |
| 1:K:184:MET:HE1  | 1:K:265:ALA:HB2  | 1.93                     | 0.51              |
| 1:K:278:GLN:OE1  | 1:L:217:LEU:HD23 | 2.11                     | 0.51              |
| 1:L:59:ILE:HD11  | 1:L:95:THR:HG21  | 1.89                     | 0.51              |
| 1:L:222:ASN:HD22 | 1:L:237:ASN:HB2  | 1.75                     | 0.51              |
| 1:M:10:MET:SD    | 1:M:21:LEU:HD21  | 2.51                     | 0.51              |
| 1:M:21:LEU:O     | 1:M:35:ARG:HB3   | 2.11                     | 0.51              |
| 1:N:21:LEU:O     | 1:N:35:ARG:HB3   | 2.11                     | 0.51              |
| 1:N:219:ASP:OD1  | 1:N:225:LEU:HG   | 2.11                     | 0.51              |
| 1:O:19:THR:CG2   | 1:O:40:THR:HG22  | 2.36                     | 0.51              |
| 1:O:166:GLN:O    | 1:O:166:GLN:HG2  | 2.11                     | 0.51              |
| 1:O:196:PRO:HB3  | 1:O:199:ARG:NH2  | 2.25                     | 0.51              |
| 1:O:321:VAL:O    | 1:O:325:LYS:HG2  | 2.11                     | 0.51              |
| 1:O:323:VAL:CG2  | 1:P:47:ASP:C     | 2.57                     | 0.51              |
| 1:P:43:TYR:CZ    | 1:P:67:LEU:CB    | 2.87                     | 0.51              |
| 1:A:114:LEU:CG   | 1:A:156:ALA:HB1  | 2.38                     | 0.51              |
| 1:A:187:SER:HA   | 1:A:199:ARG:HG2  | 1.93                     | 0.51              |
| 1:B:47:ASP:C     | 1:C:322:ALA:C    | 2.62                     | 0.51              |
| 1:B:130:ILE:O    | 1:B:149:ILE:HD13 | 2.11                     | 0.51              |
| 1:B:187:SER:HA   | 1:B:199:ARG:HG2  | 1.93                     | 0.51              |
| 1:C:230:GLN:CA   | 1:H:308:ASN:OD1  | 2.51                     | 0.51              |
| 1:D:22:ILE:HG22  | 1:D:312:TRP:CZ3  | 2.46                     | 0.51              |
| 1:D:219:ASP:CG   | 1:D:224:ASN:ND2  | 2.64                     | 0.51              |
| 1:E:147:PHE:CE2  | 1:E:149:ILE:CG2  | 2.94                     | 0.51              |
| 1:F:10:MET:SD    | 1:F:21:LEU:HD21  | 2.51                     | 0.51              |
| 1:F:32:ASP:HB3   | 1:F:34:LYS:HD2   | 1.93                     | 0.51              |
| 1:F:50:ILE:HG21  | 1:G:319:TYR:CE2  | 2.47                     | 0.51              |
| 1:F:59:ILE:HD11  | 1:F:95:THR:HG21  | 1.89                     | 0.51              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:183:ASN:OD1  | 1:I:197:SER:OG   | 2.22                     | 0.51              |
| 1:F:219:ASP:CG   | 1:F:224:ASN:ND2  | 2.64                     | 0.51              |
| 1:F:273:GLY:O    | 1:F:274:PHE:CG   | 2.63                     | 0.51              |
| 1:G:218:THR:OG1  | 1:H:278:GLN:HB3  | 1.87                     | 0.51              |
| 1:I:127:ARG:HA   | 1:I:130:ILE:HG12 | 1.92                     | 0.51              |
| 1:I:153:THR:HG21 | 1:I:325:LYS:CD   | 2.41                     | 0.51              |
| 1:J:34:LYS:N     | 1:J:35:ARG:CB    | 2.72                     | 0.51              |
| 1:J:277:ASP:HB2  | 1:K:219:ASP:CG   | 2.32                     | 0.51              |
| 1:J:319:TYR:O    | 1:J:323:VAL:HG13 | 2.10                     | 0.51              |
| 1:K:319:TYR:CE2  | 1:L:50:ILE:HG21  | 2.46                     | 0.51              |
| 1:L:21:LEU:O     | 1:L:35:ARG:HB3   | 2.11                     | 0.51              |
| 1:L:130:ILE:O    | 1:L:149:ILE:HD13 | 2.11                     | 0.51              |
| 1:L:155:LYS:HG3  | 1:L:156:ALA:N    | 2.26                     | 0.51              |
| 1:M:114:LEU:CG   | 1:M:156:ALA:HB1  | 2.38                     | 0.51              |
| 1:M:147:PHE:CE2  | 1:M:149:ILE:CG2  | 2.94                     | 0.51              |
| 1:M:155:LYS:HG3  | 1:M:156:ALA:N    | 2.26                     | 0.51              |
| 1:N:301:PRO:CD   | 1:O:227:THR:HG23 | 2.38                     | 0.51              |
| 1:N:321:VAL:O    | 1:N:325:LYS:HG2  | 2.11                     | 0.51              |
| 1:O:127:ARG:HA   | 1:O:130:ILE:HG12 | 1.92                     | 0.51              |
| 1:O:130:ILE:HD12 | 1:O:152:ILE:HB   | 1.92                     | 0.51              |
| 1:O:222:ASN:HD22 | 1:O:237:ASN:HB2  | 1.75                     | 0.51              |
| 1:P:130:ILE:HD12 | 1:P:152:ILE:HB   | 1.92                     | 0.51              |
| 1:P:147:PHE:CE2  | 1:P:149:ILE:CG2  | 2.94                     | 0.51              |
| 1:P:187:SER:HA   | 1:P:199:ARG:HG2  | 1.93                     | 0.51              |
| 1:P:310:SER:HA   | 1:P:313:THR:CG2  | 2.42                     | 0.51              |
| 1:A:12:LEU:HD21  | 1:A:21:LEU:CD1   | 2.38                     | 0.50              |
| 1:A:21:LEU:O     | 1:A:35:ARG:HB3   | 2.11                     | 0.50              |
| 1:B:32:ASP:C     | 1:B:34:LYS:HB2   | 2.31                     | 0.50              |
| 1:B:166:GLN:O    | 1:B:166:GLN:HG2  | 2.11                     | 0.50              |
| 1:B:227:THR:CB   | 1:C:301:PRO:HD3  | 1.89                     | 0.50              |
| 1:B:255:LYS:O    | 1:B:259:GLU:HB2  | 2.11                     | 0.50              |
| 1:B:308:ASN:ND2  | 1:F:241:LYS:HB3  | 2.26                     | 0.50              |
| 1:C:153:THR:HG21 | 1:C:325:LYS:CD   | 2.41                     | 0.50              |
| 1:D:21:LEU:O     | 1:D:35:ARG:HB3   | 2.11                     | 0.50              |
| 1:D:32:ASP:C     | 1:D:34:LYS:HB2   | 2.31                     | 0.50              |
| 1:D:83:ASN:N     | 1:D:84:LEU:HB3   | 2.26                     | 0.50              |
| 1:D:161:VAL:HG11 | 1:D:285:ILE:CD1  | 2.42                     | 0.50              |
| 1:D:321:VAL:O    | 1:D:325:LYS:HG2  | 2.11                     | 0.50              |
| 1:E:36:VAL:CG2   | 1:E:38:PHE:CZ    | 2.94                     | 0.50              |
| 1:F:70:GLU:CD    | 1:F:74:GLU:HB3   | 2.31                     | 0.50              |
| 1:F:164:LEU:O    | 1:F:164:LEU:HD23 | 2.11                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:219:ASP:CG   | 1:G:277:ASP:HB2  | 2.31                     | 0.50              |
| 1:G:22:ILE:HG22  | 1:G:312:TRP:CZ3  | 2.46                     | 0.50              |
| 1:G:33:ILE:C     | 1:G:312:TRP:CZ2  | 2.84                     | 0.50              |
| 1:G:70:GLU:CD    | 1:G:74:GLU:HB3   | 2.31                     | 0.50              |
| 1:G:83:ASN:N     | 1:G:84:LEU:HB3   | 2.26                     | 0.50              |
| 1:G:186:PHE:HE2  | 1:G:269:ILE:HD11 | 1.70                     | 0.50              |
| 1:G:259:GLU:O    | 1:G:263:LYS:HG3  | 2.11                     | 0.50              |
| 1:G:273:GLY:O    | 1:G:274:PHE:CG   | 2.63                     | 0.50              |
| 1:I:219:ASP:OD1  | 1:I:225:LEU:HG   | 2.11                     | 0.50              |
| 1:J:196:PRO:HB3  | 1:J:199:ARG:NH2  | 2.25                     | 0.50              |
| 1:J:275:LYS:HZ2  | 1:K:219:ASP:HB3  | 1.76                     | 0.50              |
| 1:J:308:ASN:O    | 1:O:229:GLU:OE1  | 2.29                     | 0.50              |
| 1:J:319:TYR:CE2  | 1:K:50:ILE:HG21  | 2.46                     | 0.50              |
| 1:K:21:LEU:O     | 1:K:35:ARG:HB3   | 2.11                     | 0.50              |
| 1:K:52:ILE:H     | 1:K:74:GLU:CG    | 2.06                     | 0.50              |
| 1:K:130:ILE:O    | 1:K:149:ILE:HD13 | 2.11                     | 0.50              |
| 1:K:161:VAL:HG11 | 1:K:285:ILE:CD1  | 2.41                     | 0.50              |
| 1:L:10:MET:SD    | 1:L:21:LEU:HD21  | 2.51                     | 0.50              |
| 1:L:70:GLU:CD    | 1:L:74:GLU:HB3   | 2.31                     | 0.50              |
| 1:M:32:ASP:C     | 1:M:34:LYS:HB2   | 2.31                     | 0.50              |
| 1:M:127:ARG:HA   | 1:M:130:ILE:HG12 | 1.92                     | 0.50              |
| 1:N:19:THR:CG2   | 1:N:40:THR:HG22  | 2.36                     | 0.50              |
| 1:N:36:VAL:CG2   | 1:N:38:PHE:CZ    | 2.94                     | 0.50              |
| 1:N:39:LYS:HG2   | 1:N:41:LYS:HG3   | 1.93                     | 0.50              |
| 1:O:12:LEU:HD21  | 1:O:21:LEU:CD1   | 2.38                     | 0.50              |
| 1:O:21:LEU:O     | 1:O:35:ARG:HB3   | 2.11                     | 0.50              |
| 1:O:153:THR:HG21 | 1:O:325:LYS:CD   | 2.41                     | 0.50              |
| 1:O:219:ASP:OD1  | 1:O:225:LEU:HG   | 2.11                     | 0.50              |
| 1:P:50:ILE:HG13  | 1:P:50:ILE:O     | 2.09                     | 0.50              |
| 1:P:153:THR:HG21 | 1:P:325:LYS:CD   | 2.41                     | 0.50              |
| 1:P:219:ASP:CG   | 1:P:224:ASN:ND2  | 2.64                     | 0.50              |
| 1:A:10:MET:SD    | 1:A:21:LEU:HD21  | 2.51                     | 0.50              |
| 1:A:22:ILE:HG22  | 1:A:312:TRP:CZ3  | 2.46                     | 0.50              |
| 1:A:164:LEU:HD23 | 1:A:164:LEU:O    | 2.11                     | 0.50              |
| 1:A:321:VAL:O    | 1:A:325:LYS:HG2  | 2.11                     | 0.50              |
| 1:B:161:VAL:HG11 | 1:B:285:ILE:CD1  | 2.42                     | 0.50              |
| 1:C:161:VAL:HG11 | 1:C:285:ILE:CD1  | 2.41                     | 0.50              |
| 1:D:130:ILE:O    | 1:D:149:ILE:HD13 | 2.11                     | 0.50              |
| 1:D:166:GLN:O    | 1:D:166:GLN:HG2  | 2.11                     | 0.50              |
| 1:E:33:ILE:C     | 1:E:312:TRP:CZ2  | 2.84                     | 0.50              |
| 1:E:34:LYS:N     | 1:E:35:ARG:CB    | 2.72                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:161:VAL:HG11 | 1:E:285:ILE:CD1  | 2.42                     | 0.50              |
| 1:F:22:ILE:HD12  | 1:F:27:LYS:HZ1   | 1.77                     | 0.50              |
| 1:G:50:ILE:HG21  | 1:H:319:TYR:CE2  | 2.47                     | 0.50              |
| 1:G:99:ASP:HA    | 1:G:145:TYR:CE1  | 2.47                     | 0.50              |
| 1:G:202:GLU:HG2  | 1:J:272:ARG:CA   | 2.41                     | 0.50              |
| 1:H:119:ASN:HD21 | 1:K:119:ASN:CA   | 2.23                     | 0.50              |
| 1:H:155:LYS:HG3  | 1:H:156:ALA:N    | 2.26                     | 0.50              |
| 1:H:319:TYR:O    | 1:H:323:VAL:HG13 | 2.10                     | 0.50              |
| 1:I:27:LYS:NZ    | 1:I:35:ARG:NH2   | 2.59                     | 0.50              |
| 1:I:32:ASP:C     | 1:I:34:LYS:HB2   | 2.32                     | 0.50              |
| 1:I:33:ILE:C     | 1:I:312:TRP:CZ2  | 2.84                     | 0.50              |
| 1:I:114:LEU:CG   | 1:I:156:ALA:HB1  | 2.38                     | 0.50              |
| 1:I:164:LEU:HD23 | 1:I:164:LEU:O    | 2.11                     | 0.50              |
| 1:I:308:ASN:HB3  | 1:N:228:ASN:C    | 2.24                     | 0.50              |
| 1:J:21:LEU:O     | 1:J:35:ARG:HB3   | 2.11                     | 0.50              |
| 1:J:165:GLU:HG2  | 1:O:241:LYS:HB3  | 1.93                     | 0.50              |
| 1:K:33:ILE:C     | 1:K:312:TRP:CZ2  | 2.84                     | 0.50              |
| 1:K:95:THR:HG22  | 1:K:136:ILE:CD1  | 2.24                     | 0.50              |
| 1:K:155:LYS:HG3  | 1:K:156:ALA:N    | 2.26                     | 0.50              |
| 1:K:164:LEU:O    | 1:K:164:LEU:HD23 | 2.11                     | 0.50              |
| 1:M:33:ILE:C     | 1:M:312:TRP:CZ2  | 2.84                     | 0.50              |
| 1:M:70:GLU:CD    | 1:M:74:GLU:HB3   | 2.31                     | 0.50              |
| 1:M:116:VAL:CG2  | 1:M:122:ALA:HB3  | 2.40                     | 0.50              |
| 1:M:130:ILE:HD12 | 1:M:152:ILE:HB   | 1.92                     | 0.50              |
| 1:N:10:MET:SD    | 1:N:21:LEU:HD21  | 2.51                     | 0.50              |
| 1:N:130:ILE:O    | 1:N:149:ILE:HD13 | 2.11                     | 0.50              |
| 1:O:32:ASP:C     | 1:O:34:LYS:HB2   | 2.31                     | 0.50              |
| 1:O:155:LYS:HG3  | 1:O:156:ALA:N    | 2.26                     | 0.50              |
| 1:O:310:SER:HA   | 1:O:313:THR:CG2  | 2.42                     | 0.50              |
| 1:P:99:ASP:HA    | 1:P:145:TYR:CE1  | 2.47                     | 0.50              |
| 1:P:186:PHE:HE2  | 1:P:269:ILE:HD11 | 1.70                     | 0.50              |
| 1:A:47:ASP:C     | 1:B:322:ALA:C    | 2.62                     | 0.50              |
| 1:A:228:ASN:O    | 1:F:308:ASN:HB3  | 2.11                     | 0.50              |
| 1:B:22:ILE:HG22  | 1:B:35:ARG:CB    | 2.35                     | 0.50              |
| 1:B:22:ILE:HD12  | 1:B:27:LYS:HZ1   | 1.75                     | 0.50              |
| 1:B:27:LYS:NZ    | 1:B:35:ARG:NH2   | 2.59                     | 0.50              |
| 1:B:155:LYS:HG3  | 1:B:156:ALA:N    | 2.26                     | 0.50              |
| 1:C:39:LYS:HG2   | 1:C:41:LYS:HG3   | 1.93                     | 0.50              |
| 1:C:83:ASN:N     | 1:C:84:LEU:HB3   | 2.26                     | 0.50              |
| 1:C:255:LYS:O    | 1:C:259:GLU:HB2  | 2.11                     | 0.50              |
| 1:E:22:ILE:HG22  | 1:E:312:TRP:CZ3  | 2.46                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:161:VAL:HG11 | 1:F:285:ILE:CD1  | 2.41                     | 0.50              |
| 1:F:197:SER:CA   | 1:I:183:ASN:HD21 | 2.23                     | 0.50              |
| 1:G:161:VAL:HG11 | 1:G:285:ILE:CD1  | 2.42                     | 0.50              |
| 1:G:203:GLU:H    | 1:J:272:ARG:HG3  | 0.71                     | 0.50              |
| 1:H:161:VAL:HG11 | 1:H:285:ILE:CD1  | 2.42                     | 0.50              |
| 1:I:110:LEU:HD23 | 1:I:111:ALA:O    | 2.12                     | 0.50              |
| 1:I:147:PHE:CE2  | 1:I:149:ILE:CG2  | 2.94                     | 0.50              |
| 1:J:43:TYR:CE2   | 1:J:67:LEU:CD1   | 2.91                     | 0.50              |
| 1:J:83:ASN:N     | 1:J:84:LEU:HB3   | 2.26                     | 0.50              |
| 1:J:184:MET:HE1  | 1:J:265:ALA:HB2  | 1.93                     | 0.50              |
| 1:J:259:GLU:O    | 1:J:263:LYS:HG3  | 2.11                     | 0.50              |
| 1:J:310:SER:HA   | 1:J:313:THR:CG2  | 2.41                     | 0.50              |
| 1:K:32:ASP:C     | 1:K:34:LYS:HB2   | 2.31                     | 0.50              |
| 1:K:83:ASN:N     | 1:K:84:LEU:HB3   | 2.27                     | 0.50              |
| 1:K:133:ASN:ND2  | 1:K:148:GLU:HG3  | 2.27                     | 0.50              |
| 1:K:219:ASP:CG   | 1:K:224:ASN:ND2  | 2.64                     | 0.50              |
| 1:K:277:ASP:CG   | 1:L:219:ASP:C    | 2.70                     | 0.50              |
| 1:L:74:GLU:C     | 1:P:245:GLU:CB   | 2.70                     | 0.50              |
| 1:L:83:ASN:N     | 1:L:84:LEU:HB3   | 2.27                     | 0.50              |
| 1:L:110:LEU:HD23 | 1:L:111:ALA:O    | 2.12                     | 0.50              |
| 1:M:130:ILE:O    | 1:M:149:ILE:HD13 | 2.11                     | 0.50              |
| 1:M:164:LEU:HD12 | 1:M:313:THR:O    | 2.11                     | 0.50              |
| 1:M:187:SER:HA   | 1:M:199:ARG:HG2  | 1.93                     | 0.50              |
| 1:M:259:GLU:O    | 1:M:263:LYS:HG3  | 2.11                     | 0.50              |
| 1:N:99:ASP:HA    | 1:N:145:TYR:CE1  | 2.47                     | 0.50              |
| 1:O:68:ILE:HG13  | 1:O:68:ILE:O     | 2.11                     | 0.50              |
| 1:O:164:LEU:O    | 1:O:164:LEU:HD23 | 2.11                     | 0.50              |
| 1:O:255:LYS:O    | 1:O:259:GLU:HB2  | 2.11                     | 0.50              |
| 1:P:36:VAL:CG2   | 1:P:38:PHE:CZ    | 2.94                     | 0.50              |
| 1:A:50:ILE:HB    | 1:F:245:GLU:OE2  | 2.12                     | 0.50              |
| 1:A:127:ARG:HA   | 1:A:130:ILE:HG12 | 1.92                     | 0.50              |
| 1:A:130:ILE:O    | 1:A:149:ILE:HD13 | 2.11                     | 0.50              |
| 1:A:196:PRO:HB3  | 1:A:199:ARG:NH2  | 2.25                     | 0.50              |
| 1:A:247:ASP:N    | 1:E:52:ILE:CG1   | 2.67                     | 0.50              |
| 1:A:315:CYS:SG   | 1:A:316:GLU:N    | 2.85                     | 0.50              |
| 1:B:164:LEU:HD12 | 1:B:313:THR:O    | 2.11                     | 0.50              |
| 1:B:321:VAL:O    | 1:B:325:LYS:HG2  | 2.11                     | 0.50              |
| 1:C:10:MET:SD    | 1:C:21:LEU:HD21  | 2.51                     | 0.50              |
| 1:D:36:VAL:CG2   | 1:D:38:PHE:CZ    | 2.94                     | 0.50              |
| 1:E:127:ARG:HA   | 1:E:130:ILE:HG12 | 1.92                     | 0.50              |
| 1:E:219:ASP:C    | 1:F:277:ASP:CG   | 2.70                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:83:ASN:N     | 1:F:84:LEU:HB3   | 2.27                     | 0.50              |
| 1:F:99:ASP:HA    | 1:F:145:TYR:CE1  | 2.47                     | 0.50              |
| 1:F:110:LEU:HD23 | 1:F:111:ALA:O    | 2.12                     | 0.50              |
| 1:G:203:GLU:HB2  | 1:J:198:GLU:N    | 2.26                     | 0.50              |
| 1:G:268:LEU:HD22 | 1:J:271:LYS:HE2  | 1.92                     | 0.50              |
| 1:H:58:LYS:HZ2   | 1:H:65:GLU:CG    | 2.25                     | 0.50              |
| 1:H:186:PHE:HE2  | 1:H:269:ILE:HD11 | 1.70                     | 0.50              |
| 1:H:187:SER:HA   | 1:H:199:ARG:HG2  | 1.93                     | 0.50              |
| 1:I:21:LEU:O     | 1:I:35:ARG:HB3   | 2.11                     | 0.50              |
| 1:I:161:VAL:HG11 | 1:I:285:ILE:CD1  | 2.42                     | 0.50              |
| 1:I:306:ILE:HG13 | 1:N:230:GLN:CB   | 2.42                     | 0.50              |
| 1:J:22:ILE:HG22  | 1:J:312:TRP:CZ3  | 2.46                     | 0.50              |
| 1:J:74:GLU:C     | 1:N:245:GLU:O    | 2.49                     | 0.50              |
| 1:J:114:LEU:CG   | 1:J:156:ALA:HB1  | 2.38                     | 0.50              |
| 1:J:130:ILE:O    | 1:J:149:ILE:HD13 | 2.11                     | 0.50              |
| 1:J:133:ASN:ND2  | 1:J:148:GLU:HG3  | 2.27                     | 0.50              |
| 1:K:68:ILE:O     | 1:K:68:ILE:HG13  | 2.11                     | 0.50              |
| 1:K:222:ASN:HD22 | 1:K:237:ASN:HB2  | 1.75                     | 0.50              |
| 1:K:310:SER:HA   | 1:K:313:THR:CG2  | 2.42                     | 0.50              |
| 1:L:255:LYS:O    | 1:L:259:GLU:HB2  | 2.11                     | 0.50              |
| 1:M:22:ILE:HG22  | 1:M:312:TRP:CZ3  | 2.46                     | 0.50              |
| 1:M:182:LEU:HD23 | 1:M:182:LEU:O    | 2.12                     | 0.50              |
| 1:N:12:LEU:HD21  | 1:N:21:LEU:CD1   | 2.38                     | 0.50              |
| 1:N:43:TYR:CZ    | 1:N:67:LEU:CB    | 2.87                     | 0.50              |
| 1:N:68:ILE:O     | 1:N:68:ILE:HG13  | 2.11                     | 0.50              |
| 1:N:116:VAL:CG2  | 1:N:122:ALA:HB3  | 2.40                     | 0.50              |
| 1:N:130:ILE:HD12 | 1:N:152:ILE:HB   | 1.92                     | 0.50              |
| 1:N:166:GLN:HG2  | 1:N:166:GLN:O    | 2.11                     | 0.50              |
| 1:N:315:CYS:SG   | 1:N:316:GLU:N    | 2.85                     | 0.50              |
| 1:O:130:ILE:O    | 1:O:149:ILE:HD13 | 2.11                     | 0.50              |
| 1:P:21:LEU:O     | 1:P:35:ARG:HB3   | 2.11                     | 0.50              |
| 1:P:219:ASP:OD1  | 1:P:225:LEU:HG   | 2.11                     | 0.50              |
| 1:A:27:LYS:NZ    | 1:A:35:ARG:NH2   | 2.59                     | 0.50              |
| 1:A:161:VAL:HG11 | 1:A:285:ILE:CD1  | 2.42                     | 0.50              |
| 1:A:227:THR:HG23 | 1:B:301:PRO:CD   | 2.38                     | 0.50              |
| 1:B:10:MET:SD    | 1:B:21:LEU:HD21  | 2.51                     | 0.50              |
| 1:B:36:VAL:CG2   | 1:B:38:PHE:CZ    | 2.94                     | 0.50              |
| 1:B:127:ARG:HA   | 1:B:130:ILE:HG12 | 1.92                     | 0.50              |
| 1:B:133:ASN:ND2  | 1:B:148:GLU:HG3  | 2.27                     | 0.50              |
| 1:C:68:ILE:O     | 1:C:68:ILE:HG13  | 2.11                     | 0.50              |
| 1:C:70:GLU:CD    | 1:C:74:GLU:HB3   | 2.31                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:164:LEU:HD12 | 1:C:313:THR:O    | 2.11                     | 0.50              |
| 1:C:166:GLN:HG2  | 1:C:166:GLN:O    | 2.11                     | 0.50              |
| 1:C:315:CYS:SG   | 1:C:316:GLU:N    | 2.85                     | 0.50              |
| 1:D:240:MET:HE2  | 1:H:73:VAL:CG2   | 2.40                     | 0.50              |
| 1:E:27:LYS:NZ    | 1:E:35:ARG:NH2   | 2.59                     | 0.50              |
| 1:E:32:ASP:HB3   | 1:E:34:LYS:HD2   | 1.93                     | 0.50              |
| 1:E:32:ASP:C     | 1:E:34:LYS:HB2   | 2.32                     | 0.50              |
| 1:E:50:ILE:HG21  | 1:F:319:TYR:CE2  | 2.47                     | 0.50              |
| 1:E:130:ILE:O    | 1:E:149:ILE:HD13 | 2.12                     | 0.50              |
| 1:F:310:SER:HA   | 1:F:313:THR:CG2  | 2.41                     | 0.50              |
| 1:G:155:LYS:HG3  | 1:G:156:ALA:N    | 2.26                     | 0.50              |
| 1:G:219:ASP:CG   | 1:G:224:ASN:HD22 | 2.15                     | 0.50              |
| 1:G:315:CYS:SG   | 1:G:316:GLU:N    | 2.85                     | 0.50              |
| 1:H:164:LEU:O    | 1:H:164:LEU:HD23 | 2.11                     | 0.50              |
| 1:H:203:GLU:HG3  | 1:K:198:GLU:HG3  | 0.61                     | 0.50              |
| 1:I:10:MET:SD    | 1:I:21:LEU:HD21  | 2.51                     | 0.50              |
| 1:I:83:ASN:N     | 1:I:84:LEU:HB3   | 2.26                     | 0.50              |
| 1:I:133:ASN:ND2  | 1:I:148:GLU:HG3  | 2.27                     | 0.50              |
| 1:I:319:TYR:O    | 1:I:323:VAL:HG13 | 2.10                     | 0.50              |
| 1:I:321:VAL:CA   | 1:J:49:TYR:HB2   | 2.28                     | 0.50              |
| 1:I:323:VAL:C    | 1:J:47:ASP:CA    | 2.71                     | 0.50              |
| 1:J:68:ILE:HG13  | 1:J:68:ILE:O     | 2.11                     | 0.50              |
| 1:J:147:PHE:CE2  | 1:J:149:ILE:CG2  | 2.94                     | 0.50              |
| 1:J:155:LYS:HG3  | 1:J:156:ALA:N    | 2.26                     | 0.50              |
| 1:J:164:LEU:O    | 1:J:164:LEU:HD23 | 2.11                     | 0.50              |
| 1:J:187:SER:HA   | 1:J:199:ARG:HG2  | 1.93                     | 0.50              |
| 1:K:315:CYS:SG   | 1:K:316:GLU:N    | 2.85                     | 0.50              |
| 1:L:32:ASP:C     | 1:L:34:LYS:HB2   | 2.32                     | 0.50              |
| 1:N:164:LEU:HD12 | 1:N:313:THR:O    | 2.11                     | 0.50              |
| 1:N:182:LEU:O    | 1:N:182:LEU:HD23 | 2.12                     | 0.50              |
| 1:N:196:PRO:HB3  | 1:N:199:ARG:NH2  | 2.25                     | 0.50              |
| 1:O:36:VAL:CG2   | 1:O:38:PHE:CZ    | 2.94                     | 0.50              |
| 1:P:68:ILE:HG13  | 1:P:68:ILE:O     | 2.11                     | 0.50              |
| 1:P:164:LEU:O    | 1:P:164:LEU:HD23 | 2.11                     | 0.50              |
| 1:A:208:ASP:CA   | 1:A:211:ILE:HG12 | 2.42                     | 0.50              |
| 1:B:32:ASP:HB3   | 1:B:34:LYS:HD2   | 1.93                     | 0.50              |
| 1:B:34:LYS:N     | 1:B:35:ARG:CB    | 2.72                     | 0.50              |
| 1:B:208:ASP:CA   | 1:B:211:ILE:HG12 | 2.42                     | 0.50              |
| 1:B:229:GLU:N    | 1:G:308:ASN:CB   | 2.33                     | 0.50              |
| 1:C:155:LYS:HG3  | 1:C:156:ALA:N    | 2.26                     | 0.50              |
| 1:C:219:ASP:CG   | 1:C:224:ASN:HD22 | 2.15                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:321:VAL:O    | 1:C:325:LYS:HG2  | 2.11                     | 0.50              |
| 1:D:164:LEU:O    | 1:D:164:LEU:HD23 | 2.11                     | 0.50              |
| 1:E:43:TYR:CE2   | 1:E:67:LEU:CD1   | 2.91                     | 0.50              |
| 1:E:187:SER:HA   | 1:E:199:ARG:HG2  | 1.93                     | 0.50              |
| 1:E:208:ASP:HA   | 1:E:211:ILE:CG1  | 2.42                     | 0.50              |
| 1:E:259:GLU:O    | 1:E:263:LYS:HG3  | 2.11                     | 0.50              |
| 1:F:183:ASN:OD1  | 1:I:197:SER:CB   | 2.59                     | 0.50              |
| 1:F:187:SER:HA   | 1:F:199:ARG:HG2  | 1.93                     | 0.50              |
| 1:F:217:LEU:HD23 | 1:G:278:GLN:OE1  | 2.11                     | 0.50              |
| 1:F:219:ASP:CG   | 1:F:224:ASN:HD22 | 2.15                     | 0.50              |
| 1:F:315:CYS:SG   | 1:F:316:GLU:N    | 2.85                     | 0.50              |
| 1:G:164:LEU:O    | 1:G:164:LEU:HD23 | 2.11                     | 0.50              |
| 1:G:255:LYS:O    | 1:G:259:GLU:HB2  | 2.11                     | 0.50              |
| 1:H:315:CYS:SG   | 1:H:316:GLU:N    | 2.85                     | 0.50              |
| 1:I:22:ILE:HG22  | 1:I:312:TRP:CZ3  | 2.46                     | 0.50              |
| 1:I:155:LYS:HG3  | 1:I:156:ALA:N    | 2.26                     | 0.50              |
| 1:J:32:ASP:C     | 1:J:34:LYS:HB2   | 2.32                     | 0.50              |
| 1:J:99:ASP:HA    | 1:J:145:TYR:CE1  | 2.47                     | 0.50              |
| 1:J:182:LEU:HD23 | 1:J:182:LEU:O    | 2.12                     | 0.50              |
| 1:K:187:SER:HA   | 1:K:199:ARG:HG2  | 1.93                     | 0.50              |
| 1:L:68:ILE:HG13  | 1:L:68:ILE:O     | 2.11                     | 0.50              |
| 1:L:187:SER:HA   | 1:L:199:ARG:HG2  | 1.93                     | 0.50              |
| 1:L:315:CYS:SG   | 1:L:316:GLU:N    | 2.85                     | 0.50              |
| 1:M:164:LEU:O    | 1:M:164:LEU:HD23 | 2.11                     | 0.50              |
| 1:M:166:GLN:O    | 1:M:166:GLN:HG2  | 2.11                     | 0.50              |
| 1:N:114:LEU:CG   | 1:N:156:ALA:HB1  | 2.38                     | 0.50              |
| 1:O:105:LYS:HZ2  | 1:O:148:GLU:HB3  | 1.77                     | 0.50              |
| 1:P:130:ILE:O    | 1:P:149:ILE:HD13 | 2.11                     | 0.50              |
| 1:P:222:ASN:HD22 | 1:P:237:ASN:HB2  | 1.75                     | 0.50              |
| 1:P:321:VAL:O    | 1:P:325:LYS:HG2  | 2.11                     | 0.50              |
| 1:A:32:ASP:HB3   | 1:A:34:LYS:HD2   | 1.93                     | 0.50              |
| 1:A:133:ASN:ND2  | 1:A:148:GLU:HG3  | 2.27                     | 0.50              |
| 1:B:164:LEU:O    | 1:B:164:LEU:HD23 | 2.11                     | 0.50              |
| 1:C:33:ILE:C     | 1:C:312:TRP:CZ2  | 2.84                     | 0.50              |
| 1:C:208:ASP:CA   | 1:C:211:ILE:HG12 | 2.42                     | 0.50              |
| 1:C:219:ASP:CG   | 1:C:224:ASN:ND2  | 2.64                     | 0.50              |
| 1:D:95:THR:CB    | 1:D:136:ILE:HG21 | 2.42                     | 0.50              |
| 1:D:99:ASP:HA    | 1:D:145:TYR:CE1  | 2.47                     | 0.50              |
| 1:D:182:LEU:O    | 1:D:182:LEU:HD23 | 2.12                     | 0.50              |
| 1:D:219:ASP:CG   | 1:D:224:ASN:HD22 | 2.15                     | 0.50              |
| 1:E:155:LYS:HG3  | 1:E:156:ALA:N    | 2.26                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:133:ASN:ND2  | 1:F:148:GLU:HG3  | 2.27                     | 0.50              |
| 1:F:164:LEU:HD13 | 1:F:313:THR:CA   | 2.40                     | 0.50              |
| 1:G:110:LEU:HD23 | 1:G:111:ALA:O    | 2.12                     | 0.50              |
| 1:G:187:SER:HA   | 1:G:199:ARG:HG2  | 1.93                     | 0.50              |
| 1:H:68:ILE:O     | 1:H:68:ILE:HG13  | 2.11                     | 0.50              |
| 1:H:130:ILE:O    | 1:H:149:ILE:HD13 | 2.11                     | 0.50              |
| 1:H:310:SER:HA   | 1:H:313:THR:CG2  | 2.41                     | 0.50              |
| 1:I:130:ILE:O    | 1:I:149:ILE:HD13 | 2.11                     | 0.50              |
| 1:I:187:SER:HA   | 1:I:199:ARG:HG2  | 1.93                     | 0.50              |
| 1:I:208:ASP:HA   | 1:I:211:ILE:CG1  | 2.42                     | 0.50              |
| 1:I:255:LYS:O    | 1:I:259:GLU:HB2  | 2.11                     | 0.50              |
| 1:I:319:TYR:CE2  | 1:J:50:ILE:HG21  | 2.47                     | 0.50              |
| 1:J:52:ILE:HG12  | 1:N:245:GLU:C    | 2.31                     | 0.50              |
| 1:J:119:ASN:CG   | 1:J:120:ALA:H    | 2.09                     | 0.50              |
| 1:J:161:VAL:HG11 | 1:J:285:ILE:CD1  | 2.42                     | 0.50              |
| 1:J:164:LEU:HD12 | 1:J:313:THR:O    | 2.11                     | 0.50              |
| 1:J:222:ASN:HD22 | 1:J:237:ASN:HB2  | 1.75                     | 0.50              |
| 1:J:309:ASN:C    | 1:O:229:GLU:OE2  | 2.40                     | 0.50              |
| 1:K:147:PHE:CE2  | 1:K:149:ILE:CG2  | 2.94                     | 0.50              |
| 1:K:182:LEU:O    | 1:K:182:LEU:HD23 | 2.12                     | 0.50              |
| 1:L:99:ASP:HA    | 1:L:145:TYR:CE1  | 2.47                     | 0.50              |
| 1:L:133:ASN:ND2  | 1:L:148:GLU:HG3  | 2.27                     | 0.50              |
| 1:L:147:PHE:CE2  | 1:L:149:ILE:CG2  | 2.94                     | 0.50              |
| 1:L:164:LEU:O    | 1:L:164:LEU:HD23 | 2.11                     | 0.50              |
| 1:M:36:VAL:CG2   | 1:M:38:PHE:CZ    | 2.94                     | 0.50              |
| 1:M:68:ILE:HG13  | 1:M:68:ILE:O     | 2.11                     | 0.50              |
| 1:M:323:VAL:CA   | 1:N:47:ASP:O     | 2.48                     | 0.50              |
| 1:N:164:LEU:HD23 | 1:N:164:LEU:O    | 2.11                     | 0.50              |
| 1:O:116:VAL:CG2  | 1:O:122:ALA:HB3  | 2.40                     | 0.50              |
| 1:O:182:LEU:O    | 1:O:182:LEU:HD23 | 2.12                     | 0.50              |
| 1:P:19:THR:CG2   | 1:P:40:THR:HG22  | 2.36                     | 0.50              |
| 1:P:110:LEU:HD23 | 1:P:111:ALA:O    | 2.12                     | 0.50              |
| 1:P:114:LEU:CG   | 1:P:156:ALA:HB1  | 2.38                     | 0.50              |
| 1:P:155:LYS:HG3  | 1:P:156:ALA:N    | 2.26                     | 0.50              |
| 1:P:259:GLU:O    | 1:P:263:LYS:HG3  | 2.11                     | 0.50              |
| 1:P:315:CYS:SG   | 1:P:316:GLU:N    | 2.85                     | 0.50              |
| 1:A:164:LEU:HD12 | 1:A:313:THR:O    | 2.11                     | 0.50              |
| 1:B:83:ASN:N     | 1:B:84:LEU:HB3   | 2.26                     | 0.50              |
| 1:C:27:LYS:NZ    | 1:C:35:ARG:NH2   | 2.59                     | 0.50              |
| 1:C:99:ASP:HA    | 1:C:145:TYR:CE1  | 2.47                     | 0.50              |
| 1:C:133:ASN:ND2  | 1:C:148:GLU:HG3  | 2.27                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:182:LEU:O    | 1:C:182:LEU:HD23 | 2.12                     | 0.50              |
| 1:D:10:MET:SD    | 1:D:21:LEU:HD21  | 2.51                     | 0.50              |
| 1:D:155:LYS:HG3  | 1:D:156:ALA:N    | 2.26                     | 0.50              |
| 1:D:164:LEU:HD12 | 1:D:313:THR:O    | 2.11                     | 0.50              |
| 1:E:59:ILE:HD11  | 1:E:95:THR:HG21  | 1.89                     | 0.50              |
| 1:E:83:ASN:N     | 1:E:84:LEU:HB3   | 2.26                     | 0.50              |
| 1:E:219:ASP:HB3  | 1:F:275:LYS:HZ2  | 1.77                     | 0.50              |
| 1:E:261:PHE:CD2  | 1:E:292:LEU:HD21 | 2.47                     | 0.50              |
| 1:F:119:ASN:OD1  | 1:I:120:ALA:N    | 2.44                     | 0.50              |
| 1:G:68:ILE:HG13  | 1:G:68:ILE:O     | 2.11                     | 0.50              |
| 1:G:198:GLU:N    | 1:J:203:GLU:HB2  | 2.26                     | 0.50              |
| 1:G:319:TYR:O    | 1:G:323:VAL:HG13 | 2.10                     | 0.50              |
| 1:H:21:LEU:O     | 1:H:35:ARG:HB3   | 2.11                     | 0.50              |
| 1:H:95:THR:CB    | 1:H:136:ILE:HG21 | 2.42                     | 0.50              |
| 1:I:99:ASP:HA    | 1:I:145:TYR:CE1  | 2.47                     | 0.50              |
| 1:I:182:LEU:O    | 1:I:182:LEU:HD23 | 2.12                     | 0.50              |
| 1:J:110:LEU:HD23 | 1:J:111:ALA:O    | 2.12                     | 0.50              |
| 1:J:284:PHE:HE2  | 1:J:296:ILE:HG12 | 1.74                     | 0.50              |
| 1:L:182:LEU:O    | 1:L:182:LEU:HD23 | 2.12                     | 0.50              |
| 1:M:12:LEU:HD21  | 1:M:21:LEU:CD1   | 2.38                     | 0.50              |
| 1:M:36:VAL:O     | 1:M:312:TRP:CH2  | 2.65                     | 0.50              |
| 1:N:34:LYS:N     | 1:N:35:ARG:CB    | 2.72                     | 0.50              |
| 1:N:43:TYR:CZ    | 1:N:70:GLU:CG    | 2.95                     | 0.50              |
| 1:N:133:ASN:HD22 | 1:N:148:GLU:CA   | 2.11                     | 0.50              |
| 1:O:114:LEU:CG   | 1:O:156:ALA:HB1  | 2.38                     | 0.50              |
| 1:O:219:ASP:CG   | 1:O:224:ASN:HD22 | 2.15                     | 0.50              |
| 1:P:32:ASP:C     | 1:P:34:LYS:HB2   | 2.31                     | 0.50              |
| 1:P:182:LEU:HD23 | 1:P:182:LEU:O    | 2.12                     | 0.50              |
| 1:A:33:ILE:C     | 1:A:312:TRP:CZ2  | 2.84                     | 0.50              |
| 1:A:99:ASP:HA    | 1:A:145:TYR:CE1  | 2.47                     | 0.50              |
| 1:B:22:ILE:HG22  | 1:B:312:TRP:CZ3  | 2.46                     | 0.50              |
| 1:B:36:VAL:O     | 1:B:312:TRP:CH2  | 2.65                     | 0.50              |
| 1:C:32:ASP:HB3   | 1:C:34:LYS:HD2   | 1.93                     | 0.50              |
| 1:C:95:THR:CB    | 1:C:136:ILE:HG21 | 2.42                     | 0.50              |
| 1:D:39:LYS:HG2   | 1:D:41:LYS:HG3   | 1.93                     | 0.50              |
| 1:D:133:ASN:ND2  | 1:D:148:GLU:HG3  | 2.27                     | 0.50              |
| 1:E:23:GLY:O     | 1:E:27:LYS:HG3   | 2.12                     | 0.50              |
| 1:E:315:CYS:SG   | 1:E:316:GLU:N    | 2.85                     | 0.50              |
| 1:E:321:VAL:O    | 1:E:325:LYS:HG2  | 2.11                     | 0.50              |
| 1:F:22:ILE:HG22  | 1:F:312:TRP:CZ3  | 2.46                     | 0.50              |
| 1:F:202:GLU:HG2  | 1:I:272:ARG:HB2  | 1.93                     | 0.50              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:208:ASP:HA   | 1:G:211:ILE:CG1  | 2.42                     | 0.50              |
| 1:G:208:ASP:CA   | 1:G:211:ILE:HG12 | 2.42                     | 0.50              |
| 1:G:219:ASP:C    | 1:H:277:ASP:CG   | 2.70                     | 0.50              |
| 1:G:261:PHE:CD2  | 1:G:292:LEU:HD21 | 2.47                     | 0.50              |
| 1:H:83:ASN:N     | 1:H:84:LEU:HB3   | 2.26                     | 0.50              |
| 1:H:99:ASP:HA    | 1:H:145:TYR:CE1  | 2.47                     | 0.50              |
| 1:H:264:ASP:OD1  | 1:K:267:LYS:O    | 2.29                     | 0.50              |
| 1:I:36:VAL:O     | 1:I:312:TRP:CH2  | 2.65                     | 0.50              |
| 1:I:277:ASP:HB2  | 1:J:219:ASP:CG   | 2.31                     | 0.50              |
| 1:I:278:GLN:OE1  | 1:J:217:LEU:HD23 | 2.11                     | 0.50              |
| 1:J:277:ASP:CG   | 1:K:219:ASP:C    | 2.70                     | 0.50              |
| 1:J:315:CYS:SG   | 1:J:316:GLU:N    | 2.85                     | 0.50              |
| 1:K:36:VAL:O     | 1:K:312:TRP:CH2  | 2.65                     | 0.50              |
| 1:K:208:ASP:HA   | 1:K:211:ILE:CG1  | 2.42                     | 0.50              |
| 1:L:52:ILE:HD12  | 1:P:248:THR:CA   | 2.40                     | 0.50              |
| 1:L:208:ASP:HA   | 1:L:211:ILE:CG1  | 2.42                     | 0.50              |
| 1:M:43:TYR:CZ    | 1:M:70:GLU:CG    | 2.95                     | 0.50              |
| 1:M:153:THR:HG21 | 1:M:325:LYS:CD   | 2.41                     | 0.50              |
| 1:M:208:ASP:CA   | 1:M:211:ILE:HG12 | 2.42                     | 0.50              |
| 1:N:127:ARG:HA   | 1:N:130:ILE:HG12 | 1.92                     | 0.50              |
| 1:N:186:PHE:HE2  | 1:N:269:ILE:HD11 | 1.70                     | 0.50              |
| 1:N:219:ASP:CG   | 1:N:224:ASN:HD22 | 2.15                     | 0.50              |
| 1:O:133:ASN:ND2  | 1:O:148:GLU:HG3  | 2.27                     | 0.50              |
| 1:P:39:LYS:HG2   | 1:P:41:LYS:HG3   | 1.93                     | 0.50              |
| 1:A:37:ILE:HG13  | 1:A:312:TRP:HZ2  | 1.65                     | 0.49              |
| 1:A:208:ASP:C    | 1:A:211:ILE:HG12 | 2.33                     | 0.49              |
| 1:B:219:ASP:CG   | 1:B:224:ASN:HD22 | 2.15                     | 0.49              |
| 1:B:245:GLU:HB3  | 1:F:74:GLU:O     | 2.11                     | 0.49              |
| 1:B:315:CYS:SG   | 1:B:316:GLU:N    | 2.85                     | 0.49              |
| 1:C:7:GLU:OE1    | 1:C:326:TYR:CE1  | 2.66                     | 0.49              |
| 1:C:261:PHE:CD2  | 1:C:292:LEU:HD21 | 2.47                     | 0.49              |
| 1:D:43:TYR:CE2   | 1:D:67:LEU:CD1   | 2.91                     | 0.49              |
| 1:D:315:CYS:SG   | 1:D:316:GLU:N    | 2.85                     | 0.49              |
| 1:E:21:LEU:O     | 1:E:35:ARG:HB3   | 2.11                     | 0.49              |
| 1:E:110:LEU:HD23 | 1:E:111:ALA:O    | 2.12                     | 0.49              |
| 1:F:23:GLY:O     | 1:F:27:LYS:HG3   | 2.12                     | 0.49              |
| 1:F:43:TYR:CZ    | 1:F:70:GLU:CG    | 2.95                     | 0.49              |
| 1:F:68:ILE:O     | 1:F:68:ILE:HG13  | 2.11                     | 0.49              |
| 1:F:155:LYS:HG3  | 1:F:156:ALA:N    | 2.26                     | 0.49              |
| 1:F:219:ASP:C    | 1:G:277:ASP:CG   | 2.70                     | 0.49              |
| 1:G:21:LEU:O     | 1:G:35:ARG:HB3   | 2.11                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:23:GLY:O     | 1:G:27:LYS:HG3   | 2.12                     | 0.49              |
| 1:G:36:VAL:O     | 1:G:312:TRP:CH2  | 2.65                     | 0.49              |
| 1:G:43:TYR:CZ    | 1:G:70:GLU:CG    | 2.95                     | 0.49              |
| 1:G:50:ILE:HG22  | 1:H:323:VAL:HG11 | 0.50                     | 0.49              |
| 1:H:43:TYR:CZ    | 1:H:70:GLU:CG    | 2.95                     | 0.49              |
| 1:H:133:ASN:ND2  | 1:H:148:GLU:HG3  | 2.27                     | 0.49              |
| 1:H:208:ASP:HA   | 1:H:211:ILE:CG1  | 2.42                     | 0.49              |
| 1:H:271:LYS:C    | 1:K:204:HIS:CE1  | 2.83                     | 0.49              |
| 1:I:95:THR:CB    | 1:I:136:ILE:HG21 | 2.42                     | 0.49              |
| 1:I:275:LYS:HZ2  | 1:J:219:ASP:HB3  | 1.77                     | 0.49              |
| 1:I:277:ASP:CG   | 1:J:219:ASP:C    | 2.70                     | 0.49              |
| 1:J:36:VAL:O     | 1:J:312:TRP:CH2  | 2.65                     | 0.49              |
| 1:K:27:LYS:NZ    | 1:K:35:ARG:NH2   | 2.59                     | 0.49              |
| 1:K:110:LEU:HD23 | 1:K:111:ALA:O    | 2.12                     | 0.49              |
| 1:L:36:VAL:O     | 1:L:312:TRP:CH2  | 2.65                     | 0.49              |
| 1:L:261:PHE:CD2  | 1:L:292:LEU:HD21 | 2.47                     | 0.49              |
| 1:M:133:ASN:ND2  | 1:M:148:GLU:HG3  | 2.27                     | 0.49              |
| 1:M:322:ALA:C    | 1:N:47:ASP:C     | 2.62                     | 0.49              |
| 1:N:83:ASN:N     | 1:N:84:LEU:HB3   | 2.26                     | 0.49              |
| 1:N:85:ILE:HG23  | 1:N:86:HIS:N     | 2.28                     | 0.49              |
| 1:N:208:ASP:C    | 1:N:211:ILE:HG12 | 2.33                     | 0.49              |
| 1:N:261:PHE:CD2  | 1:N:292:LEU:HD21 | 2.47                     | 0.49              |
| 1:O:164:LEU:HD12 | 1:O:313:THR:O    | 2.11                     | 0.49              |
| 1:P:22:ILE:HG22  | 1:P:35:ARG:CB    | 2.35                     | 0.49              |
| 1:P:43:TYR:CZ    | 1:P:70:GLU:CG    | 2.95                     | 0.49              |
| 1:P:133:ASN:ND2  | 1:P:148:GLU:HG3  | 2.27                     | 0.49              |
| 1:P:261:PHE:CD2  | 1:P:292:LEU:HD21 | 2.48                     | 0.49              |
| 1:A:36:VAL:N     | 1:A:312:TRP:CH2  | 2.80                     | 0.49              |
| 1:A:43:TYR:CZ    | 1:A:70:GLU:CG    | 2.95                     | 0.49              |
| 1:A:245:GLU:HB3  | 1:E:74:GLU:O     | 2.11                     | 0.49              |
| 1:A:261:PHE:CD2  | 1:A:292:LEU:HD21 | 2.48                     | 0.49              |
| 1:B:43:TYR:CZ    | 1:B:70:GLU:CG    | 2.95                     | 0.49              |
| 1:C:36:VAL:O     | 1:C:312:TRP:CH2  | 2.65                     | 0.49              |
| 1:C:43:TYR:CZ    | 1:C:70:GLU:CG    | 2.95                     | 0.49              |
| 1:C:208:ASP:C    | 1:C:211:ILE:HG12 | 2.33                     | 0.49              |
| 1:D:32:ASP:HB3   | 1:D:34:LYS:HD2   | 1.93                     | 0.49              |
| 1:D:68:ILE:HG13  | 1:D:68:ILE:O     | 2.11                     | 0.49              |
| 1:D:219:ASP:OD1  | 1:D:225:LEU:HG   | 2.11                     | 0.49              |
| 1:D:256:LYS:HA   | 1:D:256:LYS:CE   | 2.28                     | 0.49              |
| 1:E:50:ILE:CG2   | 1:F:323:VAL:CB   | 2.75                     | 0.49              |
| 1:E:116:VAL:CG2  | 1:E:122:ALA:HB3  | 2.40                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:164:LEU:O    | 1:E:164:LEU:HD23 | 2.11                     | 0.49              |
| 1:E:222:ASN:HD22 | 1:E:237:ASN:HB2  | 1.75                     | 0.49              |
| 1:E:310:SER:HA   | 1:E:313:THR:CG2  | 2.41                     | 0.49              |
| 1:F:21:LEU:O     | 1:F:35:ARG:HB3   | 2.11                     | 0.49              |
| 1:F:33:ILE:C     | 1:F:312:TRP:CZ2  | 2.84                     | 0.49              |
| 1:F:36:VAL:O     | 1:F:312:TRP:CH2  | 2.65                     | 0.49              |
| 1:F:219:ASP:CB   | 1:G:275:LYS:HZ2  | 2.25                     | 0.49              |
| 1:G:27:LYS:NZ    | 1:G:35:ARG:NH2   | 2.59                     | 0.49              |
| 1:G:85:ILE:HG23  | 1:G:86:HIS:N     | 2.27                     | 0.49              |
| 1:G:95:THR:CB    | 1:G:136:ILE:HG21 | 2.42                     | 0.49              |
| 1:H:36:VAL:O     | 1:H:312:TRP:CH2  | 2.65                     | 0.49              |
| 1:H:85:ILE:HG23  | 1:H:86:HIS:N     | 2.27                     | 0.49              |
| 1:H:208:ASP:CA   | 1:H:211:ILE:HG12 | 2.42                     | 0.49              |
| 1:I:68:ILE:O     | 1:I:68:ILE:HG13  | 2.11                     | 0.49              |
| 1:I:275:LYS:HZ2  | 1:J:219:ASP:CB   | 2.24                     | 0.49              |
| 1:I:323:VAL:HG11 | 1:J:50:ILE:HG22  | 0.50                     | 0.49              |
| 1:L:110:LEU:HD22 | 1:L:126:TYR:CE2  | 2.47                     | 0.49              |
| 1:L:321:VAL:O    | 1:L:325:LYS:HG2  | 2.11                     | 0.49              |
| 1:M:83:ASN:N     | 1:M:84:LEU:HB3   | 2.26                     | 0.49              |
| 1:M:85:ILE:HG23  | 1:M:86:HIS:N     | 2.28                     | 0.49              |
| 1:M:186:PHE:HE2  | 1:M:269:ILE:HD11 | 1.70                     | 0.49              |
| 1:N:7:GLU:OE1    | 1:N:326:TYR:CE1  | 2.66                     | 0.49              |
| 1:N:22:ILE:HG22  | 1:N:312:TRP:CZ3  | 2.46                     | 0.49              |
| 1:N:23:GLY:O     | 1:N:27:LYS:HG3   | 2.12                     | 0.49              |
| 1:N:32:ASP:C     | 1:N:34:LYS:HB2   | 2.31                     | 0.49              |
| 1:N:36:VAL:O     | 1:N:312:TRP:CH2  | 2.65                     | 0.49              |
| 1:O:33:ILE:C     | 1:O:312:TRP:CZ2  | 2.84                     | 0.49              |
| 1:O:110:LEU:HD23 | 1:O:111:ALA:O    | 2.12                     | 0.49              |
| 1:P:22:ILE:HG22  | 1:P:312:TRP:CZ3  | 2.46                     | 0.49              |
| 1:P:116:VAL:CG2  | 1:P:122:ALA:HB3  | 2.40                     | 0.49              |
| 1:P:164:LEU:HD12 | 1:P:313:THR:O    | 2.11                     | 0.49              |
| 1:A:22:ILE:CG2   | 1:A:312:TRP:CZ3  | 2.95                     | 0.49              |
| 1:A:83:ASN:N     | 1:A:84:LEU:HB3   | 2.26                     | 0.49              |
| 1:A:219:ASP:OD1  | 1:A:225:LEU:HG   | 2.11                     | 0.49              |
| 1:A:243:GLY:N    | 1:F:165:GLU:N    | 2.55                     | 0.49              |
| 1:B:36:VAL:N     | 1:B:312:TRP:CH2  | 2.80                     | 0.49              |
| 1:B:133:ASN:HD22 | 1:B:148:GLU:CA   | 2.11                     | 0.49              |
| 1:B:182:LEU:HD23 | 1:B:182:LEU:O    | 2.12                     | 0.49              |
| 1:B:219:ASP:OD1  | 1:B:225:LEU:HG   | 2.11                     | 0.49              |
| 1:C:219:ASP:OD1  | 1:C:225:LEU:HG   | 2.11                     | 0.49              |
| 1:D:43:TYR:CZ    | 1:D:70:GLU:CG    | 2.95                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:208:ASP:CA   | 1:D:211:ILE:HG12 | 2.42                     | 0.49              |
| 1:D:259:GLU:O    | 1:D:263:LYS:HG3  | 2.11                     | 0.49              |
| 1:E:43:TYR:CZ    | 1:E:70:GLU:CG    | 2.95                     | 0.49              |
| 1:E:99:ASP:HA    | 1:E:145:TYR:CE1  | 2.47                     | 0.49              |
| 1:F:85:ILE:HG23  | 1:F:86:HIS:N     | 2.27                     | 0.49              |
| 1:F:130:ILE:O    | 1:F:149:ILE:HD13 | 2.11                     | 0.49              |
| 1:G:110:LEU:HD22 | 1:G:126:TYR:CE2  | 2.48                     | 0.49              |
| 1:G:133:ASN:ND2  | 1:G:148:GLU:HG3  | 2.27                     | 0.49              |
| 1:H:219:ASP:CG   | 1:H:224:ASN:HD22 | 2.15                     | 0.49              |
| 1:I:208:ASP:C    | 1:I:211:ILE:HG12 | 2.33                     | 0.49              |
| 1:I:219:ASP:CG   | 1:I:224:ASN:HD22 | 2.15                     | 0.49              |
| 1:I:222:ASN:HD22 | 1:I:237:ASN:HB2  | 1.75                     | 0.49              |
| 1:I:261:PHE:CD2  | 1:I:292:LEU:HD21 | 2.47                     | 0.49              |
| 1:J:95:THR:CB    | 1:J:136:ILE:HG21 | 2.42                     | 0.49              |
| 1:J:123:LYS:HZ3  | 1:J:127:ARG:NH1  | 2.08                     | 0.49              |
| 1:J:261:PHE:CD2  | 1:J:292:LEU:HD21 | 2.47                     | 0.49              |
| 1:J:262:LEU:HD21 | 1:J:292:LEU:HD23 | 1.95                     | 0.49              |
| 1:J:323:VAL:HG11 | 1:K:50:ILE:HG22  | 0.49                     | 0.49              |
| 1:K:34:LYS:N     | 1:K:35:ARG:CB    | 2.72                     | 0.49              |
| 1:K:95:THR:CB    | 1:K:136:ILE:HG21 | 2.42                     | 0.49              |
| 1:K:208:ASP:C    | 1:K:211:ILE:HG12 | 2.33                     | 0.49              |
| 1:K:323:VAL:HG11 | 1:L:50:ILE:HG22  | 0.49                     | 0.49              |
| 1:L:161:VAL:HG11 | 1:L:285:ILE:CD1  | 2.42                     | 0.49              |
| 1:L:310:SER:HA   | 1:L:313:THR:CG2  | 2.42                     | 0.49              |
| 1:M:27:LYS:NZ    | 1:M:35:ARG:NH2   | 2.59                     | 0.49              |
| 1:M:95:THR:CB    | 1:M:136:ILE:HG21 | 2.42                     | 0.49              |
| 1:M:321:VAL:O    | 1:M:325:LYS:HG2  | 2.11                     | 0.49              |
| 1:O:7:GLU:OE1    | 1:O:326:TYR:CE1  | 2.66                     | 0.49              |
| 1:O:83:ASN:N     | 1:O:84:LEU:HB3   | 2.26                     | 0.49              |
| 1:O:85:ILE:HG23  | 1:O:86:HIS:N     | 2.27                     | 0.49              |
| 1:P:36:VAL:O     | 1:P:312:TRP:CH2  | 2.65                     | 0.49              |
| 1:P:83:ASN:N     | 1:P:84:LEU:HB3   | 2.26                     | 0.49              |
| 1:P:208:ASP:C    | 1:P:211:ILE:HG12 | 2.33                     | 0.49              |
| 1:A:36:VAL:O     | 1:A:312:TRP:CH2  | 2.66                     | 0.49              |
| 1:B:37:ILE:HG13  | 1:B:312:TRP:HZ2  | 1.65                     | 0.49              |
| 1:B:99:ASP:HA    | 1:B:145:TYR:CE1  | 2.47                     | 0.49              |
| 1:B:208:ASP:C    | 1:B:211:ILE:HG12 | 2.33                     | 0.49              |
| 1:C:164:LEU:HD23 | 1:C:164:LEU:O    | 2.11                     | 0.49              |
| 1:C:230:GLN:HB3  | 1:H:306:ILE:CG2  | 2.30                     | 0.49              |
| 1:C:241:LYS:C    | 1:H:165:GLU:OE2  | 2.51                     | 0.49              |
| 1:D:22:ILE:CG2   | 1:D:312:TRP:CZ3  | 2.96                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:110:LEU:HD23 | 1:D:111:ALA:O    | 2.12                     | 0.49              |
| 1:D:116:VAL:CG2  | 1:D:122:ALA:HB3  | 2.40                     | 0.49              |
| 1:E:50:ILE:HG22  | 1:F:323:VAL:CB   | 2.33                     | 0.49              |
| 1:E:85:ILE:HG23  | 1:E:86:HIS:N     | 2.27                     | 0.49              |
| 1:E:110:LEU:HD22 | 1:E:126:TYR:CE2  | 2.47                     | 0.49              |
| 1:E:219:ASP:CG   | 1:E:224:ASN:HD22 | 2.15                     | 0.49              |
| 1:E:262:LEU:HD21 | 1:E:292:LEU:HD23 | 1.95                     | 0.49              |
| 1:F:50:ILE:HG22  | 1:G:323:VAL:HG11 | 0.49                     | 0.49              |
| 1:F:95:THR:CB    | 1:F:136:ILE:HG21 | 2.42                     | 0.49              |
| 1:F:222:ASN:HD22 | 1:F:237:ASN:HB2  | 1.75                     | 0.49              |
| 1:H:37:ILE:CD1   | 1:H:312:TRP:CE2  | 2.96                     | 0.49              |
| 1:H:110:LEU:HD22 | 1:H:126:TYR:CE2  | 2.48                     | 0.49              |
| 1:I:116:VAL:CG2  | 1:I:122:ALA:HB3  | 2.40                     | 0.49              |
| 1:I:315:CYS:SG   | 1:I:316:GLU:N    | 2.85                     | 0.49              |
| 1:J:52:ILE:CG2   | 1:N:248:THR:HA   | 2.25                     | 0.49              |
| 1:J:110:LEU:HD22 | 1:J:126:TYR:CE2  | 2.48                     | 0.49              |
| 1:K:110:LEU:HD22 | 1:K:126:TYR:CE2  | 2.48                     | 0.49              |
| 1:K:261:PHE:CD2  | 1:K:292:LEU:HD21 | 2.47                     | 0.49              |
| 1:L:22:ILE:CG2   | 1:L:312:TRP:CZ3  | 2.96                     | 0.49              |
| 1:L:95:THR:CB    | 1:L:136:ILE:HG21 | 2.42                     | 0.49              |
| 1:M:23:GLY:O     | 1:M:27:LYS:HG3   | 2.12                     | 0.49              |
| 1:M:208:ASP:HA   | 1:M:211:ILE:CG1  | 2.42                     | 0.49              |
| 1:N:161:VAL:HG11 | 1:N:285:ILE:CD1  | 2.41                     | 0.49              |
| 1:N:208:ASP:CA   | 1:N:211:ILE:HG12 | 2.42                     | 0.49              |
| 1:O:22:ILE:HG22  | 1:O:312:TRP:CZ3  | 2.46                     | 0.49              |
| 1:O:179:PHE:HB2  | 1:O:288:THR:HB   | 1.93                     | 0.49              |
| 1:O:186:PHE:HE2  | 1:O:269:ILE:HD11 | 1.70                     | 0.49              |
| 1:O:315:CYS:SG   | 1:O:316:GLU:N    | 2.85                     | 0.49              |
| 1:P:7:GLU:OE1    | 1:P:326:TYR:CE1  | 2.66                     | 0.49              |
| 1:P:110:LEU:HD22 | 1:P:126:TYR:CE2  | 2.48                     | 0.49              |
| 1:P:219:ASP:CG   | 1:P:224:ASN:HD22 | 2.15                     | 0.49              |
| 1:A:7:GLU:OE1    | 1:A:326:TYR:CE1  | 2.66                     | 0.49              |
| 1:A:219:ASP:CG   | 1:A:224:ASN:HD22 | 2.15                     | 0.49              |
| 1:A:230:GLN:C    | 1:F:308:ASN:CG   | 2.71                     | 0.49              |
| 1:A:247:ASP:OD2  | 1:F:320:LYS:NZ   | 2.46                     | 0.49              |
| 1:B:22:ILE:CG2   | 1:B:312:TRP:CZ3  | 2.95                     | 0.49              |
| 1:B:43:TYR:CE2   | 1:B:67:LEU:CD1   | 2.91                     | 0.49              |
| 1:B:95:THR:CB    | 1:B:136:ILE:HG21 | 2.42                     | 0.49              |
| 1:C:36:VAL:N     | 1:C:312:TRP:CH2  | 2.80                     | 0.49              |
| 1:D:208:ASP:C    | 1:D:211:ILE:HG12 | 2.33                     | 0.49              |
| 1:E:36:VAL:O     | 1:E:312:TRP:CH2  | 2.65                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:50:ILE:HG22  | 1:F:323:VAL:HG11 | 0.49                     | 0.49              |
| 1:E:68:ILE:HG13  | 1:E:68:ILE:O     | 2.11                     | 0.49              |
| 1:E:219:ASP:CB   | 1:F:275:LYS:HZ2  | 2.25                     | 0.49              |
| 1:F:110:LEU:HD22 | 1:F:126:TYR:CE2  | 2.48                     | 0.49              |
| 1:F:116:VAL:CG2  | 1:F:122:ALA:HB3  | 2.40                     | 0.49              |
| 1:F:219:ASP:HB3  | 1:G:275:LYS:HZ2  | 1.77                     | 0.49              |
| 1:F:272:ARG:CD   | 1:I:202:GLU:HA   | 2.04                     | 0.49              |
| 1:G:130:ILE:O    | 1:G:149:ILE:HD13 | 2.11                     | 0.49              |
| 1:G:208:ASP:C    | 1:G:211:ILE:HG12 | 2.33                     | 0.49              |
| 1:G:272:ARG:HG3  | 1:J:203:GLU:H    | 0.71                     | 0.49              |
| 1:I:23:GLY:O     | 1:I:27:LYS:HG3   | 2.12                     | 0.49              |
| 1:I:324:ALA:CA   | 1:J:46:GLU:HG3   | 2.39                     | 0.49              |
| 1:J:116:VAL:CG2  | 1:J:122:ALA:HB3  | 2.40                     | 0.49              |
| 1:K:117:LEU:CD1  | 1:K:156:ALA:N    | 2.76                     | 0.49              |
| 1:K:164:LEU:O    | 1:P:243:GLY:N    | 2.46                     | 0.49              |
| 1:L:7:GLU:OE1    | 1:L:326:TYR:CE1  | 2.65                     | 0.49              |
| 1:L:219:ASP:CG   | 1:L:224:ASN:HD22 | 2.15                     | 0.49              |
| 1:M:7:GLU:OE1    | 1:M:326:TYR:CE1  | 2.65                     | 0.49              |
| 1:O:39:LYS:HG2   | 1:O:41:LYS:HG3   | 1.93                     | 0.49              |
| 1:P:85:ILE:HG23  | 1:P:86:HIS:N     | 2.28                     | 0.49              |
| 1:A:164:LEU:HD23 | 1:A:164:LEU:C    | 2.33                     | 0.49              |
| 1:B:7:GLU:OE1    | 1:B:326:TYR:CE1  | 2.66                     | 0.49              |
| 1:B:110:LEU:HD23 | 1:B:111:ALA:O    | 2.12                     | 0.49              |
| 1:B:261:PHE:CD2  | 1:B:292:LEU:HD21 | 2.47                     | 0.49              |
| 1:C:110:LEU:HD23 | 1:C:111:ALA:O    | 2.12                     | 0.49              |
| 1:C:243:GLY:N    | 1:H:164:LEU:C    | 2.64                     | 0.49              |
| 1:D:36:VAL:O     | 1:D:312:TRP:CH2  | 2.65                     | 0.49              |
| 1:E:95:THR:CB    | 1:E:136:ILE:HG21 | 2.42                     | 0.49              |
| 1:E:117:LEU:CD1  | 1:E:156:ALA:N    | 2.76                     | 0.49              |
| 1:E:184:MET:HG2  | 1:E:202:GLU:OE1  | 2.13                     | 0.49              |
| 1:F:164:LEU:C    | 1:F:164:LEU:HD23 | 2.33                     | 0.49              |
| 1:F:184:MET:HG2  | 1:F:202:GLU:OE1  | 2.13                     | 0.49              |
| 1:G:43:TYR:CE2   | 1:G:67:LEU:CD1   | 2.91                     | 0.49              |
| 1:G:117:LEU:CD1  | 1:G:156:ALA:N    | 2.76                     | 0.49              |
| 1:G:184:MET:HG2  | 1:G:202:GLU:OE1  | 2.13                     | 0.49              |
| 1:H:23:GLY:O     | 1:H:27:LYS:HG3   | 2.12                     | 0.49              |
| 1:H:208:ASP:C    | 1:H:211:ILE:HG12 | 2.33                     | 0.49              |
| 1:I:22:ILE:CG2   | 1:I:312:TRP:CZ3  | 2.96                     | 0.49              |
| 1:I:117:LEU:CD1  | 1:I:156:ALA:N    | 2.76                     | 0.49              |
| 1:I:310:SER:HA   | 1:I:313:THR:CG2  | 2.42                     | 0.49              |
| 1:J:85:ILE:HG23  | 1:J:86:HIS:N     | 2.27                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:164:LEU:C    | 1:J:164:LEU:HD23 | 2.33                     | 0.49              |
| 1:K:119:ASN:CG   | 1:K:120:ALA:H    | 2.09                     | 0.49              |
| 1:K:164:LEU:C    | 1:K:164:LEU:HD23 | 2.33                     | 0.49              |
| 1:K:275:LYS:CB   | 1:L:218:THR:C    | 2.78                     | 0.49              |
| 1:L:23:GLY:O     | 1:L:27:LYS:HG3   | 2.12                     | 0.49              |
| 1:L:164:LEU:HD23 | 1:L:164:LEU:C    | 2.33                     | 0.49              |
| 1:M:99:ASP:HA    | 1:M:145:TYR:CE1  | 2.47                     | 0.49              |
| 1:M:261:PHE:CD2  | 1:M:292:LEU:HD21 | 2.47                     | 0.49              |
| 1:M:315:CYS:SG   | 1:M:316:GLU:N    | 2.85                     | 0.49              |
| 1:N:95:THR:CB    | 1:N:136:ILE:HG21 | 2.42                     | 0.49              |
| 1:N:110:LEU:HD22 | 1:N:126:TYR:CE2  | 2.48                     | 0.49              |
| 1:N:133:ASN:ND2  | 1:N:148:GLU:HG3  | 2.27                     | 0.49              |
| 1:N:208:ASP:HA   | 1:N:211:ILE:CG1  | 2.42                     | 0.49              |
| 1:O:22:ILE:HG22  | 1:O:35:ARG:CB    | 2.35                     | 0.49              |
| 1:P:164:LEU:HD23 | 1:P:164:LEU:C    | 2.33                     | 0.49              |
| 1:C:72:GLY:O     | 1:D:167:GLU:N    | 2.46                     | 0.49              |
| 1:C:79:THR:HG21  | 1:D:169:PHE:CE2  | 2.48                     | 0.49              |
| 1:C:85:ILE:HG23  | 1:C:86:HIS:N     | 2.28                     | 0.49              |
| 1:C:110:LEU:HD22 | 1:C:126:TYR:CE2  | 2.48                     | 0.49              |
| 1:C:258:LYS:NZ   | 1:C:295:GLN:CG   | 2.76                     | 0.49              |
| 1:D:110:LEU:HD22 | 1:D:126:TYR:CE2  | 2.48                     | 0.49              |
| 1:D:246:ILE:CA   | 1:H:52:ILE:HG12  | 2.38                     | 0.49              |
| 1:E:22:ILE:CG2   | 1:E:312:TRP:CZ3  | 2.96                     | 0.49              |
| 1:E:37:ILE:CD1   | 1:E:312:TRP:CE2  | 2.96                     | 0.49              |
| 1:E:208:ASP:C    | 1:E:211:ILE:HG12 | 2.33                     | 0.49              |
| 1:E:311:GLN:HG3  | 1:E:312:TRP:CD1  | 2.48                     | 0.49              |
| 1:F:27:LYS:HZ1   | 1:F:35:ARG:HE    | 1.59                     | 0.49              |
| 1:F:43:TYR:CE2   | 1:F:67:LEU:CD1   | 2.91                     | 0.49              |
| 1:F:208:ASP:HA   | 1:F:211:ILE:CG1  | 2.42                     | 0.49              |
| 1:F:208:ASP:CA   | 1:F:211:ILE:HG12 | 2.42                     | 0.49              |
| 1:F:262:LEU:HD21 | 1:F:292:LEU:HD23 | 1.95                     | 0.49              |
| 1:G:22:ILE:HD12  | 1:G:27:LYS:HZ1   | 1.78                     | 0.49              |
| 1:G:111:ALA:HB1  | 1:G:157:GLU:HA   | 1.95                     | 0.49              |
| 1:G:184:MET:HE1  | 1:G:265:ALA:HB2  | 1.94                     | 0.49              |
| 1:G:222:ASN:HD22 | 1:G:237:ASN:HB2  | 1.75                     | 0.49              |
| 1:G:311:GLN:HG3  | 1:G:312:TRP:CD1  | 2.48                     | 0.49              |
| 1:H:27:LYS:NZ    | 1:H:35:ARG:NH2   | 2.59                     | 0.49              |
| 1:I:110:LEU:HD22 | 1:I:126:TYR:CE2  | 2.48                     | 0.49              |
| 1:I:164:LEU:O    | 1:N:243:GLY:N    | 2.45                     | 0.49              |
| 1:I:208:ASP:CA   | 1:I:211:ILE:HG12 | 2.42                     | 0.49              |
| 1:J:22:ILE:CG2   | 1:J:312:TRP:CZ3  | 2.95                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:37:ILE:CD1   | 1:J:312:TRP:CE2  | 2.96                     | 0.49              |
| 1:J:258:LYS:NZ   | 1:J:295:GLN:CG   | 2.76                     | 0.49              |
| 1:J:305:ILE:HG22 | 1:O:241:LYS:HZ3  | 1.76                     | 0.49              |
| 1:J:324:ALA:CA   | 1:K:46:GLU:HG3   | 2.39                     | 0.49              |
| 1:K:22:ILE:CG2   | 1:K:312:TRP:CZ3  | 2.96                     | 0.49              |
| 1:K:37:ILE:CD1   | 1:K:312:TRP:CE2  | 2.96                     | 0.49              |
| 1:K:116:VAL:CG2  | 1:K:122:ALA:HB3  | 2.40                     | 0.49              |
| 1:K:258:LYS:NZ   | 1:K:295:GLN:CG   | 2.76                     | 0.49              |
| 1:L:208:ASP:C    | 1:L:211:ILE:HG12 | 2.33                     | 0.49              |
| 1:L:284:PHE:HE2  | 1:L:296:ILE:HG12 | 1.74                     | 0.49              |
| 1:M:74:GLU:OE1   | 1:M:75:ASP:HB2   | 2.13                     | 0.49              |
| 1:N:22:ILE:HG22  | 1:N:35:ARG:CB    | 2.35                     | 0.49              |
| 1:N:27:LYS:NZ    | 1:N:35:ARG:NH2   | 2.59                     | 0.49              |
| 1:O:74:GLU:OE1   | 1:O:75:ASP:HB2   | 2.13                     | 0.49              |
| 1:O:99:ASP:HA    | 1:O:145:TYR:CE1  | 2.47                     | 0.49              |
| 1:P:74:GLU:OE1   | 1:P:75:ASP:HB2   | 2.13                     | 0.49              |
| 1:A:23:GLY:O     | 1:A:27:LYS:HG3   | 2.12                     | 0.49              |
| 1:A:72:GLY:O     | 1:B:167:GLU:N    | 2.46                     | 0.49              |
| 1:A:110:LEU:HD23 | 1:A:111:ALA:O    | 2.12                     | 0.49              |
| 1:A:177:ILE:HD11 | 1:A:284:PHE:CD1  | 2.47                     | 0.49              |
| 1:A:182:LEU:O    | 1:A:182:LEU:HD23 | 2.12                     | 0.49              |
| 1:B:23:GLY:O     | 1:B:27:LYS:HG3   | 2.12                     | 0.49              |
| 1:B:72:GLY:O     | 1:C:167:GLU:N    | 2.46                     | 0.49              |
| 1:B:79:THR:HG21  | 1:C:169:PHE:CE2  | 2.48                     | 0.49              |
| 1:B:117:LEU:CD1  | 1:B:156:ALA:N    | 2.76                     | 0.49              |
| 1:C:43:TYR:CE2   | 1:C:67:LEU:CD1   | 2.91                     | 0.49              |
| 1:D:36:VAL:N     | 1:D:312:TRP:CH2  | 2.80                     | 0.49              |
| 1:D:114:LEU:HD23 | 1:D:194:VAL:HG21 | 1.95                     | 0.49              |
| 1:D:117:LEU:CD1  | 1:D:156:ALA:N    | 2.76                     | 0.49              |
| 1:D:258:LYS:NZ   | 1:D:295:GLN:CG   | 2.76                     | 0.49              |
| 1:E:165:GLU:OE1  | 1:E:167:GLU:HB2  | 2.13                     | 0.49              |
| 1:E:182:LEU:HD23 | 1:E:182:LEU:O    | 2.12                     | 0.49              |
| 1:E:208:ASP:CA   | 1:E:211:ILE:HG12 | 2.42                     | 0.49              |
| 1:E:219:ASP:HB3  | 1:F:275:LYS:NZ   | 2.27                     | 0.49              |
| 1:F:184:MET:HE1  | 1:F:265:ALA:HB2  | 1.94                     | 0.49              |
| 1:F:321:VAL:O    | 1:F:325:LYS:HG2  | 2.11                     | 0.49              |
| 1:G:114:LEU:HD23 | 1:G:194:VAL:HG21 | 1.95                     | 0.49              |
| 1:G:258:LYS:NZ   | 1:G:295:GLN:CG   | 2.76                     | 0.49              |
| 1:H:22:ILE:CG2   | 1:H:312:TRP:CZ3  | 2.95                     | 0.49              |
| 1:H:164:LEU:HD23 | 1:H:164:LEU:C    | 2.33                     | 0.49              |
| 1:H:184:MET:HG2  | 1:H:202:GLU:OE1  | 2.13                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:43:TYR:CZ    | 1:I:70:GLU:CG    | 2.95                     | 0.49              |
| 1:I:262:LEU:HD21 | 1:I:292:LEU:HD23 | 1.95                     | 0.49              |
| 1:J:43:TYR:CZ    | 1:J:70:GLU:CG    | 2.95                     | 0.49              |
| 1:J:208:ASP:CA   | 1:J:211:ILE:HG12 | 2.42                     | 0.49              |
| 1:J:241:LYS:HB2  | 1:N:308:ASN:HD21 | 1.78                     | 0.49              |
| 1:K:7:GLU:OE1    | 1:K:326:TYR:CE1  | 2.66                     | 0.49              |
| 1:K:262:LEU:HD21 | 1:K:292:LEU:HD23 | 1.95                     | 0.49              |
| 1:K:275:LYS:HZ2  | 1:L:219:ASP:CG   | 2.14                     | 0.49              |
| 1:K:324:ALA:CA   | 1:L:46:GLU:HG3   | 2.39                     | 0.49              |
| 1:M:110:LEU:HD23 | 1:M:111:ALA:O    | 2.12                     | 0.49              |
| 1:M:320:LYS:NZ   | 1:N:50:ILE:CG1   | 2.72                     | 0.49              |
| 1:N:74:GLU:OE1   | 1:N:75:ASP:HB2   | 2.13                     | 0.49              |
| 1:O:36:VAL:O     | 1:O:312:TRP:CH2  | 2.65                     | 0.49              |
| 1:O:164:LEU:HD23 | 1:O:164:LEU:C    | 2.33                     | 0.49              |
| 1:O:208:ASP:C    | 1:O:211:ILE:HG12 | 2.33                     | 0.49              |
| 1:P:36:VAL:N     | 1:P:312:TRP:CH2  | 2.80                     | 0.49              |
| 1:P:177:ILE:HD11 | 1:P:284:PHE:CD1  | 2.47                     | 0.49              |
| 1:B:110:LEU:HD22 | 1:B:126:TYR:CE2  | 2.48                     | 0.49              |
| 1:C:116:VAL:CG2  | 1:C:122:ALA:HB3  | 2.40                     | 0.49              |
| 1:C:117:LEU:CD1  | 1:C:156:ALA:N    | 2.76                     | 0.49              |
| 1:D:37:ILE:CD1   | 1:D:312:TRP:CE2  | 2.96                     | 0.49              |
| 1:D:85:ILE:HG23  | 1:D:86:HIS:N     | 2.27                     | 0.49              |
| 1:D:250:SER:HB2  | 1:D:254:ILE:HG23 | 1.95                     | 0.49              |
| 1:E:19:THR:CG2   | 1:E:40:THR:HG22  | 2.36                     | 0.49              |
| 1:E:133:ASN:ND2  | 1:E:148:GLU:HG3  | 2.27                     | 0.49              |
| 1:E:164:LEU:HD23 | 1:E:164:LEU:C    | 2.33                     | 0.49              |
| 1:E:218:THR:C    | 1:F:275:LYS:CB   | 2.78                     | 0.49              |
| 1:F:202:GLU:CA   | 1:I:272:ARG:HB2  | 2.33                     | 0.49              |
| 1:F:208:ASP:C    | 1:F:211:ILE:HG12 | 2.33                     | 0.49              |
| 1:G:95:THR:HG22  | 1:G:136:ILE:CD1  | 2.24                     | 0.49              |
| 1:G:116:VAL:CG2  | 1:G:122:ALA:HB3  | 2.40                     | 0.49              |
| 1:G:197:SER:CB   | 1:J:183:ASN:OD1  | 2.61                     | 0.49              |
| 1:H:182:LEU:HD23 | 1:H:182:LEU:O    | 2.12                     | 0.49              |
| 1:H:222:ASN:HD22 | 1:H:237:ASN:HB2  | 1.75                     | 0.49              |
| 1:I:22:ILE:HD11  | 1:I:319:TYR:HB2  | 1.95                     | 0.49              |
| 1:I:284:PHE:HE2  | 1:I:296:ILE:HG12 | 1.74                     | 0.49              |
| 1:I:311:GLN:HG3  | 1:I:312:TRP:CD1  | 2.48                     | 0.49              |
| 1:J:208:ASP:HA   | 1:J:211:ILE:CG1  | 2.42                     | 0.49              |
| 1:J:208:ASP:C    | 1:J:211:ILE:HG12 | 2.33                     | 0.49              |
| 1:K:219:ASP:CB   | 1:K:224:ASN:ND2  | 2.65                     | 0.49              |
| 1:K:311:GLN:HG3  | 1:K:312:TRP:CD1  | 2.48                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:161:VAL:HG11 | 1:M:285:ILE:CD1  | 2.41                     | 0.49              |
| 1:M:167:GLU:N    | 1:N:72:GLY:O     | 2.46                     | 0.49              |
| 1:M:169:PHE:CE2  | 1:N:79:THR:HG21  | 2.48                     | 0.49              |
| 1:N:311:GLN:HG3  | 1:N:312:TRP:CD1  | 2.48                     | 0.49              |
| 1:O:23:GLY:O     | 1:O:27:LYS:HG3   | 2.12                     | 0.49              |
| 1:O:105:LYS:HZ3  | 1:O:148:GLU:CB   | 2.26                     | 0.49              |
| 1:O:208:ASP:HA   | 1:O:211:ILE:CG1  | 2.42                     | 0.49              |
| 1:P:58:LYS:HZ2   | 1:P:65:GLU:CG    | 2.25                     | 0.49              |
| 1:P:95:THR:CB    | 1:P:136:ILE:HG21 | 2.42                     | 0.49              |
| 1:A:79:THR:HG21  | 1:B:169:PHE:CE2  | 2.48                     | 0.49              |
| 1:A:85:ILE:HG23  | 1:A:86:HIS:N     | 2.27                     | 0.49              |
| 1:A:110:LEU:HD22 | 1:A:126:TYR:CE2  | 2.48                     | 0.49              |
| 1:A:184:MET:HG2  | 1:A:202:GLU:OE1  | 2.13                     | 0.49              |
| 1:B:47:ASP:O     | 1:C:323:VAL:HG13 | 2.13                     | 0.49              |
| 1:B:85:ILE:HG23  | 1:B:86:HIS:N     | 2.27                     | 0.49              |
| 1:B:164:LEU:HD23 | 1:B:164:LEU:C    | 2.33                     | 0.49              |
| 1:C:22:ILE:CG2   | 1:C:312:TRP:CZ3  | 2.95                     | 0.49              |
| 1:C:37:ILE:HG13  | 1:C:312:TRP:HZ2  | 1.65                     | 0.49              |
| 1:C:217:LEU:HD23 | 1:C:217:LEU:C    | 2.34                     | 0.49              |
| 1:C:232:GLU:CA   | 1:H:308:ASN:ND2  | 2.67                     | 0.49              |
| 1:C:250:SER:HB2  | 1:C:254:ILE:HG23 | 1.95                     | 0.49              |
| 1:D:27:LYS:NZ    | 1:D:35:ARG:NH2   | 2.59                     | 0.49              |
| 1:D:177:ILE:HD11 | 1:D:284:PHE:CD1  | 2.47                     | 0.49              |
| 1:E:111:ALA:HB1  | 1:E:157:GLU:HA   | 1.95                     | 0.49              |
| 1:F:61:LEU:HD23  | 1:F:62:ASP:N     | 2.28                     | 0.49              |
| 1:F:111:ALA:HB1  | 1:F:157:GLU:HA   | 1.95                     | 0.49              |
| 1:G:43:TYR:HH    | 1:G:56:SER:HG    | 1.58                     | 0.49              |
| 1:G:49:TYR:HB2   | 1:H:321:VAL:CA   | 2.28                     | 0.49              |
| 1:G:164:LEU:C    | 1:G:164:LEU:HD23 | 2.33                     | 0.49              |
| 1:G:219:ASP:H    | 1:H:277:ASP:C    | 2.16                     | 0.49              |
| 1:G:272:ARG:CB   | 1:J:202:GLU:HG2  | 2.43                     | 0.49              |
| 1:G:310:SER:HA   | 1:G:313:THR:CG2  | 2.42                     | 0.49              |
| 1:G:321:VAL:O    | 1:G:325:LYS:HG2  | 2.11                     | 0.49              |
| 1:H:7:GLU:OE1    | 1:H:326:TYR:CE1  | 2.66                     | 0.49              |
| 1:H:120:ALA:N    | 1:K:119:ASN:OD1  | 2.46                     | 0.49              |
| 1:H:165:GLU:OE1  | 1:H:167:GLU:HB2  | 2.13                     | 0.49              |
| 1:H:258:LYS:NZ   | 1:H:295:GLN:CG   | 2.76                     | 0.49              |
| 1:H:311:GLN:HG3  | 1:H:312:TRP:CD1  | 2.48                     | 0.49              |
| 1:I:258:LYS:NZ   | 1:I:295:GLN:CG   | 2.76                     | 0.49              |
| 1:J:277:ASP:C    | 1:K:219:ASP:H    | 2.16                     | 0.49              |
