



Full wwPDB X-ray Structure Validation Report ⓘ

May 15, 2020 – 04:45 am BST

PDB ID : 6GEB
Title : X-ray structure of the Legionella pneumophila ATPase DotB
Authors : Prevost, M.S.; Waksman, G.
Deposited on : 2018-04-26
Resolution : 3.19 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.11
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.11

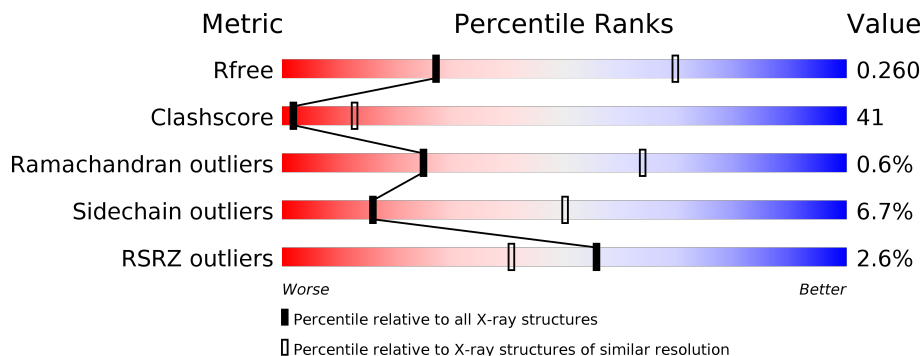
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.19 Å.

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



| Metric | Whole archive (#Entries) | Similar resolution (#Entries, resolution range(Å)) |
|-----------------------|-----------------------------|-------------------------------------------------------|
| R_{free} | 130704 | 1133 (3.20-3.20) |
| Clashscore | 141614 | 1253 (3.20-3.20) |
| Ramachandran outliers | 138981 | 1234 (3.20-3.20) |
| Sidechain outliers | 138945 | 1233 (3.20-3.20) |
| RSRZ outliers | 127900 | 1095 (3.20-3.20) |

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

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|----------------------|
| 1 | A | 391 | 4% 50% 42% 6% |
| 1 | B | 391 | % 56% 36% 5% |
| 1 | C | 391 | % 50% 39% 5% 6% |
| 1 | D | 391 | 2% 48% 44% 6% 6% |
| 1 | E | 391 | 2% 49% 40% 6% 6% |
| 1 | F | 391 | 2% 44% 46% 6% 6% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1 | G | 391 | |
| 1 | H | 391 | |
| 1 | I | 391 | |
| 1 | J | 391 | |
| 1 | K | 391 | |
| 1 | L | 391 | |

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

| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 2 | PO4 | J | 401 | - | - | X | - |

2 Entry composition [i](#)

There are 2 unique types of molecules in this entry. The entry contains 34658 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called DotB.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 1 | A | 369 | 2907 | 1826 | 512 | 558 | 11 | 0 | 0 | 0 |
| 1 | B | 371 | 2906 | 1826 | 510 | 559 | 11 | 0 | 0 | 0 |
| 1 | C | 369 | 2886 | 1814 | 503 | 558 | 11 | 0 | 0 | 0 |
| 1 | D | 368 | 2874 | 1806 | 503 | 554 | 11 | 0 | 0 | 0 |
| 1 | E | 367 | 2867 | 1805 | 498 | 553 | 11 | 0 | 0 | 0 |
| 1 | F | 366 | 2859 | 1800 | 495 | 553 | 11 | 0 | 0 | 0 |
| 1 | G | 369 | 2907 | 1826 | 512 | 558 | 11 | 0 | 0 | 0 |
| 1 | H | 371 | 2906 | 1826 | 510 | 559 | 11 | 0 | 0 | 0 |
| 1 | I | 369 | 2886 | 1814 | 503 | 558 | 11 | 0 | 0 | 0 |
| 1 | J | 368 | 2874 | 1806 | 503 | 554 | 11 | 0 | 0 | 0 |
| 1 | K | 367 | 2867 | 1805 | 498 | 553 | 11 | 0 | 0 | 0 |
| 1 | L | 366 | 2859 | 1800 | 495 | 553 | 11 | 0 | 0 | 0 |

There are 180 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|-----------------------|------------|
| A | -13 | MET | - | initiating methionine | UNP O52185 |
| A | -12 | ALA | - | expression tag | UNP O52185 |
| A | -11 | SER | - | expression tag | UNP O52185 |
| A | -10 | TRP | - | expression tag | UNP O52185 |
| A | -9 | SER | - | expression tag | UNP O52185 |

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| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|-----------------------|------------|
| A | -8 | HIS | - | expression tag | UNP O52185 |
| A | -7 | PRO | - | expression tag | UNP O52185 |
| A | -6 | GLN | - | expression tag | UNP O52185 |
| A | -5 | PHE | - | expression tag | UNP O52185 |
| A | -4 | GLU | - | expression tag | UNP O52185 |
| A | -3 | LYS | - | expression tag | UNP O52185 |
| A | -2 | ILE | - | expression tag | UNP O52185 |
| A | -1 | GLU | - | expression tag | UNP O52185 |
| A | 0 | GLY | - | expression tag | UNP O52185 |
| A | 1 | ARG | - | expression tag | UNP O52185 |
| B | -13 | MET | - | initiating methionine | UNP O52185 |
| B | -12 | ALA | - | expression tag | UNP O52185 |
| B | -11 | SER | - | expression tag | UNP O52185 |
| B | -10 | TRP | - | expression tag | UNP O52185 |
| B | -9 | SER | - | expression tag | UNP O52185 |
| B | -8 | HIS | - | expression tag | UNP O52185 |
| B | -7 | PRO | - | expression tag | UNP O52185 |
| B | -6 | GLN | - | expression tag | UNP O52185 |
| B | -5 | PHE | - | expression tag | UNP O52185 |
| B | -4 | GLU | - | expression tag | UNP O52185 |
| B | -3 | LYS | - | expression tag | UNP O52185 |
| B | -2 | ILE | - | expression tag | UNP O52185 |
| B | -1 | GLU | - | expression tag | UNP O52185 |
| B | 0 | GLY | - | expression tag | UNP O52185 |
| B | 1 | ARG | - | expression tag | UNP O52185 |
| C | -13 | MET | - | initiating methionine | UNP O52185 |
| C | -12 | ALA | - | expression tag | UNP O52185 |
| C | -11 | SER | - | expression tag | UNP O52185 |
| C | -10 | TRP | - | expression tag | UNP O52185 |
| C | -9 | SER | - | expression tag | UNP O52185 |
| C | -8 | HIS | - | expression tag | UNP O52185 |
| C | -7 | PRO | - | expression tag | UNP O52185 |
| C | -6 | GLN | - | expression tag | UNP O52185 |
| C | -5 | PHE | - | expression tag | UNP O52185 |
| C | -4 | GLU | - | expression tag | UNP O52185 |
| C | -3 | LYS | - | expression tag | UNP O52185 |
| C | -2 | ILE | - | expression tag | UNP O52185 |
| C | -1 | GLU | - | expression tag | UNP O52185 |
| C | 0 | GLY | - | expression tag | UNP O52185 |
| C | 1 | ARG | - | expression tag | UNP O52185 |
| D | -13 | MET | - | initiating methionine | UNP O52185 |
| D | -12 | ALA | - | expression tag | UNP O52185 |

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| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|-----------------------|------------|
| D | -11 | SER | - | expression tag | UNP O52185 |
| D | -10 | TRP | - | expression tag | UNP O52185 |
| D | -9 | SER | - | expression tag | UNP O52185 |
| D | -8 | HIS | - | expression tag | UNP O52185 |
| D | -7 | PRO | - | expression tag | UNP O52185 |
| D | -6 | GLN | - | expression tag | UNP O52185 |
| D | -5 | PHE | - | expression tag | UNP O52185 |
| D | -4 | GLU | - | expression tag | UNP O52185 |
| D | -3 | LYS | - | expression tag | UNP O52185 |
| D | -2 | ILE | - | expression tag | UNP O52185 |
| D | -1 | GLU | - | expression tag | UNP O52185 |
| D | 0 | GLY | - | expression tag | UNP O52185 |
| D | 1 | ARG | - | expression tag | UNP O52185 |
| E | -13 | MET | - | initiating methionine | UNP O52185 |
| E | -12 | ALA | - | expression tag | UNP O52185 |
| E | -11 | SER | - | expression tag | UNP O52185 |
| E | -10 | TRP | - | expression tag | UNP O52185 |
| E | -9 | SER | - | expression tag | UNP O52185 |
| E | -8 | HIS | - | expression tag | UNP O52185 |
| E | -7 | PRO | - | expression tag | UNP O52185 |
| E | -6 | GLN | - | expression tag | UNP O52185 |
| E | -5 | PHE | - | expression tag | UNP O52185 |
| E | -4 | GLU | - | expression tag | UNP O52185 |
| E | -3 | LYS | - | expression tag | UNP O52185 |
| E | -2 | ILE | - | expression tag | UNP O52185 |
| E | -1 | GLU | - | expression tag | UNP O52185 |
| E | 0 | GLY | - | expression tag | UNP O52185 |
| E | 1 | ARG | - | expression tag | UNP O52185 |
| F | -13 | MET | - | initiating methionine | UNP O52185 |
| F | -12 | ALA | - | expression tag | UNP O52185 |
| F | -11 | SER | - | expression tag | UNP O52185 |
| F | -10 | TRP | - | expression tag | UNP O52185 |
| F | -9 | SER | - | expression tag | UNP O52185 |
| F | -8 | HIS | - | expression tag | UNP O52185 |
| F | -7 | PRO | - | expression tag | UNP O52185 |
| F | -6 | GLN | - | expression tag | UNP O52185 |
| F | -5 | PHE | - | expression tag | UNP O52185 |
| F | -4 | GLU | - | expression tag | UNP O52185 |
| F | -3 | LYS | - | expression tag | UNP O52185 |
| F | -2 | ILE | - | expression tag | UNP O52185 |
| F | -1 | GLU | - | expression tag | UNP O52185 |
| F | 0 | GLY | - | expression tag | UNP O52185 |

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| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|-----------------------|------------|
| F | 1 | ARG | - | expression tag | UNP O52185 |
| G | -13 | MET | - | initiating methionine | UNP O52185 |
| G | -12 | ALA | - | expression tag | UNP O52185 |
| G | -11 | SER | - | expression tag | UNP O52185 |
| G | -10 | TRP | - | expression tag | UNP O52185 |
| G | -9 | SER | - | expression tag | UNP O52185 |
| G | -8 | HIS | - | expression tag | UNP O52185 |
| G | -7 | PRO | - | expression tag | UNP O52185 |
| G | -6 | GLN | - | expression tag | UNP O52185 |
| G | -5 | PHE | - | expression tag | UNP O52185 |
| G | -4 | GLU | - | expression tag | UNP O52185 |
| G | -3 | LYS | - | expression tag | UNP O52185 |
| G | -2 | ILE | - | expression tag | UNP O52185 |
| G | -1 | GLU | - | expression tag | UNP O52185 |
| G | 0 | GLY | - | expression tag | UNP O52185 |
| G | 1 | ARG | - | expression tag | UNP O52185 |
| H | -13 | MET | - | initiating methionine | UNP O52185 |
| H | -12 | ALA | - | expression tag | UNP O52185 |
| H | -11 | SER | - | expression tag | UNP O52185 |
| H | -10 | TRP | - | expression tag | UNP O52185 |
| H | -9 | SER | - | expression tag | UNP O52185 |
| H | -8 | HIS | - | expression tag | UNP O52185 |
| H | -7 | PRO | - | expression tag | UNP O52185 |
| H | -6 | GLN | - | expression tag | UNP O52185 |
| H | -5 | PHE | - | expression tag | UNP O52185 |
| H | -4 | GLU | - | expression tag | UNP O52185 |
| H | -3 | LYS | - | expression tag | UNP O52185 |
| H | -2 | ILE | - | expression tag | UNP O52185 |
| H | -1 | GLU | - | expression tag | UNP O52185 |
| H | 0 | GLY | - | expression tag | UNP O52185 |
| H | 1 | ARG | - | expression tag | UNP O52185 |
| I | -13 | MET | - | initiating methionine | UNP O52185 |
| I | -12 | ALA | - | expression tag | UNP O52185 |
| I | -11 | SER | - | expression tag | UNP O52185 |
| I | -10 | TRP | - | expression tag | UNP O52185 |
| I | -9 | SER | - | expression tag | UNP O52185 |
| I | -8 | HIS | - | expression tag | UNP O52185 |
| I | -7 | PRO | - | expression tag | UNP O52185 |
| I | -6 | GLN | - | expression tag | UNP O52185 |
| I | -5 | PHE | - | expression tag | UNP O52185 |
| I | -4 | GLU | - | expression tag | UNP O52185 |
| I | -3 | LYS | - | expression tag | UNP O52185 |

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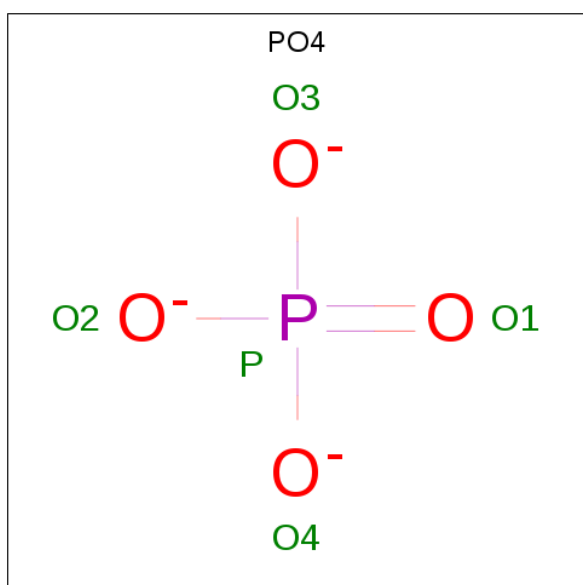
| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|-----------------------|------------|
| I | -2 | ILE | - | expression tag | UNP O52185 |
| I | -1 | GLU | - | expression tag | UNP O52185 |
| I | 0 | GLY | - | expression tag | UNP O52185 |
| I | 1 | ARG | - | expression tag | UNP O52185 |
| J | -13 | MET | - | initiating methionine | UNP O52185 |
| J | -12 | ALA | - | expression tag | UNP O52185 |
| J | -11 | SER | - | expression tag | UNP O52185 |
| J | -10 | TRP | - | expression tag | UNP O52185 |
| J | -9 | SER | - | expression tag | UNP O52185 |
| J | -8 | HIS | - | expression tag | UNP O52185 |
| J | -7 | PRO | - | expression tag | UNP O52185 |
| J | -6 | GLN | - | expression tag | UNP O52185 |
| J | -5 | PHE | - | expression tag | UNP O52185 |
| J | -4 | GLU | - | expression tag | UNP O52185 |
| J | -3 | LYS | - | expression tag | UNP O52185 |
| J | -2 | ILE | - | expression tag | UNP O52185 |
| J | -1 | GLU | - | expression tag | UNP O52185 |
| J | 0 | GLY | - | expression tag | UNP O52185 |
| J | 1 | ARG | - | expression tag | UNP O52185 |
| K | -13 | MET | - | initiating methionine | UNP O52185 |
| K | -12 | ALA | - | expression tag | UNP O52185 |
| K | -11 | SER | - | expression tag | UNP O52185 |
| K | -10 | TRP | - | expression tag | UNP O52185 |
| K | -9 | SER | - | expression tag | UNP O52185 |
| K | -8 | HIS | - | expression tag | UNP O52185 |
| K | -7 | PRO | - | expression tag | UNP O52185 |
| K | -6 | GLN | - | expression tag | UNP O52185 |
| K | -5 | PHE | - | expression tag | UNP O52185 |
| K | -4 | GLU | - | expression tag | UNP O52185 |
| K | -3 | LYS | - | expression tag | UNP O52185 |
| K | -2 | ILE | - | expression tag | UNP O52185 |
| K | -1 | GLU | - | expression tag | UNP O52185 |
| K | 0 | GLY | - | expression tag | UNP O52185 |
| K | 1 | ARG | - | expression tag | UNP O52185 |
| L | -13 | MET | - | initiating methionine | UNP O52185 |
| L | -12 | ALA | - | expression tag | UNP O52185 |
| L | -11 | SER | - | expression tag | UNP O52185 |
| L | -10 | TRP | - | expression tag | UNP O52185 |
| L | -9 | SER | - | expression tag | UNP O52185 |
| L | -8 | HIS | - | expression tag | UNP O52185 |
| L | -7 | PRO | - | expression tag | UNP O52185 |
| L | -6 | GLN | - | expression tag | UNP O52185 |

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| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------------|------------|
| L | -5 | PHE | - | expression tag | UNP O52185 |
| L | -4 | GLU | - | expression tag | UNP O52185 |
| L | -3 | LYS | - | expression tag | UNP O52185 |
| L | -2 | ILE | - | expression tag | UNP O52185 |
| L | -1 | GLU | - | expression tag | UNP O52185 |
| L | 0 | GLY | - | expression tag | UNP O52185 |
| L | 1 | ARG | - | expression tag | UNP O52185 |

- Molecule 2 is PHOSPHATE ION (three-letter code: PO4) (formula: O₄P).



| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|--------------------|---------|---------|
| 2 | A | 1 | Total O P 5 4 1 | 0 | 0 |
| 2 | B | 1 | Total O P 5 4 1 | 0 | 0 |
| 2 | C | 1 | Total O P 5 4 1 | 0 | 0 |
| 2 | D | 1 | Total O P 5 4 1 | 0 | 0 |
| 2 | E | 1 | Total O P 5 4 1 | 0 | 0 |
| 2 | F | 1 | Total O P 5 4 1 | 0 | 0 |
| 2 | G | 1 | Total O P 5 4 1 | 0 | 0 |
| 2 | H | 1 | Total O P 5 4 1 | 0 | 0 |

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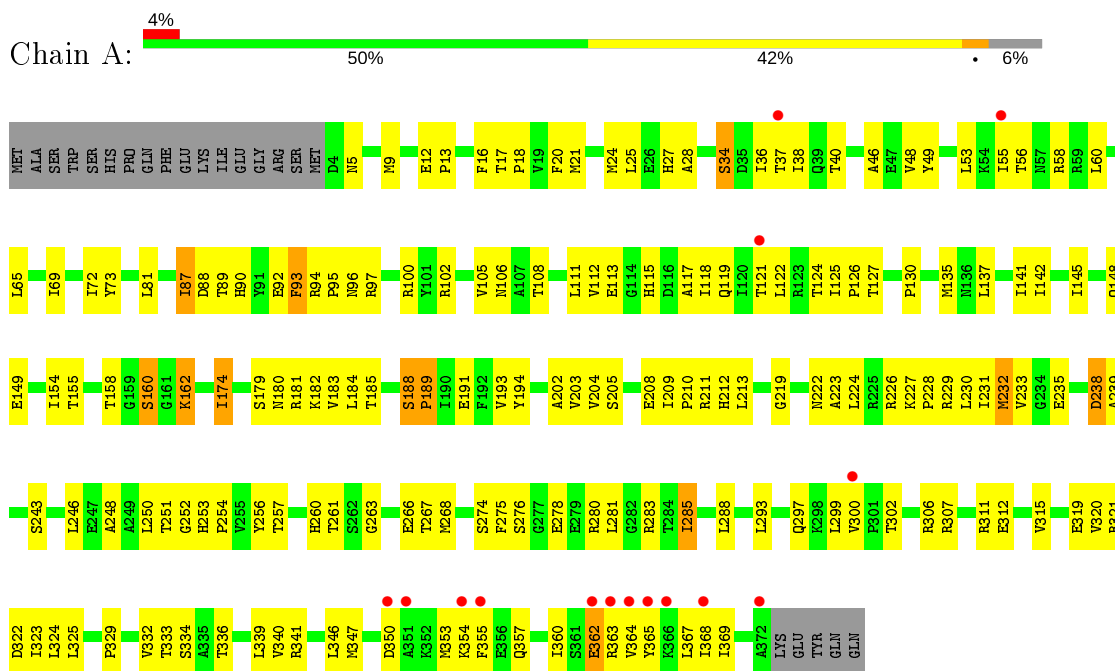
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| Mol | Chain | Residues | Atoms | | | ZeroOcc | AltConf |
|------------|--------------|-----------------|--------------|--------|--------|----------------|----------------|
| 2 | I | 1 | Total 5 | O 4 | P 1 | 0 | 0 |
| 2 | J | 1 | Total 5 | O 4 | P 1 | 0 | 0 |
| 2 | K | 1 | Total 5 | O 4 | P 1 | 0 | 0 |
| 2 | L | 1 | Total 5 | O 4 | P 1 | 0 | 0 |

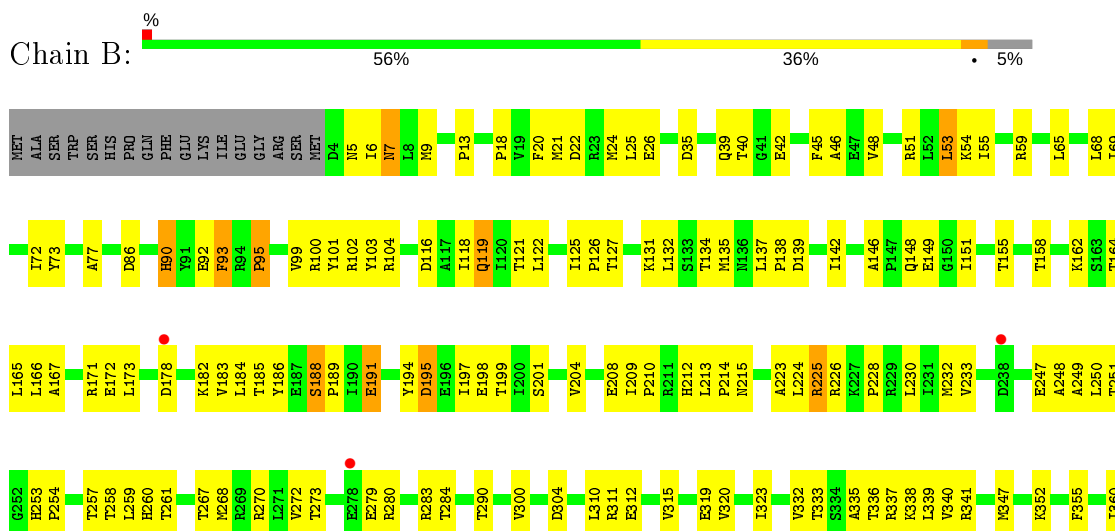
3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA and DNA 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 electron 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 dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). 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: DotB

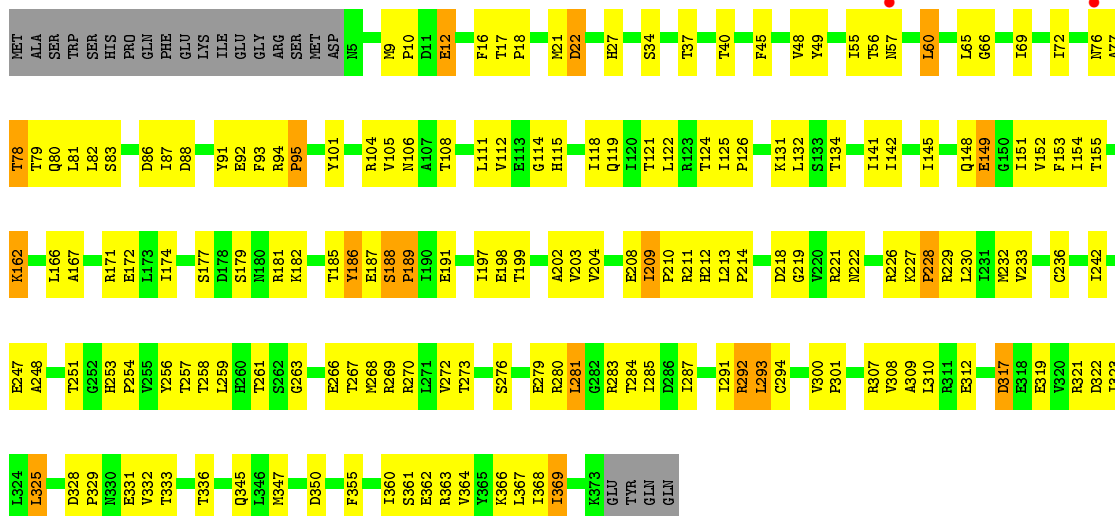


- Molecule 1: DotB

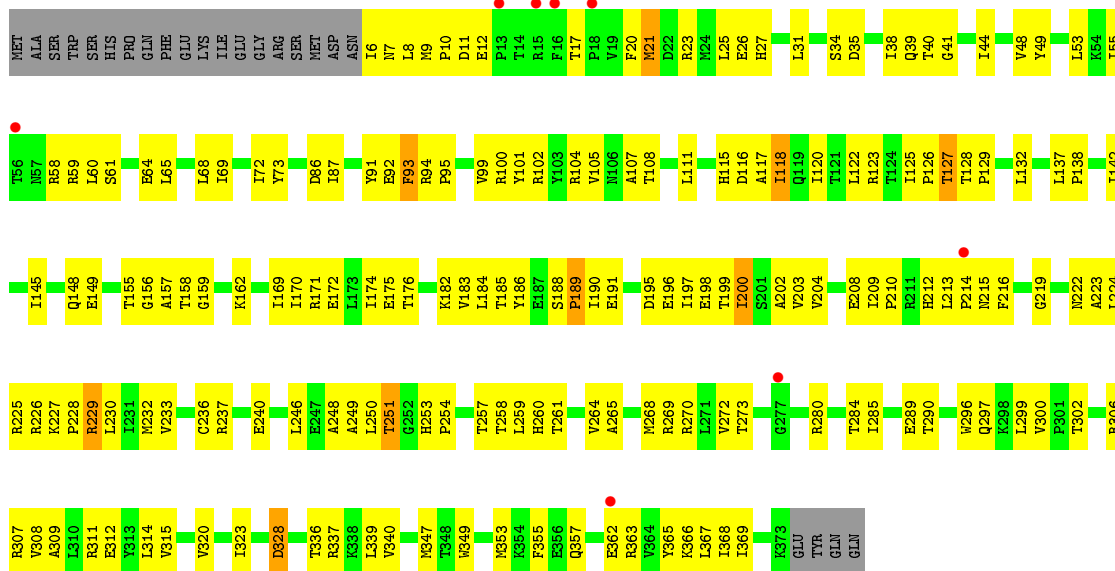




• Molecule 1: DotB

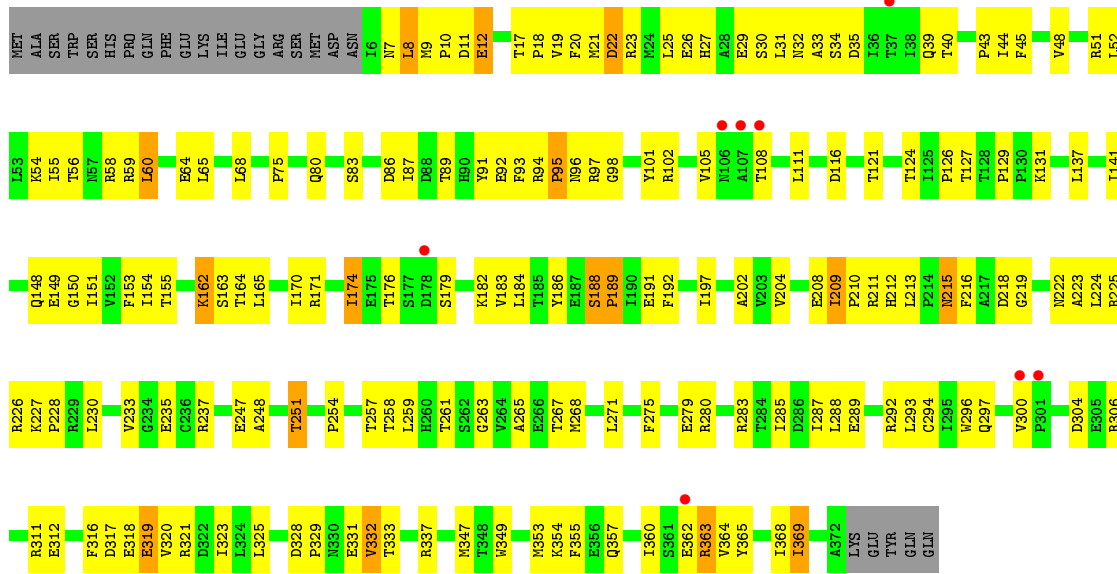


• Molecule 1: DotB

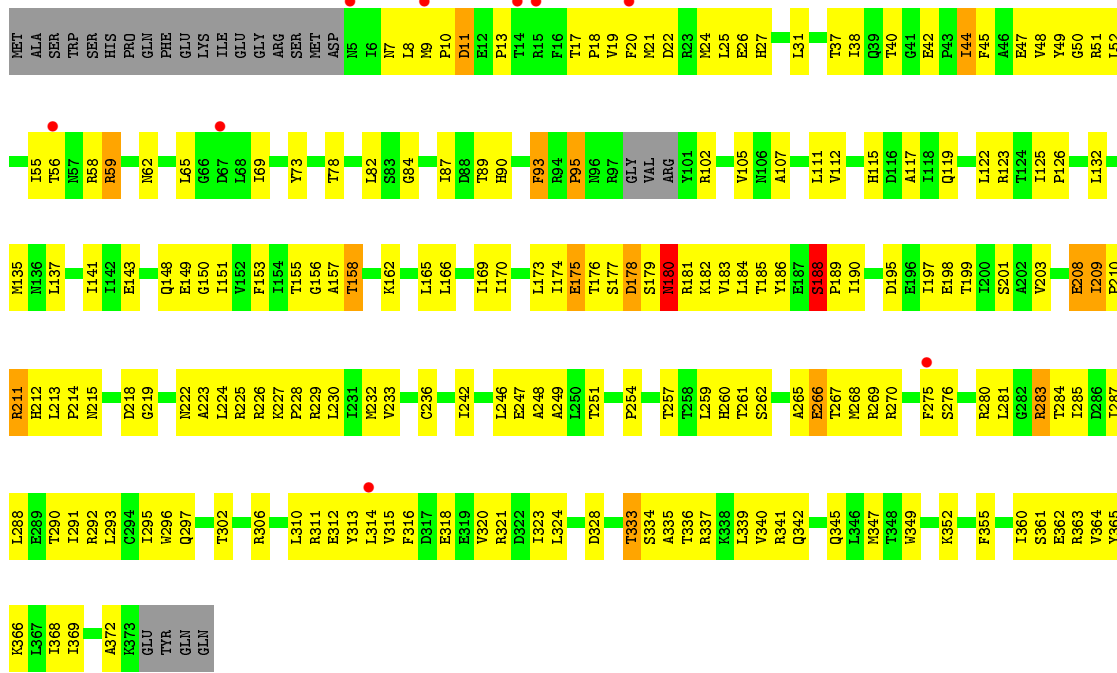


• Molecule 1: DotB

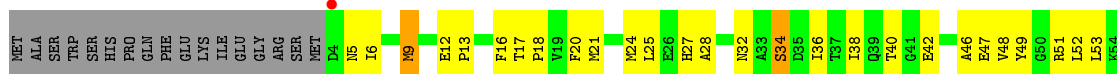


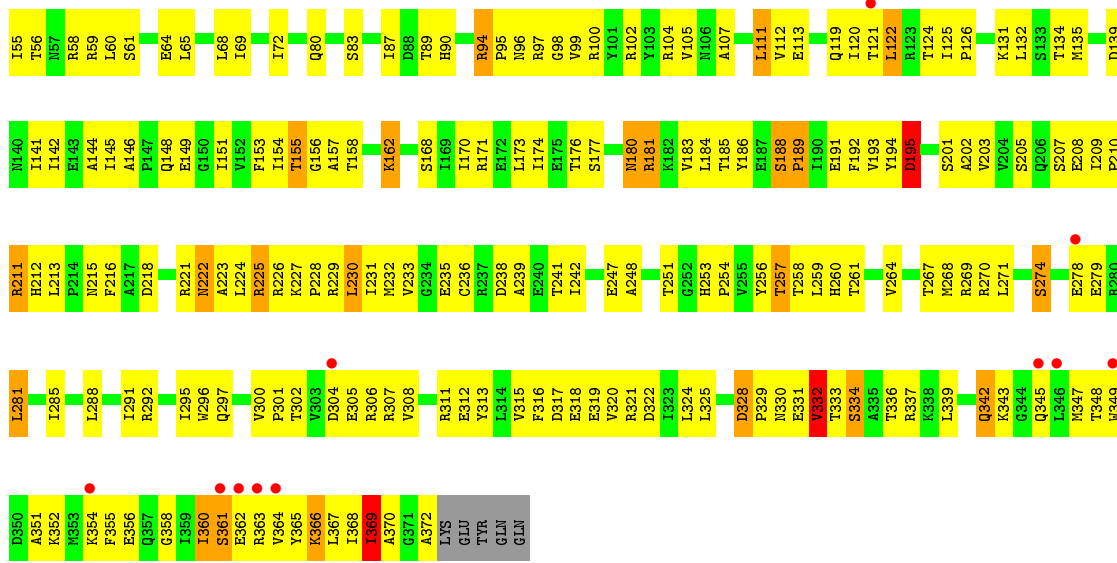


• Molecule 1: DotB

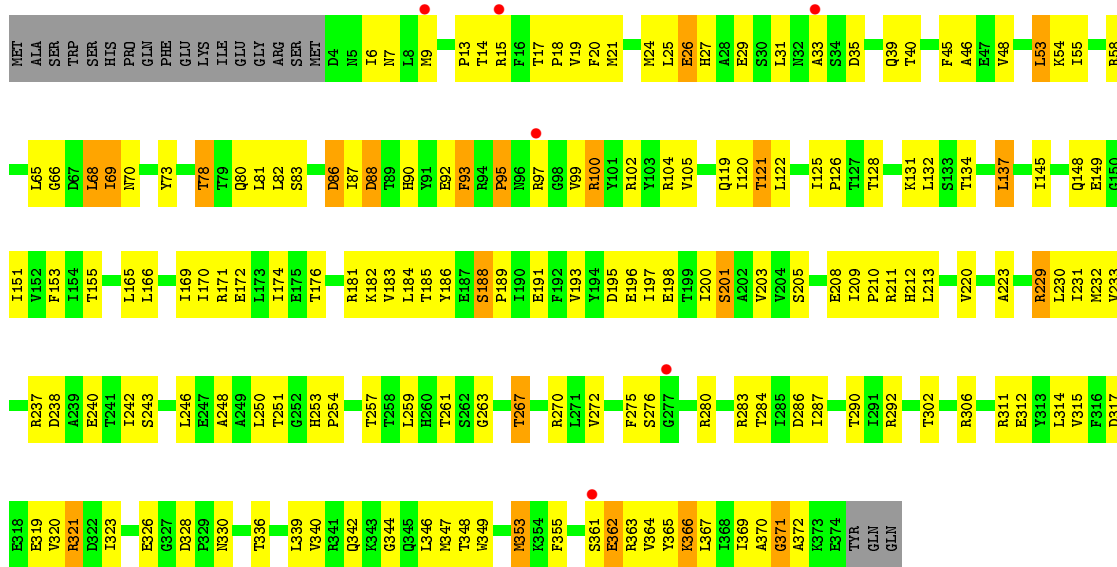


• Molecule 1: DotB

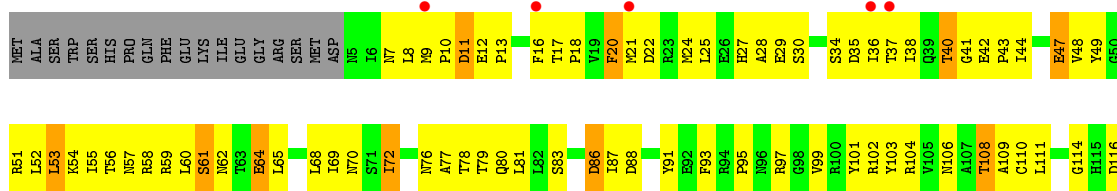


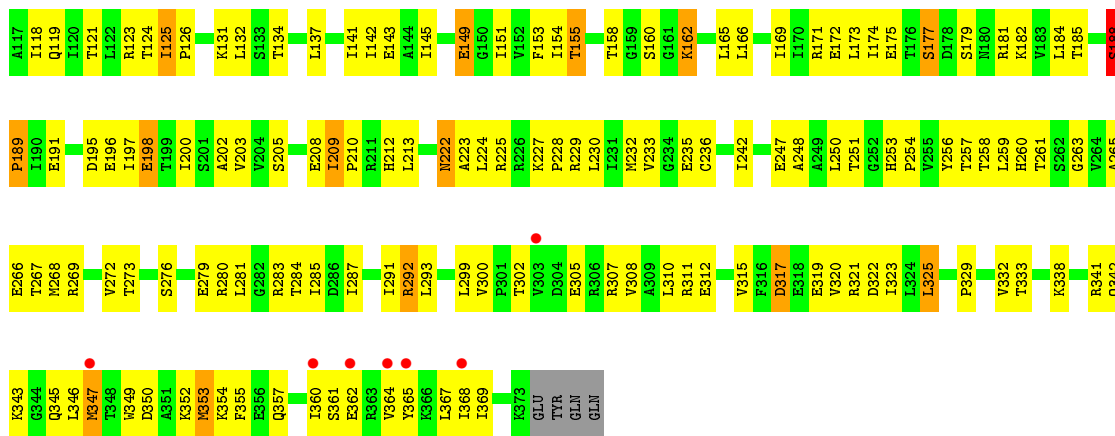


• Molecule 1: DotB

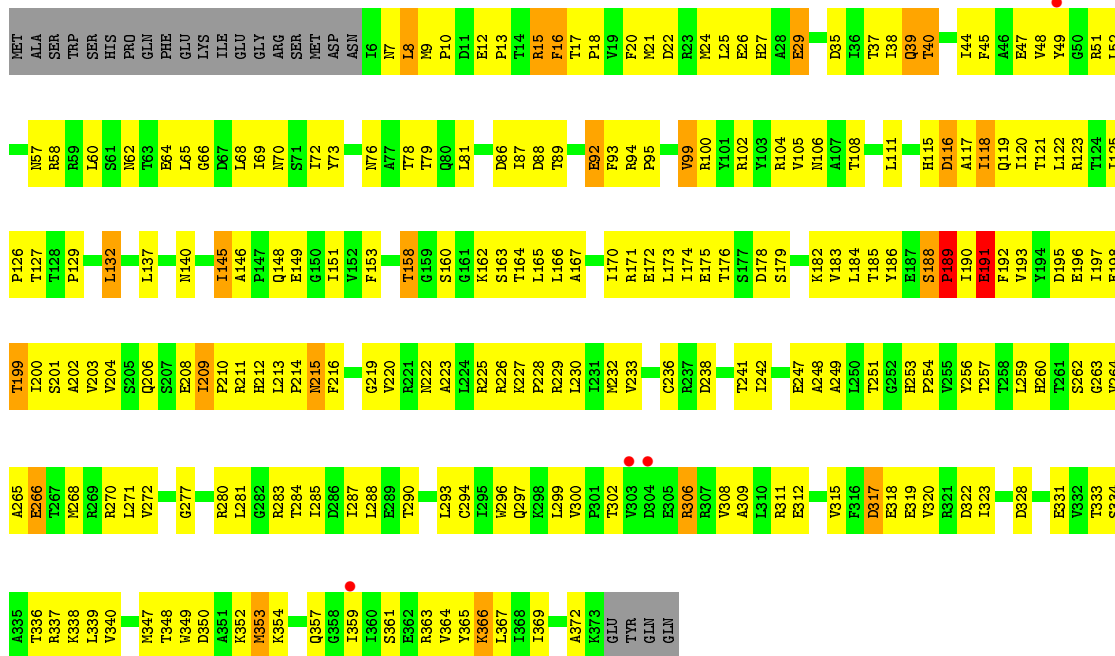


• Molecule 1: DotB

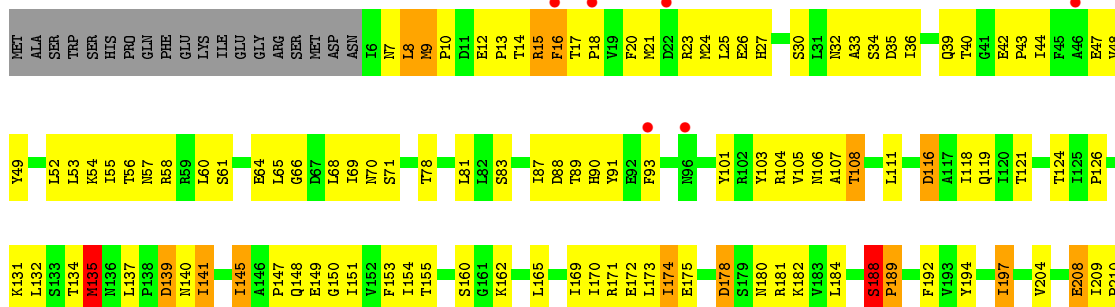


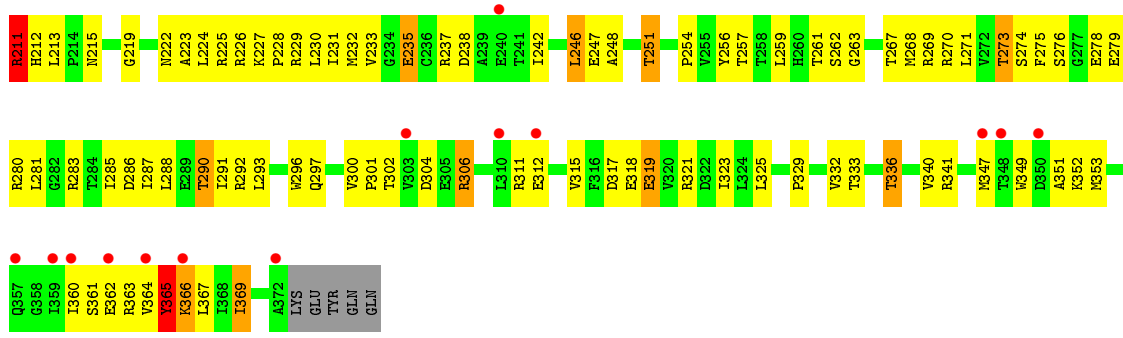


• Molecule 1: DotB

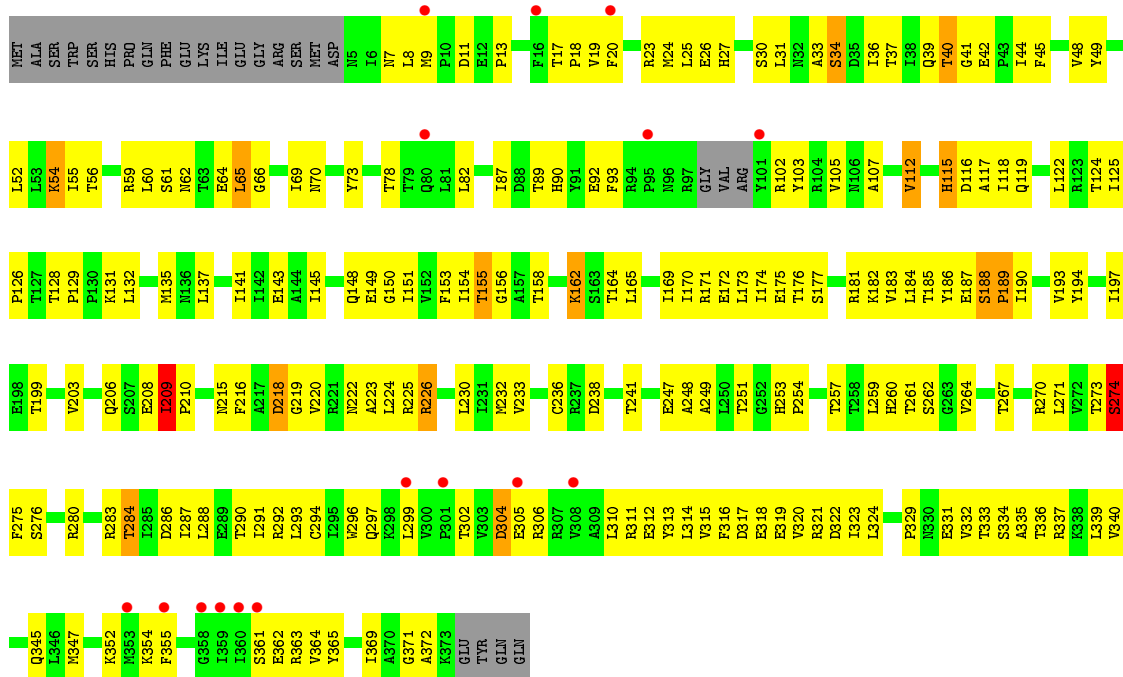


• Molecule 1: DotB





• Molecule 1: DotB



4 Data and refinement statistics

| Property | Value | Source |
|-------------------------------------------------------------------------|-------------------------------------------------------------|------------------|
| Space group | P 1 | Depositor |
| Cell constants a, b, c, α , β , γ | 109.20Å 109.30Å 119.80Å 83.70° 86.60° 60.70° | Depositor |
| Resolution (Å) | 36.04 – 3.19 49.10 – 3.19 | Depositor EDS |
| % Data completeness (in resolution range) | 98.0 (36.04-3.19) 98.1 (49.10-3.19) | Depositor EDS |
| R_{merge} | (Not available) | Depositor |
| R_{sym} | (Not available) | Depositor |
| $\langle I/\sigma(I) \rangle$ ¹ | 1.40 (at 3.19Å) | Xtrriage |
| Refinement program | REFMAC 5.8.0158 | Depositor |
| R, R_{free} | 0.233 , 0.261 0.234 , 0.260 | Depositor DCC |
| R_{free} test set | 3841 reflections (4.92%) | wwPDB-VP |
| Wilson B-factor (Å ²) | 103.3 | Xtrriage |
| Anisotropy | 0.099 | Xtrriage |
| Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²) | 0.31 , 64.0 | EDS |
| L-test for twinning ² | $\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.28$ | Xtrriage |
| Estimated twinning fraction | 0.034 for h-k,-k,-l | Xtrriage |
| F_o, F_c correlation | 0.93 | EDS |
| Total number of atoms | 34658 | wwPDB-VP |
| Average B, all atoms (Å ²) | 100.0 | wwPDB-VP |

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.82% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: PO4

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 | 0.73 | 0/2954 | 0.78 | 4/4009 (0.1%) |
| 1 | B | 0.78 | 0/2953 | 0.77 | 6/4009 (0.1%) |
| 1 | C | 0.73 | 0/2933 | 0.77 | 5/3984 (0.1%) |
| 1 | D | 0.79 | 0/2920 | 0.78 | 4/3965 (0.1%) |
| 1 | E | 0.78 | 1/2914 (0.0%) | 0.79 | 4/3958 (0.1%) |
| 1 | F | 0.81 | 2/2904 (0.1%) | 0.80 | 5/3943 (0.1%) |
| 1 | G | 0.91 | 1/2954 (0.0%) | 0.90 | 5/4009 (0.1%) |
| 1 | H | 0.82 | 0/2953 | 0.77 | 4/4009 (0.1%) |
| 1 | I | 0.84 | 1/2933 (0.0%) | 0.81 | 4/3984 (0.1%) |
| 1 | J | 0.82 | 0/2920 | 0.84 | 6/3965 (0.2%) |
| 1 | K | 0.84 | 0/2914 | 0.86 | 6/3958 (0.2%) |
| 1 | L | 0.84 | 0/2904 | 0.82 | 2/3943 (0.1%) |
| All | All | 0.81 | 5/35156 (0.0%) | 0.81 | 55/47736 (0.1%) |

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 | F | 0 | 1 |
| 1 | K | 0 | 1 |
| 1 | L | 0 | 1 |
| All | All | 0 | 3 |

All (5) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | F | 312 | GLU | CD-OE1 | 5.61 | 1.31 | 1.25 |
| 1 | F | 175 | GLU | CD-OE2 | -5.35 | 1.19 | 1.25 |
| 1 | E | 12 | GLU | CG-CD | 5.23 | 1.59 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 1 | G | 369 | ILE | N-CA | -5.10 | 1.36 | 1.46 |
| 1 | I | 61 | SER | CB-OG | -5.08 | 1.35 | 1.42 |

All (55) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 238 | ASP | CB-CG-OD2 | 10.49 | 127.74 | 118.30 |
| 1 | F | 211 | ARG | NE-CZ-NH2 | 9.40 | 125.00 | 120.30 |
| 1 | C | 317 | ASP | CB-CG-OD2 | 7.73 | 125.26 | 118.30 |
| 1 | B | 304 | ASP | CB-CG-OD1 | -7.54 | 111.51 | 118.30 |
| 1 | G | 195 | ASP | CB-CG-OD1 | -7.33 | 111.70 | 118.30 |
| 1 | A | 238 | ASP | CB-CG-OD1 | -6.85 | 112.13 | 118.30 |
| 1 | L | 286 | ASP | CB-CG-OD1 | -6.48 | 112.47 | 118.30 |
| 1 | G | 59 | ARG | NE-CZ-NH2 | -6.43 | 117.08 | 120.30 |
| 1 | C | 186 | TYR | CB-CG-CD2 | -6.40 | 117.16 | 121.00 |
| 1 | J | 116 | ASP | CB-CG-OD2 | 6.36 | 124.02 | 118.30 |
| 1 | K | 135 | MET | CG-SD-CE | 6.23 | 110.17 | 100.20 |
| 1 | E | 209 | ILE | C-N-CD | 6.20 | 141.42 | 128.40 |
| 1 | C | 186 | TYR | CB-CG-CD1 | 6.14 | 124.68 | 121.00 |
| 1 | B | 304 | ASP | CB-CG-OD2 | 6.08 | 123.78 | 118.30 |
| 1 | H | 362 | GLU | OE1-CD-OE2 | -5.98 | 116.13 | 123.30 |
| 1 | F | 123 | ARG | NE-CZ-NH1 | -5.93 | 117.34 | 120.30 |
| 1 | K | 208 | GLU | OE1-CD-OE2 | -5.92 | 116.20 | 123.30 |
| 1 | C | 317 | ASP | CB-CG-OD1 | -5.91 | 112.98 | 118.30 |
| 1 | B | 365 | TYR | CB-CG-CD2 | -5.90 | 117.46 | 121.00 |
| 1 | K | 209 | ILE | C-N-CD | 5.84 | 140.67 | 128.40 |
| 1 | B | 195 | ASP | CB-CG-OD2 | -5.77 | 113.11 | 118.30 |
| 1 | K | 188 | SER | C-N-CD | 5.73 | 140.44 | 128.40 |
| 1 | H | 86 | ASP | CB-CG-OD2 | 5.70 | 123.43 | 118.30 |
| 1 | J | 188 | SER | C-N-CD | 5.67 | 140.30 | 128.40 |
| 1 | E | 211 | ARG | N-CA-C | 5.56 | 126.02 | 111.00 |
| 1 | G | 221 | ARG | NE-CZ-NH2 | 5.55 | 123.07 | 120.30 |
| 1 | D | 116 | ASP | CB-CG-OD2 | 5.54 | 123.29 | 118.30 |
| 1 | J | 191 | GLU | OE1-CD-OE2 | -5.49 | 116.71 | 123.30 |
| 1 | L | 209 | ILE | C-N-CD | 5.48 | 139.90 | 128.40 |
| 1 | I | 317 | ASP | CB-CG-OD2 | -5.47 | 113.38 | 118.30 |
| 1 | K | 365 | TYR | CB-CG-CD1 | 5.47 | 124.28 | 121.00 |
| 1 | E | 363 | ARG | NE-CZ-NH2 | 5.40 | 123.00 | 120.30 |
| 1 | D | 328 | ASP | CB-CG-OD1 | -5.35 | 113.48 | 118.30 |
| 1 | A | 88 | ASP | CB-CG-OD2 | 5.33 | 123.10 | 118.30 |
| 1 | B | 225 | ARG | NE-CZ-NH1 | 5.33 | 122.96 | 120.30 |
| 1 | G | 332 | VAL | CB-CA-C | -5.32 | 101.29 | 111.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | G | 139 | ASP | CB-CG-OD1 | 5.30 | 123.07 | 118.30 |
| 1 | H | 321 | ARG | NE-CZ-NH2 | 5.29 | 122.94 | 120.30 |
| 1 | K | 211 | ARG | N-CA-C | 5.28 | 125.27 | 111.00 |
| 1 | I | 20 | PHE | CB-CG-CD1 | -5.25 | 117.12 | 120.80 |
| 1 | D | 229 | ARG | NE-CZ-NH1 | -5.23 | 117.68 | 120.30 |
| 1 | F | 95 | PRO | N-CA-CB | 5.20 | 109.55 | 103.30 |
| 1 | F | 188 | SER | C-N-CD | 5.19 | 139.31 | 128.40 |
| 1 | I | 86 | ASP | CB-CG-OD1 | 5.19 | 122.97 | 118.30 |
| 1 | A | 188 | SER | C-N-CD | 5.19 | 139.30 | 128.40 |
| 1 | H | 195 | ASP | CB-CG-OD1 | 5.19 | 122.97 | 118.30 |
| 1 | C | 187 | GLU | OE1-CD-OE2 | -5.18 | 117.08 | 123.30 |
| 1 | B | 225 | ARG | NE-CZ-NH2 | -5.14 | 117.73 | 120.30 |
| 1 | E | 188 | SER | C-N-CD | 5.12 | 139.16 | 128.40 |
| 1 | F | 318 | GLU | OE1-CD-OE2 | -5.09 | 117.19 | 123.30 |
| 1 | J | 189 | PRO | CA-N-CD | -5.08 | 104.40 | 111.50 |
| 1 | I | 188 | SER | C-N-CD | 5.06 | 139.02 | 128.40 |
| 1 | D | 250 | LEU | CB-CG-CD2 | 5.03 | 119.55 | 111.00 |
| 1 | J | 317 | ASP | CB-CG-OD2 | -5.01 | 113.79 | 118.30 |
| 1 | J | 178 | ASP | CB-CG-OD1 | -5.01 | 113.79 | 118.30 |

There are no chirality outliers.

