# Full wwPDB EM Validation Report ⓘ

Dec 16, 2024 – 01:03 AM EST

| | | |
|---|---|---|
| PDB ID | : | 1Q5B |
| EMDB ID | : | EMD-1052 |
| Title | : | lambda-shaped TRANS and CIS interactions of cadherins model based on fitting C-cadherin (1L3W) to 3D map of desmosomes obtained by electron tomography |
| Authors | : | He, W.; Cowin, P.; Stokes, D.L. |
| Deposited on | : | 2003-08-06 |
| Resolution | : | 30.00 Å(reported) |
| Based on initial model | : | 1L3W |

This is a Full wwPDB EM 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/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

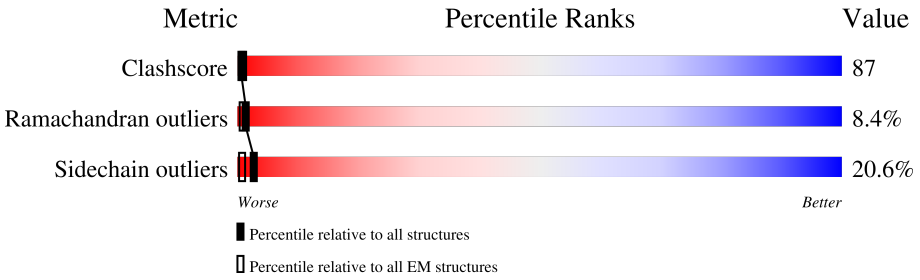
| | | |
|---|---|---|
| EMDB validation analysis | : | 0.0.1.dev113 |
| Mogul | : | 2022.3.0, CSD as543be (2022) |
| MolProbity | : | 4.02b-467 |
| Percentile statistics | : | 20231227.v01 (using entries in the PDB archive December 27th 2023) |
| MapQ | : | 1.9.13 |
| Ideal geometry (proteins) | : | Engh & Huber (2001) |
| Ideal geometry (DNA, RNA) | : | Parkinson et al. (1996) |
| Validation Pipeline (wwPDB-VP) | : | 2.40 |

# 1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
*ELECTRON MICROSCOPY*

The reported resolution of this entry is 30.00 Å.

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




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

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=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 <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 1 | A | 880 | 61% 16% 31% 10% • 39% |
| 1 | B | 880 | 61% 16% 31% 11% • 39% |
| 1 | C | 880 | 61% 16% 31% 11% • 39% |

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 | NAG | A | 801 | - | - | X | - |
| 2 | NAG | A | 805 | X | - | X | - |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|---|---|---|---|---|---|---|---|
| 2 | NAG | A | 806 | X | - | X | - |
| 2 | NAG | A | 807 | - | - | X | - |
| 2 | NAG | A | 809 | - | - | X | - |
| 2 | NAG | A | 810 | - | - | X | - |
| 2 | NAG | A | 902 | X | - | X | - |
| 2 | NAG | A | 903 | X | - | - | - |
| 2 | NAG | A | 904 | - | - | X | - |
| 2 | NAG | B | 801 | - | - | X | - |
| 2 | NAG | B | 805 | X | - | X | - |
| 2 | NAG | B | 806 | X | - | X | - |
| 2 | NAG | B | 807 | - | - | X | - |
| 2 | NAG | B | 809 | - | - | X | - |
| 2 | NAG | B | 810 | - | - | X | - |
| 2 | NAG | B | 902 | X | - | X | - |
| 2 | NAG | B | 903 | X | - | - | - |
| 2 | NAG | B | 904 | - | - | X | - |
| 2 | NAG | C | 801 | - | - | X | - |
| 2 | NAG | C | 805 | X | - | X | - |
| 2 | NAG | C | 806 | X | - | X | - |
| 2 | NAG | C | 807 | - | - | X | - |
| 2 | NAG | C | 809 | - | - | X | - |
| 2 | NAG | C | 810 | - | - | X | - |
| 2 | NAG | C | 902 | X | - | X | - |
| 2 | NAG | C | 903 | X | - | - | - |
| 2 | NAG | C | 904 | - | - | X | - |
| 3 | NDG | A | 811 | - | - | X | - |
| 3 | NDG | B | 811 | - | - | X | - |