| 1:K:85:ILE:HG23  | 1:K:86:HIS:N     | 2.27                     | 0.49              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:219:ASP:CG   | 1:K:224:ASN:HD22 | 2.15                     | 0.49              |
| 1:K:305:ILE:HB   | 1:P:241:LYS:HD3  | 1.94                     | 0.49              |
| 1:K:323:VAL:C    | 1:L:47:ASP:CA    | 2.71                     | 0.49              |
| 1:L:116:VAL:CG2  | 1:L:122:ALA:HB3  | 2.40                     | 0.49              |
| 1:L:208:ASP:CA   | 1:L:211:ILE:HG12 | 2.42                     | 0.49              |
| 1:L:258:LYS:NZ   | 1:L:295:GLN:CG   | 2.76                     | 0.49              |
| 1:M:22:ILE:HG22  | 1:M:35:ARG:CB    | 2.35                     | 0.49              |
| 1:M:219:ASP:CG   | 1:M:224:ASN:HD22 | 2.15                     | 0.49              |
| 1:N:22:ILE:CG2   | 1:N:312:TRP:CZ3  | 2.96                     | 0.49              |
| 1:N:110:LEU:HD23 | 1:N:111:ALA:O    | 2.12                     | 0.49              |
| 1:N:164:LEU:HD23 | 1:N:164:LEU:C    | 2.33                     | 0.49              |
| 1:O:22:ILE:CG2   | 1:O:312:TRP:CZ3  | 2.96                     | 0.49              |
| 1:O:37:ILE:CD1   | 1:O:312:TRP:CE2  | 2.96                     | 0.49              |
| 1:O:43:TYR:CZ    | 1:O:70:GLU:CG    | 2.95                     | 0.49              |
| 1:O:110:LEU:HD22 | 1:O:126:TYR:CE2  | 2.48                     | 0.49              |
| 1:O:173:ASN:ND2  | 1:O:279:LEU:CD2  | 2.70                     | 0.49              |
| 1:P:22:ILE:CG2   | 1:P:312:TRP:CZ3  | 2.95                     | 0.49              |
| 1:P:23:GLY:O     | 1:P:27:LYS:HG3   | 2.12                     | 0.49              |
| 1:P:161:VAL:HG11 | 1:P:285:ILE:CD1  | 2.41                     | 0.49              |
| 1:A:47:ASP:O     | 1:B:323:VAL:CA   | 2.48                     | 0.48              |
| 1:A:47:ASP:O     | 1:B:323:VAL:HG13 | 2.13                     | 0.48              |
| 1:A:95:THR:CB    | 1:A:136:ILE:HG21 | 2.42                     | 0.48              |
| 1:A:250:SER:HB2  | 1:A:254:ILE:HG23 | 1.95                     | 0.48              |
| 1:B:177:ILE:HD11 | 1:B:284:PHE:CD1  | 2.47                     | 0.48              |
| 1:B:250:SER:HB2  | 1:B:254:ILE:HG23 | 1.95                     | 0.48              |
| 1:C:47:ASP:O     | 1:D:323:VAL:HG13 | 2.13                     | 0.48              |
| 1:D:217:LEU:HD23 | 1:D:217:LEU:C    | 2.34                     | 0.48              |
| 1:E:22:ILE:HD11  | 1:E:319:TYR:HB2  | 1.95                     | 0.48              |
| 1:E:43:TYR:HH    | 1:E:56:SER:HG    | 1.57                     | 0.48              |
| 1:F:27:LYS:NZ    | 1:F:35:ARG:NH2   | 2.59                     | 0.48              |
| 1:F:117:LEU:CD1  | 1:F:156:ALA:N    | 2.76                     | 0.48              |
| 1:F:258:LYS:NZ   | 1:F:295:GLN:CG   | 2.76                     | 0.48              |
| 1:F:261:PHE:CD2  | 1:F:292:LEU:HD21 | 2.47                     | 0.48              |
| 1:G:7:GLU:OE1    | 1:G:326:TYR:CE1  | 2.65                     | 0.48              |
| 1:G:37:ILE:CD1   | 1:G:312:TRP:CE2  | 2.96                     | 0.48              |
| 1:G:49:TYR:C     | 1:H:323:VAL:CA   | 2.53                     | 0.48              |
| 1:H:22:ILE:HD11  | 1:H:319:TYR:HB2  | 1.95                     | 0.48              |
| 1:H:34:LYS:N     | 1:H:35:ARG:CB    | 2.72                     | 0.48              |
| 1:H:110:LEU:HD23 | 1:H:111:ALA:O    | 2.12                     | 0.48              |
| 1:H:111:ALA:HB1  | 1:H:157:GLU:HA   | 1.95                     | 0.48              |
| 1:H:267:LYS:O    | 1:K:264:ASP:OD1  | 2.30                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:284:PHE:HE2  | 1:H:296:ILE:HG12 | 1.74                     | 0.48              |
| 1:I:37:ILE:CD1   | 1:I:312:TRP:CE2  | 2.96                     | 0.48              |
| 1:I:52:ILE:HA    | 1:M:248:THR:HG22 | 1.95                     | 0.48              |
| 1:I:85:ILE:HG23  | 1:I:86:HIS:N     | 2.28                     | 0.48              |
| 1:I:164:LEU:C    | 1:I:164:LEU:HD23 | 2.33                     | 0.48              |
| 1:J:117:LEU:CD1  | 1:J:156:ALA:N    | 2.76                     | 0.48              |
| 1:J:164:LEU:O    | 1:O:243:GLY:N    | 2.46                     | 0.48              |
| 1:L:117:LEU:CD1  | 1:L:156:ALA:N    | 2.76                     | 0.48              |
| 1:L:184:MET:HG2  | 1:L:202:GLU:OE1  | 2.13                     | 0.48              |
| 1:M:34:LYS:N     | 1:M:35:ARG:CB    | 2.72                     | 0.48              |
| 1:M:208:ASP:C    | 1:M:211:ILE:HG12 | 2.33                     | 0.48              |
| 1:M:250:SER:HB2  | 1:M:254:ILE:HG23 | 1.95                     | 0.48              |
| 1:M:256:LYS:HA   | 1:M:256:LYS:CE   | 2.28                     | 0.48              |
| 1:M:258:LYS:NZ   | 1:M:295:GLN:CG   | 2.76                     | 0.48              |
| 1:M:311:GLN:HG3  | 1:M:312:TRP:CD1  | 2.48                     | 0.48              |
| 1:N:58:LYS:HZ2   | 1:N:65:GLU:CG    | 2.26                     | 0.48              |
| 1:N:117:LEU:CD1  | 1:N:156:ALA:N    | 2.76                     | 0.48              |
| 1:O:22:ILE:HD11  | 1:O:319:TYR:HB2  | 1.95                     | 0.48              |
| 1:O:58:LYS:HZ2   | 1:O:65:GLU:HG2   | 1.75                     | 0.48              |
| 1:O:95:THR:CB    | 1:O:136:ILE:HG21 | 2.42                     | 0.48              |
| 1:O:311:GLN:HG3  | 1:O:312:TRP:CD1  | 2.48                     | 0.48              |
| 1:P:61:LEU:HD23  | 1:P:62:ASP:N     | 2.29                     | 0.48              |
| 1:A:117:LEU:CD1  | 1:A:156:ALA:N    | 2.76                     | 0.48              |
| 1:A:248:THR:CG2  | 1:E:52:ILE:CD1   | 2.89                     | 0.48              |
| 1:B:37:ILE:CD1   | 1:B:312:TRP:CE2  | 2.96                     | 0.48              |
| 1:B:184:MET:HG2  | 1:B:202:GLU:OE1  | 2.13                     | 0.48              |
| 1:B:217:LEU:HD23 | 1:B:217:LEU:C    | 2.34                     | 0.48              |
| 1:C:34:LYS:N     | 1:C:35:ARG:CB    | 2.72                     | 0.48              |
| 1:C:114:LEU:HD23 | 1:C:194:VAL:HG21 | 1.95                     | 0.48              |
| 1:C:242:LYS:HG3  | 1:H:166:GLN:OE1  | 2.13                     | 0.48              |
| 1:C:252:THR:HG21 | 1:G:53:GLU:HG3   | 1.95                     | 0.48              |
| 1:D:7:GLU:OE1    | 1:D:326:TYR:CE1  | 2.66                     | 0.48              |
| 1:D:22:ILE:HG22  | 1:D:35:ARG:CB    | 2.35                     | 0.48              |
| 1:D:262:LEU:HD21 | 1:D:292:LEU:HD23 | 1.95                     | 0.48              |
| 1:E:114:LEU:HD23 | 1:E:194:VAL:HG21 | 1.95                     | 0.48              |
| 1:E:284:PHE:HE2  | 1:E:296:ILE:HG12 | 1.74                     | 0.48              |
| 1:F:37:ILE:CD1   | 1:F:312:TRP:CE2  | 2.96                     | 0.48              |
| 1:F:74:GLU:OE1   | 1:F:75:ASP:HB2   | 2.13                     | 0.48              |
| 1:F:165:GLU:OE1  | 1:F:167:GLU:HB2  | 2.13                     | 0.48              |
| 1:F:182:LEU:O    | 1:F:182:LEU:HD23 | 2.12                     | 0.48              |
| 1:F:197:SER:CB   | 1:I:183:ASN:CG   | 2.81                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:22:ILE:CG2   | 1:G:312:TRP:CZ3  | 2.96                     | 0.48              |
| 1:G:98:LEU:HD23  | 1:G:98:LEU:O     | 2.14                     | 0.48              |
| 1:G:182:LEU:O    | 1:G:182:LEU:HD23 | 2.12                     | 0.48              |
| 1:G:198:GLU:CG   | 1:J:203:GLU:CD   | 2.80                     | 0.48              |
| 1:H:261:PHE:CD2  | 1:H:292:LEU:HD21 | 2.47                     | 0.48              |
| 1:H:321:VAL:O    | 1:H:325:LYS:HG2  | 2.11                     | 0.48              |
| 1:I:61:LEU:HD23  | 1:I:62:ASP:N     | 2.28                     | 0.48              |
| 1:I:111:ALA:HB1  | 1:I:157:GLU:HA   | 1.95                     | 0.48              |
| 1:I:177:ILE:HD11 | 1:I:284:PHE:CD1  | 2.47                     | 0.48              |
| 1:J:7:GLU:OE1    | 1:J:326:TYR:CE1  | 2.65                     | 0.48              |
| 1:J:74:GLU:OE1   | 1:J:75:ASP:HB2   | 2.13                     | 0.48              |
| 1:J:74:GLU:CA    | 1:N:245:GLU:O    | 2.58                     | 0.48              |
| 1:K:22:ILE:HD11  | 1:K:319:TYR:HB2  | 1.95                     | 0.48              |
| 1:K:23:GLY:O     | 1:K:27:LYS:HG3   | 2.12                     | 0.48              |
| 1:K:99:ASP:HA    | 1:K:145:TYR:CE1  | 2.47                     | 0.48              |
| 1:K:165:GLU:OE1  | 1:K:167:GLU:HB2  | 2.13                     | 0.48              |
| 1:L:85:ILE:HG23  | 1:L:86:HIS:N     | 2.28                     | 0.48              |
| 1:L:250:SER:HB2  | 1:L:254:ILE:HG23 | 1.95                     | 0.48              |
| 1:M:37:ILE:CD1   | 1:M:312:TRP:CE2  | 2.96                     | 0.48              |
| 1:N:37:ILE:CD1   | 1:N:312:TRP:CE2  | 2.96                     | 0.48              |
| 1:N:167:GLU:N    | 1:O:72:GLY:O     | 2.46                     | 0.48              |
| 1:N:250:SER:HB2  | 1:N:254:ILE:HG23 | 1.95                     | 0.48              |
| 1:O:110:LEU:CA   | 1:O:318:LEU:HD13 | 2.36                     | 0.48              |
| 1:O:161:VAL:HG11 | 1:O:285:ILE:CD1  | 2.41                     | 0.48              |
| 1:O:208:ASP:CA   | 1:O:211:ILE:HG12 | 2.42                     | 0.48              |
| 1:O:261:PHE:CD2  | 1:O:292:LEU:HD21 | 2.47                     | 0.48              |
| 1:P:22:ILE:HD11  | 1:P:319:TYR:HB2  | 1.95                     | 0.48              |
| 1:P:98:LEU:HD23  | 1:P:98:LEU:O     | 2.14                     | 0.48              |
| 1:A:43:TYR:CE2   | 1:A:67:LEU:CD1   | 2.91                     | 0.48              |
| 1:A:74:GLU:OE1   | 1:A:75:ASP:HB2   | 2.13                     | 0.48              |
| 1:A:98:LEU:O     | 1:A:98:LEU:HD23  | 2.14                     | 0.48              |
| 1:C:23:GLY:O     | 1:C:27:LYS:HG3   | 2.12                     | 0.48              |
| 1:C:50:ILE:HG23  | 1:D:320:LYS:HG3  | 1.95                     | 0.48              |
| 1:C:246:ILE:CD1  | 1:H:323:VAL:HG13 | 2.42                     | 0.48              |
| 1:C:262:LEU:HD21 | 1:C:292:LEU:HD23 | 1.95                     | 0.48              |
| 1:D:261:PHE:CD2  | 1:D:292:LEU:HD21 | 2.47                     | 0.48              |
| 1:F:22:ILE:HD11  | 1:F:319:TYR:HB2  | 1.95                     | 0.48              |
| 1:F:177:ILE:HD11 | 1:F:284:PHE:CD1  | 2.47                     | 0.48              |
| 1:F:272:ARG:NH1  | 1:I:201:ILE:HG23 | 2.28                     | 0.48              |
| 1:F:311:GLN:HG3  | 1:F:312:TRP:CD1  | 2.48                     | 0.48              |
| 1:G:177:ILE:HD11 | 1:G:284:PHE:CD1  | 2.47                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:116:VAL:CG2  | 1:H:122:ALA:HB3  | 2.40                     | 0.48              |
| 1:H:177:ILE:HD11 | 1:H:284:PHE:CD1  | 2.48                     | 0.48              |
| 1:J:23:GLY:O     | 1:J:27:LYS:HG3   | 2.12                     | 0.48              |
| 1:J:111:ALA:HB1  | 1:J:157:GLU:HA   | 1.95                     | 0.48              |
| 1:J:184:MET:HG2  | 1:J:202:GLU:OE1  | 2.13                     | 0.48              |
| 1:J:311:GLN:HG3  | 1:J:312:TRP:CD1  | 2.48                     | 0.48              |
| 1:K:184:MET:HG2  | 1:K:202:GLU:OE1  | 2.13                     | 0.48              |
| 1:K:305:ILE:CG2  | 1:P:241:LYS:CE   | 2.91                     | 0.48              |
| 1:L:37:ILE:CD1   | 1:L:312:TRP:CE2  | 2.96                     | 0.48              |
| 1:L:43:TYR:CZ    | 1:L:70:GLU:CG    | 2.95                     | 0.48              |
| 1:M:110:LEU:HD22 | 1:M:126:TYR:CE2  | 2.48                     | 0.48              |
| 1:M:117:LEU:CD1  | 1:M:156:ALA:N    | 2.76                     | 0.48              |
| 1:M:164:LEU:HD23 | 1:M:164:LEU:C    | 2.33                     | 0.48              |
| 1:M:217:LEU:HD23 | 1:M:217:LEU:C    | 2.34                     | 0.48              |
| 1:N:184:MET:HG2  | 1:N:202:GLU:OE1  | 2.13                     | 0.48              |
| 1:O:36:VAL:N     | 1:O:312:TRP:CH2  | 2.80                     | 0.48              |
| 1:O:250:SER:HB2  | 1:O:254:ILE:HG23 | 1.95                     | 0.48              |
| 1:P:208:ASP:HA   | 1:P:211:ILE:CG1  | 2.42                     | 0.48              |
| 1:P:250:SER:HB2  | 1:P:254:ILE:HG23 | 1.95                     | 0.48              |
| 1:P:311:GLN:HG3  | 1:P:312:TRP:CD1  | 2.48                     | 0.48              |
| 1:B:98:LEU:HD23  | 1:B:98:LEU:O     | 2.14                     | 0.48              |
| 1:E:58:LYS:HZ2   | 1:E:65:GLU:HG2   | 1.78                     | 0.48              |
| 1:E:74:GLU:OE1   | 1:E:75:ASP:HB2   | 2.13                     | 0.48              |
| 1:F:22:ILE:CG2   | 1:F:312:TRP:CZ3  | 2.96                     | 0.48              |
| 1:F:98:LEU:O     | 1:F:98:LEU:HD23  | 2.13                     | 0.48              |
| 1:F:127:ARG:HG2  | 1:F:154:ILE:CD1  | 2.44                     | 0.48              |
| 1:G:74:GLU:OE1   | 1:G:75:ASP:HB2   | 2.13                     | 0.48              |
| 1:G:219:ASP:CG   | 1:H:277:ASP:HB2  | 2.31                     | 0.48              |
| 1:G:262:LEU:HD21 | 1:G:292:LEU:HD23 | 1.95                     | 0.48              |
| 1:G:267:LYS:O    | 1:J:264:ASP:OD1  | 2.30                     | 0.48              |
| 1:H:43:TYR:CE2   | 1:H:67:LEU:CD1   | 2.91                     | 0.48              |
| 1:I:74:GLU:OE1   | 1:I:75:ASP:HB2   | 2.13                     | 0.48              |
| 1:I:184:MET:HG2  | 1:I:202:GLU:OE1  | 2.13                     | 0.48              |
| 1:J:61:LEU:HD23  | 1:J:62:ASP:N     | 2.28                     | 0.48              |
| 1:J:275:LYS:CB   | 1:K:218:THR:C    | 2.78                     | 0.48              |
| 1:K:43:TYR:CZ    | 1:K:70:GLU:CG    | 2.95                     | 0.48              |
| 1:K:277:ASP:HB2  | 1:L:219:ASP:CG   | 2.32                     | 0.48              |
| 1:K:307:THR:C    | 1:P:230:GLN:CB   | 2.61                     | 0.48              |
| 1:K:309:ASN:C    | 1:P:229:GLU:OE2  | 2.40                     | 0.48              |
| 1:L:22:ILE:HD11  | 1:L:319:TYR:HB2  | 1.95                     | 0.48              |
| 1:L:34:LYS:N     | 1:L:35:ARG:CB    | 2.72                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:222:ASN:CB   | 1:L:237:ASN:CB   | 2.90                     | 0.48              |
| 1:L:311:GLN:HG3  | 1:L:312:TRP:CD1  | 2.48                     | 0.48              |
| 1:M:22:ILE:CG2   | 1:M:312:TRP:CZ3  | 2.95                     | 0.48              |
| 1:M:177:ILE:HD11 | 1:M:284:PHE:CD1  | 2.47                     | 0.48              |
| 1:M:184:MET:HG2  | 1:M:202:GLU:OE1  | 2.13                     | 0.48              |
| 1:N:258:LYS:NZ   | 1:N:295:GLN:CG   | 2.76                     | 0.48              |
| 1:N:320:LYS:HG3  | 1:O:50:ILE:HG23  | 1.95                     | 0.48              |
| 1:O:61:LEU:HD23  | 1:O:62:ASP:N     | 2.29                     | 0.48              |
| 1:O:177:ILE:HD11 | 1:O:284:PHE:CD1  | 2.48                     | 0.48              |
| 1:P:165:GLU:OE1  | 1:P:167:GLU:HB2  | 2.13                     | 0.48              |
| 1:P:184:MET:HG2  | 1:P:202:GLU:OE1  | 2.13                     | 0.48              |
| 1:A:217:LEU:HD23 | 1:A:217:LEU:C    | 2.34                     | 0.48              |
| 1:B:127:ARG:HG2  | 1:B:154:ILE:CD1  | 2.44                     | 0.48              |
| 1:B:165:GLU:OE1  | 1:B:167:GLU:HB2  | 2.13                     | 0.48              |
| 1:B:245:GLU:O    | 1:F:74:GLU:CA    | 2.60                     | 0.48              |
| 1:B:258:LYS:NZ   | 1:B:295:GLN:CG   | 2.76                     | 0.48              |
| 1:C:164:LEU:HD23 | 1:C:164:LEU:C    | 2.33                     | 0.48              |
| 1:C:165:GLU:OE1  | 1:C:167:GLU:HB2  | 2.13                     | 0.48              |
| 1:C:177:ILE:HD11 | 1:C:284:PHE:CD1  | 2.47                     | 0.48              |
| 1:C:245:GLU:CG   | 1:G:75:ASP:N     | 2.76                     | 0.48              |
| 1:E:61:LEU:HD23  | 1:E:62:ASP:N     | 2.29                     | 0.48              |
| 1:F:7:GLU:OE1    | 1:F:326:TYR:CE1  | 2.66                     | 0.48              |
| 1:F:186:PHE:HE2  | 1:F:269:ILE:HD11 | 1.70                     | 0.48              |
| 1:F:196:PRO:O    | 1:I:201:ILE:HG21 | 2.13                     | 0.48              |
| 1:G:61:LEU:HD23  | 1:G:62:ASP:N     | 2.28                     | 0.48              |
| 1:H:98:LEU:O     | 1:H:98:LEU:HD23  | 2.14                     | 0.48              |
| 1:H:127:ARG:HG2  | 1:H:154:ILE:CD1  | 2.44                     | 0.48              |
| 1:H:262:LEU:HD21 | 1:H:292:LEU:HD23 | 1.95                     | 0.48              |
| 1:J:22:ILE:HD11  | 1:J:319:TYR:HB2  | 1.95                     | 0.48              |
| 1:J:114:LEU:HD23 | 1:J:194:VAL:HG21 | 1.95                     | 0.48              |
| 1:J:256:LYS:HA   | 1:J:256:LYS:CE   | 2.28                     | 0.48              |
| 1:K:114:LEU:HD23 | 1:K:194:VAL:HG21 | 1.95                     | 0.48              |
| 1:K:245:GLU:HG2  | 1:P:52:ILE:CD1   | 2.43                     | 0.48              |
| 1:L:177:ILE:HD11 | 1:L:284:PHE:CD1  | 2.47                     | 0.48              |
| 1:M:114:LEU:HD23 | 1:M:194:VAL:HG21 | 1.95                     | 0.48              |
| 1:M:127:ARG:HG2  | 1:M:154:ILE:CD1  | 2.44                     | 0.48              |
| 1:N:127:ARG:HG2  | 1:N:154:ILE:CD1  | 2.44                     | 0.48              |
| 1:N:169:PHE:CE2  | 1:O:79:THR:HG21  | 2.48                     | 0.48              |
| 1:O:184:MET:HG2  | 1:O:202:GLU:OE1  | 2.13                     | 0.48              |
| 1:P:37:ILE:CD1   | 1:P:312:TRP:CE2  | 2.96                     | 0.48              |
| 1:P:208:ASP:CA   | 1:P:211:ILE:HG12 | 2.42                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:37:ILE:CD1   | 1:A:312:TRP:CE2  | 2.96                     | 0.48              |
| 1:A:258:LYS:NZ   | 1:A:295:GLN:CG   | 2.76                     | 0.48              |
| 1:A:262:LEU:HD21 | 1:A:292:LEU:HD23 | 1.95                     | 0.48              |
| 1:A:311:GLN:HG3  | 1:A:312:TRP:CD1  | 2.48                     | 0.48              |
| 1:B:50:ILE:HG23  | 1:C:320:LYS:HG3  | 1.95                     | 0.48              |
| 1:B:116:VAL:CG2  | 1:B:122:ALA:HB3  | 2.40                     | 0.48              |
| 1:B:220:LEU:C    | 1:B:221:ASN:O    | 2.52                     | 0.48              |
| 1:B:262:LEU:HD21 | 1:B:292:LEU:HD23 | 1.95                     | 0.48              |
| 1:C:116:VAL:CG2  | 1:C:121:LYS:HZ2  | 2.26                     | 0.48              |
| 1:C:184:MET:HG2  | 1:C:202:GLU:OE1  | 2.13                     | 0.48              |
| 1:D:23:GLY:O     | 1:D:27:LYS:HG3   | 2.12                     | 0.48              |
| 1:D:127:ARG:HG2  | 1:D:154:ILE:CD1  | 2.44                     | 0.48              |
| 1:D:164:LEU:HD23 | 1:D:164:LEU:C    | 2.33                     | 0.48              |
| 1:D:208:ASP:HA   | 1:D:211:ILE:CG1  | 2.42                     | 0.48              |
| 1:H:271:LYS:CG   | 1:K:202:GLU:CG   | 2.78                     | 0.48              |
| 1:J:127:ARG:HG2  | 1:J:154:ILE:CD1  | 2.44                     | 0.48              |
| 1:K:61:LEU:HD23  | 1:K:62:ASP:N     | 2.28                     | 0.48              |
| 1:K:74:GLU:OE1   | 1:K:75:ASP:HB2   | 2.13                     | 0.48              |
| 1:K:217:LEU:HD23 | 1:K:217:LEU:C    | 2.34                     | 0.48              |
| 1:K:277:ASP:C    | 1:L:219:ASP:H    | 2.16                     | 0.48              |
| 1:L:165:GLU:OE1  | 1:L:167:GLU:HB2  | 2.13                     | 0.48              |
| 1:M:165:GLU:OE1  | 1:M:167:GLU:HB2  | 2.13                     | 0.48              |
| 1:N:217:LEU:HD23 | 1:N:217:LEU:C    | 2.34                     | 0.48              |
| 1:O:98:LEU:HD23  | 1:O:98:LEU:O     | 2.14                     | 0.48              |
| 1:O:167:GLU:N    | 1:P:72:GLY:O     | 2.46                     | 0.48              |
| 1:O:320:LYS:HG3  | 1:P:50:ILE:HG23  | 1.95                     | 0.48              |
| 1:P:114:LEU:HD23 | 1:P:194:VAL:HG21 | 1.95                     | 0.48              |
| 1:P:217:LEU:HD23 | 1:P:217:LEU:C    | 2.34                     | 0.48              |
| 1:A:49:TYR:CE1   | 1:B:320:LYS:NZ   | 2.74                     | 0.48              |
| 1:A:231:ALA:CA   | 1:F:308:ASN:HD22 | 2.27                     | 0.48              |
| 1:B:283:ILE:N    | 1:B:283:ILE:HD12 | 2.29                     | 0.48              |
| 1:C:98:LEU:O     | 1:C:98:LEU:HD23  | 2.14                     | 0.48              |
| 1:C:186:PHE:HE2  | 1:C:269:ILE:HD11 | 1.70                     | 0.48              |
| 1:D:98:LEU:O     | 1:D:98:LEU:HD23  | 2.13                     | 0.48              |
| 1:D:276:LEU:HD12 | 1:D:300:TYR:CE2  | 2.49                     | 0.48              |
| 1:E:7:GLU:OE1    | 1:E:326:TYR:CE1  | 2.66                     | 0.48              |
| 1:E:177:ILE:HD11 | 1:E:284:PHE:CD1  | 2.47                     | 0.48              |
| 1:F:114:LEU:HD23 | 1:F:194:VAL:HG21 | 1.95                     | 0.48              |
| 1:G:264:ASP:OD1  | 1:J:267:LYS:O    | 2.30                     | 0.48              |
| 1:H:272:ARG:HB2  | 1:K:202:GLU:HG2  | 1.95                     | 0.48              |
| 1:I:165:GLU:OE1  | 1:I:167:GLU:HB2  | 2.13                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:321:VAL:O    | 1:I:325:LYS:HG2  | 2.11                     | 0.48              |
| 1:J:98:LEU:HD23  | 1:J:98:LEU:O     | 2.14                     | 0.48              |
| 1:J:165:GLU:OE1  | 1:J:167:GLU:HB2  | 2.13                     | 0.48              |
| 1:J:222:ASN:CB   | 1:J:237:ASN:CB   | 2.90                     | 0.48              |
| 1:K:50:ILE:CG2   | 1:O:246:ILE:HD12 | 2.04                     | 0.48              |
| 1:K:98:LEU:O     | 1:K:98:LEU:HD23  | 2.13                     | 0.48              |
| 1:K:111:ALA:HB1  | 1:K:157:GLU:HA   | 1.95                     | 0.48              |
| 1:K:127:ARG:HG2  | 1:K:154:ILE:CD1  | 2.44                     | 0.48              |
| 1:K:177:ILE:HD11 | 1:K:284:PHE:CD1  | 2.48                     | 0.48              |
| 1:L:173:ASN:ND2  | 1:L:279:LEU:CD2  | 2.70                     | 0.48              |
| 1:L:262:LEU:HD21 | 1:L:292:LEU:HD23 | 1.95                     | 0.48              |
| 1:N:177:ILE:HD11 | 1:N:284:PHE:CD1  | 2.47                     | 0.48              |
| 1:N:220:LEU:C    | 1:N:221:ASN:O    | 2.52                     | 0.48              |
| 1:O:27:LYS:NZ    | 1:O:35:ARG:NH2   | 2.59                     | 0.48              |
| 1:P:117:LEU:CD1  | 1:P:156:ALA:N    | 2.76                     | 0.48              |
| 1:A:49:TYR:C     | 1:B:320:LYS:CG   | 2.21                     | 0.48              |
| 1:A:50:ILE:HG23  | 1:B:320:LYS:HG3  | 1.95                     | 0.48              |
| 1:A:61:LEU:HD23  | 1:A:62:ASP:N     | 2.29                     | 0.48              |
| 1:A:186:PHE:HE2  | 1:A:269:ILE:HD11 | 1.70                     | 0.48              |
| 1:A:208:ASP:HA   | 1:A:211:ILE:CG1  | 2.42                     | 0.48              |
| 1:A:283:ILE:HD12 | 1:A:283:ILE:N    | 2.29                     | 0.48              |
| 1:B:186:PHE:HE2  | 1:B:269:ILE:HD11 | 1.70                     | 0.48              |
| 1:C:127:ARG:HG2  | 1:C:154:ILE:CD1  | 2.44                     | 0.48              |
| 1:C:208:ASP:HA   | 1:C:211:ILE:CG1  | 2.42                     | 0.48              |
| 1:C:220:LEU:C    | 1:C:221:ASN:O    | 2.52                     | 0.48              |
| 1:C:256:LYS:HA   | 1:C:256:LYS:CE   | 2.28                     | 0.48              |
| 1:F:219:ASP:H    | 1:G:277:ASP:C    | 2.16                     | 0.48              |
| 1:G:22:ILE:HD11  | 1:G:319:TYR:HB2  | 1.95                     | 0.48              |
| 1:H:117:LEU:CD1  | 1:H:156:ALA:N    | 2.76                     | 0.48              |
| 1:J:177:ILE:HD11 | 1:J:284:PHE:CD1  | 2.48                     | 0.48              |
| 1:J:217:LEU:HD23 | 1:J:217:LEU:C    | 2.34                     | 0.48              |
| 1:K:208:ASP:CA   | 1:K:211:ILE:HG12 | 2.42                     | 0.48              |
| 1:L:58:LYS:HZ2   | 1:L:65:GLU:HG2   | 1.77                     | 0.48              |
| 1:L:61:LEU:HD23  | 1:L:62:ASP:N     | 2.29                     | 0.48              |
| 1:L:98:LEU:O     | 1:L:98:LEU:HD23  | 2.14                     | 0.48              |
| 1:L:111:ALA:HB1  | 1:L:157:GLU:HA   | 1.95                     | 0.48              |
| 1:L:217:LEU:HD23 | 1:L:217:LEU:C    | 2.34                     | 0.48              |
| 1:M:110:LEU:CA   | 1:M:318:LEU:HD13 | 2.36                     | 0.48              |
| 1:M:133:ASN:HD22 | 1:M:148:GLU:CA   | 2.11                     | 0.48              |
| 1:M:220:LEU:C    | 1:M:221:ASN:O    | 2.52                     | 0.48              |
| 1:M:276:LEU:HD12 | 1:M:300:TYR:CE2  | 2.49                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:36:VAL:N     | 1:N:312:TRP:CH2  | 2.80                     | 0.48              |
| 1:O:127:ARG:HG2  | 1:O:154:ILE:CD1  | 2.44                     | 0.48              |
| 1:O:169:PHE:CE2  | 1:P:79:THR:HG21  | 2.48                     | 0.48              |
| 1:O:262:LEU:HD21 | 1:O:292:LEU:HD23 | 1.95                     | 0.48              |
| 1:A:246:ILE:HG13 | 1:E:49:TYR:CD1   | 2.48                     | 0.48              |
| 1:B:11:THR:HG23  | 1:B:318:LEU:CB   | 2.44                     | 0.48              |
| 1:B:114:LEU:HD23 | 1:B:194:VAL:HG21 | 1.95                     | 0.48              |
| 1:B:165:GLU:CD   | 1:B:167:GLU:HB2  | 2.34                     | 0.48              |
| 1:C:276:LEU:HD12 | 1:C:300:TYR:CE2  | 2.49                     | 0.48              |
| 1:D:74:GLU:OE1   | 1:D:75:ASP:HB2   | 2.13                     | 0.48              |
| 1:D:186:PHE:HE2  | 1:D:269:ILE:HD11 | 1.70                     | 0.48              |
| 1:E:32:ASP:CA    | 1:E:34:LYS:HB2   | 2.44                     | 0.48              |
| 1:E:217:LEU:HD23 | 1:E:217:LEU:C    | 2.34                     | 0.48              |
| 1:E:258:LYS:NZ   | 1:E:295:GLN:CG   | 2.76                     | 0.48              |
| 1:F:32:ASP:CA    | 1:F:34:LYS:HB2   | 2.44                     | 0.48              |
| 1:F:218:THR:C    | 1:G:275:LYS:CB   | 2.78                     | 0.48              |
| 1:G:33:ILE:HB    | 1:G:312:TRP:CD1  | 2.49                     | 0.48              |
| 1:H:33:ILE:HB    | 1:H:312:TRP:CD1  | 2.49                     | 0.48              |
| 1:H:306:ILE:HD12 | 1:H:307:THR:N    | 2.29                     | 0.48              |
| 1:I:7:GLU:OE1    | 1:I:326:TYR:CE1  | 2.65                     | 0.48              |
| 1:I:33:ILE:HB    | 1:I:312:TRP:CD1  | 2.49                     | 0.48              |
| 1:I:98:LEU:O     | 1:I:98:LEU:HD23  | 2.14                     | 0.48              |
| 1:I:127:ARG:HG2  | 1:I:154:ILE:CD1  | 2.44                     | 0.48              |
| 1:I:217:LEU:HD23 | 1:I:217:LEU:C    | 2.34                     | 0.48              |
| 1:J:33:ILE:HB    | 1:J:312:TRP:CD1  | 2.49                     | 0.48              |
| 1:J:164:LEU:HD13 | 1:J:313:THR:CA   | 2.40                     | 0.48              |
| 1:K:219:ASP:CA   | 1:K:224:ASN:HB2  | 1.80                     | 0.48              |
| 1:K:275:LYS:NZ   | 1:L:219:ASP:HB3  | 2.27                     | 0.48              |
| 1:K:284:PHE:HE2  | 1:K:296:ILE:HG12 | 1.74                     | 0.48              |
| 1:L:34:LYS:H     | 1:L:35:ARG:HB2   | 1.78                     | 0.48              |
| 1:L:127:ARG:HG2  | 1:L:154:ILE:CD1  | 2.44                     | 0.48              |
| 1:M:58:LYS:HZ2   | 1:M:65:GLU:HG2   | 1.76                     | 0.48              |
| 1:M:320:LYS:HG3  | 1:N:50:ILE:HG23  | 1.96                     | 0.48              |
| 1:N:22:ILE:HD11  | 1:N:319:TYR:HB2  | 1.95                     | 0.48              |
| 1:N:45:LEU:CD2   | 1:N:58:LYS:HZ3   | 2.26                     | 0.48              |
| 1:N:61:LEU:HD23  | 1:N:62:ASP:N     | 2.29                     | 0.48              |
| 1:N:110:LEU:CA   | 1:N:318:LEU:HD13 | 2.36                     | 0.48              |
| 1:O:111:ALA:HB1  | 1:O:157:GLU:HA   | 1.95                     | 0.48              |
| 1:O:117:LEU:CD1  | 1:O:156:ALA:N    | 2.76                     | 0.48              |
| 1:O:220:LEU:C    | 1:O:221:ASN:O    | 2.52                     | 0.48              |
| 1:P:27:LYS:NZ    | 1:P:35:ARG:NH2   | 2.59                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:258:LYS:NZ   | 1:P:295:GLN:CG   | 2.76                     | 0.48              |
| 1:A:114:LEU:HD23 | 1:A:194:VAL:HG21 | 1.95                     | 0.48              |
| 1:A:127:ARG:HG2  | 1:A:154:ILE:CD1  | 2.44                     | 0.48              |
| 1:A:220:LEU:C    | 1:A:221:ASN:O    | 2.52                     | 0.48              |
| 1:A:229:GLU:OE2  | 1:F:312:TRP:HB2  | 2.14                     | 0.48              |
| 1:B:74:GLU:OE1   | 1:B:75:ASP:HB2   | 2.13                     | 0.48              |
| 1:B:208:ASP:HA   | 1:B:211:ILE:CG1  | 2.42                     | 0.48              |
| 1:B:284:PHE:HE2  | 1:B:296:ILE:HG12 | 1.74                     | 0.48              |
| 1:B:311:GLN:HG3  | 1:B:312:TRP:CD1  | 2.48                     | 0.48              |
| 1:C:37:ILE:CD1   | 1:C:312:TRP:CE2  | 2.96                     | 0.48              |
| 1:C:283:ILE:HD12 | 1:C:283:ILE:N    | 2.29                     | 0.48              |
| 1:C:311:GLN:HG3  | 1:C:312:TRP:CD1  | 2.48                     | 0.48              |
| 1:D:19:THR:CG2   | 1:D:40:THR:HG22  | 2.36                     | 0.48              |
| 1:D:61:LEU:HD23  | 1:D:62:ASP:N     | 2.29                     | 0.48              |
| 1:D:165:GLU:OE1  | 1:D:167:GLU:HB2  | 2.13                     | 0.48              |
| 1:D:184:MET:HG2  | 1:D:202:GLU:OE1  | 2.13                     | 0.48              |
| 1:F:19:THR:CG2   | 1:F:40:THR:HG22  | 2.36                     | 0.48              |
| 1:F:49:TYR:CB    | 1:G:324:ALA:HB3  | 2.38                     | 0.48              |
| 1:F:165:GLU:CD   | 1:F:167:GLU:HB2  | 2.34                     | 0.48              |
| 1:G:165:GLU:OE1  | 1:G:167:GLU:HB2  | 2.13                     | 0.48              |
| 1:H:43:TYR:HH    | 1:H:56:SER:HG    | 1.59                     | 0.48              |
| 1:H:74:GLU:OE1   | 1:H:75:ASP:HB2   | 2.13                     | 0.48              |
| 1:H:220:LEU:C    | 1:H:221:ASN:O    | 2.52                     | 0.48              |
| 1:I:52:ILE:HD12  | 1:M:248:THR:N    | 2.20                     | 0.48              |
| 1:I:114:LEU:HD23 | 1:I:194:VAL:HG21 | 1.95                     | 0.48              |
| 1:I:165:GLU:CD   | 1:I:167:GLU:HB2  | 2.34                     | 0.48              |
| 1:I:250:SER:HB2  | 1:I:254:ILE:HG23 | 1.95                     | 0.48              |
| 1:K:220:LEU:O    | 1:K:235:LEU:N    | 2.47                     | 0.48              |
| 1:K:306:ILE:HD12 | 1:K:307:THR:N    | 2.29                     | 0.48              |
| 1:K:321:VAL:O    | 1:K:325:LYS:HG2  | 2.11                     | 0.48              |
| 1:K:324:ALA:HB3  | 1:L:49:TYR:CB    | 2.38                     | 0.48              |
| 1:L:165:GLU:CD   | 1:L:167:GLU:HB2  | 2.34                     | 0.48              |
| 1:M:323:VAL:HG13 | 1:N:47:ASP:O     | 2.13                     | 0.48              |
| 1:N:32:ASP:CA    | 1:N:34:LYS:HB2   | 2.44                     | 0.48              |
| 1:N:114:LEU:HD23 | 1:N:194:VAL:HG21 | 1.95                     | 0.48              |
| 1:N:276:LEU:HD12 | 1:N:300:TYR:CE2  | 2.49                     | 0.48              |
| 1:O:127:ARG:CG   | 1:O:154:ILE:HD12 | 2.44                     | 0.48              |
| 1:O:165:GLU:CD   | 1:O:167:GLU:HB2  | 2.34                     | 0.48              |
| 1:O:217:LEU:HD23 | 1:O:217:LEU:C    | 2.34                     | 0.48              |
| 1:P:32:ASP:CA    | 1:P:34:LYS:HB2   | 2.44                     | 0.48              |
| 1:P:111:ALA:HB1  | 1:P:157:GLU:HA   | 1.95                     | 0.48              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:127:ARG:CG   | 1:P:154:ILE:HD12 | 2.44                     | 0.48              |
| 1:B:61:LEU:HD23  | 1:B:62:ASP:N     | 2.29                     | 0.47              |
| 1:B:246:ILE:HD12 | 1:F:50:ILE:HG12  | 1.93                     | 0.47              |
| 1:C:32:ASP:CA    | 1:C:34:LYS:HB2   | 2.44                     | 0.47              |
| 1:C:61:LEU:HD23  | 1:C:62:ASP:N     | 2.28                     | 0.47              |
| 1:D:33:ILE:HB    | 1:D:312:TRP:CD1  | 2.49                     | 0.47              |
| 1:D:165:GLU:CD   | 1:D:167:GLU:HB2  | 2.34                     | 0.47              |
| 1:F:7:GLU:C      | 1:F:326:TYR:CE1  | 2.87                     | 0.47              |
| 1:F:217:LEU:HD23 | 1:F:217:LEU:C    | 2.34                     | 0.47              |
| 1:G:32:ASP:CA    | 1:G:34:LYS:HB2   | 2.44                     | 0.47              |
| 1:G:227:THR:CG2  | 1:H:300:TYR:N    | 2.62                     | 0.47              |
| 1:G:306:ILE:HD12 | 1:G:307:THR:N    | 2.29                     | 0.47              |
| 1:H:197:SER:CB   | 1:K:183:ASN:OD1  | 2.62                     | 0.47              |
| 1:H:217:LEU:HD23 | 1:H:217:LEU:C    | 2.34                     | 0.47              |
| 1:I:220:LEU:C    | 1:I:221:ASN:O    | 2.52                     | 0.47              |
| 1:J:219:ASP:CG   | 1:J:224:ASN:HD22 | 2.15                     | 0.47              |
| 1:J:283:ILE:N    | 1:J:283:ILE:HD12 | 2.29                     | 0.47              |
| 1:J:306:ILE:HD12 | 1:J:307:THR:N    | 2.29                     | 0.47              |
| 1:K:250:SER:HB2  | 1:K:254:ILE:HG23 | 1.95                     | 0.47              |
| 1:K:283:ILE:HD12 | 1:K:283:ILE:N    | 2.29                     | 0.47              |
| 1:L:50:ILE:HD12  | 1:P:246:ILE:C    | 2.33                     | 0.47              |
| 1:L:306:ILE:HD12 | 1:L:307:THR:N    | 2.29                     | 0.47              |
| 1:M:32:ASP:CA    | 1:M:34:LYS:HB2   | 2.44                     | 0.47              |
| 1:M:127:ARG:CG   | 1:M:154:ILE:HD12 | 2.44                     | 0.47              |
| 1:M:262:LEU:HD21 | 1:M:292:LEU:HD23 | 1.95                     | 0.47              |
| 1:N:98:LEU:O     | 1:N:98:LEU:HD23  | 2.14                     | 0.47              |
| 1:N:111:ALA:HB1  | 1:N:157:GLU:HA   | 1.95                     | 0.47              |
| 1:N:127:ARG:CG   | 1:N:154:ILE:HD12 | 2.44                     | 0.47              |
| 1:N:173:ASN:ND2  | 1:N:279:LEU:CD2  | 2.70                     | 0.47              |
| 1:N:284:PHE:HE2  | 1:N:296:ILE:HG12 | 1.74                     | 0.47              |
| 1:P:127:ARG:HG2  | 1:P:154:ILE:CD1  | 2.44                     | 0.47              |
| 1:A:222:ASN:CB   | 1:A:237:ASN:CB   | 2.90                     | 0.47              |
| 1:B:50:ILE:CG1   | 1:C:320:LYS:NZ   | 2.72                     | 0.47              |
| 1:C:76:SER:O     | 1:D:169:PHE:CE2  | 2.67                     | 0.47              |
| 1:C:173:ASN:ND2  | 1:C:279:LEU:CD2  | 2.70                     | 0.47              |
| 1:C:213:VAL:HG13 | 1:C:253:VAL:CG1  | 2.45                     | 0.47              |
| 1:D:32:ASP:CA    | 1:D:34:LYS:HB2   | 2.44                     | 0.47              |
| 1:D:310:SER:HA   | 1:D:313:THR:CG2  | 2.42                     | 0.47              |
| 1:D:311:GLN:HG3  | 1:D:312:TRP:CD1  | 2.48                     | 0.47              |
| 1:E:98:LEU:HD23  | 1:E:98:LEU:O     | 2.13                     | 0.47              |
| 1:E:127:ARG:HG2  | 1:E:154:ILE:CD1  | 2.44                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:33:ILE:HB    | 1:F:312:TRP:CD1  | 2.49                     | 0.47              |
| 1:F:179:PHE:HB2  | 1:F:288:THR:HB   | 1.93                     | 0.47              |
| 1:F:206:VAL:HB   | 1:F:288:THR:OG1  | 2.14                     | 0.47              |
| 1:H:45:LEU:CD2   | 1:H:58:LYS:HZ3   | 2.27                     | 0.47              |
| 1:H:114:LEU:HD23 | 1:H:194:VAL:HG21 | 1.95                     | 0.47              |
| 1:H:165:GLU:CD   | 1:H:167:GLU:HB2  | 2.34                     | 0.47              |
| 1:H:206:VAL:HB   | 1:H:288:THR:OG1  | 2.14                     | 0.47              |
| 1:H:250:SER:HB2  | 1:H:254:ILE:HG23 | 1.95                     | 0.47              |
| 1:I:166:GLN:CA   | 1:N:242:LYS:O    | 2.48                     | 0.47              |
| 1:J:34:LYS:H     | 1:J:35:ARG:HB2   | 1.78                     | 0.47              |
| 1:J:206:VAL:HB   | 1:J:288:THR:OG1  | 2.14                     | 0.47              |
| 1:J:213:VAL:HG13 | 1:J:253:VAL:CG1  | 2.45                     | 0.47              |
| 1:J:321:VAL:O    | 1:J:325:LYS:HG2  | 2.11                     | 0.47              |
| 1:K:34:LYS:H     | 1:K:35:ARG:HB2   | 1.79                     | 0.47              |
| 1:L:74:GLU:OE1   | 1:L:75:ASP:HB2   | 2.13                     | 0.47              |
| 1:L:213:VAL:HG13 | 1:L:253:VAL:CG1  | 2.45                     | 0.47              |
| 1:L:220:LEU:O    | 1:L:235:LEU:N    | 2.47                     | 0.47              |
| 1:M:33:ILE:HB    | 1:M:312:TRP:CD1  | 2.49                     | 0.47              |
| 1:M:165:GLU:CD   | 1:M:167:GLU:HB2  | 2.34                     | 0.47              |
| 1:N:323:VAL:HG13 | 1:O:47:ASP:O     | 2.13                     | 0.47              |
| 1:O:11:THR:HG23  | 1:O:318:LEU:CB   | 2.44                     | 0.47              |
| 1:O:32:ASP:CA    | 1:O:34:LYS:HB2   | 2.44                     | 0.47              |
| 1:P:33:ILE:HB    | 1:P:312:TRP:CD1  | 2.49                     | 0.47              |
| 1:P:110:LEU:CA   | 1:P:318:LEU:HD13 | 2.36                     | 0.47              |
| 1:A:116:VAL:CG2  | 1:A:122:ALA:HB3  | 2.40                     | 0.47              |
| 1:A:227:THR:HG23 | 1:B:301:PRO:N    | 2.29                     | 0.47              |
| 1:A:241:LYS:HE2  | 1:F:305:ILE:HG21 | 1.96                     | 0.47              |
| 1:C:74:GLU:OE1   | 1:C:75:ASP:HB2   | 2.13                     | 0.47              |
| 1:D:220:LEU:C    | 1:D:221:ASN:O    | 2.52                     | 0.47              |
| 1:E:84:LEU:O     | 1:E:88:LEU:HG    | 2.14                     | 0.47              |
| 1:E:283:ILE:HD12 | 1:E:283:ILE:N    | 2.29                     | 0.47              |
| 1:G:217:LEU:HD23 | 1:G:217:LEU:C    | 2.34                     | 0.47              |
| 1:G:220:LEU:C    | 1:G:221:ASN:O    | 2.52                     | 0.47              |
| 1:H:32:ASP:CA    | 1:H:34:LYS:HB2   | 2.44                     | 0.47              |
| 1:I:52:ILE:HG13  | 1:M:245:GLU:O    | 2.09                     | 0.47              |
| 1:I:213:VAL:HG13 | 1:I:253:VAL:CG1  | 2.44                     | 0.47              |
| 1:I:283:ILE:HD12 | 1:I:283:ILE:N    | 2.29                     | 0.47              |
| 1:J:165:GLU:CD   | 1:J:167:GLU:HB2  | 2.34                     | 0.47              |
| 1:J:220:LEU:C    | 1:J:221:ASN:O    | 2.52                     | 0.47              |
| 1:L:75:ASP:OD1   | 1:P:245:GLU:OE1  | 2.32                     | 0.47              |
| 1:L:283:ILE:N    | 1:L:283:ILE:HD12 | 2.29                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:43:TYR:CE2   | 1:M:67:LEU:CD1   | 2.91                     | 0.47              |
| 1:M:222:ASN:CB   | 1:M:237:ASN:CB   | 2.90                     | 0.47              |
| 1:M:283:ILE:N    | 1:M:283:ILE:HD12 | 2.29                     | 0.47              |
| 1:N:33:ILE:HB    | 1:N:312:TRP:CD1  | 2.49                     | 0.47              |
| 1:O:33:ILE:HB    | 1:O:312:TRP:CD1  | 2.49                     | 0.47              |
| 1:O:149:ILE:HD13 | 1:O:149:ILE:HG21 | 1.74                     | 0.47              |
| 1:O:258:LYS:NZ   | 1:O:295:GLN:CG   | 2.76                     | 0.47              |
| 1:O:323:VAL:HG13 | 1:P:47:ASP:O     | 2.13                     | 0.47              |
| 1:A:32:ASP:CA    | 1:A:34:LYS:HB2   | 2.44                     | 0.47              |
| 1:A:39:LYS:HE2   | 1:A:41:LYS:HD2   | 1.97                     | 0.47              |
| 1:A:84:LEU:O     | 1:A:88:LEU:HG    | 2.14                     | 0.47              |
| 1:A:213:VAL:HG13 | 1:A:253:VAL:CG1  | 2.45                     | 0.47              |
| 1:A:310:SER:HA   | 1:A:313:THR:CG2  | 2.42                     | 0.47              |
| 1:B:32:ASP:CA    | 1:B:34:LYS:HB2   | 2.44                     | 0.47              |
| 1:B:241:LYS:HB3  | 1:G:165:GLU:HG2  | 1.97                     | 0.47              |
| 1:C:27:LYS:HE2   | 1:C:35:ARG:CG    | 2.34                     | 0.47              |
| 1:C:33:ILE:HB    | 1:C:312:TRP:CD1  | 2.49                     | 0.47              |
| 1:C:39:LYS:HE2   | 1:C:41:LYS:HD2   | 1.97                     | 0.47              |
| 1:C:133:ASN:HD22 | 1:C:148:GLU:CA   | 2.11                     | 0.47              |
| 1:C:206:VAL:HB   | 1:C:288:THR:OG1  | 2.14                     | 0.47              |
| 1:D:213:VAL:HG13 | 1:D:253:VAL:CG1  | 2.44                     | 0.47              |
| 1:E:213:VAL:HG13 | 1:E:253:VAL:CG1  | 2.44                     | 0.47              |
| 1:E:219:ASP:N    | 1:F:278:GLN:N    | 2.53                     | 0.47              |
| 1:F:84:LEU:O     | 1:F:88:LEU:HG    | 2.14                     | 0.47              |
| 1:F:306:ILE:HD12 | 1:F:307:THR:N    | 2.29                     | 0.47              |
| 1:G:202:GLU:HG2  | 1:J:272:ARG:CB   | 2.43                     | 0.47              |
| 1:G:250:SER:HB2  | 1:G:254:ILE:HG23 | 1.95                     | 0.47              |
| 1:H:61:LEU:HD23  | 1:H:62:ASP:N     | 2.28                     | 0.47              |
| 1:H:197:SER:OG   | 1:K:183:ASN:OD1  | 2.24                     | 0.47              |
| 1:I:34:LYS:H     | 1:I:35:ARG:HB2   | 1.78                     | 0.47              |
| 1:I:324:ALA:N    | 1:J:48:GLY:N     | 2.63                     | 0.47              |
| 1:K:33:ILE:HB    | 1:K:312:TRP:CD1  | 2.49                     | 0.47              |
| 1:K:58:LYS:HZ2   | 1:K:65:GLU:HG2   | 1.78                     | 0.47              |
| 1:K:206:VAL:HB   | 1:K:288:THR:OG1  | 2.14                     | 0.47              |
| 1:K:276:LEU:HD12 | 1:K:300:TYR:CE2  | 2.49                     | 0.47              |
| 1:M:36:VAL:N     | 1:M:312:TRP:CH2  | 2.80                     | 0.47              |
| 1:M:111:ALA:HB1  | 1:M:157:GLU:HA   | 1.95                     | 0.47              |
| 1:N:165:GLU:OE1  | 1:N:167:GLU:HB2  | 2.13                     | 0.47              |
| 1:N:262:LEU:HD21 | 1:N:292:LEU:HD23 | 1.95                     | 0.47              |
| 1:O:283:ILE:N    | 1:O:283:ILE:HD12 | 2.29                     | 0.47              |
| 1:P:179:PHE:HB2  | 1:P:288:THR:HB   | 1.93                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:220:LEU:C    | 1:P:221:ASN:O    | 2.52                     | 0.47              |
| 1:P:283:ILE:HD12 | 1:P:283:ILE:N    | 2.29                     | 0.47              |
| 1:A:22:ILE:HG22  | 1:A:35:ARG:CB    | 2.35                     | 0.47              |
| 1:A:22:ILE:HD11  | 1:A:319:TYR:HB2  | 1.95                     | 0.47              |
| 1:A:165:GLU:OE1  | 1:A:167:GLU:HB2  | 2.13                     | 0.47              |
| 1:A:241:LYS:HB3  | 1:F:165:GLU:OE2  | 2.14                     | 0.47              |
| 1:B:43:TYR:CZ    | 1:B:67:LEU:CB    | 2.87                     | 0.47              |
| 1:B:76:SER:O     | 1:C:169:PHE:CE2  | 2.67                     | 0.47              |
| 1:B:127:ARG:CG   | 1:B:154:ILE:HD12 | 2.44                     | 0.47              |
| 1:B:222:ASN:CB   | 1:B:237:ASN:CB   | 2.90                     | 0.47              |
| 1:B:246:ILE:CD1  | 1:F:50:ILE:HG12  | 2.05                     | 0.47              |
| 1:C:49:TYR:C     | 1:D:320:LYS:CG   | 2.21                     | 0.47              |
| 1:C:112:CYS:HG   | 1:C:122:ALA:HB1  | 1.77                     | 0.47              |
| 1:C:230:GLN:HA   | 1:H:308:ASN:OD1  | 2.14                     | 0.47              |
| 1:D:127:ARG:CG   | 1:D:154:ILE:HD12 | 2.44                     | 0.47              |
| 1:D:283:ILE:N    | 1:D:283:ILE:HD12 | 2.29                     | 0.47              |
| 1:E:165:GLU:CD   | 1:E:167:GLU:HB2  | 2.34                     | 0.47              |
| 1:F:250:SER:HB2  | 1:F:254:ILE:HG23 | 1.95                     | 0.47              |
| 1:F:268:LEU:HD12 | 1:I:268:LEU:HD12 | 1.05                     | 0.47              |
| 1:F:276:LEU:HD12 | 1:F:300:TYR:CE2  | 2.49                     | 0.47              |
| 1:G:206:VAL:HB   | 1:G:288:THR:OG1  | 2.14                     | 0.47              |
| 1:G:219:ASP:HB3  | 1:H:275:LYS:NZ   | 2.27                     | 0.47              |
| 1:H:7:GLU:C      | 1:H:326:TYR:CE1  | 2.87                     | 0.47              |
| 1:H:183:ASN:ND2  | 1:K:197:SER:CA   | 2.77                     | 0.47              |
| 1:J:220:LEU:O    | 1:J:235:LEU:N    | 2.47                     | 0.47              |
| 1:J:275:LYS:HZ1  | 1:K:224:ASN:HD21 | 1.58                     | 0.47              |
| 1:J:276:LEU:HD12 | 1:J:300:TYR:CE2  | 2.49                     | 0.47              |
| 1:J:278:GLN:N    | 1:K:219:ASP:N    | 2.53                     | 0.47              |
| 1:K:165:GLU:CD   | 1:K:167:GLU:HB2  | 2.34                     | 0.47              |
| 1:L:19:THR:CG2   | 1:L:40:THR:HG22  | 2.36                     | 0.47              |
| 1:L:36:VAL:N     | 1:L:312:TRP:CH2  | 2.80                     | 0.47              |
| 1:L:276:LEU:HD12 | 1:L:300:TYR:CE2  | 2.49                     | 0.47              |
| 1:N:283:ILE:HD12 | 1:N:283:ILE:N    | 2.29                     | 0.47              |
| 1:O:114:LEU:HD23 | 1:O:194:VAL:HG21 | 1.95                     | 0.47              |
| 1:P:149:ILE:HD13 | 1:P:149:ILE:HG21 | 1.74                     | 0.47              |
| 1:P:165:GLU:CD   | 1:P:167:GLU:HB2  | 2.34                     | 0.47              |
| 1:A:127:ARG:CG   | 1:A:154:ILE:HD12 | 2.44                     | 0.47              |
| 1:A:151:ASP:C    | 1:A:151:ASP:OD1  | 2.53                     | 0.47              |
| 1:B:84:LEU:O     | 1:B:88:LEU:HG    | 2.14                     | 0.47              |
| 1:B:151:ASP:C    | 1:B:151:ASP:OD1  | 2.53                     | 0.47              |
| 1:B:242:LYS:HA   | 1:G:164:LEU:O    | 2.15                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:310:SER:HA   | 1:B:313:THR:CG2  | 2.42                     | 0.47              |
| 1:C:19:THR:CG2   | 1:C:40:THR:HG22  | 2.36                     | 0.47              |
| 1:C:84:LEU:O     | 1:C:88:LEU:HG    | 2.14                     | 0.47              |
| 1:C:127:ARG:CG   | 1:C:154:ILE:HD12 | 2.44                     | 0.47              |
| 1:C:220:LEU:O    | 1:C:235:LEU:N    | 2.47                     | 0.47              |
| 1:D:22:ILE:HD11  | 1:D:319:TYR:HB2  | 1.95                     | 0.47              |
| 1:D:43:TYR:CZ    | 1:D:67:LEU:CB    | 2.87                     | 0.47              |
| 1:E:33:ILE:HB    | 1:E:312:TRP:CD1  | 2.49                     | 0.47              |
| 1:F:36:VAL:N     | 1:F:312:TRP:CH2  | 2.80                     | 0.47              |
| 1:F:95:THR:HG22  | 1:F:136:ILE:CD1  | 2.24                     | 0.47              |
| 1:F:272:ARG:HG3  | 1:I:202:GLU:HA   | 1.57                     | 0.47              |
| 1:F:283:ILE:HD12 | 1:F:283:ILE:N    | 2.29                     | 0.47              |
| 1:G:127:ARG:HG2  | 1:G:154:ILE:CD1  | 2.44                     | 0.47              |
| 1:G:276:LEU:HD12 | 1:G:300:TYR:CE2  | 2.49                     | 0.47              |
| 1:H:127:ARG:CG   | 1:H:154:ILE:HD12 | 2.44                     | 0.47              |
| 1:I:206:VAL:HB   | 1:I:288:THR:OG1  | 2.14                     | 0.47              |
| 1:I:324:ALA:HB3  | 1:J:49:TYR:CB    | 2.38                     | 0.47              |
| 1:J:165:GLU:OE2  | 1:O:241:LYS:CB   | 2.61                     | 0.47              |
| 1:K:66:TYR:CE2   | 1:K:88:LEU:HD22  | 2.50                     | 0.47              |
| 1:K:220:LEU:C    | 1:K:221:ASN:O    | 2.52                     | 0.47              |
| 1:L:33:ILE:HB    | 1:L:312:TRP:CD1  | 2.49                     | 0.47              |
| 1:L:114:LEU:HD23 | 1:L:194:VAL:HG21 | 1.95                     | 0.47              |
| 1:L:127:ARG:CG   | 1:L:154:ILE:HD12 | 2.44                     | 0.47              |
| 1:L:206:VAL:HB   | 1:L:288:THR:OG1  | 2.14                     | 0.47              |
| 1:M:61:LEU:HD23  | 1:M:62:ASP:N     | 2.29                     | 0.47              |
| 1:N:165:GLU:CD   | 1:N:167:GLU:HB2  | 2.34                     | 0.47              |
| 1:N:256:LYS:HA   | 1:N:256:LYS:CE   | 2.28                     | 0.47              |
| 1:O:43:TYR:HE2   | 1:O:67:LEU:HD13  | 1.77                     | 0.47              |
| 1:O:206:VAL:HB   | 1:O:288:THR:OG1  | 2.14                     | 0.47              |
| 1:P:262:LEU:HD21 | 1:P:292:LEU:HD23 | 1.95                     | 0.47              |
| 1:A:33:ILE:HB    | 1:A:312:TRP:CD1  | 2.49                     | 0.47              |
| 1:A:231:ALA:C    | 1:F:308:ASN:ND2  | 2.65                     | 0.47              |
| 1:B:33:ILE:HB    | 1:B:312:TRP:CD1  | 2.49                     | 0.47              |
| 1:B:184:MET:HE2  | 1:B:186:PHE:CE1  | 2.50                     | 0.47              |
| 1:B:206:VAL:HB   | 1:B:288:THR:OG1  | 2.14                     | 0.47              |
| 1:B:213:VAL:HG13 | 1:B:253:VAL:CG1  | 2.44                     | 0.47              |
| 1:B:220:LEU:O    | 1:B:235:LEU:N    | 2.47                     | 0.47              |
| 1:B:231:ALA:N    | 1:G:308:ASN:HD21 | 1.80                     | 0.47              |
| 1:C:151:ASP:C    | 1:C:151:ASP:OD1  | 2.53                     | 0.47              |
| 1:D:11:THR:HG23  | 1:D:318:LEU:CB   | 2.44                     | 0.47              |
| 1:D:179:PHE:HB2  | 1:D:288:THR:HB   | 1.93                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:220:LEU:O    | 1:D:235:LEU:N    | 2.47                     | 0.47              |
| 1:D:308:ASN:HD21 | 1:H:241:LYS:C    | 2.15                     | 0.47              |
| 1:E:151:ASP:C    | 1:E:151:ASP:OD1  | 2.53                     | 0.47              |
| 1:E:153:THR:HG21 | 1:E:325:LYS:HE3  | 1.97                     | 0.47              |
| 1:E:206:VAL:HB   | 1:E:288:THR:OG1  | 2.14                     | 0.47              |
| 1:E:276:LEU:HD12 | 1:E:300:TYR:CE2  | 2.49                     | 0.47              |
| 1:E:306:ILE:HD12 | 1:E:307:THR:N    | 2.29                     | 0.47              |
| 1:F:39:LYS:HE2   | 1:F:41:LYS:HD2   | 1.97                     | 0.47              |
| 1:F:66:TYR:CE2   | 1:F:88:LEU:HD22  | 2.50                     | 0.47              |
| 1:F:213:VAL:HG13 | 1:F:253:VAL:CG1  | 2.45                     | 0.47              |
| 1:G:66:TYR:CE2   | 1:G:88:LEU:HD22  | 2.50                     | 0.47              |
| 1:G:84:LEU:O     | 1:G:88:LEU:HG    | 2.14                     | 0.47              |
| 1:G:151:ASP:C    | 1:G:151:ASP:OD1  | 2.53                     | 0.47              |
| 1:I:11:THR:HG23  | 1:I:318:LEU:CB   | 2.44                     | 0.47              |
| 1:I:179:PHE:HB2  | 1:I:288:THR:HB   | 1.93                     | 0.47              |
| 1:I:184:MET:HE2  | 1:I:186:PHE:CE1  | 2.50                     | 0.47              |
| 1:I:256:LYS:HA   | 1:I:256:LYS:CE   | 2.28                     | 0.47              |
| 1:I:276:LEU:HD12 | 1:I:300:TYR:CE2  | 2.49                     | 0.47              |
| 1:I:307:THR:HA   | 1:N:231:ALA:CB   | 2.45                     | 0.47              |
| 1:I:309:ASN:O    | 1:N:229:GLU:OE1  | 2.33                     | 0.47              |
| 1:J:27:LYS:NZ    | 1:J:35:ARG:NH2   | 2.59                     | 0.47              |
| 1:J:66:TYR:CE2   | 1:J:88:LEU:HD22  | 2.50                     | 0.47              |
| 1:J:73:VAL:CG1   | 1:N:240:MET:HE1  | 2.43                     | 0.47              |
| 1:J:123:LYS:HZ1  | 1:J:127:ARG:HH12 | 1.61                     | 0.47              |
| 1:J:130:ILE:CD1  | 1:J:152:ILE:HB   | 2.45                     | 0.47              |
| 1:J:159:SER:OG   | 1:J:163:PHE:CE1  | 2.67                     | 0.47              |
| 1:J:186:PHE:HE2  | 1:J:269:ILE:HD11 | 1.70                     | 0.47              |
| 1:K:36:VAL:N     | 1:K:312:TRP:CH2  | 2.80                     | 0.47              |
| 1:K:127:ARG:CG   | 1:K:154:ILE:HD12 | 2.44                     | 0.47              |
| 1:K:153:THR:HG21 | 1:K:325:LYS:HE3  | 1.97                     | 0.47              |
| 1:K:213:VAL:HG13 | 1:K:253:VAL:CG1  | 2.44                     | 0.47              |
| 1:L:7:GLU:C      | 1:L:326:TYR:CE1  | 2.87                     | 0.47              |
| 1:L:32:ASP:CA    | 1:L:34:LYS:HB2   | 2.44                     | 0.47              |
| 1:L:184:MET:HE2  | 1:L:186:PHE:CE1  | 2.50                     | 0.47              |
| 1:M:98:LEU:HD23  | 1:M:98:LEU:O     | 2.14                     | 0.47              |
| 1:M:153:THR:HG21 | 1:M:325:LYS:HE3  | 1.97                     | 0.47              |
| 1:M:188:LEU:C    | 1:M:188:LEU:HD23 | 2.35                     | 0.47              |
| 1:M:206:VAL:HB   | 1:M:288:THR:OG1  | 2.14                     | 0.47              |
| 1:M:320:LYS:NZ   | 1:N:49:TYR:CE1   | 2.74                     | 0.47              |
| 1:N:39:LYS:HE2   | 1:N:41:LYS:HD2   | 1.97                     | 0.47              |
| 1:N:43:TYR:HE2   | 1:N:67:LEU:HD13  | 1.77                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:153:THR:HG21 | 1:O:325:LYS:HE3  | 1.97                     | 0.47              |
| 1:O:284:PHE:HE2  | 1:O:296:ILE:HG12 | 1.74                     | 0.47              |
| 1:P:34:LYS:N     | 1:P:35:ARG:C     | 2.68                     | 0.47              |
| 1:P:39:LYS:HE2   | 1:P:41:LYS:HD2   | 1.97                     | 0.47              |
| 1:P:43:TYR:HE2   | 1:P:67:LEU:HD13  | 1.78                     | 0.47              |
| 1:P:151:ASP:OD1  | 1:P:151:ASP:C    | 2.53                     | 0.47              |
| 1:A:43:TYR:CD1   | 1:A:67:LEU:HB3   | 2.50                     | 0.47              |
| 1:A:45:LEU:CD2   | 1:A:58:LYS:NZ    | 2.78                     | 0.47              |
| 1:A:153:THR:HG21 | 1:A:325:LYS:HE3  | 1.97                     | 0.47              |
| 1:B:34:LYS:N     | 1:B:35:ARG:C     | 2.68                     | 0.47              |
| 1:B:43:TYR:CD1   | 1:B:67:LEU:HB3   | 2.50                     | 0.47              |
| 1:B:45:LEU:CD2   | 1:B:58:LYS:NZ    | 2.78                     | 0.47              |
| 1:C:7:GLU:C      | 1:C:326:TYR:CE1  | 2.87                     | 0.47              |
| 1:C:22:ILE:HD11  | 1:C:319:TYR:HB2  | 1.95                     | 0.47              |
| 1:C:43:TYR:CD1   | 1:C:67:LEU:HB3   | 2.50                     | 0.47              |
| 1:C:47:ASP:O     | 1:D:323:VAL:CB   | 2.63                     | 0.47              |
| 1:C:219:ASP:C    | 1:C:224:ASN:CB   | 2.82                     | 0.47              |
| 1:C:310:SER:HA   | 1:C:313:THR:CG2  | 2.41                     | 0.47              |
| 1:D:222:ASN:CB   | 1:D:237:ASN:CB   | 2.90                     | 0.47              |
| 1:E:106:VAL:CG2  | 1:E:147:PHE:CE1  | 2.98                     | 0.47              |
| 1:E:130:ILE:CD1  | 1:E:152:ILE:HB   | 2.45                     | 0.47              |
| 1:E:188:LEU:C    | 1:E:188:LEU:HD23 | 2.35                     | 0.47              |
| 1:F:34:LYS:N     | 1:F:35:ARG:C     | 2.68                     | 0.47              |
| 1:F:127:ARG:CG   | 1:F:154:ILE:HD12 | 2.44                     | 0.47              |
| 1:F:203:GLU:H    | 1:I:272:ARG:HA   | 1.80                     | 0.47              |
| 1:F:220:LEU:C    | 1:F:221:ASN:O    | 2.52                     | 0.47              |
| 1:G:45:LEU:CD2   | 1:G:58:LYS:NZ    | 2.78                     | 0.47              |
| 1:G:130:ILE:CD1  | 1:G:152:ILE:HB   | 2.45                     | 0.47              |
| 1:G:143:LYS:CE   | 1:G:145:TYR:CZ   | 2.98                     | 0.47              |
| 1:G:164:LEU:HD13 | 1:G:313:THR:CA   | 2.40                     | 0.47              |
| 1:G:183:ASN:OD1  | 1:J:197:SER:CB   | 2.62                     | 0.47              |
| 1:G:203:GLU:CD   | 1:J:198:GLU:CG   | 2.80                     | 0.47              |
| 1:H:11:THR:HG23  | 1:H:318:LEU:CB   | 2.44                     | 0.47              |
| 1:H:52:ILE:O     | 1:H:74:GLU:CG    | 2.63                     | 0.47              |
| 1:H:84:LEU:O     | 1:H:88:LEU:HG    | 2.14                     | 0.47              |
| 1:H:143:LYS:CE   | 1:H:145:TYR:CZ   | 2.98                     | 0.47              |
| 1:H:276:LEU:HD12 | 1:H:300:TYR:CE2  | 2.49                     | 0.47              |
| 1:H:283:ILE:HD12 | 1:H:283:ILE:N    | 2.29                     | 0.47              |
| 1:I:153:THR:HG21 | 1:I:325:LYS:HE3  | 1.97                     | 0.47              |
| 1:J:127:ARG:CG   | 1:J:154:ILE:HD12 | 2.44                     | 0.47              |
| 1:J:153:THR:HG21 | 1:J:325:LYS:HE3  | 1.97                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:188:LEU:C    | 1:J:188:LEU:HD23 | 2.35                     | 0.47              |
| 1:J:250:SER:HB2  | 1:J:254:ILE:HG23 | 1.95                     | 0.47              |
| 1:K:188:LEU:HD23 | 1:K:188:LEU:C    | 2.35                     | 0.47              |
| 1:L:149:ILE:HD13 | 1:L:149:ILE:HG21 | 1.74                     | 0.47              |
| 1:M:34:LYS:N     | 1:M:35:ARG:C     | 2.68                     | 0.47              |
| 1:M:151:ASP:C    | 1:M:151:ASP:OD1  | 2.53                     | 0.47              |
| 1:M:220:LEU:O    | 1:M:235:LEU:N    | 2.47                     | 0.47              |
| 1:M:284:PHE:HE2  | 1:M:296:ILE:HG12 | 1.74                     | 0.47              |
| 1:O:184:MET:HE2  | 1:O:186:PHE:CE1  | 2.50                     | 0.47              |
| 1:O:188:LEU:HD23 | 1:O:188:LEU:C    | 2.36                     | 0.47              |
| 1:A:220:LEU:O    | 1:A:235:LEU:N    | 2.47                     | 0.47              |
| 1:B:188:LEU:C    | 1:B:188:LEU:HD23 | 2.35                     | 0.47              |
| 1:B:246:ILE:CA   | 1:F:50:ILE:C     | 2.49                     | 0.47              |
| 1:C:184:MET:HE2  | 1:C:186:PHE:CE1  | 2.50                     | 0.47              |
| 1:C:202:GLU:OE2  | 1:C:204:HIS:CG   | 2.68                     | 0.47              |
| 1:D:34:LYS:N     | 1:D:35:ARG:CB    | 2.72                     | 0.47              |
| 1:D:43:TYR:HE2   | 1:D:67:LEU:HD13  | 1.78                     | 0.47              |
| 1:E:159:SER:OG   | 1:E:163:PHE:CE1  | 2.67                     | 0.47              |
| 1:F:106:VAL:CG2  | 1:F:147:PHE:CE1  | 2.98                     | 0.47              |
| 1:F:219:ASP:N    | 1:G:278:GLN:N    | 2.53                     | 0.47              |
| 1:G:34:LYS:N     | 1:G:35:ARG:C     | 2.68                     | 0.47              |
| 1:G:127:ARG:CG   | 1:G:154:ILE:HD12 | 2.44                     | 0.47              |
| 1:G:218:THR:C    | 1:H:275:LYS:CB   | 2.78                     | 0.47              |
| 1:H:27:LYS:HE2   | 1:H:35:ARG:CG    | 2.34                     | 0.47              |
| 1:I:32:ASP:CA    | 1:I:34:LYS:HB2   | 2.44                     | 0.47              |
| 1:I:143:LYS:CE   | 1:I:145:TYR:CZ   | 2.98                     | 0.47              |
| 1:I:188:LEU:HD23 | 1:I:188:LEU:C    | 2.36                     | 0.47              |
| 1:K:32:ASP:CA    | 1:K:34:LYS:HB2   | 2.44                     | 0.47              |
| 1:K:75:ASP:OD1   | 1:O:245:GLU:OE1  | 2.33                     | 0.47              |
| 1:K:130:ILE:CD1  | 1:K:152:ILE:HB   | 2.45                     | 0.47              |
| 1:L:66:TYR:CE2   | 1:L:88:LEU:HD22  | 2.50                     | 0.47              |
| 1:L:130:ILE:CD1  | 1:L:152:ILE:HB   | 2.45                     | 0.47              |
| 1:L:153:THR:HG21 | 1:L:325:LYS:HE3  | 1.97                     | 0.47              |
| 1:L:220:LEU:C    | 1:L:221:ASN:O    | 2.52                     | 0.47              |
| 1:M:7:GLU:C      | 1:M:326:TYR:CE1  | 2.87                     | 0.47              |
| 1:M:22:ILE:HD11  | 1:M:319:TYR:HB2  | 1.95                     | 0.47              |
| 1:M:43:TYR:HE2   | 1:M:67:LEU:HD13  | 1.77                     | 0.47              |
| 1:M:45:LEU:CD2   | 1:M:58:LYS:NZ    | 2.78                     | 0.47              |
| 1:N:106:VAL:CG2  | 1:N:147:PHE:CE1  | 2.98                     | 0.47              |
| 1:N:130:ILE:CD1  | 1:N:152:ILE:HB   | 2.45                     | 0.47              |
| 1:N:220:LEU:O    | 1:N:235:LEU:N    | 2.47                     | 0.47              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:222:ASN:CB   | 1:N:237:ASN:CB   | 2.91                     | 0.47              |
| 1:O:27:LYS:HZ1   | 1:O:35:ARG:HE    | 1.61                     | 0.47              |
| 1:O:151:ASP:C    | 1:O:151:ASP:OD1  | 2.53                     | 0.47              |
| 1:O:165:GLU:OE1  | 1:O:167:GLU:HB2  | 2.13                     | 0.47              |
| 1:O:301:PRO:N    | 1:P:227:THR:HG23 | 2.29                     | 0.47              |
| 1:P:45:LEU:CD2   | 1:P:58:LYS:NZ    | 2.78                     | 0.47              |
| 1:A:34:LYS:N     | 1:A:35:ARG:C     | 2.68                     | 0.47              |
| 1:B:153:THR:HG21 | 1:B:325:LYS:HE3  | 1.97                     | 0.47              |
| 1:B:219:ASP:C    | 1:B:224:ASN:CB   | 2.82                     | 0.47              |
| 1:B:241:LYS:CE   | 1:G:305:ILE:HG22 | 2.45                     | 0.47              |
| 1:B:247:ASP:CA   | 1:F:52:ILE:HD11  | 1.96                     | 0.47              |
| 1:C:159:SER:OG   | 1:C:163:PHE:CE1  | 2.68                     | 0.47              |
| 1:D:84:LEU:O     | 1:D:88:LEU:HG    | 2.14                     | 0.47              |
| 1:D:111:ALA:HB1  | 1:D:157:GLU:HA   | 1.95                     | 0.47              |
| 1:D:184:MET:HE2  | 1:D:186:PHE:CE1  | 2.50                     | 0.47              |
| 1:D:188:LEU:HD23 | 1:D:188:LEU:C    | 2.35                     | 0.47              |
| 1:D:206:VAL:HB   | 1:D:288:THR:OG1  | 2.14                     | 0.47              |
| 1:D:245:GLU:O    | 1:H:52:ILE:HG13  | 2.14                     | 0.47              |
| 1:E:11:THR:HG23  | 1:E:318:LEU:CB   | 2.44                     | 0.47              |
| 1:E:45:LEU:CD2   | 1:E:58:LYS:NZ    | 2.78                     | 0.47              |
| 1:E:250:SER:HB2  | 1:E:254:ILE:HG23 | 1.95                     | 0.47              |
| 1:F:143:LYS:CE   | 1:F:145:TYR:CZ   | 2.98                     | 0.47              |
| 1:G:19:THR:CG2   | 1:G:40:THR:HG22  | 2.36                     | 0.47              |
| 1:G:39:LYS:HE2   | 1:G:41:LYS:HD2   | 1.97                     | 0.47              |
| 1:G:283:ILE:N    | 1:G:283:ILE:HD12 | 2.29                     | 0.47              |
| 1:H:66:TYR:CE2   | 1:H:88:LEU:HD22  | 2.50                     | 0.47              |
| 1:H:179:PHE:HB2  | 1:H:288:THR:HB   | 1.93                     | 0.47              |
| 1:H:220:LEU:O    | 1:H:235:LEU:N    | 2.47                     | 0.47              |
| 1:I:106:VAL:CG2  | 1:I:147:PHE:CE1  | 2.98                     | 0.47              |
| 1:J:34:LYS:N     | 1:J:35:ARG:C     | 2.68                     | 0.47              |
| 1:J:45:LEU:CD2   | 1:J:58:LYS:NZ    | 2.78                     | 0.47              |
| 1:J:52:ILE:O     | 1:J:74:GLU:CG    | 2.63                     | 0.47              |
| 1:K:52:ILE:O     | 1:K:74:GLU:CG    | 2.63                     | 0.47              |
| 1:K:143:LYS:CE   | 1:K:145:TYR:CZ   | 2.98                     | 0.47              |
| 1:O:130:ILE:CD1  | 1:O:152:ILE:HB   | 2.45                     | 0.47              |
| 1:O:169:PHE:CE2  | 1:P:76:SER:O     | 2.67                     | 0.47              |
| 1:P:184:MET:HE2  | 1:P:186:PHE:CE1  | 2.50                     | 0.47              |
| 1:A:11:THR:HG23  | 1:A:318:LEU:CB   | 2.44                     | 0.46              |
| 1:A:130:ILE:CD1  | 1:A:152:ILE:HB   | 2.45                     | 0.46              |
| 1:A:184:MET:HE2  | 1:A:186:PHE:CE1  | 2.50                     | 0.46              |
| 1:A:202:GLU:OE2  | 1:A:204:HIS:CG   | 2.68                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:206:VAL:HB   | 1:A:288:THR:OG1  | 2.14                     | 0.46              |
| 1:B:19:THR:CG2   | 1:B:40:THR:HG22  | 2.36                     | 0.46              |
| 1:B:22:ILE:HD11  | 1:B:319:TYR:HB2  | 1.95                     | 0.46              |
| 1:B:27:LYS:HZ1   | 1:B:35:ARG:HE    | 1.60                     | 0.46              |
| 1:B:246:ILE:HG23 | 1:F:50:ILE:C     | 2.15                     | 0.46              |
| 1:C:34:LYS:H     | 1:C:35:ARG:HB2   | 1.79                     | 0.46              |
| 1:C:45:LEU:CD2   | 1:C:58:LYS:NZ    | 2.78                     | 0.46              |
| 1:C:111:ALA:HB1  | 1:C:157:GLU:HA   | 1.95                     | 0.46              |
| 1:C:116:VAL:CG2  | 1:C:121:LYS:NZ   | 2.79                     | 0.46              |
| 1:C:222:ASN:CB   | 1:C:237:ASN:CB   | 2.90                     | 0.46              |
| 1:D:27:LYS:HE2   | 1:D:35:ARG:CG    | 2.34                     | 0.46              |
| 1:D:45:LEU:HD23  | 1:D:58:LYS:HZ1   | 1.81                     | 0.46              |
| 1:D:52:ILE:O     | 1:D:74:GLU:CG    | 2.63                     | 0.46              |
| 1:D:153:THR:HG21 | 1:D:325:LYS:HE3  | 1.97                     | 0.46              |
| 1:E:143:LYS:CE   | 1:E:145:TYR:CZ   | 2.98                     | 0.46              |
| 1:E:219:ASP:H    | 1:F:277:ASP:C    | 2.16                     | 0.46              |
| 1:E:220:LEU:O    | 1:E:235:LEU:N    | 2.47                     | 0.46              |
| 1:F:130:ILE:CD1  | 1:F:152:ILE:HB   | 2.45                     | 0.46              |
| 1:F:202:GLU:HG2  | 1:I:272:ARG:CA   | 2.45                     | 0.46              |
| 1:G:27:LYS:HE2   | 1:G:35:ARG:NE    | 2.26                     | 0.46              |
| 1:G:153:THR:HG21 | 1:G:325:LYS:HE3  | 1.97                     | 0.46              |
| 1:G:271:LYS:HG2  | 1:J:202:GLU:CD   | 2.35                     | 0.46              |
| 1:H:34:LYS:N     | 1:H:35:ARG:C     | 2.68                     | 0.46              |
| 1:H:116:VAL:CG2  | 1:H:121:LYS:NZ   | 2.78                     | 0.46              |
| 1:I:123:LYS:HZ1  | 1:I:127:ARG:HH12 | 1.63                     | 0.46              |
| 1:I:127:ARG:CG   | 1:I:154:ILE:HD12 | 2.44                     | 0.46              |
| 1:K:151:ASP:C    | 1:K:151:ASP:OD1  | 2.53                     | 0.46              |
| 1:L:34:LYS:N     | 1:L:35:ARG:C     | 2.68                     | 0.46              |
| 1:L:45:LEU:CD2   | 1:L:58:LYS:NZ    | 2.78                     | 0.46              |
| 1:L:143:LYS:CE   | 1:L:145:TYR:CZ   | 2.98                     | 0.46              |
| 1:L:151:ASP:C    | 1:L:151:ASP:OD1  | 2.53                     | 0.46              |
| 1:M:27:LYS:HZ1   | 1:M:35:ARG:HE    | 1.61                     | 0.46              |
| 1:M:39:LYS:HE2   | 1:M:41:LYS:HD2   | 1.97                     | 0.46              |
| 1:N:184:MET:HE2  | 1:N:186:PHE:CE1  | 2.50                     | 0.46              |
| 1:N:206:VAL:HB   | 1:N:288:THR:OG1  | 2.14                     | 0.46              |
| 1:O:34:LYS:N     | 1:O:35:ARG:C     | 2.68                     | 0.46              |
| 1:O:106:VAL:CG2  | 1:O:147:PHE:CE1  | 2.98                     | 0.46              |
| 1:O:202:GLU:OE2  | 1:O:204:HIS:CG   | 2.68                     | 0.46              |
| 1:P:66:TYR:CE2   | 1:P:88:LEU:HD22  | 2.50                     | 0.46              |
| 1:P:106:VAL:CG2  | 1:P:147:PHE:CE1  | 2.98                     | 0.46              |
| 1:A:165:GLU:CD   | 1:A:167:GLU:HB2  | 2.34                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:219:ASP:C    | 1:A:224:ASN:CB   | 2.82                     | 0.46              |
| 1:A:245:GLU:HG3  | 1:E:76:SER:OG    | 2.14                     | 0.46              |
| 1:B:47:ASP:O     | 1:C:323:VAL:CB   | 2.63                     | 0.46              |
| 1:B:111:ALA:HB1  | 1:B:157:GLU:HA   | 1.95                     | 0.46              |
| 1:C:165:GLU:CD   | 1:C:167:GLU:HB2  | 2.34                     | 0.46              |
| 1:C:242:LYS:HA   | 1:H:165:GLU:HA   | 1.98                     | 0.46              |
| 1:D:7:GLU:C      | 1:D:326:TYR:CE1  | 2.88                     | 0.46              |
| 1:D:39:LYS:HE2   | 1:D:41:LYS:HD2   | 1.97                     | 0.46              |
| 1:D:45:LEU:CD2   | 1:D:58:LYS:NZ    | 2.78                     | 0.46              |
| 1:E:34:LYS:H     | 1:E:35:ARG:HB2   | 1.78                     | 0.46              |
| 1:E:52:ILE:O     | 1:E:74:GLU:CG    | 2.63                     | 0.46              |
| 1:E:123:LYS:HZ1  | 1:E:127:ARG:HH12 | 1.61                     | 0.46              |
| 1:E:184:MET:HE2  | 1:E:186:PHE:CE1  | 2.50                     | 0.46              |
| 1:F:151:ASP:C    | 1:F:151:ASP:OD1  | 2.53                     | 0.46              |
| 1:G:27:LYS:HE2   | 1:G:35:ARG:CG    | 2.34                     | 0.46              |
| 1:G:43:TYR:CD1   | 1:G:67:LEU:HB3   | 2.50                     | 0.46              |
| 1:G:165:GLU:CD   | 1:G:167:GLU:HB2  | 2.34                     | 0.46              |
| 1:G:188:LEU:HD23 | 1:G:188:LEU:C    | 2.35                     | 0.46              |
| 1:H:213:VAL:HG13 | 1:H:253:VAL:CG1  | 2.45                     | 0.46              |
| 1:J:19:THR:CG2   | 1:J:40:THR:HG22  | 2.36                     | 0.46              |
| 1:J:32:ASP:CA    | 1:J:34:LYS:HB2   | 2.44                     | 0.46              |
| 1:J:43:TYR:CD1   | 1:J:67:LEU:HB3   | 2.50                     | 0.46              |
| 1:J:84:LEU:O     | 1:J:88:LEU:HG    | 2.14                     | 0.46              |
| 1:J:143:LYS:CE   | 1:J:145:TYR:CZ   | 2.98                     | 0.46              |
| 1:K:19:THR:CG2   | 1:K:40:THR:HG22  | 2.36                     | 0.46              |