All (3) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-----------|
| 1 | F | 180 | ASN | Mainchain |
| 1 | K | 246 | LEU | Mainchain |
| 1 | L | 372 | ALA | Peptide |

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

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

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1 | A | 2907 | 0 | 2949 | 206 | 0 |
| 1 | B | 2906 | 0 | 2929 | 199 | 0 |
| 1 | C | 2886 | 0 | 2907 | 195 | 1 |
| 1 | D | 2874 | 0 | 2901 | 193 | 0 |
| 1 | E | 2867 | 0 | 2891 | 214 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1 | F | 2859 | 0 | 2876 | 241 | 1 |
| 1 | G | 2907 | 0 | 2949 | 359 | 0 |
| 1 | H | 2906 | 0 | 2929 | 230 | 0 |
| 1 | I | 2886 | 0 | 2907 | 332 | 0 |
| 1 | J | 2874 | 0 | 2901 | 341 | 0 |
| 1 | K | 2867 | 0 | 2891 | 273 | 0 |
| 1 | L | 2859 | 0 | 2876 | 245 | 0 |
| 2 | A | 5 | 0 | 0 | 0 | 0 |
| 2 | B | 5 | 0 | 0 | 0 | 0 |
| 2 | C | 5 | 0 | 0 | 0 | 0 |
| 2 | D | 5 | 0 | 0 | 0 | 0 |
| 2 | E | 5 | 0 | 0 | 0 | 0 |
| 2 | F | 5 | 0 | 0 | 0 | 0 |
| 2 | G | 5 | 0 | 0 | 0 | 0 |
| 2 | H | 5 | 0 | 0 | 0 | 0 |
| 2 | I | 5 | 0 | 0 | 0 | 0 |
| 2 | J | 5 | 0 | 0 | 2 | 0 |
| 2 | K | 5 | 0 | 0 | 1 | 0 |
| 2 | L | 5 | 0 | 0 | 0 | 0 |
| All | All | 34658 | 0 | 34906 | 2849 | 1 |

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 41.