## 2 Entry composition

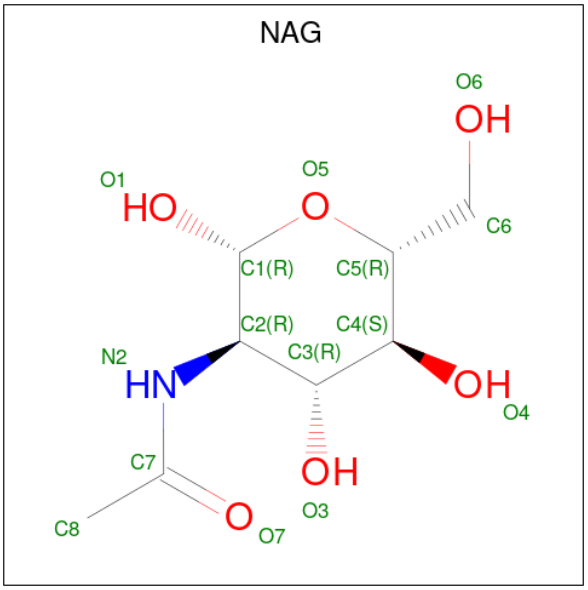
There are 4 unique types of molecules in this entry. The entry contains 13239 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called EP-cadherin.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 540 | Total | C | N | O | S | 0 | 0 |
| | | | 4191 | 2635 | 695 | 850 | 11 | | |
| 1 | B | 540 | Total | C | N | O | S | 0 | 0 |
| | | | 4191 | 2635 | 695 | 850 | 11 | | |
| 1 | C | 540 | Total | C | N | O | S | 0 | 0 |
| | | | 4191 | 2635 | 695 | 850 | 11 | | |

- Molecule 2 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).




| Mol | Chain | Residues | Atoms | | | | AltConf |
|---|---|---|---|---|---|---|---|
| 2 | A | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | A | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | A | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |

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| Mol | Chain | Residues | Atoms | | | | AltConf |
|---|---|---|---|---|---|---|---|
| 2 | A | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | A | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | A | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | A | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | A | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | A | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | A | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | A | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | A | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | A | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | B | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | B | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | B | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | B | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | B | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | B | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | B | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | B | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | B | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | B | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | B | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |

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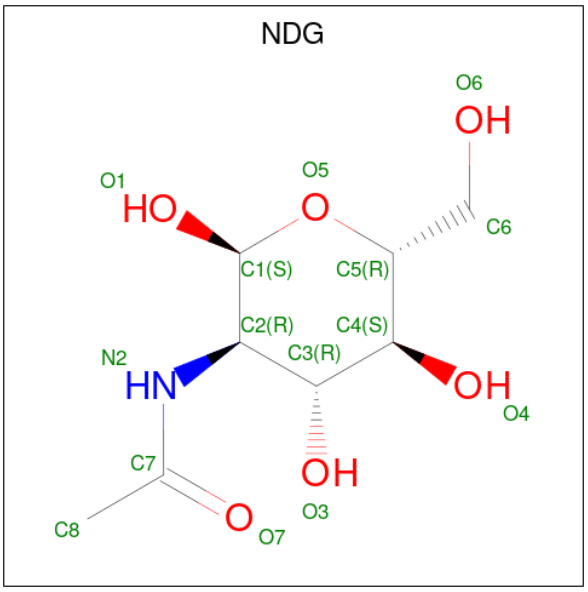
| Mol | Chain | Residues | Atoms | | | | AltConf |
|---|---|---|---|---|---|---|---|
| 2 | B | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | B | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 2 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |

- Molecule 3 is 2-acetamido-2-deoxy-alpha-D-glucopyranose (three-letter code: NDG) (formula: $C_8H_{15}NO_6$).




| Mol | Chain | Residues | Atoms | | | | AltConf |
|---|---|---|---|---|---|---|---|
| 3 | A | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 3 | A | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 3 | B | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 3 | B | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 3 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |
| 3 | C | 1 | Total | C | N | O | 0 |
| | | | 14 | 8 | 1 | 5 | |

- Molecule 4 is CALCIUM ION (three-letter code: CA) (formula: Ca).