| 1:L:43:TYR:CD1   | 1:L:67:LEU:HB3   | 2.50                     | 0.46              |
| 1:L:164:LEU:HD13 | 1:L:313:THR:CA   | 2.40                     | 0.46              |
| 1:M:173:ASN:ND2  | 1:M:279:LEU:CD2  | 2.70                     | 0.46              |
| 1:M:184:MET:HE2  | 1:M:186:PHE:CE1  | 2.51                     | 0.46              |
| 1:N:45:LEU:CD2   | 1:N:58:LYS:NZ    | 2.78                     | 0.46              |
| 1:O:143:LYS:CE   | 1:O:145:TYR:CZ   | 2.98                     | 0.46              |
| 1:P:206:VAL:HB   | 1:P:288:THR:OG1  | 2.14                     | 0.46              |
| 1:A:52:ILE:O     | 1:A:74:GLU:CG    | 2.63                     | 0.46              |
| 1:A:79:THR:CG2   | 1:B:192:CYS:HB2  | 2.38                     | 0.46              |
| 1:A:111:ALA:HB1  | 1:A:157:GLU:HA   | 1.95                     | 0.46              |
| 1:A:112:CYS:HG   | 1:A:122:ALA:HB1  | 1.79                     | 0.46              |
| 1:A:188:LEU:HD23 | 1:A:188:LEU:C    | 2.35                     | 0.46              |
| 1:B:116:VAL:CG2  | 1:B:121:LYS:NZ   | 2.79                     | 0.46              |
| 1:B:184:MET:O    | 1:B:201:ILE:HD12 | 2.16                     | 0.46              |
| 1:C:153:THR:HG21 | 1:C:325:LYS:HE3  | 1.97                     | 0.46              |
| 1:E:66:TYR:CE2   | 1:E:88:LEU:HD22  | 2.50                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:219:ASP:C    | 1:F:277:ASP:CB   | 2.77                     | 0.46              |
| 1:F:34:LYS:H     | 1:F:35:ARG:HB2   | 1.78                     | 0.46              |
| 1:F:227:THR:CG2  | 1:G:300:TYR:N    | 2.62                     | 0.46              |
| 1:G:147:PHE:CE2  | 1:G:149:ILE:HG22 | 2.51                     | 0.46              |
| 1:G:213:VAL:HG13 | 1:G:253:VAL:CG1  | 2.44                     | 0.46              |
| 1:H:151:ASP:OD1  | 1:H:151:ASP:C    | 2.53                     | 0.46              |
| 1:H:153:THR:HG21 | 1:H:325:LYS:HE3  | 1.97                     | 0.46              |
| 1:H:188:LEU:HD23 | 1:H:188:LEU:C    | 2.35                     | 0.46              |
| 1:I:84:LEU:O     | 1:I:88:LEU:HG    | 2.14                     | 0.46              |
| 1:I:305:ILE:HG22 | 1:N:241:LYS:HZ1  | 1.78                     | 0.46              |
| 1:J:39:LYS:HE2   | 1:J:41:LYS:HD2   | 1.97                     | 0.46              |
| 1:J:116:VAL:CG2  | 1:J:121:LYS:NZ   | 2.79                     | 0.46              |
| 1:K:116:VAL:CG2  | 1:K:121:LYS:NZ   | 2.79                     | 0.46              |
| 1:K:179:PHE:HB2  | 1:K:288:THR:HB   | 1.93                     | 0.46              |
| 1:M:213:VAL:HG13 | 1:M:253:VAL:CG1  | 2.44                     | 0.46              |
| 1:N:52:ILE:O     | 1:N:74:GLU:CG    | 2.63                     | 0.46              |
| 1:N:219:ASP:C    | 1:N:224:ASN:CB   | 2.82                     | 0.46              |
| 1:N:301:PRO:N    | 1:O:227:THR:HG23 | 2.29                     | 0.46              |
| 1:O:220:LEU:O    | 1:O:235:LEU:N    | 2.47                     | 0.46              |
| 1:P:43:TYR:CD1   | 1:P:67:LEU:HB3   | 2.50                     | 0.46              |
| 1:P:84:LEU:O     | 1:P:88:LEU:HG    | 2.14                     | 0.46              |
| 1:A:76:SER:O     | 1:B:169:PHE:CE2  | 2.67                     | 0.46              |
| 1:A:106:VAL:CG2  | 1:A:147:PHE:CE1  | 2.98                     | 0.46              |
| 1:A:184:MET:O    | 1:A:201:ILE:HD12 | 2.16                     | 0.46              |
| 1:A:246:ILE:C    | 1:E:50:ILE:HD12  | 2.35                     | 0.46              |
| 1:A:276:LEU:HD12 | 1:A:300:TYR:CE2  | 2.49                     | 0.46              |
| 1:B:79:THR:CG2   | 1:C:192:CYS:HB2  | 2.38                     | 0.46              |
| 1:B:106:VAL:CG2  | 1:B:147:PHE:CE1  | 2.98                     | 0.46              |
| 1:D:43:TYR:CD1   | 1:D:67:LEU:HB3   | 2.50                     | 0.46              |
| 1:D:130:ILE:CD1  | 1:D:152:ILE:HB   | 2.45                     | 0.46              |
| 1:E:36:VAL:N     | 1:E:312:TRP:CH2  | 2.80                     | 0.46              |
| 1:E:220:LEU:C    | 1:E:221:ASN:O    | 2.52                     | 0.46              |
| 1:F:127:ARG:HG2  | 1:F:154:ILE:HD12 | 1.98                     | 0.46              |
| 1:F:219:ASP:OD1  | 1:F:225:LEU:HG   | 2.11                     | 0.46              |
| 1:F:268:LEU:HD21 | 1:I:268:LEU:HA   | 1.97                     | 0.46              |
| 1:G:52:ILE:O     | 1:G:74:GLU:CG    | 2.63                     | 0.46              |
| 1:H:27:LYS:HE2   | 1:H:35:ARG:NE    | 2.26                     | 0.46              |
| 1:H:39:LYS:HE2   | 1:H:41:LYS:HD2   | 1.97                     | 0.46              |
| 1:H:106:VAL:CG2  | 1:H:147:PHE:CE1  | 2.98                     | 0.46              |
| 1:H:202:GLU:CG   | 1:K:271:LYS:HG2  | 2.44                     | 0.46              |
| 1:I:66:TYR:CE2   | 1:I:88:LEU:HD22  | 2.50                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:116:VAL:CG2  | 1:I:121:LYS:NZ   | 2.79                     | 0.46              |
| 1:I:220:LEU:O    | 1:I:235:LEU:N    | 2.47                     | 0.46              |
| 1:J:151:ASP:C    | 1:J:151:ASP:OD1  | 2.53                     | 0.46              |
| 1:J:202:GLU:OE2  | 1:J:204:HIS:CG   | 2.68                     | 0.46              |
| 1:K:84:LEU:O     | 1:K:88:LEU:HG    | 2.14                     | 0.46              |
| 1:K:202:GLU:OE2  | 1:K:204:HIS:CG   | 2.68                     | 0.46              |
| 1:K:275:LYS:HZ2  | 1:L:219:ASP:HB3  | 1.80                     | 0.46              |
| 1:L:39:LYS:HE2   | 1:L:41:LYS:HD2   | 1.97                     | 0.46              |
| 1:L:106:VAL:CG2  | 1:L:147:PHE:CE1  | 2.98                     | 0.46              |
| 1:L:116:VAL:CG2  | 1:L:121:LYS:NZ   | 2.79                     | 0.46              |
| 1:L:188:LEU:HD23 | 1:L:188:LEU:C    | 2.36                     | 0.46              |
| 1:M:11:THR:HG23  | 1:M:318:LEU:CB   | 2.44                     | 0.46              |
| 1:M:301:PRO:HD3  | 1:N:227:THR:CB   | 1.89                     | 0.46              |
| 1:M:301:PRO:N    | 1:N:227:THR:HG23 | 2.29                     | 0.46              |
| 1:N:34:LYS:N     | 1:N:35:ARG:C     | 2.68                     | 0.46              |
| 1:N:202:GLU:OE2  | 1:N:204:HIS:CG   | 2.68                     | 0.46              |
| 1:N:213:VAL:HG13 | 1:N:253:VAL:CG1  | 2.44                     | 0.46              |
| 1:N:301:PRO:CD   | 1:O:227:THR:CG2  | 2.93                     | 0.46              |
| 1:N:310:SER:HA   | 1:N:313:THR:CG2  | 2.42                     | 0.46              |
| 1:O:43:TYR:CD1   | 1:O:67:LEU:HB3   | 2.50                     | 0.46              |
| 1:O:52:ILE:O     | 1:O:74:GLU:CG    | 2.63                     | 0.46              |
| 1:O:147:PHE:CE2  | 1:O:149:ILE:HG22 | 2.51                     | 0.46              |
| 1:O:213:VAL:HG13 | 1:O:253:VAL:CG1  | 2.44                     | 0.46              |
| 1:P:11:THR:HG23  | 1:P:318:LEU:CB   | 2.44                     | 0.46              |
| 1:P:143:LYS:CE   | 1:P:145:TYR:CZ   | 2.98                     | 0.46              |
| 1:P:147:PHE:CE2  | 1:P:149:ILE:HG22 | 2.51                     | 0.46              |
| 1:B:7:GLU:C      | 1:B:326:TYR:CE1  | 2.87                     | 0.46              |
| 1:C:66:TYR:CE2   | 1:C:88:LEU:HD22  | 2.50                     | 0.46              |
| 1:C:130:ILE:CD1  | 1:C:152:ILE:HB   | 2.45                     | 0.46              |
| 1:C:184:MET:O    | 1:C:201:ILE:HD12 | 2.16                     | 0.46              |
| 1:C:231:ALA:HB3  | 1:H:307:THR:HA   | 1.97                     | 0.46              |
| 1:D:106:VAL:CG2  | 1:D:147:PHE:CE1  | 2.98                     | 0.46              |
| 1:D:147:PHE:CE2  | 1:D:149:ILE:HG22 | 2.51                     | 0.46              |
| 1:D:151:ASP:C    | 1:D:151:ASP:OD1  | 2.53                     | 0.46              |
| 1:E:112:CYS:HG   | 1:E:122:ALA:HB1  | 1.80                     | 0.46              |
| 1:E:116:VAL:CG2  | 1:E:121:LYS:NZ   | 2.79                     | 0.46              |
| 1:E:127:ARG:CG   | 1:E:154:ILE:HD12 | 2.44                     | 0.46              |
| 1:E:184:MET:O    | 1:E:201:ILE:HD12 | 2.16                     | 0.46              |
| 1:E:202:GLU:OE2  | 1:E:204:HIS:CG   | 2.68                     | 0.46              |
| 1:F:45:LEU:CD2   | 1:F:58:LYS:NZ    | 2.78                     | 0.46              |
| 1:F:116:VAL:CG2  | 1:F:121:LYS:NZ   | 2.78                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:203:GLU:OE2  | 1:I:274:PHE:HZ   | 1.98                     | 0.46              |
| 1:G:202:GLU:CD   | 1:J:271:LYS:HG2  | 2.35                     | 0.46              |
| 1:H:127:ARG:HG2  | 1:H:154:ILE:HD12 | 1.98                     | 0.46              |
| 1:H:184:MET:HE2  | 1:H:186:PHE:CE1  | 2.50                     | 0.46              |
| 1:H:184:MET:O    | 1:H:201:ILE:HD12 | 2.16                     | 0.46              |
| 1:H:272:ARG:HH11 | 1:K:201:ILE:HG23 | 1.74                     | 0.46              |
| 1:H:272:ARG:HA   | 1:K:203:GLU:H    | 1.80                     | 0.46              |
| 1:I:130:ILE:CD1  | 1:I:152:ILE:HB   | 2.45                     | 0.46              |
| 1:I:202:GLU:OE2  | 1:I:204:HIS:CG   | 2.69                     | 0.46              |
| 1:J:7:GLU:C      | 1:J:326:TYR:CE1  | 2.87                     | 0.46              |
| 1:J:11:THR:HG23  | 1:J:318:LEU:CB   | 2.44                     | 0.46              |
| 1:J:98:LEU:HD21  | 1:J:104:ASN:HB3  | 1.98                     | 0.46              |
| 1:K:50:ILE:C     | 1:O:246:ILE:HG23 | 2.18                     | 0.46              |
| 1:K:241:LYS:HB2  | 1:O:308:ASN:HD21 | 1.80                     | 0.46              |
| 1:L:43:TYR:CE2   | 1:L:70:GLU:OE1   | 2.69                     | 0.46              |
| 1:L:52:ILE:O     | 1:L:74:GLU:CG    | 2.63                     | 0.46              |
| 1:L:202:GLU:OE2  | 1:L:204:HIS:CG   | 2.68                     | 0.46              |
| 1:M:84:LEU:O     | 1:M:88:LEU:HG    | 2.14                     | 0.46              |
| 1:M:130:ILE:CD1  | 1:M:152:ILE:HB   | 2.45                     | 0.46              |
| 1:M:310:SER:HA   | 1:M:313:THR:CG2  | 2.42                     | 0.46              |
| 1:N:7:GLU:C      | 1:N:326:TYR:CE1  | 2.87                     | 0.46              |
| 1:N:43:TYR:CD1   | 1:N:67:LEU:HB3   | 2.50                     | 0.46              |
| 1:N:112:CYS:HG   | 1:N:122:ALA:HB1  | 1.79                     | 0.46              |
| 1:N:143:LYS:CE   | 1:N:145:TYR:CZ   | 2.98                     | 0.46              |
| 1:N:169:PHE:CE2  | 1:O:76:SER:O     | 2.67                     | 0.46              |
| 1:O:39:LYS:HE2   | 1:O:41:LYS:HD2   | 1.97                     | 0.46              |
| 1:O:66:TYR:CE2   | 1:O:88:LEU:HD22  | 2.50                     | 0.46              |
| 1:O:84:LEU:O     | 1:O:88:LEU:HG    | 2.14                     | 0.46              |
| 1:O:181:GLY:HA2  | 1:O:206:VAL:CG1  | 2.31                     | 0.46              |
| 1:O:323:VAL:CB   | 1:P:47:ASP:O     | 2.63                     | 0.46              |
| 1:P:43:TYR:CE2   | 1:P:70:GLU:OE1   | 2.69                     | 0.46              |
| 1:P:123:LYS:HZ3  | 1:P:127:ARG:NH1  | 2.14                     | 0.46              |
| 1:P:130:ILE:CD1  | 1:P:152:ILE:HB   | 2.45                     | 0.46              |
| 1:P:153:THR:HG21 | 1:P:325:LYS:HE3  | 1.97                     | 0.46              |
| 1:P:276:LEU:HD12 | 1:P:300:TYR:CE2  | 2.49                     | 0.46              |
| 1:A:7:GLU:C      | 1:A:326:TYR:CE1  | 2.87                     | 0.46              |
| 1:A:229:GLU:OE2  | 1:F:312:TRP:HD1  | 1.99                     | 0.46              |
| 1:B:130:ILE:CD1  | 1:B:152:ILE:HB   | 2.45                     | 0.46              |
| 1:B:143:LYS:CE   | 1:B:145:TYR:CZ   | 2.98                     | 0.46              |
| 1:B:248:THR:HG22 | 1:F:52:ILE:CA    | 2.32                     | 0.46              |
| 1:C:106:VAL:CG2  | 1:C:147:PHE:CE1  | 2.98                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:214:GLY:N    | 1:C:235:LEU:HD11 | 2.31                     | 0.46              |
| 1:C:227:THR:CB   | 1:D:301:PRO:HD3  | 1.89                     | 0.46              |
| 1:D:143:LYS:CE   | 1:D:145:TYR:CZ   | 2.98                     | 0.46              |
| 1:E:98:LEU:HD21  | 1:E:104:ASN:HB3  | 1.98                     | 0.46              |
| 1:E:147:PHE:CE2  | 1:E:149:ILE:HG22 | 2.51                     | 0.46              |
| 1:G:34:LYS:H     | 1:G:35:ARG:HB2   | 1.78                     | 0.46              |
| 1:G:46:GLU:HG3   | 1:H:324:ALA:CA   | 2.39                     | 0.46              |
| 1:G:106:VAL:CG2  | 1:G:147:PHE:CE1  | 2.98                     | 0.46              |
| 1:G:116:VAL:CG2  | 1:G:121:LYS:NZ   | 2.78                     | 0.46              |
| 1:G:127:ARG:HG2  | 1:G:154:ILE:HD12 | 1.98                     | 0.46              |
| 1:G:220:LEU:O    | 1:G:235:LEU:N    | 2.47                     | 0.46              |
| 1:H:43:TYR:CD2   | 1:H:67:LEU:CB    | 2.95                     | 0.46              |
| 1:H:43:TYR:CD1   | 1:H:67:LEU:HB3   | 2.50                     | 0.46              |
| 1:I:52:ILE:O     | 1:I:74:GLU:CG    | 2.63                     | 0.46              |
| 1:I:98:LEU:HD21  | 1:I:104:ASN:HB3  | 1.98                     | 0.46              |
| 1:I:164:LEU:HD13 | 1:I:313:THR:CA   | 2.40                     | 0.46              |
| 1:I:277:ASP:C    | 1:J:219:ASP:H    | 2.16                     | 0.46              |
| 1:J:106:VAL:CG2  | 1:J:147:PHE:CE1  | 2.98                     | 0.46              |
| 1:K:11:THR:HG23  | 1:K:318:LEU:CB   | 2.44                     | 0.46              |
| 1:K:74:GLU:CA    | 1:O:245:GLU:O    | 2.62                     | 0.46              |
| 1:K:184:MET:O    | 1:K:201:ILE:HD12 | 2.16                     | 0.46              |
| 1:L:27:LYS:HZ1   | 1:L:35:ARG:HH21  | 1.61                     | 0.46              |
| 1:M:147:PHE:CE2  | 1:M:149:ILE:HG22 | 2.51                     | 0.46              |
| 1:M:184:MET:O    | 1:M:201:ILE:HD12 | 2.16                     | 0.46              |
| 1:M:219:ASP:C    | 1:M:224:ASN:CB   | 2.82                     | 0.46              |
| 1:N:84:LEU:O     | 1:N:88:LEU:HG    | 2.14                     | 0.46              |
| 1:O:116:VAL:CG2  | 1:O:121:LYS:NZ   | 2.79                     | 0.46              |
| 1:O:184:MET:O    | 1:O:201:ILE:HD12 | 2.16                     | 0.46              |
| 1:P:213:VAL:HG13 | 1:P:253:VAL:CG1  | 2.45                     | 0.46              |
| 1:P:222:ASN:CB   | 1:P:237:ASN:CB   | 2.90                     | 0.46              |
| 1:A:19:THR:CG2   | 1:A:40:THR:HG22  | 2.36                     | 0.46              |
| 1:A:34:LYS:H     | 1:A:35:ARG:HB2   | 1.79                     | 0.46              |
| 1:A:147:PHE:CE2  | 1:A:149:ILE:HG22 | 2.51                     | 0.46              |
| 1:A:229:GLU:OE2  | 1:F:309:ASN:C    | 2.45                     | 0.46              |
| 1:B:43:TYR:CD2   | 1:B:67:LEU:CB    | 2.95                     | 0.46              |
| 1:B:52:ILE:O     | 1:B:74:GLU:CG    | 2.63                     | 0.46              |
| 1:B:256:LYS:HA   | 1:B:256:LYS:CE   | 2.28                     | 0.46              |
| 1:C:143:LYS:CE   | 1:C:145:TYR:CZ   | 2.98                     | 0.46              |
| 1:D:184:MET:O    | 1:D:201:ILE:HD12 | 2.16                     | 0.46              |
| 1:D:306:ILE:HD12 | 1:D:307:THR:N    | 2.29                     | 0.46              |
| 1:E:127:ARG:HG2  | 1:E:154:ILE:HD12 | 1.98                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:202:GLU:OE2  | 1:F:204:HIS:CG   | 2.68                     | 0.46              |
| 1:G:197:SER:C    | 1:J:203:GLU:CB   | 2.76                     | 0.46              |
| 1:H:34:LYS:H     | 1:H:35:ARG:HB2   | 1.78                     | 0.46              |
| 1:I:32:ASP:HB3   | 1:I:34:LYS:HD2   | 1.93                     | 0.46              |
| 1:J:147:PHE:CE2  | 1:J:149:ILE:HG22 | 2.51                     | 0.46              |
| 1:K:27:LYS:HZ1   | 1:K:35:ARG:HE    | 1.63                     | 0.46              |
| 1:K:52:ILE:HG12  | 1:O:246:ILE:CA   | 2.45                     | 0.46              |
| 1:K:147:PHE:CE2  | 1:K:149:ILE:HG22 | 2.51                     | 0.46              |
| 1:K:165:GLU:CD   | 1:P:241:LYS:O    | 2.53                     | 0.46              |
| 1:M:32:ASP:HB3   | 1:M:34:LYS:HD2   | 1.93                     | 0.46              |
| 1:M:66:TYR:CE2   | 1:M:88:LEU:HD22  | 2.50                     | 0.46              |
| 1:M:106:VAL:CG2  | 1:M:147:PHE:CE1  | 2.98                     | 0.46              |
| 1:M:143:LYS:CE   | 1:M:145:TYR:CZ   | 2.98                     | 0.46              |
| 1:M:320:LYS:HD3  | 1:N:49:TYR:CZ    | 2.51                     | 0.46              |
| 1:N:34:LYS:H     | 1:N:35:ARG:HB2   | 1.79                     | 0.46              |
| 1:N:153:THR:HG21 | 1:N:325:LYS:HE3  | 1.97                     | 0.46              |
| 1:N:184:MET:O    | 1:N:201:ILE:HD12 | 2.16                     | 0.46              |
| 1:N:323:VAL:CB   | 1:O:47:ASP:O     | 2.63                     | 0.46              |
| 1:O:45:LEU:CD2   | 1:O:58:LYS:NZ    | 2.78                     | 0.46              |
| 1:P:45:LEU:CD2   | 1:P:58:LYS:HZ3   | 2.27                     | 0.46              |
| 1:P:184:MET:O    | 1:P:201:ILE:HD12 | 2.16                     | 0.46              |
| 1:P:220:LEU:O    | 1:P:235:LEU:N    | 2.47                     | 0.46              |
| 1:A:66:TYR:CE2   | 1:A:88:LEU:HD22  | 2.50                     | 0.46              |
| 1:A:143:LYS:CE   | 1:A:145:TYR:CZ   | 2.98                     | 0.46              |
| 1:A:164:LEU:HD13 | 1:A:313:THR:CA   | 2.40                     | 0.46              |
| 1:A:306:ILE:HD12 | 1:A:307:THR:N    | 2.29                     | 0.46              |
| 1:C:227:THR:HG23 | 1:D:301:PRO:N    | 2.29                     | 0.46              |
| 1:F:43:TYR:CE2   | 1:F:70:GLU:OE1   | 2.69                     | 0.46              |
| 1:F:43:TYR:CD1   | 1:F:67:LEU:HB3   | 2.50                     | 0.46              |
| 1:F:98:LEU:HD21  | 1:F:104:ASN:HB3  | 1.98                     | 0.46              |
| 1:F:188:LEU:HD23 | 1:F:188:LEU:C    | 2.35                     | 0.46              |
| 1:F:202:GLU:OE2  | 1:I:272:ARG:HA   | 2.16                     | 0.46              |
| 1:F:220:LEU:O    | 1:F:235:LEU:N    | 2.47                     | 0.46              |
| 1:G:198:GLU:CA   | 1:J:203:GLU:CB   | 2.88                     | 0.46              |
| 1:G:202:GLU:OE2  | 1:G:204:HIS:CG   | 2.68                     | 0.46              |
| 1:H:45:LEU:CD2   | 1:H:58:LYS:NZ    | 2.78                     | 0.46              |
| 1:H:98:LEU:HD21  | 1:H:104:ASN:HB3  | 1.98                     | 0.46              |
| 1:I:19:THR:CG2   | 1:I:40:THR:HG22  | 2.36                     | 0.46              |
| 1:I:241:LYS:HB3  | 1:M:308:ASN:ND2  | 2.31                     | 0.46              |
| 1:J:43:TYR:CE2   | 1:J:70:GLU:OE1   | 2.69                     | 0.46              |
| 1:J:184:MET:O    | 1:J:201:ILE:HD12 | 2.16                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:277:ASP:CB   | 1:K:219:ASP:C    | 2.77                     | 0.46              |
| 1:J:307:THR:C    | 1:O:230:GLN:CB   | 2.67                     | 0.46              |
| 1:K:173:ASN:ND2  | 1:K:279:LEU:CD2  | 2.70                     | 0.46              |
| 1:L:84:LEU:O     | 1:L:88:LEU:HG    | 2.15                     | 0.46              |
| 1:L:98:LEU:HD21  | 1:L:104:ASN:HB3  | 1.98                     | 0.46              |
| 1:M:43:TYR:CD1   | 1:M:67:LEU:HB3   | 2.50                     | 0.46              |
| 1:M:52:ILE:O     | 1:M:74:GLU:CG    | 2.63                     | 0.46              |
| 1:M:95:THR:HG21  | 1:M:136:ILE:HG21 | 1.97                     | 0.46              |
| 1:M:164:LEU:HD13 | 1:M:313:THR:CA   | 2.40                     | 0.46              |
| 1:M:169:PHE:CE2  | 1:N:76:SER:O     | 2.67                     | 0.46              |
| 1:M:202:GLU:OE2  | 1:M:204:HIS:CG   | 2.68                     | 0.46              |
| 1:N:147:PHE:CE2  | 1:N:149:ILE:HG22 | 2.51                     | 0.46              |
| 1:N:214:GLY:N    | 1:N:235:LEU:HD11 | 2.31                     | 0.46              |
| 1:O:43:TYR:CE2   | 1:O:70:GLU:OE1   | 2.69                     | 0.46              |
| 1:P:116:VAL:CG2  | 1:P:121:LYS:NZ   | 2.79                     | 0.46              |
| 1:A:49:TYR:CZ    | 1:B:320:LYS:HD3  | 2.51                     | 0.46              |
| 1:A:214:GLY:N    | 1:A:235:LEU:HD11 | 2.31                     | 0.46              |
| 1:B:39:LYS:HE2   | 1:B:41:LYS:HD2   | 1.97                     | 0.46              |
| 1:B:52:ILE:CA    | 1:B:74:GLU:HG2   | 2.46                     | 0.46              |
| 1:B:202:GLU:OE2  | 1:B:204:HIS:CG   | 2.68                     | 0.46              |
| 1:C:52:ILE:O     | 1:C:74:GLU:CG    | 2.63                     | 0.46              |
| 1:C:52:ILE:CA    | 1:C:74:GLU:HG2   | 2.46                     | 0.46              |
| 1:D:112:CYS:HG   | 1:D:122:ALA:HB1  | 1.81                     | 0.46              |
| 1:E:43:TYR:CE2   | 1:E:70:GLU:OE1   | 2.69                     | 0.46              |
| 1:E:49:TYR:HE1   | 1:F:320:LYS:CB   | 2.20                     | 0.46              |
| 1:E:52:ILE:CA    | 1:E:74:GLU:HG2   | 2.46                     | 0.46              |
| 1:E:105:LYS:HZ3  | 1:E:148:GLU:CB   | 2.28                     | 0.46              |
| 1:E:219:ASP:OD1  | 1:E:225:LEU:HG   | 2.11                     | 0.46              |
| 1:F:52:ILE:CA    | 1:F:74:GLU:HG2   | 2.46                     | 0.46              |
| 1:F:114:LEU:CD1  | 1:F:156:ALA:HB1  | 2.46                     | 0.46              |
| 1:F:272:ARG:NH1  | 1:I:201:ILE:CG2  | 2.78                     | 0.46              |
| 1:G:11:THR:HG23  | 1:G:318:LEU:CB   | 2.44                     | 0.46              |
| 1:G:114:LEU:CD1  | 1:G:156:ALA:HB1  | 2.46                     | 0.46              |
| 1:G:271:LYS:HZ3  | 1:J:265:ALA:HA   | 1.73                     | 0.46              |
| 1:H:130:ILE:CD1  | 1:H:152:ILE:HB   | 2.45                     | 0.46              |
| 1:H:149:ILE:HD13 | 1:H:149:ILE:HG21 | 1.74                     | 0.46              |
| 1:H:177:ILE:CG1  | 1:H:284:PHE:HA   | 2.46                     | 0.46              |
| 1:H:201:ILE:HG21 | 1:K:196:PRO:O    | 2.16                     | 0.46              |
| 1:H:202:GLU:OE2  | 1:H:204:HIS:CG   | 2.68                     | 0.46              |
| 1:I:45:LEU:CD2   | 1:I:58:LYS:NZ    | 2.78                     | 0.46              |
| 1:I:114:LEU:CD1  | 1:I:156:ALA:HB1  | 2.46                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:127:ARG:HG2  | 1:I:154:ILE:HD12 | 1.98                     | 0.46              |
| 1:J:52:ILE:HD13  | 1:N:248:THR:HG23 | 1.96                     | 0.46              |
| 1:K:43:TYR:CE2   | 1:K:70:GLU:OE1   | 2.69                     | 0.46              |
| 1:K:305:ILE:HG22 | 1:P:241:LYS:HZ3  | 1.77                     | 0.46              |
| 1:L:214:GLY:N    | 1:L:235:LEU:HD11 | 2.31                     | 0.46              |
| 1:M:116:VAL:CG2  | 1:M:121:LYS:NZ   | 2.79                     | 0.46              |
| 1:M:209:LEU:O    | 1:M:213:VAL:HG23 | 2.16                     | 0.46              |
| 1:N:114:LEU:CD1  | 1:N:156:ALA:HB1  | 2.46                     | 0.46              |
| 1:N:151:ASP:C    | 1:N:151:ASP:OD1  | 2.53                     | 0.46              |
| 1:N:164:LEU:HD13 | 1:N:313:THR:CA   | 2.40                     | 0.46              |
| 1:O:256:LYS:HA   | 1:O:256:LYS:CE   | 2.28                     | 0.46              |
| 1:P:114:LEU:CD1  | 1:P:156:ALA:HB1  | 2.46                     | 0.46              |
| 1:P:202:GLU:OE2  | 1:P:204:HIS:CG   | 2.68                     | 0.46              |
| 1:A:52:ILE:CA    | 1:A:74:GLU:HG2   | 2.46                     | 0.46              |
| 1:C:188:LEU:HD23 | 1:C:188:LEU:C    | 2.36                     | 0.46              |
| 1:D:22:ILE:HB    | 1:D:27:LYS:HE3   | 1.96                     | 0.46              |
| 1:D:34:LYS:N     | 1:D:35:ARG:C     | 2.68                     | 0.46              |
| 1:D:173:ASN:ND2  | 1:D:279:LEU:CD2  | 2.70                     | 0.46              |
| 1:E:43:TYR:CD1   | 1:E:67:LEU:HB3   | 2.50                     | 0.46              |
| 1:F:27:LYS:HE2   | 1:F:35:ARG:CG    | 2.34                     | 0.46              |
| 1:F:52:ILE:O     | 1:F:74:GLU:CG    | 2.63                     | 0.46              |
| 1:F:184:MET:O    | 1:F:201:ILE:HD12 | 2.16                     | 0.46              |
| 1:F:271:LYS:HG2  | 1:I:202:GLU:CG   | 2.45                     | 0.46              |
| 1:G:98:LEU:HD21  | 1:G:104:ASN:HB3  | 1.98                     | 0.46              |
| 1:G:274:PHE:CD1  | 1:J:204:HIS:CE1  | 2.77                     | 0.46              |
| 1:H:114:LEU:CD1  | 1:H:156:ALA:HB1  | 2.46                     | 0.46              |
| 1:H:147:PHE:CE2  | 1:H:149:ILE:HG22 | 2.51                     | 0.46              |
| 1:H:214:GLY:N    | 1:H:235:LEU:HD11 | 2.31                     | 0.46              |
| 1:I:39:LYS:HE2   | 1:I:41:LYS:HD2   | 1.97                     | 0.46              |
| 1:I:52:ILE:CA    | 1:I:74:GLU:HG2   | 2.46                     | 0.46              |
| 1:I:151:ASP:C    | 1:I:151:ASP:OD1  | 2.53                     | 0.46              |
| 1:I:159:SER:OG   | 1:I:163:PHE:CE1  | 2.67                     | 0.46              |
| 1:J:52:ILE:CD1   | 1:N:248:THR:HG23 | 2.47                     | 0.46              |
| 1:J:52:ILE:CA    | 1:J:74:GLU:HG2   | 2.46                     | 0.46              |
| 1:K:52:ILE:CA    | 1:K:74:GLU:HG2   | 2.46                     | 0.46              |
| 1:K:222:ASN:CB   | 1:K:237:ASN:CB   | 2.90                     | 0.46              |
| 1:K:320:LYS:CB   | 1:L:49:TYR:HE1   | 2.20                     | 0.46              |
| 1:M:177:ILE:CG1  | 1:M:284:PHE:HA   | 2.46                     | 0.46              |
| 1:N:95:THR:HG21  | 1:N:136:ILE:HG21 | 1.97                     | 0.46              |
| 1:N:116:VAL:CG2  | 1:N:121:LYS:NZ   | 2.79                     | 0.46              |
| 1:O:276:LEU:HD12 | 1:O:300:TYR:CE2  | 2.49                     | 0.46              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:52:ILE:CA    | 1:P:74:GLU:HG2   | 2.46                     | 0.46              |
| 1:P:209:LEU:O    | 1:P:213:VAL:HG23 | 2.17                     | 0.46              |
| 1:P:284:PHE:HE2  | 1:P:296:ILE:HG12 | 1.74                     | 0.46              |
| 1:A:35:ARG:HH22  | 1:A:316:GLU:HG2  | 1.81                     | 0.45              |
| 1:B:35:ARG:HH22  | 1:B:316:GLU:HG2  | 1.81                     | 0.45              |
| 1:B:209:LEU:O    | 1:B:213:VAL:HG23 | 2.16                     | 0.45              |
| 1:B:214:GLY:N    | 1:B:235:LEU:HD11 | 2.31                     | 0.45              |
| 1:D:52:ILE:CA    | 1:D:74:GLU:HG2   | 2.46                     | 0.45              |
| 1:D:181:GLY:HA2  | 1:D:206:VAL:CG1  | 2.32                     | 0.45              |
| 1:F:147:PHE:CE2  | 1:F:149:ILE:HG22 | 2.51                     | 0.45              |
| 1:F:177:ILE:CG1  | 1:F:284:PHE:HA   | 2.46                     | 0.45              |
| 1:F:227:THR:H    | 1:G:300:TYR:HB3  | 1.59                     | 0.45              |
| 1:G:52:ILE:CA    | 1:G:74:GLU:HG2   | 2.46                     | 0.45              |
| 1:G:160:GLY:O    | 1:G:317:GLY:HA3  | 2.16                     | 0.45              |
| 1:G:177:ILE:CG1  | 1:G:284:PHE:HA   | 2.46                     | 0.45              |
| 1:H:222:ASN:CB   | 1:H:237:ASN:CB   | 2.90                     | 0.45              |
| 1:I:43:TYR:CE2   | 1:I:70:GLU:OE1   | 2.69                     | 0.45              |
| 1:I:147:PHE:CE2  | 1:I:149:ILE:HG22 | 2.51                     | 0.45              |
| 1:I:184:MET:O    | 1:I:201:ILE:HD12 | 2.16                     | 0.45              |
| 1:J:114:LEU:CD1  | 1:J:156:ALA:HB1  | 2.46                     | 0.45              |
| 1:K:45:LEU:CD2   | 1:K:58:LYS:NZ    | 2.78                     | 0.45              |
| 1:K:98:LEU:HD21  | 1:K:104:ASN:HB3  | 1.98                     | 0.45              |
| 1:K:106:VAL:CG2  | 1:K:147:PHE:CE1  | 2.98                     | 0.45              |
| 1:L:50:ILE:C     | 1:P:246:ILE:HG23 | 2.14                     | 0.45              |
| 1:L:52:ILE:CA    | 1:L:74:GLU:HG2   | 2.46                     | 0.45              |
| 1:N:43:TYR:CE2   | 1:N:70:GLU:OE1   | 2.69                     | 0.45              |
| 1:N:66:TYR:CE2   | 1:N:88:LEU:HD22  | 2.50                     | 0.45              |
| 1:N:177:ILE:CG1  | 1:N:284:PHE:HA   | 2.46                     | 0.45              |
| 1:O:52:ILE:CA    | 1:O:74:GLU:HG2   | 2.46                     | 0.45              |
| 1:O:209:LEU:O    | 1:O:213:VAL:HG23 | 2.16                     | 0.45              |
| 1:P:98:LEU:HD21  | 1:P:104:ASN:HB3  | 1.98                     | 0.45              |
| 1:P:214:GLY:N    | 1:P:235:LEU:HD11 | 2.31                     | 0.45              |
| 1:A:43:TYR:CE2   | 1:A:70:GLU:OE1   | 2.69                     | 0.45              |
| 1:A:47:ASP:O     | 1:B:323:VAL:CB   | 2.63                     | 0.45              |
| 1:A:116:VAL:CG2  | 1:A:121:LYS:NZ   | 2.79                     | 0.45              |
| 1:B:147:PHE:CE2  | 1:B:149:ILE:HG22 | 2.51                     | 0.45              |
| 1:B:159:SER:OG   | 1:B:163:PHE:CE1  | 2.67                     | 0.45              |
| 1:B:306:ILE:HD12 | 1:B:307:THR:N    | 2.29                     | 0.45              |
| 1:C:35:ARG:HH22  | 1:C:316:GLU:HG2  | 1.81                     | 0.45              |
| 1:C:181:GLY:HA2  | 1:C:206:VAL:CG1  | 2.31                     | 0.45              |
| 1:C:209:LEU:O    | 1:C:213:VAL:HG23 | 2.16                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:98:LEU:HD21  | 1:D:104:ASN:HB3  | 1.98                     | 0.45              |
| 1:D:116:VAL:CG2  | 1:D:121:LYS:NZ   | 2.79                     | 0.45              |
| 1:D:202:GLU:OE2  | 1:D:204:HIS:CG   | 2.69                     | 0.45              |
| 1:F:49:TYR:C     | 1:G:323:VAL:CA   | 2.53                     | 0.45              |
| 1:G:184:MET:O    | 1:G:201:ILE:HD12 | 2.16                     | 0.45              |
| 1:G:219:ASP:N    | 1:H:278:GLN:N    | 2.53                     | 0.45              |
| 1:H:52:ILE:CA    | 1:H:74:GLU:HG2   | 2.46                     | 0.45              |
| 1:I:278:GLN:N    | 1:J:219:ASP:N    | 2.53                     | 0.45              |
| 1:J:127:ARG:HG2  | 1:J:154:ILE:HD12 | 1.98                     | 0.45              |
| 1:J:320:LYS:C    | 1:O:246:ILE:CD1  | 2.84                     | 0.45              |
| 1:L:49:TYR:CG    | 1:P:246:ILE:HG13 | 2.51                     | 0.45              |
| 1:L:184:MET:O    | 1:L:201:ILE:HD12 | 2.16                     | 0.45              |
| 1:L:209:LEU:O    | 1:L:213:VAL:HG23 | 2.16                     | 0.45              |
| 1:M:214:GLY:N    | 1:M:235:LEU:HD11 | 2.31                     | 0.45              |
| 1:M:300:TYR:C    | 1:N:227:THR:CG2  | 2.66                     | 0.45              |
| 1:N:209:LEU:O    | 1:N:213:VAL:HG23 | 2.16                     | 0.45              |
| 1:O:114:LEU:CD1  | 1:O:156:ALA:HB1  | 2.46                     | 0.45              |
| 1:O:127:ARG:HG2  | 1:O:154:ILE:HD12 | 1.98                     | 0.45              |
| 1:P:52:ILE:O     | 1:P:74:GLU:CG    | 2.63                     | 0.45              |
| 1:P:127:ARG:HG2  | 1:P:154:ILE:HD12 | 1.98                     | 0.45              |
| 1:P:188:LEU:HD23 | 1:P:188:LEU:C    | 2.35                     | 0.45              |
| 1:C:43:TYR:CE2   | 1:C:70:GLU:OE1   | 2.69                     | 0.45              |
| 1:C:147:PHE:CE2  | 1:C:149:ILE:HG22 | 2.51                     | 0.45              |
| 1:D:35:ARG:HH22  | 1:D:316:GLU:HG2  | 1.81                     | 0.45              |
| 1:D:43:TYR:CE2   | 1:D:70:GLU:OE1   | 2.69                     | 0.45              |
| 1:D:116:VAL:CG2  | 1:D:121:LYS:HZ2  | 2.29                     | 0.45              |
| 1:D:219:ASP:C    | 1:D:224:ASN:CB   | 2.82                     | 0.45              |
| 1:E:27:LYS:HZ1   | 1:E:35:ARG:HE    | 1.60                     | 0.45              |
| 1:E:114:LEU:CD1  | 1:E:156:ALA:HB1  | 2.46                     | 0.45              |
| 1:E:177:ILE:CG1  | 1:E:284:PHE:HA   | 2.46                     | 0.45              |
| 1:E:214:GLY:N    | 1:E:235:LEU:HD11 | 2.31                     | 0.45              |
| 1:F:159:SER:OG   | 1:F:163:PHE:CE1  | 2.67                     | 0.45              |
| 1:G:43:TYR:CE2   | 1:G:70:GLU:OE1   | 2.69                     | 0.45              |
| 1:I:214:GLY:N    | 1:I:235:LEU:HD11 | 2.31                     | 0.45              |
| 1:J:171:ASN:HA   | 1:J:191:ASN:OD1  | 2.17                     | 0.45              |
| 1:J:320:LYS:CB   | 1:K:49:TYR:HE1   | 2.20                     | 0.45              |
| 1:K:127:ARG:HG2  | 1:K:154:ILE:HD12 | 1.98                     | 0.45              |
| 1:L:22:ILE:HD12  | 1:L:27:LYS:HZ1   | 1.81                     | 0.45              |
| 1:L:127:ARG:HG2  | 1:L:154:ILE:HD12 | 1.98                     | 0.45              |
| 1:M:43:TYR:CE2   | 1:M:70:GLU:OE1   | 2.69                     | 0.45              |
| 1:M:114:LEU:CD1  | 1:M:156:ALA:HB1  | 2.46                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:323:VAL:CB   | 1:N:47:ASP:O     | 2.63                     | 0.45              |
| 1:N:52:ILE:CA    | 1:N:74:GLU:HG2   | 2.46                     | 0.45              |
| 1:N:188:LEU:HD23 | 1:N:188:LEU:C    | 2.36                     | 0.45              |
| 1:O:98:LEU:HD21  | 1:O:104:ASN:HB3  | 1.98                     | 0.45              |
| 1:O:164:LEU:HD13 | 1:O:313:THR:CA   | 2.40                     | 0.45              |
| 1:O:177:ILE:CG1  | 1:O:284:PHE:HA   | 2.46                     | 0.45              |
| 1:O:301:PRO:CD   | 1:P:227:THR:CG2  | 2.93                     | 0.45              |
| 1:A:49:TYR:CE2   | 1:B:320:LYS:HD3  | 2.52                     | 0.45              |
| 1:A:209:LEU:O    | 1:A:213:VAL:HG23 | 2.16                     | 0.45              |
| 1:B:114:LEU:CD1  | 1:B:156:ALA:HB1  | 2.46                     | 0.45              |
| 1:B:222:ASN:ND2  | 1:B:237:ASN:ND2  | 2.65                     | 0.45              |
| 1:B:276:LEU:HD12 | 1:B:300:TYR:CE2  | 2.49                     | 0.45              |
| 1:C:22:ILE:HB    | 1:C:27:LYS:HE3   | 1.96                     | 0.45              |
| 1:C:179:PHE:HB2  | 1:C:288:THR:HB   | 1.93                     | 0.45              |
| 1:D:66:TYR:CE2   | 1:D:88:LEU:HD22  | 2.50                     | 0.45              |
| 1:D:127:ARG:HG2  | 1:D:154:ILE:HD12 | 1.98                     | 0.45              |
| 1:E:160:GLY:O    | 1:E:317:GLY:HA3  | 2.16                     | 0.45              |
| 1:F:120:ALA:H    | 1:I:119:ASN:CG   | 2.17                     | 0.45              |
| 1:F:213:VAL:HB   | 1:F:235:LEU:HD13 | 1.99                     | 0.45              |
| 1:G:214:GLY:N    | 1:G:235:LEU:HD11 | 2.31                     | 0.45              |
| 1:H:19:THR:CG2   | 1:H:40:THR:HG22  | 2.36                     | 0.45              |
| 1:H:274:PHE:HZ   | 1:K:203:GLU:OE2  | 1.98                     | 0.45              |
| 1:I:171:ASN:HA   | 1:I:191:ASN:OD1  | 2.17                     | 0.45              |
| 1:I:323:VAL:CA   | 1:J:49:TYR:C     | 2.53                     | 0.45              |
| 1:J:32:ASP:HB3   | 1:J:34:LYS:HD2   | 1.93                     | 0.45              |
| 1:J:214:GLY:N    | 1:J:235:LEU:HD11 | 2.31                     | 0.45              |
| 1:L:147:PHE:CE2  | 1:L:149:ILE:HG22 | 2.51                     | 0.45              |
| 1:L:171:ASN:HA   | 1:L:191:ASN:OD1  | 2.17                     | 0.45              |
| 1:M:45:LEU:CB    | 1:M:67:LEU:HD11  | 2.40                     | 0.45              |
| 1:M:109:VAL:CG2  | 1:M:321:VAL:HG13 | 2.46                     | 0.45              |
| 1:M:160:GLY:O    | 1:M:317:GLY:HA3  | 2.17                     | 0.45              |
| 1:M:306:ILE:HD12 | 1:M:307:THR:N    | 2.29                     | 0.45              |
| 1:N:127:ARG:HG2  | 1:N:154:ILE:HD12 | 1.98                     | 0.45              |
| 1:N:159:SER:OG   | 1:N:163:PHE:CE1  | 2.68                     | 0.45              |
| 1:N:160:GLY:O    | 1:N:317:GLY:HA3  | 2.16                     | 0.45              |
| 1:A:227:THR:CB   | 1:B:301:PRO:HD3  | 1.89                     | 0.45              |
| 1:B:164:LEU:HD13 | 1:B:313:THR:CA   | 2.40                     | 0.45              |
| 1:C:222:ASN:ND2  | 1:C:237:ASN:ND2  | 2.65                     | 0.45              |
| 1:E:34:LYS:N     | 1:E:35:ARG:C     | 2.68                     | 0.45              |
| 1:E:61:LEU:HD23  | 1:E:62:ASP:HB2   | 1.99                     | 0.45              |
| 1:E:165:GLU:OE1  | 1:E:167:GLU:CB   | 2.65                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:123:LYS:HZ1  | 1:F:127:ARG:HH12 | 1.64                     | 0.45              |
| 1:F:153:THR:HG21 | 1:F:325:LYS:HE3  | 1.97                     | 0.45              |
| 1:F:160:GLY:O    | 1:F:317:GLY:HA3  | 2.17                     | 0.45              |
| 1:G:171:ASN:HA   | 1:G:191:ASN:OD1  | 2.17                     | 0.45              |
| 1:G:203:GLU:CB   | 1:J:197:SER:C    | 2.75                     | 0.45              |
| 1:G:213:VAL:HB   | 1:G:235:LEU:HD13 | 1.99                     | 0.45              |
| 1:H:160:GLY:O    | 1:H:317:GLY:HA3  | 2.17                     | 0.45              |
| 1:I:7:GLU:C      | 1:I:326:TYR:CE1  | 2.87                     | 0.45              |
| 1:I:213:VAL:HB   | 1:I:235:LEU:HD13 | 1.99                     | 0.45              |
| 1:J:58:LYS:HZ2   | 1:J:65:GLU:CG    | 2.30                     | 0.45              |
| 1:J:165:GLU:OE1  | 1:J:167:GLU:CB   | 2.65                     | 0.45              |
| 1:J:222:ASN:ND2  | 1:J:237:ASN:ND2  | 2.65                     | 0.45              |
| 1:J:245:GLU:OE2  | 1:O:52:ILE:CD1   | 2.64                     | 0.45              |
| 1:K:171:ASN:HA   | 1:K:191:ASN:OD1  | 2.17                     | 0.45              |
| 1:K:209:LEU:O    | 1:K:213:VAL:HG23 | 2.16                     | 0.45              |
| 1:K:214:GLY:N    | 1:K:235:LEU:HD11 | 2.31                     | 0.45              |
| 1:N:32:ASP:HB3   | 1:N:34:LYS:HD2   | 1.93                     | 0.45              |
| 1:N:285:ILE:C    | 1:N:289:THR:OG1  | 2.55                     | 0.45              |
| 1:O:95:THR:HG21  | 1:O:136:ILE:HG21 | 1.97                     | 0.45              |
| 1:O:222:ASN:ND2  | 1:O:237:ASN:ND2  | 2.65                     | 0.45              |
| 1:P:159:SER:OG   | 1:P:163:PHE:CE1  | 2.68                     | 0.45              |
| 1:P:177:ILE:CG1  | 1:P:284:PHE:HA   | 2.46                     | 0.45              |
| 1:B:49:TYR:CE2   | 1:C:320:LYS:HD3  | 2.52                     | 0.45              |
| 1:B:227:THR:HG23 | 1:C:301:PRO:N    | 2.29                     | 0.45              |
| 1:B:229:GLU:N    | 1:G:309:ASN:OD1  | 2.49                     | 0.45              |
| 1:B:230:GLN:CB   | 1:G:307:THR:C    | 2.77                     | 0.45              |
| 1:B:246:ILE:CG1  | 1:G:320:LYS:CA   | 2.89                     | 0.45              |
| 1:C:34:LYS:N     | 1:C:35:ARG:C     | 2.68                     | 0.45              |
| 1:D:160:GLY:O    | 1:D:317:GLY:HA3  | 2.17                     | 0.45              |
| 1:D:214:GLY:N    | 1:D:235:LEU:HD11 | 2.31                     | 0.45              |
| 1:E:22:ILE:HB    | 1:E:27:LYS:HE3   | 1.96                     | 0.45              |
| 1:E:217:LEU:CD2  | 1:F:278:GLN:OE1  | 2.65                     | 0.45              |
| 1:E:222:ASN:CB   | 1:E:237:ASN:CB   | 2.90                     | 0.45              |
| 1:G:272:ARG:HH11 | 1:J:201:ILE:HG13 | 1.68                     | 0.45              |
| 1:H:171:ASN:HA   | 1:H:191:ASN:OD1  | 2.17                     | 0.45              |
| 1:H:213:VAL:HB   | 1:H:235:LEU:HD13 | 1.99                     | 0.45              |
| 1:I:320:LYS:CB   | 1:J:49:TYR:HE1   | 2.20                     | 0.45              |
| 1:J:209:LEU:O    | 1:J:213:VAL:HG23 | 2.16                     | 0.45              |
| 1:J:213:VAL:HB   | 1:J:235:LEU:HD13 | 1.99                     | 0.45              |
| 1:K:34:LYS:N     | 1:K:35:ARG:C     | 2.68                     | 0.45              |
| 1:L:27:LYS:HZ1   | 1:L:35:ARG:NH2   | 2.15                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:114:LEU:CD1  | 1:L:156:ALA:HB1  | 2.46                     | 0.45              |
| 1:L:160:GLY:O    | 1:L:317:GLY:HA3  | 2.16                     | 0.45              |
| 1:M:52:ILE:CA    | 1:M:74:GLU:HG2   | 2.46                     | 0.45              |
| 1:M:165:GLU:OE1  | 1:M:167:GLU:CB   | 2.65                     | 0.45              |
| 1:N:184:MET:HG3  | 1:N:184:MET:O    | 2.17                     | 0.45              |
| 1:N:222:ASN:ND2  | 1:N:237:ASN:ND2  | 2.65                     | 0.45              |
| 1:O:160:GLY:O    | 1:O:317:GLY:HA3  | 2.17                     | 0.45              |
| 1:O:184:MET:HG3  | 1:O:184:MET:O    | 2.17                     | 0.45              |
| 1:O:300:TYR:C    | 1:P:227:THR:CG2  | 2.66                     | 0.45              |
| 1:P:35:ARG:HH22  | 1:P:316:GLU:HG2  | 1.81                     | 0.45              |
| 1:P:95:THR:HG21  | 1:P:136:ILE:HG21 | 1.97                     | 0.45              |
| 1:P:181:GLY:HA2  | 1:P:206:VAL:CG1  | 2.31                     | 0.45              |
| 1:P:184:MET:HG3  | 1:P:184:MET:O    | 2.17                     | 0.45              |
| 1:A:246:ILE:CG1  | 1:F:320:LYS:CA   | 2.88                     | 0.45              |
| 1:A:285:ILE:C    | 1:A:289:THR:OG1  | 2.55                     | 0.45              |
| 1:B:22:ILE:HB    | 1:B:27:LYS:HE3   | 1.96                     | 0.45              |
| 1:B:43:TYR:CE2   | 1:B:70:GLU:OE1   | 2.69                     | 0.45              |
| 1:B:173:ASN:ND2  | 1:B:279:LEU:CD2  | 2.70                     | 0.45              |
| 1:C:49:TYR:CZ    | 1:D:320:LYS:HD3  | 2.51                     | 0.45              |
| 1:C:127:ARG:HG2  | 1:C:154:ILE:HD12 | 1.98                     | 0.45              |
| 1:C:165:GLU:OE1  | 1:C:167:GLU:CB   | 2.65                     | 0.45              |
| 1:C:306:ILE:HD12 | 1:C:307:THR:N    | 2.29                     | 0.45              |
| 1:G:112:CYS:HG   | 1:G:122:ALA:HB1  | 1.82                     | 0.45              |
| 1:G:165:GLU:OE1  | 1:G:167:GLU:CB   | 2.65                     | 0.45              |
| 1:G:222:ASN:ND2  | 1:G:237:ASN:ND2  | 2.65                     | 0.45              |
| 1:H:184:MET:HG3  | 1:H:184:MET:O    | 2.17                     | 0.45              |
| 1:H:285:ILE:C    | 1:H:289:THR:OG1  | 2.55                     | 0.45              |
| 1:I:43:TYR:CD1   | 1:I:67:LEU:HB3   | 2.50                     | 0.45              |
| 1:I:306:ILE:HD12 | 1:I:307:THR:N    | 2.29                     | 0.45              |
| 1:J:241:LYS:CB   | 1:N:308:ASN:HD21 | 2.29                     | 0.45              |
| 1:J:320:LYS:O    | 1:O:246:ILE:CD1  | 2.58                     | 0.45              |
| 1:K:213:VAL:HB   | 1:K:235:LEU:HD13 | 1.99                     | 0.45              |
| 1:L:74:GLU:CA    | 1:P:245:GLU:O    | 2.65                     | 0.45              |
| 1:L:213:VAL:HB   | 1:L:235:LEU:HD13 | 1.99                     | 0.45              |
| 1:L:222:ASN:ND2  | 1:L:237:ASN:ND2  | 2.65                     | 0.45              |
| 1:N:98:LEU:HD21  | 1:N:104:ASN:HB3  | 1.98                     | 0.45              |
| 1:O:170:LYS:CD   | 1:P:78:GLU:C     | 2.78                     | 0.45              |
| 1:P:160:GLY:O    | 1:P:317:GLY:HA3  | 2.16                     | 0.45              |
| 1:P:164:LEU:HD13 | 1:P:313:THR:CA   | 2.40                     | 0.45              |
| 1:P:219:ASP:C    | 1:P:224:ASN:CB   | 2.82                     | 0.45              |
| 1:A:114:LEU:CD1  | 1:A:156:ALA:HB1  | 2.46                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:66:TYR:CE2   | 1:B:88:LEU:HD22  | 2.50                     | 0.45              |
| 1:B:109:VAL:CG2  | 1:B:321:VAL:HG13 | 2.46                     | 0.45              |
| 1:B:127:ARG:HG2  | 1:B:154:ILE:HD12 | 1.98                     | 0.45              |
| 1:B:152:ILE:C    | 1:B:153:THR:HG23 | 2.37                     | 0.45              |
| 1:B:165:GLU:OE1  | 1:B:167:GLU:CB   | 2.65                     | 0.45              |
| 1:B:181:GLY:HA2  | 1:B:206:VAL:CG1  | 2.31                     | 0.45              |
| 1:B:245:GLU:O    | 1:F:52:ILE:CG1   | 2.61                     | 0.45              |
| 1:C:98:LEU:HD21  | 1:C:104:ASN:HB3  | 1.98                     | 0.45              |
| 1:C:114:LEU:CD1  | 1:C:156:ALA:HB1  | 2.46                     | 0.45              |
| 1:D:133:ASN:HD22 | 1:D:148:GLU:CA   | 2.11                     | 0.45              |
| 1:D:209:LEU:O    | 1:D:213:VAL:HG23 | 2.16                     | 0.45              |
| 1:E:39:LYS:HE2   | 1:E:41:LYS:HD2   | 1.97                     | 0.45              |
| 1:E:213:VAL:HB   | 1:E:235:LEU:HD13 | 1.99                     | 0.45              |
| 1:E:285:ILE:C    | 1:E:289:THR:OG1  | 2.55                     | 0.45              |
| 1:H:219:ASP:C    | 1:H:224:ASN:CB   | 2.82                     | 0.45              |
| 1:I:160:GLY:O    | 1:I:317:GLY:HA3  | 2.16                     | 0.45              |
| 1:I:209:LEU:O    | 1:I:213:VAL:HG23 | 2.16                     | 0.45              |
| 1:I:222:ASN:CB   | 1:I:237:ASN:CB   | 2.90                     | 0.45              |
| 1:K:43:TYR:CD1   | 1:K:67:LEU:HB3   | 2.50                     | 0.45              |
| 1:K:208:ASP:HA   | 1:K:211:ILE:HD11 | 1.99                     | 0.45              |
| 1:K:307:THR:O    | 1:P:230:GLN:CB   | 2.50                     | 0.45              |
| 1:L:116:VAL:HG21 | 1:L:121:LYS:HG3  | 1.98                     | 0.45              |
| 1:L:165:GLU:OE1  | 1:L:167:GLU:CB   | 2.65                     | 0.45              |
| 1:L:184:MET:HG3  | 1:L:184:MET:O    | 2.17                     | 0.45              |
| 1:M:100:SER:HB3  | 1:M:101:ASN:HB2  | 1.99                     | 0.45              |
| 1:M:159:SER:OG   | 1:M:163:PHE:CE1  | 2.67                     | 0.45              |
| 1:M:285:ILE:C    | 1:M:289:THR:OG1  | 2.55                     | 0.45              |
| 1:M:320:LYS:HG2  | 1:N:50:ILE:CB    | 2.47                     | 0.45              |
| 1:N:100:SER:HB3  | 1:N:101:ASN:HB2  | 1.99                     | 0.45              |
| 1:N:165:GLU:OE1  | 1:N:167:GLU:CB   | 2.65                     | 0.45              |
| 1:N:208:ASP:HA   | 1:N:211:ILE:HD11 | 1.99                     | 0.45              |
| 1:O:109:VAL:CG2  | 1:O:321:VAL:HG13 | 2.46                     | 0.45              |
| 1:O:159:SER:OG   | 1:O:163:PHE:CE1  | 2.67                     | 0.45              |
| 1:O:214:GLY:N    | 1:O:235:LEU:HD11 | 2.31                     | 0.45              |
| 1:O:320:LYS:HD3  | 1:P:49:TYR:CE2   | 2.52                     | 0.45              |
| 1:P:165:GLU:OE1  | 1:P:167:GLU:CB   | 2.65                     | 0.45              |
| 1:A:152:ILE:C    | 1:A:153:THR:HG23 | 2.37                     | 0.45              |
| 1:C:177:ILE:CG1  | 1:C:284:PHE:HA   | 2.46                     | 0.45              |
| 1:D:43:TYR:CD2   | 1:D:67:LEU:CB    | 2.95                     | 0.45              |
| 1:D:213:VAL:HB   | 1:D:235:LEU:HD13 | 1.99                     | 0.45              |
| 1:D:222:ASN:ND2  | 1:D:237:ASN:ND2  | 2.65                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:284:PHE:HE2  | 1:D:296:ILE:HG12 | 1.74                     | 0.45              |
| 1:E:35:ARG:HH22  | 1:E:316:GLU:HG2  | 1.81                     | 0.45              |
| 1:F:49:TYR:HE1   | 1:G:320:LYS:CB   | 2.20                     | 0.45              |
| 1:F:61:LEU:HD23  | 1:F:62:ASP:HB2   | 1.99                     | 0.45              |
| 1:G:203:GLU:CD   | 1:J:198:GLU:HG2  | 2.35                     | 0.45              |
| 1:G:208:ASP:HA   | 1:G:211:ILE:HD11 | 1.99                     | 0.45              |
| 1:G:222:ASN:CB   | 1:G:237:ASN:CB   | 2.90                     | 0.45              |
| 1:H:27:LYS:HZ1   | 1:H:35:ARG:HE    | 1.62                     | 0.45              |
| 1:H:43:TYR:CE2   | 1:H:70:GLU:OE1   | 2.69                     | 0.45              |
| 1:H:60:GLU:N     | 1:H:137:THR:HG22 | 2.32                     | 0.45              |
| 1:H:123:LYS:HZ1  | 1:H:127:ARG:HH12 | 1.65                     | 0.45              |
| 1:H:203:GLU:OE1  | 1:K:274:PHE:CE2  | 2.65                     | 0.45              |
| 1:I:184:MET:HG3  | 1:I:184:MET:O    | 2.17                     | 0.45              |
| 1:J:184:MET:HG3  | 1:J:184:MET:O    | 2.17                     | 0.45              |
| 1:J:208:ASP:HA   | 1:J:211:ILE:HD11 | 1.99                     | 0.45              |
| 1:K:7:GLU:C      | 1:K:326:TYR:CE1  | 2.87                     | 0.45              |
| 1:K:114:LEU:CD1  | 1:K:156:ALA:HB1  | 2.46                     | 0.45              |
| 1:K:184:MET:HG3  | 1:K:184:MET:O    | 2.17                     | 0.45              |
| 1:L:112:CYS:HG   | 1:L:122:ALA:HB1  | 1.82                     | 0.45              |
| 1:M:98:LEU:HD21  | 1:M:104:ASN:HB3  | 1.98                     | 0.45              |
| 1:M:127:ARG:HG2  | 1:M:154:ILE:HD12 | 1.98                     | 0.45              |
| 1:M:184:MET:HG3  | 1:M:184:MET:O    | 2.17                     | 0.45              |
| 1:O:219:ASP:C    | 1:O:224:ASN:CB   | 2.82                     | 0.45              |
| 1:O:222:ASN:CB   | 1:O:237:ASN:CB   | 2.90                     | 0.45              |
| 1:P:116:VAL:CG2  | 1:P:121:LYS:HZ2  | 2.29                     | 0.45              |
| 1:P:208:ASP:HA   | 1:P:211:ILE:HD11 | 1.99                     | 0.45              |
| 1:A:22:ILE:HB    | 1:A:27:LYS:HE3   | 1.96                     | 0.45              |
| 1:A:98:LEU:HD21  | 1:A:104:ASN:HB3  | 1.98                     | 0.45              |
| 1:A:184:MET:HG3  | 1:A:184:MET:O    | 2.17                     | 0.45              |
| 1:B:7:GLU:HB2    | 1:B:107:GLN:HE22 | 1.82                     | 0.45              |
| 1:B:285:ILE:C    | 1:B:289:THR:OG1  | 2.55                     | 0.45              |
| 1:C:152:ILE:C    | 1:C:153:THR:HG23 | 2.37                     | 0.45              |
| 1:C:213:VAL:HB   | 1:C:235:LEU:HD13 | 1.99                     | 0.45              |
| 1:D:114:LEU:CD1  | 1:D:156:ALA:HB1  | 2.46                     | 0.45              |
| 1:D:171:ASN:HA   | 1:D:191:ASN:OD1  | 2.17                     | 0.45              |
| 1:E:7:GLU:C      | 1:E:326:TYR:CE1  | 2.87                     | 0.45              |
| 1:E:152:ILE:C    | 1:E:153:THR:HG23 | 2.37                     | 0.45              |
| 1:E:208:ASP:HA   | 1:E:211:ILE:HD11 | 1.99                     | 0.45              |
| 1:E:222:ASN:ND2  | 1:E:237:ASN:ND2  | 2.65                     | 0.45              |
| 1:E:226:ILE:HD12 | 1:F:303:ASN:C    | 2.11                     | 0.45              |
| 1:F:35:ARG:HH22  | 1:F:316:GLU:HG2  | 1.81                     | 0.45              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:203:GLU:OE2  | 1:I:274:PHE:CZ   | 2.70                     | 0.45              |
| 1:F:208:ASP:HA   | 1:F:211:ILE:HD11 | 1.99                     | 0.45              |
| 1:G:60:GLU:N     | 1:G:137:THR:HG22 | 2.32                     | 0.45              |
| 1:G:184:MET:HG3  | 1:G:184:MET:O    | 2.17                     | 0.45              |
| 1:I:49:TYR:CA    | 1:M:246:ILE:HD11 | 2.44                     | 0.45              |
| 1:I:100:SER:HB3  | 1:I:101:ASN:HB2  | 1.99                     | 0.45              |
| 1:I:208:ASP:HA   | 1:I:211:ILE:HD11 | 1.99                     | 0.45              |
| 1:I:222:ASN:ND2  | 1:I:237:ASN:ND2  | 2.65                     | 0.45              |
| 1:J:36:VAL:N     | 1:J:312:TRP:CH2  | 2.80                     | 0.45              |
| 1:J:116:VAL:HG21 | 1:J:121:LYS:HG3  | 1.98                     | 0.45              |
| 1:K:39:LYS:HE2   | 1:K:41:LYS:HD2   | 1.97                     | 0.45              |
| 1:K:116:VAL:HG21 | 1:K:121:LYS:HG3  | 1.98                     | 0.45              |
| 1:K:160:GLY:O    | 1:K:317:GLY:HA3  | 2.16                     | 0.45              |
| 1:K:165:GLU:OE1  | 1:K:167:GLU:CB   | 2.65                     | 0.45              |
| 1:L:208:ASP:HA   | 1:L:211:ILE:HD11 | 1.99                     | 0.45              |
| 1:M:208:ASP:HA   | 1:M:211:ILE:HD11 | 1.99                     | 0.45              |
| 1:M:222:ASN:ND2  | 1:M:237:ASN:ND2  | 2.65                     | 0.45              |
| 1:N:320:LYS:HG2  | 1:O:50:ILE:CB    | 2.47                     | 0.45              |
| 1:N:320:LYS:NZ   | 1:O:50:ILE:CG1   | 2.72                     | 0.45              |
| 1:O:35:ARG:HH22  | 1:O:316:GLU:HG2  | 1.81                     | 0.45              |
| 1:O:123:LYS:HZ3  | 1:O:127:ARG:NH1  | 2.14                     | 0.45              |
| 1:O:208:ASP:HA   | 1:O:211:ILE:HD11 | 1.99                     | 0.45              |
| 1:O:285:ILE:C    | 1:O:289:THR:OG1  | 2.55                     | 0.45              |
| 1:P:213:VAL:HB   | 1:P:235:LEU:HD13 | 1.99                     | 0.45              |
| 1:A:81:LYS:HB3   | 1:B:170:LYS:CE   | 2.48                     | 0.44              |
| 1:B:177:ILE:CG1  | 1:B:284:PHE:HA   | 2.46                     | 0.44              |
| 1:C:45:LEU:CB    | 1:C:67:LEU:HD11  | 2.40                     | 0.44              |
| 1:D:177:ILE:CG1  | 1:D:284:PHE:HA   | 2.46                     | 0.44              |
| 1:E:27:LYS:HE2   | 1:E:35:ARG:CG    | 2.34                     | 0.44              |
| 1:E:184:MET:HG3  | 1:E:184:MET:O    | 2.17                     | 0.44              |
| 1:F:171:ASN:HA   | 1:F:191:ASN:OD1  | 2.17                     | 0.44              |
| 1:F:217:LEU:CD2  | 1:G:278:GLN:OE1  | 2.64                     | 0.44              |
| 1:F:285:ILE:C    | 1:F:289:THR:OG1  | 2.55                     | 0.44              |
| 1:G:123:LYS:HZ1  | 1:G:127:ARG:HH12 | 1.65                     | 0.44              |
| 1:H:222:ASN:ND2  | 1:H:237:ASN:ND2  | 2.65                     | 0.44              |
| 1:I:34:LYS:N     | 1:I:35:ARG:C     | 2.68                     | 0.44              |
| 1:I:58:LYS:HZ2   | 1:I:65:GLU:CG    | 2.30                     | 0.44              |
| 1:I:61:LEU:HD23  | 1:I:62:ASP:HB2   | 1.99                     | 0.44              |
| 1:I:116:VAL:HG21 | 1:I:121:LYS:HG3  | 1.98                     | 0.44              |
| 1:J:100:SER:HB3  | 1:J:101:ASN:HB2  | 1.99                     | 0.44              |
| 1:J:323:VAL:CA   | 1:K:49:TYR:C     | 2.53                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:52:ILE:CG1   | 1:P:247:ASP:N    | 2.71                     | 0.44              |
| 1:L:60:GLU:N     | 1:L:137:THR:HG22 | 2.32                     | 0.44              |
| 1:M:123:LYS:HZ3  | 1:M:127:ARG:NH1  | 2.15                     | 0.44              |
| 1:N:7:GLU:HB2    | 1:N:107:GLN:HE22 | 1.82                     | 0.44              |
| 1:N:43:TYR:HH    | 1:N:56:SER:HG    | 1.62                     | 0.44              |
| 1:N:152:ILE:C    | 1:N:153:THR:HG23 | 2.37                     | 0.44              |
| 1:O:320:LYS:HG2  | 1:P:50:ILE:CB    | 2.47                     | 0.44              |
| 1:P:256:LYS:HA   | 1:P:256:LYS:CE   | 2.28                     | 0.44              |
| 1:A:95:THR:HG21  | 1:A:136:ILE:HG21 | 1.96                     | 0.44              |
| 1:A:160:GLY:O    | 1:A:317:GLY:HA3  | 2.16                     | 0.44              |
| 1:A:222:ASN:ND2  | 1:A:237:ASN:ND2  | 2.65                     | 0.44              |
| 1:B:220:LEU:O    | 1:B:221:ASN:O    | 2.35                     | 0.44              |
| 1:C:7:GLU:HB2    | 1:C:107:GLN:HE22 | 1.82                     | 0.44              |
| 1:C:11:THR:HG23  | 1:C:318:LEU:CB   | 2.44                     | 0.44              |
| 1:C:49:TYR:CE2   | 1:D:320:LYS:HD3  | 2.52                     | 0.44              |
| 1:C:248:THR:CG2  | 1:G:52:ILE:HA    | 2.47                     | 0.44              |
| 1:C:284:PHE:HE2  | 1:C:296:ILE:HG12 | 1.74                     | 0.44              |
| 1:D:285:ILE:C    | 1:D:289:THR:OG1  | 2.55                     | 0.44              |
| 1:F:22:ILE:HB    | 1:F:27:LYS:HE3   | 1.96                     | 0.44              |
| 1:F:27:LYS:HZ1   | 1:F:35:ARG:HH21  | 1.65                     | 0.44              |
| 1:F:272:ARG:HA   | 1:I:202:GLU:CD   | 2.36                     | 0.44              |
| 1:G:285:ILE:C    | 1:G:289:THR:OG1  | 2.56                     | 0.44              |
| 1:H:22:ILE:HB    | 1:H:27:LYS:HE3   | 1.96                     | 0.44              |
| 1:H:165:GLU:OE1  | 1:H:167:GLU:CB   | 2.65                     | 0.44              |
| 1:H:271:LYS:HE2  | 1:K:268:LEU:CD2  | 2.46                     | 0.44              |
| 1:H:272:ARG:CA   | 1:K:202:GLU:HG2  | 2.48                     | 0.44              |
| 1:I:285:ILE:C    | 1:I:289:THR:OG1  | 2.55                     | 0.44              |
| 1:J:61:LEU:HD23  | 1:J:62:ASP:HB2   | 1.99                     | 0.44              |
| 1:K:7:GLU:HB2    | 1:K:107:GLN:HE22 | 1.82                     | 0.44              |
| 1:K:50:ILE:HD12  | 1:O:246:ILE:C    | 2.37                     | 0.44              |
| 1:K:60:GLU:N     | 1:K:137:THR:HG22 | 2.32                     | 0.44              |
| 1:K:100:SER:HB3  | 1:K:101:ASN:HB2  | 1.99                     | 0.44              |
| 1:L:11:THR:HG23  | 1:L:318:LEU:CB   | 2.44                     | 0.44              |
| 1:L:44:ASN:HB2   | 1:L:64:LYS:NZ    | 2.26                     | 0.44              |
| 1:M:320:LYS:HD3  | 1:N:49:TYR:CE2   | 2.52                     | 0.44              |
| 1:N:149:ILE:HD13 | 1:N:149:ILE:HG21 | 1.74                     | 0.44              |
| 1:O:152:ILE:C    | 1:O:153:THR:HG23 | 2.37                     | 0.44              |
| 1:P:285:ILE:C    | 1:P:289:THR:OG1  | 2.55                     | 0.44              |
| 1:A:50:ILE:CB    | 1:B:320:LYS:HG2  | 2.47                     | 0.44              |
| 1:A:127:ARG:HG2  | 1:A:154:ILE:HD12 | 1.98                     | 0.44              |
| 1:A:177:ILE:CG1  | 1:A:284:PHE:HA   | 2.46                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:284:PHE:CE2  | 1:A:296:ILE:CG2  | 2.95                     | 0.44              |
| 1:B:213:VAL:HB   | 1:B:235:LEU:HD13 | 1.99                     | 0.44              |
| 1:B:240:MET:HE1  | 1:F:73:VAL:HG11  | 1.98                     | 0.44              |
| 1:C:220:LEU:O    | 1:C:221:ASN:O    | 2.35                     | 0.44              |
| 1:D:165:GLU:OE1  | 1:D:167:GLU:CB   | 2.65                     | 0.44              |
| 1:D:220:LEU:O    | 1:D:221:ASN:O    | 2.35                     | 0.44              |
| 1:E:43:TYR:CD2   | 1:E:67:LEU:CB    | 2.95                     | 0.44              |
| 1:E:43:TYR:CD2   | 1:E:67:LEU:CD1   | 3.01                     | 0.44              |
| 1:F:152:ILE:C    | 1:F:153:THR:HG23 | 2.37                     | 0.44              |
| 1:F:184:MET:HG3  | 1:F:184:MET:O    | 2.17                     | 0.44              |
| 1:F:214:GLY:N    | 1:F:235:LEU:HD11 | 2.31                     | 0.44              |
| 1:G:7:GLU:C      | 1:G:326:TYR:CE1  | 2.87                     | 0.44              |
| 1:G:217:LEU:CD2  | 1:H:278:GLN:OE1  | 2.64                     | 0.44              |
| 1:H:7:GLU:HB2    | 1:H:107:GLN:HE22 | 1.82                     | 0.44              |
| 1:H:183:ASN:HD21 | 1:K:197:SER:CA   | 2.26                     | 0.44              |
| 1:I:74:GLU:CA    | 1:M:245:GLU:O    | 2.54                     | 0.44              |
| 1:K:32:ASP:HB3   | 1:K:34:LYS:HD2   | 1.93                     | 0.44              |
| 1:K:43:TYR:CD2   | 1:K:67:LEU:CD1   | 3.01                     | 0.44              |
| 1:K:285:ILE:C    | 1:K:289:THR:OG1  | 2.55                     | 0.44              |
| 1:N:60:GLU:N     | 1:N:137:THR:HG22 | 2.32                     | 0.44              |
| 1:N:306:ILE:HD12 | 1:N:307:THR:N    | 2.29                     | 0.44              |
| 1:O:7:GLU:HB2    | 1:O:107:GLN:HE22 | 1.82                     | 0.44              |
| 1:O:32:ASP:HB3   | 1:O:34:LYS:HD2   | 1.93                     | 0.44              |
| 1:O:43:TYR:CD2   | 1:O:67:LEU:CB    | 2.95                     | 0.44              |
| 1:O:43:TYR:HH    | 1:O:56:SER:HG    | 1.62                     | 0.44              |
| 1:O:100:SER:HB3  | 1:O:101:ASN:HB2  | 1.99                     | 0.44              |
| 1:O:213:VAL:HB   | 1:O:235:LEU:HD13 | 1.99                     | 0.44              |
| 1:A:173:ASN:ND2  | 1:A:279:LEU:CD2  | 2.70                     | 0.44              |
| 1:A:220:LEU:O    | 1:A:221:ASN:O    | 2.35                     | 0.44              |
| 1:A:246:ILE:CG1  | 1:E:49:TYR:CD2   | 3.01                     | 0.44              |
| 1:A:256:LYS:HA   | 1:A:256:LYS:CE   | 2.28                     | 0.44              |
| 1:B:81:LYS:HB3   | 1:C:170:LYS:CE   | 2.48                     | 0.44              |
| 1:C:81:LYS:HB3   | 1:D:170:LYS:CE   | 2.47                     | 0.44              |
| 1:C:160:GLY:O    | 1:C:317:GLY:HA3  | 2.16                     | 0.44              |
| 1:C:184:MET:HG3  | 1:C:184:MET:O    | 2.17                     | 0.44              |
| 1:C:248:THR:CG2  | 1:G:52:ILE:HG23  | 2.47                     | 0.44              |
| 1:D:164:LEU:HD13 | 1:D:313:THR:CA   | 2.40                     | 0.44              |
| 1:E:179:PHE:HB2  | 1:E:288:THR:HB   | 1.93                     | 0.44              |
| 1:G:27:LYS:HZ1   | 1:G:35:ARG:HH21  | 1.64                     | 0.44              |
| 1:G:35:ARG:HH22  | 1:G:316:GLU:HG2  | 1.81                     | 0.44              |
| 1:G:43:TYR:CD2   | 1:G:67:LEU:CB    | 2.95                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:209:LEU:O    | 1:H:213:VAL:HG23 | 2.16                     | 0.44              |
| 1:J:60:GLU:N     | 1:J:137:THR:HG22 | 2.32                     | 0.44              |
| 1:K:61:LEU:HD23  | 1:K:62:ASP:HB2   | 1.99                     | 0.44              |
| 1:K:152:ILE:C    | 1:K:153:THR:HG23 | 2.37                     | 0.44              |
| 1:L:7:GLU:HB2    | 1:L:107:GLN:HE22 | 1.82                     | 0.44              |
| 1:L:100:SER:HB3  | 1:L:101:ASN:HB2  | 1.99                     | 0.44              |
| 1:L:109:VAL:CG2  | 1:L:321:VAL:HG13 | 2.46                     | 0.44              |
| 1:M:152:ILE:C    | 1:M:153:THR:HG23 | 2.37                     | 0.44              |
| 1:N:213:VAL:HB   | 1:N:235:LEU:HD13 | 1.99                     | 0.44              |
| 1:N:284:PHE:CZ   | 1:N:304:SER:OG   | 2.68                     | 0.44              |
| 1:N:320:LYS:HD3  | 1:O:49:TYR:CZ    | 2.51                     | 0.44              |
| 1:O:220:LEU:O    | 1:O:221:ASN:O    | 2.35                     | 0.44              |
| 1:P:100:SER:HB3  | 1:P:101:ASN:HB2  | 1.99                     | 0.44              |
| 1:P:222:ASN:ND2  | 1:P:237:ASN:ND2  | 2.65                     | 0.44              |
| 1:P:284:PHE:CE2  | 1:P:296:ILE:CG2  | 2.95                     | 0.44              |
| 1:A:61:LEU:HD23  | 1:A:62:ASP:HB2   | 1.99                     | 0.44              |
| 1:A:181:GLY:HA2  | 1:A:206:VAL:CG1  | 2.31                     | 0.44              |
| 1:A:241:LYS:CG   | 1:F:166:GLN:NE2  | 2.79                     | 0.44              |
| 1:B:98:LEU:HD21  | 1:B:104:ASN:HB3  | 1.98                     | 0.44              |
| 1:B:160:GLY:O    | 1:B:317:GLY:HA3  | 2.16                     | 0.44              |
| 1:B:184:MET:HG3  | 1:B:184:MET:O    | 2.17                     | 0.44              |
| 1:C:43:TYR:CD2   | 1:C:67:LEU:CD1   | 3.01                     | 0.44              |
| 1:C:116:VAL:HG21 | 1:C:121:LYS:HZ2  | 1.81                     | 0.44              |
| 1:C:285:ILE:C    | 1:C:289:THR:OG1  | 2.55                     | 0.44              |
| 1:D:184:MET:HG3  | 1:D:184:MET:O    | 2.17                     | 0.44              |
| 1:E:171:ASN:HA   | 1:E:191:ASN:OD1  | 2.17                     | 0.44              |
| 1:F:272:ARG:CA   | 1:I:202:GLU:OE2  | 2.57                     | 0.44              |
| 1:G:7:GLU:HB2    | 1:G:107:GLN:HE22 | 1.82                     | 0.44              |
| 1:G:36:VAL:N     | 1:G:312:TRP:CH2  | 2.80                     | 0.44              |
| 1:G:61:LEU:HD23  | 1:G:62:ASP:HB2   | 1.99                     | 0.44              |
| 1:G:209:LEU:O    | 1:G:213:VAL:HG23 | 2.16                     | 0.44              |
| 1:H:35:ARG:HH22  | 1:H:316:GLU:HG2  | 1.81                     | 0.44              |
| 1:I:43:TYR:CD2   | 1:I:67:LEU:CD1   | 3.01                     | 0.44              |
| 1:I:278:GLN:OE1  | 1:J:217:LEU:CD2  | 2.64                     | 0.44              |
| 1:J:278:GLN:OE1  | 1:K:217:LEU:CD2  | 2.64                     | 0.44              |
| 1:J:296:ILE:O    | 1:J:296:ILE:HG13 | 2.18                     | 0.44              |
| 1:K:308:ASN:O    | 1:P:229:GLU:OE1  | 2.36                     | 0.44              |
| 1:N:35:ARG:HH22  | 1:N:316:GLU:HG2  | 1.81                     | 0.44              |
| 1:N:220:LEU:O    | 1:N:221:ASN:O    | 2.35                     | 0.44              |
| 1:O:43:TYR:CE2   | 1:O:67:LEU:CG    | 3.01                     | 0.44              |
| 1:O:284:PHE:CZ   | 1:O:304:SER:OG   | 2.68                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:302:ASN:HB2  | 1:P:226:ILE:HG12 | 1.16                     | 0.44              |
| 1:P:43:TYR:CE2   | 1:P:67:LEU:CG    | 3.01                     | 0.44              |
| 1:P:152:ILE:C    | 1:P:153:THR:HG23 | 2.37                     | 0.44              |
| 1:P:220:LEU:O    | 1:P:221:ASN:O    | 2.35                     | 0.44              |
| 1:A:43:TYR:CD2   | 1:A:67:LEU:CB    | 2.95                     | 0.44              |
| 1:A:44:ASN:HB2   | 1:A:64:LYS:NZ    | 2.26                     | 0.44              |
| 1:B:50:ILE:CB    | 1:C:320:LYS:HG2  | 2.47                     | 0.44              |
| 1:B:52:ILE:HD13  | 1:G:245:GLU:OE2  | 2.17                     | 0.44              |
| 1:B:58:LYS:HZ2   | 1:B:65:GLU:CG    | 2.31                     | 0.44              |
| 1:B:95:THR:HG21  | 1:B:136:ILE:HG21 | 1.97                     | 0.44              |
| 1:B:113:PRO:O    | 1:B:116:VAL:HG12 | 2.18                     | 0.44              |
| 1:B:246:ILE:CA   | 1:F:52:ILE:HG12  | 2.47                     | 0.44              |
| 1:B:248:THR:CG2  | 1:F:52:ILE:CD1   | 2.95                     | 0.44              |
| 1:C:171:ASN:HA   | 1:C:191:ASN:OD1  | 2.17                     | 0.44              |
| 1:D:60:GLU:N     | 1:D:137:THR:HG22 | 2.32                     | 0.44              |
| 1:D:152:ILE:C    | 1:D:153:THR:HG23 | 2.37                     | 0.44              |
| 1:D:246:ILE:N    | 1:H:49:TYR:CZ    | 2.80                     | 0.44              |
| 1:G:233:SER:HB3  | 1:H:277:ASP:OD2  | 2.18                     | 0.44              |
| 1:H:152:ILE:C    | 1:H:153:THR:HG23 | 2.37                     | 0.44              |
| 1:H:183:ASN:CG   | 1:K:197:SER:CB   | 2.85                     | 0.44              |
| 1:I:49:TYR:C     | 1:M:246:ILE:HD11 | 1.91                     | 0.44              |
| 1:I:60:GLU:N     | 1:I:137:THR:HG22 | 2.32                     | 0.44              |
| 1:I:78:GLU:OE1   | 1:M:245:GLU:OE2  | 2.35                     | 0.44              |
| 1:J:219:ASP:OD1  | 1:J:225:LEU:HG   | 2.11                     | 0.44              |
| 1:K:109:VAL:CG2  | 1:K:321:VAL:HG13 | 2.46                     | 0.44              |
| 1:K:113:PRO:O    | 1:K:116:VAL:HG12 | 2.18                     | 0.44              |
| 1:K:222:ASN:ND2  | 1:K:237:ASN:ND2  | 2.65                     | 0.44              |
| 1:K:278:GLN:OE1  | 1:L:217:LEU:CD2  | 2.65                     | 0.44              |
| 1:L:152:ILE:C    | 1:L:153:THR:HG23 | 2.37                     | 0.44              |
| 1:M:213:VAL:HB   | 1:M:235:LEU:HD13 | 1.99                     | 0.44              |
| 1:M:220:LEU:O    | 1:M:221:ASN:O    | 2.35                     | 0.44              |
| 1:N:43:TYR:CE2   | 1:N:67:LEU:CG    | 3.01                     | 0.44              |
| 1:N:113:PRO:O    | 1:N:116:VAL:HG12 | 2.18                     | 0.44              |
| 1:N:320:LYS:HD3  | 1:O:49:TYR:CE2   | 2.52                     | 0.44              |
| 1:O:165:GLU:OE1  | 1:O:167:GLU:CB   | 2.65                     | 0.44              |
| 1:P:34:LYS:H     | 1:P:35:ARG:HB2   | 1.79                     | 0.44              |
| 1:A:165:GLU:OE1  | 1:A:167:GLU:CB   | 2.65                     | 0.44              |
| 1:A:213:VAL:HB   | 1:A:235:LEU:HD13 | 1.99                     | 0.44              |
| 1:B:61:LEU:HD23  | 1:B:62:ASP:HB2   | 1.99                     | 0.44              |
| 1:C:45:LEU:CD2   | 1:C:58:LYS:HZ3   | 2.30                     | 0.44              |
| 1:C:164:LEU:HD13 | 1:C:313:THR:CA   | 2.40                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:240:MET:CA   | 1:H:166:GLN:CG   | 2.91                     | 0.44              |
| 1:C:240:MET:HE1  | 1:G:73:VAL:CG2   | 2.29                     | 0.44              |
| 1:D:113:PRO:O    | 1:D:116:VAL:HG12 | 2.18                     | 0.44              |
| 1:D:157:GLU:HG3  | 1:D:158:GLY:N    | 2.33                     | 0.44              |
| 1:E:7:GLU:HB2    | 1:E:107:GLN:HE22 | 1.82                     | 0.44              |
| 1:E:233:SER:HB3  | 1:F:277:ASP:OD2  | 2.18                     | 0.44              |
| 1:F:46:GLU:HG3   | 1:G:324:ALA:CA   | 2.39                     | 0.44              |
| 1:F:165:GLU:OE1  | 1:F:167:GLU:CB   | 2.65                     | 0.44              |
| 1:F:222:ASN:ND2  | 1:F:237:ASN:ND2  | 2.65                     | 0.44              |
| 1:G:43:TYR:CD2   | 1:G:67:LEU:CD1   | 3.01                     | 0.44              |