All (2849) 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:J:9:MET:CE | 1:J:24:MET:HA | 1.29 | 1.53 |
| 1:J:9:MET:HE3 | 1:J:24:MET:CA | 1.57 | 1.35 |
| 1:G:291:ILE:HD13 | 1:G:316:PHE:CE2 | 1.64 | 1.31 |
| 1:G:355:PHE:CZ | 1:G:365:TYR:CD2 | 2.23 | 1.25 |
| 1:D:236:CYS:SG | 1:D:259:LEU:HD21 | 1.79 | 1.23 |
| 1:E:29:GLU:HG2 | 1:E:101:TYR:CE2 | 1.74 | 1.22 |
| 1:G:355:PHE:CZ | 1:G:365:TYR:HD2 | 1.55 | 1.22 |
| 1:K:40:THR:HG22 | 1:K:65:LEU:HD22 | 1.22 | 1.21 |
| 1:J:280:ARG:O | 1:J:284:THR:HG23 | 1.40 | 1.20 |
| 1:L:215:ASN:OD1 | 1:L:218:ASP:HB2 | 1.40 | 1.20 |
| 1:C:280:ARG:O | 1:C:284:THR:HG23 | 1.39 | 1.19 |
| 1:L:112:VAL:HG23 | 1:L:117:ALA:CB | 1.73 | 1.17 |
| 1:J:9:MET:CE | 1:J:24:MET:CA | 2.13 | 1.17 |
| 1:I:280:ARG:O | 1:I:284:THR:HG23 | 1.42 | 1.17 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:291:ILE:CG2 | 1:G:316:PHE:HD2 | 1.57 | 1.16 |
| 1:I:355:PHE:CE2 | 1:I:362:GLU:HA | 1.80 | 1.15 |
| 1:D:8:LEU:HD13 | 1:D:9:MET:N | 1.60 | 1.15 |
| 1:D:261:THR:HG21 | 1:D:270:ARG:HG3 | 1.17 | 1.12 |
| 1:K:363:ARG:HA | 1:K:366:LYS:CD | 1.78 | 1.12 |
| 1:I:261:THR:HG23 | 1:I:267:THR:HG22 | 1.21 | 1.12 |
| 1:I:24:MET:CE | 1:I:44:ILE:HD13 | 1.77 | 1.12 |
| 1:F:190:ILE:HG12 | 1:F:208:GLU:HG3 | 1.25 | 1.11 |
| 1:B:93:PHE:CZ | 1:B:101:TYR:HD2 | 1.68 | 1.11 |
| 1:J:121:THR:HG21 | 1:K:182:LYS:HZ3 | 1.06 | 1.11 |
| 1:D:280:ARG:O | 1:D:284:THR:HG23 | 1.46 | 1.11 |
| 1:G:363:ARG:HA | 1:G:366:LYS:HD2 | 1.17 | 1.11 |
| 1:I:104:ARG:CG | 1:I:125:ILE:HD11 | 1.80 | 1.11 |
| 1:H:48:VAL:HG21 | 1:H:53:LEU:HD11 | 1.32 | 1.11 |
| 1:E:162:LYS:HD3 | 1:E:258:THR:HB | 1.32 | 1.10 |
| 1:G:356:GLU:N | 1:G:356:GLU:OE2 | 1.83 | 1.10 |
| 1:L:112:VAL:HG23 | 1:L:117:ALA:HB2 | 1.33 | 1.10 |
| 1:B:280:ARG:O | 1:B:284:THR:HG23 | 1.50 | 1.10 |
| 1:G:291:ILE:HG12 | 1:G:316:PHE:CD2 | 1.87 | 1.09 |
| 1:I:108:THR:HG21 | 1:J:222:ASN:HD21 | 1.08 | 1.09 |
| 1:I:40:THR:HG22 | 1:I:65:LEU:HD12 | 1.21 | 1.09 |
| 1:J:15:ARG:HG2 | 1:J:64:GLU:OE2 | 1.53 | 1.09 |
| 1:F:48:VAL:HG12 | 1:F:49:TYR:HD2 | 1.17 | 1.09 |
| 1:D:102:ARG:HH21 | 1:D:127:THR:HG22 | 1.12 | 1.08 |
| 1:D:175:GLU:HA | 1:D:199:THR:HG22 | 1.31 | 1.08 |
| 1:F:174:ILE:HG22 | 1:F:199:THR:HG21 | 1.34 | 1.08 |
| 1:C:104:ARG:HG3 | 1:C:125:ILE:HD11 | 1.33 | 1.07 |
| 1:J:60:LEU:HD13 | 1:J:64:GLU:OE1 | 1.55 | 1.07 |
| 1:I:24:MET:HE2 | 1:I:44:ILE:CD1 | 1.83 | 1.07 |
| 1:H:365:TYR:CZ | 1:H:369:ILE:HD11 | 1.90 | 1.07 |
| 1:I:321:ARG:O | 1:I:325:LEU:HD12 | 1.55 | 1.07 |
| 1:J:174:ILE:HG12 | 1:J:199:THR:HG21 | 1.37 | 1.06 |
| 1:G:180:ASN:HB3 | 1:L:52:LEU:HB2 | 1.38 | 1.06 |
| 1:I:104:ARG:CG | 1:I:125:ILE:CD1 | 2.34 | 1.06 |
| 1:G:291:ILE:CD1 | 1:G:316:PHE:CE2 | 2.38 | 1.05 |
| 1:E:40:THR:HG22 | 1:E:65:LEU:HD22 | 1.36 | 1.05 |
| 1:I:261:THR:CG2 | 1:I:267:THR:HG22 | 1.86 | 1.04 |
| 1:K:288:LEU:HD13 | 1:K:325:LEU:HD23 | 1.39 | 1.04 |
| 1:A:355:PHE:HA | 1:A:360:ILE:HG22 | 1.31 | 1.04 |
| 1:E:108:THR:HG21 | 1:F:226:ARG:NH2 | 1.72 | 1.04 |
| 1:K:16:PHE:HZ | 1:K:24:MET:HE3 | 1.21 | 1.04 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:119:GLN:HE22 | 1:H:182:LYS:NZ | 1.56 | 1.04 |
| 1:C:321:ARG:O | 1:C:325:LEU:HD12 | 1.57 | 1.03 |
| 1:I:261:THR:HG21 | 1:I:267:THR:HA | 1.39 | 1.03 |
| 1:I:104:ARG:HG2 | 1:I:125:ILE:HD11 | 1.32 | 1.03 |
| 1:K:363:ARG:HA | 1:K:366:LYS:HD3 | 1.03 | 1.03 |
| 1:B:155:THR:HG22 | 1:B:259:LEU:HB2 | 1.39 | 1.03 |
| 1:K:24:MET:HE1 | 1:K:44:ILE:HD12 | 1.38 | 1.03 |
| 1:J:353:MET:O | 1:J:357:GLN:HG2 | 1.59 | 1.03 |
| 1:L:9:MET:SD | 1:L:56:THR:HG22 | 1.97 | 1.03 |
| 1:I:104:ARG:HG2 | 1:I:125:ILE:CD1 | 1.89 | 1.03 |
| 1:F:73:TYR:CD1 | 1:F:89:THR:HG21 | 1.93 | 1.03 |
| 1:F:9:MET:HG2 | 1:F:10:PRO:HD2 | 1.39 | 1.02 |
| 1:G:269:ARG:HG2 | 1:G:269:ARG:HH11 | 1.18 | 1.02 |
| 1:F:40:THR:HG23 | 1:F:65:LEU:HD22 | 1.40 | 1.02 |
| 1:G:355:PHE:CE2 | 1:G:365:TYR:CD2 | 2.48 | 1.02 |
| 1:E:261:THR:OG1 | 1:E:267:THR:HG22 | 1.59 | 1.02 |
| 1:F:125:ILE:HD12 | 1:F:126:PRO:HD2 | 1.42 | 1.02 |
| 1:I:355:PHE:HE2 | 1:I:362:GLU:CA | 1.70 | 1.02 |
| 1:I:355:PHE:HE2 | 1:I:362:GLU:HA | 0.90 | 1.02 |
| 1:F:155:THR:HG22 | 1:F:259:LEU:HB2 | 1.39 | 1.02 |
| 1:C:104:ARG:CG | 1:C:125:ILE:HD11 | 1.89 | 1.01 |
| 1:J:121:THR:HG21 | 1:K:182:LYS:NZ | 1.74 | 1.01 |
| 1:C:79:THR:HA | 1:C:82:LEU:HD12 | 1.04 | 1.01 |
| 1:K:261:THR:OG1 | 1:K:267:THR:HG22 | 1.60 | 1.00 |
| 1:D:261:THR:CG2 | 1:D:270:ARG:HG3 | 1.91 | 1.00 |
| 1:G:291:ILE:CG2 | 1:G:316:PHE:CD2 | 2.44 | 1.00 |
| 1:B:212:HIS:O | 1:B:213:LEU:HD12 | 1.62 | 1.00 |
| 1:A:261:THR:HB | 1:A:267:THR:HG22 | 1.44 | 0.99 |
| 1:J:365:TYR:CE2 | 1:J:369:ILE:HD11 | 1.96 | 0.99 |
| 1:F:48:VAL:HG12 | 1:F:49:TYR:CD2 | 1.97 | 0.99 |
| 1:C:79:THR:CA | 1:C:82:LEU:HD12 | 1.91 | 0.99 |
| 1:F:24:MET:SD | 1:F:44:ILE:HD12 | 2.03 | 0.99 |
| 1:K:170:ILE:O | 1:K:174:ILE:HG22 | 1.61 | 0.98 |
| 1:L:183:VAL:HG13 | 1:L:230:LEU:HD22 | 1.45 | 0.98 |
| 1:L:24:MET:SD | 1:L:44:ILE:HD13 | 2.02 | 0.98 |
| 1:D:40:THR:HG22 | 1:D:65:LEU:HD22 | 1.42 | 0.98 |
| 1:J:196:GLU:OE1 | 1:J:196:GLU:N | 1.97 | 0.98 |
| 1:H:188:SER:OG | 1:H:189:PRO:HD3 | 1.62 | 0.98 |
| 1:J:15:ARG:HA | 1:J:58:ARG:NH1 | 1.78 | 0.98 |
| 1:A:285:ILE:H | 1:A:285:ILE:HD12 | 1.25 | 0.98 |
| 1:H:212:HIS:O | 1:H:213:LEU:HD12 | 1.63 | 0.97 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:365:TYR:CZ | 1:B:369:ILE:HD11 | 2.00 | 0.97 |
| 1:E:164:THR:HG22 | 1:E:192:PHE:HZ | 1.26 | 0.97 |
| 1:E:40:THR:CG2 | 1:E:65:LEU:HD22 | 1.94 | 0.97 |
| 1:G:291:ILE:HG23 | 1:G:316:PHE:HD2 | 1.30 | 0.97 |
| 1:C:40:THR:HG22 | 1:C:65:LEU:HD22 | 1.47 | 0.97 |
| 1:F:13:PRO:HG3 | 1:F:20:PHE:CD2 | 2.00 | 0.97 |
| 1:J:272:VAL:HG13 | 1:J:284:THR:HG22 | 1.46 | 0.97 |
| 1:K:108:THR:HG21 | 1:L:222:ASN:HD21 | 1.27 | 0.97 |
| 1:L:233:VAL:HB | 1:L:257:THR:HG22 | 1.47 | 0.96 |
| 1:G:239:ALA:HA | 1:G:242:ILE:HD12 | 1.47 | 0.96 |
| 1:E:164:THR:HG22 | 1:E:192:PHE:CZ | 2.00 | 0.96 |
| 1:I:13:PRO:HB3 | 1:I:20:PHE:CE2 | 1.99 | 0.96 |
| 1:I:272:VAL:HG13 | 1:I:284:THR:HG22 | 1.46 | 0.96 |
| 1:D:264:VAL:HG11 | 1:D:340:VAL:HG11 | 1.44 | 0.96 |
| 1:J:174:ILE:HG12 | 1:J:199:THR:CG2 | 1.94 | 0.96 |
| 1:I:355:PHE:CZ | 1:I:362:GLU:HG2 | 2.00 | 0.96 |
| 1:L:112:VAL:CG2 | 1:L:117:ALA:CB | 2.43 | 0.96 |
| 1:H:14:THR:O | 1:H:15:ARG:NE | 1.97 | 0.95 |
| 1:J:352:LYS:HG3 | 1:J:365:TYR:OH | 1.65 | 0.95 |
| 1:D:40:THR:CG2 | 1:D:65:LEU:HD22 | 1.96 | 0.95 |
| 1:H:125:ILE:HD12 | 1:H:126:PRO:HD2 | 1.47 | 0.95 |
| 1:K:40:THR:CG2 | 1:K:65:LEU:HD22 | 1.95 | 0.95 |
| 1:K:135:MET:HA | 1:K:135:MET:CE | 1.96 | 0.95 |
| 1:G:40:THR:HG22 | 1:G:65:LEU:HD22 | 1.45 | 0.95 |
| 1:F:233:VAL:HB | 1:F:257:THR:HG22 | 1.49 | 0.95 |
| 1:G:363:ARG:CA | 1:G:366:LYS:HD2 | 1.97 | 0.95 |
| 1:I:24:MET:HE1 | 1:I:44:ILE:HD13 | 1.46 | 0.95 |
| 1:L:125:ILE:HD12 | 1:L:126:PRO:HD2 | 1.47 | 0.95 |
| 1:H:233:VAL:HB | 1:H:257:THR:HG22 | 1.48 | 0.94 |
| 1:I:233:VAL:HB | 1:I:257:THR:HG22 | 1.49 | 0.94 |
| 1:J:60:LEU:CD1 | 1:J:64:GLU:OE1 | 2.14 | 0.94 |
| 1:G:119:GLN:HE22 | 1:H:182:LYS:HZ1 | 1.07 | 0.94 |
| 1:G:363:ARG:HA | 1:G:366:LYS:CD | 1.98 | 0.94 |
| 1:I:154:ILE:CG2 | 1:I:162:LYS:HB3 | 1.96 | 0.94 |
| 1:C:154:ILE:CG2 | 1:C:162:LYS:HB3 | 1.97 | 0.94 |
| 1:G:216:PHE:HD2 | 1:G:233:VAL:HG12 | 1.30 | 0.94 |
| 1:I:25:LEU:HD13 | 1:I:103:TYR:CE2 | 2.02 | 0.94 |
| 1:J:233:VAL:HB | 1:J:257:THR:HG22 | 1.46 | 0.94 |
| 1:J:121:THR:CG2 | 1:K:182:LYS:HZ3 | 1.80 | 0.94 |
| 1:G:365:TYR:HA | 1:G:368:ILE:HD12 | 1.49 | 0.94 |
| 1:B:233:VAL:HB | 1:B:257:THR:HG22 | 1.47 | 0.94 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:233:VAL:HB | 1:D:257:THR:HG22 | 1.48 | 0.94 |
| 1:C:233:VAL:HB | 1:C:257:THR:HG22 | 1.50 | 0.94 |
| 1:J:9:MET:HA | 1:J:27:HIS:CD2 | 2.03 | 0.94 |
| 1:F:335:ALA:O | 1:F:339:LEU:HD23 | 1.68 | 0.93 |
| 1:D:8:LEU:HD13 | 1:D:9:MET:H | 1.18 | 0.93 |
| 1:L:24:MET:SD | 1:L:44:ILE:CD1 | 2.57 | 0.93 |
| 1:E:208:GLU:H | 1:E:212:HIS:HD2 | 1.09 | 0.93 |
| 1:K:332:VAL:O | 1:K:336:THR:HG22 | 1.69 | 0.93 |
| 1:L:40:THR:HG22 | 1:L:65:LEU:HD23 | 1.49 | 0.93 |
| 1:G:149:GLU:OE1 | 1:G:149:GLU:N | 2.01 | 0.93 |
| 1:J:262:SER:O | 1:J:266:GLU:HG3 | 1.69 | 0.93 |
| 1:K:363:ARG:CA | 1:K:366:LYS:HD3 | 1.98 | 0.93 |
| 1:F:183:VAL:HG13 | 1:F:230:LEU:HD22 | 1.49 | 0.93 |
| 1:I:287:ILE:O | 1:I:291:ILE:HG13 | 1.69 | 0.93 |
| 1:K:16:PHE:CZ | 1:K:24:MET:CE | 2.52 | 0.92 |
| 1:I:154:ILE:HG22 | 1:I:162:LYS:HB3 | 1.52 | 0.92 |
| 1:I:61:SER:HB3 | 1:I:64:GLU:HG3 | 1.51 | 0.92 |
| 1:I:108:THR:HG21 | 1:J:222:ASN:ND2 | 1.84 | 0.92 |
| 1:K:353:MET:HE3 | 1:K:353:MET:HA | 1.52 | 0.92 |
| 1:A:233:VAL:HB | 1:A:257:THR:HG22 | 1.52 | 0.92 |
| 1:B:93:PHE:CZ | 1:B:101:TYR:CD2 | 2.58 | 0.92 |
| 1:E:365:TYR:O | 1:E:368:ILE:HG22 | 1.69 | 0.92 |
| 1:I:104:ARG:HG3 | 1:I:125:ILE:CD1 | 1.99 | 0.92 |
| 1:C:261:THR:HB | 1:C:267:THR:HG22 | 1.50 | 0.92 |
| 1:A:12:GLU:OE1 | 1:A:56:THR:HG23 | 1.67 | 0.92 |
| 1:G:174:ILE:HD11 | 1:G:202:ALA:HB1 | 1.52 | 0.92 |
| 1:I:65:LEU:HA | 1:I:68:LEU:HD12 | 1.51 | 0.92 |
| 1:A:155:THR:HG21 | 1:A:267:THR:HG21 | 1.50 | 0.91 |
| 1:A:278:GLU:OE2 | 1:F:269:ARG:NH2 | 2.03 | 0.91 |
| 1:D:23:ARG:NH1 | 1:D:26:GLU:OE2 | 2.02 | 0.91 |
| 1:E:108:THR:CB | 1:F:226:ARG:NH2 | 2.33 | 0.91 |
| 1:G:291:ILE:CG1 | 1:G:316:PHE:CD2 | 2.52 | 0.91 |
| 1:K:16:PHE:CZ | 1:K:24:MET:HE3 | 2.05 | 0.91 |
| 1:D:129:PRO:O | 1:D:171:ARG:NH1 | 2.03 | 0.91 |
| 1:D:175:GLU:HA | 1:D:199:THR:CG2 | 1.99 | 0.91 |
| 1:G:155:THR:HG23 | 1:G:259:LEU:HB2 | 1.52 | 0.91 |
| 1:I:24:MET:CE | 1:I:44:ILE:CD1 | 2.47 | 0.91 |
| 1:G:111:LEU:HD12 | 1:G:112:VAL:N | 1.84 | 0.91 |
| 1:C:287:ILE:O | 1:C:291:ILE:HG13 | 1.69 | 0.91 |
| 1:L:48:VAL:HG12 | 1:L:49:TYR:CD2 | 2.05 | 0.91 |
| 1:I:40:THR:CG2 | 1:I:65:LEU:HD12 | 2.01 | 0.91 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:121:THR:CG2 | 1:K:182:LYS:NZ | 2.32 | 0.91 |
| 1:A:355:PHE:HA | 1:A:360:ILE:CG2 | 2.00 | 0.90 |
| 1:I:261:THR:HG21 | 1:I:267:THR:CA | 2.00 | 0.90 |
| 1:C:293:LEU:HD22 | 1:C:294:CYS:N | 1.86 | 0.90 |
| 1:B:247:GLU:O | 1:B:251:THR:HG23 | 1.72 | 0.90 |
| 1:E:108:THR:CG2 | 1:F:226:ARG:NH2 | 2.35 | 0.90 |
| 1:B:119:GLN:NE2 | 1:C:226:ARG:HH21 | 1.69 | 0.90 |
| 1:A:94:ARG:HE | 1:A:100:ARG:HG2 | 1.36 | 0.90 |
| 1:G:291:ILE:HD13 | 1:G:316:PHE:HE2 | 1.27 | 0.90 |
| 1:L:222:ASN:HA | 1:L:225:ARG:HH21 | 1.37 | 0.90 |
| 1:A:40:THR:HG22 | 1:A:65:LEU:HD22 | 1.52 | 0.90 |
| 1:G:216:PHE:HD2 | 1:G:233:VAL:CG1 | 1.84 | 0.89 |
| 1:K:135:MET:HE3 | 1:K:135:MET:HA | 1.52 | 0.89 |
| 1:H:272:VAL:HG13 | 1:H:284:THR:HG22 | 1.54 | 0.89 |
| 1:I:184:LEU:HD12 | 1:I:228:PRO:HG3 | 1.51 | 0.89 |
| 1:J:9:MET:HE1 | 1:J:24:MET:CA | 2.02 | 0.89 |
| 1:H:188:SER:O | 1:H:208:GLU:HG3 | 1.72 | 0.89 |
| 1:B:337:ARG:O | 1:B:340:VAL:HG22 | 1.72 | 0.89 |
| 1:D:353:MET:O | 1:D:357:GLN:HG2 | 1.71 | 0.89 |
| 1:G:291:ILE:HG21 | 1:G:316:PHE:CD2 | 2.06 | 0.89 |
| 1:G:17:THR:HG23 | 1:G:18:PRO:HD2 | 1.55 | 0.89 |
| 1:H:280:ARG:O | 1:H:284:THR:HG23 | 1.72 | 0.88 |
| 1:G:69:ILE:HD11 | 1:G:120:ILE:CG1 | 2.03 | 0.88 |
| 1:L:40:THR:CG2 | 1:L:65:LEU:HD23 | 2.02 | 0.88 |
| 1:D:236:CYS:SG | 1:D:259:LEU:CD2 | 2.60 | 0.88 |
| 1:E:35:ASP:OD2 | 1:F:227:LYS:HD2 | 1.73 | 0.88 |
| 1:H:48:VAL:HG21 | 1:H:53:LEU:CD1 | 2.02 | 0.88 |
| 1:I:266:GLU:OE1 | 1:I:266:GLU:N | 2.06 | 0.88 |
| 1:G:230:LEU:HD13 | 1:G:231:ILE:N | 1.89 | 0.88 |
| 1:J:94:ARG:CB | 1:J:100:ARG:HD2 | 2.04 | 0.88 |
| 1:L:156:GLY:HA2 | 1:L:296:TRP:CZ3 | 2.08 | 0.88 |
| 1:E:21:MET:HE2 | 1:E:68:LEU:HG | 1.55 | 0.88 |
| 1:I:175:GLU:O | 1:I:200:ILE:HD11 | 1.74 | 0.88 |
| 1:G:238:ASP:OD1 | 1:G:239:ALA:N | 2.06 | 0.88 |
| 1:J:81:LEU:HD21 | 1:J:87:ILE:HD12 | 1.56 | 0.88 |
| 1:H:238:ASP:HB3 | 1:H:240:GLU:OE1 | 1.74 | 0.87 |
| 1:A:285:ILE:HG23 | 1:A:325:LEU:HD11 | 1.56 | 0.87 |
| 1:H:188:SER:HB3 | 1:H:189:PRO:CD | 2.05 | 0.87 |
| 1:H:188:SER:CB | 1:H:189:PRO:CD | 2.52 | 0.87 |
| 1:C:208:GLU:H | 1:C:212:HIS:HD2 | 1.23 | 0.87 |
| 1:F:21:MET:O | 1:F:25:LEU:HG | 1.73 | 0.87 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:17:THR:HG23 | 1:A:18:PRO:HD2 | 1.55 | 0.87 |
| 1:B:151:ILE:HG13 | 1:B:290:THR:HG22 | 1.56 | 0.87 |
| 1:G:365:TYR:CA | 1:G:368:ILE:HD12 | 2.05 | 0.87 |
| 1:K:288:LEU:CD1 | 1:K:325:LEU:HD23 | 2.03 | 0.87 |
| 1:C:40:THR:CG2 | 1:C:65:LEU:HD22 | 2.04 | 0.87 |
| 1:F:17:THR:HG23 | 1:F:18:PRO:HD2 | 1.57 | 0.87 |
| 1:A:365:TYR:CZ | 1:A:369:ILE:HD11 | 2.10 | 0.86 |
| 1:C:355:PHE:HE1 | 1:C:362:GLU:HG2 | 1.40 | 0.86 |
| 1:I:329:PRO:HA | 1:I:332:VAL:HG23 | 1.54 | 0.86 |
| 1:A:94:ARG:HH21 | 1:A:100:ARG:HG3 | 1.38 | 0.86 |
| 1:D:102:ARG:NH2 | 1:D:127:THR:HG22 | 1.88 | 0.86 |
| 1:E:35:ASP:CG | 1:F:227:LYS:HD2 | 1.96 | 0.86 |
| 1:I:175:GLU:O | 1:I:200:ILE:CD1 | 2.23 | 0.86 |
| 1:K:16:PHE:HZ | 1:K:24:MET:CE | 1.87 | 0.86 |
| 1:H:171:ARG:HG3 | 1:H:197:ILE:HD13 | 1.56 | 0.86 |
| 1:G:230:LEU:HD21 | 1:G:256:TYR:CE1 | 2.09 | 0.86 |
| 1:H:73:TYR:OH | 1:H:210:PRO:HB2 | 1.76 | 0.86 |
| 1:D:258:THR:O | 1:D:259:LEU:HD23 | 1.76 | 0.86 |
| 1:G:40:THR:CG2 | 1:G:65:LEU:HD22 | 2.05 | 0.85 |
| 1:I:24:MET:HE2 | 1:I:44:ILE:HD12 | 1.56 | 0.85 |
| 1:J:125:ILE:CD1 | 1:J:126:PRO:HD2 | 2.06 | 0.85 |
| 1:A:355:PHE:CA | 1:A:360:ILE:HG22 | 2.06 | 0.85 |
| 1:C:154:ILE:HG22 | 1:C:162:LYS:HB3 | 1.55 | 0.85 |
| 1:I:235:GLU:OE1 | 1:I:260:HIS:NE2 | 2.09 | 0.85 |
| 1:K:173:LEU:HD22 | 1:K:181:ARG:CZ | 2.06 | 0.85 |
| 1:E:365:TYR:CE2 | 1:E:369:ILE:HD11 | 2.12 | 0.85 |
| 1:D:208:GLU:H | 1:D:212:HIS:HD2 | 1.21 | 0.85 |
| 1:K:137:LEU:HG | 1:K:141:ILE:HD11 | 1.59 | 0.85 |
| 1:E:95:PRO:HG2 | 1:E:96:ASN:H | 1.40 | 0.85 |
| 1:J:183:VAL:HG13 | 1:J:230:LEU:HD22 | 1.55 | 0.85 |
| 1:K:90:HIS:NE2 | 1:K:104:ARG:HG3 | 1.92 | 0.85 |
| 1:F:9:MET:CG | 1:F:10:PRO:HD2 | 2.05 | 0.85 |
| 1:B:374:GLU:CB | 1:C:281:LEU:HD22 | 2.06 | 0.85 |
| 1:G:216:PHE:CD2 | 1:G:233:VAL:HG12 | 2.11 | 0.84 |
| 1:J:102:ARG:NH1 | 1:J:127:THR:HG22 | 1.92 | 0.84 |
| 1:A:243:SER:OG | 1:A:283:ARG:NH2 | 2.10 | 0.84 |
| 1:E:29:GLU:HG2 | 1:E:101:TYR:HE2 | 1.35 | 0.84 |
| 1:A:208:GLU:H | 1:A:212:HIS:HD2 | 1.22 | 0.84 |
| 1:J:8:LEU:O | 1:J:27:HIS:NE2 | 2.11 | 0.84 |
| 1:A:94:ARG:HH12 | 1:A:97:ARG:HD2 | 1.41 | 0.84 |
| 1:F:40:THR:CG2 | 1:F:65:LEU:HD22 | 2.06 | 0.84 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:24:MET:SD | 1:I:25:LEU:HD23 | 2.18 | 0.84 |
| 1:J:92:GLU:HG3 | 1:J:102:ARG:HG2 | 1.59 | 0.84 |
| 1:J:102:ARG:CZ | 1:J:193:VAL:HG21 | 2.07 | 0.84 |
| 1:G:288:LEU:O | 1:G:291:ILE:HG22 | 1.77 | 0.83 |
| 1:J:81:LEU:HD21 | 1:J:87:ILE:CD1 | 2.07 | 0.83 |
| 1:K:108:THR:HG21 | 1:L:222:ASN:ND2 | 1.93 | 0.83 |
| 1:F:132:LEU:HD13 | 1:F:169:ILE:HD13 | 1.60 | 0.83 |
| 1:G:180:ASN:HA | 1:G:201:SER:O | 1.79 | 0.83 |
| 1:I:104:ARG:HG3 | 1:I:125:ILE:HD11 | 1.60 | 0.83 |
| 1:A:229:ARG:NH1 | 1:A:252:GLY:O | 2.10 | 0.83 |
| 1:G:278:GLU:CD | 1:L:337:ARG:NH1 | 2.31 | 0.83 |
| 1:H:171:ARG:HG3 | 1:H:197:ILE:CD1 | 2.08 | 0.83 |
| 1:J:12:GLU:OE2 | 1:J:57:ASN:N | 2.12 | 0.83 |
| 1:L:17:THR:HG23 | 1:L:18:PRO:HD2 | 1.58 | 0.83 |
| 1:H:188:SER:HB3 | 1:H:189:PRO:HD2 | 1.61 | 0.83 |
| 1:I:38:ILE:HG22 | 1:I:65:LEU:HD21 | 1.60 | 0.83 |
| 1:L:9:MET:HE1 | 1:L:24:MET:HB2 | 1.61 | 0.83 |
| 1:K:171:ARG:HA | 1:K:174:ILE:CG2 | 2.08 | 0.83 |
| 1:A:40:THR:CG2 | 1:A:65:LEU:HD22 | 2.07 | 0.83 |
| 1:D:174:ILE:HG12 | 1:D:199:THR:HG21 | 1.58 | 0.83 |
| 1:G:69:ILE:CD1 | 1:G:120:ILE:HD13 | 2.08 | 0.83 |
| 1:J:39:GLN:HE21 | 1:J:119:GLN:HG3 | 1.44 | 0.83 |
| 1:B:46:ALA:HB2 | 1:B:55:ILE:HD11 | 1.61 | 0.83 |
| 1:D:272:VAL:HG13 | 1:D:284:THR:HG22 | 1.61 | 0.83 |
| 1:I:25:LEU:CD1 | 1:I:103:TYR:CE2 | 2.61 | 0.83 |
| 1:L:190:ILE:HG12 | 1:L:208:GLU:CG | 2.07 | 0.83 |
| 1:L:13:PRO:HB3 | 1:L:20:PHE:CE2 | 2.13 | 0.82 |
| 1:C:79:THR:HA | 1:C:82:LEU:CD1 | 2.00 | 0.82 |
| 1:H:208:GLU:H | 1:H:212:HIS:HD2 | 1.26 | 0.82 |
| 1:G:154:ILE:CD1 | 1:G:295:ILE:HD12 | 2.09 | 0.82 |
| 1:G:233:VAL:HB | 1:G:257:THR:CG2 | 2.09 | 0.82 |
| 1:I:47:GLU:HA | 1:I:52:LEU:HD23 | 1.59 | 0.82 |
| 1:J:10:PRO:HD3 | 1:J:27:HIS:HD2 | 1.44 | 0.82 |
| 1:G:352:LYS:HG3 | 1:G:365:TYR:CE2 | 2.14 | 0.82 |
| 1:B:104:ARG:HD3 | 1:B:191:GLU:OE1 | 1.80 | 0.82 |
| 1:C:276:SER:O | 1:C:280:ARG:HB2 | 1.80 | 0.82 |
| 1:F:222:ASN:HA | 1:F:225:ARG:NH2 | 1.95 | 0.82 |
| 1:G:365:TYR:HA | 1:G:368:ILE:CD1 | 2.09 | 0.82 |
| 1:J:13:PRO:HB3 | 1:J:20:PHE:CE1 | 2.15 | 0.82 |
| 1:L:156:GLY:HA2 | 1:L:296:TRP:HZ3 | 1.44 | 0.82 |
| 1:G:318:GLU:HG3 | 1:L:363:ARG:CZ | 2.10 | 0.81 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:317:ASP:HB3 | 1:J:320:VAL:HG23 | 1.60 | 0.81 |
| 1:K:194:TYR:O | 1:K:197:ILE:HG22 | 1.80 | 0.81 |
| 1:K:108:THR:CG2 | 1:L:222:ASN:HD21 | 1.93 | 0.81 |
| 1:K:276:SER:HA | 1:K:280:ARG:HD2 | 1.60 | 0.81 |
| 1:C:328:ASP:HB3 | 1:C:331:GLU:HG3 | 1.60 | 0.81 |
| 1:F:174:ILE:CG2 | 1:F:199:THR:HG21 | 2.10 | 0.81 |
| 1:F:293:LEU:HD13 | 1:F:315:VAL:HG22 | 1.63 | 0.81 |
| 1:F:44:ILE:HG13 | 1:F:56:THR:HG21 | 1.60 | 0.81 |
| 1:F:78:THR:O | 1:F:82:LEU:HD12 | 1.81 | 0.81 |
| 1:F:8:LEU:O | 1:F:27:HIS:HE1 | 1.64 | 0.81 |
| 1:I:49:TYR:O | 1:I:307:ARG:HD2 | 1.80 | 0.81 |
| 1:E:108:THR:HG21 | 1:F:226:ARG:HH22 | 1.45 | 0.81 |
| 1:K:230:LEU:HD23 | 1:K:231:ILE:N | 1.95 | 0.81 |
| 1:B:249:ALA:HB1 | 1:B:290:THR:HG23 | 1.60 | 0.81 |
| 1:E:170:ILE:O | 1:E:174:ILE:HG22 | 1.79 | 0.81 |
| 1:J:104:ARG:CZ | 1:J:123:ARG:HH11 | 1.93 | 0.81 |
| 1:G:173:LEU:HG | 1:G:181:ARG:NH1 | 1.95 | 0.81 |
| 1:L:132:LEU:HD13 | 1:L:169:ILE:HD13 | 1.61 | 0.81 |
| 1:J:352:LYS:HG3 | 1:J:365:TYR:CZ | 2.14 | 0.81 |
| 1:L:89:THR:HG22 | 1:L:90:HIS:H | 1.44 | 0.81 |
| 1:K:361:SER:HB2 | 1:K:364:VAL:HG23 | 1.61 | 0.81 |
| 1:G:312:GLU:HB2 | 1:G:347:MET:HB2 | 1.63 | 0.81 |
| 1:E:233:VAL:HB | 1:E:257:THR:HG22 | 1.62 | 0.80 |
| 1:G:9:MET:CE | 1:G:24:MET:HA | 2.11 | 0.80 |
| 1:F:132:LEU:CD1 | 1:F:169:ILE:HD13 | 2.11 | 0.80 |
| 1:A:188:SER:O | 1:A:208:GLU:HG3 | 1.80 | 0.80 |
| 1:G:342:GLN:HG2 | 1:G:343:LYS:HG2 | 1.63 | 0.80 |
| 1:I:263:GLY:O | 1:I:267:THR:HG23 | 1.81 | 0.80 |
| 1:A:12:GLU:CD | 1:A:56:THR:HG23 | 2.01 | 0.80 |
| 1:H:92:GLU:OE1 | 1:H:100:ARG:HD2 | 1.80 | 0.80 |
| 1:L:222:ASN:HA | 1:L:225:ARG:NH2 | 1.95 | 0.80 |
| 1:H:283:ARG:O | 1:H:287:ILE:HG13 | 1.82 | 0.80 |
| 1:J:9:MET:CG | 1:J:10:PRO:HD2 | 2.11 | 0.80 |
| 1:A:119:GLN:HE22 | 1:B:182:LYS:HE2 | 1.46 | 0.80 |
| 1:E:208:GLU:H | 1:E:212:HIS:CD2 | 1.99 | 0.80 |
| 1:H:172:GLU:O | 1:H:176:THR:HG23 | 1.80 | 0.80 |
| 1:L:149:GLU:HG2 | 1:L:150:GLY:N | 1.97 | 0.80 |
| 1:K:233:VAL:HB | 1:K:257:THR:HG22 | 1.63 | 0.80 |
| 1:A:365:TYR:CE2 | 1:A:369:ILE:HD11 | 2.17 | 0.80 |
| 1:G:69:ILE:HD11 | 1:G:120:ILE:HG12 | 1.64 | 0.80 |
| 1:C:361:SER:HB3 | 1:C:364:VAL:HG23 | 1.65 | 0.79 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:162:LYS:HD3 | 1:E:258:THR:CB | 2.11 | 0.79 |
| 1:F:209:ILE:HG22 | 1:F:210:PRO:HD3 | 1.63 | 0.79 |
| 1:L:337:ARG:O | 1:L:340:VAL:HG22 | 1.81 | 0.79 |
| 1:L:9:MET:CE | 1:L:24:MET:HB2 | 2.11 | 0.79 |
| 1:E:355:PHE:HB2 | 1:E:360:ILE:HD11 | 1.63 | 0.79 |
| 1:J:45:PHE:HD2 | 1:J:52:LEU:HG | 1.45 | 0.79 |
| 1:E:316:PHE:HA | 1:E:320:VAL:HG21 | 1.62 | 0.79 |
| 1:I:61:SER:HB3 | 1:I:64:GLU:CG | 2.13 | 0.79 |
| 1:K:137:LEU:HD11 | 1:K:311:ARG:CZ | 2.12 | 0.79 |
| 1:E:219:GLY:O | 1:E:222:ASN:HB3 | 1.83 | 0.79 |
| 1:K:286:ASP:O | 1:K:290:THR:OG1 | 2.00 | 0.79 |
| 1:L:25:LEU:HD13 | 1:L:93:PHE:CE2 | 2.16 | 0.79 |
| 1:E:164:THR:CG2 | 1:E:192:PHE:HZ | 1.96 | 0.79 |
| 1:G:111:LEU:HD11 | 1:G:113:GLU:O | 1.83 | 0.79 |
| 1:I:279:GLU:HG2 | 1:I:283:ARG:HG2 | 1.64 | 0.79 |
| 1:A:238:ASP:OD1 | 1:A:239:ALA:N | 2.15 | 0.79 |
| 1:G:355:PHE:CE2 | 1:G:365:TYR:CG | 2.71 | 0.79 |
| 1:J:199:THR:CG2 | 1:J:202:ALA:HB3 | 2.13 | 0.79 |
| 1:K:12:GLU:OE2 | 1:K:57:ASN:N | 2.16 | 0.79 |
| 1:L:365:TYR:CE2 | 1:L:369:ILE:HD11 | 2.18 | 0.79 |
| 1:A:89:THR:HG22 | 1:A:90:HIS:H | 1.47 | 0.79 |
| 1:J:52:LEU:N | 1:K:180:ASN:OD1 | 2.15 | 0.79 |
| 1:C:77:ALA:O | 1:C:81:LEU:HD13 | 1.82 | 0.79 |
| 1:J:10:PRO:HD3 | 1:J:27:HIS:CD2 | 2.18 | 0.79 |
| 1:G:318:GLU:HG3 | 1:L:363:ARG:NH2 | 1.98 | 0.79 |
| 1:F:149:GLU:HG2 | 1:F:150:GLY:N | 1.96 | 0.78 |
| 1:D:183:VAL:HG13 | 1:D:230:LEU:HD22 | 1.65 | 0.78 |
| 1:I:166:LEU:HD23 | 1:I:169:ILE:HD12 | 1.65 | 0.78 |
| 1:C:174:ILE:HD11 | 1:C:199:THR:HG21 | 1.66 | 0.78 |
| 1:D:264:VAL:CG1 | 1:D:340:VAL:HG11 | 2.12 | 0.78 |
| 1:F:320:VAL:HA | 1:F:323:ILE:HD12 | 1.65 | 0.78 |
| 1:G:188:SER:OG | 1:G:189:PRO:HD3 | 1.83 | 0.78 |
| 1:G:235:GLU:HA | 1:G:258:THR:O | 1.83 | 0.78 |
| 1:I:171:ARG:O | 1:I:174:ILE:HG22 | 1.83 | 0.78 |
| 1:I:160:SER:HA | 1:I:299:LEU:HG | 1.64 | 0.78 |
| 1:G:80:GLN:O | 1:G:83:SER:OG | 2.02 | 0.78 |
| 1:H:317:ASP:HB2 | 1:H:320:VAL:HG23 | 1.66 | 0.78 |
| 1:F:296:TRP:HE1 | 1:F:347:MET:HE2 | 1.46 | 0.78 |
| 1:G:69:ILE:HG12 | 1:G:120:ILE:HD11 | 1.66 | 0.78 |
| 1:J:99:VAL:O | 1:J:100:ARG:HD3 | 1.82 | 0.78 |
| 1:B:208:GLU:H | 1:B:212:HIS:HD2 | 1.29 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:94:ARG:NH1 | 1:A:97:ARG:HA | 1.99 | 0.78 |
| 1:D:72:ILE:HD11 | 1:D:105:VAL:HG21 | 1.63 | 0.78 |
| 1:J:9:MET:HG3 | 1:J:10:PRO:HD2 | 1.64 | 0.78 |
| 1:K:219:GLY:O | 1:K:222:ASN:HB3 | 1.83 | 0.78 |
| 1:L:280:ARG:O | 1:L:284:THR:OG1 | 2.01 | 0.78 |
| 1:C:17:THR:HG23 | 1:C:18:PRO:HD2 | 1.66 | 0.78 |
| 1:I:35:ASP:OD2 | 1:I:123:ARG:HG3 | 1.84 | 0.78 |
| 1:J:337:ARG:O | 1:J:340:VAL:HG22 | 1.83 | 0.78 |
| 1:K:111:LEU:CD2 | 1:L:90:HIS:NE2 | 2.47 | 0.78 |
| 1:A:355:PHE:CA | 1:A:360:ILE:CG2 | 2.62 | 0.78 |
| 1:F:9:MET:HG2 | 1:F:10:PRO:CD | 2.14 | 0.77 |
| 1:B:365:TYR:OH | 1:B:369:ILE:HD11 | 1.84 | 0.77 |
| 1:D:104:ARG:CZ | 1:D:123:ARG:HH11 | 1.97 | 0.77 |
| 1:J:89:THR:HA | 1:J:208:GLU:OE1 | 1.84 | 0.77 |
| 1:K:137:LEU:HD11 | 1:K:311:ARG:NE | 2.00 | 0.77 |
| 1:C:80:GLN:O | 1:C:83:SER:HB3 | 1.83 | 0.77 |
| 1:H:186:TYR:OH | 1:H:223:ALA:HB2 | 1.84 | 0.77 |
| 1:E:353:MET:HE3 | 1:E:353:MET:HA | 1.65 | 0.77 |
| 1:J:92:GLU:OE2 | 1:J:102:ARG:NE | 2.16 | 0.77 |
| 1:J:199:THR:HG23 | 1:J:202:ALA:HB3 | 1.65 | 0.77 |
| 1:K:208:GLU:H | 1:K:212:HIS:HD2 | 1.31 | 0.77 |
| 1:K:321:ARG:O | 1:K:325:LEU:HG | 1.84 | 0.77 |
| 1:B:90:HIS:NE2 | 1:B:92:GLU:HG3 | 2.00 | 0.77 |
| 1:C:22:ASP:OD2 | 1:C:93:PHE:CD2 | 2.37 | 0.77 |
| 1:G:233:VAL:HB | 1:G:257:THR:HG22 | 1.65 | 0.77 |
| 1:D:200:ILE:HD12 | 1:D:200:ILE:O | 1.85 | 0.77 |
| 1:F:190:ILE:CG1 | 1:F:208:GLU:HG3 | 2.11 | 0.77 |
| 1:G:345:GLN:HG3 | 1:G:349:TRP:CE3 | 2.20 | 0.77 |
| 1:B:186:TYR:OH | 1:B:223:ALA:HB2 | 1.84 | 0.77 |
| 1:J:129:PRO:HG3 | 1:J:167:ALA:HB1 | 1.67 | 0.77 |
| 1:L:9:MET:HG3 | 1:L:55:ILE:O | 1.84 | 0.77 |
| 1:J:13:PRO:HG3 | 1:J:20:PHE:CD1 | 2.20 | 0.77 |
| 1:F:209:ILE:HD11 | 1:F:215:ASN:C | 2.05 | 0.77 |
| 1:J:209:ILE:HG22 | 1:J:210:PRO:HD3 | 1.68 | 0.76 |
| 1:K:8:LEU:N | 1:K:8:LEU:HD23 | 2.00 | 0.76 |
| 1:C:366:LYS:O | 1:C:369:ILE:HG22 | 1.84 | 0.76 |
| 1:H:320:VAL:HG13 | 1:H:339:LEU:HD13 | 1.68 | 0.76 |
| 1:I:258:THR:O | 1:I:259:LEU:HD12 | 1.85 | 0.76 |
| 1:I:52:LEU:O | 1:I:53:LEU:HD23 | 1.85 | 0.76 |
| 1:L:194:TYR:HA | 1:L:197:ILE:HD13 | 1.67 | 0.76 |
| 1:I:173:LEU:O | 1:I:181:ARG:NH2 | 2.18 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:258:THR:O | 1:G:259:LEU:HD23 | 1.85 | 0.76 |
| 1:G:332:VAL:HG23 | 1:G:333:THR:H | 1.49 | 0.76 |
| 1:F:195:ASP:O | 1:F:198:GLU:OE2 | 2.03 | 0.76 |
| 1:K:269:ARG:HB2 | 1:K:333:THR:CG2 | 2.16 | 0.76 |
| 1:E:17:THR:CG2 | 1:E:18:PRO:HD2 | 2.15 | 0.76 |
| 1:H:65:LEU:CD1 | 1:H:120:ILE:HD12 | 2.15 | 0.76 |
| 1:I:13:PRO:HG3 | 1:I:20:PHE:CD2 | 2.21 | 0.76 |
| 1:K:137:LEU:CG | 1:K:141:ILE:HD11 | 2.16 | 0.76 |
| 1:I:17:THR:HG23 | 1:I:18:PRO:HD2 | 1.68 | 0.76 |
| 1:C:166:LEU:HD13 | 1:C:232:MET:HE2 | 1.67 | 0.75 |
| 1:C:293:LEU:HD22 | 1:C:294:CYS:H | 1.51 | 0.75 |
| 1:G:180:ASN:HB3 | 1:L:52:LEU:CB | 2.15 | 0.75 |
| 1:I:149:GLU:O | 1:I:292:ARG:HD2 | 1.86 | 0.75 |
| 1:A:92:GLU:CG | 1:A:102:ARG:HG2 | 2.16 | 0.75 |
| 1:B:125:ILE:HD12 | 1:B:126:PRO:HD2 | 1.69 | 0.75 |
| 1:J:92:GLU:OE2 | 1:J:102:ARG:CZ | 2.34 | 0.75 |
| 1:L:190:ILE:HG12 | 1:L:208:GLU:HG2 | 1.66 | 0.75 |
| 1:C:132:LEU:HB2 | 1:C:172:GLU:HG3 | 1.68 | 0.75 |
| 1:F:261:THR:HG22 | 1:F:270:ARG:HE | 1.49 | 0.75 |
| 1:F:183:VAL:HG13 | 1:F:230:LEU:CD2 | 2.16 | 0.75 |
| 1:J:125:ILE:HD12 | 1:J:126:PRO:HD2 | 1.66 | 0.75 |
| 1:F:197:ILE:HD12 | 1:F:197:ILE:O | 1.85 | 0.75 |
| 1:I:209:ILE:O | 1:I:213:LEU:O | 2.04 | 0.75 |
| 1:F:296:TRP:HE1 | 1:F:347:MET:CE | 2.00 | 0.75 |
| 1:H:18:PRO:O | 1:H:21:MET:HB3 | 1.87 | 0.75 |
| 1:J:219:GLY:O | 1:J:222:ASN:HB3 | 1.87 | 0.75 |
| 1:L:333:THR:O | 1:L:336:THR:OG1 | 2.02 | 0.75 |
| 1:C:88:ASP:OD1 | 1:C:106:ASN:ND2 | 2.19 | 0.75 |
| 1:D:38:ILE:HB | 1:D:120:ILE:HG23 | 1.68 | 0.75 |
| 1:F:125:ILE:HD12 | 1:F:126:PRO:CD | 2.17 | 0.75 |
| 1:G:174:ILE:CD1 | 1:G:202:ALA:HB1 | 2.15 | 0.75 |
| 1:G:302:THR:OG1 | 1:G:306:ARG:O | 2.05 | 0.75 |
| 1:I:80:GLN:O | 1:I:83:SER:HB3 | 1.87 | 0.75 |
| 1:J:10:PRO:CD | 1:J:27:HIS:HD2 | 1.99 | 0.75 |
| 1:L:293:LEU:HD13 | 1:L:315:VAL:HG22 | 1.67 | 0.75 |
| 1:H:209:ILE:O | 1:H:213:LEU:O | 2.03 | 0.75 |
| 1:L:183:VAL:HG13 | 1:L:230:LEU:CD2 | 2.17 | 0.75 |
| 1:L:190:ILE:N | 1:L:208:GLU:OE2 | 2.20 | 0.75 |
| 1:L:296:TRP:NE1 | 1:L:347:MET:HE2 | 2.02 | 0.75 |
| 1:F:9:MET:HA | 1:F:27:HIS:ND1 | 2.01 | 0.75 |
| 1:H:68:LEU:HD23 | 1:H:68:LEU:N | 2.01 | 0.75 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:40:THR:HG21 | 1:L:62:ASN:OD1 | 1.87 | 0.75 |
| 1:B:100:ARG:HE | 1:B:102:ARG:HH12 | 1.33 | 0.74 |
| 1:C:154:ILE:HG21 | 1:C:162:LYS:HB3 | 1.69 | 0.74 |
| 1:D:171:ARG:HG3 | 1:D:197:ILE:HD13 | 1.69 | 0.74 |
| 1:K:13:PRO:HB2 | 1:K:15:ARG:O | 1.87 | 0.74 |
| 1:E:108:THR:CB | 1:F:226:ARG:HH21 | 1.99 | 0.74 |
| 1:J:175:GLU:HG3 | 1:J:197:ILE:CG2 | 2.16 | 0.74 |
| 1:D:61:SER:OG | 1:D:64:GLU:OE2 | 2.04 | 0.74 |
| 1:F:296:TRP:NE1 | 1:F:347:MET:CE | 2.50 | 0.74 |
| 1:J:72:ILE:HD11 | 1:J:105:VAL:HG21 | 1.69 | 0.74 |
| 1:L:154:ILE:HG22 | 1:L:162:LYS:HG2 | 1.69 | 0.74 |
| 1:L:155:THR:OG1 | 1:L:261:THR:O | 2.05 | 0.74 |
| 1:K:111:LEU:HD21 | 1:L:90:HIS:NE2 | 2.03 | 0.74 |
| 1:C:17:THR:CG2 | 1:C:18:PRO:HD2 | 2.17 | 0.74 |
| 1:C:155:THR:HG21 | 1:C:267:THR:HG21 | 1.70 | 0.74 |
| 1:G:17:THR:CG2 | 1:G:18:PRO:HD2 | 2.18 | 0.74 |
| 1:E:183:VAL:HG13 | 1:E:230:LEU:HD22 | 1.70 | 0.74 |
| 1:F:297:GLN:HB2 | 1:F:311:ARG:HG2 | 1.67 | 0.74 |
| 1:H:119:GLN:OE1 | 1:I:205:SER:HB2 | 1.87 | 0.74 |
| 1:G:279:GLU:OE1 | 1:G:279:GLU:HA | 1.86 | 0.74 |
| 1:H:328:ASP:OD1 | 1:H:330:ASN:N | 2.19 | 0.74 |
| 1:G:135:MET:HA | 1:G:135:MET:HE2 | 1.69 | 0.74 |
| 1:I:132:LEU:HB2 | 1:I:172:GLU:HG3 | 1.70 | 0.74 |
| 1:I:43:PRO:HD3 | 1:I:59:ARG:HG2 | 1.69 | 0.74 |
| 1:J:65:LEU:HD23 | 1:J:118:ILE:O | 1.87 | 0.74 |
| 1:J:102:ARG:NH2 | 1:J:193:VAL:HG21 | 2.03 | 0.74 |
| 1:J:145:ILE:CD1 | 1:J:293:LEU:CD2 | 2.66 | 0.74 |
| 1:F:174:ILE:HG22 | 1:F:199:THR:CG2 | 2.16 | 0.74 |
| 1:K:25:LEU:HD13 | 1:K:93:PHE:CE2 | 2.23 | 0.74 |
| 1:B:102:ARG:HE | 1:B:127:THR:HG22 | 1.53 | 0.73 |
| 1:E:108:THR:HG21 | 1:F:226:ARG:HH21 | 1.53 | 0.73 |
| 1:G:365:TYR:O | 1:G:369:ILE:HG13 | 1.87 | 0.73 |
| 1:E:89:THR:HG23 | 1:E:105:VAL:CG1 | 2.18 | 0.73 |
| 1:F:156:GLY:HA2 | 1:F:296:TRP:CZ3 | 2.23 | 0.73 |
| 1:J:99:VAL:C | 1:J:100:ARG:HD3 | 2.09 | 0.73 |
| 1:L:25:LEU:HD13 | 1:L:93:PHE:HE2 | 1.51 | 0.73 |
| 1:A:49:TYR:CZ | 1:A:306:ARG:HG3 | 2.22 | 0.73 |
| 1:D:366:LYS:O | 1:D:369:ILE:HG23 | 1.88 | 0.73 |
| 1:E:328:ASP:N | 1:E:331:GLU:OE2 | 2.21 | 0.73 |
| 1:E:8:LEU:HD12 | 1:E:31:LEU:HD11 | 1.68 | 0.73 |
| 1:G:102:ARG:NH2 | 1:G:125:ILE:HG21 | 2.02 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:9:MET:CE | 1:J:24:MET:CB | 2.66 | 0.73 |
| 1:H:212:HIS:C | 1:H:213:LEU:HD12 | 2.08 | 0.73 |
| 1:I:110:CYS:O | 1:J:212:HIS:HE1 | 1.72 | 0.73 |
| 1:J:102:ARG:HE | 1:J:193:VAL:HG11 | 1.54 | 0.73 |
| 1:J:352:LYS:HA | 1:J:365:TYR:CE1 | 2.23 | 0.73 |
| 1:K:9:MET:SD | 1:K:10:PRO:HD2 | 2.28 | 0.73 |
| 1:E:21:MET:CE | 1:E:68:LEU:HG | 2.18 | 0.73 |
| 1:A:203:VAL:HG13 | 1:F:42:GLU:OE1 | 1.87 | 0.73 |
| 1:G:235:GLU:CA | 1:G:258:THR:OG1 | 2.36 | 0.73 |
| 1:I:104:ARG:HG3 | 1:I:125:ILE:HD13 | 1.68 | 0.73 |
| 1:G:278:GLU:OE1 | 1:L:337:ARG:NH1 | 2.22 | 0.73 |
| 1:B:100:ARG:NE | 1:B:102:ARG:HH12 | 1.86 | 0.73 |
| 1:E:17:THR:HG23 | 1:E:18:PRO:HD2 | 1.71 | 0.73 |
| 1:G:183:VAL:HG22 | 1:G:230:LEU:HB3 | 1.69 | 0.73 |
| 1:K:68:LEU:O | 1:K:71:SER:OG | 2.05 | 0.73 |
| 1:L:188:SER:HA | 1:L:209:ILE:HG22 | 1.71 | 0.73 |
| 1:C:329:PRO:HA | 1:C:332:VAL:HG23 | 1.70 | 0.72 |
| 1:G:89:THR:HG22 | 1:G:90:HIS:N | 2.04 | 0.72 |
| 1:I:276:SER:O | 1:I:280:ARG:HB2 | 1.88 | 0.72 |
| 1:E:354:LYS:HE2 | 1:E:354:LYS:HA | 1.69 | 0.72 |
| 1:I:365:TYR:O | 1:I:368:ILE:HG13 | 1.89 | 0.72 |
| 1:L:61:SER:OG | 1:L:64:GLU:HG3 | 1.89 | 0.72 |
| 1:D:174:ILE:C | 1:D:199:THR:HG21 | 2.10 | 0.72 |
| 1:G:235:GLU:N | 1:G:258:THR:OG1 | 2.21 | 0.72 |
| 1:G:89:THR:HG22 | 1:G:90:HIS:H | 1.53 | 0.72 |
| 1:I:353:MET:HG2 | 1:I:357:GLN:HE22 | 1.54 | 0.72 |
| 1:K:171:ARG:HA | 1:K:174:ILE:HG21 | 1.70 | 0.72 |
| 1:K:17:THR:HG23 | 1:K:18:PRO:HD2 | 1.71 | 0.72 |
| 1:K:275:PHE:O | 1:K:280:ARG:HD2 | 1.90 | 0.72 |
| 1:A:34:SER:O | 1:A:124:THR:HG23 | 1.88 | 0.72 |
| 1:G:364:VAL:C | 1:G:368:ILE:HD12 | 2.09 | 0.72 |
| 1:K:362:GLU:O | 1:K:366:LYS:HG3 | 1.90 | 0.72 |
| 1:D:366:LYS:HA | 1:D:369:ILE:CG2 | 2.20 | 0.72 |
| 1:F:188:SER:O | 1:F:208:GLU:HG2 | 1.88 | 0.72 |
| 1:H:92:GLU:HG2 | 1:H:102:ARG:HG2 | 1.72 | 0.72 |
| 1:H:363:ARG:NH1 | 1:I:322:ASP:OD1 | 2.22 | 0.72 |
| 1:L:143:GLU:HA | 1:L:143:GLU:OE1 | 1.89 | 0.72 |
| 1:G:155:THR:HG23 | 1:G:259:LEU:CB | 2.20 | 0.72 |
| 1:I:197:ILE:N | 1:I:197:ILE:HD12 | 2.04 | 0.72 |
| 1:J:7:ASN:O | 1:J:8:LEU:HD12 | 1.89 | 0.72 |
| 1:L:302:THR:OG1 | 1:L:306:ARG:O | 2.08 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:17:THR:CG2 | 1:A:18:PRO:HD2 | 2.19 | 0.72 |
| 1:C:279:GLU:HG2 | 1:C:283:ARG:HG2 | 1.72 | 0.72 |
| 1:G:42:GLU:OE2 | 1:H:198:GLU:OE2 | 2.07 | 0.72 |
| 1:H:97:ARG:NH2 | 1:H:99:VAL:HG21 | 2.04 | 0.72 |
| 1:K:9:MET:HB2 | 1:K:55:ILE:O | 1.89 | 0.72 |
| 1:F:337:ARG:O | 1:F:340:VAL:HG22 | 1.90 | 0.72 |
| 1:I:37:THR:HG21 | 1:J:182:LYS:HD2 | 1.72 | 0.72 |
| 1:E:7:ASN:C | 1:E:8:LEU:HG | 2.08 | 0.71 |
| 1:F:173:LEU:O | 1:F:179:SER:OG | 2.07 | 0.71 |
| 1:G:69:ILE:HG12 | 1:G:120:ILE:CD1 | 2.19 | 0.71 |
| 1:G:291:ILE:O | 1:G:292:ARG:NH1 | 2.23 | 0.71 |
| 1:G:300:VAL:HG13 | 1:G:301:PRO:HD2 | 1.70 | 0.71 |
| 1:K:363:ARG:O | 1:K:367:LEU:HG | 1.88 | 0.71 |
| 1:K:88:ASP:OD1 | 1:K:106:ASN:ND2 | 2.21 | 0.71 |
| 1:A:113:GLU:OE1 | 1:B:100:ARG:NH2 | 2.23 | 0.71 |
| 1:H:155:THR:HG22 | 1:H:259:LEU:HB2 | 1.72 | 0.71 |
| 1:J:191:GLU:HB3 | 1:J:192:PHE:CD1 | 2.24 | 0.71 |
| 1:J:248:ALA:O | 1:J:251:THR:OG1 | 2.08 | 0.71 |
| 1:K:353:MET:CE | 1:K:353:MET:HA | 2.19 | 0.71 |
| 1:L:248:ALA:O | 1:L:251:THR:OG1 | 2.06 | 0.71 |
| 1:I:230:LEU:HD11 | 1:I:256:TYR:CD1 | 2.25 | 0.71 |
| 1:E:45:PHE:CE1 | 1:E:54:LYS:HG2 | 2.24 | 0.71 |
| 1:K:296:TRP:CZ3 | 1:K:347:MET:HE2 | 2.26 | 0.71 |
| 1:C:149:GLU:O | 1:C:292:ARG:HD2 | 1.90 | 0.71 |
| 1:E:9:MET:HB2 | 1:E:55:ILE:O | 1.90 | 0.71 |
| 1:F:143:GLU:OE1 | 1:F:143:GLU:HA | 1.90 | 0.71 |
| 1:I:17:THR:CG2 | 1:I:18:PRO:HD2 | 2.20 | 0.71 |
| 1:G:173:LEU:O | 1:G:181:ARG:NH2 | 2.14 | 0.71 |
| 1:H:35:ASP:OD2 | 1:I:227:LYS:HD3 | 1.90 | 0.71 |
| 1:J:182:LYS:NZ | 1:J:226:ARG:O | 2.24 | 0.71 |
| 1:B:212:HIS:C | 1:B:213:LEU:HD12 | 2.11 | 0.71 |
| 1:G:12:GLU:CD | 1:G:56:THR:HG23 | 2.11 | 0.71 |
| 1:J:183:VAL:HB | 1:J:204:VAL:HG22 | 1.72 | 0.71 |
| 1:K:40:THR:HG22 | 1:K:65:LEU:CD2 | 2.14 | 0.71 |
| 1:B:224:LEU:HD21 | 1:B:248:ALA:HA | 1.72 | 0.71 |
| 1:B:249:ALA:CB | 1:B:290:THR:CG2 | 2.68 | 0.71 |
| 1:E:328:ASP:O | 1:E:331:GLU:HG2 | 1.89 | 0.71 |
| 1:E:332:VAL:HG23 | 1:E:333:THR:H | 1.55 | 0.71 |
| 1:J:102:ARG:HH11 | 1:J:127:THR:HG22 | 1.53 | 0.71 |
| 1:K:269:ARG:O | 1:K:273:THR:OG1 | 2.09 | 0.71 |
| 1:K:44:ILE:HG22 | 1:K:55:ILE:HD11 | 1.73 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:249:ALA:HB1 | 1:B:290:THR:CG2 | 2.20 | 0.71 |
| 1:E:58:ARG:HH12 | 1:E:64:GLU:CD | 1.94 | 0.71 |
| 1:E:43:PRO:HD3 | 1:E:59:ARG:HD3 | 1.73 | 0.70 |
| 1:F:209:ILE:HD11 | 1:F:215:ASN:O | 1.91 | 0.70 |
| 1:F:9:MET:HE1 | 1:F:24:MET:HB2 | 1.72 | 0.70 |
| 1:H:208:GLU:H | 1:H:212:HIS:CD2 | 2.09 | 0.70 |
| 1:I:34:SER:O | 1:I:124:THR:HG23 | 1.91 | 0.70 |
| 1:I:52:LEU:C | 1:I:53:LEU:HD23 | 2.10 | 0.70 |
| 1:I:54:LYS:C | 1:I:55:ILE:HD13 | 2.12 | 0.70 |
| 1:I:88:ASP:OD1 | 1:I:106:ASN:ND2 | 2.24 | 0.70 |
| 1:E:129:PRO:HB2 | 1:E:171:ARG:HD3 | 1.73 | 0.70 |
| 1:H:188:SER:CB | 1:H:189:PRO:HD3 | 2.19 | 0.70 |
| 1:I:208:GLU:H | 1:I:212:HIS:HD2 | 1.37 | 0.70 |
| 1:K:288:LEU:HB3 | 1:K:325:LEU:HD21 | 1.73 | 0.70 |
| 1:K:111:LEU:HD13 | 1:L:90:HIS:CE1 | 2.27 | 0.70 |
| 1:E:108:THR:HB | 1:F:226:ARG:NH2 | 2.07 | 0.70 |
| 1:K:263:GLY:O | 1:K:267:THR:HG23 | 1.91 | 0.70 |
| 1:I:137:LEU:HD23 | 1:I:311:ARG:NH1 | 2.06 | 0.70 |
| 1:B:208:GLU:H | 1:B:212:HIS:CD2 | 2.09 | 0.70 |
| 1:F:345:GLN:HG3 | 1:F:349:TRP:HE3 | 1.54 | 0.70 |
| 1:G:9:MET:HE1 | 1:G:24:MET:HB2 | 1.72 | 0.70 |
| 1:L:125:ILE:HD12 | 1:L:126:PRO:CD | 2.20 | 0.70 |
| 1:I:174:ILE:HG13 | 1:I:202:ALA:HB1 | 1.74 | 0.70 |
| 1:J:40:THR:HG23 | 1:J:62:ASN:HA | 1.74 | 0.70 |
| 1:J:58:ARG:NH1 | 1:J:64:GLU:OE2 | 2.23 | 0.70 |
| 1:L:112:VAL:HG23 | 1:L:117:ALA:HB3 | 1.68 | 0.70 |
| 1:J:94:ARG:CB | 1:J:100:ARG:CD | 2.69 | 0.70 |
| 1:J:15:ARG:CG | 1:J:64:GLU:OE2 | 2.37 | 0.70 |
| 1:G:69:ILE:HD11 | 1:G:120:ILE:CD1 | 2.21 | 0.70 |
| 1:H:9:MET:HE1 | 1:H:24:MET:HB2 | 1.74 | 0.70 |
| 1:B:73:TYR:OH | 1:B:210:PRO:HB2 | 1.92 | 0.70 |
| 1:D:155:THR:HG22 | 1:D:259:LEU:HB2 | 1.74 | 0.70 |
| 1:E:263:GLY:O | 1:E:267:THR:HG23 | 1.91 | 0.70 |
| 1:E:9:MET:CG | 1:E:10:PRO:HD2 | 2.22 | 0.70 |
| 1:G:235:GLU:HB3 | 1:G:258:THR:OG1 | 1.92 | 0.70 |
| 1:G:248:ALA:O | 1:G:251:THR:OG1 | 2.10 | 0.70 |
| 1:I:25:LEU:CD1 | 1:I:103:TYR:HE2 | 2.05 | 0.70 |
| 1:I:365:TYR:CE2 | 1:I:369:ILE:HD11 | 2.27 | 0.70 |
| 1:I:48:VAL:N | 1:I:51:ARG:O | 2.20 | 0.70 |
| 1:G:306:ARG:HG2 | 1:G:307:ARG:N | 2.07 | 0.69 |
| 1:G:354:LYS:HB3 | 1:G:360:ILE:CD1 | 2.21 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:186:TYR:OH | 1:J:223:ALA:HB2 | 1.91 | 0.69 |
| 1:G:61:SER:OG | 1:G:64:GLU:OE1 | 2.07 | 0.69 |
| 1:K:302:THR:OG1 | 1:K:304:ASP:OD1 | 2.07 | 0.69 |
| 1:G:238:ASP:O | 1:G:242:ILE:HD12 | 1.93 | 0.69 |
| 1:H:155:THR:HG21 | 1:H:267:THR:HG21 | 1.74 | 0.69 |
| 1:I:22:ASP:OD2 | 1:I:93:PHE:CE1 | 2.45 | 0.69 |
| 1:F:73:TYR:CD1 | 1:F:89:THR:CG2 | 2.73 | 0.69 |
| 1:G:322:ASP:HA | 1:G:325:LEU:HD12 | 1.72 | 0.69 |
| 1:J:140:ASN:HD22 | 1:J:140:ASN:H | 1.40 | 0.69 |
| 1:K:288:LEU:CB | 1:K:325:LEU:HD21 | 2.23 | 0.69 |
| 1:L:24:MET:SD | 1:L:44:ILE:HD12 | 2.31 | 0.69 |
| 1:D:224:LEU:HD21 | 1:D:248:ALA:HA | 1.72 | 0.69 |
| 1:E:7:ASN:HA | 1:E:54:LYS:O | 1.92 | 0.69 |
| 1:G:318:GLU:O | 1:G:322:ASP:OD2 | 2.09 | 0.69 |
| 1:D:94:ARG:CB | 1:D:100:ARG:HE | 2.05 | 0.69 |
| 1:G:208:GLU:H | 1:G:212:HIS:HD2 | 1.39 | 0.69 |
| 1:G:239:ALA:CA | 1:G:242:ILE:HD12 | 2.20 | 0.69 |
| 1:G:119:GLN:NE2 | 1:H:182:LYS:NZ | 2.37 | 0.69 |
| 1:I:184:LEU:CD1 | 1:I:228:PRO:HB3 | 2.23 | 0.69 |
| 1:I:95:PRO:HD2 | 1:I:99:VAL:O | 1.92 | 0.69 |
| 1:K:24:MET:SD | 1:K:44:ILE:HD13 | 2.32 | 0.69 |
| 1:B:197:ILE:HG22 | 1:B:199:THR:HG23 | 1.75 | 0.69 |
| 1:K:35:ASP:C | 1:K:36:ILE:HD12 | 2.13 | 0.69 |
| 1:F:186:TYR:OH | 1:F:223:ALA:HB2 | 1.92 | 0.69 |
| 1:G:322:ASP:OD1 | 1:L:363:ARG:NH2 | 2.24 | 0.69 |
| 1:A:293:LEU:HD13 | 1:A:315:VAL:HG22 | 1.73 | 0.69 |
| 1:K:7:ASN:C | 1:K:8:LEU:HD23 | 2.13 | 0.69 |
| 1:L:171:ARG:O | 1:L:175:GLU:HG3 | 1.93 | 0.69 |
| 1:L:296:TRP:NE1 | 1:L:347:MET:CE | 2.55 | 0.69 |
| 1:B:183:VAL:HG13 | 1:B:230:LEU:HD22 | 1.74 | 0.69 |
| 1:F:24:MET:SD | 1:F:44:ILE:HG21 | 2.33 | 0.69 |
| 1:L:13:PRO:HB3 | 1:L:20:PHE:CD2 | 2.27 | 0.69 |
| 1:L:89:THR:HG22 | 1:L:90:HIS:N | 2.08 | 0.69 |
| 1:C:272:VAL:HG13 | 1:C:284:THR:HG22 | 1.73 | 0.69 |
| 1:D:8:LEU:CD1 | 1:D:9:MET:N | 2.49 | 0.69 |
| 1:G:238:ASP:C | 1:G:242:ILE:HD12 | 2.14 | 0.69 |
| 1:H:19:VAL:HG23 | 1:H:20:PHE:N | 2.07 | 0.69 |
| 1:J:9:MET:HE1 | 1:J:24:MET:CB | 2.22 | 0.69 |
| 1:G:132:LEU:HD23 | 1:G:132:LEU:O | 1.92 | 0.68 |
| 1:G:317:ASP:HB3 | 1:G:320:VAL:HG23 | 1.75 | 0.68 |
| 1:K:137:LEU:CD1 | 1:K:311:ARG:CZ | 2.71 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:41:GLY:O | 1:I:59:ARG:HD2 | 1.93 | 0.68 |
| 1:I:95:PRO:CD | 1:I:99:VAL:O | 2.41 | 0.68 |
| 1:J:24:MET:HE3 | 1:J:25:LEU:N | 2.08 | 0.68 |
| 1:J:29:GLU:OE2 | 1:J:29:GLU:HA | 1.93 | 0.68 |
| 1:L:312:GLU:HB2 | 1:L:347:MET:N | 2.08 | 0.68 |
| 1:D:268:MET:HG3 | 1:D:336:THR:HG21 | 1.75 | 0.68 |
| 1:G:215:ASN:OD1 | 1:G:218:ASP:OD2 | 2.11 | 0.68 |
| 1:G:269:ARG:HH11 | 1:G:269:ARG:CG | 2.03 | 0.68 |
| 1:G:154:ILE:HD11 | 1:G:295:ILE:HD12 | 1.74 | 0.68 |
| 1:J:337:ARG:NH1 | 1:K:278:GLU:OE1 | 2.26 | 0.68 |
| 1:J:72:ILE:HD13 | 1:J:105:VAL:HG11 | 1.75 | 0.68 |
| 1:L:9:MET:SD | 1:L:56:THR:CG2 | 2.80 | 0.68 |
| 1:A:94:ARG:HH21 | 1:A:100:ARG:CG | 2.06 | 0.68 |
| 1:A:285:ILE:N | 1:A:285:ILE:HD12 | 2.06 | 0.68 |
| 1:D:186:TYR:OH | 1:D:223:ALA:HB2 | 1.94 | 0.68 |
| 1:E:353:MET:CE | 1:E:353:MET:HA | 2.22 | 0.68 |
| 1:J:9:MET:HE1 | 1:J:24:MET:HB2 | 1.75 | 0.68 |
| 1:B:352:LYS:HA | 1:B:365:TYR:CE1 | 2.27 | 0.68 |
| 1:C:208:GLU:H | 1:C:212:HIS:CD2 | 2.08 | 0.68 |
| 1:K:16:PHE:CZ | 1:K:24:MET:HE1 | 2.27 | 0.68 |
| 1:K:24:MET:SD | 1:K:44:ILE:HG21 | 2.34 | 0.68 |
| 1:H:272:VAL:HG13 | 1:H:284:THR:CG2 | 2.22 | 0.68 |
| 1:I:341:ARG:HG2 | 1:I:346:LEU:HD11 | 1.75 | 0.68 |
| 1:J:209:ILE:HG22 | 1:J:210:PRO:CD | 2.23 | 0.68 |
| 1:A:340:VAL:HG12 | 1:A:346:LEU:HD12 | 1.75 | 0.68 |
| 1:B:9:MET:HE1 | 1:B:24:MET:HB2 | 1.74 | 0.68 |
| 1:F:9:MET:CE | 1:F:24:MET:HB2 | 2.23 | 0.68 |
| 1:H:119:GLN:HE22 | 1:I:182:LYS:HE3 | 1.59 | 0.68 |
| 1:I:248:ALA:O | 1:I:251:THR:OG1 | 2.11 | 0.68 |
| 1:K:246:LEU:HD21 | 1:K:287:ILE:HD13 | 1.76 | 0.68 |
| 1:L:40:THR:HG22 | 1:L:65:LEU:CD2 | 2.24 | 0.68 |
| 1:D:35:ASP:OD2 | 1:E:227:LYS:HD2 | 1.93 | 0.68 |
| 1:E:155:THR:HG22 | 1:E:259:LEU:HB2 | 1.76 | 0.68 |
| 1:F:17:THR:CG2 | 1:F:18:PRO:HD2 | 2.23 | 0.68 |
| 1:I:361:SER:HB3 | 1:I:364:VAL:HG23 | 1.75 | 0.68 |
| 1:L:197:ILE:N | 1:L:197:ILE:HD12 | 2.08 | 0.68 |
| 1:K:155:THR:HG22 | 1:K:259:LEU:HB2 | 1.74 | 0.67 |
| 1:C:188:SER:O | 1:C:208:GLU:HG3 | 1.94 | 0.67 |