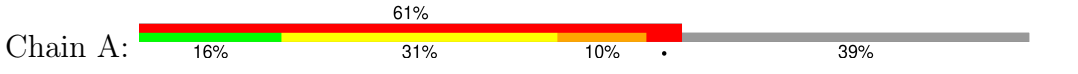
| Mol | Chain | Residues | Atoms | | AltConf |
|---|---|---|---|---|---|
| 4 | A | 12 | Total | Ca | 0 |
| | | | 12 | 12 | |
| 4 | B | 12 | Total | Ca | 0 |
| | | | 12 | 12 | |
| 4 | C | 12 | Total | Ca | 0 |
| | | | 12 | 12 | |

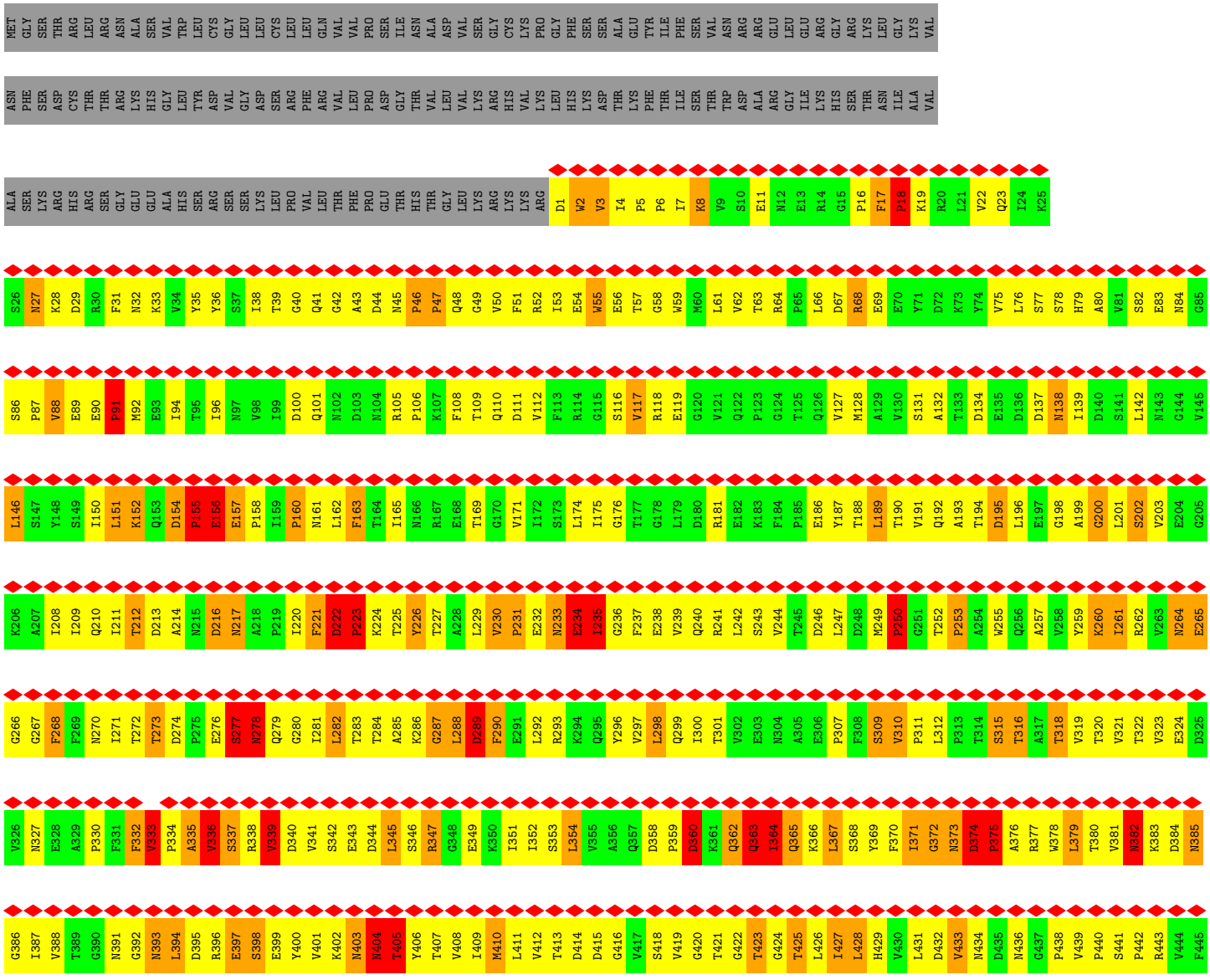
# 3 Residue-property plots (i)