| 1:G:49:TYR:HE1   | 1:H:320:LYS:CB   | 2.20                     | 0.44              |
| 1:I:27:LYS:HE2   | 1:I:35:ARG:CG    | 2.34                     | 0.44              |
| 1:K:44:ASN:HB2   | 1:K:64:LYS:NZ    | 2.26                     | 0.44              |
| 1:L:43:TYR:CD2   | 1:L:67:LEU:CD1   | 3.01                     | 0.44              |
| 1:L:113:PRO:O    | 1:L:116:VAL:HG12 | 2.18                     | 0.44              |
| 1:M:61:LEU:HD23  | 1:M:62:ASP:HB2   | 1.99                     | 0.44              |
| 1:M:170:LYS:CD   | 1:N:78:GLU:C     | 2.78                     | 0.44              |
| 1:M:171:ASN:HA   | 1:M:191:ASN:OD1  | 2.17                     | 0.44              |
| 1:O:171:ASN:HA   | 1:O:191:ASN:OD1  | 2.17                     | 0.44              |
| 1:O:296:ILE:O    | 1:O:296:ILE:HG13 | 2.18                     | 0.44              |
| 1:P:171:ASN:HA   | 1:P:191:ASN:OD1  | 2.17                     | 0.44              |
| 1:A:43:TYR:CE2   | 1:A:67:LEU:CG    | 3.01                     | 0.44              |
| 1:B:123:LYS:HE2  | 1:B:127:ARG:NH2  | 2.33                     | 0.44              |
| 1:C:60:GLU:N     | 1:C:137:THR:HG22 | 2.32                     | 0.44              |
| 1:C:244:GLY:HA2  | 1:H:320:LYS:HD2  | 1.24                     | 0.44              |
| 1:D:100:SER:HB3  | 1:D:101:ASN:HB2  | 1.99                     | 0.44              |
| 1:D:116:VAL:HG21 | 1:D:121:LYS:HG3  | 1.98                     | 0.44              |
| 1:E:100:SER:HB3  | 1:E:101:ASN:HB2  | 1.99                     | 0.44              |
| 1:F:58:LYS:HZ2   | 1:F:65:GLU:CG    | 2.30                     | 0.44              |
| 1:F:183:ASN:HD21 | 1:I:197:SER:CB   | 2.17                     | 0.44              |
| 1:I:36:VAL:N     | 1:I:312:TRP:CH2  | 2.80                     | 0.44              |
| 1:I:165:GLU:OE1  | 1:I:167:GLU:CB   | 2.65                     | 0.44              |
| 1:I:220:LEU:O    | 1:I:221:ASN:O    | 2.35                     | 0.44              |
| 1:J:7:GLU:HB2    | 1:J:107:GLN:HE22 | 1.82                     | 0.44              |
| 1:J:43:TYR:CD2   | 1:J:67:LEU:CD1   | 3.01                     | 0.44              |
| 1:J:152:ILE:C    | 1:J:153:THR:HG23 | 2.37                     | 0.44              |
| 1:J:220:LEU:O    | 1:J:221:ASN:O    | 2.35                     | 0.44              |
| 1:J:285:ILE:C    | 1:J:289:THR:OG1  | 2.56                     | 0.44              |
| 1:K:43:TYR:CE2   | 1:K:67:LEU:CG    | 3.01                     | 0.44              |
| 1:K:220:LEU:O    | 1:K:221:ASN:O    | 2.35                     | 0.44              |
| 1:K:296:ILE:O    | 1:K:296:ILE:HG13 | 2.18                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:323:VAL:CA   | 1:L:49:TYR:C     | 2.53                     | 0.44              |
| 1:L:220:LEU:O    | 1:L:221:ASN:O    | 2.35                     | 0.44              |
| 1:M:43:TYR:CE2   | 1:M:67:LEU:CG    | 3.01                     | 0.44              |
| 1:N:11:THR:HG23  | 1:N:318:LEU:CB   | 2.44                     | 0.44              |
| 1:N:170:LYS:CE   | 1:O:81:LYS:HB3   | 2.48                     | 0.44              |
| 1:N:171:ASN:HA   | 1:N:191:ASN:OD1  | 2.17                     | 0.44              |
| 1:N:300:TYR:HA   | 1:O:227:THR:CB   | 2.46                     | 0.44              |
| 1:N:320:LYS:CG   | 1:O:49:TYR:C     | 2.21                     | 0.44              |
| 1:O:131:LYS:HD2  | 1:O:149:ILE:HD11 | 1.99                     | 0.44              |
| 1:P:296:ILE:O    | 1:P:296:ILE:HG13 | 2.18                     | 0.44              |
| 1:A:7:GLU:HB2    | 1:A:107:GLN:HE22 | 1.82                     | 0.44              |
| 1:A:109:VAL:CG2  | 1:A:321:VAL:HG13 | 2.46                     | 0.44              |
| 1:B:43:TYR:CD2   | 1:B:67:LEU:CD1   | 3.01                     | 0.44              |
| 1:C:50:ILE:CB    | 1:D:320:LYS:HG2  | 2.47                     | 0.44              |
| 1:C:157:GLU:HG3  | 1:C:158:GLY:N    | 2.33                     | 0.44              |
| 1:E:46:GLU:H     | 1:F:324:ALA:HB1  | 1.83                     | 0.44              |
| 1:E:48:GLY:N     | 1:F:324:ALA:N    | 2.63                     | 0.44              |
| 1:E:220:LEU:O    | 1:E:221:ASN:O    | 2.35                     | 0.44              |
| 1:E:296:ILE:O    | 1:E:296:ILE:HG13 | 2.18                     | 0.44              |
| 1:F:157:GLU:HG3  | 1:F:158:GLY:N    | 2.33                     | 0.44              |
| 1:F:198:GLU:HG3  | 1:I:203:GLU:HG3  | 0.56                     | 0.44              |
| 1:F:209:LEU:O    | 1:F:213:VAL:HG23 | 2.17                     | 0.44              |
| 1:F:233:SER:HB3  | 1:G:277:ASP:OD2  | 2.18                     | 0.44              |
| 1:G:22:ILE:HB    | 1:G:27:LYS:HE3   | 1.96                     | 0.44              |
| 1:G:173:ASN:ND2  | 1:G:279:LEU:CD2  | 2.70                     | 0.44              |
| 1:G:227:THR:CG2  | 1:H:300:TYR:H    | 2.31                     | 0.44              |
| 1:H:268:LEU:HD22 | 1:K:271:LYS:HZ1  | 1.83                     | 0.44              |
| 1:I:109:VAL:CG2  | 1:I:321:VAL:HG13 | 2.46                     | 0.44              |
| 1:I:241:LYS:HB2  | 1:M:308:ASN:HD21 | 1.81                     | 0.44              |
| 1:J:160:GLY:O    | 1:J:317:GLY:HA3  | 2.16                     | 0.44              |
| 1:J:250:SER:CB   | 1:J:253:VAL:HB   | 2.25                     | 0.44              |
| 1:K:157:GLU:HG3  | 1:K:158:GLY:N    | 2.33                     | 0.44              |
| 1:K:277:ASP:OD2  | 1:L:233:SER:HB3  | 2.18                     | 0.44              |
| 1:L:22:ILE:HB    | 1:L:27:LYS:HE3   | 1.96                     | 0.44              |
| 1:M:35:ARG:HH22  | 1:M:316:GLU:HG2  | 1.81                     | 0.44              |
| 1:M:170:LYS:CE   | 1:N:81:LYS:HB3   | 2.48                     | 0.44              |
| 1:M:219:ASP:HA   | 1:M:224:ASN:CG   | 2.36                     | 0.44              |
| 1:M:296:ILE:O    | 1:M:296:ILE:HG13 | 2.18                     | 0.44              |
| 1:N:296:ILE:O    | 1:N:296:ILE:HG13 | 2.18                     | 0.44              |
| 1:N:302:ASN:HB2  | 1:O:226:ILE:HG12 | 1.16                     | 0.44              |
| 1:O:123:LYS:HE2  | 1:O:127:ARG:NH2  | 2.33                     | 0.44              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:170:LYS:CE   | 1:P:81:LYS:HB3   | 2.47                     | 0.44              |
| 1:O:320:LYS:NZ   | 1:P:49:TYR:CE1   | 2.74                     | 0.44              |
| 1:P:123:LYS:HE2  | 1:P:127:ARG:NH2  | 2.33                     | 0.44              |
| 1:A:50:ILE:CG1   | 1:B:320:LYS:NZ   | 2.72                     | 0.43              |
| 1:B:78:GLU:C     | 1:C:170:LYS:CD   | 2.78                     | 0.43              |
| 1:C:87:LYS:HD3   | 1:C:129:TYR:CE2  | 2.53                     | 0.43              |
| 1:C:119:ASN:CG   | 1:C:120:ALA:N    | 2.72                     | 0.43              |
| 1:C:123:LYS:HE2  | 1:C:127:ARG:NH2  | 2.33                     | 0.43              |
| 1:C:222:ASN:HD22 | 1:C:237:ASN:HB2  | 1.75                     | 0.43              |
| 1:C:230:GLN:CD   | 1:H:306:ILE:CG2  | 2.86                     | 0.43              |
| 1:E:209:LEU:O    | 1:E:213:VAL:HG23 | 2.16                     | 0.43              |
| 1:F:46:GLU:H     | 1:G:324:ALA:HB1  | 1.83                     | 0.43              |
| 1:F:87:LYS:HD3   | 1:F:129:TYR:CE2  | 2.53                     | 0.43              |
| 1:F:204:HIS:HE1  | 1:I:270:GLU:O    | 2.01                     | 0.43              |
| 1:F:225:LEU:CA   | 1:G:276:LEU:O    | 2.64                     | 0.43              |
| 1:F:272:ARG:HB2  | 1:I:202:GLU:CG   | 2.38                     | 0.43              |
| 1:G:240:MET:SD   | 1:G:251:SER:CB   | 3.06                     | 0.43              |
| 1:H:61:LEU:HD23  | 1:H:62:ASP:HB2   | 1.99                     | 0.43              |
| 1:H:87:LYS:HD3   | 1:H:129:TYR:CE2  | 2.53                     | 0.43              |
| 1:I:43:TYR:CD2   | 1:I:67:LEU:CB    | 2.95                     | 0.43              |
| 1:I:52:ILE:HG12  | 1:M:246:ILE:HA   | 1.79                     | 0.43              |
| 1:J:109:VAL:CG2  | 1:J:321:VAL:HG13 | 2.46                     | 0.43              |
| 1:J:113:PRO:O    | 1:J:116:VAL:HG12 | 2.18                     | 0.43              |
| 1:J:157:GLU:HG3  | 1:J:158:GLY:N    | 2.33                     | 0.43              |
| 1:J:300:TYR:HB3  | 1:K:227:THR:H    | 1.59                     | 0.43              |
| 1:J:324:ALA:HB1  | 1:K:46:GLU:H     | 1.83                     | 0.43              |
| 1:K:320:LYS:HE2  | 1:P:247:ASP:CG   | 2.38                     | 0.43              |
| 1:L:43:TYR:CE2   | 1:L:67:LEU:CG    | 3.01                     | 0.43              |
| 1:L:285:ILE:C    | 1:L:289:THR:OG1  | 2.55                     | 0.43              |
| 1:M:7:GLU:HB2    | 1:M:107:GLN:HE22 | 1.82                     | 0.43              |
| 1:N:123:LYS:HE2  | 1:N:127:ARG:NH2  | 2.33                     | 0.43              |
| 1:O:60:GLU:N     | 1:O:137:THR:HG22 | 2.32                     | 0.43              |
| 1:O:61:LEU:HD23  | 1:O:62:ASP:HB2   | 1.99                     | 0.43              |
| 1:P:32:ASP:HB3   | 1:P:34:LYS:HD2   | 1.93                     | 0.43              |
| 1:P:60:GLU:N     | 1:P:137:THR:HG22 | 2.32                     | 0.43              |
| 1:P:61:LEU:HD23  | 1:P:62:ASP:HB2   | 1.99                     | 0.43              |
| 1:P:113:PRO:O    | 1:P:116:VAL:HG12 | 2.18                     | 0.43              |
| 1:P:116:VAL:HG21 | 1:P:121:LYS:HZ2  | 1.83                     | 0.43              |
| 1:A:26:LYS:CG    | 1:A:97:VAL:HG22  | 2.48                     | 0.43              |
| 1:A:58:LYS:HZ2   | 1:A:65:GLU:CG    | 2.31                     | 0.43              |
| 1:A:123:LYS:HE2  | 1:A:127:ARG:NH2  | 2.33                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:49:TYR:CE1   | 1:C:320:LYS:HD2  | 2.36                     | 0.43              |
| 1:B:60:GLU:N     | 1:B:137:THR:HG22 | 2.32                     | 0.43              |
| 1:B:171:ASN:HA   | 1:B:191:ASN:OD1  | 2.17                     | 0.43              |
| 1:B:208:ASP:HA   | 1:B:211:ILE:HD11 | 1.99                     | 0.43              |
| 1:B:222:ASN:HD22 | 1:B:237:ASN:HB2  | 1.75                     | 0.43              |
| 1:B:248:THR:CA   | 1:F:52:ILE:HD12  | 2.44                     | 0.43              |
| 1:C:100:SER:HB3  | 1:C:101:ASN:HB2  | 1.99                     | 0.43              |
| 1:C:109:VAL:CG2  | 1:C:321:VAL:HG13 | 2.46                     | 0.43              |
| 1:C:116:VAL:HG21 | 1:C:121:LYS:HG3  | 1.98                     | 0.43              |
| 1:C:198:GLU:OE2  | 1:C:274:PHE:CE2  | 2.71                     | 0.43              |
| 1:C:208:ASP:HA   | 1:C:211:ILE:HD11 | 1.99                     | 0.43              |
| 1:D:123:LYS:HE2  | 1:D:127:ARG:NH2  | 2.34                     | 0.43              |
| 1:D:208:ASP:HA   | 1:D:211:ILE:HD11 | 1.99                     | 0.43              |
| 1:E:46:GLU:HG3   | 1:F:324:ALA:CA   | 2.39                     | 0.43              |
| 1:E:310:SER:CA   | 1:E:313:THR:HG23 | 2.47                     | 0.43              |
| 1:F:48:GLY:N     | 1:G:324:ALA:N    | 2.63                     | 0.43              |
| 1:F:198:GLU:OE2  | 1:F:274:PHE:CE2  | 2.71                     | 0.43              |
| 1:F:220:LEU:O    | 1:F:221:ASN:O    | 2.35                     | 0.43              |
| 1:F:222:ASN:CB   | 1:F:237:ASN:CB   | 2.90                     | 0.43              |
| 1:F:310:SER:CA   | 1:F:313:THR:HG23 | 2.47                     | 0.43              |
| 1:H:113:PRO:O    | 1:H:116:VAL:HG12 | 2.18                     | 0.43              |
| 1:H:198:GLU:OE2  | 1:H:274:PHE:CE2  | 2.71                     | 0.43              |
| 1:H:202:GLU:OE2  | 1:K:272:ARG:CA   | 2.62                     | 0.43              |
| 1:H:274:PHE:CZ   | 1:K:203:GLU:OE2  | 2.72                     | 0.43              |
| 1:H:296:ILE:O    | 1:H:296:ILE:HG13 | 2.18                     | 0.43              |
| 1:I:7:GLU:HB2    | 1:I:107:GLN:HE22 | 1.82                     | 0.43              |
| 1:I:43:TYR:CE2   | 1:I:67:LEU:CG    | 3.01                     | 0.43              |
| 1:J:43:TYR:CE2   | 1:J:67:LEU:CG    | 3.01                     | 0.43              |
| 1:J:87:LYS:HD3   | 1:J:129:TYR:CE2  | 2.53                     | 0.43              |
| 1:J:203:GLU:O    | 1:J:204:HIS:CD2  | 2.72                     | 0.43              |
| 1:J:305:ILE:HG22 | 1:O:241:LYS:CE   | 2.47                     | 0.43              |
| 1:K:240:MET:SD   | 1:K:251:SER:CB   | 3.07                     | 0.43              |
| 1:L:123:LYS:HZ1  | 1:L:127:ARG:HH12 | 1.64                     | 0.43              |
| 1:L:203:GLU:O    | 1:L:204:HIS:CD2  | 2.72                     | 0.43              |
| 1:M:43:TYR:CD2   | 1:M:67:LEU:CB    | 2.95                     | 0.43              |
| 1:M:116:VAL:HG21 | 1:M:121:LYS:HG3  | 1.98                     | 0.43              |
| 1:N:320:LYS:NZ   | 1:O:49:TYR:CE1   | 2.74                     | 0.43              |
| 1:O:163:PHE:HA   | 1:P:76:SER:HG    | 1.80                     | 0.43              |
| 1:P:7:GLU:HB2    | 1:P:107:GLN:HE22 | 1.82                     | 0.43              |
| 1:P:43:TYR:CD2   | 1:P:67:LEU:CD1   | 3.01                     | 0.43              |
| 1:A:100:SER:HB3  | 1:A:101:ASN:HB2  | 1.99                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:157:GLU:HG3  | 1:A:158:GLY:N    | 2.33                     | 0.43              |
| 1:A:171:ASN:HA   | 1:A:191:ASN:OD1  | 2.17                     | 0.43              |
| 1:B:50:ILE:HB    | 1:G:245:GLU:OE2  | 2.18                     | 0.43              |
| 1:B:227:THR:CG2  | 1:C:300:TYR:C    | 2.66                     | 0.43              |
| 1:D:198:GLU:OE2  | 1:D:274:PHE:CE2  | 2.71                     | 0.43              |
| 1:D:203:GLU:O    | 1:D:204:HIS:CD2  | 2.72                     | 0.43              |
| 1:D:222:ASN:HD22 | 1:D:237:ASN:HB2  | 1.75                     | 0.43              |
| 1:E:119:ASN:CG   | 1:E:120:ALA:N    | 2.72                     | 0.43              |
| 1:F:7:GLU:HB2    | 1:F:107:GLN:HE22 | 1.82                     | 0.43              |
| 1:F:100:SER:HB3  | 1:F:101:ASN:HB2  | 2.00                     | 0.43              |
| 1:F:109:VAL:HG11 | 1:F:318:LEU:O    | 2.19                     | 0.43              |
| 1:G:43:TYR:CE2   | 1:G:67:LEU:CG    | 3.01                     | 0.43              |
| 1:G:50:ILE:HG22  | 1:H:323:VAL:CB   | 2.33                     | 0.43              |
| 1:G:113:PRO:O    | 1:G:116:VAL:HG12 | 2.18                     | 0.43              |
| 1:G:198:GLU:HG2  | 1:J:203:GLU:CD   | 2.34                     | 0.43              |
| 1:G:198:GLU:OE2  | 1:G:274:PHE:CE2  | 2.71                     | 0.43              |
| 1:H:268:LEU:HA   | 1:K:268:LEU:HD21 | 2.00                     | 0.43              |
| 1:H:271:LYS:HZ3  | 1:K:265:ALA:HA   | 1.79                     | 0.43              |
| 1:I:26:LYS:CG    | 1:I:97:VAL:HG22  | 2.48                     | 0.43              |
| 1:M:119:ASN:CG   | 1:M:120:ALA:N    | 2.72                     | 0.43              |
| 1:M:240:MET:SD   | 1:M:251:SER:CB   | 3.07                     | 0.43              |
| 1:M:300:TYR:HA   | 1:N:227:THR:CB   | 2.46                     | 0.43              |
| 1:N:61:LEU:HD23  | 1:N:62:ASP:HB2   | 1.99                     | 0.43              |
| 1:O:26:LYS:CG    | 1:O:97:VAL:HG22  | 2.48                     | 0.43              |
| 1:O:87:LYS:HD3   | 1:O:129:TYR:CE2  | 2.53                     | 0.43              |
| 1:O:157:GLU:HG3  | 1:O:158:GLY:N    | 2.33                     | 0.43              |
| 1:O:306:ILE:HD12 | 1:O:307:THR:N    | 2.29                     | 0.43              |
| 1:P:26:LYS:CG    | 1:P:97:VAL:HG22  | 2.48                     | 0.43              |
| 1:A:119:ASN:CG   | 1:A:120:ALA:N    | 2.72                     | 0.43              |
| 1:A:203:GLU:O    | 1:A:204:HIS:CD2  | 2.72                     | 0.43              |
| 1:A:240:MET:SD   | 1:A:251:SER:CB   | 3.07                     | 0.43              |
| 1:B:116:VAL:HG21 | 1:B:121:LYS:HG3  | 1.98                     | 0.43              |
| 1:B:211:ILE:HG13 | 1:B:212:ARG:N    | 2.34                     | 0.43              |
| 1:B:240:MET:SD   | 1:B:251:SER:CB   | 3.07                     | 0.43              |
| 1:B:246:ILE:C    | 1:F:50:ILE:HD12  | 2.37                     | 0.43              |
| 1:C:43:TYR:CE2   | 1:C:67:LEU:CG    | 3.01                     | 0.43              |
| 1:C:61:LEU:HD23  | 1:C:62:ASP:HB2   | 1.99                     | 0.43              |
| 1:C:284:PHE:CE2  | 1:C:296:ILE:CG2  | 2.95                     | 0.43              |
| 1:D:240:MET:SD   | 1:D:251:SER:CB   | 3.07                     | 0.43              |
| 1:E:87:LYS:HD3   | 1:E:129:TYR:CE2  | 2.53                     | 0.43              |
| 1:E:149:ILE:HD13 | 1:E:149:ILE:HG21 | 1.74                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:113:PRO:O    | 1:F:116:VAL:HG12 | 2.18                     | 0.43              |
| 1:F:149:ILE:HD13 | 1:F:149:ILE:HG21 | 1.74                     | 0.43              |
| 1:F:240:MET:SD   | 1:F:251:SER:CB   | 3.07                     | 0.43              |
| 1:F:268:LEU:CD2  | 1:I:271:LYS:HE2  | 2.48                     | 0.43              |
| 1:G:87:LYS:HD3   | 1:G:129:TYR:CE2  | 2.53                     | 0.43              |
| 1:G:152:ILE:C    | 1:G:153:THR:HG23 | 2.37                     | 0.43              |
| 1:G:203:GLU:CB   | 1:J:198:GLU:CA   | 2.89                     | 0.43              |
| 1:G:220:LEU:O    | 1:G:221:ASN:O    | 2.35                     | 0.43              |
| 1:H:220:LEU:O    | 1:H:221:ASN:O    | 2.35                     | 0.43              |
| 1:H:272:ARG:O    | 1:K:203:GLU:CB   | 2.44                     | 0.43              |
| 1:H:310:SER:CA   | 1:H:313:THR:HG23 | 2.47                     | 0.43              |
| 1:I:123:LYS:HE2  | 1:I:127:ARG:NH2  | 2.33                     | 0.43              |
| 1:I:152:ILE:C    | 1:I:153:THR:HG23 | 2.37                     | 0.43              |
| 1:I:277:ASP:OD2  | 1:J:233:SER:HB3  | 2.18                     | 0.43              |
| 1:I:296:ILE:O    | 1:I:296:ILE:HG13 | 2.18                     | 0.43              |
| 1:I:309:ASN:OD1  | 1:N:229:GLU:N    | 2.51                     | 0.43              |
| 1:J:109:VAL:HG11 | 1:J:318:LEU:O    | 2.19                     | 0.43              |
| 1:J:277:ASP:OD2  | 1:K:233:SER:HB3  | 2.18                     | 0.43              |
| 1:K:87:LYS:HD3   | 1:K:129:TYR:CE2  | 2.54                     | 0.43              |
| 1:K:123:LYS:HZ1  | 1:K:127:ARG:HH12 | 1.65                     | 0.43              |
| 1:K:250:SER:CB   | 1:K:253:VAL:HB   | 2.25                     | 0.43              |
| 1:L:32:ASP:HB3   | 1:L:34:LYS:HD2   | 1.93                     | 0.43              |
| 1:L:35:ARG:HH22  | 1:L:316:GLU:HG2  | 1.81                     | 0.43              |
| 1:L:61:LEU:HD23  | 1:L:62:ASP:HB2   | 1.99                     | 0.43              |
| 1:L:310:SER:CA   | 1:L:313:THR:HG23 | 2.47                     | 0.43              |
| 1:N:27:LYS:HZ1   | 1:N:35:ARG:HE    | 1.64                     | 0.43              |
| 1:N:116:VAL:HG21 | 1:N:121:LYS:HG3  | 1.98                     | 0.43              |
| 1:N:301:PRO:HD3  | 1:O:227:THR:CB   | 1.89                     | 0.43              |
| 1:O:113:PRO:O    | 1:O:116:VAL:HG12 | 2.18                     | 0.43              |
| 1:O:169:PHE:CE2  | 1:P:79:THR:CG2   | 3.02                     | 0.43              |
| 1:P:240:MET:SD   | 1:P:251:SER:CB   | 3.07                     | 0.43              |
| 1:A:43:TYR:CD2   | 1:A:67:LEU:CD1   | 3.01                     | 0.43              |
| 1:A:79:THR:CG2   | 1:B:169:PHE:CE2  | 3.02                     | 0.43              |
| 1:A:229:GLU:OE2  | 1:F:312:TRP:CD1  | 2.72                     | 0.43              |
| 1:A:296:ILE:O    | 1:A:296:ILE:HG13 | 2.18                     | 0.43              |
| 1:B:26:LYS:CG    | 1:B:97:VAL:HG22  | 2.48                     | 0.43              |
| 1:B:79:THR:CG2   | 1:C:169:PHE:CE2  | 3.02                     | 0.43              |
| 1:B:198:GLU:OE2  | 1:B:274:PHE:CE2  | 2.71                     | 0.43              |
| 1:B:245:GLU:CB   | 1:F:74:GLU:C     | 2.70                     | 0.43              |
| 1:B:296:ILE:O    | 1:B:296:ILE:HG13 | 2.18                     | 0.43              |
| 1:C:24:LYS:HD3   | 1:C:319:TYR:CZ   | 2.54                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:27:LYS:HZ1   | 1:C:35:ARG:HE    | 1.64                     | 0.43              |
| 1:E:198:GLU:OE2  | 1:E:274:PHE:CE2  | 2.71                     | 0.43              |
| 1:E:203:GLU:O    | 1:E:204:HIS:CD2  | 2.72                     | 0.43              |
| 1:F:123:LYS:HE2  | 1:F:127:ARG:NH2  | 2.33                     | 0.43              |
| 1:F:173:ASN:ND2  | 1:F:279:LEU:CD2  | 2.70                     | 0.43              |
| 1:G:100:SER:HB3  | 1:G:101:ASN:HB2  | 2.00                     | 0.43              |
| 1:G:157:GLU:HG3  | 1:G:158:GLY:N    | 2.33                     | 0.43              |
| 1:G:227:THR:H    | 1:H:300:TYR:HB3  | 1.59                     | 0.43              |
| 1:H:110:LEU:HD13 | 1:H:126:TYR:HH   | 1.84                     | 0.43              |
| 1:I:240:MET:SD   | 1:I:251:SER:CB   | 3.07                     | 0.43              |
| 1:I:310:SER:CA   | 1:I:313:THR:HG23 | 2.47                     | 0.43              |
| 1:J:131:LYS:HD2  | 1:J:149:ILE:HD11 | 1.99                     | 0.43              |
| 1:J:240:MET:SD   | 1:J:251:SER:CB   | 3.06                     | 0.43              |
| 1:K:43:TYR:CD2   | 1:K:67:LEU:CB    | 2.95                     | 0.43              |
| 1:K:110:LEU:HD13 | 1:K:126:TYR:HH   | 1.84                     | 0.43              |
| 1:K:312:TRP:HD1  | 1:P:229:GLU:OE2  | 2.00                     | 0.43              |
| 1:K:324:ALA:HB1  | 1:L:46:GLU:H     | 1.83                     | 0.43              |
| 1:M:60:GLU:N     | 1:M:137:THR:HG22 | 2.32                     | 0.43              |
| 1:M:87:LYS:HD3   | 1:M:129:TYR:CE2  | 2.53                     | 0.43              |
| 1:M:123:LYS:HE2  | 1:M:127:ARG:NH2  | 2.34                     | 0.43              |
| 1:N:119:ASN:CG   | 1:N:120:ALA:N    | 2.72                     | 0.43              |
| 1:O:211:ILE:HG13 | 1:O:212:ARG:N    | 2.34                     | 0.43              |
| 1:P:109:VAL:CG2  | 1:P:318:LEU:HB3  | 2.48                     | 0.43              |
| 1:P:119:ASN:CG   | 1:P:120:ALA:N    | 2.72                     | 0.43              |
| 1:P:157:GLU:HG3  | 1:P:158:GLY:N    | 2.33                     | 0.43              |
| 1:A:24:LYS:HD3   | 1:A:319:TYR:CZ   | 2.54                     | 0.43              |
| 1:A:45:LEU:CB    | 1:A:67:LEU:HD11  | 2.40                     | 0.43              |
| 1:A:60:GLU:N     | 1:A:137:THR:HG22 | 2.32                     | 0.43              |
| 1:A:113:PRO:O    | 1:A:116:VAL:HG12 | 2.18                     | 0.43              |
| 1:A:222:ASN:HD22 | 1:A:237:ASN:HB2  | 1.75                     | 0.43              |
| 1:A:246:ILE:HG13 | 1:F:320:LYS:CA   | 2.48                     | 0.43              |
| 1:A:284:PHE:HE2  | 1:A:296:ILE:HG12 | 1.74                     | 0.43              |
| 1:B:44:ASN:HB2   | 1:B:64:LYS:NZ    | 2.26                     | 0.43              |
| 1:B:52:ILE:CD1   | 1:G:245:GLU:OE2  | 2.66                     | 0.43              |
| 1:B:100:SER:HB3  | 1:B:101:ASN:HB2  | 1.99                     | 0.43              |
| 1:C:79:THR:CG2   | 1:D:169:PHE:CE2  | 3.02                     | 0.43              |
| 1:C:227:THR:CG2  | 1:D:301:PRO:CD   | 2.93                     | 0.43              |
| 1:D:7:GLU:HB2    | 1:D:107:GLN:HE22 | 1.82                     | 0.43              |
| 1:D:43:TYR:CE2   | 1:D:67:LEU:CG    | 3.01                     | 0.43              |
| 1:D:61:LEU:HD23  | 1:D:62:ASP:HB2   | 1.99                     | 0.43              |
| 1:D:159:SER:OG   | 1:D:163:PHE:CE1  | 2.68                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:43:TYR:CE2   | 1:E:67:LEU:CG    | 3.01                     | 0.43              |
| 1:E:109:VAL:CG2  | 1:E:321:VAL:HG13 | 2.46                     | 0.43              |
| 1:E:113:PRO:O    | 1:E:116:VAL:HG12 | 2.18                     | 0.43              |
| 1:F:43:TYR:CD2   | 1:F:67:LEU:CD1   | 3.01                     | 0.43              |
| 1:F:225:LEU:HD13 | 1:G:276:LEU:HD12 | 2.00                     | 0.43              |
| 1:G:123:LYS:HE2  | 1:G:127:ARG:NH2  | 2.34                     | 0.43              |
| 1:G:149:ILE:HD13 | 1:G:149:ILE:HG21 | 1.74                     | 0.43              |
| 1:G:159:SER:OG   | 1:G:163:PHE:CE1  | 2.67                     | 0.43              |
| 1:H:109:VAL:CG2  | 1:H:318:LEU:HB3  | 2.48                     | 0.43              |
| 1:H:119:ASN:CG   | 1:H:120:ALA:N    | 2.72                     | 0.43              |
| 1:H:157:GLU:HG3  | 1:H:158:GLY:N    | 2.33                     | 0.43              |
| 1:H:173:ASN:ND2  | 1:H:279:LEU:CD2  | 2.70                     | 0.43              |
| 1:I:87:LYS:HD3   | 1:I:129:TYR:CE2  | 2.53                     | 0.43              |
| 1:I:203:GLU:O    | 1:I:204:HIS:CD2  | 2.72                     | 0.43              |
| 1:I:324:ALA:HB1  | 1:J:46:GLU:H     | 1.83                     | 0.43              |
| 1:K:22:ILE:HB    | 1:K:27:LYS:HE3   | 1.96                     | 0.43              |
| 1:K:123:LYS:HE2  | 1:K:127:ARG:NH2  | 2.33                     | 0.43              |
| 1:K:166:GLN:HG3  | 1:P:240:MET:HA   | 1.70                     | 0.43              |
| 1:K:203:GLU:O    | 1:K:204:HIS:CD2  | 2.72                     | 0.43              |
| 1:L:27:LYS:HZ1   | 1:L:35:ARG:NE    | 2.17                     | 0.43              |
| 1:L:131:LYS:HD2  | 1:L:149:ILE:HD11 | 1.99                     | 0.43              |
| 1:L:159:SER:OG   | 1:L:163:PHE:CE1  | 2.67                     | 0.43              |
| 1:M:7:GLU:CD     | 1:M:107:GLN:HE22 | 2.22                     | 0.43              |
| 1:M:157:GLU:HG3  | 1:M:158:GLY:N    | 2.33                     | 0.43              |
| 1:N:87:LYS:HD3   | 1:N:129:TYR:CE2  | 2.53                     | 0.43              |
| 1:N:169:PHE:CE2  | 1:O:79:THR:CG2   | 3.02                     | 0.43              |
| 1:O:240:MET:SD   | 1:O:251:SER:CB   | 3.07                     | 0.43              |
| 1:P:109:VAL:HG11 | 1:P:318:LEU:O    | 2.19                     | 0.43              |
| 1:P:211:ILE:HG13 | 1:P:212:ARG:N    | 2.34                     | 0.43              |
| 1:A:87:LYS:HD3   | 1:A:129:TYR:CE2  | 2.53                     | 0.43              |
| 1:A:116:VAL:HG21 | 1:A:121:LYS:HG3  | 1.98                     | 0.43              |
| 1:B:24:LYS:HD3   | 1:B:319:TYR:CZ   | 2.54                     | 0.43              |
| 1:B:179:PHE:HB2  | 1:B:288:THR:HB   | 1.93                     | 0.43              |
| 1:C:43:TYR:CD2   | 1:C:67:LEU:CB    | 2.95                     | 0.43              |
| 1:D:24:LYS:HD3   | 1:D:319:TYR:CZ   | 2.54                     | 0.43              |
| 1:F:60:GLU:N     | 1:F:137:THR:HG22 | 2.32                     | 0.43              |
| 1:F:131:LYS:HD2  | 1:F:149:ILE:HD11 | 1.99                     | 0.43              |
| 1:F:198:GLU:HG2  | 1:I:203:GLU:OE1  | 2.18                     | 0.43              |
| 1:G:109:VAL:CG2  | 1:G:318:LEU:HB3  | 2.48                     | 0.43              |
| 1:G:109:VAL:CG2  | 1:G:321:VAL:HG13 | 2.46                     | 0.43              |
| 1:G:131:LYS:HD2  | 1:G:149:ILE:HD11 | 1.99                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:183:ASN:CG   | 1:K:197:SER:HB3  | 2.37                     | 0.43              |
| 1:I:131:LYS:HD2  | 1:I:149:ILE:HD11 | 1.99                     | 0.43              |
| 1:I:276:LEU:O    | 1:J:225:LEU:CA   | 2.64                     | 0.43              |
| 1:I:320:LYS:C    | 1:N:246:ILE:HD11 | 2.39                     | 0.43              |
| 1:J:27:LYS:HE2   | 1:J:35:ARG:CG    | 2.34                     | 0.43              |
| 1:K:131:LYS:HD2  | 1:K:149:ILE:HD11 | 1.99                     | 0.43              |
| 1:K:198:GLU:OE2  | 1:K:274:PHE:CE2  | 2.71                     | 0.43              |
| 1:L:110:LEU:CA   | 1:L:318:LEU:HD13 | 2.36                     | 0.43              |
| 1:L:123:LYS:HE2  | 1:L:127:ARG:NH2  | 2.34                     | 0.43              |
| 1:L:250:SER:CB   | 1:L:253:VAL:HB   | 2.25                     | 0.43              |
| 1:L:296:ILE:O    | 1:L:296:ILE:HG13 | 2.18                     | 0.43              |
| 1:M:149:ILE:HD13 | 1:M:149:ILE:HG21 | 1.74                     | 0.43              |
| 1:N:26:LYS:CG    | 1:N:97:VAL:HG22  | 2.48                     | 0.43              |
| 1:N:43:TYR:CD2   | 1:N:67:LEU:CD1   | 3.01                     | 0.43              |
| 1:N:123:LYS:HZ2  | 1:N:127:ARG:NH1  | 2.17                     | 0.43              |
| 1:N:157:GLU:HG3  | 1:N:158:GLY:N    | 2.33                     | 0.43              |
| 1:N:211:ILE:HG13 | 1:N:212:ARG:N    | 2.34                     | 0.43              |
| 1:N:240:MET:SD   | 1:N:251:SER:CB   | 3.07                     | 0.43              |
| 1:O:43:TYR:CD2   | 1:O:67:LEU:CD1   | 3.01                     | 0.43              |
| 1:O:45:LEU:CB    | 1:O:67:LEU:HD11  | 2.40                     | 0.43              |
| 1:O:109:VAL:CG2  | 1:O:318:LEU:HB3  | 2.48                     | 0.43              |
| 1:O:203:GLU:O    | 1:O:204:HIS:CD2  | 2.72                     | 0.43              |
| 1:A:7:GLU:CD     | 1:A:107:GLN:HE22 | 2.22                     | 0.43              |
| 1:C:26:LYS:CG    | 1:C:97:VAL:HG22  | 2.48                     | 0.43              |
| 1:C:203:GLU:O    | 1:C:204:HIS:CD2  | 2.72                     | 0.43              |
| 1:C:240:MET:SD   | 1:C:251:SER:CB   | 3.06                     | 0.43              |
| 1:E:34:LYS:N     | 1:E:35:ARG:CA    | 2.82                     | 0.43              |
| 1:E:240:MET:SD   | 1:E:251:SER:CB   | 3.07                     | 0.43              |
| 1:G:203:GLU:O    | 1:G:204:HIS:CD2  | 2.72                     | 0.43              |
| 1:G:296:ILE:O    | 1:G:296:ILE:HG13 | 2.18                     | 0.43              |
| 1:H:32:ASP:HB3   | 1:H:34:LYS:HD2   | 1.93                     | 0.43              |
| 1:H:99:ASP:O     | 1:H:99:ASP:OD1   | 2.37                     | 0.43              |
| 1:H:100:SER:HB3  | 1:H:101:ASN:HB2  | 2.00                     | 0.43              |
| 1:H:109:VAL:CG2  | 1:H:321:VAL:HG13 | 2.46                     | 0.43              |
| 1:H:109:VAL:HG11 | 1:H:318:LEU:O    | 2.19                     | 0.43              |
| 1:H:116:VAL:HG21 | 1:H:121:LYS:HG3  | 1.98                     | 0.43              |
| 1:H:268:LEU:CA   | 1:K:268:LEU:HD21 | 2.48                     | 0.43              |
| 1:H:271:LYS:HG2  | 1:K:202:GLU:OE2  | 2.17                     | 0.43              |
| 1:I:44:ASN:HB2   | 1:I:64:LYS:NZ    | 2.26                     | 0.43              |
| 1:I:198:GLU:OE2  | 1:I:274:PHE:CE2  | 2.71                     | 0.43              |
| 1:I:219:ASP:HA   | 1:I:224:ASN:CG   | 2.36                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:34:LYS:N     | 1:J:35:ARG:CA    | 2.82                     | 0.43              |
| 1:L:27:LYS:NZ    | 1:L:35:ARG:NH2   | 2.59                     | 0.43              |
| 1:M:169:PHE:CE2  | 1:N:79:THR:CG2   | 3.02                     | 0.43              |
| 1:M:211:ILE:HG13 | 1:M:212:ARG:N    | 2.34                     | 0.43              |
| 1:N:7:GLU:CD     | 1:N:107:GLN:HE22 | 2.22                     | 0.43              |
| 1:N:109:VAL:CG2  | 1:N:318:LEU:HB3  | 2.48                     | 0.43              |
| 1:N:109:VAL:CG2  | 1:N:321:VAL:HG13 | 2.46                     | 0.43              |
| 1:N:203:GLU:O    | 1:N:204:HIS:CD2  | 2.72                     | 0.43              |
| 1:N:284:PHE:CE2  | 1:N:296:ILE:CG2  | 2.95                     | 0.43              |
| 1:O:116:VAL:HG22 | 1:O:116:VAL:O    | 2.19                     | 0.43              |
| 1:O:119:ASN:CG   | 1:O:120:ALA:N    | 2.72                     | 0.43              |
| 1:P:198:GLU:OE2  | 1:P:274:PHE:CE2  | 2.71                     | 0.43              |
| 1:A:34:LYS:N     | 1:A:35:ARG:CA    | 2.82                     | 0.43              |
| 1:A:179:PHE:HB2  | 1:A:288:THR:HB   | 1.93                     | 0.43              |
| 1:A:246:ILE:HG23 | 1:E:50:ILE:C     | 2.05                     | 0.43              |
| 1:B:43:TYR:CE2   | 1:B:67:LEU:CG    | 3.01                     | 0.43              |
| 1:B:87:LYS:HD3   | 1:B:129:TYR:CE2  | 2.53                     | 0.43              |
| 1:C:231:ALA:H    | 1:H:308:ASN:ND2  | 2.04                     | 0.43              |
| 1:C:246:ILE:CG1  | 1:H:320:LYS:CA   | 2.88                     | 0.43              |
| 1:D:7:GLU:CD     | 1:D:107:GLN:HE22 | 2.22                     | 0.43              |
| 1:D:34:LYS:N     | 1:D:35:ARG:CA    | 2.82                     | 0.43              |
| 1:D:149:ILE:HD13 | 1:D:149:ILE:HG21 | 1.74                     | 0.43              |
| 1:E:44:ASN:HB2   | 1:E:64:LYS:NZ    | 2.26                     | 0.43              |
| 1:E:60:GLU:N     | 1:E:137:THR:HG22 | 2.32                     | 0.43              |
| 1:E:157:GLU:HG3  | 1:E:158:GLY:N    | 2.33                     | 0.43              |
| 1:F:43:TYR:CE2   | 1:F:67:LEU:CG    | 3.01                     | 0.43              |
| 1:F:99:ASP:OD1   | 1:F:99:ASP:O     | 2.37                     | 0.43              |
| 1:F:109:VAL:CG2  | 1:F:321:VAL:HG13 | 2.46                     | 0.43              |
| 1:G:99:ASP:OD1   | 1:G:99:ASP:O     | 2.37                     | 0.43              |
| 1:G:219:ASP:HB3  | 1:H:275:LYS:HZ2  | 1.83                     | 0.43              |
| 1:G:220:LEU:O    | 1:G:234:ALA:O    | 2.37                     | 0.43              |
| 1:G:225:LEU:CA   | 1:H:276:LEU:O    | 2.64                     | 0.43              |
| 1:G:271:LYS:CD   | 1:J:202:GLU:HG3  | 2.49                     | 0.43              |
| 1:H:123:LYS:HE2  | 1:H:127:ARG:NH2  | 2.34                     | 0.43              |
| 1:H:203:GLU:CG   | 1:K:197:SER:C    | 2.87                     | 0.43              |
| 1:I:52:ILE:HG13  | 1:M:247:ASP:O    | 2.16                     | 0.43              |
| 1:I:113:PRO:O    | 1:I:116:VAL:HG12 | 2.18                     | 0.43              |
| 1:J:85:ILE:HG23  | 1:J:86:HIS:H     | 1.84                     | 0.43              |
| 1:J:123:LYS:HE2  | 1:J:127:ARG:NH2  | 2.34                     | 0.43              |
| 1:J:165:GLU:CD   | 1:O:241:LYS:O    | 2.57                     | 0.43              |
| 1:J:198:GLU:OE2  | 1:J:274:PHE:CE2  | 2.71                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:85:ILE:HG23  | 1:K:86:HIS:H     | 1.84                     | 0.43              |
| 1:L:66:TYR:CZ    | 1:L:88:LEU:CD2   | 3.01                     | 0.43              |
| 1:L:119:ASN:CG   | 1:L:120:ALA:N    | 2.72                     | 0.43              |
| 1:O:109:VAL:HG11 | 1:O:318:LEU:O    | 2.19                     | 0.43              |
| 1:O:116:VAL:HG21 | 1:O:121:LYS:HG3  | 1.98                     | 0.43              |
| 1:P:203:GLU:O    | 1:P:204:HIS:CD2  | 2.72                     | 0.43              |
| 1:A:198:GLU:OE2  | 1:A:274:PHE:CE2  | 2.71                     | 0.43              |
| 1:A:208:ASP:HA   | 1:A:211:ILE:HD11 | 1.99                     | 0.43              |
| 1:A:227:THR:CG2  | 1:B:300:TYR:C    | 2.66                     | 0.43              |
| 1:A:227:THR:CB   | 1:B:300:TYR:HA   | 2.46                     | 0.43              |
| 1:A:243:GLY:HA3  | 1:F:162:LEU:O    | 2.19                     | 0.43              |
| 1:D:43:TYR:CD2   | 1:D:67:LEU:CD1   | 3.01                     | 0.43              |
| 1:E:99:ASP:OD1   | 1:E:99:ASP:O     | 2.37                     | 0.43              |
| 1:E:203:GLU:O    | 1:E:204:HIS:HD2  | 2.02                     | 0.43              |
| 1:F:203:GLU:O    | 1:F:204:HIS:CD2  | 2.72                     | 0.43              |
| 1:F:296:ILE:O    | 1:F:296:ILE:HG13 | 2.18                     | 0.43              |
| 1:G:46:GLU:H     | 1:H:324:ALA:HB1  | 1.83                     | 0.43              |
| 1:G:116:VAL:HG22 | 1:G:116:VAL:O    | 2.19                     | 0.43              |
| 1:G:196:PRO:HA   | 1:G:199:ARG:NH2  | 2.34                     | 0.43              |
| 1:G:197:SER:HB3  | 1:J:203:GLU:HG2  | 2.01                     | 0.43              |
| 1:G:211:ILE:HG13 | 1:G:212:ARG:N    | 2.34                     | 0.43              |
| 1:H:7:GLU:CD     | 1:H:107:GLN:HE22 | 2.22                     | 0.43              |
| 1:H:43:TYR:CD2   | 1:H:67:LEU:CD1   | 3.01                     | 0.43              |
| 1:H:116:VAL:HG22 | 1:H:116:VAL:O    | 2.19                     | 0.43              |
| 1:H:220:LEU:O    | 1:H:234:ALA:O    | 2.37                     | 0.43              |
| 1:I:85:ILE:HG23  | 1:I:86:HIS:H     | 1.84                     | 0.43              |
| 1:I:166:GLN:C    | 1:N:241:LYS:CA   | 2.86                     | 0.43              |
| 1:I:203:GLU:O    | 1:I:204:HIS:HD2  | 2.02                     | 0.43              |
| 1:I:219:ASP:C    | 1:I:224:ASN:CB   | 2.82                     | 0.43              |
| 1:J:276:LEU:HD12 | 1:K:225:LEU:HD13 | 2.00                     | 0.43              |
| 1:K:35:ARG:HH22  | 1:K:316:GLU:HG2  | 1.81                     | 0.43              |
| 1:K:109:VAL:HG11 | 1:K:318:LEU:O    | 2.19                     | 0.43              |
| 1:K:300:TYR:H    | 1:L:227:THR:CG2  | 2.31                     | 0.43              |
| 1:L:186:PHE:HD2  | 1:L:269:ILE:CD1  | 2.31                     | 0.43              |
| 1:L:240:MET:SD   | 1:L:251:SER:CB   | 3.06                     | 0.43              |
| 1:M:22:ILE:HB    | 1:M:27:LYS:HE3   | 1.96                     | 0.43              |
| 1:M:34:LYS:N     | 1:M:35:ARG:CA    | 2.82                     | 0.43              |
| 1:M:43:TYR:CD2   | 1:M:67:LEU:CD1   | 3.01                     | 0.43              |
| 1:M:113:PRO:O    | 1:M:116:VAL:HG12 | 2.18                     | 0.43              |
| 1:M:198:GLU:OE2  | 1:M:274:PHE:CE2  | 2.71                     | 0.43              |
| 1:M:302:ASN:HB2  | 1:N:226:ILE:HG12 | 1.16                     | 0.43              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:22:ILE:HB    | 1:N:27:LYS:HE3   | 1.96                     | 0.43              |
| 1:O:99:ASP:OD1   | 1:O:99:ASP:O     | 2.37                     | 0.43              |
| 1:P:306:ILE:HD12 | 1:P:307:THR:N    | 2.29                     | 0.43              |
| 1:A:211:ILE:HG13 | 1:A:212:ARG:N    | 2.34                     | 0.42              |
| 1:A:246:ILE:C    | 1:E:50:ILE:CG1   | 2.43                     | 0.42              |
| 1:B:34:LYS:N     | 1:B:35:ARG:CA    | 2.82                     | 0.42              |
| 1:B:49:TYR:CZ    | 1:C:320:LYS:HD3  | 2.51                     | 0.42              |
| 1:B:203:GLU:O    | 1:B:204:HIS:CD2  | 2.72                     | 0.42              |
| 1:B:227:THR:CB   | 1:C:300:TYR:HA   | 2.46                     | 0.42              |
| 1:C:61:LEU:HD12  | 1:C:91:TYR:CB    | 2.49                     | 0.42              |
| 1:C:241:LYS:HD3  | 1:H:305:ILE:HB   | 2.01                     | 0.42              |
| 1:D:116:VAL:HG21 | 1:D:121:LYS:HZ2  | 1.83                     | 0.42              |
| 1:D:308:ASN:HD21 | 1:H:241:LYS:HB2  | 1.82                     | 0.42              |
| 1:E:109:VAL:HG11 | 1:E:318:LEU:O    | 2.19                     | 0.42              |
| 1:E:123:LYS:HE2  | 1:E:127:ARG:NH2  | 2.34                     | 0.42              |
| 1:F:11:THR:HG23  | 1:F:318:LEU:CB   | 2.44                     | 0.42              |
| 1:F:197:SER:C    | 1:I:203:GLU:CG   | 2.87                     | 0.42              |
| 1:F:211:ILE:HG13 | 1:F:212:ARG:N    | 2.34                     | 0.42              |
| 1:G:48:GLY:N     | 1:H:324:ALA:N    | 2.63                     | 0.42              |
| 1:G:116:VAL:HG21 | 1:G:121:LYS:HG3  | 1.98                     | 0.42              |
| 1:G:203:GLU:HG2  | 1:J:197:SER:HB3  | 2.00                     | 0.42              |
| 1:H:43:TYR:CE2   | 1:H:67:LEU:CG    | 3.01                     | 0.42              |
| 1:H:131:LYS:HD2  | 1:H:149:ILE:HD11 | 1.99                     | 0.42              |
| 1:H:196:PRO:HA   | 1:H:199:ARG:NH2  | 2.34                     | 0.42              |
| 1:H:240:MET:SD   | 1:H:251:SER:CB   | 3.07                     | 0.42              |
| 1:H:270:GLU:O    | 1:K:204:HIS:HE1  | 2.02                     | 0.42              |
| 1:H:272:ARG:HA   | 1:K:202:GLU:OE2  | 2.18                     | 0.42              |
| 1:I:34:LYS:N     | 1:I:35:ARG:CA    | 2.82                     | 0.42              |
| 1:I:157:GLU:HG3  | 1:I:158:GLY:N    | 2.33                     | 0.42              |
| 1:J:50:ILE:CD1   | 1:N:246:ILE:C    | 2.87                     | 0.42              |
| 1:J:203:GLU:O    | 1:J:204:HIS:HD2  | 2.02                     | 0.42              |
| 1:K:34:LYS:N     | 1:K:35:ARG:CA    | 2.82                     | 0.42              |
| 1:L:24:LYS:HD3   | 1:L:319:TYR:CZ   | 2.54                     | 0.42              |
| 1:L:87:LYS:HD3   | 1:L:129:TYR:CE2  | 2.53                     | 0.42              |
| 1:L:109:VAL:HG11 | 1:L:318:LEU:O    | 2.19                     | 0.42              |
| 1:L:196:PRO:HA   | 1:L:199:ARG:CZ   | 2.49                     | 0.42              |
| 1:M:26:LYS:CG    | 1:M:97:VAL:HG22  | 2.48                     | 0.42              |
| 1:M:116:VAL:HG22 | 1:M:116:VAL:O    | 2.19                     | 0.42              |
| 1:M:179:PHE:HB2  | 1:M:288:THR:HB   | 1.93                     | 0.42              |
| 1:M:320:LYS:CD   | 1:N:50:ILE:N     | 2.44                     | 0.42              |
| 1:P:87:LYS:HD3   | 1:P:129:TYR:CE2  | 2.53                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:109:VAL:HG11 | 1:A:318:LEU:O    | 2.19                     | 0.42              |
| 1:C:43:TYR:CE1   | 1:C:70:GLU:CG    | 2.95                     | 0.42              |
| 1:C:49:TYR:CE1   | 1:D:320:LYS:NZ   | 2.74                     | 0.42              |
| 1:C:113:PRO:O    | 1:C:116:VAL:HG12 | 2.18                     | 0.42              |
| 1:D:43:TYR:CE1   | 1:D:70:GLU:CG    | 2.95                     | 0.42              |
| 1:E:36:VAL:C     | 1:E:312:TRP:CH2  | 2.93                     | 0.42              |
| 1:E:116:VAL:HG22 | 1:E:116:VAL:O    | 2.19                     | 0.42              |
| 1:E:196:PRO:HA   | 1:E:199:ARG:CZ   | 2.49                     | 0.42              |
| 1:E:218:THR:C    | 1:F:275:LYS:HG2  | 2.40                     | 0.42              |
| 1:F:220:LEU:O    | 1:F:234:ALA:O    | 2.37                     | 0.42              |
| 1:G:36:VAL:C     | 1:G:312:TRP:CH2  | 2.93                     | 0.42              |
| 1:H:34:LYS:N     | 1:H:35:ARG:CA    | 2.82                     | 0.42              |
| 1:H:36:VAL:HG21  | 1:H:38:PHE:CZ    | 2.54                     | 0.42              |
| 1:H:95:THR:HG21  | 1:H:136:ILE:HG21 | 1.97                     | 0.42              |
| 1:H:211:ILE:HG13 | 1:H:212:ARG:N    | 2.34                     | 0.42              |
| 1:I:109:VAL:CG2  | 1:I:318:LEU:HB3  | 2.48                     | 0.42              |
| 1:I:220:LEU:O    | 1:I:234:ALA:O    | 2.37                     | 0.42              |
| 1:J:36:VAL:C     | 1:J:312:TRP:CH2  | 2.93                     | 0.42              |
| 1:J:196:PRO:HA   | 1:J:199:ARG:NH2  | 2.34                     | 0.42              |
| 1:J:300:TYR:H    | 1:K:227:THR:CG2  | 2.31                     | 0.42              |
| 1:K:24:LYS:HD3   | 1:K:319:TYR:CZ   | 2.54                     | 0.42              |
| 1:K:203:GLU:O    | 1:K:204:HIS:HD2  | 2.02                     | 0.42              |
| 1:K:275:LYS:HG2  | 1:L:218:THR:C    | 2.40                     | 0.42              |
| 1:L:61:LEU:HD12  | 1:L:91:TYR:CB    | 2.49                     | 0.42              |
| 1:L:157:GLU:HG3  | 1:L:158:GLY:N    | 2.33                     | 0.42              |
| 1:M:27:LYS:HZ1   | 1:M:35:ARG:HH21  | 1.67                     | 0.42              |
| 1:M:109:VAL:CG2  | 1:M:318:LEU:HB3  | 2.48                     | 0.42              |
| 1:P:7:GLU:CD     | 1:P:107:GLN:HE22 | 2.22                     | 0.42              |
| 1:P:99:ASP:O     | 1:P:99:ASP:OD1   | 2.37                     | 0.42              |
| 1:P:116:VAL:HG22 | 1:P:116:VAL:O    | 2.19                     | 0.42              |
| 1:P:116:VAL:HG21 | 1:P:121:LYS:HG3  | 1.98                     | 0.42              |
| 1:P:203:GLU:O    | 1:P:204:HIS:HD2  | 2.02                     | 0.42              |
| 1:A:220:LEU:HD12 | 1:A:220:LEU:N    | 2.34                     | 0.42              |
| 1:A:246:ILE:CG1  | 1:F:320:LYS:O    | 2.67                     | 0.42              |
| 1:B:7:GLU:CD     | 1:B:107:GLN:HE22 | 2.22                     | 0.42              |
| 1:C:211:ILE:HG13 | 1:C:212:ARG:N    | 2.34                     | 0.42              |
| 1:C:227:THR:CB   | 1:D:300:TYR:HA   | 2.46                     | 0.42              |
| 1:C:246:ILE:CA   | 1:G:52:ILE:CG1   | 2.88                     | 0.42              |
| 1:D:109:VAL:HG11 | 1:D:318:LEU:O    | 2.19                     | 0.42              |
| 1:D:196:PRO:HA   | 1:D:199:ARG:CZ   | 2.49                     | 0.42              |
| 1:E:211:ILE:HG13 | 1:E:212:ARG:N    | 2.34                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:220:LEU:O    | 1:E:234:ALA:O    | 2.37                     | 0.42              |
| 1:E:225:LEU:HD13 | 1:F:276:LEU:HD12 | 2.00                     | 0.42              |
| 1:F:34:LYS:N     | 1:F:35:ARG:CA    | 2.82                     | 0.42              |
| 1:F:202:GLU:OE2  | 1:I:271:LYS:HG2  | 2.18                     | 0.42              |
| 1:F:203:GLU:O    | 1:F:204:HIS:HD2  | 2.02                     | 0.42              |
| 1:H:8:TYR:CE1    | 1:H:25:ASN:ND2   | 2.86                     | 0.42              |
| 1:H:45:LEU:CB    | 1:H:67:LEU:HD11  | 2.40                     | 0.42              |
| 1:H:196:PRO:HA   | 1:H:199:ARG:CZ   | 2.50                     | 0.42              |
| 1:H:203:GLU:O    | 1:H:204:HIS:CD2  | 2.72                     | 0.42              |
| 1:H:219:ASP:HA   | 1:H:224:ASN:CG   | 2.36                     | 0.42              |
| 1:I:49:TYR:CE2   | 1:M:245:GLU:C    | 2.93                     | 0.42              |
| 1:I:73:VAL:CG2   | 1:M:240:MET:HE1  | 2.27                     | 0.42              |
| 1:I:196:PRO:HA   | 1:I:199:ARG:NH2  | 2.35                     | 0.42              |
| 1:J:24:LYS:HD3   | 1:J:319:TYR:CZ   | 2.54                     | 0.42              |
| 1:K:110:LEU:CA   | 1:K:318:LEU:HD13 | 2.36                     | 0.42              |
| 1:L:27:LYS:HE2   | 1:L:35:ARG:CG    | 2.34                     | 0.42              |
| 1:L:43:TYR:CE1   | 1:L:70:GLU:CG    | 2.95                     | 0.42              |
| 1:L:50:ILE:CD1   | 1:P:247:ASP:N    | 2.82                     | 0.42              |
| 1:L:198:GLU:OE2  | 1:L:274:PHE:CE2  | 2.71                     | 0.42              |
| 1:M:99:ASP:OD1   | 1:M:99:ASP:O     | 2.37                     | 0.42              |
| 1:M:203:GLU:O    | 1:M:204:HIS:HD2  | 2.02                     | 0.42              |
| 1:N:99:ASP:OD1   | 1:N:99:ASP:O     | 2.37                     | 0.42              |
| 1:N:198:GLU:OE2  | 1:N:274:PHE:CE2  | 2.71                     | 0.42              |
| 1:A:61:LEU:HD12  | 1:A:91:TYR:CB    | 2.49                     | 0.42              |
| 1:A:254:ILE:CG1  | 1:A:255:LYS:N    | 2.83                     | 0.42              |
| 1:B:116:VAL:CG2  | 1:B:121:LYS:HZ2  | 2.32                     | 0.42              |
| 1:B:241:LYS:HD3  | 1:G:305:ILE:HB   | 2.02                     | 0.42              |
| 1:C:112:CYS:CB   | 1:C:122:ALA:HB1  | 2.50                     | 0.42              |
| 1:D:26:LYS:CG    | 1:D:97:VAL:HG22  | 2.48                     | 0.42              |
| 1:D:211:ILE:HG13 | 1:D:212:ARG:N    | 2.34                     | 0.42              |
| 1:E:36:VAL:HG21  | 1:E:38:PHE:CZ    | 2.54                     | 0.42              |
| 1:E:196:PRO:HA   | 1:E:199:ARG:NH2  | 2.34                     | 0.42              |
| 1:F:71:GLN:HG3   | 1:G:168:ASN:CB   | 2.49                     | 0.42              |
| 1:F:109:VAL:CG2  | 1:F:318:LEU:HB3  | 2.48                     | 0.42              |
| 1:F:116:VAL:HG22 | 1:F:116:VAL:O    | 2.19                     | 0.42              |
| 1:F:116:VAL:HG21 | 1:F:121:LYS:HG3  | 1.98                     | 0.42              |
| 1:F:196:PRO:HA   | 1:F:199:ARG:NH2  | 2.35                     | 0.42              |
| 1:G:179:PHE:HB2  | 1:G:288:THR:HB   | 1.93                     | 0.42              |
| 1:G:203:GLU:O    | 1:G:204:HIS:HD2  | 2.02                     | 0.42              |
| 1:I:99:ASP:OD1   | 1:I:99:ASP:O     | 2.37                     | 0.42              |
| 1:I:116:VAL:HG22 | 1:I:116:VAL:O    | 2.19                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:177:ILE:CG1  | 1:I:284:PHE:HA   | 2.46                     | 0.42              |
| 1:J:22:ILE:HB    | 1:J:27:LYS:HE3   | 1.96                     | 0.42              |
| 1:J:220:LEU:O    | 1:J:234:ALA:O    | 2.37                     | 0.42              |
| 1:J:275:LYS:HG2  | 1:K:218:THR:C    | 2.40                     | 0.42              |
| 1:K:7:GLU:CD     | 1:K:107:GLN:HE22 | 2.22                     | 0.42              |
| 1:K:27:LYS:HE2   | 1:K:35:ARG:CG    | 2.34                     | 0.42              |
| 1:K:43:TYR:CD2   | 1:K:75:ASP:HB3   | 2.55                     | 0.42              |
| 1:K:196:PRO:HA   | 1:K:199:ARG:NH2  | 2.35                     | 0.42              |
| 1:L:85:ILE:HG23  | 1:L:86:HIS:H     | 1.84                     | 0.42              |
| 1:M:133:ASN:HD21 | 1:M:148:GLU:CB   | 2.33                     | 0.42              |
| 1:M:196:PRO:HA   | 1:M:199:ARG:NH2  | 2.34                     | 0.42              |
| 1:M:203:GLU:O    | 1:M:204:HIS:CD2  | 2.72                     | 0.42              |
| 1:O:22:ILE:HB    | 1:O:27:LYS:HE3   | 1.96                     | 0.42              |
| 1:O:34:LYS:N     | 1:O:35:ARG:CA    | 2.82                     | 0.42              |
| 1:O:198:GLU:OE2  | 1:O:274:PHE:CE2  | 2.71                     | 0.42              |
| 1:O:320:LYS:NZ   | 1:P:50:ILE:CG1   | 2.72                     | 0.42              |
| 1:P:196:PRO:HA   | 1:P:199:ARG:NH2  | 2.34                     | 0.42              |
| 1:A:27:LYS:HZ1   | 1:A:35:ARG:HE    | 1.66                     | 0.42              |
| 1:A:112:CYS:CB   | 1:A:122:ALA:HB1  | 2.50                     | 0.42              |
| 1:A:241:LYS:CE   | 1:F:305:ILE:HG21 | 2.49                     | 0.42              |
| 1:B:157:GLU:HG3  | 1:B:158:GLY:N    | 2.33                     | 0.42              |
| 1:B:220:LEU:HD12 | 1:B:220:LEU:N    | 2.34                     | 0.42              |
| 1:B:246:ILE:HG13 | 1:F:49:TYR:CG    | 2.55                     | 0.42              |
| 1:C:109:VAL:HG11 | 1:C:318:LEU:O    | 2.19                     | 0.42              |
| 1:E:186:PHE:HD2  | 1:E:269:ILE:CD1  | 2.31                     | 0.42              |
| 1:F:44:ASN:HB2   | 1:F:64:LYS:NZ    | 2.26                     | 0.42              |
| 1:F:227:THR:CG2  | 1:G:300:TYR:H    | 2.31                     | 0.42              |
| 1:G:71:GLN:HG3   | 1:H:168:ASN:CB   | 2.49                     | 0.42              |
| 1:G:196:PRO:HA   | 1:G:199:ARG:CZ   | 2.49                     | 0.42              |
| 1:H:61:LEU:CD1   | 1:H:91:TYR:CD2   | 3.03                     | 0.42              |
| 1:I:27:LYS:HZ1   | 1:I:35:ARG:HE    | 1.66                     | 0.42              |
| 1:I:35:ARG:O     | 1:I:36:VAL:HB    | 2.20                     | 0.42              |
| 1:I:186:PHE:HD2  | 1:I:269:ILE:CD1  | 2.32                     | 0.42              |
| 1:I:275:LYS:HG2  | 1:J:218:THR:C    | 2.40                     | 0.42              |
| 1:J:35:ARG:O     | 1:J:36:VAL:HB    | 2.20                     | 0.42              |
| 1:J:99:ASP:OD1   | 1:J:99:ASP:O     | 2.37                     | 0.42              |
| 1:J:116:VAL:HG22 | 1:J:116:VAL:O    | 2.19                     | 0.42              |
| 1:K:61:LEU:HD12  | 1:K:91:TYR:CB    | 2.49                     | 0.42              |
| 1:K:116:VAL:HG22 | 1:K:116:VAL:O    | 2.19                     | 0.42              |
| 1:L:36:VAL:C     | 1:L:312:TRP:CH2  | 2.93                     | 0.42              |
| 1:L:196:PRO:HA   | 1:L:199:ARG:NH2  | 2.34                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:112:CYS:CB   | 1:N:122:ALA:HB1  | 2.50                     | 0.42              |
| 1:N:196:PRO:HA   | 1:N:199:ARG:CZ   | 2.50                     | 0.42              |
| 1:O:133:ASN:HD21 | 1:O:148:GLU:CB   | 2.33                     | 0.42              |
| 1:P:24:LYS:HD3   | 1:P:319:TYR:CZ   | 2.54                     | 0.42              |
| 1:P:34:LYS:N     | 1:P:35:ARG:CA    | 2.82                     | 0.42              |
| 1:P:220:LEU:HD12 | 1:P:220:LEU:N    | 2.34                     | 0.42              |
| 1:A:43:TYR:CD2   | 1:A:75:ASP:HB3   | 2.55                     | 0.42              |
| 1:B:242:LYS:O    | 1:G:166:GLN:CA   | 2.49                     | 0.42              |
| 1:B:254:ILE:CG1  | 1:B:255:LYS:N    | 2.83                     | 0.42              |
| 1:C:34:LYS:N     | 1:C:35:ARG:CA    | 2.82                     | 0.42              |
| 1:C:254:ILE:CG1  | 1:C:255:LYS:N    | 2.83                     | 0.42              |
| 1:D:27:LYS:HE2   | 1:D:35:ARG:NE    | 2.26                     | 0.42              |
| 1:D:200:PHE:HB3  | 1:D:272:ARG:NE   | 2.35                     | 0.42              |
| 1:D:248:THR:HA   | 1:H:52:ILE:CG2   | 2.47                     | 0.42              |
| 1:E:24:LYS:HD3   | 1:E:319:TYR:CZ   | 2.54                     | 0.42              |
| 1:E:116:VAL:HG21 | 1:E:121:LYS:HG3  | 1.98                     | 0.42              |
| 1:F:43:TYR:CD2   | 1:F:75:ASP:HB3   | 2.55                     | 0.42              |
| 1:F:218:THR:C    | 1:G:275:LYS:HG2  | 2.40                     | 0.42              |
| 1:G:36:VAL:HG21  | 1:G:38:PHE:CZ    | 2.54                     | 0.42              |
| 1:G:109:VAL:HG11 | 1:G:318:LEU:O    | 2.19                     | 0.42              |
| 1:G:218:THR:C    | 1:H:275:LYS:HG2  | 2.40                     | 0.42              |
| 1:H:110:LEU:CD2  | 1:H:111:ALA:O    | 2.68                     | 0.42              |
| 1:H:202:GLU:CA   | 1:K:272:ARG:CG   | 2.73                     | 0.42              |
| 1:H:203:GLU:O    | 1:H:204:HIS:HD2  | 2.02                     | 0.42              |
| 1:I:43:TYR:CD2   | 1:I:75:ASP:HB3   | 2.55                     | 0.42              |
| 1:I:300:TYR:H    | 1:J:227:THR:CG2  | 2.31                     | 0.42              |
| 1:J:35:ARG:HH22  | 1:J:316:GLU:HG2  | 1.81                     | 0.42              |
| 1:J:123:LYS:HZ1  | 1:J:127:ARG:NH1  | 2.15                     | 0.42              |
| 1:J:177:ILE:CG1  | 1:J:284:PHE:HA   | 2.46                     | 0.42              |
| 1:K:35:ARG:O     | 1:K:36:VAL:HB    | 2.20                     | 0.42              |
| 1:K:99:ASP:O     | 1:K:99:ASP:OD1   | 2.37                     | 0.42              |
| 1:L:35:ARG:O     | 1:L:36:VAL:HB    | 2.20                     | 0.42              |
| 1:L:116:VAL:HG22 | 1:L:116:VAL:O    | 2.19                     | 0.42              |
| 1:M:112:CYS:CB   | 1:M:122:ALA:HB1  | 2.50                     | 0.42              |
| 1:N:24:LYS:HD3   | 1:N:319:TYR:CZ   | 2.54                     | 0.42              |
| 1:N:219:ASP:HA   | 1:N:224:ASN:CG   | 2.36                     | 0.42              |
| 1:N:310:SER:CA   | 1:N:313:THR:HG23 | 2.47                     | 0.42              |
| 1:O:61:LEU:HD12  | 1:O:91:TYR:CB    | 2.49                     | 0.42              |
| 1:O:219:ASP:HA   | 1:O:224:ASN:CG   | 2.36                     | 0.42              |
| 1:O:220:LEU:HD12 | 1:O:220:LEU:N    | 2.34                     | 0.42              |
| 1:P:43:TYR:CD2   | 1:P:75:ASP:HB3   | 2.55                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:61:LEU:HD12  | 1:P:91:TYR:CB    | 2.49                     | 0.42              |
| 1:P:173:ASN:ND2  | 1:P:279:LEU:CD2  | 2.70                     | 0.42              |
| 1:P:219:ASP:HA   | 1:P:224:ASN:CG   | 2.36                     | 0.42              |
| 1:A:35:ARG:O     | 1:A:36:VAL:HB    | 2.20                     | 0.42              |
| 1:A:85:ILE:HG23  | 1:A:86:HIS:H     | 1.84                     | 0.42              |
| 1:B:43:TYR:CD2   | 1:B:75:ASP:HB3   | 2.55                     | 0.42              |
| 1:B:110:LEU:CD2  | 1:B:111:ALA:O    | 2.68                     | 0.42              |
| 1:B:241:LYS:CE   | 1:G:305:ILE:CG2  | 2.98                     | 0.42              |
| 1:C:133:ASN:HD21 | 1:C:148:GLU:CB   | 2.33                     | 0.42              |
| 1:C:196:PRO:HA   | 1:C:199:ARG:CZ   | 2.49                     | 0.42              |
| 1:C:220:LEU:O    | 1:C:234:ALA:O    | 2.37                     | 0.42              |
| 1:D:87:LYS:HD3   | 1:D:129:TYR:CE2  | 2.53                     | 0.42              |
| 1:D:220:LEU:O    | 1:D:234:ALA:O    | 2.37                     | 0.42              |
| 1:E:7:GLU:CD     | 1:E:107:GLN:HE22 | 2.22                     | 0.42              |
| 1:E:120:ALA:C    | 1:E:124:GLU:HG2  | 2.40                     | 0.42              |
| 1:F:24:LYS:HD3   | 1:F:319:TYR:CZ   | 2.54                     | 0.42              |
| 1:G:7:GLU:CD     | 1:G:107:GLN:HE22 | 2.22                     | 0.42              |
| 1:G:24:LYS:HD3   | 1:G:319:TYR:CZ   | 2.54                     | 0.42              |
| 1:G:85:ILE:HG23  | 1:G:86:HIS:H     | 1.84                     | 0.42              |
| 1:G:120:ALA:C    | 1:G:124:GLU:HG2  | 2.40                     | 0.42              |
| 1:G:310:SER:CA   | 1:G:313:THR:HG23 | 2.47                     | 0.42              |
| 1:H:85:ILE:HG23  | 1:H:86:HIS:H     | 1.84                     | 0.42              |
| 1:I:24:LYS:HD3   | 1:I:319:TYR:CZ   | 2.54                     | 0.42              |
| 1:I:61:LEU:HD12  | 1:I:91:TYR:CB    | 2.49                     | 0.42              |
| 1:I:73:VAL:CB    | 1:M:240:MET:HE1  | 2.47                     | 0.42              |
| 1:I:173:ASN:ND2  | 1:I:279:LEU:CD2  | 2.70                     | 0.42              |
| 1:I:257:VAL:HG13 | 1:I:258:LYS:N    | 2.35                     | 0.42              |
| 1:J:110:LEU:CA   | 1:J:318:LEU:HD13 | 2.36                     | 0.42              |
| 1:J:196:PRO:HA   | 1:J:199:ARG:CZ   | 2.49                     | 0.42              |
| 1:J:284:PHE:CE2  | 1:J:296:ILE:CG2  | 2.95                     | 0.42              |
| 1:K:164:LEU:O    | 1:P:242:LYS:CA   | 2.67                     | 0.42              |
| 1:K:177:ILE:CG1  | 1:K:284:PHE:HA   | 2.46                     | 0.42              |
| 1:K:196:PRO:HA   | 1:K:199:ARG:CZ   | 2.50                     | 0.42              |
| 1:K:219:ASP:OD1  | 1:K:225:LEU:HG   | 2.11                     | 0.42              |
| 1:K:220:LEU:O    | 1:K:234:ALA:O    | 2.37                     | 0.42              |
| 1:L:7:GLU:CD     | 1:L:107:GLN:HE22 | 2.22                     | 0.42              |
| 1:L:110:LEU:CD2  | 1:L:111:ALA:O    | 2.68                     | 0.42              |
| 1:L:203:GLU:O    | 1:L:204:HIS:HD2  | 2.02                     | 0.42              |
| 1:L:220:LEU:O    | 1:L:234:ALA:O    | 2.37                     | 0.42              |
| 1:M:35:ARG:O     | 1:M:36:VAL:HB    | 2.20                     | 0.42              |
| 1:M:61:LEU:HD12  | 1:M:91:TYR:CB    | 2.49                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:200:PHE:HB3  | 1:M:272:ARG:NE   | 2.35                     | 0.42              |
| 1:N:35:ARG:O     | 1:N:36:VAL:HB    | 2.20                     | 0.42              |
| 1:O:22:ILE:HD13  | 1:O:22:ILE:HG21  | 1.88                     | 0.42              |
| 1:O:24:LYS:HD3   | 1:O:319:TYR:CZ   | 2.54                     | 0.42              |
| 1:O:112:CYS:CB   | 1:O:122:ALA:HB1  | 2.50                     | 0.42              |
| 1:A:99:ASP:OD1   | 1:A:99:ASP:O     | 2.37                     | 0.42              |
| 1:A:133:ASN:HD21 | 1:A:148:GLU:CB   | 2.33                     | 0.42              |
| 1:A:200:PHE:HB3  | 1:A:272:ARG:NE   | 2.35                     | 0.42              |
| 1:B:43:TYR:CE1   | 1:B:70:GLU:CG    | 2.95                     | 0.42              |
| 1:B:49:TYR:CE1   | 1:C:320:LYS:NZ   | 2.74                     | 0.42              |
| 1:B:109:VAL:HG11 | 1:B:318:LEU:O    | 2.19                     | 0.42              |
| 1:B:116:VAL:HG22 | 1:B:116:VAL:O    | 2.19                     | 0.42              |
| 1:B:196:PRO:HA   | 1:B:199:ARG:CZ   | 2.50                     | 0.42              |
| 1:B:200:PHE:HB3  | 1:B:272:ARG:NE   | 2.35                     | 0.42              |
| 1:B:247:ASP:N    | 1:F:52:ILE:CG1   | 2.69                     | 0.42              |
| 1:B:248:THR:CG2  | 1:F:52:ILE:HD13  | 2.44                     | 0.42              |
| 1:B:284:PHE:CZ   | 1:B:304:SER:OG   | 2.68                     | 0.42              |
| 1:C:7:GLU:CD     | 1:C:107:GLN:HE22 | 2.22                     | 0.42              |
| 1:C:45:LEU:HD23  | 1:C:58:LYS:HZ1   | 1.83                     | 0.42              |
| 1:C:220:LEU:HD12 | 1:C:220:LEU:N    | 2.34                     | 0.42              |
| 1:D:61:LEU:HD12  | 1:D:91:TYR:CB    | 2.49                     | 0.42              |
| 1:D:133:ASN:HD21 | 1:D:148:GLU:CB   | 2.33                     | 0.42              |
| 1:D:254:ILE:CG1  | 1:D:255:LYS:N    | 2.83                     | 0.42              |
| 1:E:61:LEU:CD1   | 1:E:91:TYR:CD2   | 3.03                     | 0.42              |
| 1:F:7:GLU:CD     | 1:F:107:GLN:HE22 | 2.22                     | 0.42              |
| 1:F:27:LYS:HE2   | 1:F:35:ARG:NE    | 2.26                     | 0.42              |
| 1:F:61:LEU:CD1   | 1:F:91:TYR:CD2   | 3.03                     | 0.42              |
| 1:F:120:ALA:C    | 1:F:124:GLU:HG2  | 2.41                     | 0.42              |
| 1:G:225:LEU:HD13 | 1:H:276:LEU:HD12 | 2.00                     | 0.42              |
| 1:H:24:LYS:HD3   | 1:H:319:TYR:CZ   | 2.54                     | 0.42              |
| 1:H:43:TYR:CD2   | 1:H:75:ASP:HB3   | 2.55                     | 0.42              |
| 1:H:284:PHE:CE2  | 1:H:296:ILE:CG2  | 2.95                     | 0.42              |
| 1:I:112:CYS:CB   | 1:I:122:ALA:HB1  | 2.50                     | 0.42              |
| 1:J:112:CYS:CB   | 1:J:122:ALA:HB1  | 2.50                     | 0.42              |
| 1:J:211:ILE:HG13 | 1:J:212:ARG:N    | 2.34                     | 0.42              |
| 1:L:43:TYR:CD2   | 1:L:67:LEU:CB    | 2.95                     | 0.42              |
| 1:L:99:ASP:OD1   | 1:L:99:ASP:O     | 2.37                     | 0.42              |
| 1:L:220:LEU:O    | 1:L:221:ASN:C    | 2.58                     | 0.42              |
| 1:M:24:LYS:HD3   | 1:M:319:TYR:CZ   | 2.54                     | 0.42              |
| 1:M:218:THR:HG23 | 1:M:219:ASP:CG   | 2.40                     | 0.42              |
| 1:N:33:ILE:HB    | 1:N:312:TRP:HE1  | 1.83                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:196:PRO:HA   | 1:N:199:ARG:NH2  | 2.35                     | 0.42              |
| 1:N:203:GLU:O    | 1:N:204:HIS:HD2  | 2.02                     | 0.42              |
| 1:N:300:TYR:C    | 1:O:227:THR:CG2  | 2.66                     | 0.42              |
| 1:O:33:ILE:HB    | 1:O:312:TRP:HE1  | 1.83                     | 0.42              |
| 1:O:105:LYS:HZ3  | 1:O:148:GLU:HB3  | 1.84                     | 0.42              |
| 1:O:200:PHE:HB3  | 1:O:272:ARG:NE   | 2.35                     | 0.42              |
| 1:P:22:ILE:HB    | 1:P:27:LYS:HE3   | 1.96                     | 0.42              |
| 1:P:27:LYS:HE2   | 1:P:35:ARG:CG    | 2.34                     | 0.42              |
| 1:P:43:TYR:HH    | 1:P:56:SER:HG    | 1.64                     | 0.42              |
| 1:P:112:CYS:CB   | 1:P:122:ALA:HB1  | 2.50                     | 0.42              |
| 1:A:61:LEU:CD1   | 1:A:91:TYR:CD2   | 3.03                     | 0.42              |
| 1:A:241:LYS:HD3  | 1:F:305:ILE:HB   | 2.02                     | 0.42              |
| 1:A:284:PHE:CZ   | 1:A:304:SER:OG   | 2.68                     | 0.42              |
| 1:B:35:ARG:O     | 1:B:36:VAL:HB    | 2.20                     | 0.42              |
| 1:B:99:ASP:OD1   | 1:B:99:ASP:O     | 2.37                     | 0.42              |
| 1:B:133:ASN:HD21 | 1:B:148:GLU:CB   | 2.33                     | 0.42              |
| 1:B:220:LEU:O    | 1:B:234:ALA:O    | 2.37                     | 0.42              |
| 1:C:43:TYR:CD2   | 1:C:75:ASP:HB3   | 2.55                     | 0.42              |
| 1:C:149:ILE:HD13 | 1:C:149:ILE:HG21 | 1.74                     | 0.42              |
| 1:C:241:LYS:O    | 1:H:165:GLU:C    | 2.57                     | 0.42              |
| 1:D:119:ASN:CG   | 1:D:120:ALA:N    | 2.72                     | 0.42              |
| 1:D:196:PRO:HA   | 1:D:199:ARG:NH2  | 2.34                     | 0.42              |
| 1:D:240:MET:HE2  | 1:H:73:VAL:HG23  | 2.01                     | 0.42              |
| 1:E:200:PHE:HB3  | 1:E:272:ARG:NE   | 2.35                     | 0.42              |
| 1:F:184:MET:HG2  | 1:F:202:GLU:HB3  | 2.01                     | 0.42              |
| 1:F:196:PRO:HA   | 1:F:199:ARG:CZ   | 2.50                     | 0.42              |
| 1:F:219:ASP:C    | 1:G:277:ASP:CB   | 2.77                     | 0.42              |
| 1:F:284:PHE:CE2  | 1:F:296:ILE:CG2  | 2.95                     | 0.42              |
| 1:G:34:LYS:N     | 1:G:35:ARG:CA    | 2.82                     | 0.42              |
| 1:G:219:ASP:C    | 1:G:224:ASN:CB   | 2.82                     | 0.42              |
| 1:H:120:ALA:C    | 1:H:124:GLU:HG2  | 2.41                     | 0.42              |
| 1:H:272:ARG:HB2  | 1:K:202:GLU:CA   | 2.36                     | 0.42              |
| 1:I:61:LEU:CD1   | 1:I:91:TYR:CD2   | 3.03                     | 0.42              |
| 1:K:52:ILE:CG1   | 1:O:247:ASP:N    | 2.67                     | 0.42              |
| 1:K:110:LEU:CD2  | 1:K:111:ALA:O    | 2.68                     | 0.42              |
| 1:K:276:LEU:HD12 | 1:L:225:LEU:HD13 | 2.00                     | 0.42              |
| 1:L:49:TYR:HE2   | 1:P:245:GLU:O    | 2.03                     | 0.42              |
| 1:L:177:ILE:CG1  | 1:L:284:PHE:HA   | 2.46                     | 0.42              |
| 1:L:184:MET:HG2  | 1:L:202:GLU:HB3  | 2.01                     | 0.42              |
| 1:L:257:VAL:HG13 | 1:L:258:LYS:N    | 2.35                     | 0.42              |
| 1:M:33:ILE:HB    | 1:M:312:TRP:HE1  | 1.83                     | 0.42              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:109:VAL:HG11 | 1:M:318:LEU:O    | 2.19                     | 0.42              |
| 1:M:110:LEU:CD2  | 1:M:111:ALA:O    | 2.68                     | 0.42              |
| 1:M:138:VAL:CG2  | 1:M:145:TYR:CE2  | 3.02                     | 0.42              |
| 1:N:22:ILE:HD13  | 1:N:22:ILE:HG21  | 1.89                     | 0.42              |
| 1:N:61:LEU:HD12  | 1:N:91:TYR:CB    | 2.49                     | 0.42              |
| 1:N:169:PHE:H    | 1:O:41:LYS:NZ    | 2.18                     | 0.42              |
| 1:N:220:LEU:HD12 | 1:N:220:LEU:N    | 2.34                     | 0.42              |
| 1:N:257:VAL:HG13 | 1:N:258:LYS:N    | 2.35                     | 0.42              |
| 1:O:7:GLU:CD     | 1:O:107:GLN:HE22 | 2.22                     | 0.42              |
| 1:O:36:VAL:C     | 1:O:312:TRP:CH2  | 2.93                     | 0.42              |
| 1:O:61:LEU:CD1   | 1:O:91:TYR:CD2   | 3.03                     | 0.42              |
| 1:O:110:LEU:CD2  | 1:O:111:ALA:O    | 2.68                     | 0.42              |
| 1:P:61:LEU:CD1   | 1:P:91:TYR:CD2   | 3.03                     | 0.42              |
| 1:P:133:ASN:HD21 | 1:P:148:GLU:CB   | 2.33                     | 0.42              |
| 1:P:220:LEU:O    | 1:P:234:ALA:O    | 2.37                     | 0.42              |
| 1:B:61:LEU:HD12  | 1:B:91:TYR:CB    | 2.49                     | 0.42              |
| 1:C:200:PHE:HB3  | 1:C:272:ARG:NE   | 2.35                     | 0.42              |
| 1:C:257:VAL:HG13 | 1:C:258:LYS:N    | 2.35                     | 0.42              |
| 1:C:284:PHE:CZ   | 1:C:304:SER:OG   | 2.68                     | 0.42              |
| 1:E:85:ILE:HG23  | 1:E:86:HIS:H     | 1.84                     | 0.42              |
| 1:E:257:VAL:HG13 | 1:E:258:LYS:N    | 2.35                     | 0.42              |
| 1:F:36:VAL:C     | 1:F:312:TRP:CH2  | 2.93                     | 0.42              |
| 1:F:85:ILE:HG23  | 1:F:86:HIS:H     | 1.84                     | 0.42              |
| 1:G:61:LEU:CD1   | 1:G:91:TYR:CD2   | 3.03                     | 0.42              |
| 1:G:110:LEU:CD2  | 1:G:111:ALA:O    | 2.68                     | 0.42              |
| 1:G:202:GLU:HG2  | 1:J:272:ARG:N    | 2.35                     | 0.42              |
| 1:H:36:VAL:C     | 1:H:312:TRP:CH2  | 2.93                     | 0.42              |
| 1:H:112:CYS:CB   | 1:H:122:ALA:HB1  | 2.50                     | 0.42              |
| 1:H:220:LEU:O    | 1:H:221:ASN:C    | 2.58                     | 0.42              |
| 1:I:109:VAL:HG11 | 1:I:318:LEU:O    | 2.19                     | 0.42              |
| 1:I:110:LEU:CD2  | 1:I:111:ALA:O    | 2.68                     | 0.42              |
| 1:L:52:ILE:CD1   | 1:P:248:THR:CG2  | 2.97                     | 0.42              |
| 1:L:284:PHE:CE2  | 1:L:296:ILE:CG2  | 2.95                     | 0.42              |
| 1:M:222:ASN:HD22 | 1:M:237:ASN:HB2  | 1.75                     | 0.42              |
| 1:N:34:LYS:N     | 1:N:35:ARG:CA    | 2.82                     | 0.42              |
| 1:N:61:LEU:CD1   | 1:N:91:TYR:CD2   | 3.03                     | 0.42              |