| 1:E:304:ASP:OD2 | 1:E:306:ARG:HD2 | 1.94 | 0.67 |
| 1:I:86:ASP:OD2 | 1:J:225:ARG:NH1 | 2.24 | 0.67 |
| 1:E:329:PRO:O | 1:E:332:VAL:HG13 | 1.94 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:86:ASP:HB2 | 1:I:213:LEU:HD21 | 1.76 | 0.67 |
| 1:I:208:GLU:H | 1:I:212:HIS:CD2 | 2.12 | 0.67 |
| 1:I:261:THR:CG2 | 1:I:267:THR:CG2 | 2.70 | 0.67 |
| 1:K:288:LEU:CB | 1:K:325:LEU:CD2 | 2.73 | 0.67 |
| 1:L:215:ASN:OD1 | 1:L:218:ASP:CB | 2.31 | 0.67 |
| 1:A:137:LEU:HD23 | 1:A:141:ILE:HG21 | 1.75 | 0.67 |
| 1:D:208:GLU:H | 1:D:212:HIS:CD2 | 2.07 | 0.67 |
| 1:D:367:LEU:HD11 | 1:E:325:LEU:HD13 | 1.77 | 0.67 |
| 1:G:69:ILE:HD11 | 1:G:120:ILE:HD13 | 1.76 | 0.67 |
| 1:G:230:LEU:HD21 | 1:G:256:TYR:HE1 | 1.57 | 0.67 |
| 1:K:300:VAL:HG13 | 1:K:301:PRO:HD2 | 1.76 | 0.67 |
| 1:G:69:ILE:CD1 | 1:G:120:ILE:CD1 | 2.71 | 0.67 |
| 1:J:39:GLN:C | 1:J:65:LEU:HD21 | 2.14 | 0.67 |
| 1:C:287:ILE:HG22 | 1:C:291:ILE:HD11 | 1.75 | 0.67 |
| 1:F:296:TRP:NE1 | 1:F:347:MET:HE1 | 2.10 | 0.67 |
| 1:I:184:LEU:HD12 | 1:I:228:PRO:CG | 2.25 | 0.67 |
| 1:A:208:GLU:H | 1:A:212:HIS:CD2 | 2.08 | 0.67 |
| 1:B:40:THR:OG1 | 1:B:65:LEU:HD22 | 1.95 | 0.67 |
| 1:C:363:ARG:HG3 | 1:C:364:VAL:N | 2.08 | 0.67 |
| 1:E:164:THR:CG2 | 1:E:192:PHE:CZ | 2.74 | 0.67 |
| 1:G:324:LEU:HD21 | 1:G:339:LEU:HD12 | 1.77 | 0.67 |
| 1:L:132:LEU:CD1 | 1:L:169:ILE:HD13 | 2.24 | 0.67 |
| 1:B:259:LEU:HD12 | 1:B:267:THR:HG23 | 1.76 | 0.67 |
| 1:G:230:LEU:HD13 | 1:G:230:LEU:C | 2.15 | 0.67 |
| 1:G:317:ASP:C | 1:G:321:ARG:NH1 | 2.48 | 0.67 |
| 1:G:355:PHE:HZ | 1:G:365:TYR:HD2 | 1.31 | 0.67 |
| 1:J:323:ILE:HD13 | 1:J:323:ILE:N | 2.09 | 0.67 |
| 1:J:40:THR:N | 1:J:65:LEU:HD21 | 2.10 | 0.67 |
| 1:K:292:ARG:HG3 | 1:K:292:ARG:HH21 | 1.57 | 0.67 |
| 1:C:166:LEU:CD1 | 1:C:232:MET:HE2 | 2.24 | 0.67 |
| 1:D:237:ARG:NH2 | 1:D:260:HIS:HB2 | 2.10 | 0.67 |
| 1:E:22:ASP:OD1 | 1:E:22:ASP:N | 2.28 | 0.67 |
| 1:I:65:LEU:HA | 1:I:68:LEU:CD1 | 2.24 | 0.67 |
| 1:J:38:ILE:HB | 1:J:120:ILE:HG23 | 1.77 | 0.67 |
| 1:K:131:LYS:O | 1:K:134:THR:OG1 | 2.10 | 0.67 |
| 1:C:119:GLN:HE22 | 1:D:182:LYS:HE2 | 1.58 | 0.67 |
| 1:F:184:LEU:HD13 | 1:F:226:ARG:HD2 | 1.75 | 0.67 |
| 1:L:319:GLU:O | 1:L:323:ILE:HG13 | 1.95 | 0.67 |
| 1:A:297:GLN:HE21 | 1:A:311:ARG:NE | 1.93 | 0.66 |
| 1:H:131:LYS:O | 1:H:134:THR:OG1 | 2.14 | 0.66 |
| 1:C:76:ASN:O | 1:C:79:THR:OG1 | 2.12 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:18:PRO:O | 1:H:21:MET:N | 2.28 | 0.66 |
| 1:K:111:LEU:CD1 | 1:L:90:HIS:NE2 | 2.59 | 0.66 |
| 1:L:270:ARG:O | 1:L:274:SER:OG | 2.12 | 0.66 |
| 1:L:313:TYR:CE2 | 1:L:345:GLN:NE2 | 2.63 | 0.66 |
| 1:A:92:GLU:HG3 | 1:A:102:ARG:HG2 | 1.76 | 0.66 |
| 1:C:300:VAL:HG21 | 1:C:310:LEU:HD12 | 1.78 | 0.66 |
| 1:D:198:GLU:HA | 1:D:198:GLU:OE2 | 1.95 | 0.66 |
| 1:G:321:ARG:HG3 | 1:G:321:ARG:HH11 | 1.61 | 0.66 |
| 1:L:296:TRP:CD1 | 1:L:347:MET:HE2 | 2.30 | 0.66 |
| 1:L:313:TYR:HE2 | 1:L:345:GLN:NE2 | 1.93 | 0.66 |
| 1:B:65:LEU:HD23 | 1:B:118:ILE:O | 1.95 | 0.66 |
| 1:F:209:ILE:HG22 | 1:F:210:PRO:CD | 2.25 | 0.66 |
| 1:G:328:ASP:OD1 | 1:G:330:ASN:N | 2.27 | 0.66 |
| 1:A:124:THR:O | 1:A:125:ILE:HD13 | 1.96 | 0.66 |
| 1:F:78:THR:O | 1:F:82:LEU:CD1 | 2.44 | 0.66 |
| 1:G:281:LEU:HD21 | 1:G:329:PRO:HG2 | 1.76 | 0.66 |
| 1:G:345:GLN:HG3 | 1:G:349:TRP:CZ3 | 2.31 | 0.66 |
| 1:H:46:ALA:HB2 | 1:H:55:ILE:HD11 | 1.75 | 0.66 |
| 1:I:49:TYR:C | 1:I:307:ARG:HD2 | 2.16 | 0.66 |
| 1:K:27:HIS:O | 1:K:30:SER:OG | 2.10 | 0.66 |
| 1:K:24:MET:CE | 1:K:44:ILE:HD12 | 2.20 | 0.66 |
| 1:A:188:SER:OG | 1:A:189:PRO:HD3 | 1.96 | 0.66 |
| 1:G:247:GLU:O | 1:G:251:THR:HG23 | 1.95 | 0.66 |
| 1:G:355:PHE:HZ | 1:G:365:TYR:CD2 | 2.04 | 0.66 |
| 1:G:69:ILE:HD11 | 1:G:120:ILE:CG2 | 2.25 | 0.66 |
| 1:G:269:ARG:HG2 | 1:G:269:ARG:NH1 | 1.97 | 0.66 |
| 1:I:16:PHE:CE1 | 1:I:20:PHE:HB3 | 2.30 | 0.66 |
| 1:B:46:ALA:CB | 1:B:55:ILE:HD11 | 2.25 | 0.66 |
| 1:E:188:SER:HB3 | 1:E:189:PRO:HD3 | 1.77 | 0.66 |
| 1:F:125:ILE:CD1 | 1:F:126:PRO:HD2 | 2.24 | 0.66 |
| 1:G:212:HIS:O | 1:G:213:LEU:HD23 | 1.96 | 0.66 |
| 1:A:230:LEU:HD13 | 1:A:231:ILE:N | 2.10 | 0.66 |
| 1:C:361:SER:OG | 1:C:363:ARG:HG2 | 1.95 | 0.66 |
| 1:D:272:VAL:HG13 | 1:D:284:THR:CG2 | 2.25 | 0.66 |
| 1:I:367:LEU:HD23 | 1:I:367:LEU:C | 2.16 | 0.66 |
| 1:I:365:TYR:HA | 1:I:368:ILE:HD11 | 1.78 | 0.66 |
| 1:K:150:GLY:HA3 | 1:K:292:ARG:HD2 | 1.76 | 0.66 |
| 1:G:173:LEU:C | 1:G:181:ARG:HH22 | 1.99 | 0.65 |
| 1:G:239:ALA:HA | 1:G:242:ILE:CD1 | 2.24 | 0.65 |
| 1:G:366:LYS:O | 1:G:369:ILE:HB | 1.94 | 0.65 |
| 1:B:151:ILE:HG13 | 1:B:290:THR:CG2 | 2.26 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:33:ALA:HB2 | 1:E:48:VAL:HG22 | 1.79 | 0.65 |
| 1:G:317:ASP:OD1 | 1:G:319:GLU:N | 2.25 | 0.65 |
| 1:G:364:VAL:O | 1:G:368:ILE:HD12 | 1.96 | 0.65 |
| 1:G:21:MET:CE | 1:G:72:ILE:HD11 | 2.26 | 0.65 |
| 1:G:354:LYS:CB | 1:G:360:ILE:HD11 | 2.26 | 0.65 |
| 1:I:321:ARG:O | 1:I:325:LEU:CD1 | 2.38 | 0.65 |
| 1:K:171:ARG:CA | 1:K:174:ILE:CG2 | 2.73 | 0.65 |
| 1:A:9:MET:HB3 | 1:A:55:ILE:HG23 | 1.78 | 0.65 |
| 1:C:174:ILE:CD1 | 1:C:199:THR:HG21 | 2.27 | 0.65 |
| 1:G:355:PHE:CZ | 1:G:365:TYR:CG | 2.84 | 0.65 |
| 1:I:236:CYS:SG | 1:I:242:ILE:HG12 | 2.37 | 0.65 |
| 1:J:297:GLN:HG3 | 1:J:311:ARG:HG2 | 1.77 | 0.65 |
| 1:K:12:GLU:OE2 | 1:K:58:ARG:N | 2.22 | 0.65 |
| 1:K:13:PRO:HG3 | 1:K:20:PHE:CD2 | 2.31 | 0.65 |
| 1:A:12:GLU:OE2 | 1:A:58:ARG:CB | 2.44 | 0.65 |
| 1:E:9:MET:HG3 | 1:E:10:PRO:HD2 | 1.79 | 0.65 |
| 1:F:313:TYR:CE2 | 1:F:345:GLN:NE2 | 2.64 | 0.65 |
| 1:G:291:ILE:HG23 | 1:G:316:PHE:CD2 | 2.20 | 0.65 |
| 1:G:355:PHE:O | 1:G:358:GLY:N | 2.28 | 0.65 |
| 1:I:21:MET:CE | 1:I:68:LEU:HD23 | 2.26 | 0.65 |
| 1:F:13:PRO:HG3 | 1:F:20:PHE:CE2 | 2.32 | 0.65 |
| 1:I:177:SER:N | 1:I:200:ILE:HD13 | 2.12 | 0.65 |
| 1:J:17:THR:CG2 | 1:J:18:PRO:HD2 | 2.26 | 0.65 |
| 1:J:40:THR:N | 1:J:65:LEU:CD2 | 2.59 | 0.65 |
| 1:F:40:THR:OG1 | 1:F:117:ALA:HB1 | 1.96 | 0.65 |
| 1:F:222:ASN:HA | 1:F:225:ARG:HH21 | 1.60 | 0.65 |
| 1:G:216:PHE:CD2 | 1:G:233:VAL:CG1 | 2.75 | 0.65 |
| 1:H:243:SER:OG | 1:H:283:ARG:NH2 | 2.30 | 0.65 |
| 1:I:77:ALA:O | 1:I:81:LEU:HD13 | 1.96 | 0.65 |
| 1:J:238:ASP:O | 1:J:242:ILE:HG13 | 1.96 | 0.65 |
| 1:J:333:THR:O | 1:J:336:THR:OG1 | 2.10 | 0.65 |
| 1:B:45:PHE:CE2 | 1:C:203:VAL:HG22 | 2.32 | 0.65 |
| 1:E:176:THR:HG23 | 1:E:179:SER:HB3 | 1.79 | 0.65 |
| 1:F:281:LEU:O | 1:F:285:ILE:HD13 | 1.96 | 0.65 |
| 1:G:329:PRO:O | 1:G:332:VAL:HG13 | 1.97 | 0.65 |
| 1:H:261:THR:OG1 | 1:H:267:THR:HG23 | 1.97 | 0.65 |
| 1:I:174:ILE:HG13 | 1:I:202:ALA:CB | 2.25 | 0.65 |
| 1:K:269:ARG:HB2 | 1:K:333:THR:HG22 | 1.78 | 0.65 |
| 1:L:283:ARG:O | 1:L:287:ILE:HG13 | 1.97 | 0.65 |
| 1:A:209:ILE:O | 1:A:213:LEU:O | 2.15 | 0.65 |
| 1:C:367:LEU:C | 1:C:367:LEU:HD23 | 2.17 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:352:LYS:HB2 | 1:F:365:TYR:OH | 1.97 | 0.65 |
| 1:G:317:ASP:OD1 | 1:G:318:GLU:N | 2.30 | 0.65 |
| 1:J:121:THR:HG22 | 1:K:182:LYS:HZ1 | 1.61 | 0.65 |
| 1:J:17:THR:HG22 | 1:J:18:PRO:HD2 | 1.79 | 0.65 |
| 1:J:81:LEU:N | 1:J:81:LEU:HD23 | 2.12 | 0.65 |
| 1:C:12:GLU:OE1 | 1:C:57:ASN:OD1 | 2.14 | 0.65 |
| 1:D:236:CYS:HG | 1:D:259:LEU:HD21 | 1.57 | 0.65 |
| 1:E:58:ARG:NH1 | 1:E:64:GLU:OE1 | 2.29 | 0.65 |
| 1:I:25:LEU:HD12 | 1:I:103:TYR:HE2 | 1.62 | 0.65 |
| 1:G:184:LEU:HG | 1:G:228:PRO:HB3 | 1.78 | 0.64 |
| 1:J:92:GLU:HG3 | 1:J:102:ARG:CG | 2.27 | 0.64 |
| 1:K:43:PRO:HG3 | 1:K:54:LYS:HD3 | 1.78 | 0.64 |
| 1:L:275:PHE:CE2 | 1:L:283:ARG:HD3 | 2.31 | 0.64 |
| 1:I:142:ILE:O | 1:I:145:ILE:HG13 | 1.97 | 0.64 |
| 1:I:65:LEU:CA | 1:I:68:LEU:HD12 | 2.25 | 0.64 |
| 1:F:208:GLU:H | 1:F:212:HIS:HD2 | 1.43 | 0.64 |
| 1:G:105:VAL:HG12 | 1:G:122:LEU:HG | 1.79 | 0.64 |
| 1:I:329:PRO:HA | 1:I:332:VAL:CG2 | 2.26 | 0.64 |
| 1:A:208:GLU:HG2 | 1:A:210:PRO:HD2 | 1.80 | 0.64 |
| 1:I:184:LEU:HG | 1:I:228:PRO:HB3 | 1.77 | 0.64 |
| 1:I:175:GLU:O | 1:I:200:ILE:HD12 | 1.96 | 0.64 |
| 1:L:141:ILE:HD11 | 1:L:313:TYR:CE1 | 2.32 | 0.64 |
| 1:A:89:THR:HG22 | 1:A:90:HIS:N | 2.13 | 0.64 |
| 1:B:100:ARG:HE | 1:B:102:ARG:NH1 | 1.95 | 0.64 |
| 1:I:21:MET:HE2 | 1:I:68:LEU:CD2 | 2.27 | 0.64 |
| 1:I:261:THR:HG23 | 1:I:267:THR:CG2 | 2.14 | 0.64 |
| 1:J:15:ARG:HA | 1:J:58:ARG:HH11 | 1.61 | 0.64 |
| 1:K:293:LEU:HD13 | 1:K:315:VAL:HG22 | 1.79 | 0.64 |
| 1:C:104:ARG:HG3 | 1:C:125:ILE:CD1 | 2.22 | 0.64 |
| 1:D:69:ILE:HA | 1:D:72:ILE:HG22 | 1.79 | 0.64 |
| 1:E:137:LEU:HB3 | 1:E:141:ILE:HD11 | 1.78 | 0.64 |
| 1:I:48:VAL:O | 1:I:51:ARG:N | 2.27 | 0.64 |
| 1:J:9:MET:HE3 | 1:J:24:MET:HA | 0.65 | 0.64 |
| 1:D:261:THR:HG21 | 1:D:270:ARG:CG | 2.11 | 0.64 |
| 1:D:264:VAL:HG11 | 1:D:340:VAL:CG1 | 2.25 | 0.64 |
| 1:F:352:LYS:HD2 | 1:F:365:TYR:OH | 1.97 | 0.64 |
| 1:G:9:MET:HE1 | 1:G:24:MET:CB | 2.28 | 0.64 |
| 1:H:200:ILE:HG22 | 1:H:201:SER:HB3 | 1.79 | 0.64 |
| 1:J:125:ILE:CG1 | 1:J:126:PRO:HD2 | 2.27 | 0.64 |
| 1:L:25:LEU:HD23 | 1:L:36:ILE:HD13 | 1.79 | 0.64 |
| 1:D:69:ILE:HD12 | 1:D:72:ILE:CG2 | 2.28 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:186:TYR:OH | 1:E:222:ASN:ND2 | 2.30 | 0.64 |
| 1:F:246:LEU:HD23 | 1:F:290:THR:HG21 | 1.77 | 0.64 |
| 1:G:94:ARG:HB3 | 1:G:99:VAL:O | 1.98 | 0.64 |
| 1:L:131:LYS:HD3 | 1:L:171:ARG:NH2 | 2.12 | 0.64 |
| 1:L:197:ILE:H | 1:L:197:ILE:HD12 | 1.63 | 0.64 |
| 1:J:70:ASN:OD1 | 1:J:78:THR:OG1 | 2.14 | 0.64 |
| 1:K:208:GLU:H | 1:K:212:HIS:CD2 | 2.14 | 0.64 |
| 1:A:97:ARG:HG3 | 1:A:97:ARG:HH11 | 1.62 | 0.63 |
| 1:B:166:LEU:HD11 | 1:B:258:THR:CG2 | 2.27 | 0.63 |
| 1:B:171:ARG:HG3 | 1:B:197:ILE:CD1 | 2.28 | 0.63 |
| 1:C:22:ASP:OD1 | 1:C:91:TYR:OH | 2.16 | 0.63 |
| 1:I:16:PHE:CZ | 1:I:21:MET:HA | 2.33 | 0.63 |
| 1:L:261:THR:HG21 | 1:L:267:THR:HA | 1.81 | 0.63 |
| 1:G:180:ASN:CB | 1:L:52:LEU:HB2 | 2.23 | 0.63 |
| 1:E:9:MET:HA | 1:E:27:HIS:CE1 | 2.33 | 0.63 |
| 1:J:121:THR:CG2 | 1:K:182:LYS:HZ1 | 2.11 | 0.63 |
| 1:K:7:ASN:HA | 1:K:54:LYS:O | 1.98 | 0.63 |
| 1:G:112:VAL:HG12 | 1:G:113:GLU:HG2 | 1.80 | 0.63 |
| 1:I:61:SER:CB | 1:I:64:GLU:HG3 | 2.26 | 0.63 |
| 1:I:22:ASP:OD2 | 1:I:93:PHE:CD1 | 2.51 | 0.63 |
| 1:J:354:LYS:HG3 | 1:J:359:ILE:HD12 | 1.80 | 0.63 |
| 1:A:12:GLU:OE2 | 1:A:58:ARG:HB2 | 1.97 | 0.63 |
| 1:G:122:LEU:N | 1:G:122:LEU:HD12 | 2.14 | 0.63 |
| 1:G:12:GLU:OE1 | 1:G:56:THR:HG23 | 1.98 | 0.63 |
| 1:I:182:LYS:HE2 | 1:I:184:LEU:HD21 | 1.81 | 0.63 |
| 1:K:171:ARG:CA | 1:K:174:ILE:HG22 | 2.28 | 0.63 |
| 1:I:61:SER:H | 1:I:64:GLU:CD | 2.01 | 0.63 |
| 1:J:352:LYS:CA | 1:J:365:TYR:CE1 | 2.80 | 0.63 |
| 1:L:275:PHE:CE2 | 1:L:283:ARG:HB3 | 2.32 | 0.63 |
| 1:D:41:GLY:O | 1:D:59:ARG:HD3 | 1.99 | 0.63 |
| 1:G:46:ALA:HB2 | 1:G:55:ILE:HD12 | 1.78 | 0.63 |
| 1:I:141:ILE:O | 1:I:145:ILE:HG23 | 1.99 | 0.63 |
| 1:K:137:LEU:HG | 1:K:141:ILE:CD1 | 2.28 | 0.63 |
| 1:G:235:GLU:CB | 1:G:258:THR:O | 2.47 | 0.63 |
| 1:H:246:LEU:O | 1:H:250:LEU:HD12 | 1.99 | 0.63 |
| 1:J:352:LYS:CA | 1:J:365:TYR:HE1 | 2.12 | 0.63 |
| 1:B:209:ILE:O | 1:B:213:LEU:O | 2.15 | 0.63 |
| 1:B:48:VAL:HG23 | 1:B:48:VAL:O | 1.98 | 0.63 |
| 1:B:48:VAL:CG2 | 1:B:53:LEU:HD11 | 2.29 | 0.63 |
| 1:G:155:THR:CG2 | 1:G:259:LEU:HB2 | 2.27 | 0.63 |
| 1:J:69:ILE:HA | 1:J:72:ILE:CG2 | 2.29 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:17:THR:CG2 | 1:K:18:PRO:HD2 | 2.29 | 0.63 |
| 1:E:154:ILE:HG21 | 1:E:165:LEU:HD23 | 1.80 | 0.62 |
| 1:G:111:LEU:HD22 | 1:H:90:HIS:CE1 | 2.33 | 0.62 |
| 1:G:224:LEU:HD21 | 1:G:248:ALA:HA | 1.81 | 0.62 |
| 1:J:13:PRO:HG3 | 1:J:20:PHE:HD1 | 1.63 | 0.62 |
| 1:E:349:TRP:CZ3 | 1:E:353:MET:HG3 | 2.35 | 0.62 |
| 1:F:361:SER:O | 1:F:364:VAL:HG12 | 1.99 | 0.62 |
| 1:K:188:SER:O | 1:K:208:GLU:HG3 | 1.98 | 0.62 |
| 1:C:21:MET:CE | 1:C:72:ILE:HD11 | 2.29 | 0.62 |
| 1:G:367:LEU:HD23 | 1:G:367:LEU:O | 1.99 | 0.62 |
| 1:I:131:LYS:O | 1:I:134:THR:OG1 | 2.15 | 0.62 |
| 1:L:66:GLY:O | 1:L:69:ILE:HG22 | 1.99 | 0.62 |
| 1:C:166:LEU:HD13 | 1:C:232:MET:CE | 2.28 | 0.62 |
| 1:E:48:VAL:O | 1:E:51:ARG:HG2 | 1.99 | 0.62 |
| 1:F:214:PRO:HB2 | 1:F:218:ASP:OD2 | 2.00 | 0.62 |
| 1:J:125:ILE:HG13 | 1:J:126:PRO:HD2 | 1.82 | 0.62 |
| 1:K:269:ARG:HB2 | 1:K:333:THR:HG21 | 1.82 | 0.62 |
| 1:B:332:VAL:O | 1:B:336:THR:HG23 | 1.99 | 0.62 |
| 1:D:209:ILE:O | 1:D:213:LEU:O | 2.16 | 0.62 |
| 1:E:44:ILE:H | 1:E:56:THR:HG22 | 1.64 | 0.62 |
| 1:H:65:LEU:HD11 | 1:H:120:ILE:HD12 | 1.80 | 0.62 |
| 1:A:135:MET:HB3 | 1:A:137:LEU:CD1 | 2.29 | 0.62 |
| 1:A:281:LEU:C | 1:A:281:LEU:HD13 | 2.20 | 0.62 |
| 1:F:236:CYS:SG | 1:F:242:ILE:HG12 | 2.39 | 0.62 |
| 1:G:348:THR:O | 1:G:351:ALA:HB3 | 2.00 | 0.62 |
| 1:I:355:PHE:CE2 | 1:I:362:GLU:HG2 | 2.33 | 0.62 |
| 1:B:102:ARG:NE | 1:B:127:THR:HG22 | 2.14 | 0.62 |
| 1:B:249:ALA:CB | 1:B:290:THR:HG21 | 2.29 | 0.62 |
| 1:C:81:LEU:HD11 | 1:C:87:ILE:CD1 | 2.30 | 0.62 |
| 1:E:7:ASN:O | 1:E:8:LEU:HD23 | 2.00 | 0.62 |
| 1:G:230:LEU:CD2 | 1:G:256:TYR:HE1 | 2.13 | 0.62 |
| 1:G:352:LYS:O | 1:G:355:PHE:HB2 | 1.98 | 0.62 |
| 1:K:171:ARG:O | 1:K:174:ILE:CG2 | 2.48 | 0.62 |
| 1:G:268:MET:HG3 | 1:G:336:THR:HG21 | 1.80 | 0.62 |
| 1:J:172:GLU:O | 1:J:176:THR:HG23 | 1.99 | 0.62 |
| 1:A:141:ILE:O | 1:A:145:ILE:HG23 | 1.99 | 0.62 |
| 1:B:184:LEU:HD22 | 1:B:226:ARG:HH21 | 1.65 | 0.62 |
| 1:B:188:SER:HB3 | 1:B:189:PRO:HD2 | 1.82 | 0.62 |
| 1:D:69:ILE:HA | 1:D:72:ILE:CG2 | 2.30 | 0.62 |
| 1:G:302:THR:OG1 | 1:G:304:ASP:OD1 | 2.07 | 0.62 |
| 1:H:81:LEU:HD21 | 1:H:87:ILE:HG13 | 1.81 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:230:LEU:CD1 | 1:I:256:TYR:CE1 | 2.82 | 0.62 |
| 1:I:354:LYS:O | 1:I:357:GLN:N | 2.33 | 0.62 |
| 1:L:264:VAL:HG22 | 1:L:294:CYS:SG | 2.39 | 0.62 |
| 1:B:352:LYS:HA | 1:B:365:TYR:HE1 | 1.64 | 0.61 |
| 1:C:236:CYS:SG | 1:C:242:ILE:HG12 | 2.40 | 0.61 |
| 1:D:174:ILE:O | 1:D:199:THR:HG21 | 2.00 | 0.61 |
| 1:D:320:VAL:HG13 | 1:D:339:LEU:HD13 | 1.80 | 0.61 |
| 1:D:307:ARG:NH2 | 1:E:251:THR:O | 2.32 | 0.61 |
| 1:E:162:LYS:CD | 1:E:258:THR:HB | 2.21 | 0.61 |
| 1:E:317:ASP:OD1 | 1:E:318:GLU:N | 2.31 | 0.61 |
| 1:I:109:ALA:C | 1:J:212:HIS:ND1 | 2.54 | 0.61 |
| 1:F:22:ASP:O | 1:F:26:GLU:HG3 | 2.00 | 0.61 |
| 1:G:144:ALA:HB2 | 1:G:315:VAL:CG1 | 2.30 | 0.61 |
| 1:I:197:ILE:H | 1:I:197:ILE:HD12 | 1.65 | 0.61 |
| 1:I:355:PHE:CZ | 1:I:362:GLU:CG | 2.81 | 0.61 |
| 1:A:49:TYR:CE1 | 1:A:306:ARG:HG3 | 2.35 | 0.61 |
| 1:C:81:LEU:HD11 | 1:C:87:ILE:HD12 | 1.82 | 0.61 |
| 1:F:132:LEU:HD11 | 1:F:169:ILE:CD1 | 2.30 | 0.61 |
| 1:G:365:TYR:N | 1:G:368:ILE:HD12 | 2.14 | 0.61 |
| 1:H:248:ALA:O | 1:H:251:THR:HB | 2.00 | 0.61 |
| 1:C:209:ILE:O | 1:C:213:LEU:O | 2.18 | 0.61 |
| 1:G:235:GLU:CA | 1:G:258:THR:O | 2.47 | 0.61 |
| 1:I:76:ASN:O | 1:I:79:THR:OG1 | 2.15 | 0.61 |
| 1:L:27:HIS:O | 1:L:30:SER:OG | 2.17 | 0.61 |
| 1:D:249:ALA:HB1 | 1:D:290:THR:OG1 | 2.00 | 0.61 |
| 1:F:328:ASP:O | 1:F:328:ASP:OD1 | 2.17 | 0.61 |
| 1:G:333:THR:O | 1:G:336:THR:OG1 | 2.13 | 0.61 |
| 1:G:69:ILE:CG1 | 1:G:120:ILE:CD1 | 2.78 | 0.61 |
| 1:I:287:ILE:HG22 | 1:I:291:ILE:HD11 | 1.81 | 0.61 |
| 1:J:171:ARG:O | 1:J:175:GLU:HB2 | 2.00 | 0.61 |
| 1:J:24:MET:CE | 1:J:25:LEU:HD23 | 2.30 | 0.61 |
| 1:J:88:ASP:OD1 | 1:J:106:ASN:ND2 | 2.33 | 0.61 |
| 1:K:14:THR:OG1 | 1:K:15:ARG:N | 2.32 | 0.61 |
| 1:L:310:LEU:HD22 | 1:L:354:LYS:HG3 | 1.81 | 0.61 |
| 1:A:94:ARG:HH11 | 1:A:97:ARG:HA | 1.66 | 0.61 |
| 1:C:132:LEU:HB2 | 1:C:172:GLU:CG | 2.31 | 0.61 |
| 1:G:188:SER:O | 1:G:208:GLU:HG3 | 2.00 | 0.61 |
| 1:J:37:THR:OG1 | 1:K:182:LYS:HE3 | 2.00 | 0.61 |
| 1:A:46:ALA:HB2 | 1:A:55:ILE:HD12 | 1.83 | 0.61 |
| 1:H:125:ILE:HD12 | 1:H:126:PRO:CD | 2.25 | 0.61 |
| 1:J:174:ILE:HG23 | 1:J:175:GLU:N | 2.16 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:171:ARG:C | 1:K:174:ILE:HG22 | 2.21 | 0.61 |
| 1:K:296:TRP:CE3 | 1:K:347:MET:HE2 | 2.35 | 0.61 |
| 1:A:224:LEU:HD21 | 1:A:248:ALA:HA | 1.82 | 0.61 |
| 1:B:363:ARG:NH1 | 1:C:322:ASP:OD1 | 2.33 | 0.61 |
| 1:G:317:ASP:O | 1:G:321:ARG:N | 2.19 | 0.61 |
| 1:J:175:GLU:HG3 | 1:J:197:ILE:HG23 | 1.81 | 0.61 |
| 1:L:186:TYR:HB3 | 1:L:209:ILE:HD13 | 1.83 | 0.61 |
| 1:B:319:GLU:O | 1:B:323:ILE:HG13 | 2.00 | 0.61 |
| 1:C:197:ILE:N | 1:C:197:ILE:HD12 | 2.16 | 0.61 |
| 1:E:27:HIS:O | 1:E:30:SER:OG | 2.03 | 0.61 |
| 1:H:251:THR:HG22 | 1:H:253:HIS:CD2 | 2.35 | 0.61 |
| 1:H:21:MET:HE3 | 1:H:68:LEU:HB3 | 1.83 | 0.61 |
| 1:J:213:LEU:HD22 | 1:J:214:PRO:HD3 | 1.83 | 0.61 |
| 1:K:70:ASN:OD1 | 1:K:78:THR:HG23 | 2.00 | 0.61 |
| 1:A:261:THR:HG21 | 1:A:267:THR:N | 2.16 | 0.61 |
| 1:G:318:GLU:O | 1:G:322:ASP:CG | 2.38 | 0.61 |
| 1:J:272:VAL:HG13 | 1:J:284:THR:CG2 | 2.26 | 0.61 |
| 1:K:208:GLU:HG2 | 1:K:210:PRO:HD2 | 1.83 | 0.61 |
| 1:K:262:SER:HB2 | 1:K:296:TRP:CZ2 | 2.35 | 0.61 |
| 1:L:355:PHE:CZ | 1:L:362:GLU:HG3 | 2.36 | 0.61 |
| 1:A:365:TYR:CE1 | 1:A:369:ILE:HD11 | 2.35 | 0.60 |
| 1:C:188:SER:OG | 1:C:189:PRO:HD3 | 2.01 | 0.60 |
| 1:C:188:SER:CB | 1:C:189:PRO:HD3 | 2.30 | 0.60 |
| 1:D:99:VAL:HG12 | 1:D:100:ARG:N | 2.16 | 0.60 |
| 1:E:188:SER:O | 1:E:208:GLU:HG3 | 2.01 | 0.60 |
| 1:H:48:VAL:CG2 | 1:H:53:LEU:CD1 | 2.76 | 0.60 |
| 1:J:60:LEU:HD12 | 1:J:64:GLU:OE1 | 2.01 | 0.60 |
| 1:K:175:GLU:OE2 | 1:K:197:ILE:HD11 | 2.01 | 0.60 |
| 1:K:47:GLU:HG3 | 1:K:52:LEU:HD12 | 1.83 | 0.60 |
| 1:I:116:ASP:OD1 | 1:J:211:ARG:NH2 | 2.34 | 0.60 |
| 1:I:34:SER:OG | 1:I:35:ASP:OD1 | 2.12 | 0.60 |
| 1:I:7:ASN:O | 1:I:55:ILE:HA | 2.01 | 0.60 |
| 1:I:110:CYS:C | 1:J:212:HIS:CE1 | 2.75 | 0.60 |
| 1:A:119:GLN:HE22 | 1:B:182:LYS:CE | 2.14 | 0.60 |
| 1:F:281:LEU:O | 1:F:285:ILE:CD1 | 2.50 | 0.60 |
| 1:I:132:LEU:CB | 1:I:172:GLU:HG3 | 2.31 | 0.60 |
| 1:K:317:ASP:OD1 | 1:K:318:GLU:N | 2.34 | 0.60 |
| 1:B:367:LEU:CD2 | 1:C:325:LEU:HD22 | 2.31 | 0.60 |
| 1:G:352:LYS:HG3 | 1:G:365:TYR:CZ | 2.35 | 0.60 |
| 1:K:24:MET:HE1 | 1:K:44:ILE:CD1 | 2.22 | 0.60 |
| 1:L:149:GLU:HG2 | 1:L:150:GLY:H | 1.64 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:189:PRO:HA | 1:L:208:GLU:OE2 | 2.01 | 0.60 |
| 1:E:188:SER:HA | 1:E:210:PRO:HD3 | 1.83 | 0.60 |
| 1:F:212:HIS:O | 1:F:213:LEU:HG | 2.02 | 0.60 |
| 1:G:291:ILE:CG1 | 1:G:316:PHE:CE2 | 2.81 | 0.60 |
| 1:I:174:ILE:CG1 | 1:I:202:ALA:CB | 2.79 | 0.60 |
| 1:I:47:GLU:CA | 1:I:52:LEU:HD23 | 2.31 | 0.60 |
| 1:K:288:LEU:HB3 | 1:K:325:LEU:CD2 | 2.30 | 0.60 |
| 1:L:219:GLY:O | 1:L:222:ASN:HB3 | 2.02 | 0.60 |
| 1:L:333:THR:HG23 | 1:L:334:SER:N | 2.17 | 0.60 |
| 1:A:275:PHE:O | 1:A:280:ARG:NE | 2.31 | 0.60 |
| 1:B:116:ASP:OD2 | 1:C:211:ARG:NH1 | 2.34 | 0.60 |
| 1:B:209:ILE:N | 1:B:210:PRO:HD2 | 2.17 | 0.60 |
| 1:K:304:ASP:CG | 1:K:306:ARG:HG3 | 2.21 | 0.60 |
| 1:I:132:LEU:HB2 | 1:I:172:GLU:CG | 2.31 | 0.60 |
| 1:I:300:VAL:HG21 | 1:I:310:LEU:HD12 | 1.82 | 0.60 |
| 1:K:170:ILE:O | 1:K:174:ILE:CG2 | 2.45 | 0.60 |
| 1:A:233:VAL:HB | 1:A:257:THR:CG2 | 2.29 | 0.60 |
| 1:A:251:THR:OG1 | 1:A:253:HIS:HD2 | 1.84 | 0.60 |
| 1:A:268:MET:HG3 | 1:A:336:THR:HG21 | 1.84 | 0.60 |
| 1:E:275:PHE:O | 1:E:280:ARG:HB2 | 2.02 | 0.60 |
| 1:F:236:CYS:SG | 1:F:242:ILE:CG1 | 2.90 | 0.60 |
| 1:G:355:PHE:CZ | 1:G:365:TYR:CB | 2.84 | 0.60 |
| 1:G:355:PHE:CE2 | 1:G:365:TYR:HB2 | 2.36 | 0.60 |
| 1:G:9:MET:HE1 | 1:G:24:MET:CA | 2.30 | 0.60 |
| 1:J:191:GLU:HB3 | 1:J:192:PHE:CE1 | 2.36 | 0.60 |
| 1:J:264:VAL:CG1 | 1:J:340:VAL:HG11 | 2.32 | 0.60 |
| 1:D:296:TRP:CE3 | 1:D:347:MET:HE2 | 2.37 | 0.60 |
| 1:F:111:LEU:HD12 | 1:F:115:HIS:O | 2.02 | 0.60 |
| 1:F:208:GLU:N | 1:F:212:HIS:HD2 | 2.00 | 0.60 |
| 1:H:230:LEU:HD23 | 1:H:231:ILE:N | 2.17 | 0.60 |
| 1:I:188:SER:O | 1:I:208:GLU:HG3 | 2.02 | 0.60 |
| 1:I:21:MET:HE2 | 1:I:68:LEU:HD23 | 1.82 | 0.60 |
| 1:G:111:LEU:HD12 | 1:G:111:LEU:C | 2.22 | 0.60 |
| 1:I:236:CYS:SG | 1:I:242:ILE:CG1 | 2.90 | 0.60 |
| 1:A:341:ARG:HG2 | 1:A:346:LEU:HD21 | 1.84 | 0.59 |
| 1:B:21:MET:CE | 1:B:72:ILE:HD11 | 2.31 | 0.59 |
| 1:C:300:VAL:HG11 | 1:C:368:ILE:HD11 | 1.84 | 0.59 |
| 1:D:170:ILE:O | 1:D:174:ILE:HG22 | 2.02 | 0.59 |
| 1:D:214:PRO:C | 1:D:215:ASN:HD22 | 2.05 | 0.59 |
| 1:D:355:PHE:HE1 | 1:D:362:GLU:HG3 | 1.67 | 0.59 |
| 1:E:40:THR:HG23 | 1:E:65:LEU:HD22 | 1.84 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:154:ILE:HG21 | 1:I:162:LYS:HB3 | 1.84 | 0.59 |
| 1:K:171:ARG:O | 1:K:174:ILE:HG23 | 2.02 | 0.59 |
| 1:C:236:CYS:SG | 1:C:242:ILE:CG1 | 2.90 | 0.59 |
| 1:E:108:THR:CG2 | 1:F:226:ARG:HH21 | 2.05 | 0.59 |
| 1:G:235:GLU:HB2 | 1:G:258:THR:O | 2.02 | 0.59 |
| 1:G:355:PHE:CE2 | 1:G:365:TYR:CB | 2.85 | 0.59 |
| 1:J:146:ALA:HB2 | 1:J:173:LEU:HD21 | 1.85 | 0.59 |
| 1:K:352:LYS:HB2 | 1:K:365:TYR:OH | 2.01 | 0.59 |
| 1:B:125:ILE:CD1 | 1:B:126:PRO:HD2 | 2.31 | 0.59 |
| 1:F:291:ILE:HD13 | 1:F:316:PHE:CZ | 2.36 | 0.59 |
| 1:J:69:ILE:HA | 1:J:72:ILE:HG22 | 1.85 | 0.59 |
| 1:K:61:SER:HB3 | 1:K:64:GLU:OE1 | 2.02 | 0.59 |
| 1:C:78:THR:O | 1:C:82:LEU:HG | 2.02 | 0.59 |
| 1:F:259:LEU:HD13 | 1:F:267:THR:HG23 | 1.83 | 0.59 |
| 1:H:104:ARG:HH21 | 1:H:191:GLU:CD | 2.05 | 0.59 |
| 1:H:48:VAL:CG2 | 1:H:53:LEU:HD11 | 2.21 | 0.59 |
| 1:I:353:MET:CG | 1:I:357:GLN:HE22 | 2.15 | 0.59 |
| 1:G:211:ARG:NH2 | 1:L:116:ASP:OD1 | 2.36 | 0.59 |
| 1:L:125:ILE:CD1 | 1:L:126:PRO:HD2 | 2.28 | 0.59 |
| 1:L:24:MET:SD | 1:L:44:ILE:HG21 | 2.43 | 0.59 |
| 1:L:324:LEU:HD22 | 1:L:332:VAL:HG13 | 1.84 | 0.59 |
| 1:G:278:GLU:CD | 1:L:337:ARG:HH12 | 2.02 | 0.59 |
| 1:J:317:ASP:OD1 | 1:J:318:GLU:N | 2.35 | 0.59 |
| 1:D:65:LEU:HB3 | 1:D:118:ILE:CG1 | 2.33 | 0.59 |
| 1:F:209:ILE:O | 1:F:209:ILE:HD13 | 2.02 | 0.59 |
| 1:H:188:SER:OG | 1:H:189:PRO:CD | 2.42 | 0.59 |
| 1:C:171:ARG:O | 1:C:174:ILE:HG22 | 2.03 | 0.59 |
| 1:I:155:THR:HG21 | 1:I:267:THR:HG21 | 1.84 | 0.59 |
| 1:I:365:TYR:O | 1:I:368:ILE:CG1 | 2.51 | 0.59 |
| 1:J:216:PHE:O | 1:J:220:VAL:HG23 | 2.02 | 0.59 |
| 1:L:73:TYR:CE1 | 1:L:87:ILE:HG23 | 2.38 | 0.59 |
| 1:B:272:VAL:HG13 | 1:B:284:THR:HG22 | 1.85 | 0.59 |
| 1:D:171:ARG:HG3 | 1:D:197:ILE:CD1 | 2.33 | 0.59 |
| 1:I:319:GLU:OE2 | 1:I:343:LYS:NZ | 2.35 | 0.59 |
| 1:B:365:TYR:CE2 | 1:B:369:ILE:HD11 | 2.38 | 0.59 |
| 1:E:44:ILE:H | 1:E:56:THR:CG2 | 2.16 | 0.59 |
| 1:F:178:ASP:O | 1:F:180:ASN:ND2 | 2.36 | 0.59 |
| 1:G:345:GLN:HB2 | 1:G:349:TRP:HZ3 | 1.68 | 0.59 |
| 1:H:27:HIS:HD2 | 1:H:55:ILE:CG2 | 2.16 | 0.59 |
| 1:F:156:GLY:HA2 | 1:F:296:TRP:HZ3 | 1.66 | 0.58 |
| 1:I:81:LEU:HD11 | 1:I:87:ILE:CD1 | 2.33 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:119:GLN:HE21 | 1:K:121:THR:HG23 | 1.67 | 0.58 |
| 1:A:9:MET:HA | 1:A:27:HIS:CE1 | 2.38 | 0.58 |
| 1:B:46:ALA:HB2 | 1:B:55:ILE:CD1 | 2.31 | 0.58 |
| 1:D:296:TRP:CH2 | 1:D:347:MET:HE3 | 2.38 | 0.58 |
| 1:E:21:MET:O | 1:E:25:LEU:N | 2.28 | 0.58 |
| 1:F:209:ILE:CG2 | 1:F:210:PRO:HD3 | 2.32 | 0.58 |
| 1:G:296:TRP:CH2 | 1:G:347:MET:HE1 | 2.38 | 0.58 |
| 1:H:92:GLU:CG | 1:H:102:ARG:HG2 | 2.33 | 0.58 |
| 1:F:180:ASN:HA | 1:F:201:SER:O | 2.03 | 0.58 |
| 1:J:145:ILE:HD12 | 1:J:293:LEU:CD2 | 2.33 | 0.58 |
| 1:J:40:THR:HG23 | 1:J:62:ASN:CA | 2.33 | 0.58 |
| 1:F:111:LEU:HD12 | 1:F:115:HIS:C | 2.23 | 0.58 |
| 1:G:9:MET:HE1 | 1:G:24:MET:HA | 1.85 | 0.58 |
| 1:J:174:ILE:O | 1:J:199:THR:HG21 | 2.03 | 0.58 |
| 1:C:111:LEU:HD13 | 1:C:111:LEU:C | 2.23 | 0.58 |
| 1:J:9:MET:HG2 | 1:J:10:PRO:HD2 | 1.84 | 0.58 |
| 1:D:92:GLU:OE2 | 1:D:102:ARG:NH1 | 2.37 | 0.58 |
| 1:I:302:THR:HG21 | 1:I:308:VAL:HB | 1.85 | 0.58 |
| 1:K:137:LEU:CD2 | 1:K:141:ILE:HD11 | 2.34 | 0.58 |
| 1:L:275:PHE:CE2 | 1:L:283:ARG:CD | 2.87 | 0.58 |
| 1:B:365:TYR:CE2 | 1:B:369:ILE:CD1 | 2.87 | 0.58 |
| 1:C:12:GLU:CD | 1:C:56:THR:OG1 | 2.42 | 0.58 |
| 1:F:73:TYR:CE1 | 1:F:89:THR:CG2 | 2.87 | 0.58 |
| 1:G:264:VAL:HG23 | 1:G:312:GLU:OE2 | 2.03 | 0.58 |
| 1:I:108:THR:CG2 | 1:J:222:ASN:HD21 | 2.00 | 0.58 |
| 1:J:26:GLU:OE1 | 1:J:95:PRO:HB2 | 2.02 | 0.58 |
| 1:K:222:ASN:O | 1:K:225:ARG:N | 2.35 | 0.58 |
| 1:K:44:ILE:CG2 | 1:K:55:ILE:HD11 | 2.33 | 0.58 |
| 1:B:102:ARG:HH21 | 1:B:127:THR:HB | 1.68 | 0.58 |
| 1:D:10:PRO:HD3 | 1:D:27:HIS:ND1 | 2.18 | 0.58 |
| 1:E:209:ILE:HG13 | 1:E:216:PHE:CD1 | 2.38 | 0.58 |
| 1:G:170:ILE:HD12 | 1:G:194:TYR:OH | 2.04 | 0.58 |
| 1:H:21:MET:CE | 1:H:68:LEU:HB3 | 2.34 | 0.58 |
| 1:I:317:ASP:H | 1:I:320:VAL:CG2 | 2.17 | 0.58 |
| 1:J:68:LEU:O | 1:J:72:ILE:HG22 | 2.04 | 0.58 |
| 1:K:180:ASN:HD22 | 1:K:180:ASN:N | 2.00 | 0.58 |
| 1:K:283:ARG:O | 1:K:287:ILE:HG12 | 2.04 | 0.58 |
| 1:L:112:VAL:CG2 | 1:L:117:ALA:HB3 | 2.30 | 0.58 |
| 1:L:190:ILE:CG1 | 1:L:208:GLU:HG2 | 2.34 | 0.58 |
| 1:A:94:ARG:NE | 1:A:100:ARG:HE | 2.00 | 0.58 |
| 1:B:21:MET:HE1 | 1:B:72:ILE:HD11 | 1.86 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:230:LEU:CD1 | 1:G:230:LEU:C | 2.72 | 0.58 |
| 1:H:290:THR:O | 1:H:292:ARG:NH2 | 2.37 | 0.58 |
| 1:I:104:ARG:CG | 1:I:125:ILE:HD13 | 2.24 | 0.58 |
| 1:J:352:LYS:CG | 1:J:365:TYR:OH | 2.48 | 0.58 |
| 1:K:223:ALA:O | 1:K:228:PRO:HD3 | 2.04 | 0.58 |
| 1:C:152:VAL:HG13 | 1:C:293:LEU:HD12 | 1.85 | 0.58 |
| 1:E:184:LEU:HG | 1:E:228:PRO:HB3 | 1.86 | 0.58 |
| 1:K:184:LEU:HG | 1:K:228:PRO:HB3 | 1.85 | 0.58 |
| 1:A:230:LEU:HD21 | 1:A:256:TYR:CE1 | 2.39 | 0.57 |
| 1:J:182:LYS:HZ1 | 1:J:226:ARG:HB3 | 1.69 | 0.57 |
| 1:L:173:LEU:HD22 | 1:L:181:ARG:NH2 | 2.19 | 0.57 |
| 1:E:355:PHE:HE2 | 1:E:362:GLU:HA | 1.68 | 0.57 |
| 1:F:149:GLU:HG2 | 1:F:150:GLY:H | 1.64 | 0.57 |
| 1:H:65:LEU:HD12 | 1:H:120:ILE:HD12 | 1.86 | 0.57 |
| 1:J:145:ILE:CD1 | 1:J:293:LEU:HD21 | 2.34 | 0.57 |
| 1:L:275:PHE:CD2 | 1:L:283:ARG:HB3 | 2.39 | 0.57 |
| 1:B:188:SER:O | 1:B:208:GLU:HG3 | 2.04 | 0.57 |
| 1:E:80:GLN:O | 1:E:83:SER:HB3 | 2.04 | 0.57 |
| 1:G:354:LYS:HB3 | 1:G:360:ILE:HD11 | 1.86 | 0.57 |
| 1:I:177:SER:CA | 1:I:200:ILE:HD13 | 2.34 | 0.57 |
| 1:I:62:ASN:OD1 | 1:I:118:ILE:HD12 | 2.05 | 0.57 |
| 1:C:214:PRO:HG2 | 1:C:218:ASP:OD2 | 2.04 | 0.57 |
| 1:H:230:LEU:HD23 | 1:H:230:LEU:C | 2.24 | 0.57 |
| 1:J:22:ASP:O | 1:J:25:LEU:HB2 | 2.05 | 0.57 |
| 1:J:9:MET:HE3 | 1:J:24:MET:CB | 2.29 | 0.57 |
| 1:E:321:ARG:O | 1:E:325:LEU:HG | 2.05 | 0.57 |
| 1:F:219:GLY:O | 1:F:222:ASN:HB3 | 2.04 | 0.57 |
| 1:K:194:TYR:CD2 | 1:K:204:VAL:HG11 | 2.40 | 0.57 |
| 1:A:46:ALA:HB2 | 1:A:55:ILE:CD1 | 2.35 | 0.57 |
| 1:C:209:ILE:N | 1:C:210:PRO:HD2 | 2.19 | 0.57 |
| 1:E:275:PHE:O | 1:E:280:ARG:CB | 2.52 | 0.57 |
| 1:E:93:PHE:HE2 | 1:E:95:PRO:HA | 1.69 | 0.57 |
| 1:H:21:MET:HE3 | 1:H:68:LEU:HD13 | 1.86 | 0.57 |
| 1:J:238:ASP:OD1 | 1:J:241:THR:HG23 | 2.04 | 0.57 |
| 1:J:24:MET:HE3 | 1:J:25:LEU:HG | 1.85 | 0.57 |
| 1:L:40:THR:HG23 | 1:L:118:ILE:O | 2.04 | 0.57 |
| 1:L:27:HIS:CD2 | 1:L:31:LEU:HD13 | 2.39 | 0.57 |
| 1:A:92:GLU:OE2 | 1:A:100:ARG:NH1 | 2.36 | 0.57 |
| 1:B:48:VAL:HG22 | 1:B:53:LEU:HD11 | 1.86 | 0.57 |
| 1:B:90:HIS:C | 1:B:90:HIS:CD2 | 2.78 | 0.57 |
| 1:F:188:SER:HA | 1:F:209:ILE:HG22 | 1.86 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:222:ASN:O | 1:G:225:ARG:HG3 | 2.05 | 0.57 |
| 1:H:251:THR:CG2 | 1:H:253:HIS:CD2 | 2.87 | 0.57 |
| 1:I:110:CYS:O | 1:J:212:HIS:CE1 | 2.55 | 0.57 |
| 1:K:171:ARG:O | 1:K:175:GLU:HB2 | 2.04 | 0.57 |
| 1:A:119:GLN:NE2 | 1:B:182:LYS:HE2 | 2.16 | 0.57 |
| 1:A:184:LEU:HG | 1:A:228:PRO:HB3 | 1.86 | 0.57 |
| 1:H:365:TYR:OH | 1:H:369:ILE:HD11 | 2.04 | 0.57 |
| 1:I:81:LEU:HD11 | 1:I:87:ILE:HD12 | 1.85 | 0.57 |
| 1:I:111:LEU:HD12 | 1:J:190:ILE:HD12 | 1.85 | 0.57 |
| 1:K:25:LEU:CD1 | 1:K:93:PHE:CE2 | 2.88 | 0.57 |
| 1:K:111:LEU:HD11 | 1:L:90:HIS:NE2 | 2.19 | 0.57 |
| 1:A:154:ILE:HG22 | 1:A:162:LYS:HB3 | 1.87 | 0.57 |
| 1:A:320:VAL:HG13 | 1:A:339:LEU:HD13 | 1.87 | 0.57 |
| 1:F:313:TYR:HE2 | 1:F:345:GLN:NE2 | 2.02 | 0.57 |
| 1:G:122:LEU:N | 1:G:122:LEU:CD1 | 2.68 | 0.57 |
| 1:G:135:MET:HA | 1:G:135:MET:CE | 2.34 | 0.57 |
| 1:G:144:ALA:CB | 1:G:315:VAL:HG13 | 2.35 | 0.57 |
| 1:G:235:GLU:CB | 1:G:258:THR:OG1 | 2.52 | 0.57 |
| 1:I:197:ILE:H | 1:I:197:ILE:CD1 | 2.17 | 0.57 |
| 1:I:13:PRO:CG | 1:I:20:PHE:CD2 | 2.88 | 0.57 |
| 1:K:281:LEU:HD12 | 1:K:281:LEU:O | 2.05 | 0.57 |
| 1:L:317:ASP:OD1 | 1:L:318:GLU:N | 2.38 | 0.57 |
| 1:B:171:ARG:HG3 | 1:B:197:ILE:HD13 | 1.86 | 0.57 |
| 1:C:34:SER:O | 1:C:124:THR:HG23 | 2.05 | 0.57 |
| 1:C:333:THR:O | 1:C:336:THR:OG1 | 2.14 | 0.57 |
| 1:C:48:VAL:HG12 | 1:C:49:TYR:HD2 | 1.70 | 0.57 |
| 1:E:43:PRO:HG2 | 1:E:54:LYS:HD3 | 1.85 | 0.57 |
| 1:G:126:PRO:HB2 | 1:G:192:PHE:CE1 | 2.39 | 0.57 |
| 1:G:260:HIS:CD2 | 1:G:261:THR:CG2 | 2.88 | 0.57 |
| 1:I:179:SER:HB2 | 1:I:181:ARG:NH2 | 2.20 | 0.57 |
| 1:J:92:GLU:OE2 | 1:J:102:ARG:NH2 | 2.38 | 0.57 |
| 1:K:25:LEU:HD13 | 1:K:93:PHE:HE2 | 1.69 | 0.57 |
| 1:L:320:VAL:HG13 | 1:L:339:LEU:HD12 | 1.87 | 0.57 |
| 1:E:150:GLY:HA3 | 1:E:292:ARG:HD2 | 1.86 | 0.56 |
| 1:F:49:TYR:CD1 | 1:F:50:GLY:N | 2.71 | 0.56 |
| 1:I:197:ILE:N | 1:I:197:ILE:CD1 | 2.68 | 0.56 |
| 1:C:131:LYS:O | 1:C:134:THR:OG1 | 2.22 | 0.56 |
| 1:D:111:LEU:HD22 | 1:D:115:HIS:O | 2.05 | 0.56 |
| 1:H:185:THR:HG22 | 1:H:232:MET:HB3 | 1.86 | 0.56 |
| 1:H:229:ARG:HG2 | 1:H:229:ARG:HH21 | 1.68 | 0.56 |
| 1:H:276:SER:O | 1:H:280:ARG:HB2 | 2.05 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:93:PHE:CE2 | 1:K:103:TYR:CE1 | 2.93 | 0.56 |
| 1:L:40:THR:HG23 | 1:L:65:LEU:HD23 | 1.86 | 0.56 |
| 1:A:297:GLN:HG3 | 1:A:311:ARG:HG2 | 1.86 | 0.56 |
| 1:B:21:MET:SD | 1:B:68:LEU:HD22 | 2.45 | 0.56 |
| 1:C:104:ARG:CD | 1:C:125:ILE:HD11 | 2.34 | 0.56 |
| 1:D:184:LEU:HG | 1:D:228:PRO:HB3 | 1.87 | 0.56 |
| 1:D:246:LEU:HD23 | 1:D:290:THR:HG21 | 1.87 | 0.56 |
| 1:D:355:PHE:CE1 | 1:D:362:GLU:HG3 | 2.40 | 0.56 |
| 1:E:9:MET:HG2 | 1:E:10:PRO:HD2 | 1.86 | 0.56 |
| 1:F:44:ILE:HB | 1:F:56:THR:HG23 | 1.87 | 0.56 |
| 1:I:22:ASP:HB3 | 1:I:93:PHE:CE2 | 2.40 | 0.56 |
| 1:I:367:LEU:HD23 | 1:I:368:ILE:N | 2.19 | 0.56 |
| 1:E:17:THR:HG22 | 1:E:18:PRO:HD2 | 1.87 | 0.56 |
| 1:E:223:ALA:O | 1:E:228:PRO:HD3 | 2.04 | 0.56 |
| 1:E:288:LEU:HB3 | 1:E:325:LEU:HD21 | 1.86 | 0.56 |
| 1:G:208:GLU:H | 1:G:212:HIS:CD2 | 2.21 | 0.56 |
| 1:K:89:THR:HG23 | 1:K:105:VAL:CG1 | 2.34 | 0.56 |
| 1:A:211:ARG:O | 1:F:84:GLY:HA2 | 2.06 | 0.56 |
| 1:C:355:PHE:CE1 | 1:C:362:GLU:HG2 | 2.31 | 0.56 |
| 1:G:46:ALA:HB2 | 1:G:55:ILE:CD1 | 2.34 | 0.56 |
| 1:I:22:ASP:OD2 | 1:I:93:PHE:CZ | 2.58 | 0.56 |
| 1:L:365:TYR:CZ | 1:L:369:ILE:HD11 | 2.40 | 0.56 |
| 1:L:61:SER:O | 1:L:64:GLU:N | 2.38 | 0.56 |
| 1:A:25:LEU:HD23 | 1:A:36:ILE:CD1 | 2.36 | 0.56 |
| 1:A:306:ARG:HG2 | 1:A:307:ARG:H | 1.71 | 0.56 |
| 1:B:279:GLU:O | 1:B:283:ARG:HG2 | 2.05 | 0.56 |
| 1:C:166:LEU:HD12 | 1:C:167:ALA:N | 2.20 | 0.56 |
| 1:D:86:ASP:OD1 | 1:D:87:ILE:N | 2.39 | 0.56 |
| 1:I:174:ILE:HG12 | 1:I:202:ALA:HB3 | 1.87 | 0.56 |
| 1:J:102:ARG:NE | 1:J:193:VAL:HG21 | 2.20 | 0.56 |
| 1:L:297:GLN:OE1 | 1:L:311:ARG:NH2 | 2.37 | 0.56 |
| 1:A:182:LYS:HD2 | 1:F:37:THR:HG21 | 1.88 | 0.56 |
| 1:A:340:VAL:HG12 | 1:A:346:LEU:CD1 | 2.36 | 0.56 |
| 1:C:361:SER:HB3 | 1:C:364:VAL:CG2 | 2.34 | 0.56 |
| 1:F:135:MET:HB3 | 1:F:137:LEU:HD13 | 1.88 | 0.56 |
| 1:G:291:ILE:HG21 | 1:G:316:PHE:CE2 | 2.41 | 0.56 |
| 1:H:209:ILE:N | 1:H:210:PRO:HD2 | 2.21 | 0.56 |
| 1:I:86:ASP:CG | 1:J:225:ARG:HH12 | 2.09 | 0.56 |
| 1:L:333:THR:HG23 | 1:L:334:SER:H | 1.70 | 0.56 |
| 1:L:337:ARG:O | 1:L:340:VAL:CG2 | 2.53 | 0.56 |
| 1:B:132:LEU:HB2 | 1:B:172:GLU:HG3 | 1.88 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:367:LEU:HD23 | 1:C:325:LEU:HD22 | 1.88 | 0.56 |
| 1:E:23:ARG:NH1 | 1:E:26:GLU:OE1 | 2.39 | 0.56 |
| 1:E:8:LEU:CD1 | 1:E:31:LEU:HD11 | 2.36 | 0.56 |
| 1:F:283:ARG:O | 1:F:287:ILE:HG13 | 2.06 | 0.56 |
| 1:G:320:VAL:CG1 | 1:G:339:LEU:HD13 | 2.35 | 0.56 |
| 1:G:89:THR:CG2 | 1:G:90:HIS:H | 2.18 | 0.56 |
| 1:A:126:PRO:O | 1:A:191:GLU:O | 2.23 | 0.56 |
| 1:A:288:LEU:O | 1:A:321:ARG:HD2 | 2.06 | 0.56 |
| 1:A:94:ARG:HD3 | 1:A:96:ASN:O | 2.06 | 0.56 |
| 1:H:276:SER:O | 1:H:280:ARG:N | 2.37 | 0.56 |
| 1:H:58:ARG:NH2 | 1:H:58:ARG:HB3 | 2.21 | 0.56 |
| 1:H:68:LEU:H | 1:H:68:LEU:HD23 | 1.69 | 0.56 |
| 1:A:142:ILE:HA | 1:A:145:ILE:HG12 | 1.87 | 0.56 |
| 1:B:9:MET:CE | 1:B:24:MET:HB2 | 2.34 | 0.56 |
| 1:E:17:THR:CG2 | 1:E:18:PRO:CD | 2.84 | 0.56 |
| 1:E:208:GLU:N | 1:E:212:HIS:HD2 | 1.92 | 0.56 |
| 1:G:121:THR:C | 1:G:122:LEU:HD12 | 2.26 | 0.56 |
| 1:B:55:ILE:HG22 | 1:B:55:ILE:O | 2.06 | 0.56 |
| 1:D:365:TYR:O | 1:D:369:ILE:HG22 | 2.05 | 0.56 |
| 1:E:108:THR:CG2 | 1:F:226:ARG:HH22 | 2.11 | 0.56 |
| 1:I:68:LEU:O | 1:I:72:ILE:HG13 | 2.06 | 0.56 |
| 1:J:185:THR:HG22 | 1:J:232:MET:HB3 | 1.88 | 0.56 |
| 1:K:329:PRO:O | 1:K:332:VAL:HG13 | 2.06 | 0.56 |
| 1:A:37:THR:HG21 | 1:B:182:LYS:HD2 | 1.86 | 0.55 |
| 1:D:188:SER:HB3 | 1:D:189:PRO:HD3 | 1.88 | 0.55 |
| 1:D:174:ILE:HG12 | 1:D:199:THR:CG2 | 2.31 | 0.55 |
| 1:D:296:TRP:CZ3 | 1:D:347:MET:HE3 | 2.41 | 0.55 |
| 1:E:102:ARG:NH1 | 1:E:127:THR:HG21 | 2.21 | 0.55 |
| 1:E:275:PHE:O | 1:E:280:ARG:HG3 | 2.06 | 0.55 |
| 1:H:355:PHE:CZ | 1:H:362:GLU:HG3 | 2.41 | 0.55 |
| 1:J:299:LEU:HA | 1:J:308:VAL:O | 2.06 | 0.55 |
| 1:K:270:ARG:O | 1:K:274:SER:OG | 2.20 | 0.55 |
| 1:B:102:ARG:HE | 1:B:127:THR:HA | 1.70 | 0.55 |
| 1:E:10:PRO:HG2 | 1:E:11:ASP:OD1 | 2.05 | 0.55 |
| 1:H:81:LEU:CD2 | 1:H:87:ILE:HG13 | 2.36 | 0.55 |
| 1:K:93:PHE:CE2 | 1:K:103:TYR:HE1 | 2.23 | 0.55 |
| 1:K:169:ILE:O | 1:K:172:GLU:HB3 | 2.06 | 0.55 |
| 1:C:149:GLU:O | 1:C:292:ARG:CD | 2.53 | 0.55 |
| 1:D:155:THR:HB | 1:D:261:THR:O | 2.06 | 0.55 |
| 1:G:144:ALA:HB2 | 1:G:315:VAL:HG11 | 1.89 | 0.55 |
| 1:G:355:PHE:HE2 | 1:G:365:TYR:CG | 2.21 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:121:THR:HG21 | 1:I:182:LYS:NZ | 2.20 | 0.55 |
| 1:J:209:ILE:HD11 | 1:J:215:ASN:O | 2.05 | 0.55 |
| 1:K:173:LEU:HD22 | 1:K:181:ARG:NE | 2.21 | 0.55 |
| 1:B:249:ALA:HB3 | 1:B:290:THR:HG21 | 1.88 | 0.55 |
| 1:F:132:LEU:CD1 | 1:F:169:ILE:CD1 | 2.83 | 0.55 |
| 1:F:93:PHE:CD1 | 1:F:93:PHE:O | 2.60 | 0.55 |
| 1:G:288:LEU:CD1 | 1:G:325:LEU:HD23 | 2.36 | 0.55 |
| 1:G:34:SER:O | 1:G:124:THR:HG23 | 2.07 | 0.55 |
| 1:B:259:LEU:HD12 | 1:B:267:THR:CG2 | 2.37 | 0.55 |
| 1:D:65:LEU:HD23 | 1:D:118:ILE:O | 2.06 | 0.55 |
| 1:G:25:LEU:HD23 | 1:G:36:ILE:CD1 | 2.37 | 0.55 |
| 1:J:10:PRO:CD | 1:J:27:HIS:CD2 | 2.84 | 0.55 |
| 1:G:145:ILE:C | 1:G:145:ILE:HD12 | 2.27 | 0.55 |
| 1:G:361:SER:HB3 | 1:G:364:VAL:HG23 | 1.88 | 0.55 |
| 1:H:312:GLU:HB2 | 1:H:347:MET:N | 2.22 | 0.55 |
| 1:I:171:ARG:HA | 1:I:174:ILE:HG22 | 1.88 | 0.55 |
| 1:A:251:THR:OG1 | 1:A:253:HIS:CD2 | 2.60 | 0.55 |
| 1:G:365:TYR:CZ | 1:G:369:ILE:HD11 | 2.41 | 0.55 |
| 1:I:230:LEU:CD1 | 1:I:256:TYR:CD1 | 2.90 | 0.55 |
| 1:J:45:PHE:CD2 | 1:J:52:LEU:HG | 2.35 | 0.55 |
| 1:B:102:ARG:HB2 | 1:B:125:ILE:CG2 | 2.37 | 0.55 |
| 1:F:166:LEU:HD13 | 1:F:232:MET:SD | 2.47 | 0.55 |
| 1:I:247:GLU:O | 1:I:251:THR:HG23 | 2.07 | 0.55 |
| 1:I:272:VAL:HG13 | 1:I:284:THR:CG2 | 2.31 | 0.55 |
| 1:J:140:ASN:ND2 | 1:J:140:ASN:H | 2.05 | 0.55 |
| 1:L:73:TYR:CD1 | 1:L:87:ILE:HG23 | 2.42 | 0.55 |
| 1:E:43:PRO:CG | 1:E:54:LYS:HD3 | 2.37 | 0.55 |
| 1:F:314:LEU:HD23 | 1:F:315:VAL:C | 2.27 | 0.55 |
| 1:A:203:VAL:CG1 | 1:F:42:GLU:OE1 | 2.55 | 0.55 |
| 1:G:320:VAL:HG13 | 1:G:339:LEU:HD13 | 1.88 | 0.55 |
| 1:H:261:THR:CG2 | 1:H:270:ARG:HD2 | 2.36 | 0.55 |
| 1:B:92:GLU:HA | 1:B:101:TYR:O | 2.07 | 0.55 |
| 1:C:186:TYR:CE2 | 1:C:219:GLY:CA | 2.90 | 0.55 |
| 1:F:291:ILE:CD1 | 1:F:316:PHE:CE1 | 2.90 | 0.55 |
| 1:I:352:LYS:HD2 | 1:I:365:TYR:OH | 2.06 | 0.55 |
| 1:K:149:GLU:OE1 | 1:K:149:GLU:N | 2.40 | 0.55 |
| 1:K:36:ILE:N | 1:K:36:ILE:HD12 | 2.22 | 0.55 |
| 1:L:273:THR:O | 1:L:275:PHE:N | 2.40 | 0.55 |
| 1:B:280:ARG:O | 1:B:284:THR:CG2 | 2.42 | 0.54 |
| 1:E:89:THR:HG23 | 1:E:105:VAL:HG13 | 1.87 | 0.54 |
| 1:G:94:ARG:CB | 1:G:99:VAL:O | 2.55 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:340:VAL:HG23 | 1:H:346:LEU:CD2 | 2.38 | 0.54 |
| 1:A:105:VAL:HG12 | 1:A:122:LEU:HG | 1.88 | 0.54 |
| 1:D:104:ARG:NE | 1:D:123:ARG:HH11 | 2.05 | 0.54 |
| 1:D:172:GLU:O | 1:D:176:THR:HG23 | 2.07 | 0.54 |
| 1:H:181:ARG:HG2 | 1:H:229:ARG:CG | 2.37 | 0.54 |
| 1:I:209:ILE:N | 1:I:210:PRO:HD2 | 2.22 | 0.54 |
| 1:J:170:ILE:O | 1:J:174:ILE:HG22 | 2.08 | 0.54 |
| 1:J:69:ILE:HD12 | 1:J:72:ILE:CG2 | 2.37 | 0.54 |
| 1:A:135:MET:CB | 1:A:137:LEU:CD1 | 2.85 | 0.54 |
| 1:H:70:ASN:OD1 | 1:H:78:THR:OG1 | 2.22 | 0.54 |
| 1:K:238:ASP:O | 1:K:242:ILE:HG13 | 2.07 | 0.54 |
| 1:G:174:ILE:CD1 | 1:G:202:ALA:CB | 2.85 | 0.54 |
| 1:G:230:LEU:CD2 | 1:G:256:TYR:CE1 | 2.86 | 0.54 |
| 1:G:288:LEU:HD13 | 1:G:325:LEU:HD23 | 1.90 | 0.54 |
| 1:L:132:LEU:HD23 | 1:L:172:GLU:OE1 | 2.07 | 0.54 |
| 1:L:17:THR:HG23 | 1:L:18:PRO:CD | 2.34 | 0.54 |
| 1:D:296:TRP:CE3 | 1:D:347:MET:CE | 2.91 | 0.54 |
| 1:E:319:GLU:O | 1:E:323:ILE:HG13 | 2.07 | 0.54 |
| 1:E:116:ASP:OD1 | 1:F:211:ARG:NH1 | 2.37 | 0.54 |
| 1:F:8:LEU:O | 1:F:27:HIS:CE1 | 2.54 | 0.54 |
| 1:G:184:LEU:HD22 | 1:G:226:ARG:HH21 | 1.73 | 0.54 |
| 1:H:13:PRO:HB2 | 1:H:15:ARG:O | 2.08 | 0.54 |
| 1:B:9:MET:SD | 1:B:24:MET:HB2 | 2.48 | 0.54 |
| 1:D:156:GLY:O | 1:D:162:LYS:NZ | 2.40 | 0.54 |
| 1:F:180:ASN:H | 1:F:180:ASN:ND2 | 2.06 | 0.54 |
| 1:G:132:LEU:HD23 | 1:G:132:LEU:C | 2.27 | 0.54 |
| 1:G:229:ARG:NE | 1:G:229:ARG:HA | 2.22 | 0.54 |
| 1:I:174:ILE:CG1 | 1:I:202:ALA:HB3 | 2.38 | 0.54 |
| 1:I:55:ILE:HD13 | 1:I:55:ILE:N | 2.19 | 0.54 |
| 1:J:25:LEU:CD1 | 1:J:93:PHE:CE2 | 2.90 | 0.54 |
| 1:K:171:ARG:NE | 1:K:197:ILE:HD11 | 2.23 | 0.54 |
| 1:K:12:GLU:CD | 1:K:57:ASN:H | 2.11 | 0.54 |
| 1:B:95:PRO:HD2 | 1:B:99:VAL:O | 2.08 | 0.54 |
| 1:E:174:ILE:HG13 | 1:E:202:ALA:CB | 2.37 | 0.54 |
| 1:G:6:ILE:HD12 | 1:G:6:ILE:C | 2.28 | 0.54 |
| 1:J:95:PRO:HD2 | 1:J:99:VAL:O | 2.07 | 0.54 |
| 1:C:251:THR:OG1 | 1:C:253:HIS:HD2 | 1.91 | 0.54 |
| 1:C:261:THR:HG21 | 1:C:267:THR:N | 2.23 | 0.54 |
| 1:G:296:TRP:CZ3 | 1:G:347:MET:SD | 3.01 | 0.54 |
| 1:G:355:PHE:HE2 | 1:G:365:TYR:HB2 | 1.73 | 0.54 |
| 1:J:102:ARG:NH1 | 1:J:127:THR:CG2 | 2.70 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:116:ASP:OD1 | 1:K:211:ARG:NH2 | 2.40 | 0.54 |
| 1:L:141:ILE:HG22 | 1:L:145:ILE:HD13 | 1.89 | 0.54 |
| 1:L:291:ILE:CD1 | 1:L:316:PHE:CE1 | 2.90 | 0.54 |
| 1:L:314:LEU:HD23 | 1:L:315:VAL:C | 2.28 | 0.54 |
| 1:A:155:THR:HG21 | 1:A:267:THR:CG2 | 2.31 | 0.54 |
| 1:B:26:GLU:OE1 | 1:B:95:PRO:HB3 | 2.08 | 0.54 |
| 1:E:320:VAL:HG23 | 1:E:321:ARG:N | 2.23 | 0.54 |
| 1:G:345:GLN:CG | 1:G:349:TRP:CZ3 | 2.90 | 0.54 |
| 1:H:17:THR:OG1 | 1:H:20:PHE:HD2 | 1.90 | 0.54 |
| 1:H:121:THR:HG21 | 1:I:182:LYS:HZ1 | 1.73 | 0.54 |
| 1:J:296:TRP:CH2 | 1:J:347:MET:HE3 | 2.42 | 0.54 |
| 1:L:304:ASP:N | 1:L:304:ASP:OD1 | 2.41 | 0.54 |
| 1:C:9:MET:HA | 1:C:27:HIS:CE1 | 2.43 | 0.54 |
| 1:D:65:LEU:HB3 | 1:D:118:ILE:HG12 | 1.89 | 0.54 |
| 1:D:17:THR:OG1 | 1:D:20:PHE:HD2 | 1.91 | 0.54 |
| 1:H:119:GLN:OE1 | 1:I:205:SER:CB | 2.55 | 0.54 |
| 1:J:191:GLU:OE2 | 1:J:192:PHE:HE1 | 1.91 | 0.54 |
| 1:J:365:TYR:CE2 | 1:J:369:ILE:CD1 | 2.84 | 0.54 |
| 1:B:5:ASN:CB | 1:B:51:ARG:NH2 | 2.71 | 0.53 |
| 1:C:108:THR:HG21 | 1:D:222:ASN:HD21 | 1.73 | 0.53 |
| 1:F:361:SER:O | 1:F:364:VAL:CG1 | 2.56 | 0.53 |
| 1:G:260:HIS:CD2 | 1:G:261:THR:HG23 | 2.43 | 0.53 |
| 1:I:293:LEU:HD13 | 1:I:315:VAL:HG22 | 1.90 | 0.53 |
| 1:J:104:ARG:NE | 1:J:123:ARG:HH11 | 2.07 | 0.53 |
| 1:L:105:VAL:HG22 | 1:L:122:LEU:HG | 1.90 | 0.53 |
| 1:L:352:LYS:HA | 1:L:365:TYR:CE1 | 2.43 | 0.53 |
| 1:D:171:ARG:O | 1:D:174:ILE:HG22 | 2.08 | 0.53 |
| 1:H:348:THR:CG2 | 1:H:372:ALA:HB3 | 2.39 | 0.53 |
| 1:H:86:ASP:OD2 | 1:I:225:ARG:NH1 | 2.38 | 0.53 |
| 1:I:10:PRO:HG2 | 1:I:11:ASP:OD1 | 2.08 | 0.53 |
| 1:K:349:TRP:O | 1:K:353:MET:HG2 | 2.09 | 0.53 |
| 1:K:361:SER:HB2 | 1:K:364:VAL:CG2 | 2.37 | 0.53 |
| 1:D:125:ILE:CD1 | 1:D:126:PRO:HD2 | 2.38 | 0.53 |
| 1:F:38:ILE:HG12 | 1:F:44:ILE:HD13 | 1.90 | 0.53 |
| 1:G:296:TRP:CH2 | 1:G:347:MET:CE | 2.90 | 0.53 |
| 1:J:86:ASP:OD1 | 1:J:87:ILE:N | 2.41 | 0.53 |
| 1:H:198:GLU:OE1 | 1:H:198:GLU:HA | 2.07 | 0.53 |
| 1:I:184:LEU:CG | 1:I:228:PRO:HB3 | 2.39 | 0.53 |
| 1:J:171:ARG:O | 1:J:174:ILE:HG22 | 2.09 | 0.53 |
| 1:K:349:TRP:CZ3 | 1:K:353:MET:HG3 | 2.43 | 0.53 |
| 1:A:94:ARG:NH1 | 1:A:97:ARG:HD2 | 2.17 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:185:THR:HG22 | 1:B:232:MET:HB3 | 1.91 | 0.53 |
| 1:B:352:LYS:CA | 1:B:365:TYR:HE1 | 2.22 | 0.53 |
| 1:D:302:THR:OG1 | 1:D:306:ARG:O | 2.19 | 0.53 |
| 1:D:312:GLU:HB2 | 1:D:347:MET:N | 2.23 | 0.53 |
| 1:E:149:GLU:OE1 | 1:E:149:GLU:N | 2.41 | 0.53 |
| 1:J:132:LEU:CD2 | 1:J:137:LEU:HD12 | 2.39 | 0.53 |
| 1:K:40:THR:CG2 | 1:K:65:LEU:CD2 | 2.80 | 0.53 |
| 1:L:188:SER:HB2 | 1:L:189:PRO:HD3 | 1.91 | 0.53 |
| 1:A:179:SER:HB2 | 1:A:181:ARG:NH2 | 2.24 | 0.53 |
| 1:A:355:PHE:HB2 | 1:A:360:ILE:HG21 | 1.90 | 0.53 |
| 1:H:125:ILE:CD1 | 1:H:126:PRO:HD2 | 2.29 | 0.53 |
| 1:H:370:ALA:O | 1:H:371:GLY:C | 2.47 | 0.53 |
| 1:I:355:PHE:CE2 | 1:I:362:GLU:CA | 2.61 | 0.53 |
| 1:J:25:LEU:HD13 | 1:J:93:PHE:HE2 | 1.74 | 0.53 |
| 1:G:203:VAL:HG12 | 1:L:39:GLN:HE22 | 1.74 | 0.53 |
| 1:D:222:ASN:OD1 | 1:D:226:ARG:NH1 | 2.42 | 0.53 |
| 1:D:72:ILE:HD13 | 1:D:105:VAL:HG11 | 1.90 | 0.53 |
| 1:F:276:SER:O | 1:F:280:ARG:HB2 | 2.09 | 0.53 |
| 1:F:291:ILE:HD11 | 1:F:316:PHE:CE1 | 2.42 | 0.53 |
| 1:H:102:ARG:CZ | 1:H:193:VAL:CG2 | 2.87 | 0.53 |
| 1:H:229:ARG:HD3 | 1:H:229:ARG:O | 2.09 | 0.53 |
| 1:I:7:ASN:C | 1:I:8:LEU:HD12 | 2.29 | 0.53 |
| 1:A:21:MET:CE | 1:A:72:ILE:HD11 | 2.39 | 0.53 |
| 1:D:184:LEU:HD22 | 1:D:226:ARG:HH21 | 1.73 | 0.53 |
| 1:F:285:ILE:N | 1:F:285:ILE:HD12 | 2.24 | 0.53 |
| 1:G:94:ARG:HB3 | 1:G:100:ARG:HG2 | 1.89 | 0.53 |
| 1:G:271:LEU:O | 1:G:274:SER:OG | 2.20 | 0.53 |
| 1:G:144:ALA:CB | 1:G:315:VAL:CG1 | 2.86 | 0.53 |
| 1:K:288:LEU:HB2 | 1:K:325:LEU:CD2 | 2.38 | 0.53 |
| 1:A:97:ARG:NH1 | 1:A:97:ARG:HG3 | 2.24 | 0.53 |
| 1:B:132:LEU:HB2 | 1:B:172:GLU:CG | 2.39 | 0.53 |
| 1:C:197:ILE:N | 1:C:197:ILE:CD1 | 2.71 | 0.53 |
| 1:C:300:VAL:CG1 | 1:C:301:PRO:HD2 | 2.39 | 0.53 |
| 1:D:100:ARG:HH21 | 1:D:100:ARG:HG3 | 1.74 | 0.53 |
| 1:D:145:ILE:HG12 | 1:D:169:ILE:HD12 | 1.91 | 0.53 |
| 1:D:248:ALA:O | 1:D:253:HIS:HD2 | 1.92 | 0.53 |
| 1:J:209:ILE:O | 1:J:213:LEU:N | 2.35 | 0.53 |
| 1:K:34:SER:OG | 1:K:35:ASP:OD1 | 2.13 | 0.53 |
| 1:A:94:ARG:NE | 1:A:100:ARG:HG2 | 2.17 | 0.53 |
| 1:B:319:GLU:HG2 | 1:B:320:VAL:N | 2.23 | 0.53 |
| 1:C:186:TYR:CD2 | 1:C:219:GLY:HA3 | 2.43 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:88:ASP:OD2 | 1:D:225:ARG:HD2 | 2.09 | 0.53 |
| 1:G:28:ALA:CB | 1:G:36:ILE:HD11 | 2.39 | 0.53 |
| 1:L:90:HIS:CD2 | 1:L:102:ARG:NH2 | 2.77 | 0.53 |
| 1:L:276:SER:O | 1:L:280:ARG:HB2 | 2.09 | 0.53 |
| 1:A:28:ALA:CB | 1:A:36:ILE:HD11 | 2.39 | 0.52 |
| 1:C:270:ARG:NH1 | 1:D:289:GLU:OE2 | 2.42 | 0.52 |
| 1:D:35:ASP:OD2 | 1:E:227:LYS:CD | 2.56 | 0.52 |
| 1:H:261:THR:CG2 | 1:H:270:ARG:CD | 2.87 | 0.52 |
| 1:I:184:LEU:CD1 | 1:I:228:PRO:HG3 | 2.33 | 0.52 |
| 1:J:40:THR:OG1 | 1:J:117:ALA:HB1 | 2.09 | 0.52 |
| 1:J:264:VAL:HG23 | 1:J:294:CYS:SG | 2.48 | 0.52 |
| 1:K:21:MET:HE2 | 1:K:68:LEU:HG | 1.91 | 0.52 |
| 1:K:155:THR:O | 1:K:296:TRP:HA | 2.08 | 0.52 |
| 1:K:319:GLU:O | 1:K:323:ILE:HG13 | 2.08 | 0.52 |
| 1:K:121:THR:HG21 | 1:L:182:LYS:HZ1 | 1.74 | 0.52 |
| 1:K:111:LEU:CD1 | 1:L:90:HIS:CE1 | 2.92 | 0.52 |
| 1:C:171:ARG:HA | 1:C:174:ILE:HG22 | 1.92 | 0.52 |
| 1:C:185:THR:HG22 | 1:C:232:MET:HB3 | 1.90 | 0.52 |
| 1:D:248:ALA:O | 1:D:251:THR:OG1 | 2.28 | 0.52 |
| 1:D:40:THR:HG23 | 1:D:65:LEU:HD22 | 1.84 | 0.52 |
| 1:E:93:PHE:CD2 | 1:E:94:ARG:N | 2.78 | 0.52 |
| 1:F:11:ASP:O | 1:F:13:PRO:HD3 | 2.09 | 0.52 |
| 1:H:119:GLN:NE2 | 1:I:182:LYS:HE3 | 2.23 | 0.52 |
| 1:I:16:PHE:CZ | 1:I:21:MET:N | 2.77 | 0.52 |
| 1:I:230:LEU:HD11 | 1:I:256:TYR:CE1 | 2.42 | 0.52 |
| 1:J:16:PHE:CD2 | 1:J:60:LEU:HD11 | 2.44 | 0.52 |
| 1:L:132:LEU:CD2 | 1:L:172:GLU:OE1 | 2.58 | 0.52 |
| 1:L:141:ILE:HD11 | 1:L:313:TYR:CD1 | 2.45 | 0.52 |
| 1:A:25:LEU:HD23 | 1:A:36:ILE:HD13 | 1.91 | 0.52 |
| 1:G:260:HIS:CD2 | 1:G:261:THR:N | 2.77 | 0.52 |
| 1:G:352:LYS:HA | 1:G:355:PHE:CD2 | 2.45 | 0.52 |
| 1:I:355:PHE:HZ | 1:I:362:GLU:HG2 | 1.63 | 0.52 |
| 1:J:212:HIS:O | 1:J:213:LEU:HD23 | 2.09 | 0.52 |
| 1:K:116:ASP:N | 1:K:116:ASP:OD1 | 2.43 | 0.52 |
| 1:K:188:SER:OG | 1:K:189:PRO:HD3 | 2.08 | 0.52 |
| 1:B:24:MET:SD | 1:B:25:LEU:HD23 | 2.49 | 0.52 |
| 1:C:21:MET:HE1 | 1:C:72:ILE:HD11 | 1.90 | 0.52 |
| 1:D:69:ILE:HD12 | 1:D:72:ILE:HG23 | 1.92 | 0.52 |
| 1:F:290:THR:O | 1:F:292:ARG:NH2 | 2.43 | 0.52 |
| 1:H:19:VAL:HG23 | 1:H:20:PHE:H | 1.73 | 0.52 |
| 1:H:183:VAL:HG13 | 1:H:230:LEU:HD22 | 1.91 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:68:LEU:CD2 | 1:H:68:LEU:N | 2.73 | 0.52 |
| 1:I:302:THR:CG2 | 1:I:308:VAL:HB | 2.39 | 0.52 |
| 1:J:263:GLY:HA3 | 1:J:266:GLU:HG2 | 1.92 | 0.52 |
| 1:A:208:GLU:CG | 1:A:210:PRO:HD2 | 2.39 | 0.52 |
| 1:A:185:THR:HG22 | 1:A:232:MET:HB3 | 1.92 | 0.52 |
| 1:B:279:GLU:HG2 | 1:B:283:ARG:HG2 | 1.91 | 0.52 |
| 1:B:312:GLU:HB2 | 1:B:347:MET:N | 2.25 | 0.52 |
| 1:C:17:THR:CG2 | 1:C:18:PRO:CD | 2.87 | 0.52 |
| 1:G:180:ASN:H | 1:G:180:ASN:HD22 | 1.57 | 0.52 |
| 1:H:137:LEU:HD11 | 1:H:311:ARG:CZ | 2.39 | 0.52 |
| 1:H:99:VAL:HG12 | 1:H:100:ARG:N | 2.24 | 0.52 |
| 1:K:23:ARG:NH1 | 1:K:26:GLU:OE2 | 2.42 | 0.52 |
| 1:L:186:TYR:HB3 | 1:L:209:ILE:CD1 | 2.40 | 0.52 |
| 1:G:131:LYS:CG | 1:G:171:ARG:NH1 | 2.73 | 0.52 |
| 1:H:181:ARG:HG2 | 1:H:229:ARG:HG3 | 1.91 | 0.52 |
| 1:I:61:SER:N | 1:I:64:GLU:OE1 | 2.41 | 0.52 |
| 1:K:292:ARG:NH2 | 1:K:292:ARG:HG3 | 2.20 | 0.52 |
| 1:L:291:ILE:HD13 | 1:L:316:PHE:CZ | 2.44 | 0.52 |
| 1:B:337:ARG:CZ | 1:B:341:ARG:NH1 | 2.73 | 0.52 |
| 1:F:9:MET:HA | 1:F:27:HIS:CE1 | 2.45 | 0.52 |
| 1:A:17:THR:CG2 | 1:A:18:PRO:CD | 2.88 | 0.52 |
| 1:A:263:GLY:O | 1:A:267:THR:HG23 | 2.09 | 0.52 |
| 1:A:300:VAL:HG21 | 1:A:368:ILE:HD11 | 1.89 | 0.52 |
| 1:D:12:GLU:OE2 | 1:D:58:ARG:HB2 | 2.09 | 0.52 |
| 1:D:159:GLY:O | 1:D:299:LEU:HD12 | 2.10 | 0.52 |
| 1:D:21:MET:O | 1:D:25:LEU:HG | 2.09 | 0.52 |
| 1:J:312:GLU:HB2 | 1:J:347:MET:N | 2.25 | 0.52 |
| 1:K:90:HIS:CD2 | 1:K:104:ARG:HG3 | 2.45 | 0.52 |
| 1:D:40:THR:HG21 | 1:D:117:ALA:HB1 | 1.91 | 0.52 |
| 1:G:365:TYR:CE1 | 1:G:369:ILE:HD11 | 2.45 | 0.52 |
| 1:H:275:PHE:CD1 | 1:H:283:ARG:HG3 | 2.45 | 0.52 |
| 1:I:119:GLN:HE22 | 1:J:182:LYS:HE2 | 1.74 | 0.52 |
| 1:I:44:ILE:H | 1:I:56:THR:CG2 | 2.23 | 0.52 |
| 1:J:263:GLY:HA3 | 1:J:266:GLU:CG | 2.40 | 0.52 |
| 1:L:187:GLU:O | 1:L:209:ILE:N | 2.36 | 0.52 |
| 1:H:27:HIS:CD2 | 1:H:55:ILE:HG23 | 2.45 | 0.52 |
| 1:J:25:LEU:HD13 | 1:J:93:PHE:CE2 | 2.44 | 0.52 |
| 1:K:208:GLU:CG | 1:K:210:PRO:HD2 | 2.39 | 0.52 |
| 1:K:333:THR:O | 1:K:336:THR:HG23 | 2.10 | 0.52 |
| 1:A:205:SER:HB2 | 1:F:119:GLN:OE1 | 2.10 | 0.51 |
| 1:E:21:MET:HE1 | 1:E:68:LEU:HB3 | 1.92 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:21:MET:CE | 1:G:68:LEU:HD22 | 2.40 | 0.51 |
| 1:H:27:HIS:CD2 | 1:H:55:ILE:CG2 | 2.93 | 0.51 |
| 1:I:184:LEU:CD1 | 1:I:228:PRO:CG | 2.88 | 0.51 |
| 1:J:21:MET:O | 1:J:25:LEU:HG | 2.10 | 0.51 |
| 1:A:223:ALA:O | 1:A:228:PRO:CD | 2.59 | 0.51 |
| 1:C:319:GLU:O | 1:C:323:ILE:HG13 | 2.10 | 0.51 |
| 1:D:44:ILE:HG22 | 1:D:55:ILE:HD11 | 1.91 | 0.51 |
| 1:E:154:ILE:CG2 | 1:E:165:LEU:HD23 | 2.39 | 0.51 |
| 1:E:297:GLN:NE2 | 1:E:311:ARG:NE | 2.58 | 0.51 |
| 1:F:209:ILE:CG2 | 1:F:210:PRO:CD | 2.87 | 0.51 |
| 1:G:25:LEU:HD23 | 1:G:36:ILE:HD13 | 1.91 | 0.51 |
| 1:G:270:ARG:NH2 | 1:H:286:ASP:OD1 | 2.38 | 0.51 |
| 1:H:119:GLN:HE22 | 1:I:182:LYS:CE | 2.21 | 0.51 |
| 1:I:251:THR:OG1 | 1:I:253:HIS:HD2 | 1.92 | 0.51 |
| 1:K:365:TYR:HE1 | 1:K:369:ILE:HD11 | 1.76 | 0.51 |
| 1:L:70:ASN:OD1 | 1:L:78:THR:OG1 | 2.27 | 0.51 |
| 1:A:160:SER:O | 1:A:299:LEU:HG | 2.10 | 0.51 |
| 1:B:35:ASP:OD2 | 1:C:227:LYS:HD3 | 2.10 | 0.51 |
| 1:F:265:ALA:HB3 | 1:F:337:ARG:NH2 | 2.26 | 0.51 |
| 1:G:5:ASN:C | 1:G:6:ILE:HG23 | 2.31 | 0.51 |
| 1:H:319:GLU:O | 1:H:323:ILE:HG13 | 2.11 | 0.51 |
| 1:I:29:GLU:HG2 | 1:I:101:TYR:CZ | 2.45 | 0.51 |
| 1:I:265:ALA:O | 1:I:268:MET:HB2 | 2.11 | 0.51 |
| 1:I:345:GLN:HE21 | 1:I:350:ASP:HB2 | 1.76 | 0.51 |
| 1:L:40:THR:N | 1:L:65:LEU:HD23 | 2.25 | 0.51 |
| 1:B:7:ASN:N | 1:B:7:ASN:HD22 | 2.09 | 0.51 |
| 1:D:104:ARG:HD2 | 1:D:125:ILE:HD13 | 1.92 | 0.51 |
| 1:D:249:ALA:CB | 1:D:290:THR:OG1 | 2.58 | 0.51 |
| 1:F:208:GLU:H | 1:F:212:HIS:CD2 | 2.25 | 0.51 |
| 1:F:259:LEU:CD1 | 1:F:267:THR:HG23 | 2.40 | 0.51 |
| 1:F:314:LEU:HD11 | 1:F:339:LEU:HB3 | 1.92 | 0.51 |
| 1:F:336:THR:O | 1:F:340:VAL:HG13 | 2.11 | 0.51 |
| 1:E:75:PRO:HD3 | 1:J:323:ILE:HD12 | 1.92 | 0.51 |
| 1:A:227:LYS:HE3 | 1:F:47:GLU:OE1 | 2.09 | 0.51 |
| 1:C:132:LEU:CB | 1:C:172:GLU:HG3 | 2.39 | 0.51 |
| 1:D:125:ILE:HG13 | 1:D:126:PRO:HD2 | 1.93 | 0.51 |
| 1:F:360:ILE:HB | 1:F:364:VAL:HG11 | 1.92 | 0.51 |
| 1:G:236:CYS:HB2 | 1:G:241:THR:OG1 | 2.10 | 0.51 |
| 1:A:38:ILE:CG2 | 1:A:60:LEU:HD22 | 2.41 | 0.51 |
| 1:B:194:TYR:CD2 | 1:B:204:VAL:HG11 | 2.46 | 0.51 |
| 1:B:99:VAL:HG12 | 1:B:100:ARG:H | 1.75 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:273:THR:HG22 | 1:C:280:ARG:HH11 | 1.76 | 0.51 |
| 1:E:349:TRP:CH2 | 1:E:353:MET:HG3 | 2.45 | 0.51 |
| 1:G:174:ILE:CG1 | 1:G:202:ALA:HB1 | 2.40 | 0.51 |
| 1:G:352:LYS:HD2 | 1:G:365:TYR:OH | 2.10 | 0.51 |
| 1:I:281:LEU:HD23 | 1:I:285:ILE:HD13 | 1.91 | 0.51 |
| 1:J:171:ARG:C | 1:J:174:ILE:HG22 | 2.31 | 0.51 |
| 1:J:174:ILE:C | 1:J:199:THR:HG21 | 2.31 | 0.51 |
| 1:J:200:ILE:HG23 | 1:J:201:SER:N | 2.25 | 0.51 |
| 1:J:233:VAL:HB | 1:J:257:THR:CG2 | 2.32 | 0.51 |
| 1:K:55:ILE:HG13 | 1:K:56:THR:HG23 | 1.92 | 0.51 |
| 1:A:92:GLU:HG2 | 1:A:102:ARG:HG2 | 1.90 | 0.51 |
| 1:B:360:ILE:HD12 | 1:B:365:TYR:HB2 | 1.92 | 0.51 |
| 1:C:263:GLY:O | 1:C:267:THR:HG23 | 2.11 | 0.51 |
| 1:G:351:ALA:O | 1:G:354:LYS:HB2 | 2.10 | 0.51 |
| 1:J:208:GLU:HB3 | 1:J:211:ARG:HB3 | 1.93 | 0.51 |
| 1:J:21:MET:O | 1:J:24:MET:HB3 | 2.11 | 0.51 |
| 1:J:24:MET:HE3 | 1:J:25:LEU:CG | 2.41 | 0.51 |
| 1:J:145:ILE:HD12 | 1:J:293:LEU:HD23 | 1.92 | 0.51 |
| 1:B:18:PRO:O | 1:B:21:MET:HB3 | 2.11 | 0.51 |
| 1:C:230:LEU:HD11 | 1:C:256:TYR:CD1 | 2.45 | 0.51 |
| 1:C:248:ALA:O | 1:C:251:THR:OG1 | 2.25 | 0.51 |
| 1:I:102:ARG:O | 1:I:103:TYR:CD1 | 2.64 | 0.51 |
| 1:J:238:ASP:OD1 | 1:J:241:THR:OG1 | 2.15 | 0.51 |
| 1:J:352:LYS:N | 1:J:365:TYR:HE1 | 2.09 | 0.51 |
| 1:L:296:TRP:CD1 | 1:L:347:MET:CE | 2.94 | 0.51 |
| 1:A:142:ILE:O | 1:A:145:ILE:HG13 | 2.11 | 0.51 |
| 1:B:272:VAL:HG13 | 1:B:284:THR:CG2 | 2.41 | 0.51 |
| 1:B:6:ILE:HG23 | 1:B:54:LYS:HG3 | 1.91 | 0.51 |
| 1:D:209:ILE:N | 1:D:210:PRO:HD2 | 2.25 | 0.51 |
| 1:H:19:VAL:CG2 | 1:H:20:PHE:N | 2.72 | 0.51 |
| 1:I:261:THR:HG21 | 1:I:267:THR:CB | 2.41 | 0.51 |
| 1:J:132:LEU:HD21 | 1:J:137:LEU:HD12 | 1.92 | 0.51 |
| 1:K:288:LEU:HB2 | 1:K:325:LEU:HD21 | 1.92 | 0.51 |
| 1:L:87:ILE:HB | 1:L:107:ALA:HB3 | 1.93 | 0.51 |
| 1:C:111:LEU:HD11 | 1:C:114:GLY:H | 1.75 | 0.51 |
| 1:C:229:ARG:HG3 | 1:C:229:ARG:O | 2.10 | 0.51 |
| 1:C:81:LEU:HD12 | 1:C:81:LEU:N | 2.25 | 0.51 |
| 1:E:174:ILE:HD12 | 1:E:204:VAL:CG2 | 2.40 | 0.51 |
| 1:F:355:PHE:CZ | 1:F:362:GLU:HG3 | 2.46 | 0.51 |
| 1:G:21:MET:HE1 | 1:G:72:ILE:HD11 | 1.91 | 0.51 |
| 1:I:9:MET:CE | 1:I:12:GLU:HG3 | 2.41 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:115:HIS:N | 1:L:115:HIS:CD2 | 2.79 | 0.51 |
| 1:A:223:ALA:O | 1:A:228:PRO:HD3 | 2.11 | 0.50 |
| 1:D:125:ILE:HD12 | 1:D:126:PRO:HD2 | 1.93 | 0.50 |
| 1:D:6:ILE:HA | 1:D:53:LEU:HD13 | 1.93 | 0.50 |
| 1:H:188:SER:HG | 1:H:189:PRO:HD3 | 1.70 | 0.50 |
| 1:H:240:GLU:H | 1:H:240:GLU:CD | 2.12 | 0.50 |
| 1:H:9:MET:CE | 1:H:24:MET:HB2 | 2.42 | 0.50 |
| 1:I:302:THR:CG2 | 1:I:308:VAL:CG1 | 2.89 | 0.50 |
| 1:I:353:MET:CG | 1:I:357:GLN:NE2 | 2.74 | 0.50 |
| 1:A:363:ARG:HG3 | 1:A:364:VAL:N | 2.26 | 0.50 |
| 1:D:248:ALA:HA | 1:D:251:THR:OG1 | 2.11 | 0.50 |
| 1:G:355:PHE:HZ | 1:G:365:TYR:HB3 | 1.76 | 0.50 |
| 1:G:367:LEU:HD23 | 1:G:367:LEU:C | 2.32 | 0.50 |
| 1:H:229:ARG:HB2 | 1:H:229:ARG:CZ | 2.41 | 0.50 |
| 1:J:264:VAL:HG23 | 1:J:294:CYS:CB | 2.41 | 0.50 |
| 1:J:123:ARG:NH2 | 1:K:225:ARG:O | 2.44 | 0.50 |
| 1:A:12:GLU:OE2 | 1:A:58:ARG:HB3 | 2.11 | 0.50 |
| 1:B:336:THR:O | 1:B:340:VAL:HG13 | 2.12 | 0.50 |
| 1:D:105:VAL:HG22 | 1:D:122:LEU:HG | 1.92 | 0.50 |
| 1:I:27:HIS:O | 1:I:30:SER:HB3 | 2.12 | 0.50 |
| 1:L:291:ILE:HD11 | 1:L:316:PHE:CE1 | 2.47 | 0.50 |
| 1:L:73:TYR:CD1 | 1:L:87:ILE:CG2 | 2.94 | 0.50 |
| 1:A:158:THR:CG2 | 1:A:260:HIS:CE1 | 2.94 | 0.50 |
| 1:E:9:MET:HG2 | 1:E:10:PRO:CD | 2.41 | 0.50 |
| 1:E:332:VAL:HG23 | 1:E:333:THR:N | 2.26 | 0.50 |
| 1:E:7:ASN:C | 1:E:8:LEU:CG | 2.79 | 0.50 |
| 1:H:104:ARG:HD3 | 1:H:191:GLU:CD | 2.31 | 0.50 |
| 1:I:24:MET:SD | 1:I:25:LEU:CD2 | 2.96 | 0.50 |
| 1:J:24:MET:CE | 1:J:25:LEU:CD2 | 2.89 | 0.50 |
| 1:J:264:VAL:HG11 | 1:J:340:VAL:HG11 | 1.94 | 0.50 |
| 1:J:348:THR:CG2 | 1:J:372:ALA:CB | 2.90 | 0.50 |
| 1:K:137:LEU:HD23 | 1:K:141:ILE:HD11 | 1.94 | 0.50 |
| 1:K:171:ARG:NE | 1:K:197:ILE:CD1 | 2.74 | 0.50 |
| 1:A:261:THR:HG21 | 1:A:267:THR:HA | 1.93 | 0.50 |
| 1:A:261:THR:HG21 | 1:A:267:THR:CA | 2.41 | 0.50 |
| 1:B:93:PHE:CD1 | 1:B:93:PHE:C | 2.85 | 0.50 |
| 1:C:363:ARG:HG3 | 1:C:364:VAL:H | 1.75 | 0.50 |
| 1:E:288:LEU:HB3 | 1:E:325:LEU:CD2 | 2.41 | 0.50 |
| 1:F:364:VAL:HG13 | 1:F:365:TYR:H | 1.76 | 0.50 |
| 1:G:17:THR:CG2 | 1:G:18:PRO:CD | 2.88 | 0.50 |
| 1:G:345:GLN:CB | 1:G:349:TRP:HZ3 | 2.24 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:251:THR:CG2 | 1:H:253:HIS:NE2 | 2.74 | 0.50 |
| 1:H:9:MET:HE3 | 1:H:24:MET:HA | 1.93 | 0.50 |
| 1:I:149:GLU:O | 1:I:292:ARG:CD | 2.57 | 0.50 |
| 1:J:24:MET:HE1 | 1:J:25:LEU:HD23 | 1.93 | 0.50 |
| 1:K:180:ASN:N | 1:K:180:ASN:ND2 | 2.60 | 0.50 |
| 1:B:125:ILE:HG12 | 1:B:191:GLU:O | 2.11 | 0.50 |
| 1:D:174:ILE:HG23 | 1:D:175:GLU:N | 2.26 | 0.50 |
| 1:E:224:LEU:HD21 | 1:E:248:ALA:HA | 1.94 | 0.50 |
| 1:D:367:LEU:CD1 | 1:E:325:LEU:HD13 | 2.41 | 0.50 |
| 1:G:291:ILE:CB | 1:G:316:PHE:HD2 | 2.22 | 0.50 |
| 1:J:264:VAL:HG23 | 1:J:294:CYS:HB3 | 1.94 | 0.50 |
| 1:K:65:LEU:HD23 | 1:K:118:ILE:O | 2.12 | 0.50 |
| 1:A:124:THR:C | 1:A:125:ILE:HD13 | 2.32 | 0.50 |
| 1:B:188:SER:CB | 1:B:189:PRO:CD | 2.90 | 0.50 |
| 1:F:102:ARG:C | 1:F:125:ILE:HG22 | 2.32 | 0.50 |
| 1:F:87:ILE:HB | 1:F:107:ALA:HB3 | 1.92 | 0.50 |
| 1:G:369:ILE:O | 1:G:372:ALA:N | 2.43 | 0.50 |
| 1:H:17:THR:OG1 | 1:H:20:PHE:CD2 | 2.65 | 0.50 |
| 1:H:365:TYR:CE1 | 1:H:369:ILE:HD11 | 2.45 | 0.50 |
| 1:I:25:LEU:HD12 | 1:I:103:TYR:CE2 | 2.40 | 0.50 |
| 1:J:184:LEU:HD22 | 1:J:226:ARG:HH21 | 1.76 | 0.50 |
| 1:K:363:ARG:HA | 1:K:366:LYS:HD2 | 1.85 | 0.50 |
| 1:B:360:ILE:CD1 | 1:B:365:TYR:HB2 | 2.41 | 0.50 |
| 1:C:230:LEU:CD1 | 1:C:256:TYR:CE1 | 2.95 | 0.50 |
| 1:E:155:THR:HG21 | 1:E:267:THR:HG21 | 1.94 | 0.50 |
| 1:G:135:MET:CE | 1:G:135:MET:CA | 2.89 | 0.50 |
| 1:H:137:LEU:CD1 | 1:H:311:ARG:CZ | 2.90 | 0.50 |
| 1:I:17:THR:CG2 | 1:I:18:PRO:CD | 2.88 | 0.50 |
| 1:I:300:VAL:O | 1:I:308:VAL:HG12 | 2.11 | 0.50 |
| 1:J:16:PHE:CZ | 1:J:44:ILE:CD1 | 2.95 | 0.50 |
| 1:L:275:PHE:CD2 | 1:L:283:ARG:CB | 2.95 | 0.50 |
| 1:A:312:GLU:HB2 | 1:A:347:MET:N | 2.26 | 0.50 |
| 1:B:135:MET:HB3 | 1:B:137:LEU:HD13 | 1.92 | 0.50 |
| 1:B:99:VAL:HG12 | 1:B:100:ARG:N | 2.27 | 0.50 |
| 1:C:40:THR:HG23 | 1:C:65:LEU:HD22 | 1.91 | 0.50 |
| 1:I:154:ILE:HD13 | 1:I:166:LEU:HD21 | 1.94 | 0.50 |
| 1:K:276:SER:HA | 1:K:280:ARG:CD | 2.35 | 0.50 |
| 1:L:310:LEU:CD2 | 1:L:354:LYS:HG3 | 2.41 | 0.50 |
| 1:A:324:LEU:HD21 | 1:A:336:THR:HG23 | 1.94 | 0.49 |
| 1:A:21:MET:HE1 | 1:A:72:ILE:HD11 | 1.93 | 0.49 |
| 1:B:146:ALA:HB2 | 1:B:173:LEU:HD21 | 1.94 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:29:GLU:CG | 1:E:101:TYR:HE2 | 2.16 | 0.49 |
| 1:F:17:THR:HG22 | 1:F:19:VAL:H | 1.76 | 0.49 |
| 1:H:184:LEU:HD22 | 1:H:205:SER:OG | 2.12 | 0.49 |
| 1:H:320:VAL:CG1 | 1:H:339:LEU:HD13 | 2.41 | 0.49 |
| 1:I:81:LEU:HD23 | 1:I:118:ILE:HG12 | 1.94 | 0.49 |
| 1:I:28:ALA:CB | 1:I:36:ILE:HD11 | 2.42 | 0.49 |
| 1:I:25:LEU:HD22 | 1:I:36:ILE:HD13 | 1.93 | 0.49 |
| 1:J:17:THR:CG2 | 1:J:18:PRO:CD | 2.90 | 0.49 |
| 1:J:17:THR:HG22 | 1:J:18:PRO:CD | 2.41 | 0.49 |
| 1:J:264:VAL:HG11 | 1:J:340:VAL:CG1 | 2.42 | 0.49 |
| 1:L:296:TRP:HE1 | 1:L:347:MET:HE2 | 1.73 | 0.49 |
| 1:A:17:THR:HG23 | 1:A:18:PRO:CD | 2.35 | 0.49 |
| 1:A:184:LEU:HD22 | 1:A:226:ARG:HH21 | 1.77 | 0.49 |
| 1:A:319:GLU:O | 1:A:323:ILE:HG13 | 2.12 | 0.49 |
| 1:C:258:THR:O | 1:C:259:LEU:HD12 | 2.12 | 0.49 |
| 1:D:104:ARG:NE | 1:D:123:ARG:NH1 | 2.60 | 0.49 |
| 1:E:288:LEU:HD23 | 1:E:325:LEU:HD23 | 1.94 | 0.49 |
| 1:E:354:LYS:HE2 | 1:E:357:GLN:HG3 | 1.93 | 0.49 |
| 1:G:145:ILE:HD12 | 1:G:146:ALA:N | 2.27 | 0.49 |
| 1:G:180:ASN:ND2 | 1:G:180:ASN:H | 2.09 | 0.49 |
| 1:G:56:THR:HG22 | 1:G:58:ARG:H | 1.76 | 0.49 |
| 1:J:236:CYS:SG | 1:J:259:LEU:HD11 | 2.53 | 0.49 |
| 1:J:86:ASP:HB2 | 1:K:213:LEU:HD21 | 1.93 | 0.49 |
| 1:K:269:ARG:HG3 | 1:K:333:THR:HG21 | 1.94 | 0.49 |
| 1:A:230:LEU:HD13 | 1:A:230:LEU:C | 2.31 | 0.49 |
| 1:A:246:LEU:O | 1:A:250:LEU:HG | 2.12 | 0.49 |
| 1:C:188:SER:HB3 | 1:C:189:PRO:HD3 | 1.94 | 0.49 |
| 1:E:275:PHE:O | 1:E:280:ARG:CG | 2.60 | 0.49 |
| 1:G:174:ILE:HG13 | 1:G:202:ALA:CB | 2.43 | 0.49 |
| 1:G:269:ARG:CG | 1:G:269:ARG:NH1 | 2.68 | 0.49 |
| 1:G:89:THR:CG2 | 1:G:90:HIS:N | 2.71 | 0.49 |
| 1:G:42:GLU:OE1 | 1:H:203:VAL:HG13 | 2.11 | 0.49 |
| 1:H:340:VAL:O | 1:H:344:GLY:N | 2.44 | 0.49 |
| 1:K:171:ARG:HE | 1:K:197:ILE:HD11 | 1.78 | 0.49 |
| 1:K:173:LEU:CD2 | 1:K:181:ARG:NH1 | 2.75 | 0.49 |
| 1:A:12:GLU:OE1 | 1:A:56:THR:CG2 | 2.52 | 0.49 |
| 1:B:155:THR:CG2 | 1:B:259:LEU:HB2 | 2.26 | 0.49 |
| 1:C:152:VAL:HG13 | 1:C:293:LEU:CD1 | 2.41 | 0.49 |
| 1:D:92:GLU:OE2 | 1:D:102:ARG:NE | 2.45 | 0.49 |
| 1:D:320:VAL:CG1 | 1:D:339:LEU:HD13 | 2.42 | 0.49 |
| 1:F:13:PRO:HG3 | 1:F:20:PHE:CG | 2.45 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:248:ALA:O | 1:F:251:THR:OG1 | 2.28 | 0.49 |
| 1:J:24:MET:HE1 | 1:J:25:LEU:CD2 | 2.41 | 0.49 |
| 1:K:312:GLU:HB2 | 1:K:347:MET:N | 2.28 | 0.49 |
| 1:A:306:ARG:HG2 | 1:A:307:ARG:N | 2.27 | 0.49 |
| 1:E:154:ILE:HG22 | 1:E:162:LYS:HB2 | 1.94 | 0.49 |
| 1:F:49:TYR:HD1 | 1:F:50:GLY:H | 1.56 | 0.49 |
| 1:G:185:THR:HG22 | 1:G:232:MET:HB3 | 1.94 | 0.49 |
| 1:H:340:VAL:HG23 | 1:H:346:LEU:HD21 | 1.93 | 0.49 |
| 1:I:16:PHE:CE2 | 1:I:21:MET:HA | 2.47 | 0.49 |
| 1:L:209:ILE:HG21 | 1:L:216:PHE:CE1 | 2.47 | 0.49 |
| 1:C:312:GLU:HB2 | 1:C:347:MET:N | 2.27 | 0.49 |
| 1:D:314:LEU:HB2 | 1:D:340:VAL:HG12 | 1.93 | 0.49 |
| 1:G:102:ARG:HH21 | 1:G:125:ILE:HG21 | 1.75 | 0.49 |
| 1:H:233:VAL:HB | 1:H:257:THR:CG2 | 2.32 | 0.49 |
| 1:J:15:ARG:HB3 | 1:J:15:ARG:HH21 | 1.78 | 0.49 |
| 1:D:171:ARG:HA | 1:D:174:ILE:HG22 | 1.94 | 0.49 |
| 1:D:148:GLN:O | 1:D:254:PRO:HD3 | 2.13 | 0.49 |
| 1:G:291:ILE:CB | 1:G:316:PHE:CD2 | 2.95 | 0.49 |
| 1:G:38:ILE:CG2 | 1:G:60:LEU:HD22 | 2.42 | 0.49 |
| 1:H:66:GLY:O | 1:H:69:ILE:HG22 | 2.12 | 0.49 |
| 1:H:86:ASP:OD1 | 1:I:222:ASN:ND2 | 2.45 | 0.49 |
| 1:I:269:ARG:HG3 | 1:I:333:THR:HG21 | 1.93 | 0.49 |
| 1:J:105:VAL:HG22 | 1:J:122:LEU:HG | 1.95 | 0.49 |
| 1:J:296:TRP:CZ3 | 1:J:347:MET:HE3 | 2.48 | 0.49 |
| 1:J:361:SER:HB3 | 1:J:364:VAL:HG23 | 1.94 | 0.49 |
| 1:L:197:ILE:O | 1:L:197:ILE:HG22 | 2.12 | 0.49 |
| 1:L:90:HIS:CD2 | 1:L:102:ARG:HH22 | 2.31 | 0.49 |
| 1:A:97:ARG:O | 1:A:97:ARG:HD2 | 2.12 | 0.49 |
| 1:B:366:LYS:HD3 | 1:B:366:LYS:C | 2.33 | 0.49 |
| 1:E:137:LEU:HD23 | 1:E:141:ILE:HD11 | 1.95 | 0.49 |
| 1:E:317:ASP:O | 1:E:320:VAL:HG22 | 2.13 | 0.49 |
| 1:K:42:GLU:OE1 | 1:K:43:PRO:HD2 | 2.13 | 0.49 |
| 1:L:156:GLY:O | 1:L:260:HIS:HA | 2.12 | 0.49 |
| 1:L:170:ILE:HG22 | 1:L:174:ILE:CD1 | 2.43 | 0.49 |
| 1:A:55:ILE:O | 1:A:55:ILE:CG2 | 2.60 | 0.49 |
| 1:B:73:TYR:O | 1:B:77:ALA:HB2 | 2.12 | 0.49 |
| 1:F:335:ALA:O | 1:F:339:LEU:CD2 | 2.54 | 0.49 |
| 1:G:354:LYS:HB3 | 1:G:360:ILE:HD12 | 1.93 | 0.49 |
| 1:G:47:GLU:HG3 | 1:G:52:LEU:CD2 | 2.42 | 0.49 |
| 1:H:95:PRO:HG2 | 1:H:97:ARG:HH11 | 1.76 | 0.49 |
| 1:J:76:ASN:O | 1:J:79:THR:OG1 | 2.24 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:224:LEU:HD21 | 1:K:248:ALA:HA | 1.94 | 0.49 |
| 1:L:305:GLU:O | 1:L:305:GLU:CG | 2.61 | 0.49 |
| 1:A:154:ILE:CG2 | 1:A:162:LYS:HB3 | 2.42 | 0.49 |
| 1:B:259:LEU:CD1 | 1:B:267:THR:HG23 | 2.43 | 0.49 |
| 1:C:81:LEU:N | 1:C:81:LEU:CD1 | 2.75 | 0.49 |
| 1:F:17:THR:OG1 | 1:H:362:GLU:OE2 | 2.31 | 0.49 |
| 1:I:281:LEU:HD23 | 1:I:285:ILE:CD1 | 2.43 | 0.49 |
| 1:J:148:GLN:O | 1:J:254:PRO:HD3 | 2.13 | 0.49 |
| 1:J:51:ARG:HA | 1:K:180:ASN:OD1 | 2.12 | 0.49 |
| 1:K:155:THR:HG21 | 1:K:267:THR:HG21 | 1.94 | 0.49 |
| 1:L:335:ALA:O | 1:L:339:LEU:HD23 | 2.12 | 0.49 |
| 1:A:108:THR:HG23 | 1:B:213:LEU:HD11 | 1.95 | 0.48 |
| 1:E:162:LYS:HG2 | 1:E:163:SER:N | 2.28 | 0.48 |
| 1:F:233:VAL:HB | 1:F:257:THR:CG2 | 2.34 | 0.48 |
| 1:F:137:LEU:HD11 | 1:F:311:ARG:NH2 | 2.28 | 0.48 |
| 1:G:69:ILE:CD1 | 1:G:120:ILE:HG12 | 2.38 | 0.48 |
| 1:H:17:THR:HG1 | 1:H:20:PHE:HD2 | 1.58 | 0.48 |
| 1:J:166:LEU:CD2 | 1:J:256:TYR:HB3 | 2.42 | 0.48 |
| 1:E:91:TYR:OH | 1:J:338:LYS:NZ | 2.46 | 0.48 |
| 1:K:126:PRO:HB2 | 1:K:192:PHE:CE1 | 2.48 | 0.48 |
| 1:K:91:TYR:CE1 | 1:K:93:PHE:CD2 | 3.01 | 0.48 |
| 1:B:119:GLN:HE22 | 1:C:226:ARG:HD2 | 1.77 | 0.48 |
| 1:B:164:THR:OG1 | 1:B:165:LEU:N | 2.46 | 0.48 |
| 1:B:337:ARG:NE | 1:B:341:ARG:HH11 | 2.11 | 0.48 |
| 1:F:27:HIS:HE2 | 1:F:31:LEU:HD11 | 1.77 | 0.48 |
| 1:F:73:TYR:HD1 | 1:F:89:THR:HG21 | 1.65 | 0.48 |
| 1:H:229:ARG:CG | 1:H:229:ARG:HH21 | 2.25 | 0.48 |
| 1:J:199:THR:CG2 | 1:J:202:ALA:CB | 2.87 | 0.48 |
| 1:I:109:ALA:CB | 1:J:212:HIS:ND1 | 2.76 | 0.48 |
| 1:K:172:GLU:OE1 | 1:K:172:GLU:HA | 2.13 | 0.48 |
| 1:L:170:ILE:HG22 | 1:L:174:ILE:HD12 | 1.94 | 0.48 |
| 1:A:111:LEU:HD12 | 1:A:115:HIS:O | 2.13 | 0.48 |
| 1:A:297:GLN:HE21 | 1:A:311:ARG:CZ | 2.25 | 0.48 |
| 1:C:119:GLN:HE22 | 1:D:182:LYS:CE | 2.25 | 0.48 |
| 1:C:300:VAL:HG12 | 1:C:301:PRO:HD2 | 1.95 | 0.48 |
| 1:C:360:ILE:HG23 | 1:C:364:VAL:HB | 1.95 | 0.48 |
| 1:E:64:GLU:O | 1:E:68:LEU:HD13 | 2.12 | 0.48 |
| 1:F:345:GLN:HG3 | 1:F:349:TRP:CE3 | 2.43 | 0.48 |
| 1:G:203:VAL:CG1 | 1:L:39:GLN:NE2 | 2.76 | 0.48 |
| 1:H:33:ALA:HA | 1:H:48:VAL:HA | 1.96 | 0.48 |
| 1:I:188:SER:HB3 | 1:I:189:PRO:HD3 | 1.95 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:45:PHE:CE2 | 1:I:203:VAL:HG22 | 2.48 | 0.48 |
| 1:L:17:THR:HG22 | 1:L:19:VAL:H | 1.77 | 0.48 |
| 1:D:171:ARG:CA | 1:D:174:ILE:HG22 | 2.44 | 0.48 |
| 1:E:300:VAL:HG13 | 1:E:364:VAL:HG11 | 1.95 | 0.48 |
| 1:H:128:THR:CG2 | 1:H:196:GLU:HG3 | 2.42 | 0.48 |
| 1:J:125:ILE:HD12 | 1:J:126:PRO:CD | 2.42 | 0.48 |
| 1:K:262:SER:HB2 | 1:K:296:TRP:CE2 | 2.48 | 0.48 |
| 1:K:39:GLN:C | 1:K:65:LEU:HD21 | 2.33 | 0.48 |
| 1:L:132:LEU:CD1 | 1:L:169:ILE:CD1 | 2.89 | 0.48 |
| 1:A:92:GLU:OE1 | 1:A:102:ARG:NH2 | 2.44 | 0.48 |
| 1:A:108:THR:HG21 | 1:B:226:ARG:HH12 | 1.78 | 0.48 |
| 1:D:44:ILE:CG2 | 1:D:55:ILE:HD11 | 2.43 | 0.48 |
| 1:F:284:THR:O | 1:F:288:LEU:HD23 | 2.13 | 0.48 |
| 1:G:131:LYS:O | 1:G:134:THR:HB | 2.12 | 0.48 |
| 1:G:142:ILE:O | 1:G:145:ILE:HG13 | 2.14 | 0.48 |
| 1:G:360:ILE:HG22 | 1:G:361:SER:N | 2.28 | 0.48 |
| 1:H:6:ILE:O | 1:H:7:ASN:ND2 | 2.46 | 0.48 |
| 1:I:355:PHE:HZ | 1:I:362:GLU:CG | 2.24 | 0.48 |
| 1:J:209:ILE:HG22 | 1:J:210:PRO:N | 2.29 | 0.48 |
| 1:L:48:VAL:CG1 | 1:L:49:TYR:CD2 | 2.90 | 0.48 |
| 1:C:111:LEU:HD22 | 1:C:115:HIS:O | 2.13 | 0.48 |
| 1:C:268:MET:SD | 1:C:291:ILE:CD1 | 3.01 | 0.48 |
| 1:D:297:GLN:OE1 | 1:D:311:ARG:NE | 2.46 | 0.48 |
| 1:E:312:GLU:HB2 | 1:E:347:MET:N | 2.27 | 0.48 |
| 1:G:174:ILE:HD11 | 1:G:202:ALA:CB | 2.32 | 0.48 |
| 1:J:72:ILE:CD1 | 1:J:105:VAL:HG21 | 2.40 | 0.48 |
| 1:J:353:MET:HE2 | 1:J:353:MET:N | 2.29 | 0.48 |
| 1:J:40:THR:HG23 | 1:J:62:ASN:N | 2.29 | 0.48 |
| 1:J:69:ILE:HD12 | 1:J:72:ILE:HG23 | 1.96 | 0.48 |
| 1:L:149:GLU:CG | 1:L:150:GLY:N | 2.73 | 0.48 |
| 1:F:158:THR:HB | 1:F:260:HIS:HE1 | 1.78 | 0.48 |
| 1:F:365:TYR:CE2 | 1:F:369:ILE:HD11 | 2.49 | 0.48 |
| 1:G:157:ALA:O | 1:G:162:LYS:NZ | 2.46 | 0.48 |
| 1:H:251:THR:HG22 | 1:H:253:HIS:NE2 | 2.27 | 0.48 |
| 1:H:21:MET:O | 1:H:25:LEU:HG | 2.14 | 0.48 |
| 1:J:35:ASP:OD2 | 1:K:227:LYS:HD2 | 2.13 | 0.48 |
| 1:K:259:LEU:HD11 | 1:K:271:LEU:HD21 | 1.96 | 0.48 |
| 1:A:194:TYR:CD2 | 1:A:204:VAL:HG11 | 2.48 | 0.48 |
| 1:A:297:GLN:HG3 | 1:A:311:ARG:CG | 2.44 | 0.48 |
| 1:D:366:LYS:HA | 1:D:369:ILE:HG22 | 1.93 | 0.48 |
| 1:E:182:LYS:NZ | 1:E:226:ARG:O | 2.46 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:247:GLU:O | 1:E:251:THR:OG1 | 2.31 | 0.48 |
| 1:G:193:VAL:HG21 | 1:G:195:ASP:OD2 | 2.13 | 0.48 |
| 1:G:55:ILE:CG2 | 1:G:55:ILE:O | 2.62 | 0.48 |
| 1:H:170:ILE:O | 1:H:174:ILE:HG12 | 2.14 | 0.48 |
| 1:I:16:PHE:HZ | 1:I:21:MET:HA | 1.79 | 0.48 |
| 1:K:60:LEU:HB3 | 1:K:65:LEU:CD1 | 2.44 | 0.48 |
| 1:K:91:TYR:HE1 | 1:K:93:PHE:CD2 | 2.31 | 0.48 |
| 1:L:112:VAL:CG2 | 1:L:117:ALA:HB2 | 2.19 | 0.48 |
| 1:A:94:ARG:HE | 1:A:100:ARG:CG | 2.19 | 0.48 |
| 1:B:223:ALA:O | 1:B:228:PRO:HD3 | 2.13 | 0.48 |
| 1:C:188:SER:CB | 1:C:189:PRO:CD | 2.92 | 0.48 |
| 1:E:126:PRO:O | 1:E:191:GLU:O | 2.31 | 0.48 |
| 1:F:135:MET:CB | 1:F:137:LEU:HD13 | 2.43 | 0.48 |
| 1:G:21:MET:SD | 1:G:68:LEU:HD22 | 2.54 | 0.48 |
| 1:J:209:ILE:HD13 | 1:J:209:ILE:HA | 1.71 | 0.48 |
| 1:J:40:THR:CG2 | 1:J:62:ASN:CA | 2.92 | 0.48 |
| 1:K:189:PRO:O | 1:K:189:PRO:HD2 | 2.14 | 0.48 |
| 1:K:336:THR:O | 1:K:340:VAL:HG23 | 2.14 | 0.48 |
| 1:L:93:PHE:CE2 | 1:L:103:TYR:HE2 | 2.32 | 0.48 |
| 1:A:353:MET:HG3 | 1:A:357:GLN:HE21 | 1.78 | 0.48 |
| 1:B:55:ILE:O | 1:B:55:ILE:CG2 | 2.62 | 0.48 |
| 1:D:366:LYS:O | 1:D:369:ILE:CG2 | 2.59 | 0.48 |
| 1:F:182:LYS:HG3 | 1:F:203:VAL:HG13 | 1.96 | 0.48 |
| 1:F:291:ILE:HD13 | 1:F:316:PHE:CE2 | 2.49 | 0.48 |
| 1:F:48:VAL:O | 1:F:49:TYR:CD2 | 2.66 | 0.48 |
| 1:G:193:VAL:HG22 | 1:G:195:ASP:H | 1.79 | 0.48 |
| 1:K:300:VAL:CG1 | 1:K:301:PRO:HD2 | 2.42 | 0.48 |
| 1:A:329:PRO:O | 1:A:332:VAL:HG13 | 2.14 | 0.47 |
| 1:B:268:MET:HG3 | 1:B:336:THR:HG21 | 1.96 | 0.47 |
| 1:C:166:LEU:HD22 | 1:C:232:MET:HE1 | 1.96 | 0.47 |
| 1:D:349:TRP:CZ3 | 1:D:353:MET:HE2 | 2.49 | 0.47 |
| 1:E:215:ASN:HD22 | 1:E:218:ASP:HB2 | 1.78 | 0.47 |
| 1:E:148:GLN:O | 1:E:254:PRO:HD3 | 2.14 | 0.47 |
| 1:G:313:TYR:CE2 | 1:G:345:GLN:CD | 2.87 | 0.47 |
| 1:G:296:TRP:CZ3 | 1:G:347:MET:CE | 2.96 | 0.47 |
| 1:I:174:ILE:HG23 | 1:I:175:GLU:N | 2.28 | 0.47 |
| 1:I:365:TYR:CZ | 1:I:369:ILE:HD11 | 2.49 | 0.47 |
| 1:J:158:THR:HA | 1:J:162:LYS:HZ1 | 1.79 | 0.47 |
| 1:B:42:GLU:OE1 | 1:C:203:VAL:HG13 | 2.14 | 0.47 |
| 1:C:92:GLU:HG2 | 1:C:93:PHE:N | 2.29 | 0.47 |
| 1:D:94:ARG:CB | 1:D:100:ARG:NE | 2.74 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:329:PRO:O | 1:G:332:VAL:HG22 | 2.14 | 0.47 |
| 1:G:365:TYR:HA | 1:G:368:ILE:HD13 | 1.96 | 0.47 |
| 1:H:88:ASP:OD2 | 1:I:225:ARG:NE | 2.47 | 0.47 |
| 1:J:190:ILE:HG22 | 1:J:190:ILE:O | 2.13 | 0.47 |
| 1:K:171:ARG:C | 1:K:174:ILE:CG2 | 2.82 | 0.47 |
| 1:L:7:ASN:O | 1:L:54:LYS:O | 2.31 | 0.47 |
| 1:A:302:THR:OG1 | 1:A:306:ARG:O | 2.29 | 0.47 |
| 1:B:100:ARG:NE | 1:B:102:ARG:NH1 | 2.56 | 0.47 |
| 1:B:365:TYR:CD2 | 1:B:365:TYR:C | 2.87 | 0.47 |
| 1:C:209:ILE:H | 1:C:210:PRO:HD2 | 1.80 | 0.47 |
| 1:G:69:ILE:HD12 | 1:G:107:ALA:HB2 | 1.96 | 0.47 |
| 1:G:155:THR:HG23 | 1:G:259:LEU:C | 2.35 | 0.47 |
| 1:G:362:GLU:HG2 | 1:G:366:LYS:HE2 | 1.96 | 0.47 |
| 1:H:27:HIS:HD2 | 1:H:55:ILE:HG21 | 1.79 | 0.47 |
| 1:I:11:ASP:OD1 | 1:I:11:ASP:N | 2.48 | 0.47 |
| 1:J:184:LEU:HG | 1:J:228:PRO:HB3 | 1.95 | 0.47 |
| 1:J:348:THR:CG2 | 1:J:372:ALA:HB2 | 2.45 | 0.47 |
| 1:J:40:THR:CG2 | 1:J:62:ASN:HA | 2.43 | 0.47 |
| 1:A:365:TYR:CD2 | 1:A:369:ILE:HD11 | 2.49 | 0.47 |
| 1:E:288:LEU:CD2 | 1:E:325:LEU:HD23 | 2.45 | 0.47 |
| 1:A:278:GLU:OE2 | 1:F:266:GLU:HG3 | 2.14 | 0.47 |
| 1:F:44:ILE:HB | 1:F:56:THR:CG2 | 2.45 | 0.47 |
| 1:K:230:LEU:HD23 | 1:K:230:LEU:C | 2.35 | 0.47 |
| 1:K:285:ILE:HD12 | 1:K:285:ILE:N | 2.28 | 0.47 |
| 1:K:160:SER:N | 2:K:401:PO4:O1 | 2.36 | 0.47 |
| 1:A:81:LEU:HD12 | 1:A:118:ILE:HG12 | 1.95 | 0.47 |
| 1:C:281:LEU:HD23 | 1:C:285:ILE:CD1 | 2.44 | 0.47 |
| 1:H:211:ARG:HD2 | 1:H:212:HIS:CE1 | 2.48 | 0.47 |
| 1:H:314:LEU:HD13 | 1:H:340:VAL:HA | 1.97 | 0.47 |
| 1:I:184:LEU:HD11 | 1:I:228:PRO:HB3 | 1.96 | 0.47 |
| 1:I:265:ALA:HB3 | 1:I:266:GLU:OE1 | 2.14 | 0.47 |
| 1:I:319:GLU:O | 1:I:323:ILE:HG13 | 2.15 | 0.47 |
| 1:I:114:GLY:N | 1:J:92:GLU:OE1 | 2.47 | 0.47 |
| 1:K:34:SER:O | 1:K:124:THR:HG23 | 2.15 | 0.47 |
| 1:L:190:ILE:CG1 | 1:L:208:GLU:CG | 2.86 | 0.47 |
| 1:L:8:LEU:O | 1:L:27:HIS:CE1 | 2.68 | 0.47 |
| 1:A:332:VAL:HG23 | 1:A:333:THR:H | 1.79 | 0.47 |
| 1:C:197:ILE:H | 1:C:197:ILE:CD1 | 2.26 | 0.47 |
| 1:G:235:GLU:HG3 | 1:G:235:GLU:O | 2.14 | 0.47 |
| 1:G:297:GLN:HE22 | 1:G:311:ARG:HH21 | 1.62 | 0.47 |
| 1:J:195:ASP:O | 1:J:198:GLU:HG2 | 2.14 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:119:GLN:HE21 | 1:K:121:THR:CG2 | 2.26 | 0.47 |
| 1:K:24:MET:SD | 1:K:44:ILE:CD1 | 3.01 | 0.47 |
| 1:C:236:CYS:SG | 1:C:242:ILE:HG13 | 2.55 | 0.47 |
| 1:F:102:ARG:HB3 | 1:F:125:ILE:CG2 | 2.45 | 0.47 |
| 1:F:334:SER:HA | 1:F:337:ARG:HG3 | 1.97 | 0.47 |
| 1:G:131:LYS:HG2 | 1:G:171:ARG:NH1 | 2.29 | 0.47 |
| 1:I:224:LEU:HD21 | 1:I:248:ALA:HA | 1.96 | 0.47 |
| 1:I:24:MET:HE1 | 1:I:44:ILE:HG21 | 1.96 | 0.47 |
| 1:I:235:GLU:OE1 | 1:I:260:HIS:CE1 | 2.67 | 0.47 |
| 1:L:183:VAL:CG1 | 1:L:230:LEU:HD22 | 2.31 | 0.47 |
| 1:L:41:GLY:C | 1:L:42:GLU:HG2 | 2.34 | 0.47 |
| 1:A:40:THR:HG23 | 1:A:65:LEU:HD22 | 1.93 | 0.47 |
| 1:F:105:VAL:HG22 | 1:F:122:LEU:HG | 1.96 | 0.47 |
| 1:F:24:MET:SD | 1:F:44:ILE:CD1 | 2.90 | 0.47 |
| 1:G:369:ILE:HG22 | 1:G:370:ALA:N | 2.30 | 0.47 |
| 1:H:6:ILE:HD13 | 1:H:54:LYS:HD2 | 1.97 | 0.47 |
| 1:I:13:PRO:CB | 1:I:20:PHE:CE2 | 2.86 | 0.47 |
| 1:I:229:ARG:O | 1:I:229:ARG:HG3 | 2.15 | 0.47 |
| 1:K:17:THR:CG2 | 1:K:18:PRO:CD | 2.93 | 0.47 |
| 1:K:25:LEU:HD13 | 1:K:93:PHE:CZ | 2.49 | 0.47 |
| 1:L:175:GLU:HA | 1:L:199:THR:HG21 | 1.96 | 0.47 |
| 1:A:112:VAL:HG23 | 1:A:117:ALA:HB3 | 1.96 | 0.47 |
| 1:A:261:THR:HG21 | 1:A:266:GLU:C | 2.35 | 0.47 |
| 1:A:48:VAL:HG12 | 1:A:49:TYR:HD2 | 1.80 | 0.47 |
| 1:A:56:THR:HG22 | 1:A:58:ARG:H | 1.80 | 0.47 |
| 1:B:374:GLU:CB | 1:C:281:LEU:CD2 | 2.88 | 0.47 |
| 1:B:9:MET:HE1 | 1:B:24:MET:CB | 2.44 | 0.47 |
| 1:C:9:MET:HB2 | 1:C:10:PRO:HD2 | 1.97 | 0.47 |
| 1:D:240:GLU:OE2 | 1:D:240:GLU:HA | 2.15 | 0.47 |
| 1:F:310:LEU:CD1 | 1:F:368:ILE:CD1 | 2.92 | 0.47 |
| 1:G:362:GLU:OE1 | 1:G:366:LYS:HE3 | 2.15 | 0.47 |
| 1:H:166:LEU:HD13 | 1:H:232:MET:SD | 2.54 | 0.47 |
| 1:I:21:MET:HE2 | 1:I:68:LEU:HD22 | 1.95 | 0.47 |
| 1:K:333:THR:O | 1:K:336:THR:CG2 | 2.62 | 0.47 |
| 1:K:363:ARG:CA | 1:K:366:LYS:CD | 2.71 | 0.47 |
| 1:L:135:MET:HB2 | 1:L:137:LEU:HD13 | 1.97 | 0.47 |
| 1:B:337:ARG:HG2 | 1:B:341:ARG:NH1 | 2.30 | 0.47 |
| 1:C:141:ILE:O | 1:C:145:ILE:HG23 | 2.15 | 0.47 |
| 1:C:329:PRO:O | 1:C:332:VAL:HG23 | 2.15 | 0.47 |
| 1:H:14:THR:C | 1:H:15:ARG:HE | 2.03 | 0.47 |
| 1:H:302:THR:OG1 | 1:H:306:ARG:O | 2.29 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:364:VAL:HA | 1:H:367:LEU:HD12 | 1.97 | 0.47 |
| 1:I:329:PRO:CA | 1:I:332:VAL:HG23 | 2.36 | 0.47 |
| 1:J:283:ARG:O | 1:J:287:ILE:HG13 | 2.15 | 0.47 |
| 1:A:213:LEU:HD13 | 1:A:219:GLY:HA2 | 1.96 | 0.47 |
| 1:A:281:LEU:HD13 | 1:A:285:ILE:HD11 | 1.97 | 0.47 |
| 1:C:93:PHE:CE1 | 1:C:101:TYR:HB2 | 2.50 | 0.47 |
| 1:D:92:GLU:HA | 1:D:101:TYR:O | 2.15 | 0.47 |
| 1:G:238:ASP:O | 1:G:242:ILE:CD1 | 2.63 | 0.47 |
| 1:J:40:THR:N | 1:J:65:LEU:HD22 | 2.30 | 0.47 |
| 1:K:148:GLN:HB3 | 1:K:149:GLU:OE1 | 2.15 | 0.47 |
| 1:B:272:VAL:HG21 | 1:B:332:VAL:HG11 | 1.97 | 0.46 |
| 1:B:119:GLN:HE22 | 1:C:226:ARG:CD | 2.28 | 0.46 |
| 1:C:268:MET:HG3 | 1:C:336:THR:HG21 | 1.97 | 0.46 |
| 1:D:40:THR:O | 1:D:60:LEU:O | 2.31 | 0.46 |
| 1:F:17:THR:CG2 | 1:F:18:PRO:CD | 2.92 | 0.46 |
| 1:H:220:VAL:O | 1:H:223:ALA:N | 2.49 | 0.46 |
| 1:J:104:ARG:NE | 1:J:123:ARG:NH1 | 2.62 | 0.46 |
| 1:J:174:ILE:CG2 | 1:J:175:GLU:N | 2.78 | 0.46 |
| 1:K:223:ALA:O | 1:K:228:PRO:CD | 2.62 | 0.46 |
| 1:K:40:THR:N | 1:K:65:LEU:CD2 | 2.78 | 0.46 |
| 1:B:39:GLN:C | 1:B:65:LEU:HD21 | 2.36 | 0.46 |
| 1:E:261:THR:OG1 | 1:E:267:THR:CG2 | 2.49 | 0.46 |
| 1:F:102:ARG:HB3 | 1:F:125:ILE:HG23 | 1.96 | 0.46 |
| 1:F:236:CYS:SG | 1:F:242:ILE:HG13 | 2.54 | 0.46 |
| 1:G:111:LEU:CD2 | 1:H:90:HIS:CE1 | 2.97 | 0.46 |
| 1:G:193:VAL:HG22 | 1:G:194:TYR:N | 2.31 | 0.46 |
| 1:G:94:ARG:HD3 | 1:G:97:ARG:HA | 1.98 | 0.46 |
| 1:H:270:ARG:HH11 | 1:H:270:ARG:HG3 | 1.79 | 0.46 |
| 1:I:273:THR:HG22 | 1:I:280:ARG:HH11 | 1.80 | 0.46 |
| 1:I:137:LEU:CD2 | 1:I:311:ARG:NH1 | 2.76 | 0.46 |
| 1:I:64:GLU:O | 1:I:68:LEU:HD12 | 2.15 | 0.46 |
| 1:K:261:THR:OG1 | 1:K:267:THR:CG2 | 2.49 | 0.46 |
| 1:L:184:LEU:HD11 | 1:L:226:ARG:HB2 | 1.97 | 0.46 |
| 1:L:190:ILE:CD1 | 1:L:208:GLU:HG2 | 2.45 | 0.46 |
| 1:L:148:GLN:O | 1:L:254:PRO:HD3 | 2.15 | 0.46 |
| 1:L:291:ILE:HD13 | 1:L:316:PHE:CE1 | 2.49 | 0.46 |
| 1:G:318:GLU:CG | 1:L:363:ARG:NH2 | 2.74 | 0.46 |
| 1:A:137:LEU:HD23 | 1:A:141:ILE:CG2 | 2.45 | 0.46 |
| 1:C:86:ASP:OD1 | 1:C:87:ILE:N | 2.48 | 0.46 |
| 1:F:291:ILE:CD1 | 1:F:316:PHE:CZ | 2.99 | 0.46 |
| 1:J:108:THR:HB | 1:K:226:ARG:NH1 | 2.29 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:173:LEU:HD22 | 1:K:181:ARG:NH1 | 2.29 | 0.46 |
| 1:L:90:HIS:HD1 | 1:L:90:HIS:H | 1.62 | 0.46 |
| 1:B:48:VAL:O | 1:B:48:VAL:CG2 | 2.63 | 0.46 |
| 1:C:182:LYS:HE2 | 1:C:226:ARG:O | 2.16 | 0.46 |
| 1:D:264:VAL:HG13 | 1:D:265:ALA:N | 2.31 | 0.46 |
| 1:F:182:LYS:HZ3 | 1:F:184:LEU:HD21 | 1.81 | 0.46 |
| 1:G:297:GLN:NE2 | 1:G:311:ARG:HE | 2.13 | 0.46 |
| 1:H:19:VAL:CG2 | 1:H:20:PHE:H | 2.29 | 0.46 |
| 1:H:39:GLN:HA | 1:H:65:LEU:HD21 | 1.98 | 0.46 |
| 1:I:109:ALA:HB1 | 1:J:212:HIS:ND1 | 2.30 | 0.46 |
| 1:L:27:HIS:CD2 | 1:L:31:LEU:CD1 | 2.98 | 0.46 |
| 1:B:260:HIS:HE1 | 1:C:221:ARG:NH2 | 2.14 | 0.46 |
| 1:G:260:HIS:CD2 | 1:G:261:THR:HG22 | 2.49 | 0.46 |
| 1:H:40:THR:N | 1:H:65:LEU:CD2 | 2.78 | 0.46 |
| 1:J:48:VAL:HG12 | 1:J:49:TYR:CD2 | 2.49 | 0.46 |
| 1:B:158:THR:HG22 | 1:C:247:GLU:CD | 2.36 | 0.46 |
| 1:C:60:LEU:HB3 | 1:C:65:LEU:CD1 | 2.46 | 0.46 |
| 1:D:269:ARG:O | 1:D:273:THR:HG23 | 2.16 | 0.46 |
| 1:D:337:ARG:O | 1:D:340:VAL:HG22 | 2.15 | 0.46 |
| 1:E:316:PHE:HA | 1:E:320:VAL:CG2 | 2.40 | 0.46 |
| 1:H:229:ARG:NH2 | 1:H:229:ARG:CG | 2.79 | 0.46 |
| 1:H:366:LYS:HB3 | 1:H:366:LYS:HE3 | 1.72 | 0.46 |
| 1:I:43:PRO:CB | 1:I:56:THR:HG23 | 2.45 | 0.46 |
| 1:I:47:GLU:HB2 | 1:I:52:LEU:CD2 | 2.46 | 0.46 |
| 1:J:72:ILE:CD1 | 1:J:105:VAL:HG11 | 2.43 | 0.46 |
| 1:J:39:GLN:NE2 | 1:J:119:GLN:HG3 | 2.20 | 0.46 |
| 1:J:16:PHE:CZ | 1:J:44:ILE:HD12 | 2.50 | 0.46 |
| 1:K:173:LEU:CD2 | 1:K:181:ARG:CZ | 2.87 | 0.46 |
| 1:B:335:ALA:HA | 1:B:338:LYS:HD3 | 1.98 | 0.46 |
| 1:E:39:GLN:C | 1:E:65:LEU:HD21 | 2.35 | 0.46 |
| 1:F:141:ILE:HD11 | 1:F:313:TYR:CE2 | 2.51 | 0.46 |
| 1:G:131:LYS:HG3 | 1:G:171:ARG:NH1 | 2.31 | 0.46 |
| 1:I:13:PRO:HD3 | 1:I:20:PHE:CD1 | 2.51 | 0.46 |
| 1:I:7:ASN:OD1 | 1:I:27:HIS:CE1 | 2.68 | 0.46 |
| 1:I:355:PHE:HE2 | 1:I:362:GLU:CB | 2.27 | 0.46 |
| 1:J:13:PRO:CG | 1:J:20:PHE:CD1 | 2.97 | 0.46 |
| 1:A:235:GLU:OE1 | 1:A:260:HIS:NE2 | 2.48 | 0.46 |
| 1:B:135:MET:CB | 1:B:137:LEU:HD13 | 2.46 | 0.46 |
| 1:C:119:GLN:NE2 | 1:D:182:LYS:HE2 | 2.28 | 0.46 |
| 1:G:297:GLN:NE2 | 1:G:311:ARG:NE | 2.64 | 0.46 |
| 1:J:175:GLU:HG3 | 1:J:197:ILE:HG21 | 1.95 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:320:VAL:CG1 | 1:J:339:LEU:HD13 | 2.46 | 0.46 |
| 1:J:348:THR:HG22 | 1:J:372:ALA:HB2 | 1.97 | 0.46 |
| 1:L:251:THR:OG1 | 1:L:253:HIS:CD2 | 2.69 | 0.46 |
| 1:A:130:PRO:HB2 | 1:A:135:MET:CE | 2.46 | 0.46 |
| 1:B:273:THR:HG22 | 1:B:273:THR:O | 2.14 | 0.46 |
| 1:D:7:ASN:CB | 1:D:31:LEU:HD21 | 2.45 | 0.46 |
| 1:E:137:LEU:CG | 1:E:141:ILE:HD11 | 2.46 | 0.46 |
| 1:G:135:MET:HE3 | 1:G:135:MET:N | 2.30 | 0.46 |
| 1:G:155:THR:HG23 | 1:G:259:LEU:CA | 2.46 | 0.46 |
| 1:G:321:ARG:HG3 | 1:G:321:ARG:NH1 | 2.29 | 0.46 |
| 1:I:251:THR:OG1 | 1:I:253:HIS:CD2 | 2.69 | 0.46 |
| 1:I:69:ILE:HG23 | 1:I:70:ASN:N | 2.31 | 0.46 |
| 1:I:42:GLU:OE1 | 1:J:203:VAL:HG13 | 2.16 | 0.46 |
| 1:A:341:ARG:HA | 1:A:346:LEU:HD11 | 1.98 | 0.46 |
| 1:B:102:ARG:HB2 | 1:B:125:ILE:HG22 | 1.98 | 0.46 |
| 1:C:142:ILE:O | 1:C:145:ILE:HG13 | 2.16 | 0.46 |
| 1:D:99:VAL:CG1 | 1:D:100:ARG:N | 2.78 | 0.46 |
| 1:E:293:LEU:HD12 | 1:E:294:CYS:N | 2.31 | 0.46 |
| 1:F:262:SER:HA | 1:F:296:TRP:CE3 | 2.51 | 0.46 |
| 1:F:302:THR:OG1 | 1:F:306:ARG:O | 2.32 | 0.46 |
| 1:G:13:PRO:HG3 | 1:G:20:PHE:CG | 2.51 | 0.46 |
| 1:G:180:ASN:ND2 | 1:G:180:ASN:N | 2.64 | 0.46 |
| 1:G:251:THR:OG1 | 1:G:253:HIS:CD2 | 2.69 | 0.46 |
| 1:G:352:LYS:HB2 | 1:G:365:TYR:CZ | 2.51 | 0.46 |
| 1:I:355:PHE:CE2 | 1:I:362:GLU:CB | 2.99 | 0.46 |
| 1:J:118:ILE:O | 1:J:118:ILE:HG13 | 2.12 | 0.46 |
| 1:J:127:THR:O | 1:J:193:VAL:HG22 | 2.15 | 0.46 |
| 1:J:192:PHE:CD1 | 1:J:192:PHE:N | 2.84 | 0.46 |