| 1:O:196:PRO:HA   | 1:O:199:ARG:CZ   | 2.50                     | 0.42              |
| 1:O:196:PRO:HA   | 1:O:199:ARG:NH2  | 2.34                     | 0.42              |
| 1:P:33:ILE:HB    | 1:P:312:TRP:HE1  | 1.83                     | 0.42              |
| 1:P:109:VAL:CG2  | 1:P:321:VAL:HG13 | 2.46                     | 0.42              |
| 1:A:47:ASP:O     | 1:B:322:ALA:N    | 2.53                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:110:LEU:CD2  | 1:A:111:ALA:O    | 2.68                     | 0.41              |
| 1:B:41:LYS:NZ    | 1:C:169:PHE:H    | 2.18                     | 0.41              |
| 1:B:61:LEU:CD1   | 1:B:91:TYR:CD2   | 3.03                     | 0.41              |
| 1:B:85:ILE:HG23  | 1:B:86:HIS:H     | 1.84                     | 0.41              |
| 1:B:218:THR:C    | 1:C:275:LYS:HE3  | 2.40                     | 0.41              |
| 1:C:27:LYS:HE2   | 1:C:35:ARG:NE    | 2.26                     | 0.41              |
| 1:D:61:LEU:CD1   | 1:D:91:TYR:CD2   | 3.03                     | 0.41              |
| 1:D:116:VAL:HG22 | 1:D:116:VAL:O    | 2.19                     | 0.41              |
| 1:D:257:VAL:HG13 | 1:D:258:LYS:N    | 2.35                     | 0.41              |
| 1:E:61:LEU:HD12  | 1:E:91:TYR:CB    | 2.49                     | 0.41              |
| 1:E:110:LEU:CD2  | 1:E:111:ALA:O    | 2.68                     | 0.41              |
| 1:E:131:LYS:HD2  | 1:E:149:ILE:HD11 | 1.99                     | 0.41              |
| 1:F:43:TYR:CD2   | 1:F:67:LEU:CB    | 2.95                     | 0.41              |
| 1:F:117:LEU:HD13 | 1:F:156:ALA:HB2  | 2.02                     | 0.41              |
| 1:F:268:LEU:HD11 | 1:I:268:LEU:N    | 2.35                     | 0.41              |
| 1:G:112:CYS:CB   | 1:G:122:ALA:HB1  | 2.50                     | 0.41              |
| 1:G:184:MET:HG2  | 1:G:202:GLU:HB3  | 2.02                     | 0.41              |
| 1:G:202:GLU:HG3  | 1:J:271:LYS:CD   | 2.49                     | 0.41              |
| 1:G:272:ARG:N    | 1:J:202:GLU:HG2  | 2.34                     | 0.41              |
| 1:I:325:LYS:HB2  | 1:J:48:GLY:HA2   | 1.50                     | 0.41              |
| 1:J:7:GLU:CD     | 1:J:107:GLN:HE22 | 2.22                     | 0.41              |
| 1:J:27:LYS:HZ1   | 1:J:35:ARG:HE    | 1.64                     | 0.41              |
| 1:J:61:LEU:HD12  | 1:J:91:TYR:CB    | 2.49                     | 0.41              |
| 1:J:109:VAL:CG2  | 1:J:318:LEU:HB3  | 2.48                     | 0.41              |
| 1:K:36:VAL:C     | 1:K:312:TRP:CH2  | 2.93                     | 0.41              |
| 1:K:112:CYS:CB   | 1:K:122:ALA:HB1  | 2.50                     | 0.41              |
| 1:K:220:LEU:O    | 1:K:221:ASN:C    | 2.58                     | 0.41              |
| 1:L:34:LYS:N     | 1:L:35:ARG:CA    | 2.82                     | 0.41              |
| 1:L:52:ILE:CG1   | 1:P:245:GLU:O    | 2.61                     | 0.41              |
| 1:L:269:ILE:HA   | 1:L:269:ILE:HD13 | 1.85                     | 0.41              |
| 1:M:43:TYR:CD2   | 1:M:75:ASP:HB3   | 2.55                     | 0.41              |
| 1:M:51:ASP:CA    | 1:M:74:GLU:OE2   | 2.65                     | 0.41              |
| 1:M:257:VAL:HG13 | 1:M:258:LYS:N    | 2.35                     | 0.41              |
| 1:M:322:ALA:N    | 1:N:47:ASP:O     | 2.53                     | 0.41              |
| 1:N:322:ALA:N    | 1:O:47:ASP:O     | 2.53                     | 0.41              |
| 1:O:35:ARG:O     | 1:O:36:VAL:HB    | 2.20                     | 0.41              |
| 1:O:43:TYR:CD2   | 1:O:75:ASP:HB3   | 2.55                     | 0.41              |
| 1:P:22:ILE:HD13  | 1:P:22:ILE:HG21  | 1.89                     | 0.41              |
| 1:P:112:CYS:HG   | 1:P:122:ALA:HB1  | 1.84                     | 0.41              |
| 1:A:36:VAL:C     | 1:A:312:TRP:CH2  | 2.93                     | 0.41              |
| 1:A:196:PRO:HA   | 1:A:199:ARG:CZ   | 2.49                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:196:PRO:HA   | 1:A:199:ARG:NH2  | 2.34                     | 0.41              |
| 1:A:220:LEU:O    | 1:A:234:ALA:O    | 2.37                     | 0.41              |
| 1:A:227:THR:CG2  | 1:B:301:PRO:CD   | 2.93                     | 0.41              |
| 1:B:203:GLU:O    | 1:B:204:HIS:HD2  | 2.02                     | 0.41              |
| 1:C:99:ASP:O     | 1:C:99:ASP:OD1   | 2.37                     | 0.41              |
| 1:D:36:VAL:C     | 1:D:312:TRP:CH2  | 2.93                     | 0.41              |
| 1:D:43:TYR:CD2   | 1:D:75:ASP:HB3   | 2.55                     | 0.41              |
| 1:D:284:PHE:CZ   | 1:D:304:SER:OG   | 2.68                     | 0.41              |
| 1:E:43:TYR:HE2   | 1:E:67:LEU:HD13  | 1.78                     | 0.41              |
| 1:E:117:LEU:HD13 | 1:E:156:ALA:HB2  | 2.02                     | 0.41              |
| 1:G:27:LYS:HZ1   | 1:G:35:ARG:NH2   | 2.17                     | 0.41              |
| 1:G:220:LEU:O    | 1:G:221:ASN:C    | 2.58                     | 0.41              |
| 1:G:257:VAL:HG13 | 1:G:258:LYS:N    | 2.35                     | 0.41              |
| 1:H:61:LEU:HD12  | 1:H:91:TYR:CB    | 2.49                     | 0.41              |
| 1:H:257:VAL:HG13 | 1:H:258:LYS:N    | 2.35                     | 0.41              |
| 1:I:22:ILE:HB    | 1:I:27:LYS:HE3   | 1.96                     | 0.41              |
| 1:I:218:THR:HG23 | 1:I:219:ASP:CG   | 2.40                     | 0.41              |
| 1:I:320:LYS:CA   | 1:N:246:ILE:HD11 | 2.47                     | 0.41              |
| 1:J:43:TYR:CD2   | 1:J:67:LEU:CB    | 2.95                     | 0.41              |
| 1:J:325:LYS:HB2  | 1:K:48:GLY:HA2   | 1.50                     | 0.41              |
| 1:K:112:CYS:HG   | 1:K:122:ALA:HB1  | 1.83                     | 0.41              |
| 1:K:257:VAL:HG13 | 1:K:258:LYS:N    | 2.35                     | 0.41              |
| 1:L:132:GLY:N    | 1:L:149:ILE:CD1  | 2.83                     | 0.41              |
| 1:L:211:ILE:HG13 | 1:L:212:ARG:N    | 2.34                     | 0.41              |
| 1:M:22:ILE:HD13  | 1:M:22:ILE:HG21  | 1.88                     | 0.41              |
| 1:M:85:ILE:HG23  | 1:M:86:HIS:H     | 1.84                     | 0.41              |
| 1:N:116:VAL:HG22 | 1:N:116:VAL:O    | 2.19                     | 0.41              |
| 1:O:203:GLU:O    | 1:O:204:HIS:HD2  | 2.02                     | 0.41              |
| 1:P:49:TYR:CZ    | 1:P:75:ASP:HA    | 2.55                     | 0.41              |
| 1:P:110:LEU:CD2  | 1:P:111:ALA:O    | 2.68                     | 0.41              |
| 1:P:138:VAL:CG2  | 1:P:145:TYR:CE2  | 3.02                     | 0.41              |
| 1:A:8:TYR:CE1    | 1:A:25:ASN:ND2   | 2.86                     | 0.41              |
| 1:A:203:GLU:O    | 1:A:204:HIS:HD2  | 2.02                     | 0.41              |
| 1:A:254:ILE:HG13 | 1:A:255:LYS:H    | 1.86                     | 0.41              |
| 1:B:47:ASP:O     | 1:C:322:ALA:N    | 2.53                     | 0.41              |
| 1:B:196:PRO:HA   | 1:B:199:ARG:NH2  | 2.34                     | 0.41              |
| 1:B:257:VAL:HG13 | 1:B:258:LYS:N    | 2.35                     | 0.41              |
| 1:C:52:ILE:HB    | 1:C:74:GLU:HA    | 2.03                     | 0.41              |
| 1:D:27:LYS:HZ1   | 1:D:35:ARG:HE    | 1.66                     | 0.41              |
| 1:D:99:ASP:OD1   | 1:D:99:ASP:O     | 2.37                     | 0.41              |
| 1:D:220:LEU:HD12 | 1:D:220:LEU:N    | 2.34                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:35:ARG:O     | 1:E:36:VAL:HB    | 2.20                     | 0.41              |
| 1:E:43:TYR:CD2   | 1:E:75:ASP:HB3   | 2.55                     | 0.41              |
| 1:E:109:VAL:CG2  | 1:E:318:LEU:HB3  | 2.48                     | 0.41              |
| 1:E:133:ASN:HD21 | 1:E:148:GLU:CB   | 2.33                     | 0.41              |
| 1:E:173:ASN:ND2  | 1:E:279:LEU:CD2  | 2.70                     | 0.41              |
| 1:F:133:ASN:HD21 | 1:F:148:GLU:CB   | 2.33                     | 0.41              |
| 1:F:219:ASP:CA   | 1:G:277:ASP:CB   | 2.09                     | 0.41              |
| 1:G:43:TYR:CD2   | 1:G:75:ASP:HB3   | 2.55                     | 0.41              |
| 1:G:44:ASN:HB2   | 1:G:64:LYS:NZ    | 2.26                     | 0.41              |
| 1:H:184:MET:HG2  | 1:H:202:GLU:HB3  | 2.01                     | 0.41              |
| 1:I:7:GLU:CD     | 1:I:107:GLN:HE22 | 2.22                     | 0.41              |
| 1:I:35:ARG:HH22  | 1:I:316:GLU:HG2  | 1.81                     | 0.41              |
| 1:I:36:VAL:C     | 1:I:312:TRP:CH2  | 2.93                     | 0.41              |
| 1:I:117:LEU:HD13 | 1:I:156:ALA:HB2  | 2.03                     | 0.41              |
| 1:I:220:LEU:O    | 1:I:221:ASN:C    | 2.58                     | 0.41              |
| 1:I:276:LEU:HD12 | 1:J:225:LEU:HD13 | 2.00                     | 0.41              |
| 1:I:308:ASN:O    | 1:N:229:GLU:CD   | 2.58                     | 0.41              |
| 1:J:61:LEU:CD1   | 1:J:91:TYR:CD2   | 3.03                     | 0.41              |
| 1:K:61:LEU:CD1   | 1:K:91:TYR:CD2   | 3.03                     | 0.41              |
| 1:K:99:ASP:HB3   | 1:K:145:TYR:OH   | 2.21                     | 0.41              |
| 1:K:168:ASN:CB   | 1:L:71:GLN:HG3   | 2.49                     | 0.41              |
| 1:K:245:GLU:OE2  | 1:P:52:ILE:CD1   | 2.68                     | 0.41              |
| 1:K:276:LEU:O    | 1:L:225:LEU:CA   | 2.64                     | 0.41              |
| 1:K:325:LYS:HB2  | 1:L:48:GLY:HA2   | 1.50                     | 0.41              |
| 1:L:26:LYS:CG    | 1:L:97:VAL:HG22  | 2.48                     | 0.41              |
| 1:L:112:CYS:CB   | 1:L:122:ALA:HB1  | 2.50                     | 0.41              |
| 1:M:36:VAL:C     | 1:M:312:TRP:CH2  | 2.93                     | 0.41              |
| 1:M:43:TYR:CE1   | 1:M:70:GLU:CG    | 2.95                     | 0.41              |
| 1:M:43:TYR:HH    | 1:M:56:SER:HG    | 1.67                     | 0.41              |
| 1:M:196:PRO:HA   | 1:M:199:ARG:CZ   | 2.49                     | 0.41              |
| 1:M:220:LEU:HD12 | 1:M:220:LEU:N    | 2.34                     | 0.41              |
| 1:N:36:VAL:C     | 1:N:312:TRP:CH2  | 2.93                     | 0.41              |
| 1:N:109:VAL:HG11 | 1:N:318:LEU:O    | 2.19                     | 0.41              |
| 1:N:172:LYS:HB3  | 1:N:280:ASP:OD2  | 2.21                     | 0.41              |
| 1:O:172:LYS:HB3  | 1:O:280:ASP:OD2  | 2.21                     | 0.41              |
| 1:O:220:LEU:O    | 1:O:221:ASN:C    | 2.58                     | 0.41              |
| 1:O:310:SER:CA   | 1:O:313:THR:HG23 | 2.47                     | 0.41              |
| 1:P:35:ARG:O     | 1:P:36:VAL:HB    | 2.20                     | 0.41              |
| 1:C:49:TYR:CE2   | 1:C:50:ILE:O     | 2.74                     | 0.41              |
| 1:C:61:LEU:CD1   | 1:C:91:TYR:CD2   | 3.03                     | 0.41              |
| 1:C:198:GLU:HA   | 1:C:272:ARG:HG2  | 2.02                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:34:LYS:H     | 1:D:35:ARG:HB2   | 1.79                     | 0.41              |
| 1:D:35:ARG:O     | 1:D:36:VAL:HB    | 2.20                     | 0.41              |
| 1:D:44:ASN:HB2   | 1:D:64:LYS:NZ    | 2.26                     | 0.41              |
| 1:D:52:ILE:HB    | 1:D:74:GLU:HA    | 2.03                     | 0.41              |
| 1:E:8:TYR:CE1    | 1:E:25:ASN:ND2   | 2.86                     | 0.41              |
| 1:F:35:ARG:O     | 1:F:36:VAL:HB    | 2.20                     | 0.41              |
| 1:F:49:TYR:CE2   | 1:F:50:ILE:O     | 2.74                     | 0.41              |
| 1:G:58:LYS:HZ2   | 1:G:65:GLU:CG    | 2.33                     | 0.41              |
| 1:G:117:LEU:HD13 | 1:G:156:ALA:HB2  | 2.03                     | 0.41              |
| 1:H:43:TYR:HE2   | 1:H:67:LEU:HD13  | 1.78                     | 0.41              |
| 1:H:117:LEU:HD13 | 1:H:156:ALA:HB2  | 2.03                     | 0.41              |
| 1:H:132:GLY:N    | 1:H:149:ILE:CD1  | 2.83                     | 0.41              |
| 1:H:133:ASN:HD21 | 1:H:148:GLU:CB   | 2.33                     | 0.41              |
| 1:H:213:VAL:CG1  | 1:H:235:LEU:HD13 | 2.51                     | 0.41              |
| 1:I:275:LYS:HE3  | 1:J:219:ASP:HB3  | 1.68                     | 0.41              |
| 1:I:288:THR:HG22 | 1:I:292:LEU:HD13 | 2.03                     | 0.41              |
| 1:J:49:TYR:CE2   | 1:J:50:ILE:O     | 2.74                     | 0.41              |
| 1:J:99:ASP:HB3   | 1:J:145:TYR:OH   | 2.21                     | 0.41              |
| 1:K:117:LEU:HD13 | 1:K:156:ALA:HB2  | 2.02                     | 0.41              |
| 1:K:245:GLU:CD   | 1:P:51:ASP:O     | 2.52                     | 0.41              |
| 1:L:8:TYR:CE1    | 1:L:25:ASN:ND2   | 2.86                     | 0.41              |
| 1:L:43:TYR:CD2   | 1:L:75:ASP:HB3   | 2.55                     | 0.41              |
| 1:L:99:ASP:HB3   | 1:L:145:TYR:OH   | 2.21                     | 0.41              |
| 1:L:117:LEU:HD13 | 1:L:156:ALA:HB2  | 2.02                     | 0.41              |
| 1:L:133:ASN:HD21 | 1:L:148:GLU:CB   | 2.33                     | 0.41              |
| 1:L:254:ILE:HG13 | 1:L:255:LYS:H    | 1.86                     | 0.41              |
| 1:M:213:VAL:CG1  | 1:M:235:LEU:HD13 | 2.51                     | 0.41              |
| 1:M:220:LEU:O    | 1:M:234:ALA:O    | 2.37                     | 0.41              |
| 1:M:275:LYS:HE3  | 1:N:218:THR:C    | 2.40                     | 0.41              |
| 1:N:200:PHE:HB3  | 1:N:272:ARG:NE   | 2.35                     | 0.41              |
| 1:O:27:LYS:HE2   | 1:O:35:ARG:CG    | 2.34                     | 0.41              |
| 1:O:299:THR:O    | 1:P:227:THR:OG1  | 2.37                     | 0.41              |
| 1:P:196:PRO:HA   | 1:P:199:ARG:CZ   | 2.50                     | 0.41              |
| 1:P:200:PHE:HB3  | 1:P:272:ARG:NE   | 2.35                     | 0.41              |
| 1:P:220:LEU:O    | 1:P:221:ASN:C    | 2.58                     | 0.41              |
| 1:P:254:ILE:CG1  | 1:P:255:LYS:N    | 2.83                     | 0.41              |
| 1:A:41:LYS:NZ    | 1:B:169:PHE:H    | 2.18                     | 0.41              |
| 1:A:49:TYR:CE2   | 1:A:50:ILE:O     | 2.74                     | 0.41              |
| 1:A:116:VAL:HG22 | 1:A:116:VAL:O    | 2.19                     | 0.41              |
| 1:B:198:GLU:HA   | 1:B:272:ARG:HG2  | 2.03                     | 0.41              |
| 1:C:41:LYS:NZ    | 1:D:169:PHE:H    | 2.18                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:131:LYS:HD2  | 1:C:149:ILE:HD11 | 1.99                     | 0.41              |
| 1:C:218:THR:C    | 1:D:275:LYS:HE3  | 2.40                     | 0.41              |
| 1:D:186:PHE:HD2  | 1:D:269:ILE:CD1  | 2.31                     | 0.41              |
| 1:D:240:MET:CE   | 1:H:73:VAL:HG23  | 2.44                     | 0.41              |
| 1:E:49:TYR:CE2   | 1:E:50:ILE:O     | 2.74                     | 0.41              |
| 1:E:99:ASP:HB3   | 1:E:145:TYR:OH   | 2.21                     | 0.41              |
| 1:F:61:LEU:HD12  | 1:F:91:TYR:CB    | 2.49                     | 0.41              |
| 1:F:112:CYS:CB   | 1:F:122:ALA:HB1  | 2.50                     | 0.41              |
| 1:F:228:ASN:N    | 1:G:301:PRO:O    | 2.54                     | 0.41              |
| 1:G:61:LEU:HD12  | 1:G:91:TYR:CB    | 2.49                     | 0.41              |
| 1:G:116:VAL:HB   | 1:G:121:LYS:NZ   | 2.36                     | 0.41              |
| 1:G:132:GLY:N    | 1:G:149:ILE:CD1  | 2.83                     | 0.41              |
| 1:H:116:VAL:HB   | 1:H:121:LYS:NZ   | 2.36                     | 0.41              |
| 1:H:220:LEU:HD12 | 1:H:220:LEU:N    | 2.34                     | 0.41              |
| 1:I:49:TYR:CE2   | 1:I:50:ILE:O     | 2.74                     | 0.41              |
| 1:I:110:LEU:CA   | 1:I:318:LEU:HD13 | 2.36                     | 0.41              |
| 1:I:116:VAL:HB   | 1:I:121:LYS:NZ   | 2.36                     | 0.41              |
| 1:I:196:PRO:HA   | 1:I:199:ARG:CZ   | 2.50                     | 0.41              |
| 1:I:211:ILE:HG13 | 1:I:212:ARG:N    | 2.34                     | 0.41              |
| 1:I:277:ASP:CB   | 1:J:219:ASP:C    | 2.77                     | 0.41              |
| 1:J:43:TYR:CE1   | 1:J:70:GLU:CG    | 2.95                     | 0.41              |
| 1:J:43:TYR:CD2   | 1:J:75:ASP:HB3   | 2.55                     | 0.41              |
| 1:K:44:ASN:OD1   | 1:K:64:LYS:HD2   | 2.21                     | 0.41              |
| 1:K:211:ILE:HG13 | 1:K:212:ARG:N    | 2.34                     | 0.41              |
| 1:K:301:PRO:O    | 1:L:228:ASN:N    | 2.54                     | 0.41              |
| 1:L:44:ASN:OD1   | 1:L:64:LYS:HD2   | 2.21                     | 0.41              |
| 1:L:49:TYR:CE2   | 1:L:50:ILE:O     | 2.74                     | 0.41              |
| 1:L:120:ALA:C    | 1:L:124:GLU:HG2  | 2.40                     | 0.41              |
| 1:M:61:LEU:CD1   | 1:M:91:TYR:CD2   | 3.03                     | 0.41              |
| 1:M:172:LYS:HB3  | 1:M:280:ASP:OD2  | 2.21                     | 0.41              |
| 1:N:85:ILE:HG23  | 1:N:86:HIS:H     | 1.84                     | 0.41              |
| 1:N:99:ASP:HB3   | 1:N:145:TYR:OH   | 2.21                     | 0.41              |
| 1:N:213:VAL:CG1  | 1:N:235:LEU:HD13 | 2.51                     | 0.41              |
| 1:N:220:LEU:O    | 1:N:234:ALA:O    | 2.37                     | 0.41              |
| 1:O:254:ILE:CG1  | 1:O:255:LYS:N    | 2.83                     | 0.41              |
| 1:O:284:PHE:CE2  | 1:O:296:ILE:CG2  | 2.95                     | 0.41              |
| 1:P:36:VAL:C     | 1:P:312:TRP:CH2  | 2.93                     | 0.41              |
| 1:P:51:ASP:CA    | 1:P:74:GLU:OE2   | 2.66                     | 0.41              |
| 1:P:172:LYS:HB3  | 1:P:280:ASP:OD2  | 2.21                     | 0.41              |
| 1:P:257:VAL:HG13 | 1:P:258:LYS:N    | 2.35                     | 0.41              |
| 1:A:198:GLU:HA   | 1:A:272:ARG:HG2  | 2.03                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:226:ILE:HG12 | 1:B:302:ASN:HB2  | 1.16                     | 0.41              |
| 1:B:8:TYR:CE1    | 1:B:25:ASN:ND2   | 2.86                     | 0.41              |
| 1:B:36:VAL:C     | 1:B:312:TRP:CH2  | 2.93                     | 0.41              |
| 1:B:52:ILE:HB    | 1:B:74:GLU:HA    | 2.03                     | 0.41              |
| 1:B:142:ASP:HB3  | 1:B:143:LYS:HB2  | 2.03                     | 0.41              |
| 1:C:35:ARG:O     | 1:C:36:VAL:HB    | 2.20                     | 0.41              |
| 1:C:44:ASN:OD1   | 1:C:64:LYS:HD2   | 2.21                     | 0.41              |
| 1:C:50:ILE:CG1   | 1:D:320:LYS:NZ   | 2.72                     | 0.41              |
| 1:C:99:ASP:HB3   | 1:C:145:TYR:OH   | 2.21                     | 0.41              |
| 1:C:116:VAL:HG22 | 1:C:116:VAL:O    | 2.19                     | 0.41              |
| 1:C:196:PRO:HA   | 1:C:199:ARG:NH2  | 2.34                     | 0.41              |
| 1:C:247:ASP:O    | 1:G:52:ILE:HG23  | 2.11                     | 0.41              |
| 1:D:110:LEU:CD2  | 1:D:111:ALA:O    | 2.68                     | 0.41              |
| 1:D:112:CYS:CB   | 1:D:122:ALA:HB1  | 2.50                     | 0.41              |
| 1:D:198:GLU:HA   | 1:D:272:ARG:HG2  | 2.03                     | 0.41              |
| 1:E:26:LYS:CG    | 1:E:97:VAL:HG22  | 2.48                     | 0.41              |
| 1:E:138:VAL:CG2  | 1:E:145:TYR:CE2  | 3.02                     | 0.41              |
| 1:E:213:VAL:CG1  | 1:E:235:LEU:HD13 | 2.51                     | 0.41              |
| 1:E:220:LEU:O    | 1:E:221:ASN:C    | 2.58                     | 0.41              |
| 1:F:43:TYR:HE2   | 1:F:67:LEU:HD13  | 1.78                     | 0.41              |
| 1:F:99:ASP:HB3   | 1:F:145:TYR:OH   | 2.21                     | 0.41              |
| 1:F:116:VAL:HB   | 1:F:121:LYS:NZ   | 2.36                     | 0.41              |
| 1:F:257:VAL:HG13 | 1:F:258:LYS:N    | 2.35                     | 0.41              |
| 1:G:35:ARG:O     | 1:G:36:VAL:HB    | 2.20                     | 0.41              |
| 1:G:49:TYR:CE2   | 1:G:50:ILE:O     | 2.74                     | 0.41              |
| 1:G:133:ASN:HD21 | 1:G:148:GLU:CB   | 2.33                     | 0.41              |
| 1:H:35:ARG:O     | 1:H:36:VAL:HB    | 2.20                     | 0.41              |
| 1:H:45:LEU:HD23  | 1:H:58:LYS:HZ1   | 1.86                     | 0.41              |
| 1:H:66:TYR:CZ    | 1:H:88:LEU:CD2   | 3.01                     | 0.41              |
| 1:H:198:GLU:HA   | 1:H:272:ARG:HG2  | 2.02                     | 0.41              |
| 1:H:218:THR:HG23 | 1:H:219:ASP:CG   | 2.40                     | 0.41              |
| 1:I:99:ASP:HB3   | 1:I:145:TYR:OH   | 2.21                     | 0.41              |
| 1:J:110:LEU:CD2  | 1:J:111:ALA:O    | 2.68                     | 0.41              |
| 1:J:310:SER:CA   | 1:J:313:THR:HG23 | 2.47                     | 0.41              |
| 1:K:184:MET:HG2  | 1:K:202:GLU:HB3  | 2.01                     | 0.41              |
| 1:K:320:LYS:CA   | 1:P:246:ILE:CG1  | 2.93                     | 0.41              |
| 1:L:51:ASP:CA    | 1:L:74:GLU:OE2   | 2.65                     | 0.41              |
| 1:L:61:LEU:CD1   | 1:L:91:TYR:CD2   | 3.03                     | 0.41              |
| 1:L:179:PHE:HB2  | 1:L:288:THR:HB   | 1.93                     | 0.41              |
| 1:M:49:TYR:CZ    | 1:M:75:ASP:HA    | 2.55                     | 0.41              |
| 1:M:220:LEU:O    | 1:M:221:ASN:C    | 2.58                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:127:ARG:HE   | 1:N:154:ILE:HD12 | 1.86                     | 0.41              |
| 1:N:220:LEU:O    | 1:N:221:ASN:C    | 2.58                     | 0.41              |
| 1:N:254:ILE:CG1  | 1:N:255:LYS:N    | 2.83                     | 0.41              |
| 1:O:213:VAL:CG1  | 1:O:235:LEU:HD13 | 2.51                     | 0.41              |
| 1:O:322:ALA:N    | 1:P:47:ASP:O     | 2.54                     | 0.41              |
| 1:P:52:ILE:HB    | 1:P:74:GLU:HA    | 2.03                     | 0.41              |
| 1:P:120:ALA:C    | 1:P:124:GLU:HG2  | 2.40                     | 0.41              |
| 1:A:44:ASN:OD1   | 1:A:64:LYS:HD2   | 2.21                     | 0.41              |
| 1:B:44:ASN:OD1   | 1:B:64:LYS:HD2   | 2.21                     | 0.41              |
| 1:B:112:CYS:CB   | 1:B:122:ALA:HB1  | 2.50                     | 0.41              |
| 1:B:119:ASN:CG   | 1:B:120:ALA:N    | 2.72                     | 0.41              |
| 1:B:229:GLU:CB   | 1:G:308:ASN:CB   | 2.49                     | 0.41              |
| 1:C:36:VAL:C     | 1:C:312:TRP:CH2  | 2.93                     | 0.41              |
| 1:C:43:TYR:CD1   | 1:C:67:LEU:O     | 2.74                     | 0.41              |
| 1:C:203:GLU:O    | 1:C:204:HIS:HD2  | 2.02                     | 0.41              |
| 1:D:44:ASN:OD1   | 1:D:64:LYS:HD2   | 2.21                     | 0.41              |
| 1:D:127:ARG:HE   | 1:D:154:ILE:HD12 | 1.86                     | 0.41              |
| 1:E:227:THR:CG2  | 1:F:300:TYR:H    | 2.31                     | 0.41              |
| 1:F:220:LEU:O    | 1:F:221:ASN:C    | 2.58                     | 0.41              |
| 1:G:99:ASP:HB3   | 1:G:145:TYR:OH   | 2.21                     | 0.41              |
| 1:G:172:LYS:HB3  | 1:G:280:ASP:OD2  | 2.21                     | 0.41              |
| 1:G:220:LEU:HD12 | 1:G:220:LEU:N    | 2.34                     | 0.41              |
| 1:I:8:TYR:CE1    | 1:I:25:ASN:ND2   | 2.86                     | 0.41              |
| 1:I:43:TYR:CE1   | 1:I:70:GLU:CG    | 2.95                     | 0.41              |
| 1:I:127:ARG:HE   | 1:I:154:ILE:HD12 | 1.86                     | 0.41              |
| 1:J:8:TYR:CE1    | 1:J:25:ASN:ND2   | 2.86                     | 0.41              |
| 1:J:43:TYR:CD1   | 1:J:67:LEU:O     | 2.74                     | 0.41              |
| 1:J:116:VAL:HB   | 1:J:121:LYS:NZ   | 2.36                     | 0.41              |
| 1:J:117:LEU:HD13 | 1:J:156:ALA:HB2  | 2.03                     | 0.41              |
| 1:J:168:ASN:CB   | 1:K:71:GLN:HG3   | 2.49                     | 0.41              |
| 1:J:288:THR:HG22 | 1:J:292:LEU:HD13 | 2.03                     | 0.41              |
| 1:K:26:LYS:CG    | 1:K:97:VAL:HG22  | 2.48                     | 0.41              |
| 1:K:43:TYR:CE1   | 1:K:70:GLU:CG    | 2.95                     | 0.41              |
| 1:K:132:GLY:N    | 1:K:149:ILE:CD1  | 2.83                     | 0.41              |
| 1:K:159:SER:OG   | 1:K:163:PHE:CE1  | 2.67                     | 0.41              |
| 1:L:43:TYR:HH    | 1:L:56:SER:HG    | 1.64                     | 0.41              |
| 1:L:172:LYS:HB3  | 1:L:280:ASP:OD2  | 2.21                     | 0.41              |
| 1:M:198:GLU:HA   | 1:M:272:ARG:HG2  | 2.02                     | 0.41              |
| 1:M:254:ILE:CG1  | 1:M:255:LYS:N    | 2.83                     | 0.41              |
| 1:N:49:TYR:CE2   | 1:N:50:ILE:O     | 2.74                     | 0.41              |
| 1:N:133:ASN:HD21 | 1:N:148:GLU:CB   | 2.33                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:27:LYS:HZ1   | 1:O:35:ARG:HH21  | 1.67                     | 0.41              |
| 1:O:43:TYR:HB3   | 1:O:78:GLU:CA    | 2.51                     | 0.41              |
| 1:O:85:ILE:HG23  | 1:O:86:HIS:H     | 1.84                     | 0.41              |
| 1:O:142:ASP:HB3  | 1:O:143:LYS:HB2  | 2.03                     | 0.41              |
| 1:P:43:TYR:HB3   | 1:P:78:GLU:CA    | 2.51                     | 0.41              |
| 1:P:49:TYR:CE2   | 1:P:50:ILE:O     | 2.74                     | 0.41              |
| 1:P:85:ILE:HG23  | 1:P:86:HIS:H     | 1.84                     | 0.41              |
| 1:A:132:GLY:N    | 1:A:149:ILE:CD1  | 2.83                     | 0.41              |
| 1:A:142:ASP:HB3  | 1:A:143:LYS:HB2  | 2.03                     | 0.41              |
| 1:A:299:THR:HG22 | 1:A:300:TYR:HD1  | 1.86                     | 0.41              |
| 1:B:43:TYR:CD1   | 1:B:67:LEU:O     | 2.74                     | 0.41              |
| 1:B:51:ASP:CA    | 1:B:74:GLU:OE2   | 2.66                     | 0.41              |
| 1:B:99:ASP:HB3   | 1:B:145:TYR:OH   | 2.21                     | 0.41              |
| 1:C:85:ILE:HG23  | 1:C:86:HIS:H     | 1.84                     | 0.41              |
| 1:C:227:THR:CG2  | 1:D:300:TYR:C    | 2.66                     | 0.41              |
| 1:C:245:GLU:O    | 1:G:74:GLU:O     | 2.38                     | 0.41              |
| 1:C:299:THR:HG22 | 1:C:300:TYR:HD1  | 1.86                     | 0.41              |
| 1:D:43:TYR:CD1   | 1:D:67:LEU:O     | 2.74                     | 0.41              |
| 1:D:203:GLU:O    | 1:D:204:HIS:HD2  | 2.02                     | 0.41              |
| 1:E:116:VAL:HB   | 1:E:121:LYS:NZ   | 2.36                     | 0.41              |
| 1:F:8:TYR:CE1    | 1:F:25:ASN:ND2   | 2.86                     | 0.41              |
| 1:F:50:ILE:HG22  | 1:G:323:VAL:CB   | 2.33                     | 0.41              |
| 1:F:110:LEU:CD2  | 1:F:111:ALA:O    | 2.68                     | 0.41              |
| 1:F:127:ARG:HE   | 1:F:154:ILE:HD12 | 1.86                     | 0.41              |
| 1:F:132:GLY:N    | 1:F:149:ILE:CD1  | 2.83                     | 0.41              |
| 1:G:43:TYR:HE2   | 1:G:67:LEU:HD13  | 1.77                     | 0.41              |
| 1:H:172:LYS:HB3  | 1:H:280:ASP:OD2  | 2.21                     | 0.41              |
| 1:H:254:ILE:HG13 | 1:H:255:LYS:H    | 1.86                     | 0.41              |
| 1:I:43:TYR:CD1   | 1:I:67:LEU:O     | 2.74                     | 0.41              |
| 1:I:300:TYR:HB3  | 1:J:227:THR:H    | 1.59                     | 0.41              |
| 1:J:257:VAL:HG13 | 1:J:258:LYS:N    | 2.35                     | 0.41              |
| 1:K:43:TYR:CD1   | 1:K:67:LEU:O     | 2.74                     | 0.41              |
| 1:K:49:TYR:CE2   | 1:K:50:ILE:O     | 2.74                     | 0.41              |
| 1:K:288:THR:HG22 | 1:K:292:LEU:HD13 | 2.03                     | 0.41              |
| 1:L:200:PHE:HB3  | 1:L:272:ARG:NE   | 2.35                     | 0.41              |
| 1:M:34:LYS:H     | 1:M:35:ARG:HB2   | 1.79                     | 0.41              |
| 1:M:49:TYR:CE2   | 1:M:50:ILE:O     | 2.74                     | 0.41              |
| 1:M:169:PHE:H    | 1:N:41:LYS:NZ    | 2.18                     | 0.41              |
| 1:N:49:TYR:CZ    | 1:N:75:ASP:HA    | 2.55                     | 0.41              |
| 1:N:110:LEU:CD2  | 1:N:111:ALA:O    | 2.68                     | 0.41              |
| 1:O:43:TYR:CE1   | 1:O:70:GLU:CG    | 2.95                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:117:LEU:HD13 | 1:O:156:ALA:HB2  | 2.02                     | 0.41              |
| 1:O:257:VAL:HG13 | 1:O:258:LYS:N    | 2.35                     | 0.41              |
| 1:P:44:ASN:HB2   | 1:P:64:LYS:NZ    | 2.26                     | 0.41              |
| 1:P:99:ASP:HB3   | 1:P:145:TYR:OH   | 2.21                     | 0.41              |
| 1:P:213:VAL:CG1  | 1:P:235:LEU:HD13 | 2.51                     | 0.41              |
| 1:A:43:TYR:CD1   | 1:A:67:LEU:O     | 2.74                     | 0.41              |
| 1:A:43:TYR:HH    | 1:A:56:SER:HG    | 1.67                     | 0.41              |
| 1:A:49:TYR:CZ    | 1:A:75:ASP:HA    | 2.56                     | 0.41              |
| 1:A:52:ILE:HB    | 1:A:74:GLU:HA    | 2.03                     | 0.41              |
| 1:A:127:ARG:HE   | 1:A:154:ILE:HD12 | 1.86                     | 0.41              |
| 1:A:245:GLU:O    | 1:E:74:GLU:HA    | 2.21                     | 0.41              |
| 1:B:27:LYS:HE2   | 1:B:35:ARG:NE    | 2.26                     | 0.41              |
| 1:B:49:TYR:CE2   | 1:B:50:ILE:O     | 2.74                     | 0.41              |
| 1:B:107:GLN:CB   | 1:B:151:ASP:OD1  | 2.69                     | 0.41              |
| 1:B:116:VAL:HG21 | 1:B:121:LYS:HZ2  | 1.85                     | 0.41              |
| 1:B:116:VAL:HB   | 1:B:121:LYS:NZ   | 2.36                     | 0.41              |
| 1:B:132:GLY:N    | 1:B:149:ILE:CD1  | 2.83                     | 0.41              |
| 1:B:138:VAL:CG2  | 1:B:145:TYR:CE2  | 3.02                     | 0.41              |
| 1:B:240:MET:HE1  | 1:F:73:VAL:HG21  | 1.68                     | 0.41              |
| 1:C:8:TYR:CE1    | 1:C:25:ASN:ND2   | 2.86                     | 0.41              |
| 1:C:49:TYR:CZ    | 1:C:75:ASP:HA    | 2.55                     | 0.41              |
| 1:C:110:LEU:CD2  | 1:C:111:ALA:O    | 2.68                     | 0.41              |
| 1:C:123:LYS:HZ3  | 1:C:127:ARG:HH12 | 1.69                     | 0.41              |
| 1:C:142:ASP:HB3  | 1:C:143:LYS:HB2  | 2.03                     | 0.41              |
| 1:C:172:LYS:HB3  | 1:C:280:ASP:OD2  | 2.21                     | 0.41              |
| 1:D:49:TYR:CE2   | 1:D:50:ILE:O     | 2.74                     | 0.41              |
| 1:D:99:ASP:HB3   | 1:D:145:TYR:OH   | 2.21                     | 0.41              |
| 1:D:109:VAL:CG2  | 1:D:321:VAL:HG13 | 2.46                     | 0.41              |
| 1:D:117:LEU:HD12 | 1:D:156:ALA:N    | 2.36                     | 0.41              |
| 1:D:213:VAL:CG1  | 1:D:235:LEU:HD13 | 2.51                     | 0.41              |
| 1:D:218:THR:HG23 | 1:D:219:ASP:CG   | 2.40                     | 0.41              |
| 1:D:220:LEU:O    | 1:D:221:ASN:C    | 2.58                     | 0.41              |
| 1:D:245:GLU:OE2  | 1:H:78:GLU:OE1   | 2.38                     | 0.41              |
| 1:D:245:GLU:O    | 1:H:74:GLU:C     | 2.59                     | 0.41              |
| 1:D:296:ILE:O    | 1:D:296:ILE:HG13 | 2.18                     | 0.41              |
| 1:E:44:ASN:OD1   | 1:E:64:LYS:HD2   | 2.21                     | 0.41              |
| 1:E:49:TYR:C     | 1:F:323:VAL:CA   | 2.53                     | 0.41              |
| 1:E:112:CYS:CB   | 1:E:122:ALA:HB1  | 2.50                     | 0.41              |
| 1:E:132:GLY:N    | 1:E:149:ILE:CD1  | 2.83                     | 0.41              |
| 1:E:139:LYS:O    | 1:E:142:ASP:O    | 2.39                     | 0.41              |
| 1:E:218:THR:C    | 1:F:275:LYS:CG   | 2.89                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:227:THR:CG2  | 1:F:300:TYR:N    | 2.62                     | 0.41              |
| 1:E:228:ASN:N    | 1:F:301:PRO:O    | 2.54                     | 0.41              |
| 1:E:259:GLU:HG3  | 1:E:263:LYS:HE3  | 2.03                     | 0.41              |
| 1:F:198:GLU:HA   | 1:F:272:ARG:HG2  | 2.03                     | 0.41              |
| 1:F:213:VAL:CG1  | 1:F:235:LEU:HD13 | 2.51                     | 0.41              |
| 1:F:220:LEU:HD12 | 1:F:220:LEU:N    | 2.34                     | 0.41              |
| 1:F:259:GLU:HG3  | 1:F:263:LYS:HE3  | 2.03                     | 0.41              |
| 1:G:26:LYS:CG    | 1:G:97:VAL:HG22  | 2.48                     | 0.41              |
| 1:G:79:THR:C     | 1:H:170:LYS:HE2  | 2.41                     | 0.41              |
| 1:G:139:LYS:O    | 1:G:142:ASP:O    | 2.39                     | 0.41              |
| 1:G:198:GLU:HA   | 1:G:272:ARG:HG2  | 2.03                     | 0.41              |
| 1:G:200:PHE:HB3  | 1:G:272:ARG:NE   | 2.35                     | 0.41              |
| 1:G:226:ILE:HD12 | 1:H:303:ASN:C    | 2.11                     | 0.41              |
| 1:G:228:ASN:N    | 1:H:301:PRO:O    | 2.54                     | 0.41              |
| 1:H:26:LYS:CG    | 1:H:97:VAL:HG22  | 2.48                     | 0.41              |
| 1:H:44:ASN:OD1   | 1:H:64:LYS:HD2   | 2.21                     | 0.41              |
| 1:H:49:TYR:CZ    | 1:H:75:ASP:HA    | 2.55                     | 0.41              |
| 1:H:99:ASP:HB3   | 1:H:145:TYR:OH   | 2.21                     | 0.41              |
| 1:H:127:ARG:HE   | 1:H:154:ILE:HD12 | 1.86                     | 0.41              |
| 1:I:120:ALA:C    | 1:I:124:GLU:HG2  | 2.40                     | 0.41              |
| 1:I:139:LYS:O    | 1:I:142:ASP:O    | 2.39                     | 0.41              |
| 1:I:172:LYS:HB3  | 1:I:280:ASP:OD2  | 2.21                     | 0.41              |
| 1:I:213:VAL:CG1  | 1:I:235:LEU:HD13 | 2.51                     | 0.41              |
| 1:I:221:ASN:O    | 1:I:223:GLY:N    | 2.54                     | 0.41              |
| 1:I:275:LYS:CG   | 1:J:218:THR:C    | 2.89                     | 0.41              |
| 1:I:301:PRO:O    | 1:J:228:ASN:N    | 2.54                     | 0.41              |
| 1:J:26:LYS:CG    | 1:J:97:VAL:HG22  | 2.48                     | 0.41              |
| 1:J:44:ASN:OD1   | 1:J:64:LYS:HD2   | 2.21                     | 0.41              |
| 1:J:120:ALA:C    | 1:J:124:GLU:HG2  | 2.40                     | 0.41              |
| 1:J:133:ASN:HD21 | 1:J:148:GLU:CB   | 2.33                     | 0.41              |
| 1:J:166:GLN:CA   | 1:O:242:LYS:O    | 2.57                     | 0.41              |
| 1:J:172:LYS:HB3  | 1:J:280:ASP:OD2  | 2.21                     | 0.41              |
| 1:J:186:PHE:HD2  | 1:J:269:ILE:CD1  | 2.32                     | 0.41              |
| 1:J:220:LEU:O    | 1:J:221:ASN:C    | 2.58                     | 0.41              |
| 1:J:221:ASN:O    | 1:J:223:GLY:N    | 2.54                     | 0.41              |
| 1:J:275:LYS:CG   | 1:K:218:THR:C    | 2.89                     | 0.41              |
| 1:K:120:ALA:C    | 1:K:124:GLU:HG2  | 2.40                     | 0.41              |
| 1:K:133:ASN:HD21 | 1:K:148:GLU:CB   | 2.33                     | 0.41              |
| 1:K:139:LYS:O    | 1:K:142:ASP:O    | 2.39                     | 0.41              |
| 1:K:172:LYS:HB3  | 1:K:280:ASP:OD2  | 2.21                     | 0.41              |
| 1:K:233:SER:O    | 1:K:234:ALA:O    | 2.39                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:43:TYR:CD1   | 1:L:67:LEU:O     | 2.74                     | 0.41              |
| 1:L:138:VAL:CG2  | 1:L:145:TYR:CE2  | 3.03                     | 0.41              |
| 1:L:139:LYS:O    | 1:L:142:ASP:O    | 2.39                     | 0.41              |
| 1:L:259:GLU:HG3  | 1:L:263:LYS:HE3  | 2.03                     | 0.41              |
| 1:M:52:ILE:HB    | 1:M:74:GLU:HA    | 2.03                     | 0.41              |
| 1:M:59:ILE:HD13  | 1:M:92:THR:HG22  | 2.03                     | 0.41              |
| 1:M:107:GLN:CB   | 1:M:151:ASP:OD1  | 2.69                     | 0.41              |
| 1:M:116:VAL:HB   | 1:M:121:LYS:NZ   | 2.36                     | 0.41              |
| 1:M:139:LYS:O    | 1:M:142:ASP:O    | 2.39                     | 0.41              |
| 1:M:209:LEU:HD12 | 1:M:257:VAL:HG22 | 2.03                     | 0.41              |
| 1:N:43:TYR:CD2   | 1:N:75:ASP:HB3   | 2.55                     | 0.41              |
| 1:N:52:ILE:HB    | 1:N:74:GLU:HA    | 2.03                     | 0.41              |
| 1:N:117:LEU:HD13 | 1:N:156:ALA:HB2  | 2.03                     | 0.41              |
| 1:N:139:LYS:O    | 1:N:142:ASP:O    | 2.39                     | 0.41              |
| 1:N:142:ASP:HB3  | 1:N:143:LYS:HB2  | 2.03                     | 0.41              |
| 1:N:198:GLU:HA   | 1:N:272:ARG:HG2  | 2.02                     | 0.41              |
| 1:N:299:THR:HG22 | 1:N:300:TYR:HD1  | 1.86                     | 0.41              |
| 1:O:49:TYR:CE2   | 1:O:50:ILE:O     | 2.74                     | 0.41              |
| 1:O:52:ILE:HB    | 1:O:74:GLU:HA    | 2.03                     | 0.41              |
| 1:O:120:ALA:C    | 1:O:124:GLU:HG2  | 2.40                     | 0.41              |
| 1:O:139:LYS:O    | 1:O:142:ASP:O    | 2.39                     | 0.41              |
| 1:O:220:LEU:O    | 1:O:234:ALA:O    | 2.37                     | 0.41              |
| 1:O:288:THR:HG22 | 1:O:292:LEU:HD13 | 2.03                     | 0.41              |
| 1:O:301:PRO:HD3  | 1:P:227:THR:CB   | 1.89                     | 0.41              |
| 1:P:43:TYR:CD1   | 1:P:67:LEU:O     | 2.74                     | 0.41              |
| 1:P:45:LEU:N     | 1:P:67:LEU:HD12  | 2.36                     | 0.41              |
| 1:P:117:LEU:HD13 | 1:P:156:ALA:HB2  | 2.03                     | 0.41              |
| 1:P:127:ARG:HE   | 1:P:154:ILE:HD12 | 1.86                     | 0.41              |
| 1:P:139:LYS:O    | 1:P:142:ASP:O    | 2.39                     | 0.41              |
| 1:P:221:ASN:O    | 1:P:223:GLY:N    | 2.54                     | 0.41              |
| 1:P:288:THR:HG22 | 1:P:292:LEU:HD13 | 2.03                     | 0.41              |
| 1:A:107:GLN:CB   | 1:A:151:ASP:OD1  | 2.69                     | 0.41              |
| 1:B:149:ILE:HD13 | 1:B:149:ILE:HG21 | 1.74                     | 0.41              |
| 1:B:227:THR:CG2  | 1:C:301:PRO:CD   | 2.93                     | 0.41              |
| 1:C:233:SER:O    | 1:C:234:ALA:O    | 2.39                     | 0.41              |
| 1:D:44:ASN:CB    | 1:D:64:LYS:NZ    | 2.84                     | 0.41              |
| 1:D:95:THR:HG23  | 1:D:95:THR:H     | 1.70                     | 0.41              |
| 1:D:221:ASN:O    | 1:D:223:GLY:N    | 2.54                     | 0.41              |
| 1:E:107:GLN:CB   | 1:E:151:ASP:OD1  | 2.69                     | 0.41              |
| 1:E:117:LEU:HD12 | 1:E:156:ALA:N    | 2.36                     | 0.41              |
| 1:E:172:LYS:HB3  | 1:E:280:ASP:OD2  | 2.21                     | 0.41              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:26:LYS:CG    | 1:F:97:VAL:HG22  | 2.48                     | 0.41              |
| 1:F:45:LEU:HD23  | 1:F:58:LYS:NZ    | 2.36                     | 0.41              |
| 1:F:139:LYS:O    | 1:F:142:ASP:O    | 2.39                     | 0.41              |
| 1:G:48:GLY:HA2   | 1:H:325:LYS:HB2  | 1.50                     | 0.41              |
| 1:G:51:ASP:CA    | 1:G:74:GLU:OE2   | 2.65                     | 0.41              |
| 1:G:233:SER:O    | 1:G:234:ALA:O    | 2.39                     | 0.41              |
| 1:G:254:ILE:HG13 | 1:G:255:LYS:H    | 1.86                     | 0.41              |
| 1:G:299:THR:HG22 | 1:G:300:TYR:HD1  | 1.86                     | 0.41              |
| 1:H:44:ASN:HB2   | 1:H:64:LYS:NZ    | 2.26                     | 0.41              |
| 1:H:49:TYR:CE2   | 1:H:50:ILE:O     | 2.74                     | 0.41              |
| 1:H:107:GLN:CB   | 1:H:151:ASP:OD1  | 2.69                     | 0.41              |
| 1:H:139:LYS:O    | 1:H:142:ASP:O    | 2.39                     | 0.41              |
| 1:H:221:ASN:O    | 1:H:223:GLY:N    | 2.54                     | 0.41              |
| 1:H:291:LYS:HG2  | 1:H:292:LEU:HD12 | 2.03                     | 0.41              |
| 1:I:107:GLN:CB   | 1:I:151:ASP:OD1  | 2.69                     | 0.41              |
| 1:I:132:GLY:N    | 1:I:149:ILE:CD1  | 2.83                     | 0.41              |
| 1:I:168:ASN:CB   | 1:J:71:GLN:HG3   | 2.49                     | 0.41              |
| 1:J:52:ILE:HA    | 1:N:248:THR:CG2  | 2.46                     | 0.41              |
| 1:J:132:GLY:N    | 1:J:149:ILE:CD1  | 2.83                     | 0.41              |
| 1:J:139:LYS:O    | 1:J:142:ASP:O    | 2.39                     | 0.41              |
| 1:J:241:LYS:O    | 1:N:308:ASN:ND2  | 2.45                     | 0.41              |
| 1:K:45:LEU:HD23  | 1:K:58:LYS:NZ    | 2.36                     | 0.41              |
| 1:K:127:ARG:HE   | 1:K:154:ILE:HD12 | 1.86                     | 0.41              |
| 1:K:209:LEU:HD12 | 1:K:257:VAL:HG22 | 2.03                     | 0.41              |
| 1:K:275:LYS:CG   | 1:L:218:THR:C    | 2.89                     | 0.41              |
| 1:L:117:LEU:HD12 | 1:L:156:ALA:N    | 2.36                     | 0.41              |
| 1:M:117:LEU:HD13 | 1:M:156:ALA:HB2  | 2.03                     | 0.41              |
| 1:N:107:GLN:CB   | 1:N:151:ASP:OD1  | 2.69                     | 0.41              |
| 1:O:44:ASN:OD1   | 1:O:64:LYS:HD2   | 2.21                     | 0.41              |
| 1:O:45:LEU:HD23  | 1:O:58:LYS:NZ    | 2.37                     | 0.41              |
| 1:O:221:ASN:O    | 1:O:223:GLY:N    | 2.54                     | 0.41              |
| 1:O:275:LYS:HE3  | 1:P:218:THR:C    | 2.40                     | 0.41              |
| 1:P:45:LEU:HD23  | 1:P:58:LYS:HZ1   | 1.86                     | 0.41              |
| 1:P:142:ASP:HB3  | 1:P:143:LYS:HB2  | 2.03                     | 0.41              |
| 1:P:209:LEU:HD12 | 1:P:257:VAL:HG22 | 2.03                     | 0.41              |
| 1:A:110:LEU:HD23 | 1:A:111:ALA:H    | 1.85                     | 0.40              |
| 1:A:117:LEU:HD12 | 1:A:156:ALA:N    | 2.36                     | 0.40              |
| 1:A:242:LYS:HA   | 1:F:165:GLU:CA   | 2.51                     | 0.40              |
| 1:A:257:VAL:HG13 | 1:A:258:LYS:N    | 2.35                     | 0.40              |
| 1:B:44:ASN:CB    | 1:B:64:LYS:NZ    | 2.84                     | 0.40              |
| 1:B:61:LEU:HD23  | 1:B:61:LEU:C     | 2.42                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:117:LEU:HD12 | 1:B:156:ALA:N    | 2.36                     | 0.40              |
| 1:B:172:LYS:HB3  | 1:B:280:ASP:OD2  | 2.21                     | 0.40              |
| 1:C:46:GLU:O     | 1:D:323:VAL:CG2  | 2.70                     | 0.40              |
| 1:C:61:LEU:HD23  | 1:C:61:LEU:C     | 2.42                     | 0.40              |
| 1:C:116:VAL:HB   | 1:C:121:LYS:NZ   | 2.36                     | 0.40              |
| 1:C:213:VAL:CG1  | 1:C:235:LEU:HD13 | 2.51                     | 0.40              |
| 1:D:11:THR:HB    | 1:D:22:ILE:HG13  | 2.01                     | 0.40              |
| 1:D:49:TYR:CZ    | 1:D:75:ASP:HA    | 2.56                     | 0.40              |
| 1:D:85:ILE:HG23  | 1:D:86:HIS:H     | 1.84                     | 0.40              |
| 1:D:116:VAL:HB   | 1:D:121:LYS:NZ   | 2.36                     | 0.40              |
| 1:D:172:LYS:HB3  | 1:D:280:ASP:OD2  | 2.21                     | 0.40              |
| 1:E:45:LEU:CB    | 1:E:67:LEU:HD11  | 2.41                     | 0.40              |
| 1:E:198:GLU:HA   | 1:E:272:ARG:HG2  | 2.03                     | 0.40              |
| 1:E:291:LYS:HG2  | 1:E:292:LEU:HD12 | 2.03                     | 0.40              |
| 1:F:44:ASN:CB    | 1:F:64:LYS:NZ    | 2.84                     | 0.40              |
| 1:F:110:LEU:HD23 | 1:F:111:ALA:H    | 1.86                     | 0.40              |
| 1:F:138:VAL:CG2  | 1:F:145:TYR:CE2  | 3.03                     | 0.40              |
| 1:F:172:LYS:HB3  | 1:F:280:ASP:OD2  | 2.21                     | 0.40              |
| 1:F:218:THR:C    | 1:G:275:LYS:CG   | 2.89                     | 0.40              |
| 1:G:213:VAL:CG1  | 1:G:235:LEU:HD13 | 2.51                     | 0.40              |
| 1:G:218:THR:C    | 1:H:275:LYS:CG   | 2.89                     | 0.40              |
| 1:H:11:THR:HB    | 1:H:22:ILE:HG13  | 2.01                     | 0.40              |
| 1:H:36:VAL:N     | 1:H:312:TRP:CH2  | 2.80                     | 0.40              |
| 1:H:52:ILE:HB    | 1:H:74:GLU:HA    | 2.03                     | 0.40              |
| 1:H:159:SER:OG   | 1:H:163:PHE:CE1  | 2.67                     | 0.40              |
| 1:H:284:PHE:CD1  | 1:H:284:PHE:N    | 2.90                     | 0.40              |
| 1:H:288:THR:HG22 | 1:H:292:LEU:HD13 | 2.03                     | 0.40              |
| 1:I:209:LEU:HD12 | 1:I:257:VAL:HG22 | 2.03                     | 0.40              |
| 1:J:209:LEU:HD12 | 1:J:257:VAL:HG22 | 2.03                     | 0.40              |
| 1:J:213:VAL:CG1  | 1:J:235:LEU:HD13 | 2.51                     | 0.40              |
| 1:K:36:VAL:HG23  | 1:K:38:PHE:CZ    | 2.57                     | 0.40              |
| 1:K:107:GLN:CB   | 1:K:151:ASP:OD1  | 2.69                     | 0.40              |
| 1:K:116:VAL:HB   | 1:K:121:LYS:NZ   | 2.36                     | 0.40              |
| 1:K:117:LEU:HD12 | 1:K:156:ALA:N    | 2.36                     | 0.40              |
| 1:K:142:ASP:HB3  | 1:K:143:LYS:HB2  | 2.03                     | 0.40              |
| 1:L:52:ILE:HD13  | 1:P:248:THR:CG2  | 2.44                     | 0.40              |
| 1:L:95:THR:HG21  | 1:L:136:ILE:HG21 | 1.96                     | 0.40              |
| 1:L:127:ARG:HE   | 1:L:154:ILE:HD12 | 1.86                     | 0.40              |
| 1:L:142:ASP:HB3  | 1:L:143:LYS:HB2  | 2.03                     | 0.40              |
| 1:L:209:LEU:HD12 | 1:L:257:VAL:HG22 | 2.03                     | 0.40              |
| 1:L:262:LEU:O    | 1:L:266:ILE:HG12 | 2.22                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:68:ILE:HG21  | 1:M:92:THR:CB    | 2.52                     | 0.40              |
| 1:M:99:ASP:HB3   | 1:M:145:TYR:OH   | 2.21                     | 0.40              |
| 1:M:214:GLY:HA3  | 1:M:220:LEU:HG   | 2.03                     | 0.40              |
| 1:M:221:ASN:O    | 1:M:223:GLY:N    | 2.54                     | 0.40              |
| 1:N:27:LYS:HE2   | 1:N:35:ARG:CG    | 2.34                     | 0.40              |
| 1:N:59:ILE:HD13  | 1:N:92:THR:HG22  | 2.03                     | 0.40              |
| 1:N:131:LYS:HD2  | 1:N:149:ILE:HD11 | 1.99                     | 0.40              |
| 1:N:209:LEU:HD12 | 1:N:257:VAL:HG22 | 2.03                     | 0.40              |
| 1:N:214:GLY:HA3  | 1:N:220:LEU:HG   | 2.03                     | 0.40              |
| 1:N:221:ASN:O    | 1:N:223:GLY:N    | 2.54                     | 0.40              |
| 1:N:222:ASN:HD22 | 1:N:237:ASN:HB2  | 1.75                     | 0.40              |
| 1:N:233:SER:O    | 1:N:234:ALA:O    | 2.39                     | 0.40              |
| 1:N:288:THR:HG22 | 1:N:292:LEU:HD13 | 2.03                     | 0.40              |
| 1:O:43:TYR:CD1   | 1:O:67:LEU:O     | 2.74                     | 0.40              |
| 1:O:45:LEU:N     | 1:O:67:LEU:HD12  | 2.37                     | 0.40              |
| 1:P:87:LYS:HG2   | 1:P:129:TYR:CD2  | 2.56                     | 0.40              |
| 1:A:61:LEU:HD23  | 1:A:61:LEU:C     | 2.42                     | 0.40              |
| 1:A:116:VAL:HB   | 1:A:121:LYS:NZ   | 2.36                     | 0.40              |
| 1:A:120:ALA:C    | 1:A:124:GLU:HG2  | 2.41                     | 0.40              |
| 1:A:131:LYS:HD2  | 1:A:149:ILE:HD11 | 1.99                     | 0.40              |
| 1:A:139:LYS:O    | 1:A:142:ASP:O    | 2.39                     | 0.40              |
| 1:A:209:LEU:HD12 | 1:A:257:VAL:HG22 | 2.03                     | 0.40              |
| 1:A:284:PHE:CD1  | 1:A:284:PHE:N    | 2.89                     | 0.40              |
| 1:B:27:LYS:HZ1   | 1:B:35:ARG:NH2   | 2.20                     | 0.40              |
| 1:B:34:LYS:H     | 1:B:35:ARG:HB2   | 1.79                     | 0.40              |
| 1:B:45:LEU:N     | 1:B:67:LEU:HD12  | 2.36                     | 0.40              |
| 1:B:269:ILE:HG23 | 1:B:269:ILE:HD12 | 1.90                     | 0.40              |
| 1:C:11:THR:HB    | 1:C:22:ILE:HG13  | 2.01                     | 0.40              |
| 1:C:43:TYR:HB3   | 1:C:78:GLU:CA    | 2.51                     | 0.40              |
| 1:C:107:GLN:CB   | 1:C:151:ASP:OD1  | 2.69                     | 0.40              |
| 1:C:117:LEU:HD12 | 1:C:156:ALA:N    | 2.36                     | 0.40              |
| 1:C:132:GLY:N    | 1:C:149:ILE:CD1  | 2.83                     | 0.40              |
| 1:C:221:ASN:O    | 1:C:223:GLY:N    | 2.54                     | 0.40              |
| 1:C:248:THR:CG2  | 1:G:52:ILE:HD12  | 2.49                     | 0.40              |
| 1:C:273:GLY:O    | 1:C:274:PHE:CD2  | 2.75                     | 0.40              |
| 1:C:296:ILE:O    | 1:C:296:ILE:HG13 | 2.18                     | 0.40              |
| 1:D:87:LYS:HG2   | 1:D:129:TYR:CD2  | 2.56                     | 0.40              |
| 1:D:233:SER:O    | 1:D:234:ALA:O    | 2.39                     | 0.40              |
| 1:E:45:LEU:HD23  | 1:E:58:LYS:NZ    | 2.36                     | 0.40              |
| 1:E:110:LEU:HD23 | 1:E:111:ALA:H    | 1.86                     | 0.40              |
| 1:E:254:ILE:CG1  | 1:E:255:LYS:N    | 2.83                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:43:TYR:CD1   | 1:F:67:LEU:O     | 2.74                     | 0.40              |
| 1:F:44:ASN:OD1   | 1:F:64:LYS:HD2   | 2.21                     | 0.40              |
| 1:F:117:LEU:HD12 | 1:F:156:ALA:N    | 2.36                     | 0.40              |
| 1:F:272:ARG:HG3  | 1:I:203:GLU:H    | 0.63                     | 0.40              |
| 1:G:44:ASN:OD1   | 1:G:64:LYS:HD2   | 2.21                     | 0.40              |
| 1:G:52:ILE:HB    | 1:G:74:GLU:HA    | 2.03                     | 0.40              |
| 1:G:110:LEU:HD23 | 1:G:111:ALA:H    | 1.86                     | 0.40              |
| 1:G:221:ASN:O    | 1:G:223:GLY:N    | 2.54                     | 0.40              |
| 1:H:110:LEU:HD23 | 1:H:111:ALA:H    | 1.86                     | 0.40              |
| 1:H:203:GLU:OE1  | 1:K:198:GLU:HG2  | 2.21                     | 0.40              |
| 1:J:273:GLY:O    | 1:J:274:PHE:CD2  | 2.75                     | 0.40              |
| 1:J:276:LEU:O    | 1:K:225:LEU:CA   | 2.64                     | 0.40              |
| 1:K:61:LEU:HD23  | 1:K:61:LEU:C     | 2.42                     | 0.40              |
| 1:K:95:THR:HG21  | 1:K:136:ILE:HG21 | 1.97                     | 0.40              |
| 1:K:221:ASN:O    | 1:K:223:GLY:N    | 2.54                     | 0.40              |
| 1:L:213:VAL:CG1  | 1:L:235:LEU:HD13 | 2.51                     | 0.40              |
| 1:M:45:LEU:HD23  | 1:M:58:LYS:NZ    | 2.36                     | 0.40              |
| 1:M:132:GLY:N    | 1:M:149:ILE:CD1  | 2.83                     | 0.40              |
| 1:M:323:VAL:CG2  | 1:N:46:GLU:O     | 2.70                     | 0.40              |
| 1:N:45:LEU:N     | 1:N:67:LEU:HD12  | 2.36                     | 0.40              |
| 1:N:120:ALA:C    | 1:N:124:GLU:HG2  | 2.40                     | 0.40              |
| 1:N:273:GLY:O    | 1:N:274:PHE:CD2  | 2.75                     | 0.40              |
| 1:O:59:ILE:HD13  | 1:O:92:THR:HG22  | 2.03                     | 0.40              |
| 1:O:68:ILE:HG21  | 1:O:92:THR:CB    | 2.52                     | 0.40              |
| 1:O:169:PHE:H    | 1:P:41:LYS:NZ    | 2.18                     | 0.40              |
| 1:O:273:GLY:O    | 1:O:274:PHE:CD2  | 2.75                     | 0.40              |
| 1:P:44:ASN:OD1   | 1:P:64:LYS:HD2   | 2.21                     | 0.40              |
| 1:P:284:PHE:CD1  | 1:P:284:PHE:N    | 2.90                     | 0.40              |
| 1:P:310:SER:CA   | 1:P:313:THR:HG23 | 2.47                     | 0.40              |
| 1:A:45:LEU:N     | 1:A:67:LEU:HD12  | 2.37                     | 0.40              |
| 1:A:87:LYS:HG2   | 1:A:129:TYR:CD2  | 2.56                     | 0.40              |
| 1:A:99:ASP:HB3   | 1:A:145:TYR:OH   | 2.21                     | 0.40              |
| 1:A:172:LYS:HB3  | 1:A:280:ASP:OD2  | 2.21                     | 0.40              |
| 1:A:218:THR:C    | 1:B:275:LYS:HE3  | 2.40                     | 0.40              |
| 1:A:220:LEU:O    | 1:A:221:ASN:C    | 2.58                     | 0.40              |
| 1:A:246:ILE:CG1  | 1:E:49:TYR:CG    | 3.01                     | 0.40              |
| 1:A:259:GLU:HG3  | 1:A:263:LYS:HE3  | 2.03                     | 0.40              |
| 1:A:310:SER:CA   | 1:A:313:THR:HG23 | 2.47                     | 0.40              |
| 1:B:11:THR:HB    | 1:B:22:ILE:HG13  | 2.01                     | 0.40              |
| 1:B:43:TYR:HH    | 1:B:56:SER:HG    | 1.66                     | 0.40              |
| 1:B:46:GLU:O     | 1:C:323:VAL:CG2  | 2.70                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:59:ILE:HD13  | 1:B:92:THR:HG22  | 2.03                     | 0.40              |
| 1:B:76:SER:HG    | 1:C:163:PHE:HA   | 1.82                     | 0.40              |
| 1:B:87:LYS:HG2   | 1:B:129:TYR:CD2  | 2.56                     | 0.40              |
| 1:B:110:LEU:HD23 | 1:B:111:ALA:H    | 1.85                     | 0.40              |
| 1:B:120:ALA:C    | 1:B:124:GLU:HG2  | 2.40                     | 0.40              |
| 1:B:127:ARG:HE   | 1:B:154:ILE:HD12 | 1.86                     | 0.40              |
| 1:B:139:LYS:O    | 1:B:142:ASP:O    | 2.39                     | 0.40              |
| 1:B:230:GLN:CD   | 1:G:306:ILE:HG21 | 2.41                     | 0.40              |
| 1:C:59:ILE:HD13  | 1:C:92:THR:HG22  | 2.03                     | 0.40              |
| 1:C:87:LYS:HG2   | 1:C:129:TYR:CD2  | 2.56                     | 0.40              |
| 1:C:127:ARG:HE   | 1:C:154:ILE:HD12 | 1.86                     | 0.40              |
| 1:C:310:SER:CA   | 1:C:313:THR:HG23 | 2.47                     | 0.40              |
| 1:E:61:LEU:HD23  | 1:E:61:LEU:C     | 2.42                     | 0.40              |
| 1:E:209:LEU:HD12 | 1:E:257:VAL:HG22 | 2.03                     | 0.40              |
| 1:E:220:LEU:HD12 | 1:E:220:LEU:N    | 2.34                     | 0.40              |
| 1:F:61:LEU:HD23  | 1:F:61:LEU:C     | 2.42                     | 0.40              |
| 1:F:201:ILE:HG23 | 1:I:272:ARG:HH11 | 1.76                     | 0.40              |
| 1:F:209:LEU:HD12 | 1:F:257:VAL:HG22 | 2.03                     | 0.40              |
| 1:F:254:ILE:HG13 | 1:F:255:LYS:H    | 1.86                     | 0.40              |
| 1:F:273:GLY:O    | 1:F:274:PHE:CD2  | 2.75                     | 0.40              |
| 1:F:299:THR:HG22 | 1:F:300:TYR:HD1  | 1.86                     | 0.40              |
| 1:G:43:TYR:CD1   | 1:G:67:LEU:O     | 2.74                     | 0.40              |
| 1:G:66:TYR:CZ    | 1:G:88:LEU:CD2   | 3.01                     | 0.40              |
| 1:G:107:GLN:CB   | 1:G:151:ASP:OD1  | 2.69                     | 0.40              |
| 1:G:225:LEU:HD12 | 1:H:300:TYR:CE2  | 2.29                     | 0.40              |
| 1:G:259:GLU:HG3  | 1:G:263:LYS:HE3  | 2.03                     | 0.40              |
| 1:G:291:LYS:HG2  | 1:G:292:LEU:HD12 | 2.03                     | 0.40              |
| 1:H:36:VAL:HG23  | 1:H:38:PHE:CZ    | 2.57                     | 0.40              |
| 1:H:45:LEU:HB2   | 1:H:67:LEU:CD1   | 2.42                     | 0.40              |
| 1:H:68:ILE:HG21  | 1:H:92:THR:CB    | 2.52                     | 0.40              |
| 1:H:299:THR:HG22 | 1:H:300:TYR:HD1  | 1.86                     | 0.40              |
| 1:I:36:VAL:HG23  | 1:I:38:PHE:CZ    | 2.57                     | 0.40              |
| 1:I:50:ILE:O     | 1:M:246:ILE:N    | 2.54                     | 0.40              |
| 1:I:117:LEU:HD12 | 1:I:156:ALA:N    | 2.36                     | 0.40              |
| 1:I:142:ASP:HB3  | 1:I:143:LYS:HB2  | 2.03                     | 0.40              |
| 1:I:233:SER:C    | 1:I:234:ALA:O    | 2.60                     | 0.40              |
| 1:I:262:LEU:O    | 1:I:266:ILE:HG12 | 2.22                     | 0.40              |
| 1:J:50:ILE:HD12  | 1:N:246:ILE:C    | 2.42                     | 0.40              |
| 1:J:233:SER:O    | 1:J:234:ALA:O    | 2.39                     | 0.40              |
| 1:J:233:SER:C    | 1:J:234:ALA:O    | 2.60                     | 0.40              |
| 1:J:301:PRO:O    | 1:K:228:ASN:N    | 2.54                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:36:VAL:HG21  | 1:K:38:PHE:CZ    | 2.54                     | 0.40              |
| 1:K:138:VAL:CG2  | 1:K:145:TYR:CE2  | 3.03                     | 0.40              |
| 1:K:278:GLN:N    | 1:L:219:ASP:N    | 2.53                     | 0.40              |
| 1:K:291:LYS:HG2  | 1:K:292:LEU:HD12 | 2.03                     | 0.40              |
| 1:L:45:LEU:HD23  | 1:L:58:LYS:NZ    | 2.36                     | 0.40              |
| 1:L:61:LEU:HD23  | 1:L:61:LEU:C     | 2.42                     | 0.40              |
| 1:L:68:ILE:HG21  | 1:L:92:THR:CB    | 2.52                     | 0.40              |
| 1:L:273:GLY:O    | 1:L:274:PHE:CD2  | 2.75                     | 0.40              |
| 1:M:36:VAL:HG23  | 1:M:38:PHE:CZ    | 2.57                     | 0.40              |
| 1:M:44:ASN:CB    | 1:M:64:LYS:NZ    | 2.84                     | 0.40              |
| 1:M:127:ARG:HE   | 1:M:154:ILE:HD12 | 1.86                     | 0.40              |
| 1:M:288:THR:HG22 | 1:M:292:LEU:HD13 | 2.03                     | 0.40              |
| 1:N:36:VAL:HG23  | 1:N:38:PHE:CZ    | 2.57                     | 0.40              |
| 1:N:44:ASN:OD1   | 1:N:64:LYS:HD2   | 2.21                     | 0.40              |
| 1:N:117:LEU:HD12 | 1:N:156:ALA:N    | 2.36                     | 0.40              |
| 1:O:44:ASN:CB    | 1:O:64:LYS:NZ    | 2.84                     | 0.40              |
| 1:O:116:VAL:HB   | 1:O:121:LYS:NZ   | 2.36                     | 0.40              |
| 1:O:117:LEU:HD12 | 1:O:156:ALA:N    | 2.36                     | 0.40              |
| 1:O:209:LEU:HD12 | 1:O:257:VAL:HG22 | 2.03                     | 0.40              |
| 1:O:214:GLY:HA3  | 1:O:220:LEU:HG   | 2.03                     | 0.40              |
| 1:O:320:LYS:HD3  | 1:P:49:TYR:CZ    | 2.51                     | 0.40              |
| 1:P:8:TYR:CE1    | 1:P:25:ASN:ND2   | 2.86                     | 0.40              |
| 1:P:59:ILE:HD13  | 1:P:92:THR:HG22  | 2.04                     | 0.40              |
| 1:P:61:LEU:HD23  | 1:P:61:LEU:C     | 2.42                     | 0.40              |
| 1:P:117:LEU:HD12 | 1:P:156:ALA:N    | 2.36                     | 0.40              |
| 1:P:291:LYS:HG2  | 1:P:292:LEU:HD12 | 2.03                     | 0.40              |
| 1:A:11:THR:HB    | 1:A:22:ILE:HG13  | 2.01                     | 0.40              |
| 1:A:59:ILE:HD13  | 1:A:92:THR:HG22  | 2.04                     | 0.40              |
| 1:A:213:VAL:CG1  | 1:A:235:LEU:HD13 | 2.51                     | 0.40              |
| 1:A:221:ASN:O    | 1:A:223:GLY:N    | 2.54                     | 0.40              |
| 1:A:240:MET:HA   | 1:F:166:GLN:HG3  | 1.70                     | 0.40              |
| 1:B:209:LEU:HD12 | 1:B:257:VAL:HG22 | 2.03                     | 0.40              |
| 1:B:213:VAL:CG1  | 1:B:235:LEU:HD13 | 2.51                     | 0.40              |
| 1:B:220:LEU:O    | 1:B:221:ASN:C    | 2.58                     | 0.40              |
| 1:B:221:ASN:O    | 1:B:223:GLY:N    | 2.54                     | 0.40              |
| 1:B:259:GLU:HG3  | 1:B:263:LYS:HE3  | 2.03                     | 0.40              |
| 1:B:310:SER:CA   | 1:B:313:THR:HG23 | 2.47                     | 0.40              |
| 1:C:139:LYS:O    | 1:C:142:ASP:O    | 2.39                     | 0.40              |
| 1:D:8:TYR:CE1    | 1:D:25:ASN:ND2   | 2.86                     | 0.40              |
| 1:D:61:LEU:HD23  | 1:D:61:LEU:C     | 2.42                     | 0.40              |
| 1:E:43:TYR:CD1   | 1:E:67:LEU:O     | 2.74                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:221:ASN:O    | 1:E:223:GLY:N    | 2.54                     | 0.40              |
| 1:E:233:SER:O    | 1:E:234:ALA:O    | 2.39                     | 0.40              |
| 1:E:254:ILE:HG13 | 1:E:255:LYS:H    | 1.85                     | 0.40              |
| 1:E:284:PHE:CD1  | 1:E:284:PHE:N    | 2.90                     | 0.40              |
| 1:F:27:LYS:HZ1   | 1:F:35:ARG:NE    | 2.20                     | 0.40              |
| 1:F:48:GLY:HA2   | 1:G:325:LYS:HB2  | 1.50                     | 0.40              |
| 1:F:59:ILE:HD13  | 1:F:92:THR:HG22  | 2.03                     | 0.40              |
| 1:F:221:ASN:O    | 1:F:223:GLY:N    | 2.54                     | 0.40              |
| 1:F:291:LYS:HG2  | 1:F:292:LEU:HD12 | 2.03                     | 0.40              |
| 1:G:45:LEU:N     | 1:G:67:LEU:HD12  | 2.36                     | 0.40              |
| 1:G:59:ILE:HD13  | 1:G:92:THR:HG22  | 2.03                     | 0.40              |
| 1:G:68:ILE:HG21  | 1:G:92:THR:CB    | 2.52                     | 0.40              |
| 1:G:87:LYS:HG2   | 1:G:129:TYR:CD2  | 2.56                     | 0.40              |
| 1:G:284:PHE:CD1  | 1:G:284:PHE:N    | 2.90                     | 0.40              |
| 1:G:288:THR:HG22 | 1:G:292:LEU:HD13 | 2.03                     | 0.40              |
| 1:H:87:LYS:HG2   | 1:H:129:TYR:CD2  | 2.56                     | 0.40              |
| 1:I:133:ASN:HD21 | 1:I:148:GLU:CB   | 2.33                     | 0.40              |
| 1:I:233:SER:O    | 1:I:234:ALA:O    | 2.39                     | 0.40              |
| 1:J:45:LEU:HD23  | 1:J:58:LYS:NZ    | 2.36                     | 0.40              |
| 1:K:109:VAL:CG2  | 1:K:318:LEU:HB3  | 2.48                     | 0.40              |
| 1:L:291:LYS:HG2  | 1:L:292:LEU:HD12 | 2.03                     | 0.40              |
| 1:L:318:LEU:O    | 1:L:321:VAL:HG12 | 2.22                     | 0.40              |
| 1:M:8:TYR:CE1    | 1:M:25:ASN:ND2   | 2.86                     | 0.40              |
| 1:M:43:TYR:CD1   | 1:M:67:LEU:O     | 2.74                     | 0.40              |
| 1:M:87:LYS:HG2   | 1:M:129:TYR:CD2  | 2.56                     | 0.40              |
| 1:M:117:LEU:HD12 | 1:M:156:ALA:N    | 2.36                     | 0.40              |
| 1:M:284:PHE:CD1  | 1:M:284:PHE:N    | 2.90                     | 0.40              |
| 1:N:8:TYR:CE1    | 1:N:25:ASN:ND2   | 2.86                     | 0.40              |
| 1:N:68:ILE:HG21  | 1:N:92:THR:CB    | 2.52                     | 0.40              |
| 1:N:116:VAL:HB   | 1:N:121:LYS:NZ   | 2.36                     | 0.40              |
| 1:N:161:VAL:HG21 | 1:N:176:VAL:CG1  | 2.51                     | 0.40              |
| 1:N:233:SER:C    | 1:N:234:ALA:O    | 2.60                     | 0.40              |
| 1:N:323:VAL:CG2  | 1:O:46:GLU:O     | 2.70                     | 0.40              |
| 1:O:8:TYR:CE1    | 1:O:25:ASN:ND2   | 2.86                     | 0.40              |
| 1:O:61:LEU:HD23  | 1:O:61:LEU:C     | 2.42                     | 0.40              |
| 1:O:198:GLU:HA   | 1:O:272:ARG:HG2  | 2.03                     | 0.40              |
| 1:P:186:PHE:HD2  | 1:P:269:ILE:CD1  | 2.32                     | 0.40              |
| 1:P:233:SER:C    | 1:P:234:ALA:O    | 2.60                     | 0.40              |
| 1:P:318:LEU:O    | 1:P:321:VAL:HG12 | 2.22                     | 0.40              |
| 1:A:269:ILE:HG23 | 1:A:269:ILE:HD12 | 1.91                     | 0.40              |
| 1:B:43:TYR:HB3   | 1:B:78:GLU:CA    | 2.51                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:68:ILE:HG21  | 1:B:92:THR:CB    | 2.52                     | 0.40              |
| 1:B:196:PRO:CB   | 1:B:199:ARG:HH21 | 2.34                     | 0.40              |
| 1:B:243:GLY:N    | 1:G:164:LEU:O    | 2.54                     | 0.40              |
| 1:C:45:LEU:N     | 1:C:67:LEU:HD12  | 2.37                     | 0.40              |
| 1:C:68:ILE:HG21  | 1:C:92:THR:CB    | 2.52                     | 0.40              |
| 1:C:284:PHE:CE2  | 1:C:296:ILE:CG1  | 2.99                     | 0.40              |
| 1:D:68:ILE:HG21  | 1:D:92:THR:CB    | 2.52                     | 0.40              |
| 1:D:132:GLY:N    | 1:D:149:ILE:CD1  | 2.83                     | 0.40              |
| 1:D:224:ASN:OD1  | 1:D:225:LEU:N    | 2.55                     | 0.40              |
| 1:D:273:GLY:O    | 1:D:274:PHE:CD2  | 2.75                     | 0.40              |
| 1:E:59:ILE:HD13  | 1:E:92:THR:HG22  | 2.04                     | 0.40              |
| 1:E:127:ARG:HE   | 1:E:154:ILE:HD12 | 1.86                     | 0.40              |
| 1:E:161:VAL:HG21 | 1:E:176:VAL:CG1  | 2.51                     | 0.40              |
| 1:E:233:SER:C    | 1:E:234:ALA:O    | 2.60                     | 0.40              |
| 1:E:262:LEU:O    | 1:E:266:ILE:HG12 | 2.22                     | 0.40              |
| 1:F:11:THR:HB    | 1:F:22:ILE:HG13  | 2.01                     | 0.40              |
| 1:F:36:VAL:HG23  | 1:F:38:PHE:CZ    | 2.57                     | 0.40              |
| 1:F:107:GLN:CB   | 1:F:151:ASP:OD1  | 2.69                     | 0.40              |
| 1:F:233:SER:C    | 1:F:234:ALA:O    | 2.60                     | 0.40              |
| 1:F:284:PHE:CE2  | 1:F:296:ILE:CG1  | 2.99                     | 0.40              |
| 1:G:11:THR:HB    | 1:G:22:ILE:HG13  | 2.02                     | 0.40              |
| 1:G:68:ILE:HG21  | 1:G:92:THR:HG21  | 2.04                     | 0.40              |
| 1:G:117:LEU:HD12 | 1:G:156:ALA:N    | 2.36                     | 0.40              |
| 1:G:318:LEU:O    | 1:G:321:VAL:HG12 | 2.22                     | 0.40              |
| 1:H:186:PHE:HD2  | 1:H:269:ILE:CD1  | 2.32                     | 0.40              |
| 1:I:43:TYR:HE2   | 1:I:67:LEU:HD13  | 1.78                     | 0.40              |
| 1:I:112:CYS:HG   | 1:I:122:ALA:HB1  | 1.86                     | 0.40              |
| 1:I:291:LYS:HG2  | 1:I:292:LEU:HD12 | 2.03                     | 0.40              |
| 1:J:43:TYR:HE2   | 1:J:67:LEU:HD13  | 1.77                     | 0.40              |
| 1:J:52:ILE:HB    | 1:J:74:GLU:HA    | 2.03                     | 0.40              |
| 1:J:61:LEU:HD23  | 1:J:61:LEU:C     | 2.42                     | 0.40              |
| 1:J:87:LYS:HG2   | 1:J:129:TYR:CD2  | 2.56                     | 0.40              |
| 1:J:95:THR:HG21  | 1:J:136:ILE:HG21 | 1.97                     | 0.40              |
| 1:J:142:ASP:HB3  | 1:J:143:LYS:HB2  | 2.03                     | 0.40              |
| 1:J:291:LYS:HG2  | 1:J:292:LEU:HD12 | 2.03                     | 0.40              |
| 1:K:87:LYS:HG2   | 1:K:129:TYR:CD2  | 2.56                     | 0.40              |
| 1:K:259:GLU:HG3  | 1:K:263:LYS:HE3  | 2.03                     | 0.40              |
| 1:K:318:LEU:O    | 1:K:321:VAL:HG12 | 2.22                     | 0.40              |
| 1:L:87:LYS:HG2   | 1:L:129:TYR:CD2  | 2.56                     | 0.40              |
| 1:L:107:GLN:CB   | 1:L:151:ASP:OD1  | 2.69                     | 0.40              |
| 1:L:117:LEU:O    | 1:L:117:LEU:CD2  | 2.67                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:45:LEU:N     | 1:M:67:LEU:HD12  | 2.36                     | 0.40              |
| 1:M:161:VAL:HG21 | 1:M:176:VAL:CG1  | 2.51                     | 0.40              |
| 1:N:132:GLY:N    | 1:N:149:ILE:CD1  | 2.83                     | 0.40              |
| 1:O:99:ASP:HB3   | 1:O:145:TYR:OH   | 2.21                     | 0.40              |
| 1:O:127:ARG:HE   | 1:O:154:ILE:HD12 | 1.86                     | 0.40              |
| 1:O:291:LYS:HG2  | 1:O:292:LEU:HD12 | 2.03                     | 0.40              |
| 1:O:299:THR:HG22 | 1:O:300:TYR:HD1  | 1.86                     | 0.40              |
| 1:O:323:VAL:CG2  | 1:P:46:GLU:O     | 2.70                     | 0.40              |
| 1:P:107:GLN:CB   | 1:P:151:ASP:OD1  | 2.69                     | 0.40              |
| 1:P:116:VAL:HB   | 1:P:121:LYS:NZ   | 2.36                     | 0.40              |
| 1:P:214:GLY:HA3  | 1:P:220:LEU:HG   | 2.03                     | 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     | 322/329 (98%) | 283 (88%) | 26 (8%) | 13 (4%)  | 3           | 23 |
| 1   | B     | 322/329 (98%) | 283 (88%) | 26 (8%) | 13 (4%)  | 3           | 23 |
| 1   | C     | 322/329 (98%) | 283 (88%) | 26 (8%) | 13 (4%)  | 3           | 23 |
| 1   | D     | 322/329 (98%) | 283 (88%) | 26 (8%) | 13 (4%)  | 3           | 23 |
| 1   | E     | 322/329 (98%) | 283 (88%) | 26 (8%) | 13 (4%)  | 3           | 23 |
| 1   | F     | 322/329 (98%) | 284 (88%) | 25 (8%) | 13 (4%)  | 3           | 23 |
| 1   | G     | 322/329 (98%) | 283 (88%) | 26 (8%) | 13 (4%)  | 3           | 23 |
| 1   | H     | 322/329 (98%) | 284 (88%) | 25 (8%) | 13 (4%)  | 3           | 23 |
| 1   | I     | 322/329 (98%) | 283 (88%) | 26 (8%) | 13 (4%)  | 3           | 23 |
| 1   | J     | 322/329 (98%) | 283 (88%) | 26 (8%) | 13 (4%)  | 3           | 23 |
| 1   | K     | 322/329 (98%) | 283 (88%) | 26 (8%) | 13 (4%)  | 3           | 23 |

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| Mol | Chain | Analysed        | Favoured   | Allowed  | Outliers | Percentiles |    |
|-----|-------|-----------------|------------|----------|----------|-------------|----|
| 1   | L     | 322/329 (98%)   | 283 (88%)  | 26 (8%)  | 13 (4%)  | 3           | 23 |
| 1   | M     | 322/329 (98%)   | 283 (88%)  | 26 (8%)  | 13 (4%)  | 3           | 23 |
| 1   | N     | 322/329 (98%)   | 283 (88%)  | 26 (8%)  | 13 (4%)  | 3           | 23 |
| 1   | O     | 322/329 (98%)   | 283 (88%)  | 26 (8%)  | 13 (4%)  | 3           | 23 |
| 1   | P     | 322/329 (98%)   | 283 (88%)  | 26 (8%)  | 13 (4%)  | 3           | 23 |
| All | All   | 5152/5264 (98%) | 4530 (88%) | 414 (8%) | 208 (4%) | 5           | 23 |

All (208) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | A     | 16  | LYS  |
| 1   | A     | 34  | LYS  |
| 1   | A     | 118 | ARG  |
| 1   | A     | 221 | ASN  |
| 1   | A     | 234 | ALA  |
| 1   | A     | 274 | PHE  |
| 1   | B     | 16  | LYS  |
| 1   | B     | 34  | LYS  |
| 1   | B     | 118 | ARG  |
| 1   | B     | 221 | ASN  |
| 1   | B     | 234 | ALA  |
| 1   | B     | 274 | PHE  |
| 1   | C     | 16  | LYS  |
| 1   | C     | 34  | LYS  |
| 1   | C     | 118 | ARG  |
| 1   | C     | 221 | ASN  |
| 1   | C     | 234 | ALA  |
| 1   | C     | 274 | PHE  |
| 1   | D     | 16  | LYS  |
| 1   | D     | 34  | LYS  |
| 1   | D     | 118 | ARG  |
| 1   | D     | 221 | ASN  |
| 1   | D     | 234 | ALA  |
| 1   | D     | 274 | PHE  |
| 1   | E     | 16  | LYS  |
| 1   | E     | 34  | LYS  |
| 1   | E     | 118 | ARG  |
| 1   | E     | 221 | ASN  |
| 1   | E     | 234 | ALA  |
| 1   | E     | 274 | PHE  |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | F            | 16         | LYS         |
| 1          | F            | 34         | LYS         |
| 1          | F            | 118        | ARG         |
| 1          | F            | 221        | ASN         |
| 1          | F            | 234        | ALA         |
| 1          | F            | 274        | PHE         |
| 1          | G            | 16         | LYS         |
| 1          | G            | 34         | LYS         |
| 1          | G            | 118        | ARG         |
| 1          | G            | 221        | ASN         |
| 1          | G            | 234        | ALA         |
| 1          | G            | 274        | PHE         |
| 1          | H            | 16         | LYS         |
| 1          | H            | 34         | LYS         |
| 1          | H            | 118        | ARG         |
| 1          | H            | 221        | ASN         |
| 1          | H            | 234        | ALA         |
| 1          | H            | 274        | PHE         |
| 1          | I            | 16         | LYS         |
| 1          | I            | 34         | LYS         |
| 1          | I            | 118        | ARG         |
| 1          | I            | 221        | ASN         |
| 1          | I            | 234        | ALA         |
| 1          | I            | 274        | PHE         |
| 1          | J            | 16         | LYS         |
| 1          | J            | 34         | LYS         |
| 1          | J            | 118        | ARG         |
| 1          | J            | 221        | ASN         |
| 1          | J            | 234        | ALA         |
| 1          | J            | 274        | PHE         |
| 1          | K            | 16         | LYS         |
| 1          | K            | 34         | LYS         |
| 1          | K            | 118        | ARG         |
| 1          | K            | 221        | ASN         |
| 1          | K            | 234        | ALA         |
| 1          | K            | 274        | PHE         |
| 1          | L            | 16         | LYS         |
| 1          | L            | 34         | LYS         |
| 1          | L            | 118        | ARG         |
| 1          | L            | 221        | ASN         |
| 1          | L            | 234        | ALA         |
| 1          | L            | 274        | PHE         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | M            | 16         | LYS         |
| 1          | M            | 34         | LYS         |
| 1          | M            | 118        | ARG         |
| 1          | M            | 221        | ASN         |
| 1          | M            | 234        | ALA         |
| 1          | M            | 274        | PHE         |
| 1          | N            | 16         | LYS         |
| 1          | N            | 34         | LYS         |
| 1          | N            | 118        | ARG         |
| 1          | N            | 221        | ASN         |
| 1          | N            | 234        | ALA         |
| 1          | N            | 274        | PHE         |
| 1          | O            | 16         | LYS         |
| 1          | O            | 34         | LYS         |
| 1          | O            | 118        | ARG         |
| 1          | O            | 221        | ASN         |
| 1          | O            | 234        | ALA         |
| 1          | O            | 274        | PHE         |
| 1          | P            | 16         | LYS         |
| 1          | P            | 34         | LYS         |
| 1          | P            | 118        | ARG         |
| 1          | P            | 221        | ASN         |
| 1          | P            | 234        | ALA         |
| 1          | P            | 274        | PHE         |
| 1          | A            | 32         | ASP         |
| 1          | A            | 64         | LYS         |
| 1          | A            | 84         | LEU         |
| 1          | A            | 169        | PHE         |
| 1          | A            | 231        | ALA         |
| 1          | A            | 251        | SER         |
| 1          | B            | 32         | ASP         |
| 1          | B            | 64         | LYS         |
| 1          | B            | 84         | LEU         |
| 1          | B            | 169        | PHE         |
| 1          | B            | 231        | ALA         |
| 1          | B            | 251        | SER         |
| 1          | C            | 32         | ASP         |
| 1          | C            | 64         | LYS         |
| 1          | C            | 84         | LEU         |
| 1          | C            | 169        | PHE         |
| 1          | C            | 231        | ALA         |
| 1          | C            | 251        | SER         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | D            | 32         | ASP         |
| 1          | D            | 64         | LYS         |
| 1          | D            | 84         | LEU         |
| 1          | D            | 169        | PHE         |
| 1          | D            | 231        | ALA         |
| 1          | D            | 251        | SER         |
| 1          | E            | 32         | ASP         |
| 1          | E            | 64         | LYS         |
| 1          | E            | 84         | LEU         |
| 1          | E            | 169        | PHE         |
| 1          | E            | 231        | ALA         |
| 1          | E            | 251        | SER         |
| 1          | F            | 32         | ASP         |
| 1          | F            | 64         | LYS         |
| 1          | F            | 84         | LEU         |
| 1          | F            | 169        | PHE         |
| 1          | F            | 231        | ALA         |
| 1          | F            | 251        | SER         |
| 1          | G            | 32         | ASP         |
| 1          | G            | 64         | LYS         |
| 1          | G            | 84         | LEU         |
| 1          | G            | 169        | PHE         |
| 1          | G            | 231        | ALA         |
| 1          | G            | 251        | SER         |
| 1          | H            | 32         | ASP         |
| 1          | H            | 64         | LYS         |
| 1          | H            | 84         | LEU         |
| 1          | H            | 169        | PHE         |
| 1          | H            | 231        | ALA         |
| 1          | H            | 251        | SER         |
| 1          | I            | 32         | ASP         |
| 1          | I            | 64         | LYS         |
| 1          | I            | 84         | LEU         |
| 1          | I            | 169        | PHE         |
| 1          | I            | 231        | ALA         |
| 1          | I            | 251        | SER         |
| 1          | J            | 32         | ASP         |
| 1          | J            | 64         | LYS         |
| 1          | J            | 84         | LEU         |
| 1          | J            | 169        | PHE         |
| 1          | J            | 231        | ALA         |
| 1          | J            | 251        | SER         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | K            | 32         | ASP         |
| 1          | K            | 64         | LYS         |
| 1          | K            | 84         | LEU         |
| 1          | K            | 169        | PHE         |
| 1          | K            | 231        | ALA         |
| 1          | K            | 251        | SER         |
| 1          | L            | 32         | ASP         |
| 1          | L            | 64         | LYS         |
| 1          | L            | 84         | LEU         |
| 1          | L            | 169        | PHE         |
| 1          | L            | 231        | ALA         |
| 1          | L            | 251        | SER         |
| 1          | M            | 32         | ASP         |
| 1          | M            | 64         | LYS         |
| 1          | M            | 84         | LEU         |
| 1          | M            | 169        | PHE         |
| 1          | M            | 231        | ALA         |
| 1          | M            | 251        | SER         |
| 1          | N            | 32         | ASP         |
| 1          | N            | 64         | LYS         |
| 1          | N            | 84         | LEU         |
| 1          | N            | 169        | PHE         |
| 1          | N            | 231        | ALA         |
| 1          | N            | 251        | SER         |
| 1          | O            | 32         | ASP         |
| 1          | O            | 64         | LYS         |
| 1          | O            | 84         | LEU         |
| 1          | O            | 169        | PHE         |
| 1          | O            | 231        | ALA         |
| 1          | O            | 251        | SER         |
| 1          | P            | 32         | ASP         |
| 1          | P            | 64         | LYS         |
| 1          | P            | 84         | LEU         |
| 1          | P            | 169        | PHE         |
| 1          | P            | 231        | ALA         |
| 1          | P            | 251        | SER         |
| 1          | A            | 142        | ASP         |
| 1          | B            | 142        | ASP         |
| 1          | C            | 142        | ASP         |
| 1          | D            | 142        | ASP         |
| 1          | E            | 142        | ASP         |
| 1          | F            | 142        | ASP         |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | G     | 142 | ASP  |
| 1   | H     | 142 | ASP  |
| 1   | I     | 142 | ASP  |
| 1   | J     | 142 | ASP  |
| 1   | K     | 142 | ASP  |
| 1   | L     | 142 | ASP  |
| 1   | M     | 142 | ASP  |
| 1   | N     | 142 | ASP  |
| 1   | O     | 142 | ASP  |
| 1   | P     | 142 | ASP  |