| 1:K:64:GLU:O | 1:K:68:LEU:HD13 | 2.16 | 0.46 |
| 1:E:18:PRO:O | 1:E:21:MET:HB2 | 2.16 | 0.45 |
| 1:E:21:MET:CE | 1:E:68:LEU:CG | 2.91 | 0.45 |
| 1:E:223:ALA:O | 1:E:228:PRO:CD | 2.64 | 0.45 |
| 1:E:96:ASN:O | 1:E:98:GLY:N | 2.41 | 0.45 |
| 1:F:364:VAL:HG13 | 1:F:365:TYR:N | 2.31 | 0.45 |
| 1:I:185:THR:HG22 | 1:I:232:MET:HB3 | 1.99 | 0.45 |
| 1:K:148:GLN:O | 1:K:254:PRO:HD3 | 2.16 | 0.45 |
| 1:K:247:GLU:O | 1:K:251:THR:OG1 | 2.33 | 0.45 |
| 1:L:40:THR:H | 1:L:65:LEU:HD23 | 1.81 | 0.45 |
| 1:B:333:THR:O | 1:B:336:THR:OG1 | 2.30 | 0.45 |
| 1:G:174:ILE:HA | 1:G:174:ILE:HD12 | 1.69 | 0.45 |
| 1:G:236:CYS:SG | 1:G:259:LEU:HD21 | 2.55 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:40:THR:HG23 | 1:G:65:LEU:HD22 | 1.94 | 0.45 |
| 1:G:69:ILE:HD11 | 1:G:120:ILE:CB | 2.46 | 0.45 |
| 1:H:148:GLN:O | 1:H:254:PRO:HD3 | 2.16 | 0.45 |
| 1:J:145:ILE:HD13 | 1:J:293:LEU:HD21 | 1.97 | 0.45 |
| 1:K:285:ILE:CD1 | 1:K:285:ILE:N | 2.79 | 0.45 |
| 1:C:132:LEU:HD22 | 1:C:172:GLU:HG3 | 1.98 | 0.45 |
| 1:D:195:ASP:OD1 | 1:D:196:GLU:N | 2.49 | 0.45 |
| 1:D:68:LEU:O | 1:D:72:ILE:HG22 | 2.16 | 0.45 |
| 1:E:148:GLN:HB3 | 1:E:149:GLU:OE1 | 2.16 | 0.45 |
| 1:E:197:ILE:O | 1:E:197:ILE:HG23 | 2.15 | 0.45 |
| 1:D:367:LEU:HD21 | 1:E:289:GLU:CD | 2.37 | 0.45 |
| 1:F:268:MET:HG2 | 1:F:336:THR:HG21 | 1.96 | 0.45 |
| 1:G:132:LEU:HA | 1:G:168:SER:OG | 2.17 | 0.45 |
| 1:H:104:ARG:HD3 | 1:H:191:GLU:HG2 | 1.98 | 0.45 |
| 1:J:48:VAL:HG12 | 1:J:49:TYR:HD2 | 1.81 | 0.45 |
| 1:A:49:TYR:OH | 1:A:306:ARG:HG3 | 2.15 | 0.45 |
| 1:A:95:PRO:HG2 | 1:A:96:ASN:ND2 | 2.31 | 0.45 |
| 1:B:138:PRO:O | 1:B:142:ILE:HG12 | 2.16 | 0.45 |
| 1:B:40:THR:N | 1:B:65:LEU:CD2 | 2.79 | 0.45 |
| 1:H:132:LEU:CB | 1:H:172:GLU:HG3 | 2.46 | 0.45 |
| 1:H:340:VAL:CG2 | 1:H:346:LEU:HD21 | 2.46 | 0.45 |
| 1:I:185:THR:HA | 1:I:232:MET:HB3 | 1.99 | 0.45 |
| 1:I:40:THR:N | 1:I:65:LEU:HD11 | 2.31 | 0.45 |
| 1:J:199:THR:HG21 | 1:J:202:ALA:CB | 2.47 | 0.45 |
| 1:J:229:ARG:HG3 | 1:J:229:ARG:O | 2.17 | 0.45 |
| 1:K:174:ILE:HG23 | 1:K:175:GLU:N | 2.32 | 0.45 |
| 1:L:25:LEU:CD1 | 1:L:93:PHE:CE2 | 2.93 | 0.45 |
| 1:B:148:GLN:O | 1:B:254:PRO:HD3 | 2.16 | 0.45 |
| 1:B:261:THR:CG2 | 1:B:270:ARG:HD2 | 2.46 | 0.45 |
| 1:F:292:ARG:HD3 | 1:F:321:ARG:NH1 | 2.32 | 0.45 |
| 1:I:17:THR:HG23 | 1:I:18:PRO:CD | 2.44 | 0.45 |
| 1:I:353:MET:HG2 | 1:I:357:GLN:NE2 | 2.28 | 0.45 |
| 1:J:17:THR:HG23 | 1:J:18:PRO:HD2 | 1.97 | 0.45 |
| 1:L:92:GLU:HB2 | 1:L:102:ARG:HG3 | 1.98 | 0.45 |
| 1:L:233:VAL:HB | 1:L:257:THR:CG2 | 2.33 | 0.45 |
| 1:L:249:ALA:CB | 1:L:290:THR:OG1 | 2.64 | 0.45 |
| 1:L:34:SER:O | 1:L:124:THR:HG23 | 2.17 | 0.45 |
| 1:L:89:THR:CG2 | 1:L:90:HIS:H | 2.20 | 0.45 |
| 1:K:111:LEU:HD22 | 1:L:90:HIS:NE2 | 2.30 | 0.45 |
| 1:A:281:LEU:O | 1:A:281:LEU:HD13 | 2.16 | 0.45 |
| 1:B:208:GLU:HG3 | 1:B:210:PRO:HD2 | 1.98 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:360:ILE:HB | 1:B:364:VAL:CG1 | 2.47 | 0.45 |
| 1:C:185:THR:HA | 1:C:232:MET:HB3 | 1.99 | 0.45 |
| 1:E:176:THR:HG23 | 1:E:179:SER:CB | 2.46 | 0.45 |
| 1:E:162:LYS:CD | 1:E:258:THR:CB | 2.90 | 0.45 |
| 1:F:27:HIS:CD2 | 1:F:27:HIS:C | 2.90 | 0.45 |
| 1:G:188:SER:HA | 1:G:210:PRO:HD3 | 1.97 | 0.45 |
| 1:G:239:ALA:N | 1:G:242:ILE:HD12 | 2.31 | 0.45 |
| 1:G:355:PHE:HZ | 1:G:365:TYR:CB | 2.27 | 0.45 |
| 1:H:7:ASN:HB3 | 1:H:31:LEU:HD21 | 1.98 | 0.45 |
| 1:I:229:ARG:O | 1:I:254:PRO:HD2 | 2.17 | 0.45 |
| 1:I:48:VAL:HG12 | 1:I:49:TYR:CD2 | 2.51 | 0.45 |
| 1:I:38:ILE:CG2 | 1:I:65:LEU:HD21 | 2.40 | 0.45 |
| 1:K:365:TYR:CE1 | 1:K:369:ILE:HD11 | 2.52 | 0.45 |
| 1:L:216:PHE:O | 1:L:220:VAL:HG23 | 2.17 | 0.45 |
| 1:A:261:THR:CB | 1:A:267:THR:HG22 | 2.30 | 0.45 |
| 1:A:278:GLU:HB3 | 1:F:269:ARG:HH22 | 1.82 | 0.45 |
| 1:B:21:MET:O | 1:B:25:LEU:HG | 2.15 | 0.45 |
| 1:C:81:LEU:HD23 | 1:C:118:ILE:HG12 | 1.99 | 0.45 |
| 1:D:157:ALA:O | 1:D:162:LYS:NZ | 2.50 | 0.45 |
| 1:D:93:PHE:C | 1:D:93:PHE:CD1 | 2.89 | 0.45 |
| 1:F:27:HIS:HD2 | 1:F:27:HIS:O | 1.99 | 0.45 |
| 1:H:78:THR:O | 1:H:82:LEU:HD23 | 2.16 | 0.45 |
| 1:H:99:VAL:CG1 | 1:H:100:ARG:N | 2.79 | 0.45 |
| 1:I:177:SER:OG | 1:I:200:ILE:HG21 | 2.17 | 0.45 |
| 1:J:160:SER:N | 2:J:401:PO4:O1 | 2.49 | 0.45 |
| 1:A:174:ILE:HG13 | 1:A:202:ALA:CB | 2.46 | 0.45 |
| 1:B:261:THR:HG21 | 1:B:270:ARG:HD2 | 1.98 | 0.45 |
| 1:B:54:LYS:HG3 | 1:B:54:LYS:O | 2.16 | 0.45 |
| 1:B:6:ILE:C | 1:B:7:ASN:HD22 | 2.20 | 0.45 |
| 1:D:125:ILE:CG1 | 1:D:126:PRO:HD2 | 2.46 | 0.45 |
| 1:D:190:ILE:HG22 | 1:D:190:ILE:O | 2.17 | 0.45 |
| 1:D:269:ARG:NH1 | 1:D:270:ARG:HH12 | 2.15 | 0.45 |
| 1:D:39:GLN:C | 1:D:65:LEU:HD21 | 2.37 | 0.45 |
| 1:E:22:ASP:OD2 | 1:E:93:PHE:CD1 | 2.70 | 0.45 |
| 1:H:18:PRO:O | 1:H:21:MET:CB | 2.61 | 0.45 |
| 1:I:137:LEU:HD11 | 1:I:165:LEU:HD11 | 1.99 | 0.45 |
| 1:J:238:ASP:OD1 | 1:J:241:THR:CG2 | 2.65 | 0.45 |
| 1:J:39:GLN:CA | 1:J:65:LEU:HD21 | 2.46 | 0.45 |
| 1:J:73:TYR:CD2 | 1:J:73:TYR:O | 2.70 | 0.45 |
| 1:J:81:LEU:H | 1:J:81:LEU:HD23 | 1.80 | 0.45 |
| 1:B:86:ASP:HB2 | 1:C:213:LEU:HD21 | 1.99 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:111:LEU:HD21 | 1:C:114:GLY:C | 2.37 | 0.45 |
| 1:C:179:SER:HB2 | 1:C:181:ARG:NH2 | 2.31 | 0.45 |
| 1:C:345:GLN:NE2 | 1:C:350:ASP:OD1 | 2.49 | 0.45 |
| 1:E:215:ASN:HD21 | 1:E:218:ASP:CG | 2.19 | 0.45 |
| 1:F:249:ALA:HB1 | 1:F:290:THR:OG1 | 2.17 | 0.45 |
| 1:A:180:ASN:HB3 | 1:F:52:LEU:HB2 | 1.99 | 0.45 |
| 1:G:17:THR:HG23 | 1:G:18:PRO:CD | 2.36 | 0.45 |
| 1:G:233:VAL:O | 1:G:257:THR:HG22 | 2.17 | 0.45 |
| 1:I:223:ALA:O | 1:I:228:PRO:CD | 2.65 | 0.45 |
| 1:J:125:ILE:HG13 | 1:J:126:PRO:CD | 2.45 | 0.45 |
| 1:J:247:GLU:O | 1:J:251:THR:HG23 | 2.17 | 0.45 |
| 1:J:281:LEU:O | 1:J:285:ILE:HD13 | 2.17 | 0.45 |
| 1:J:323:ILE:HD13 | 1:J:323:ILE:H | 1.78 | 0.45 |
| 1:A:148:GLN:O | 1:A:254:PRO:HD3 | 2.17 | 0.45 |
| 1:A:230:LEU:HD22 | 1:A:254:PRO:HB2 | 1.98 | 0.45 |
| 1:C:17:THR:HG22 | 1:C:18:PRO:HD2 | 1.96 | 0.45 |
| 1:D:118:ILE:O | 1:D:118:ILE:HG13 | 2.16 | 0.45 |
| 1:D:138:PRO:O | 1:D:142:ILE:HG12 | 2.17 | 0.45 |
| 1:E:27:HIS:CD2 | 1:E:27:HIS:C | 2.90 | 0.45 |
| 1:H:155:THR:HG21 | 1:H:267:THR:CG2 | 2.44 | 0.45 |
| 1:I:104:ARG:N | 1:I:125:ILE:HD11 | 2.32 | 0.45 |
| 1:I:47:GLU:HB2 | 1:I:52:LEU:HD21 | 1.98 | 0.45 |
| 1:J:102:ARG:NE | 1:J:193:VAL:HG11 | 2.25 | 0.45 |
| 1:J:198:GLU:OE2 | 1:J:198:GLU:HA | 2.16 | 0.45 |
| 1:J:300:VAL:O | 1:J:308:VAL:HG12 | 2.17 | 0.45 |
| 1:K:188:SER:OG | 1:K:189:PRO:CD | 2.65 | 0.45 |
| 1:L:33:ALA:HA | 1:L:48:VAL:HA | 1.98 | 0.45 |
| 1:L:40:THR:N | 1:L:65:LEU:CD2 | 2.80 | 0.45 |
| 1:A:227:LYS:CE | 1:F:47:GLU:OE1 | 2.64 | 0.44 |
| 1:C:12:GLU:CD | 1:C:56:THR:HG1 | 2.21 | 0.44 |
| 1:D:38:ILE:HB | 1:D:120:ILE:CG2 | 2.42 | 0.44 |
| 1:D:73:TYR:O | 1:D:73:TYR:CG | 2.69 | 0.44 |
| 1:E:34:SER:O | 1:E:124:THR:HG23 | 2.17 | 0.44 |
| 1:E:349:TRP:CZ3 | 1:E:353:MET:CG | 2.99 | 0.44 |
| 1:E:60:LEU:HB3 | 1:E:65:LEU:CD1 | 2.47 | 0.44 |
| 1:G:322:ASP:O | 1:G:325:LEU:HB2 | 2.17 | 0.44 |
| 1:G:355:PHE:HE2 | 1:G:365:TYR:CB | 2.29 | 0.44 |
| 1:H:209:ILE:H | 1:H:210:PRO:HD2 | 1.81 | 0.44 |
| 1:I:65:LEU:HD23 | 1:I:68:LEU:HD13 | 1.98 | 0.44 |
| 1:J:65:LEU:HB3 | 1:J:118:ILE:HG12 | 1.98 | 0.44 |
| 1:L:209:ILE:HD12 | 1:L:209:ILE:HA | 1.73 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:185:THR:HG22 | 1:L:232:MET:HB3 | 1.99 | 0.44 |
| 1:L:78:THR:O | 1:L:82:LEU:HD13 | 2.17 | 0.44 |
| 1:C:142:ILE:HA | 1:C:145:ILE:HG12 | 1.98 | 0.44 |
| 1:D:69:ILE:CA | 1:D:72:ILE:HG22 | 2.47 | 0.44 |
| 1:H:261:THR:HG23 | 1:H:270:ARG:HD3 | 1.98 | 0.44 |
| 1:H:6:ILE:HG23 | 1:H:54:LYS:HG3 | 1.99 | 0.44 |
| 1:I:293:LEU:CD1 | 1:I:315:VAL:HG22 | 2.47 | 0.44 |
| 1:J:176:THR:O | 1:J:179:SER:HB3 | 2.18 | 0.44 |
| 1:J:214:PRO:O | 1:J:215:ASN:ND2 | 2.50 | 0.44 |
| 1:B:102:ARG:HH21 | 1:B:127:THR:CG2 | 2.30 | 0.44 |
| 1:D:175:GLU:CA | 1:D:199:THR:CG2 | 2.86 | 0.44 |
| 1:E:285:ILE:N | 1:E:285:ILE:CD1 | 2.80 | 0.44 |
| 1:G:306:ARG:CG | 1:G:307:ARG:N | 2.78 | 0.44 |
| 1:G:9:MET:CE | 1:G:24:MET:CA | 2.85 | 0.44 |
| 1:I:17:THR:HG22 | 1:I:18:PRO:HD2 | 1.99 | 0.44 |
| 1:I:209:ILE:H | 1:I:210:PRO:HD2 | 1.81 | 0.44 |
| 1:I:16:PHE:CZ | 1:I:21:MET:CA | 3.00 | 0.44 |
| 1:I:61:SER:HB2 | 1:I:64:GLU:OE1 | 2.17 | 0.44 |
| 1:A:28:ALA:HB3 | 1:A:36:ILE:HD11 | 2.00 | 0.44 |
| 1:B:102:ARG:HH21 | 1:B:127:THR:CB | 2.31 | 0.44 |
| 1:B:337:ARG:NE | 1:B:341:ARG:NH1 | 2.65 | 0.44 |
| 1:B:365:TYR:CZ | 1:B:369:ILE:CD1 | 2.86 | 0.44 |
| 1:C:126:PRO:O | 1:C:191:GLU:O | 2.35 | 0.44 |
| 1:D:156:GLY:C | 1:D:162:LYS:HZ1 | 2.20 | 0.44 |
| 1:H:364:VAL:HG13 | 1:H:365:TYR:N | 2.33 | 0.44 |
| 1:H:9:MET:HE3 | 1:H:24:MET:CA | 2.47 | 0.44 |
| 1:I:97:ARG:CB | 1:I:99:VAL:HG23 | 2.48 | 0.44 |
| 1:K:304:ASP:OD2 | 1:K:306:ARG:HG3 | 2.18 | 0.44 |
| 1:A:350:ASP:OD1 | 1:A:354:LYS:HD3 | 2.17 | 0.44 |
| 1:C:148:GLN:O | 1:C:254:PRO:HD3 | 2.18 | 0.44 |
| 1:C:55:ILE:O | 1:C:55:ILE:HG22 | 2.17 | 0.44 |
| 1:E:285:ILE:N | 1:E:285:ILE:HD12 | 2.31 | 0.44 |
| 1:H:151:ILE:HG21 | 1:H:153:PHE:CZ | 2.53 | 0.44 |
| 1:H:88:ASP:OD2 | 1:I:225:ARG:CD | 2.65 | 0.44 |
| 1:I:184:LEU:CD1 | 1:I:228:PRO:CB | 2.92 | 0.44 |
| 1:I:195:ASP:OD1 | 1:I:196:GLU:N | 2.50 | 0.44 |
| 1:J:264:VAL:HG13 | 1:J:265:ALA:N | 2.33 | 0.44 |
| 1:K:132:LEU:C | 1:K:132:LEU:HD23 | 2.38 | 0.44 |
| 1:K:135:MET:CA | 1:K:135:MET:CE | 2.77 | 0.44 |
| 1:L:288:LEU:CD1 | 1:L:324:LEU:HD13 | 2.48 | 0.44 |
| 1:L:40:THR:HG22 | 1:L:65:LEU:CB | 2.48 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:106:ASN:HD22 | 1:B:225:ARG:HB3 | 1.82 | 0.44 |
| 1:B:251:THR:OG1 | 1:B:253:HIS:CD2 | 2.71 | 0.44 |
| 1:B:249:ALA:CB | 1:B:290:THR:HG23 | 2.32 | 0.44 |
| 1:D:108:THR:HB | 1:E:226:ARG:NH1 | 2.33 | 0.44 |
| 1:D:171:ARG:HA | 1:D:174:ILE:CG2 | 2.47 | 0.44 |
| 1:E:89:THR:CG2 | 1:E:105:VAL:HG13 | 2.47 | 0.44 |
| 1:E:259:LEU:HD11 | 1:E:271:LEU:HD21 | 2.00 | 0.44 |
| 1:F:285:ILE:H | 1:F:285:ILE:HD12 | 1.82 | 0.44 |
| 1:G:111:LEU:HD22 | 1:H:90:HIS:NE2 | 2.33 | 0.44 |
| 1:H:92:GLU:OE2 | 1:H:102:ARG:NH1 | 2.49 | 0.44 |
| 1:H:9:MET:CE | 1:H:24:MET:CA | 2.95 | 0.44 |
| 1:J:111:LEU:HD22 | 1:J:115:HIS:O | 2.18 | 0.44 |
| 1:J:13:PRO:HB3 | 1:J:20:PHE:CD1 | 2.52 | 0.44 |
| 1:J:166:LEU:HD13 | 1:J:232:MET:SD | 2.57 | 0.44 |
| 1:L:129:PRO:O | 1:L:171:ARG:NH1 | 2.48 | 0.44 |
| 1:L:365:TYR:O | 1:L:369:ILE:HG13 | 2.18 | 0.44 |
| 1:B:214:PRO:C | 1:B:215:ASN:HD22 | 2.21 | 0.44 |
| 1:E:162:LYS:CD | 1:E:258:THR:CG2 | 2.96 | 0.44 |
| 1:G:334:SER:O | 1:G:337:ARG:HB3 | 2.18 | 0.44 |
| 1:H:165:LEU:O | 1:H:169:ILE:HG13 | 2.18 | 0.44 |
| 1:H:183:VAL:O | 1:H:184:LEU:HD23 | 2.17 | 0.44 |
| 1:H:261:THR:HG23 | 1:H:270:ARG:CD | 2.48 | 0.44 |
| 1:J:308:VAL:HG22 | 1:J:309:ALA:N | 2.33 | 0.44 |
| 1:L:89:THR:CG2 | 1:L:90:HIS:N | 2.78 | 0.44 |
| 1:A:174:ILE:CD1 | 1:A:183:VAL:HG21 | 2.48 | 0.44 |
| 1:B:209:ILE:H | 1:B:210:PRO:HD2 | 1.83 | 0.44 |
| 1:C:108:THR:HG21 | 1:D:222:ASN:ND2 | 2.32 | 0.44 |
| 1:C:108:THR:HG21 | 1:D:226:ARG:HH11 | 1.82 | 0.44 |
| 1:E:131:LYS:HB2 | 1:E:171:ARG:HH21 | 1.82 | 0.44 |
| 1:E:34:SER:OG | 1:E:35:ASP:OD1 | 2.12 | 0.44 |
| 1:F:156:GLY:N | 1:F:162:LYS:HD3 | 2.33 | 0.44 |
| 1:F:288:LEU:CD1 | 1:F:324:LEU:HD13 | 2.47 | 0.44 |
| 1:G:201:SER:C | 1:L:52:LEU:HD23 | 2.38 | 0.44 |
| 1:H:229:ARG:NH2 | 1:H:229:ARG:HB2 | 2.33 | 0.44 |
| 1:H:6:ILE:C | 1:H:7:ASN:HD22 | 2.21 | 0.44 |
| 1:I:166:LEU:HD13 | 1:I:232:MET:SD | 2.58 | 0.44 |
| 1:I:365:TYR:HA | 1:I:368:ILE:CD1 | 2.46 | 0.44 |
| 1:K:81:LEU:HD12 | 1:K:118:ILE:HG12 | 1.99 | 0.44 |
| 1:C:301:PRO:HA | 1:C:307:ARG:HD3 | 2.00 | 0.44 |
| 1:C:94:ARG:O | 1:C:95:PRO:O | 2.36 | 0.44 |
| 1:D:128:THR:HG23 | 1:D:196:GLU:OE1 | 2.18 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:229:ARG:HG3 | 1:D:229:ARG:O | 2.18 | 0.44 |
| 1:D:363:ARG:O | 1:D:366:LYS:HG2 | 2.17 | 0.44 |
| 1:E:354:LYS:CA | 1:E:354:LYS:HE2 | 2.42 | 0.44 |
| 1:G:186:TYR:HB3 | 1:G:209:ILE:HD11 | 2.00 | 0.44 |
| 1:H:137:LEU:HD11 | 1:H:311:ARG:NE | 2.33 | 0.44 |
| 1:J:78:THR:H | 1:J:78:THR:HG1 | 1.55 | 0.44 |
| 1:K:145:ILE:O | 1:K:147:PRO:HD2 | 2.17 | 0.44 |
| 1:K:366:LYS:H | 1:K:366:LYS:HG3 | 1.57 | 0.44 |
| 1:A:332:VAL:HG23 | 1:A:333:THR:N | 2.33 | 0.43 |
| 1:B:209:ILE:N | 1:B:210:PRO:CD | 2.80 | 0.43 |
| 1:C:209:ILE:HD13 | 1:C:209:ILE:HA | 1.73 | 0.43 |
| 1:D:233:VAL:HB | 1:D:257:THR:CG2 | 2.33 | 0.43 |
| 1:E:17:THR:HG23 | 1:E:18:PRO:CD | 2.44 | 0.43 |
| 1:E:21:MET:HE1 | 1:E:68:LEU:CB | 2.48 | 0.43 |
| 1:F:291:ILE:HD13 | 1:F:316:PHE:CE1 | 2.52 | 0.43 |
| 1:E:111:LEU:CD2 | 1:F:90:HIS:NE2 | 2.80 | 0.43 |
| 1:H:317:ASP:O | 1:H:321:ARG:HG3 | 2.18 | 0.43 |
| 1:I:126:PRO:O | 1:I:191:GLU:O | 2.35 | 0.43 |
| 1:I:22:ASP:OD2 | 1:I:93:PHE:CG | 2.71 | 0.43 |
| 1:I:349:TRP:CD1 | 1:I:349:TRP:C | 2.91 | 0.43 |
| 1:J:145:ILE:HD13 | 1:J:293:LEU:CD2 | 2.47 | 0.43 |
| 1:K:302:THR:OG1 | 1:K:306:ARG:O | 2.36 | 0.43 |
| 1:K:333:THR:HA | 1:K:336:THR:CG2 | 2.49 | 0.43 |
| 1:L:331:GLU:HG3 | 1:L:334:SER:HB2 | 2.00 | 0.43 |
| 1:K:111:LEU:HD21 | 1:L:90:HIS:CD2 | 2.52 | 0.43 |
| 1:D:300:VAL:HG11 | 1:D:368:ILE:HD11 | 1.99 | 0.43 |
| 1:E:353:MET:O | 1:E:357:GLN:HG2 | 2.17 | 0.43 |
| 1:F:40:THR:CG2 | 1:F:62:ASN:HA | 2.48 | 0.43 |
| 1:G:145:ILE:C | 1:G:145:ILE:CD1 | 2.86 | 0.43 |
| 1:H:105:VAL:HG22 | 1:H:122:LEU:HG | 2.00 | 0.43 |
| 1:I:165:LEU:O | 1:I:169:ILE:HG13 | 2.18 | 0.43 |
| 1:I:236:CYS:SG | 1:I:242:ILE:HG13 | 2.58 | 0.43 |
| 1:I:283:ARG:HA | 1:I:283:ARG:HD3 | 1.70 | 0.43 |
| 1:I:47:GLU:CB | 1:I:52:LEU:CD2 | 2.96 | 0.43 |
| 1:J:158:THR:HB | 1:J:260:HIS:HE1 | 1.82 | 0.43 |
| 1:K:40:THR:N | 1:K:65:LEU:HD21 | 2.33 | 0.43 |
| 1:L:222:ASN:CA | 1:L:225:ARG:NH2 | 2.75 | 0.43 |
| 1:L:290:THR:O | 1:L:292:ARG:NH2 | 2.52 | 0.43 |
| 1:A:222:ASN:OD1 | 1:A:226:ARG:NH1 | 2.52 | 0.43 |
| 1:A:355:PHE:CB | 1:A:360:ILE:CG2 | 2.96 | 0.43 |
| 1:C:230:LEU:HD11 | 1:C:256:TYR:CE1 | 2.53 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:222:ASN:O | 1:E:225:ARG:N | 2.49 | 0.43 |
| 1:F:148:GLN:O | 1:F:254:PRO:HD3 | 2.17 | 0.43 |
| 1:F:249:ALA:CB | 1:F:290:THR:OG1 | 2.65 | 0.43 |
| 1:F:369:ILE:O | 1:F:372:ALA:CB | 2.66 | 0.43 |
| 1:H:183:VAL:C | 1:H:184:LEU:HD23 | 2.38 | 0.43 |
| 1:H:361:SER:O | 1:H:364:VAL:HG12 | 2.19 | 0.43 |
| 1:H:93:PHE:CD1 | 1:H:93:PHE:C | 2.91 | 0.43 |
| 1:I:70:ASN:ND2 | 1:I:78:THR:OG1 | 2.52 | 0.43 |
| 1:J:151:ILE:HG21 | 1:J:153:PHE:CZ | 2.53 | 0.43 |
| 1:A:355:PHE:N | 1:A:360:ILE:HG22 | 2.33 | 0.43 |
| 1:B:139:ASP:OD1 | 1:B:139:ASP:N | 2.49 | 0.43 |
| 1:B:40:THR:N | 1:B:65:LEU:HD21 | 2.33 | 0.43 |
| 1:B:48:VAL:HG21 | 1:B:53:LEU:HD11 | 2.00 | 0.43 |
| 1:C:105:VAL:HG22 | 1:C:122:LEU:HG | 2.01 | 0.43 |
| 1:C:269:ARG:HG3 | 1:C:333:THR:HG21 | 2.00 | 0.43 |
| 1:E:23:ARG:HA | 1:E:23:ARG:HD3 | 1.75 | 0.43 |
| 1:F:333:THR:O | 1:F:336:THR:OG1 | 2.28 | 0.43 |
| 1:H:55:ILE:O | 1:H:55:ILE:HG22 | 2.18 | 0.43 |
| 1:I:60:LEU:N | 1:I:60:LEU:HD23 | 2.33 | 0.43 |
| 1:K:178:ASP:OD1 | 1:K:178:ASP:N | 2.50 | 0.43 |
| 1:B:102:ARG:HE | 1:B:127:THR:CG2 | 2.27 | 0.43 |
| 1:C:363:ARG:CG | 1:C:364:VAL:N | 2.77 | 0.43 |
| 1:F:135:MET:HB3 | 1:F:137:LEU:CD1 | 2.48 | 0.43 |
| 1:F:179:SER:OG | 1:F:179:SER:O | 2.37 | 0.43 |
| 1:F:37:THR:OG1 | 1:F:45:PHE:HB2 | 2.18 | 0.43 |
| 1:G:223:ALA:O | 1:G:228:PRO:HD3 | 2.19 | 0.43 |
| 1:G:28:ALA:HB3 | 1:G:36:ILE:HD11 | 1.99 | 0.43 |
| 1:J:183:VAL:HG13 | 1:J:230:LEU:CD2 | 2.37 | 0.43 |
| 1:J:24:MET:HE3 | 1:J:25:LEU:HD23 | 2.00 | 0.43 |
| 1:J:268:MET:HE1 | 1:J:288:LEU:CD1 | 2.48 | 0.43 |
| 1:A:13:PRO:HG3 | 1:A:20:PHE:CG | 2.53 | 0.43 |
| 1:A:9:MET:HE1 | 1:A:24:MET:HB2 | 2.01 | 0.43 |
| 1:A:355:PHE:HB2 | 1:A:360:ILE:CG2 | 2.48 | 0.43 |
| 1:G:151:ILE:HG21 | 1:G:153:PHE:CZ | 2.53 | 0.43 |
| 1:G:235:GLU:HA | 1:G:258:THR:OG1 | 2.17 | 0.43 |
| 1:G:96:ASN:CG | 1:G:98:GLY:H | 2.20 | 0.43 |
| 1:I:13:PRO:HG3 | 1:I:20:PHE:CG | 2.53 | 0.43 |
| 1:I:360:ILE:HG23 | 1:I:364:VAL:HB | 2.01 | 0.43 |
| 1:J:223:ALA:O | 1:J:228:PRO:HD3 | 2.17 | 0.43 |
| 1:J:25:LEU:HD12 | 1:J:93:PHE:CE2 | 2.53 | 0.43 |
| 1:L:162:LYS:HE2 | 1:L:162:LYS:HB2 | 1.79 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:361:SER:HB2 | 1:L:364:VAL:HG23 | 2.00 | 0.43 |
| 1:B:21:MET:HE1 | 1:B:122:LEU:HD21 | 2.01 | 0.43 |
| 1:C:16:PHE:HE1 | 1:C:21:MET:HA | 1.83 | 0.43 |
| 1:D:69:ILE:HD12 | 1:D:69:ILE:HA | 1.87 | 0.43 |
| 1:E:86:ASP:OD2 | 1:F:222:ASN:ND2 | 2.50 | 0.43 |
| 1:F:157:ALA:O | 1:F:162:LYS:NZ | 2.50 | 0.43 |
| 1:G:134:THR:HB | 1:G:135:MET:HE3 | 1.99 | 0.43 |
| 1:H:88:ASP:OD2 | 1:I:225:ARG:HD2 | 2.19 | 0.43 |
| 1:I:230:LEU:HD13 | 1:I:256:TYR:CE1 | 2.53 | 0.43 |
| 1:I:48:VAL:HG12 | 1:I:49:TYR:HD2 | 1.84 | 0.43 |
| 1:I:12:GLU:OE1 | 1:I:58:ARG:NE | 2.52 | 0.43 |
| 1:J:174:ILE:O | 1:J:199:THR:CG2 | 2.67 | 0.43 |
| 1:L:220:VAL:O | 1:L:223:ALA:HB3 | 2.18 | 0.43 |
| 1:L:238:ASP:O | 1:L:241:THR:HG22 | 2.18 | 0.43 |
| 1:L:236:CYS:O | 1:L:259:LEU:HD21 | 2.18 | 0.43 |
| 1:B:315:VAL:O | 1:B:315:VAL:HG13 | 2.18 | 0.43 |
| 1:B:73:TYR:O | 1:B:73:TYR:CD2 | 2.72 | 0.43 |
| 1:C:174:ILE:CD1 | 1:C:199:THR:CG2 | 2.96 | 0.43 |
| 1:C:174:ILE:HG13 | 1:C:202:ALA:HB1 | 2.01 | 0.43 |
| 1:C:268:MET:SD | 1:C:291:ILE:HD13 | 2.59 | 0.43 |
| 1:C:45:PHE:CE2 | 1:D:203:VAL:HG22 | 2.54 | 0.43 |
| 1:D:73:TYR:CD2 | 1:D:73:TYR:O | 2.72 | 0.43 |
| 1:H:65:LEU:HD12 | 1:H:120:ILE:CD1 | 2.49 | 0.43 |
| 1:K:93:PHE:HE2 | 1:K:103:TYR:CE1 | 2.36 | 0.43 |
| 1:K:235:GLU:OE2 | 1:K:237:ARG:NE | 2.51 | 0.43 |
| 1:K:317:ASP:O | 1:K:321:ARG:HG3 | 2.18 | 0.43 |
| 1:K:48:VAL:HG12 | 1:K:49:TYR:CD2 | 2.54 | 0.43 |
| 1:L:60:LEU:N | 1:L:60:LEU:HD12 | 2.33 | 0.43 |
| 1:A:37:THR:CG2 | 1:B:182:LYS:HE3 | 2.49 | 0.43 |
| 1:D:185:THR:HG22 | 1:D:232:MET:HB3 | 2.00 | 0.43 |
| 1:E:137:LEU:CB | 1:E:141:ILE:HD11 | 2.46 | 0.43 |
| 1:E:155:THR:O | 1:E:296:TRP:HA | 2.18 | 0.43 |
| 1:F:362:GLU:O | 1:F:366:LYS:HG3 | 2.19 | 0.43 |
| 1:G:313:TYR:HE2 | 1:G:345:GLN:CD | 2.22 | 0.43 |
| 1:H:188:SER:C | 1:H:208:GLU:HG3 | 2.37 | 0.43 |
| 1:H:261:THR:CG2 | 1:H:270:ARG:HD3 | 2.49 | 0.43 |
| 1:I:222:ASN:OD1 | 1:I:222:ASN:C | 2.57 | 0.43 |
| 1:J:249:ALA:HB1 | 1:J:290:THR:OG1 | 2.19 | 0.43 |
| 1:J:160:SER:O | 1:J:297:GLN:NE2 | 2.52 | 0.43 |
| 1:J:73:TYR:CG | 1:J:73:TYR:O | 2.71 | 0.43 |
| 1:K:8:LEU:O | 1:K:27:HIS:CE1 | 2.71 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:21:MET:CE | 1:K:68:LEU:HG | 2.48 | 0.43 |
| 1:B:188:SER:CB | 1:B:189:PRO:HD2 | 2.48 | 0.43 |
| 1:E:209:ILE:HG13 | 1:E:216:PHE:CE1 | 2.54 | 0.43 |
| 1:F:59:ARG:HG3 | 1:F:59:ARG:H | 1.66 | 0.43 |
| 1:G:223:ALA:O | 1:G:228:PRO:CD | 2.66 | 0.43 |
| 1:H:369:ILE:O | 1:H:370:ALA:C | 2.58 | 0.43 |
| 1:H:9:MET:CE | 1:H:24:MET:N | 2.82 | 0.43 |
| 1:I:81:LEU:CD1 | 1:I:81:LEU:N | 2.82 | 0.43 |
| 1:J:13:PRO:HB3 | 1:J:20:PHE:HE1 | 1.73 | 0.43 |
| 1:J:283:ARG:HA | 1:J:283:ARG:HE | 1.84 | 0.43 |
| 1:K:171:ARG:O | 1:K:174:ILE:HG22 | 2.14 | 0.43 |
| 1:K:9:MET:SD | 1:K:10:PRO:CD | 3.03 | 0.43 |
| 1:L:305:GLU:O | 1:L:306:ARG:HD3 | 2.19 | 0.43 |
| 1:B:195:ASP:O | 1:B:198:GLU:HB2 | 2.19 | 0.42 |
| 1:C:37:THR:OG1 | 1:C:45:PHE:HB2 | 2.18 | 0.42 |
| 1:E:151:ILE:HG21 | 1:E:153:PHE:CZ | 2.54 | 0.42 |
| 1:E:162:LYS:HD3 | 1:E:258:THR:CG2 | 2.47 | 0.42 |
| 1:E:17:THR:HB | 1:E:20:PHE:HD2 | 1.84 | 0.42 |
| 1:E:9:MET:CG | 1:E:10:PRO:CD | 2.96 | 0.42 |
| 1:F:17:THR:HB | 1:F:20:PHE:HD1 | 1.84 | 0.42 |
| 1:G:155:THR:CG2 | 1:G:259:LEU:O | 2.67 | 0.42 |
| 1:G:354:LYS:CB | 1:G:360:ILE:CD1 | 2.88 | 0.42 |
| 1:H:339:LEU:HD23 | 1:H:339:LEU:HA | 1.81 | 0.42 |
| 1:I:312:GLU:HB2 | 1:I:347:MET:N | 2.33 | 0.42 |
| 1:K:181:ARG:HA | 1:K:229:ARG:HB3 | 2.01 | 0.42 |
| 1:L:112:VAL:CG2 | 1:L:117:ALA:HB1 | 2.41 | 0.42 |
| 1:L:17:THR:HB | 1:L:20:PHE:CD1 | 2.54 | 0.42 |
| 1:L:238:ASP:OD1 | 1:L:238:ASP:C | 2.57 | 0.42 |
| 1:A:102:ARG:HH11 | 1:A:127:THR:HG21 | 1.85 | 0.42 |
| 1:A:306:ARG:CG | 1:A:307:ARG:H | 2.32 | 0.42 |
| 1:E:174:ILE:HG13 | 1:E:202:ALA:HB1 | 2.00 | 0.42 |
| 1:D:123:ARG:NH2 | 1:E:225:ARG:O | 2.52 | 0.42 |
| 1:E:265:ALA:CB | 1:E:337:ARG:HG3 | 2.49 | 0.42 |
| 1:E:8:LEU:O | 1:E:27:HIS:CE1 | 2.73 | 0.42 |
| 1:F:175:GLU:HA | 1:F:199:THR:HG22 | 2.00 | 0.42 |
| 1:G:355:PHE:HB2 | 1:G:356:GLU:OE2 | 2.18 | 0.42 |
| 1:J:171:ARG:HA | 1:J:174:ILE:CG2 | 2.49 | 0.42 |
| 1:J:173:LEU:O | 1:J:179:SER:HB2 | 2.18 | 0.42 |
| 1:J:209:ILE:CD1 | 1:J:215:ASN:C | 2.88 | 0.42 |
| 1:J:251:THR:OG1 | 1:J:253:HIS:CD2 | 2.72 | 0.42 |
| 1:K:269:ARG:NH2 | 1:L:322:ASP:OD1 | 2.52 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:333:THR:OG1 | 1:A:334:SER:N | 2.52 | 0.42 |
| 1:A:355:PHE:CE1 | 1:A:362:GLU:HA | 2.54 | 0.42 |
| 1:A:94:ARG:HH12 | 1:A:97:ARG:CD | 2.22 | 0.42 |
| 1:C:111:LEU:HD13 | 1:C:112:VAL:N | 2.33 | 0.42 |
| 1:D:349:TRP:CH2 | 1:D:353:MET:HE2 | 2.53 | 0.42 |
| 1:E:22:ASP:OD2 | 1:E:93:PHE:CE1 | 2.72 | 0.42 |
| 1:F:112:VAL:HG23 | 1:F:112:VAL:O | 2.17 | 0.42 |
| 1:G:181:ARG:HD3 | 1:G:229:ARG:HG3 | 2.00 | 0.42 |
| 1:G:296:TRP:CE3 | 1:G:347:MET:SD | 3.12 | 0.42 |
| 1:I:13:PRO:HB3 | 1:I:20:PHE:CD2 | 2.51 | 0.42 |
| 1:I:54:LYS:O | 1:I:55:ILE:HD13 | 2.18 | 0.42 |
| 1:L:194:TYR:HA | 1:L:197:ILE:CD1 | 2.43 | 0.42 |
| 1:L:292:ARG:HD3 | 1:L:321:ARG:NH1 | 2.34 | 0.42 |
| 1:A:179:SER:HB2 | 1:A:181:ARG:HH21 | 1.83 | 0.42 |
| 1:A:281:LEU:O | 1:A:285:ILE:CD1 | 2.67 | 0.42 |
| 1:E:174:ILE:HG13 | 1:E:202:ALA:HB3 | 2.01 | 0.42 |
| 1:E:271:LEU:HB3 | 1:E:287:ILE:HD12 | 2.01 | 0.42 |
| 1:F:151:ILE:HG21 | 1:F:153:PHE:CZ | 2.54 | 0.42 |
| 1:G:95:PRO:HD2 | 1:G:99:VAL:HG23 | 2.01 | 0.42 |
| 1:G:96:ASN:OD1 | 1:G:97:ARG:N | 2.52 | 0.42 |
| 1:H:263:GLY:O | 1:H:267:THR:OG1 | 2.34 | 0.42 |
| 1:H:40:THR:OG1 | 1:H:65:LEU:HD23 | 2.19 | 0.42 |
| 1:H:80:GLN:O | 1:H:83:SER:HB2 | 2.18 | 0.42 |
| 1:I:364:VAL:O | 1:I:368:ILE:HG12 | 2.20 | 0.42 |
| 1:I:57:ASN:N | 1:I:57:ASN:OD1 | 2.51 | 0.42 |
| 1:I:72:ILE:CG2 | 1:I:91:TYR:HB2 | 2.49 | 0.42 |
| 1:K:90:HIS:CD2 | 1:K:104:ARG:HA | 2.54 | 0.42 |
| 1:K:91:TYR:CE1 | 1:K:93:PHE:HD2 | 2.37 | 0.42 |
| 1:L:299:LEU:HD23 | 1:L:299:LEU:HA | 1.93 | 0.42 |
| 1:E:368:ILE:HA | 1:E:368:ILE:HD12 | 1.91 | 0.42 |
| 1:E:95:PRO:CG | 1:E:96:ASN:H | 2.11 | 0.42 |
| 1:F:184:LEU:CD1 | 1:F:228:PRO:HB3 | 2.49 | 0.42 |
| 1:H:119:GLN:NE2 | 1:I:182:LYS:CE | 2.82 | 0.42 |
| 1:I:338:LYS:HE3 | 1:I:342:GLN:OE1 | 2.20 | 0.42 |
| 1:K:66:GLY:O | 1:K:69:ILE:HG22 | 2.20 | 0.42 |
| 1:L:165:LEU:O | 1:L:169:ILE:HG12 | 2.20 | 0.42 |
| 1:L:329:PRO:HA | 1:L:332:VAL:HG23 | 2.01 | 0.42 |
| 1:G:203:VAL:CG1 | 1:L:39:GLN:HE22 | 2.32 | 0.42 |
| 1:A:188:SER:OG | 1:A:189:PRO:CD | 2.67 | 0.42 |
| 1:B:132:LEU:CB | 1:B:172:GLU:HG3 | 2.49 | 0.42 |
| 1:B:250:LEU:HD23 | 1:B:250:LEU:HA | 1.90 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:296:TRP:CZ3 | 1:D:347:MET:CE | 3.02 | 0.42 |
| 1:E:213:LEU:HA | 1:E:213:LEU:HD23 | 1.82 | 0.42 |
| 1:E:215:ASN:ND2 | 1:E:215:ASN:N | 2.66 | 0.42 |
| 1:E:149:GLU:O | 1:E:292:ARG:HD3 | 2.20 | 0.42 |
| 1:F:170:ILE:HG22 | 1:F:174:ILE:HD12 | 2.00 | 0.42 |
| 1:G:317:ASP:CA | 1:G:321:ARG:HH12 | 2.32 | 0.42 |
| 1:I:12:GLU:OE2 | 1:I:58:ARG:HG3 | 2.20 | 0.42 |
| 1:I:61:SER:CB | 1:I:64:GLU:OE1 | 2.67 | 0.42 |
| 1:J:263:GLY:CA | 1:J:266:GLU:HG2 | 2.50 | 0.42 |
| 1:J:268:MET:HG3 | 1:J:336:THR:HG21 | 2.00 | 0.42 |
| 1:K:151:ILE:HG21 | 1:K:153:PHE:CZ | 2.54 | 0.42 |
| 1:L:149:GLU:CG | 1:L:150:GLY:H | 2.32 | 0.42 |
| 1:A:365:TYR:O | 1:A:369:ILE:HD12 | 2.19 | 0.42 |
| 1:B:137:LEU:HD11 | 1:B:311:ARG:NH2 | 2.35 | 0.42 |
| 1:C:155:THR:HG22 | 1:C:259:LEU:HB2 | 2.02 | 0.42 |
| 1:C:69:ILE:HD12 | 1:C:69:ILE:HA | 1.90 | 0.42 |
| 1:G:48:VAL:HG12 | 1:G:49:TYR:CD2 | 2.55 | 0.42 |
| 1:H:340:VAL:CG2 | 1:H:346:LEU:CD2 | 2.97 | 0.42 |
| 1:H:73:TYR:O | 1:H:73:TYR:CG | 2.73 | 0.42 |
| 1:J:40:THR:HG21 | 1:J:62:ASN:HB2 | 2.01 | 0.42 |
| 1:K:25:LEU:CD1 | 1:K:93:PHE:CZ | 3.03 | 0.42 |
| 1:K:293:LEU:CD1 | 1:K:315:VAL:HG22 | 2.46 | 0.42 |
| 1:A:230:LEU:CD1 | 1:A:230:LEU:C | 2.88 | 0.42 |
| 1:B:102:ARG:C | 1:B:125:ILE:HG22 | 2.40 | 0.42 |
| 1:C:48:VAL:HG12 | 1:C:49:TYR:CD2 | 2.51 | 0.42 |
| 1:F:132:LEU:HD11 | 1:F:169:ILE:HD11 | 2.02 | 0.42 |
| 1:G:104:ARG:HB2 | 1:G:125:ILE:HD11 | 2.01 | 0.42 |
| 1:H:145:ILE:HA | 1:H:145:ILE:HD12 | 1.92 | 0.42 |
| 1:H:240:GLU:N | 1:H:240:GLU:CD | 2.72 | 0.42 |
| 1:H:26:GLU:OE1 | 1:H:95:PRO:HB3 | 2.19 | 0.42 |
| 1:I:349:TRP:HD1 | 1:I:349:TRP:O | 2.03 | 0.42 |
| 1:I:24:MET:CE | 1:I:44:ILE:HG21 | 2.49 | 0.42 |
| 1:B:131:LYS:HB2 | 1:B:134:THR:HG23 | 2.01 | 0.42 |
| 1:D:65:LEU:HD23 | 1:D:118:ILE:HG13 | 2.01 | 0.42 |
| 1:D:186:TYR:CZ | 1:D:219:GLY:O | 2.72 | 0.42 |
| 1:F:209:ILE:CD1 | 1:F:209:ILE:C | 2.88 | 0.42 |
| 1:F:185:THR:HG22 | 1:F:232:MET:HB3 | 2.00 | 0.42 |
| 1:F:73:TYR:CE1 | 1:F:89:THR:HG22 | 2.54 | 0.42 |
| 1:G:235:GLU:N | 1:G:258:THR:HG1 | 2.18 | 0.42 |
| 1:G:306:ARG:HG2 | 1:G:307:ARG:H | 1.83 | 0.42 |
| 1:G:362:GLU:O | 1:G:366:LYS:HG3 | 2.20 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:70:ASN:OD1 | 1:I:78:THR:OG1 | 2.34 | 0.42 |
| 1:J:163:SER:CB | 1:J:191:GLU:OE2 | 2.68 | 0.42 |
| 1:K:288:LEU:CB | 1:K:325:LEU:HD23 | 2.47 | 0.42 |
| 1:K:268:MET:HE1 | 1:K:291:ILE:HG21 | 2.02 | 0.42 |
| 1:K:91:TYR:CD1 | 1:K:93:PHE:HD2 | 2.37 | 0.42 |
| 1:A:37:THR:HG21 | 1:B:182:LYS:HE3 | 2.02 | 0.42 |
| 1:G:205:SER:HB2 | 1:L:119:GLN:OE1 | 2.19 | 0.42 |
| 1:H:349:TRP:CZ3 | 1:H:353:MET:CE | 3.03 | 0.42 |
| 1:H:348:THR:HG22 | 1:H:372:ALA:HB3 | 2.02 | 0.42 |
| 1:H:54:LYS:HG3 | 1:H:54:LYS:O | 2.19 | 0.42 |
| 1:J:319:GLU:O | 1:J:323:ILE:HG12 | 2.19 | 0.42 |
| 1:E:19:VAL:HG21 | 1:J:331:GLU:HG3 | 2.01 | 0.42 |
| 1:J:363:ARG:HG3 | 1:J:366:LYS:HE3 | 2.02 | 0.42 |
| 1:J:81:LEU:CD2 | 1:J:87:ILE:CD1 | 2.89 | 0.42 |
| 1:J:9:MET:CE | 1:J:24:MET:N | 2.78 | 0.42 |
| 1:K:154:ILE:HG21 | 1:K:165:LEU:HD23 | 2.02 | 0.42 |
| 1:B:164:THR:O | 1:B:167:ALA:N | 2.53 | 0.41 |
| 1:C:174:ILE:HD12 | 1:C:204:VAL:CG2 | 2.50 | 0.41 |
| 1:D:308:VAL:HG22 | 1:D:309:ALA:N | 2.35 | 0.41 |
| 1:D:87:ILE:HB | 1:D:107:ALA:HB3 | 2.02 | 0.41 |
| 1:G:148:GLN:O | 1:G:254:PRO:HD3 | 2.20 | 0.41 |
| 1:G:279:GLU:OE1 | 1:G:279:GLU:CA | 2.61 | 0.41 |
| 1:H:172:GLU:O | 1:H:176:THR:CG2 | 2.62 | 0.41 |
| 1:I:198:GLU:HG2 | 1:I:198:GLU:H | 1.55 | 0.41 |
| 1:J:249:ALA:CB | 1:J:290:THR:OG1 | 2.68 | 0.41 |
| 1:J:69:ILE:CA | 1:J:72:ILE:HG22 | 2.50 | 0.41 |
| 1:K:242:ILE:HD13 | 1:K:271:LEU:CD2 | 2.49 | 0.41 |
| 1:K:297:GLN:HE21 | 1:K:311:ARG:NE | 2.17 | 0.41 |
| 1:K:352:LYS:HA | 1:K:365:TYR:CE2 | 2.56 | 0.41 |
| 1:L:193:VAL:HA | 1:L:206:GLN:HE22 | 1.84 | 0.41 |
| 1:L:9:MET:HE3 | 1:L:24:MET:HB2 | 1.98 | 0.41 |
| 1:A:278:GLU:OE2 | 1:F:337:ARG:NH1 | 2.52 | 0.41 |
| 1:A:320:VAL:CG1 | 1:A:339:LEU:HD13 | 2.50 | 0.41 |
| 1:B:119:GLN:NE2 | 1:C:226:ARG:NH2 | 2.53 | 0.41 |
| 1:B:125:ILE:HA | 1:B:125:ILE:HD12 | 1.93 | 0.41 |
| 1:C:162:LYS:O | 1:C:166:LEU:HG | 2.20 | 0.41 |
| 1:C:251:THR:OG1 | 1:C:253:HIS:CD2 | 2.71 | 0.41 |
| 1:D:171:ARG:C | 1:D:174:ILE:HG22 | 2.40 | 0.41 |
| 1:D:174:ILE:HD12 | 1:D:204:VAL:HG21 | 2.01 | 0.41 |
| 1:E:108:THR:OG1 | 1:F:226:ARG:NH2 | 2.47 | 0.41 |
| 1:F:183:VAL:CG1 | 1:F:230:LEU:HD22 | 2.36 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:237:ARG:CZ | 1:F:247:GLU:OE1 | 2.68 | 0.41 |
| 1:F:340:VAL:HG23 | 1:F:341:ARG:N | 2.35 | 0.41 |
| 1:G:126:PRO:O | 1:G:191:GLU:O | 2.38 | 0.41 |
| 1:G:300:VAL:O | 1:G:308:VAL:HG12 | 2.20 | 0.41 |
| 1:I:44:ILE:H | 1:I:56:THR:HG22 | 1.84 | 0.41 |
| 1:J:315:VAL:HG13 | 1:J:315:VAL:O | 2.19 | 0.41 |
| 1:J:7:ASN:C | 1:J:8:LEU:HD12 | 2.40 | 0.41 |
| 1:K:351:ALA:O | 1:K:360:ILE:HD11 | 2.20 | 0.41 |
| 1:L:182:LYS:HG3 | 1:L:203:VAL:HG13 | 2.01 | 0.41 |
| 1:G:318:GLU:CG | 1:L:363:ARG:CZ | 2.91 | 0.41 |
| 1:A:209:ILE:N | 1:A:210:PRO:CD | 2.84 | 0.41 |
| 1:A:73:TYR:CD2 | 1:A:87:ILE:HG12 | 2.54 | 0.41 |
| 1:B:13:PRO:HG3 | 1:B:20:PHE:CG | 2.55 | 0.41 |
| 1:C:209:ILE:N | 1:C:210:PRO:CD | 2.83 | 0.41 |
| 1:D:48:VAL:HG12 | 1:D:49:TYR:HD2 | 1.86 | 0.41 |
| 1:F:111:LEU:CD1 | 1:F:115:HIS:C | 2.87 | 0.41 |
| 1:F:222:ASN:OD1 | 1:F:226:ARG:NE | 2.53 | 0.41 |
| 1:G:158:THR:HA | 1:G:162:LYS:NZ | 2.34 | 0.41 |
| 1:G:173:LEU:C | 1:G:181:ARG:NH2 | 2.67 | 0.41 |
| 1:G:352:LYS:CG | 1:G:365:TYR:CZ | 3.02 | 0.41 |
| 1:H:246:LEU:O | 1:H:250:LEU:CD1 | 2.67 | 0.41 |
| 1:H:336:THR:O | 1:H:340:VAL:HG13 | 2.20 | 0.41 |
| 1:I:171:ARG:C | 1:I:174:ILE:HG22 | 2.40 | 0.41 |
| 1:H:367:LEU:HD23 | 1:I:325:LEU:HD22 | 2.02 | 0.41 |
| 1:J:302:THR:N | 1:J:306:ARG:O | 2.53 | 0.41 |
| 1:J:349:TRP:CE2 | 1:J:353:MET:HE1 | 2.54 | 0.41 |
| 1:J:350:ASP:OD1 | 1:J:354:LYS:HD3 | 2.20 | 0.41 |
| 1:K:139:ASP:O | 1:K:140:ASN:C | 2.59 | 0.41 |
| 1:K:7:ASN:C | 1:K:8:LEU:CD2 | 2.87 | 0.41 |
| 1:A:297:GLN:HE21 | 1:A:311:ARG:HE | 1.65 | 0.41 |
| 1:B:135:MET:HB3 | 1:B:137:LEU:CD1 | 2.49 | 0.41 |
| 1:B:69:ILE:HD12 | 1:B:69:ILE:HA | 1.92 | 0.41 |
| 1:J:100:ARG:N | 1:J:100:ARG:HD3 | 2.30 | 0.41 |
| 1:J:166:LEU:HD21 | 1:J:256:TYR:HB3 | 2.02 | 0.41 |
| 1:I:119:GLN:HE22 | 1:J:182:LYS:CE | 2.32 | 0.41 |
| 1:J:212:HIS:O | 1:J:213:LEU:HG | 2.20 | 0.41 |
| 1:L:314:LEU:HD11 | 1:L:339:LEU:HB3 | 2.03 | 0.41 |
| 1:L:37:THR:OG1 | 1:L:45:PHE:HB2 | 2.21 | 0.41 |
| 1:A:60:LEU:HB3 | 1:A:65:LEU:CD1 | 2.50 | 0.41 |
| 1:A:89:THR:C | 1:A:105:VAL:HG22 | 2.41 | 0.41 |
| 1:C:166:LEU:CD2 | 1:C:232:MET:HE1 | 2.50 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:315:VAL:O | 1:D:315:VAL:HG13 | 2.20 | 0.41 |
| 1:D:95:PRO:HD2 | 1:D:99:VAL:O | 2.21 | 0.41 |
| 1:F:141:ILE:HG23 | 1:F:295:ILE:HD11 | 2.01 | 0.41 |
| 1:F:275:PHE:CE1 | 1:F:283:ARG:HD3 | 2.56 | 0.41 |
| 1:H:58:ARG:CZ | 1:H:58:ARG:HB3 | 2.51 | 0.41 |
| 1:J:162:LYS:HE3 | 2:J:401:PO4:O1 | 2.20 | 0.41 |
| 1:K:87:ILE:HB | 1:K:107:ALA:HB3 | 2.02 | 0.41 |
| 1:A:37:THR:HG22 | 1:A:121:THR:HG23 | 2.02 | 0.41 |
| 1:A:183:VAL:HG13 | 1:A:230:LEU:HD12 | 2.02 | 0.41 |
| 1:B:9:MET:HE1 | 1:B:24:MET:N | 2.35 | 0.41 |
| 1:D:280:ARG:O | 1:D:284:THR:CG2 | 2.40 | 0.41 |
| 1:D:72:ILE:HG13 | 1:D:91:TYR:CD1 | 2.55 | 0.41 |
| 1:E:288:LEU:CB | 1:E:325:LEU:HD21 | 2.50 | 0.41 |
| 1:E:121:THR:CG2 | 1:F:182:LYS:HE3 | 2.51 | 0.41 |
| 1:F:8:LEU:C | 1:F:27:HIS:HE1 | 2.22 | 0.41 |
| 1:A:322:ASP:OD1 | 1:F:363:ARG:NH2 | 2.54 | 0.41 |
| 1:G:176:THR:CG2 | 1:G:177:SER:N | 2.84 | 0.41 |
| 1:G:69:ILE:HD11 | 1:G:120:ILE:HG23 | 2.02 | 0.41 |
| 1:H:208:GLU:HG2 | 1:H:210:PRO:HD2 | 2.03 | 0.41 |
| 1:H:29:GLU:OE1 | 1:H:29:GLU:HA | 2.19 | 0.41 |
| 1:I:110:CYS:HB2 | 1:J:206:GLN:O | 2.20 | 0.41 |
| 1:I:174:ILE:HG12 | 1:I:202:ALA:CB | 2.50 | 0.41 |
| 1:I:171:ARG:CA | 1:I:174:ILE:HG22 | 2.50 | 0.41 |
| 1:J:165:LEU:O | 1:J:165:LEU:HD12 | 2.20 | 0.41 |
| 1:K:111:LEU:HD13 | 1:L:90:HIS:HE1 | 1.78 | 0.41 |
| 1:K:279:GLU:HG2 | 1:K:279:GLU:H | 1.61 | 0.41 |
| 1:L:188:SER:HA | 1:L:209:ILE:CG2 | 2.45 | 0.41 |
| 1:L:17:THR:CG2 | 1:L:18:PRO:HD2 | 2.41 | 0.41 |
| 1:C:261:THR:HG21 | 1:C:266:GLU:C | 2.40 | 0.41 |
| 1:C:281:LEU:HD23 | 1:C:285:ILE:HD13 | 2.02 | 0.41 |
| 1:C:308:VAL:HG22 | 1:C:309:ALA:N | 2.36 | 0.41 |
| 1:D:158:THR:HG22 | 1:E:247:GLU:OE1 | 2.21 | 0.41 |
| 1:D:223:ALA:O | 1:D:228:PRO:HD3 | 2.20 | 0.41 |
| 1:E:215:ASN:ND2 | 1:E:218:ASP:HB2 | 2.35 | 0.41 |
| 1:G:141:ILE:O | 1:G:144:ALA:N | 2.45 | 0.41 |
| 1:G:208:GLU:CG | 1:G:210:PRO:HD2 | 2.51 | 0.41 |
| 1:H:132:LEU:HB2 | 1:H:172:GLU:CG | 2.51 | 0.41 |
| 1:H:349:TRP:CZ3 | 1:H:353:MET:HE2 | 2.56 | 0.41 |
| 1:J:47:GLU:HA | 1:J:51:ARG:O | 2.21 | 0.41 |
| 1:K:283:ARG:N | 1:K:283:ARG:HD2 | 2.35 | 0.41 |
| 1:L:332:VAL:O | 1:L:336:THR:HG23 | 2.20 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:93:PHE:CD1 | 1:A:93:PHE:C | 2.94 | 0.41 |
| 1:C:17:THR:HG23 | 1:C:18:PRO:CD | 2.44 | 0.41 |
| 1:C:182:LYS:HB3 | 1:C:228:PRO:HA | 2.02 | 0.41 |
| 1:C:66:GLY:O | 1:C:69:ILE:HG22 | 2.21 | 0.41 |
| 1:E:268:MET:HE3 | 1:E:288:LEU:HD12 | 2.03 | 0.41 |
| 1:E:86:ASP:OD1 | 1:E:87:ILE:N | 2.53 | 0.41 |
| 1:F:69:ILE:HA | 1:F:69:ILE:HD12 | 1.88 | 0.41 |
| 1:I:151:ILE:CG2 | 1:I:153:PHE:CE1 | 3.04 | 0.41 |
| 1:J:60:LEU:HB3 | 1:J:65:LEU:CD1 | 2.50 | 0.41 |
| 1:K:33:ALA:HB2 | 1:K:48:VAL:HG22 | 2.03 | 0.41 |
| 1:L:247:GLU:O | 1:L:251:THR:HG23 | 2.20 | 0.41 |
| 1:L:271:LEU:HA | 1:L:271:LEU:HD23 | 1.92 | 0.41 |
| 1:L:287:ILE:O | 1:L:290:THR:HG22 | 2.20 | 0.41 |
| 1:L:93:PHE:HE2 | 1:L:103:TYR:HE2 | 1.67 | 0.41 |
| 1:A:89:THR:CG2 | 1:A:90:HIS:H | 2.25 | 0.41 |
| 1:B:300:VAL:HG21 | 1:B:310:LEU:HD11 | 2.02 | 0.41 |
| 1:E:268:MET:CE | 1:E:288:LEU:HD12 | 2.51 | 0.41 |
| 1:F:149:GLU:CG | 1:F:150:GLY:N | 2.73 | 0.41 |
| 1:F:269:ARG:HG3 | 1:F:333:THR:HB | 2.03 | 0.41 |
| 1:G:183:VAL:HG13 | 1:G:230:LEU:HD12 | 2.02 | 0.41 |
| 1:G:119:GLN:NE2 | 1:H:182:LYS:HZ1 | 1.92 | 0.41 |
| 1:B:223:ALA:O | 1:B:228:PRO:CD | 2.69 | 0.41 |
| 1:B:90:HIS:NE2 | 1:B:92:GLU:CG | 2.79 | 0.41 |
| 1:C:81:LEU:CD1 | 1:C:87:ILE:CD1 | 2.99 | 0.41 |
| 1:F:288:LEU:HD11 | 1:F:324:LEU:HD13 | 2.03 | 0.41 |
| 1:F:93:PHE:CD1 | 1:F:93:PHE:C | 2.94 | 0.41 |
| 1:G:47:GLU:HG3 | 1:G:52:LEU:HD23 | 2.03 | 0.41 |
| 1:H:242:ILE:O | 1:H:246:LEU:HG | 2.21 | 0.41 |
| 1:I:47:GLU:CB | 1:I:52:LEU:HD23 | 2.50 | 0.41 |
| 1:J:188:SER:HB3 | 1:J:189:PRO:HD3 | 2.03 | 0.41 |
| 1:J:24:MET:HB3 | 1:J:24:MET:HE2 | 1.83 | 0.41 |
| 1:K:188:SER:HA | 1:K:210:PRO:HD3 | 2.03 | 0.41 |
| 1:C:151:ILE:HG21 | 1:C:153:PHE:CZ | 2.57 | 0.41 |
| 1:F:44:ILE:HG22 | 1:F:55:ILE:HD11 | 2.03 | 0.41 |
| 1:G:229:ARG:NE | 1:G:229:ARG:CA | 2.84 | 0.41 |
| 1:G:264:VAL:O | 1:G:267:THR:HB | 2.21 | 0.41 |
| 1:G:345:GLN:CB | 1:G:349:TRP:CZ3 | 3.03 | 0.41 |
| 1:H:209:ILE:N | 1:H:210:PRO:CD | 2.83 | 0.41 |
| 1:I:353:MET:HG3 | 1:I:357:GLN:NE2 | 2.36 | 0.41 |
| 1:J:183:VAL:O | 1:J:204:VAL:HA | 2.20 | 0.41 |
| 1:J:24:MET:HE3 | 1:J:25:LEU:CD2 | 2.51 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:9:MET:CG | 1:J:10:PRO:CD | 2.93 | 0.41 |
| 1:K:230:LEU:HD21 | 1:K:256:TYR:CD1 | 2.56 | 0.41 |
| 1:L:262:SER:HA | 1:L:296:TRP:CZ3 | 2.56 | 0.41 |
| 1:L:352:LYS:CA | 1:L:365:TYR:CE1 | 3.04 | 0.41 |
| 1:L:7:ASN:O | 1:L:55:ILE:HA | 2.21 | 0.41 |
| 1:B:93:PHE:CE1 | 1:B:101:TYR:CD2 | 3.06 | 0.40 |
| 1:B:320:VAL:HG13 | 1:B:339:LEU:HD13 | 2.04 | 0.40 |
| 1:B:7:ASN:N | 1:B:7:ASN:ND2 | 2.68 | 0.40 |
| 1:B:260:HIS:CE1 | 1:C:221:ARG:NH2 | 2.89 | 0.40 |
| 1:D:199:THR:OG1 | 1:D:202:ALA:HB3 | 2.20 | 0.40 |
| 1:E:279:GLU:O | 1:E:283:ARG:HG2 | 2.21 | 0.40 |
| 1:F:165:LEU:O | 1:F:169:ILE:HG12 | 2.21 | 0.40 |
| 1:G:156:GLY:O | 1:G:162:LYS:NZ | 2.53 | 0.40 |
| 1:G:186:TYR:HA | 1:G:207:SER:O | 2.21 | 0.40 |
| 1:G:9:MET:HA | 1:G:27:HIS:CE1 | 2.56 | 0.40 |
| 1:G:313:TYR:CE2 | 1:G:345:GLN:OE1 | 2.74 | 0.40 |
| 1:H:65:LEU:HA | 1:H:68:LEU:HG | 2.03 | 0.40 |
| 1:I:209:ILE:N | 1:I:210:PRO:CD | 2.84 | 0.40 |
| 1:I:317:ASP:H | 1:I:320:VAL:HG23 | 1.86 | 0.40 |
| 1:J:119:GLN:NE2 | 1:K:182:LYS:HE2 | 2.36 | 0.40 |
| 1:J:277:GLY:HA2 | 1:J:280:ARG:HB3 | 2.03 | 0.40 |
| 1:J:354:LYS:HG3 | 1:J:359:ILE:CD1 | 2.48 | 0.40 |
| 1:J:35:ASP:OD2 | 1:K:227:LYS:CD | 2.69 | 0.40 |
| 1:L:44:ILE:CG2 | 1:L:55:ILE:HD11 | 2.51 | 0.40 |
| 1:B:188:SER:OG | 1:B:189:PRO:CD | 2.69 | 0.40 |
| 1:B:366:LYS:CD | 1:B:366:LYS:C | 2.89 | 0.40 |
| 1:D:367:LEU:HD12 | 1:D:367:LEU:HA | 1.88 | 0.40 |
| 1:F:182:LYS:HG3 | 1:F:203:VAL:CG1 | 2.51 | 0.40 |
| 1:G:222:ASN:O | 1:G:225:ARG:CG | 2.69 | 0.40 |
| 1:H:186:TYR:HB3 | 1:H:209:ILE:HD11 | 2.02 | 0.40 |
| 1:H:211:ARG:CD | 1:H:212:HIS:CE1 | 3.04 | 0.40 |
| 1:K:24:MET:CE | 1:K:44:ILE:CD1 | 2.91 | 0.40 |
| 1:K:23:ARG:O | 1:K:26:GLU:HB2 | 2.21 | 0.40 |
| 1:K:288:LEU:CD1 | 1:K:325:LEU:CD2 | 2.88 | 0.40 |
| 1:A:40:THR:HG23 | 1:A:118:ILE:O | 2.22 | 0.40 |
| 1:B:92:GLU:OE1 | 1:B:100:ARG:HD2 | 2.21 | 0.40 |
| 1:D:208:GLU:HG2 | 1:D:210:PRO:HD2 | 2.03 | 0.40 |
| 1:D:209:ILE:HD13 | 1:D:209:ILE:HA | 1.82 | 0.40 |
| 1:E:137:LEU:HD23 | 1:E:141:ILE:CD1 | 2.51 | 0.40 |
| 1:E:208:GLU:HB3 | 1:E:212:HIS:CD2 | 2.56 | 0.40 |
| 1:F:229:ARG:HG3 | 1:F:229:ARG:O | 2.21 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:342:GLN:NE2 | 1:F:342:GLN:HA | 2.36 | 0.40 |
| 1:F:296:TRP:NE1 | 1:F:347:MET:HE2 | 2.18 | 0.40 |
| 1:F:49:TYR:CG | 1:F:50:GLY:N | 2.89 | 0.40 |
| 1:G:131:LYS:O | 1:G:134:THR:CB | 2.69 | 0.40 |
| 1:I:110:CYS:CA | 1:J:212:HIS:CE1 | 3.04 | 0.40 |
| 1:I:17:THR:O | 1:I:20:PHE:N | 2.55 | 0.40 |
| 1:I:352:LYS:HA | 1:I:365:TYR:CE1 | 2.57 | 0.40 |
| 1:I:69:ILE:CG2 | 1:I:70:ASN:N | 2.84 | 0.40 |
| 1:I:80:GLN:HB2 | 1:I:80:GLN:HE21 | 1.79 | 0.40 |
| 1:J:65:LEU:CD2 | 1:J:118:ILE:O | 2.62 | 0.40 |
| 1:J:271:LEU:HB3 | 1:J:287:ILE:HD13 | 2.03 | 0.40 |
| 1:J:27:HIS:C | 1:J:27:HIS:ND1 | 2.75 | 0.40 |
| 1:K:101:TYR:N | 1:K:101:TYR:CD1 | 2.90 | 0.40 |
| 1:L:128:THR:HG22 | 1:L:197:ILE:HD11 | 2.03 | 0.40 |
| 1:G:285:ILE:HD13 | 1:L:371:GLY:HA2 | 2.04 | 0.40 |
| 1:A:158:THR:HG23 | 1:A:260:HIS:CE1 | 2.57 | 0.40 |
| 1:B:355:PHE:O | 1:B:355:PHE:CD1 | 2.75 | 0.40 |
| 1:D:125:ILE:HG12 | 1:D:191:GLU:O | 2.22 | 0.40 |
| 1:C:37:THR:HG21 | 1:D:182:LYS:HD2 | 2.02 | 0.40 |
| 1:E:52:LEU:H | 1:F:180:ASN:HB3 | 1.86 | 0.40 |
| 1:F:51:ARG:HG3 | 1:F:52:LEU:N | 2.36 | 0.40 |
| 1:I:151:ILE:HG21 | 1:I:153:PHE:CZ | 2.57 | 0.40 |
| 1:I:166:LEU:HD23 | 1:I:166:LEU:HA | 1.92 | 0.40 |
| 1:I:177:SER:HA | 1:I:200:ILE:HD13 | 2.03 | 0.40 |
| 1:J:183:VAL:CG1 | 1:J:230:LEU:HD22 | 2.40 | 0.40 |
| 1:J:302:THR:HG23 | 1:J:306:ARG:O | 2.21 | 0.40 |
| 1:K:145:ILE:HD12 | 1:K:145:ILE:HA | 1.90 | 0.40 |
| 1:K:17:THR:HG23 | 1:K:18:PRO:CD | 2.44 | 0.40 |
| 1:A:250:LEU:HD23 | 1:A:250:LEU:HA | 1.77 | 0.40 |
| 1:B:184:LEU:HG | 1:B:228:PRO:HB3 | 2.03 | 0.40 |
| 1:B:6:ILE:C | 1:B:7:ASN:ND2 | 2.75 | 0.40 |
| 1:C:319:GLU:HG3 | 1:C:319:GLU:H | 1.67 | 0.40 |
| 1:D:209:ILE:HG13 | 1:D:216:PHE:CD1 | 2.57 | 0.40 |
| 1:D:223:ALA:O | 1:D:228:PRO:CD | 2.69 | 0.40 |
| 1:E:288:LEU:CB | 1:E:325:LEU:CD2 | 2.99 | 0.40 |
| 1:E:368:ILE:HG23 | 1:E:369:ILE:N | 2.36 | 0.40 |
| 1:F:112:VAL:HG13 | 1:F:117:ALA:HB3 | 2.02 | 0.40 |
| 1:F:13:PRO:CG | 1:F:20:PHE:CG | 3.04 | 0.40 |
| 1:F:288:LEU:HD12 | 1:F:324:LEU:CB | 2.51 | 0.40 |
| 1:G:9:MET:CE | 1:G:24:MET:CB | 2.99 | 0.40 |
| 1:G:288:LEU:HD12 | 1:G:325:LEU:HD23 | 2.03 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:315:VAL:O | 1:H:315:VAL:HG13 | 2.21 | 0.40 |
| 1:I:111:LEU:CD2 | 1:J:212:HIS:HE2 | 2.35 | 0.40 |
| 1:J:66:GLY:O | 1:J:69:ILE:HG22 | 2.22 | 0.40 |
| 1:K:135:MET:HA | 1:K:135:MET:HE2 | 1.92 | 0.40 |
| 1:L:151:ILE:HG21 | 1:L:153:PHE:CZ | 2.56 | 0.40 |
| 1:L:23:ARG:O | 1:L:26:GLU:HB2 | 2.21 | 0.40 |

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|-----------------|----------------------|--------------------------|-------------------|
| 1:C:198:GLU:OE1 | 1:F:7:ASN:ND2[1_565] | 2.18 | 0.02 |

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles |
|-----|-------|---------------|-----------|---------|----------|-------------|
| 1 | A | 367/391 (94%) | 352 (96%) | 14 (4%) | 1 (0%) | 41 74 |
| 1 | B | 369/391 (94%) | 351 (95%) | 16 (4%) | 2 (0%) | 29 67 |
| 1 | C | 367/391 (94%) | 349 (95%) | 15 (4%) | 3 (1%) | 19 58 |
| 1 | D | 366/391 (94%) | 352 (96%) | 13 (4%) | 1 (0%) | 41 74 |
| 1 | E | 365/391 (93%) | 346 (95%) | 15 (4%) | 4 (1%) | 14 51 |
| 1 | F | 362/391 (93%) | 344 (95%) | 16 (4%) | 2 (1%) | 25 64 |
| 1 | G | 367/391 (94%) | 351 (96%) | 13 (4%) | 3 (1%) | 19 58 |
| 1 | H | 369/391 (94%) | 346 (94%) | 19 (5%) | 4 (1%) | 14 51 |
| 1 | I | 367/391 (94%) | 347 (95%) | 19 (5%) | 1 (0%) | 41 74 |
| 1 | J | 366/391 (94%) | 347 (95%) | 18 (5%) | 1 (0%) | 41 74 |
| 1 | K | 365/391 (93%) | 346 (95%) | 18 (5%) | 1 (0%) | 41 74 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|-----------------|------------|----------|----------|-------------|----|
| 1 | L | 362/391 (93%) | 345 (95%) | 14 (4%) | 3 (1%) | 19 | 58 |
| All | All | 4392/4692 (94%) | 4176 (95%) | 190 (4%) | 26 (1%) | 25 | 64 |