### 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     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |
| 1   | B     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |
| 1   | C     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |
| 1   | D     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |
| 1   | E     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |
| 1   | F     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |
| 1   | G     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |
| 1   | H     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |
| 1   | I     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |
| 1   | J     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |
| 1   | K     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |
| 1   | L     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |
| 1   | M     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |
| 1   | N     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |
| 1   | O     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |
| 1   | P     | 283/289 (98%) | 278 (98%) | 5 (2%)   | 59 77       |

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| Mol | Chain | Analysed        | Rotameric  | Outliers | Percentiles |
|-----|-------|-----------------|------------|----------|-------------|
| All | All   | 4528/4624 (98%) | 4448 (98%) | 80 (2%)  | 61 77       |

All (80) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | A     | 7   | GLU  |
| 1   | A     | 34  | LYS  |
| 1   | A     | 61  | LEU  |
| 1   | A     | 222 | ASN  |
| 1   | A     | 256 | LYS  |
| 1   | B     | 7   | GLU  |
| 1   | B     | 34  | LYS  |
| 1   | B     | 61  | LEU  |
| 1   | B     | 222 | ASN  |
| 1   | B     | 256 | LYS  |
| 1   | C     | 7   | GLU  |
| 1   | C     | 34  | LYS  |
| 1   | C     | 61  | LEU  |
| 1   | C     | 222 | ASN  |
| 1   | C     | 256 | LYS  |
| 1   | D     | 7   | GLU  |
| 1   | D     | 34  | LYS  |
| 1   | D     | 61  | LEU  |
| 1   | D     | 222 | ASN  |
| 1   | D     | 256 | LYS  |
| 1   | E     | 7   | GLU  |
| 1   | E     | 34  | LYS  |
| 1   | E     | 61  | LEU  |
| 1   | E     | 222 | ASN  |
| 1   | E     | 256 | LYS  |
| 1   | F     | 7   | GLU  |
| 1   | F     | 34  | LYS  |
| 1   | F     | 61  | LEU  |
| 1   | F     | 222 | ASN  |
| 1   | F     | 256 | LYS  |
| 1   | G     | 7   | GLU  |
| 1   | G     | 34  | LYS  |
| 1   | G     | 61  | LEU  |
| 1   | G     | 222 | ASN  |
| 1   | G     | 256 | LYS  |
| 1   | H     | 7   | GLU  |
| 1   | H     | 34  | LYS  |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | H            | 61         | LEU         |
| 1          | H            | 222        | ASN         |
| 1          | H            | 256        | LYS         |
| 1          | I            | 7          | GLU         |
| 1          | I            | 34         | LYS         |
| 1          | I            | 61         | LEU         |
| 1          | I            | 222        | ASN         |
| 1          | I            | 256        | LYS         |
| 1          | J            | 7          | GLU         |
| 1          | J            | 34         | LYS         |
| 1          | J            | 61         | LEU         |
| 1          | J            | 222        | ASN         |
| 1          | J            | 256        | LYS         |
| 1          | K            | 7          | GLU         |
| 1          | K            | 34         | LYS         |
| 1          | K            | 61         | LEU         |
| 1          | K            | 222        | ASN         |
| 1          | K            | 256        | LYS         |
| 1          | L            | 7          | GLU         |
| 1          | L            | 34         | LYS         |
| 1          | L            | 61         | LEU         |
| 1          | L            | 222        | ASN         |
| 1          | L            | 256        | LYS         |
| 1          | M            | 7          | GLU         |
| 1          | M            | 34         | LYS         |
| 1          | M            | 61         | LEU         |
| 1          | M            | 222        | ASN         |
| 1          | M            | 256        | LYS         |
| 1          | N            | 7          | GLU         |
| 1          | N            | 34         | LYS         |
| 1          | N            | 61         | LEU         |
| 1          | N            | 222        | ASN         |
| 1          | N            | 256        | LYS         |
| 1          | O            | 7          | GLU         |
| 1          | O            | 34         | LYS         |
| 1          | O            | 61         | LEU         |
| 1          | O            | 222        | ASN         |
| 1          | O            | 256        | LYS         |
| 1          | P            | 7          | GLU         |
| 1          | P            | 34         | LYS         |
| 1          | P            | 61         | LEU         |
| 1          | P            | 222        | ASN         |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | P     | 256 | LYS  |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (167) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | A     | 6   | ASN  |
| 1   | A     | 57  | HIS  |
| 1   | A     | 96  | GLN  |
| 1   | A     | 107 | GLN  |
| 1   | A     | 119 | ASN  |
| 1   | A     | 133 | ASN  |
| 1   | A     | 183 | ASN  |
| 1   | A     | 204 | HIS  |
| 1   | A     | 228 | ASN  |
| 1   | A     | 237 | ASN  |
| 1   | B     | 6   | ASN  |
| 1   | B     | 57  | HIS  |
| 1   | B     | 96  | GLN  |
| 1   | B     | 107 | GLN  |
| 1   | B     | 119 | ASN  |
| 1   | B     | 133 | ASN  |
| 1   | B     | 183 | ASN  |
| 1   | B     | 204 | HIS  |
| 1   | B     | 228 | ASN  |
| 1   | B     | 237 | ASN  |
| 1   | B     | 308 | ASN  |
| 1   | C     | 6   | ASN  |
| 1   | C     | 57  | HIS  |
| 1   | C     | 96  | GLN  |
| 1   | C     | 107 | GLN  |
| 1   | C     | 119 | ASN  |
| 1   | C     | 133 | ASN  |
| 1   | C     | 183 | ASN  |
| 1   | C     | 204 | HIS  |
| 1   | C     | 228 | ASN  |
| 1   | C     | 237 | ASN  |
| 1   | D     | 6   | ASN  |
| 1   | D     | 57  | HIS  |
| 1   | D     | 96  | GLN  |
| 1   | D     | 107 | GLN  |
| 1   | D     | 119 | ASN  |
| 1   | D     | 133 | ASN  |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | D            | 183        | ASN         |
| 1          | D            | 204        | HIS         |
| 1          | D            | 228        | ASN         |
| 1          | D            | 237        | ASN         |
| 1          | E            | 6          | ASN         |
| 1          | E            | 57         | HIS         |
| 1          | E            | 71         | GLN         |
| 1          | E            | 96         | GLN         |
| 1          | E            | 107        | GLN         |
| 1          | E            | 119        | ASN         |
| 1          | E            | 133        | ASN         |
| 1          | E            | 183        | ASN         |
| 1          | E            | 204        | HIS         |
| 1          | E            | 224        | ASN         |
| 1          | E            | 228        | ASN         |
| 1          | E            | 237        | ASN         |
| 1          | F            | 6          | ASN         |
| 1          | F            | 57         | HIS         |
| 1          | F            | 71         | GLN         |
| 1          | F            | 96         | GLN         |
| 1          | F            | 107        | GLN         |
| 1          | F            | 133        | ASN         |
| 1          | F            | 168        | ASN         |
| 1          | F            | 224        | ASN         |
| 1          | F            | 228        | ASN         |
| 1          | F            | 237        | ASN         |
| 1          | F            | 308        | ASN         |
| 1          | G            | 6          | ASN         |
| 1          | G            | 57         | HIS         |
| 1          | G            | 71         | GLN         |
| 1          | G            | 96         | GLN         |
| 1          | G            | 107        | GLN         |
| 1          | G            | 133        | ASN         |
| 1          | G            | 168        | ASN         |
| 1          | G            | 224        | ASN         |
| 1          | G            | 228        | ASN         |
| 1          | G            | 237        | ASN         |
| 1          | G            | 308        | ASN         |
| 1          | H            | 6          | ASN         |
| 1          | H            | 57         | HIS         |
| 1          | H            | 96         | GLN         |
| 1          | H            | 107        | GLN         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | H            | 133        | ASN         |
| 1          | H            | 168        | ASN         |
| 1          | H            | 228        | ASN         |
| 1          | H            | 237        | ASN         |
| 1          | I            | 6          | ASN         |
| 1          | I            | 57         | HIS         |
| 1          | I            | 96         | GLN         |
| 1          | I            | 107        | GLN         |
| 1          | I            | 133        | ASN         |
| 1          | I            | 168        | ASN         |
| 1          | I            | 228        | ASN         |
| 1          | I            | 237        | ASN         |
| 1          | J            | 6          | ASN         |
| 1          | J            | 57         | HIS         |
| 1          | J            | 71         | GLN         |
| 1          | J            | 96         | GLN         |
| 1          | J            | 107        | GLN         |
| 1          | J            | 133        | ASN         |
| 1          | J            | 168        | ASN         |
| 1          | J            | 224        | ASN         |
| 1          | J            | 228        | ASN         |
| 1          | J            | 237        | ASN         |
| 1          | J            | 308        | ASN         |
| 1          | K            | 6          | ASN         |
| 1          | K            | 57         | HIS         |
| 1          | K            | 71         | GLN         |
| 1          | K            | 96         | GLN         |
| 1          | K            | 107        | GLN         |
| 1          | K            | 133        | ASN         |
| 1          | K            | 168        | ASN         |
| 1          | K            | 224        | ASN         |
| 1          | K            | 228        | ASN         |
| 1          | K            | 237        | ASN         |
| 1          | K            | 308        | ASN         |
| 1          | L            | 6          | ASN         |
| 1          | L            | 57         | HIS         |
| 1          | L            | 71         | GLN         |
| 1          | L            | 96         | GLN         |
| 1          | L            | 107        | GLN         |
| 1          | L            | 119        | ASN         |
| 1          | L            | 133        | ASN         |
| 1          | L            | 183        | ASN         |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> |
|------------|--------------|------------|-------------|
| 1          | L            | 204        | HIS         |
| 1          | L            | 224        | ASN         |
| 1          | L            | 228        | ASN         |
| 1          | L            | 237        | ASN         |
| 1          | M            | 6          | ASN         |
| 1          | M            | 44         | ASN         |
| 1          | M            | 57         | HIS         |
| 1          | M            | 96         | GLN         |
| 1          | M            | 107        | GLN         |
| 1          | M            | 119        | ASN         |
| 1          | M            | 133        | ASN         |
| 1          | M            | 183        | ASN         |
| 1          | M            | 204        | HIS         |
| 1          | M            | 228        | ASN         |
| 1          | M            | 237        | ASN         |
| 1          | N            | 6          | ASN         |
| 1          | N            | 57         | HIS         |
| 1          | N            | 96         | GLN         |
| 1          | N            | 107        | GLN         |
| 1          | N            | 119        | ASN         |
| 1          | N            | 133        | ASN         |
| 1          | N            | 183        | ASN         |
| 1          | N            | 204        | HIS         |
| 1          | N            | 228        | ASN         |
| 1          | N            | 237        | ASN         |
| 1          | N            | 278        | GLN         |
| 1          | O            | 6          | ASN         |
| 1          | O            | 57         | HIS         |
| 1          | O            | 96         | GLN         |
| 1          | O            | 107        | GLN         |
| 1          | O            | 119        | ASN         |
| 1          | O            | 133        | ASN         |
| 1          | O            | 183        | ASN         |
| 1          | O            | 204        | HIS         |
| 1          | O            | 228        | ASN         |
| 1          | O            | 237        | ASN         |
| 1          | P            | 6          | ASN         |
| 1          | P            | 57         | HIS         |
| 1          | P            | 96         | GLN         |
| 1          | P            | 107        | GLN         |
| 1          | P            | 119        | ASN         |
| 1          | P            | 133        | ASN         |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | P     | 183 | ASN  |
| 1   | P     | 204 | HIS  |
| 1   | P     | 228 | ASN  |
| 1   | P     | 237 | ASN  |