All (26) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | B | 188 | SER |
| 1 | E | 332 | VAL |
| 1 | G | 332 | VAL |
| 1 | H | 188 | SER |
| 1 | C | 95 | PRO |
| 1 | E | 97 | ARG |
| 1 | G | 189 | PRO |
| 1 | I | 189 | PRO |
| 1 | L | 274 | SER |
| 1 | A | 189 | PRO |
| 1 | C | 188 | SER |
| 1 | C | 189 | PRO |
| 1 | E | 189 | PRO |
| 1 | F | 189 | PRO |
| 1 | G | 369 | ILE |
| 1 | H | 95 | PRO |
| 1 | H | 201 | SER |
| 1 | H | 371 | GLY |
| 1 | L | 189 | PRO |
| 1 | L | 210 | PRO |
| 1 | E | 95 | PRO |
| 1 | F | 95 | PRO |
| 1 | B | 95 | PRO |
| 1 | D | 189 | PRO |
| 1 | J | 189 | PRO |
| 1 | K | 189 | PRO |

5.3.2 Protein sidechains [i](#)

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

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

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|-----------------|------------|----------|-------------|----|
| 1 | A | 322/343 (94%) | 304 (94%) | 18 (6%) | 21 | 57 |
| 1 | B | 319/343 (93%) | 304 (95%) | 15 (5%) | 26 | 62 |
| 1 | C | 318/343 (93%) | 301 (95%) | 17 (5%) | 22 | 58 |
| 1 | D | 316/343 (92%) | 301 (95%) | 15 (5%) | 26 | 62 |
| 1 | E | 315/343 (92%) | 301 (96%) | 14 (4%) | 28 | 64 |
| 1 | F | 314/343 (92%) | 296 (94%) | 18 (6%) | 20 | 56 |
| 1 | G | 322/343 (94%) | 289 (90%) | 33 (10%) | 7 | 29 |
| 1 | H | 319/343 (93%) | 301 (94%) | 18 (6%) | 21 | 57 |
| 1 | I | 318/343 (93%) | 293 (92%) | 25 (8%) | 12 | 43 |
| 1 | J | 316/343 (92%) | 288 (91%) | 28 (9%) | 9 | 35 |
| 1 | K | 315/343 (92%) | 283 (90%) | 32 (10%) | 7 | 29 |
| 1 | L | 314/343 (92%) | 292 (93%) | 22 (7%) | 15 | 48 |
| All | All | 3808/4116 (92%) | 3553 (93%) | 255 (7%) | 16 | 50 |

All (255) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 5 | ASN |
| 1 | A | 16 | PHE |
| 1 | A | 34 | SER |
| 1 | A | 53 | LEU |
| 1 | A | 69 | ILE |
| 1 | A | 87 | ILE |
| 1 | A | 93 | PHE |
| 1 | A | 149 | GLU |
| 1 | A | 160 | SER |
| 1 | A | 162 | LYS |
| 1 | A | 174 | ILE |
| 1 | A | 193 | VAL |
| 1 | A | 232 | MET |
| 1 | A | 274 | SER |
| 1 | A | 276 | SER |
| 1 | A | 285 | ILE |
| 1 | A | 362 | GLU |
| 1 | A | 367 | LEU |
| 1 | B | 7 | ASN |
| 1 | B | 22 | ASP |
| 1 | B | 53 | LEU |
| 1 | B | 59 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | B | 90 | HIS |
| 1 | B | 93 | PHE |
| 1 | B | 103 | TYR |
| 1 | B | 119 | GLN |
| 1 | B | 121 | THR |
| 1 | B | 149 | GLU |
| 1 | B | 162 | LYS |
| 1 | B | 178 | ASP |
| 1 | B | 191 | GLU |
| 1 | B | 201 | SER |
| 1 | B | 366 | LYS |
| 1 | C | 12 | GLU |
| 1 | C | 22 | ASP |
| 1 | C | 60 | LEU |
| 1 | C | 78 | THR |
| 1 | C | 121 | THR |
| 1 | C | 149 | GLU |
| 1 | C | 162 | LYS |
| 1 | C | 177 | SER |
| 1 | C | 209 | ILE |
| 1 | C | 222 | ASN |
| 1 | C | 228 | PRO |
| 1 | C | 281 | LEU |
| 1 | C | 292 | ARG |
| 1 | C | 293 | LEU |
| 1 | C | 317 | ASP |
| 1 | C | 325 | LEU |
| 1 | C | 369 | ILE |
| 1 | D | 11 | ASP |
| 1 | D | 21 | MET |
| 1 | D | 34 | SER |
| 1 | D | 93 | PHE |
| 1 | D | 118 | ILE |
| 1 | D | 127 | THR |
| 1 | D | 132 | LEU |
| 1 | D | 137 | LEU |
| 1 | D | 149 | GLU |
| 1 | D | 200 | ILE |
| 1 | D | 227 | LYS |
| 1 | D | 251 | THR |
| 1 | D | 285 | ILE |
| 1 | D | 323 | ILE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | D | 328 | ASP |
| 1 | E | 8 | LEU |
| 1 | E | 12 | GLU |
| 1 | E | 22 | ASP |
| 1 | E | 32 | ASN |
| 1 | E | 60 | LEU |
| 1 | E | 92 | GLU |
| 1 | E | 162 | LYS |
| 1 | E | 174 | ILE |
| 1 | E | 215 | ASN |
| 1 | E | 235 | GLU |
| 1 | E | 251 | THR |
| 1 | E | 319 | GLU |
| 1 | E | 363 | ARG |
| 1 | E | 369 | ILE |
| 1 | F | 11 | ASP |
| 1 | F | 44 | ILE |
| 1 | F | 58 | ARG |
| 1 | F | 59 | ARG |
| 1 | F | 93 | PHE |
| 1 | F | 158 | THR |
| 1 | F | 176 | THR |
| 1 | F | 177 | SER |
| 1 | F | 178 | ASP |
| 1 | F | 180 | ASN |
| 1 | F | 181 | ARG |
| 1 | F | 188 | SER |
| 1 | F | 208 | GLU |
| 1 | F | 209 | ILE |
| 1 | F | 224 | LEU |
| 1 | F | 266 | GLU |
| 1 | F | 283 | ARG |
| 1 | F | 333 | THR |
| 1 | G | 9 | MET |
| 1 | G | 16 | PHE |
| 1 | G | 32 | ASN |
| 1 | G | 34 | SER |
| 1 | G | 51 | ARG |
| 1 | G | 53 | LEU |
| 1 | G | 87 | ILE |
| 1 | G | 94 | ARG |
| 1 | G | 111 | LEU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | G | 122 | LEU |
| 1 | G | 155 | THR |
| 1 | G | 162 | LYS |
| 1 | G | 180 | ASN |
| 1 | G | 181 | ARG |
| 1 | G | 188 | SER |
| 1 | G | 195 | ASP |
| 1 | G | 211 | ARG |
| 1 | G | 222 | ASN |
| 1 | G | 225 | ARG |
| 1 | G | 227 | LYS |
| 1 | G | 230 | LEU |
| 1 | G | 257 | THR |
| 1 | G | 274 | SER |
| 1 | G | 281 | LEU |
| 1 | G | 305 | GLU |
| 1 | G | 328 | ASP |
| 1 | G | 331 | GLU |
| 1 | G | 332 | VAL |
| 1 | G | 334 | SER |
| 1 | G | 342 | GLN |
| 1 | G | 360 | ILE |
| 1 | G | 361 | SER |
| 1 | G | 366 | LYS |
| 1 | H | 26 | GLU |
| 1 | H | 53 | LEU |
| 1 | H | 68 | LEU |
| 1 | H | 69 | ILE |
| 1 | H | 78 | THR |
| 1 | H | 88 | ASP |
| 1 | H | 93 | PHE |
| 1 | H | 100 | ARG |
| 1 | H | 121 | THR |
| 1 | H | 137 | LEU |
| 1 | H | 149 | GLU |
| 1 | H | 229 | ARG |
| 1 | H | 237 | ARG |
| 1 | H | 267 | THR |
| 1 | H | 326 | GLU |
| 1 | H | 342 | GLN |
| 1 | H | 353 | MET |
| 1 | H | 366 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | I | 11 | ASP |
| 1 | I | 40 | THR |
| 1 | I | 47 | GLU |
| 1 | I | 53 | LEU |
| 1 | I | 64 | GLU |
| 1 | I | 72 | ILE |
| 1 | I | 108 | THR |
| 1 | I | 121 | THR |
| 1 | I | 125 | ILE |
| 1 | I | 143 | GLU |
| 1 | I | 149 | GLU |
| 1 | I | 155 | THR |
| 1 | I | 158 | THR |
| 1 | I | 162 | LYS |
| 1 | I | 177 | SER |
| 1 | I | 188 | SER |
| 1 | I | 198 | GLU |
| 1 | I | 209 | ILE |
| 1 | I | 222 | ASN |
| 1 | I | 250 | LEU |
| 1 | I | 292 | ARG |
| 1 | I | 305 | GLU |
| 1 | I | 325 | LEU |
| 1 | I | 347 | MET |
| 1 | I | 353 | MET |
| 1 | J | 8 | LEU |
| 1 | J | 15 | ARG |
| 1 | J | 16 | PHE |
| 1 | J | 29 | GLU |
| 1 | J | 39 | GLN |
| 1 | J | 40 | THR |
| 1 | J | 92 | GLU |
| 1 | J | 99 | VAL |
| 1 | J | 118 | ILE |
| 1 | J | 132 | LEU |
| 1 | J | 145 | ILE |
| 1 | J | 149 | GLU |
| 1 | J | 158 | THR |
| 1 | J | 164 | THR |
| 1 | J | 191 | GLU |
| 1 | J | 199 | THR |
| 1 | J | 209 | ILE |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | J | 215 | ASN |
| 1 | J | 227 | LYS |
| 1 | J | 266 | GLU |
| 1 | J | 270 | ARG |
| 1 | J | 306 | ARG |
| 1 | J | 322 | ASP |
| 1 | J | 328 | ASP |
| 1 | J | 334 | SER |
| 1 | J | 353 | MET |
| 1 | J | 366 | LYS |
| 1 | J | 367 | LEU |
| 1 | K | 8 | LEU |
| 1 | K | 9 | MET |
| 1 | K | 15 | ARG |
| 1 | K | 16 | PHE |
| 1 | K | 32 | ASN |
| 1 | K | 53 | LEU |
| 1 | K | 83 | SER |
| 1 | K | 108 | THR |
| 1 | K | 116 | ASP |
| 1 | K | 135 | MET |
| 1 | K | 139 | ASP |
| 1 | K | 141 | ILE |
| 1 | K | 145 | ILE |
| 1 | K | 162 | LYS |
| 1 | K | 174 | ILE |
| 1 | K | 178 | ASP |
| 1 | K | 188 | SER |
| 1 | K | 197 | ILE |
| 1 | K | 211 | ARG |
| 1 | K | 215 | ASN |
| 1 | K | 232 | MET |
| 1 | K | 235 | GLU |
| 1 | K | 251 | THR |
| 1 | K | 273 | THR |
| 1 | K | 290 | THR |
| 1 | K | 306 | ARG |
| 1 | K | 319 | GLU |
| 1 | K | 336 | THR |
| 1 | K | 341 | ARG |
| 1 | K | 365 | TYR |
| 1 | K | 366 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | K | 369 | ILE |
| 1 | L | 11 | ASP |
| 1 | L | 34 | SER |
| 1 | L | 40 | THR |
| 1 | L | 54 | LYS |
| 1 | L | 59 | ARG |
| 1 | L | 65 | LEU |
| 1 | L | 112 | VAL |
| 1 | L | 115 | HIS |
| 1 | L | 155 | THR |
| 1 | L | 158 | THR |
| 1 | L | 162 | LYS |
| 1 | L | 164 | THR |
| 1 | L | 176 | THR |
| 1 | L | 177 | SER |
| 1 | L | 188 | SER |
| 1 | L | 209 | ILE |
| 1 | L | 218 | ASP |
| 1 | L | 224 | LEU |
| 1 | L | 226 | ARG |
| 1 | L | 274 | SER |
| 1 | L | 284 | THR |
| 1 | L | 304 | ASP |

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (77) such sidechains are listed below:

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 5 | ASN |
| 1 | A | 119 | GLN |
| 1 | A | 212 | HIS |
| 1 | A | 253 | HIS |
| 1 | A | 297 | GLN |
| 1 | A | 357 | GLN |
| 1 | B | 7 | ASN |
| 1 | B | 119 | GLN |
| 1 | B | 212 | HIS |
| 1 | B | 215 | ASN |
| 1 | B | 253 | HIS |
| 1 | B | 260 | HIS |
| 1 | C | 80 | GLN |
| 1 | C | 119 | GLN |
| 1 | C | 212 | HIS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | C | 215 | ASN |
| 1 | C | 253 | HIS |
| 1 | C | 297 | GLN |
| 1 | C | 345 | GLN |
| 1 | D | 39 | GLN |
| 1 | D | 80 | GLN |
| 1 | D | 136 | ASN |
| 1 | D | 212 | HIS |
| 1 | D | 215 | ASN |
| 1 | D | 253 | HIS |
| 1 | D | 260 | HIS |
| 1 | E | 119 | GLN |
| 1 | E | 212 | HIS |
| 1 | E | 215 | ASN |
| 1 | E | 222 | ASN |
| 1 | E | 297 | GLN |
| 1 | F | 27 | HIS |
| 1 | F | 39 | GLN |
| 1 | F | 80 | GLN |
| 1 | F | 180 | ASN |
| 1 | F | 212 | HIS |
| 1 | F | 253 | HIS |
| 1 | F | 260 | HIS |
| 1 | F | 342 | GLN |
| 1 | G | 80 | GLN |
| 1 | G | 119 | GLN |
| 1 | G | 180 | ASN |
| 1 | G | 212 | HIS |
| 1 | G | 253 | HIS |
| 1 | G | 260 | HIS |
| 1 | G | 297 | GLN |
| 1 | H | 7 | ASN |
| 1 | H | 27 | HIS |
| 1 | H | 212 | HIS |
| 1 | H | 215 | ASN |
| 1 | H | 260 | HIS |
| 1 | H | 330 | ASN |
| 1 | H | 357 | GLN |
| 1 | I | 27 | HIS |
| 1 | I | 80 | GLN |
| 1 | I | 180 | ASN |
| 1 | I | 212 | HIS |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | I | 253 | HIS |
| 1 | I | 345 | GLN |
| 1 | I | 357 | GLN |
| 1 | J | 39 | GLN |
| 1 | J | 140 | ASN |
| 1 | J | 215 | ASN |
| 1 | J | 253 | HIS |
| 1 | J | 260 | HIS |
| 1 | K | 27 | HIS |
| 1 | K | 62 | ASN |
| 1 | K | 119 | GLN |
| 1 | K | 212 | HIS |
| 1 | K | 222 | ASN |
| 1 | K | 297 | GLN |
| 1 | L | 39 | GLN |
| 1 | L | 115 | HIS |
| 1 | L | 180 | ASN |
| 1 | L | 206 | GLN |
| 1 | L | 222 | ASN |
| 1 | L | 253 | HIS |

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 carbohydrates in this entry.

5.6 Ligand geometry [i](#)

12 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond

length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|-------------|-------------|------|-------------|
| | | | | | Counts | RMSZ | $\# Z > 2$ | Counts | RMSZ | $\# Z > 2$ |
| 2 | PO4 | I | 401 | - | 4,4,4 | 0.79 | 0 | 6,6,6 | 1.34 | 0 |
| 2 | PO4 | L | 401 | - | 4,4,4 | 0.83 | 0 | 6,6,6 | 0.64 | 0 |
| 2 | PO4 | A | 401 | - | 4,4,4 | 0.62 | 0 | 6,6,6 | 0.89 | 0 |
| 2 | PO4 | K | 401 | - | 4,4,4 | 0.86 | 0 | 6,6,6 | 1.12 | 0 |
| 2 | PO4 | H | 401 | - | 4,4,4 | 0.83 | 0 | 6,6,6 | 1.31 | 1 (16%) |
| 2 | PO4 | J | 401 | - | 4,4,4 | 0.68 | 0 | 6,6,6 | 1.31 | 0 |
| 2 | PO4 | G | 401 | - | 4,4,4 | 0.82 | 0 | 6,6,6 | 1.24 | 1 (16%) |
| 2 | PO4 | D | 401 | - | 4,4,4 | 0.89 | 0 | 6,6,6 | 1.36 | 2 (33%) |
| 2 | PO4 | F | 401 | - | 4,4,4 | 0.91 | 0 | 6,6,6 | 1.34 | 0 |
| 2 | PO4 | C | 401 | - | 4,4,4 | 0.77 | 0 | 6,6,6 | 0.77 | 0 |
| 2 | PO4 | E | 401 | - | 4,4,4 | 1.03 | 0 | 6,6,6 | 0.91 | 0 |
| 2 | PO4 | B | 401 | - | 4,4,4 | 0.86 | 0 | 6,6,6 | 1.26 | 0 |

There are no bond length outliers.

All (4) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed($^{\circ}$) | Ideal($^{\circ}$) |
|-----|-------|-----|------|---------|-------|------------------------|---------------------|
| 2 | D | 401 | PO4 | O4-P-O3 | 2.55 | 116.15 | 107.97 |
| 2 | H | 401 | PO4 | O4-P-O1 | -2.44 | 101.98 | 110.89 |
| 2 | G | 401 | PO4 | O3-P-O1 | -2.41 | 102.08 | 110.89 |
| 2 | D | 401 | PO4 | O4-P-O1 | -2.06 | 103.37 | 110.89 |

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 3 short contacts:

| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 2 | K | 401 | PO4 | 1 | 0 |
| 2 | J | 401 | PO4 | 2 | 0 |

5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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

| Mol | Chain | Analysed | <RSRZ> | #RSRZ>2 | OWAB(Å ²) | Q<0.9 |
|-----|-------|-----------------|--------|----------------|-----------------------|-------|
| 1 | A | 369/391 (94%) | 0.12 | 15 (4%) 37 24 | 60, 96, 130, 172 | 0 |
| 1 | B | 371/391 (94%) | -0.07 | 3 (0%) 86 78 | 62, 86, 119, 162 | 0 |
| 1 | C | 369/391 (94%) | -0.06 | 2 (0%) 91 86 | 57, 85, 115, 161 | 0 |
| 1 | D | 368/391 (94%) | -0.01 | 8 (2%) 62 48 | 57, 90, 121, 160 | 0 |
| 1 | E | 367/391 (93%) | 0.08 | 8 (2%) 62 48 | 66, 96, 139, 164 | 0 |
| 1 | F | 366/391 (93%) | 0.04 | 9 (2%) 57 43 | 64, 93, 122, 140 | 0 |
| 1 | G | 369/391 (94%) | 0.08 | 12 (3%) 46 30 | 69, 101, 142, 165 | 0 |
| 1 | H | 371/391 (94%) | -0.02 | 6 (1%) 72 59 | 58, 89, 118, 169 | 0 |
| 1 | I | 369/391 (94%) | 0.20 | 12 (3%) 46 30 | 71, 111, 151, 170 | 0 |
| 1 | J | 368/391 (94%) | 0.08 | 4 (1%) 80 69 | 75, 102, 125, 141 | 0 |
| 1 | K | 367/391 (93%) | 0.20 | 20 (5%) 25 14 | 74, 112, 150, 168 | 0 |
| 1 | L | 366/391 (93%) | 0.31 | 16 (4%) 34 21 | 79, 111, 138, 162 | 0 |
| All | All | 4420/4692 (94%) | 0.08 | 115 (2%) 56 40 | 57, 98, 136, 172 | 0 |

All (115) RSRZ outliers are listed below:

| Mol | Chain | Res | Type | RSRZ |
|-----|-------|-----|------|------|
| 1 | E | 178 | ASP | 5.3 |
| 1 | J | 49 | TYR | 5.3 |
| 1 | F | 56 | THR | 4.4 |
| 1 | J | 304 | ASP | 4.3 |
| 1 | G | 362 | GLU | 4.2 |
| 1 | L | 9 | MET | 4.2 |
| 1 | K | 18 | PRO | 4.1 |
| 1 | L | 95 | PRO | 4.0 |
| 1 | J | 303 | VAL | 3.9 |
| 1 | L | 16 | PHE | 3.8 |
| 1 | L | 359 | ILE | 3.8 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 1 | I | 16 | PHE | 3.7 |
| 1 | L | 305 | GLU | 3.6 |
| 1 | E | 300 | VAL | 3.6 |
| 1 | D | 15 | ARG | 3.5 |
| 1 | K | 350 | ASP | 3.5 |
| 1 | K | 347 | MET | 3.5 |
| 1 | K | 310 | LEU | 3.5 |
| 1 | F | 14 | THR | 3.4 |
| 1 | K | 364 | VAL | 3.4 |
| 1 | A | 300 | VAL | 3.4 |
| 1 | K | 312 | GLU | 3.3 |
| 1 | A | 351 | ALA | 3.3 |
| 1 | A | 362 | GLU | 3.3 |
| 1 | G | 346 | LEU | 3.3 |
| 1 | B | 178 | ASP | 3.2 |
| 1 | K | 372 | ALA | 3.2 |
| 1 | K | 359 | ILE | 3.2 |
| 1 | H | 97 | ARG | 3.1 |
| 1 | I | 347 | MET | 3.1 |
| 1 | K | 362 | GLU | 3.0 |
| 1 | G | 363 | ARG | 3.0 |
| 1 | B | 278 | GLU | 3.0 |
| 1 | G | 121 | THR | 3.0 |
| 1 | L | 20 | PHE | 3.0 |
| 1 | L | 308 | VAL | 2.9 |
| 1 | L | 301 | PRO | 2.9 |
| 1 | F | 9 | MET | 2.9 |
| 1 | D | 13 | PRO | 2.8 |
| 1 | D | 16 | PHE | 2.8 |
| 1 | L | 360 | ILE | 2.8 |
| 1 | K | 46 | ALA | 2.8 |
| 1 | J | 359 | ILE | 2.8 |
| 1 | F | 15 | ARG | 2.8 |
| 1 | I | 21 | MET | 2.7 |
| 1 | I | 37 | THR | 2.7 |
| 1 | G | 361 | SER | 2.7 |
| 1 | L | 299 | LEU | 2.6 |
| 1 | K | 22 | ASP | 2.6 |
| 1 | A | 368 | ILE | 2.6 |
| 1 | L | 358 | GLY | 2.6 |
| 1 | H | 361 | SER | 2.6 |
| 1 | I | 364 | VAL | 2.6 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 1 | A | 55 | ILE | 2.6 |
| 1 | A | 350 | ASP | 2.6 |
| 1 | G | 278 | GLU | 2.6 |
| 1 | D | 56 | THR | 2.6 |
| 1 | A | 365 | TYR | 2.6 |
| 1 | D | 214 | PRO | 2.6 |
| 1 | I | 368 | ILE | 2.5 |
| 1 | F | 67 | ASP | 2.5 |
| 1 | D | 277 | GLY | 2.5 |
| 1 | K | 93 | PHE | 2.5 |
| 1 | G | 364 | VAL | 2.5 |
| 1 | K | 357 | GLN | 2.5 |
| 1 | K | 360 | ILE | 2.4 |
| 1 | L | 80 | GLN | 2.4 |
| 1 | I | 362 | GLU | 2.4 |
| 1 | I | 303 | VAL | 2.4 |
| 1 | E | 106 | ASN | 2.4 |
| 1 | L | 353 | MET | 2.4 |
| 1 | C | 76 | ASN | 2.4 |
| 1 | A | 37 | THR | 2.4 |
| 1 | G | 349 | TRP | 2.3 |
| 1 | K | 366 | LYS | 2.3 |
| 1 | L | 101 | TYR | 2.3 |
| 1 | I | 365 | TYR | 2.3 |
| 1 | C | 57 | ASN | 2.3 |
| 1 | G | 354 | LYS | 2.3 |
| 1 | L | 361 | SER | 2.3 |
| 1 | F | 314 | LEU | 2.3 |
| 1 | G | 4 | ASP | 2.3 |
| 1 | A | 364 | VAL | 2.3 |
| 1 | G | 345 | GLN | 2.3 |
| 1 | E | 108 | THR | 2.3 |
| 1 | K | 96 | ASN | 2.3 |
| 1 | K | 16 | PHE | 2.2 |
| 1 | E | 362 | GLU | 2.2 |
| 1 | B | 238 | ASP | 2.2 |
| 1 | F | 5 | ASN | 2.2 |
| 1 | H | 15 | ARG | 2.2 |
| 1 | D | 362 | GLU | 2.2 |
| 1 | E | 37 | THR | 2.2 |
| 1 | A | 121 | THR | 2.2 |
| 1 | K | 348 | THR | 2.2 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|-----|------|------|
| 1 | H | 277 | GLY | 2.2 |
| 1 | E | 301 | PRO | 2.2 |
| 1 | D | 18 | PRO | 2.1 |
| 1 | K | 303 | VAL | 2.1 |
| 1 | F | 275 | PHE | 2.1 |
| 1 | A | 366 | LYS | 2.1 |
| 1 | I | 9 | MET | 2.1 |
| 1 | E | 107 | ALA | 2.1 |
| 1 | A | 372 | ALA | 2.1 |
| 1 | I | 360 | ILE | 2.1 |
| 1 | K | 240 | GLU | 2.1 |
| 1 | A | 354 | LYS | 2.0 |
| 1 | L | 355 | PHE | 2.0 |
| 1 | G | 304 | ASP | 2.0 |
| 1 | H | 33 | ALA | 2.0 |
| 1 | A | 355 | PHE | 2.0 |
| 1 | A | 363 | ARG | 2.0 |
| 1 | I | 36 | ILE | 2.0 |
| 1 | F | 20 | PHE | 2.0 |
| 1 | H | 9 | MET | 2.0 |

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

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

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.4 Ligands [i](#)

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

| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|-----|-------|------|------|----------------------------|-------|
| 2 | PO4 | E | 401 | 5/5 | 0.89 | 0.21 | 82,82,85,88 | 0 |
| 2 | PO4 | H | 401 | 5/5 | 0.90 | 0.34 | 72,73,74,75 | 0 |
| 2 | PO4 | A | 401 | 5/5 | 0.90 | 0.24 | 65,68,71,73 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(\AA^2) | Q<0.9 |
|-----|------|-------|-----|-------|------|------|-----------------------------|-------|
| 2 | PO4 | L | 401 | 5/5 | 0.91 | 0.22 | 100,104,115,124 | 0 |
| 2 | PO4 | F | 401 | 5/5 | 0.93 | 0.29 | 73,74,78,84 | 0 |
| 2 | PO4 | J | 401 | 5/5 | 0.94 | 0.23 | 86,89,99,104 | 0 |
| 2 | PO4 | G | 401 | 5/5 | 0.95 | 0.29 | 65,71,78,82 | 0 |
| 2 | PO4 | I | 401 | 5/5 | 0.95 | 0.26 | 88,91,104,105 | 0 |
| 2 | PO4 | K | 401 | 5/5 | 0.95 | 0.27 | 93,97,98,101 | 0 |
| 2 | PO4 | D | 401 | 5/5 | 0.96 | 0.18 | 75,77,83,88 | 0 |
| 2 | PO4 | B | 401 | 5/5 | 0.96 | 0.27 | 66,67,72,74 | 0 |
| 2 | PO4 | C | 401 | 5/5 | 0.98 | 0.27 | 69,71,73,77 | 0 |

6.5 Other polymers [i](#)

There are no such residues in this entry.