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

### 5.5 Carbohydrates [i](#)

There are no monosaccharides 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-2068. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

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

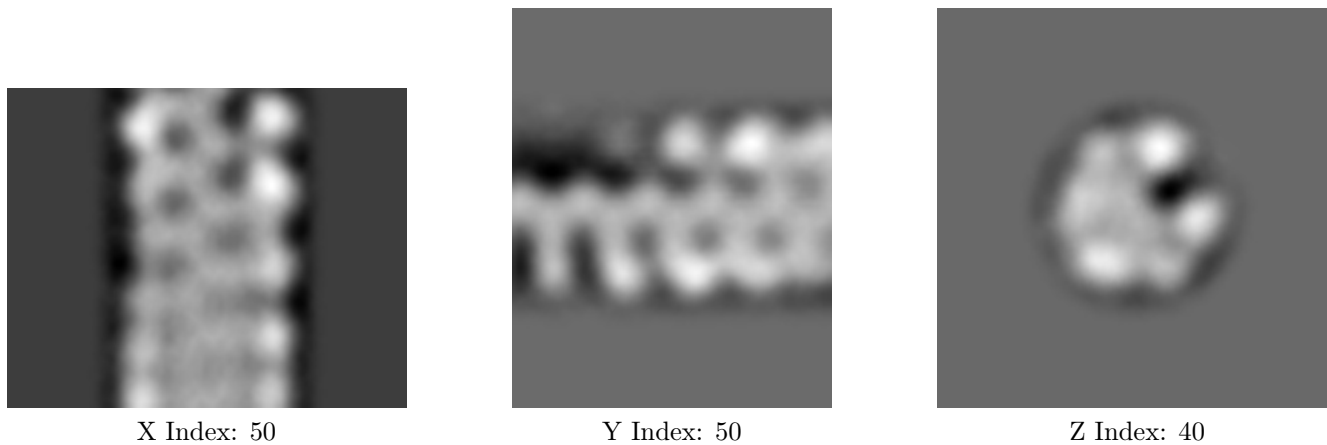
#### 6.1.1 Primary map



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

### 6.2 Central slices [i](#)

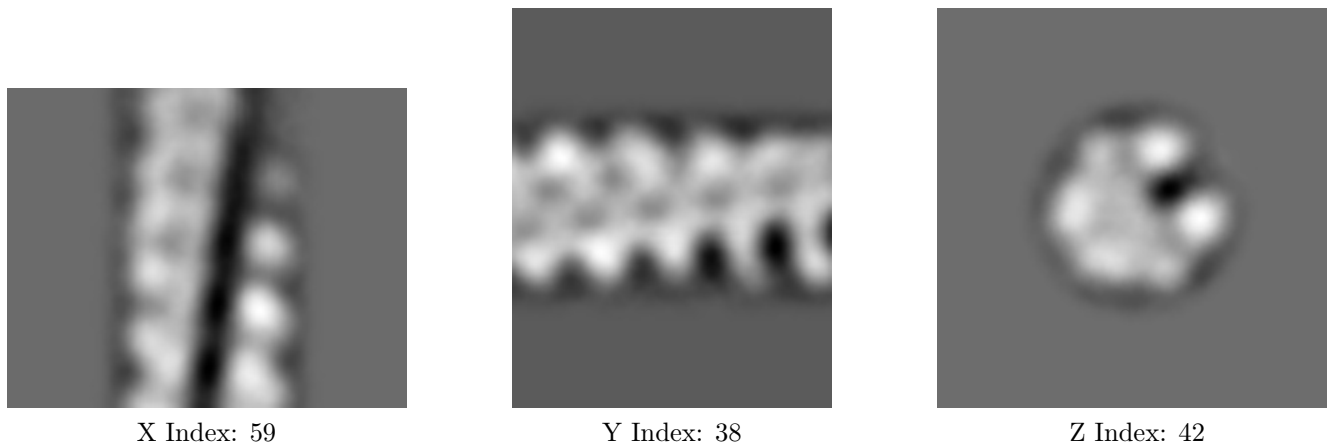
#### 6.2.1 Primary map



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

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

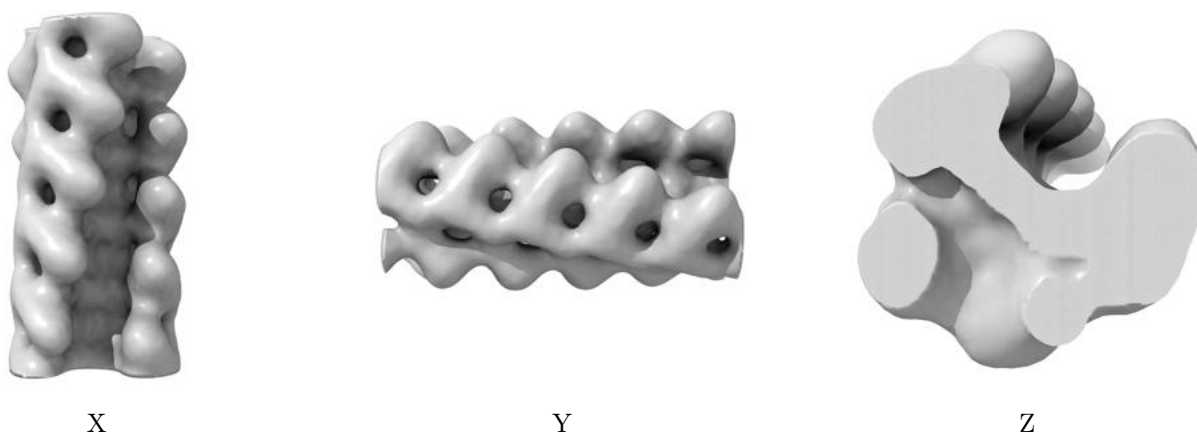
### 6.3.1 Primary map



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

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

### 6.4.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.88. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

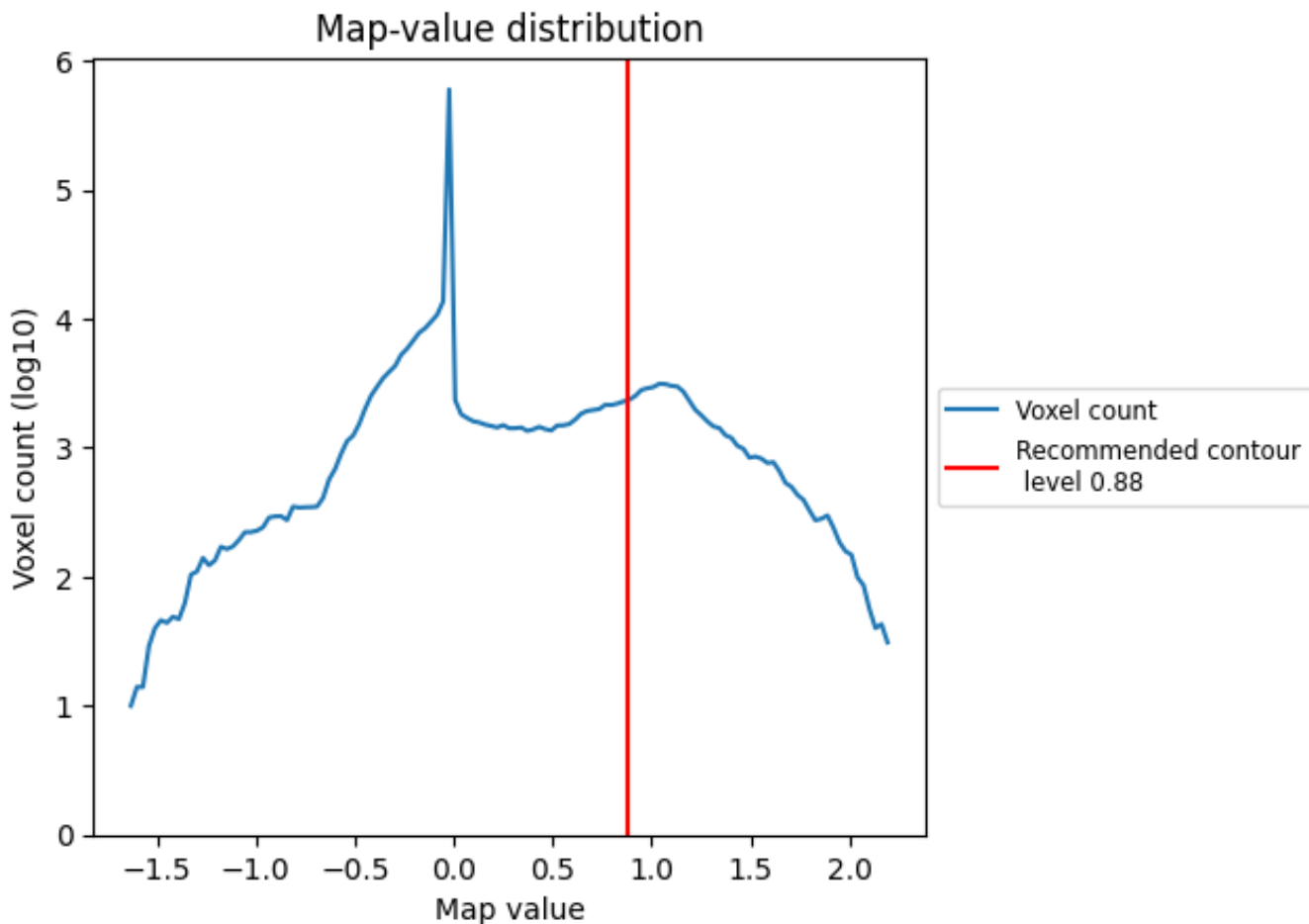
## 6.5 Mask visualisation

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

## 7 Map analysis [i](#)

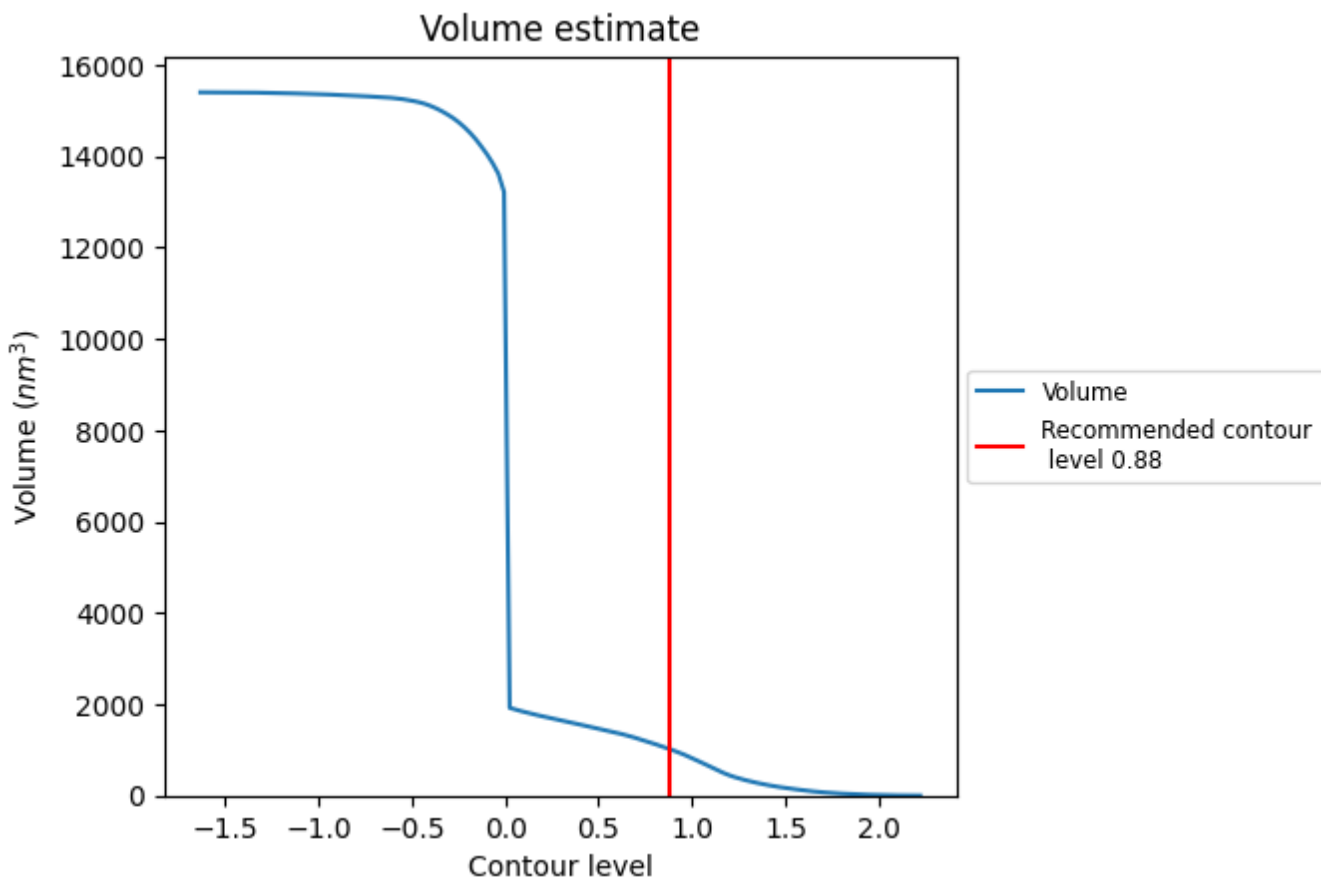
This section contains the results of statistical analysis of the map.

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



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

## 7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 1019 nm<sup>3</sup>; this corresponds to an approximate mass of 920 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 [\(i\)](#)

This section was not generated. The rotationally averaged power spectrum is only generated for cubic maps.

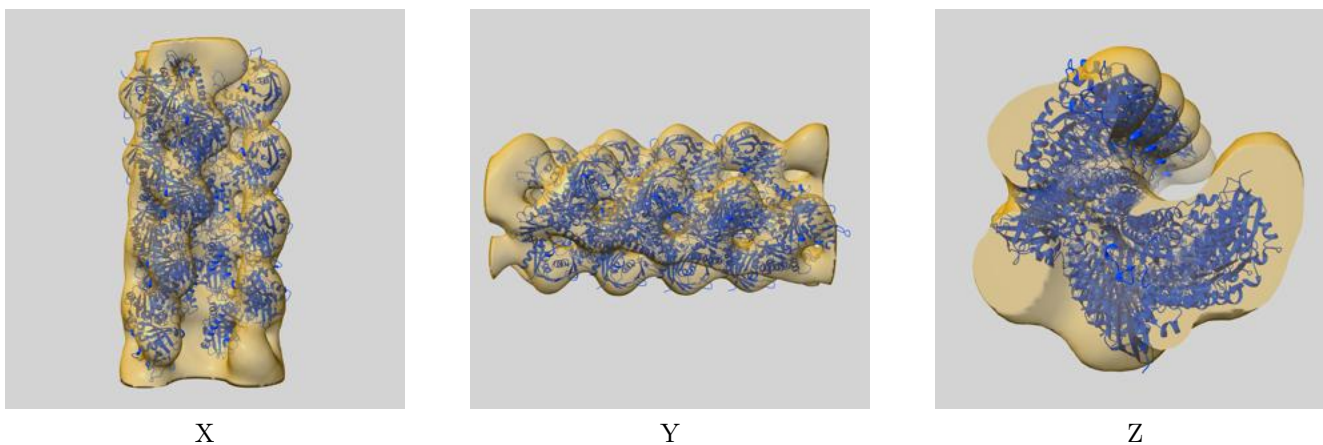
## 8 Fourier-Shell correlation

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

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

This section contains information regarding the fit between EMDB map EMD-2068 and PDB model 4APW. Per-residue inclusion information can be found in section [3](#) on page [5](#).

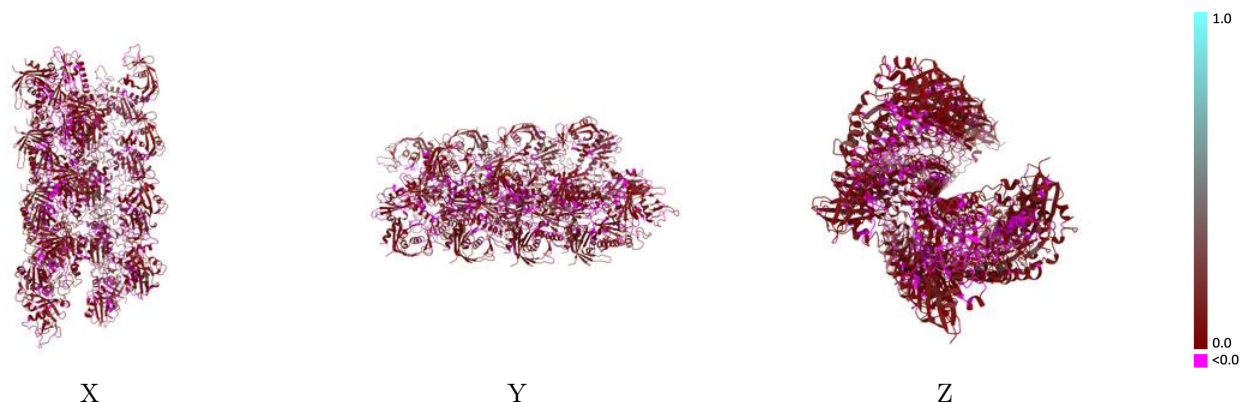
### 9.1 Map-model overlay [i](#)



The images above show the 3D surface view of the map at the recommended contour level 0.88 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

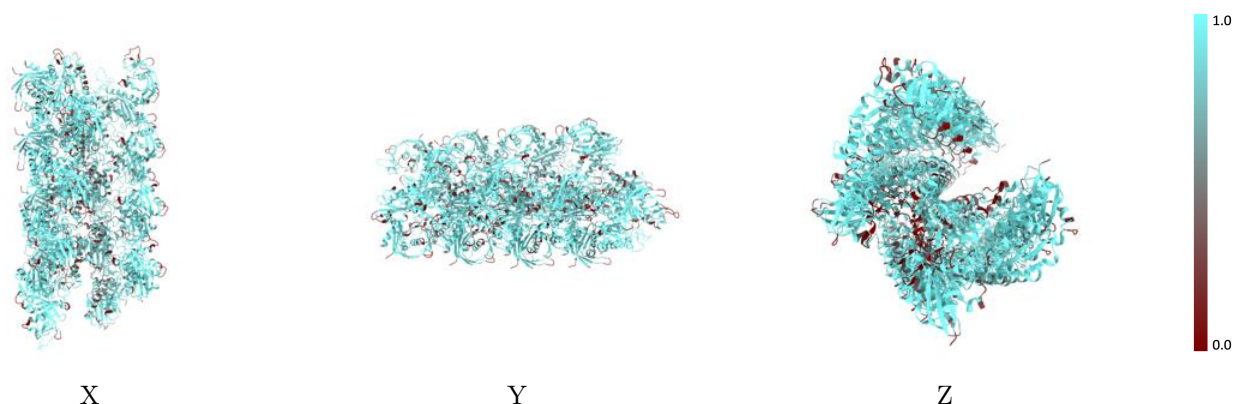


## 9.2 Q-score mapped to coordinate model [\(i\)](#)



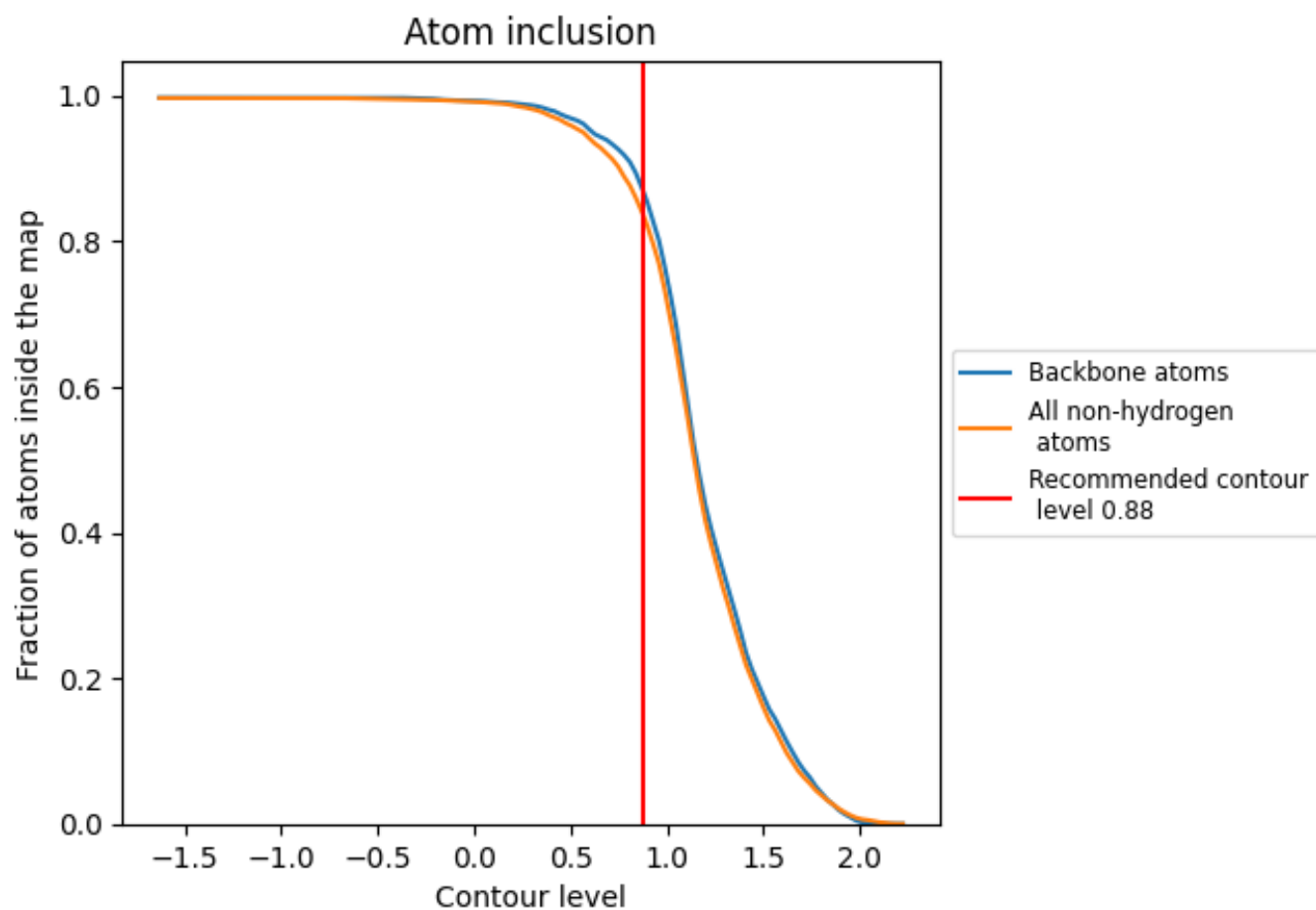
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.88).



































## 9.4 Atom inclusion [i](#)



At the recommended contour level, 87% of all backbone atoms, 83% 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 (0.88) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion   | Q-score  |
|-------|--|--|
| All   |  0.8337   |  0.0580   |
| A     |  0.8773   |  0.0560   |
| B     |  0.8781   |  0.0570   |
| C     |  0.8769   |  0.0560   |
| D     |  0.8483   |  0.0550   |
| E     |  0.7935   |  0.0580   |
| F     |  0.7959   |  0.0590   |
| G     |  0.7955   |  0.0580   |
| H     |  0.7947   |  0.0600   |
| I     |  0.7915   |  0.0590   |
| J     |  0.7943   |  0.0560   |
| K     |  0.7935   |  0.0580   |
| L     |  0.7895   |  0.0540   |
| M     |  0.8773   |  0.0580   |
| N     |  0.8773  |  0.0600  |
| O     |  0.8777 |  0.0590 |
| P     |  0.8781 |  0.0580 |