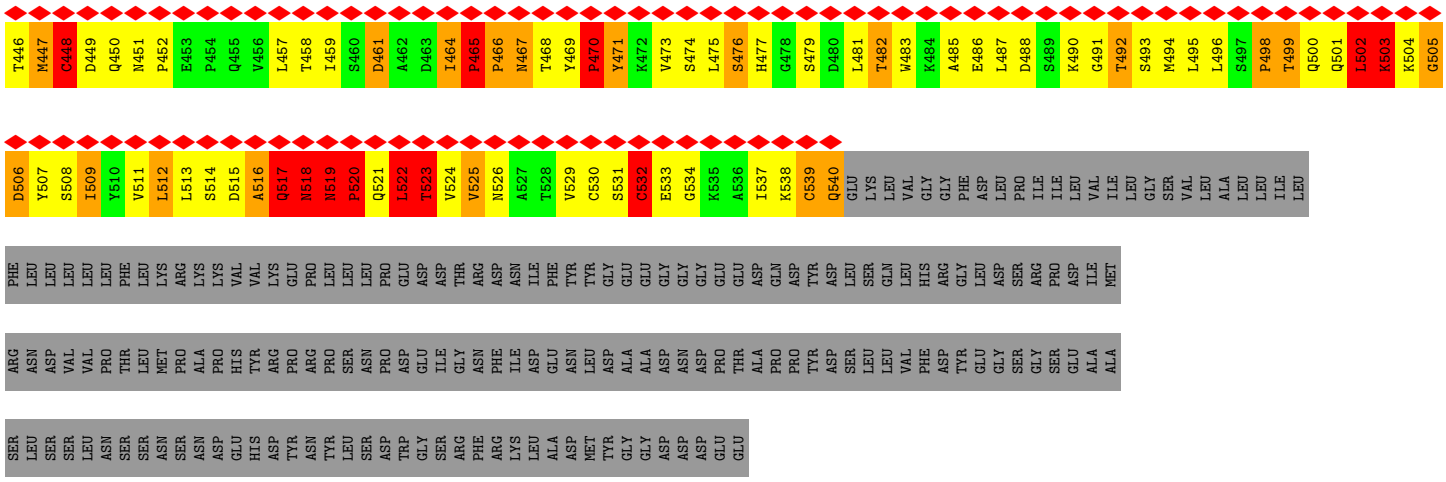
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

- Molecule 1: EP-cadherin

Chain A:

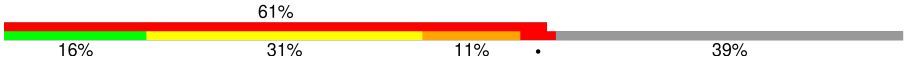


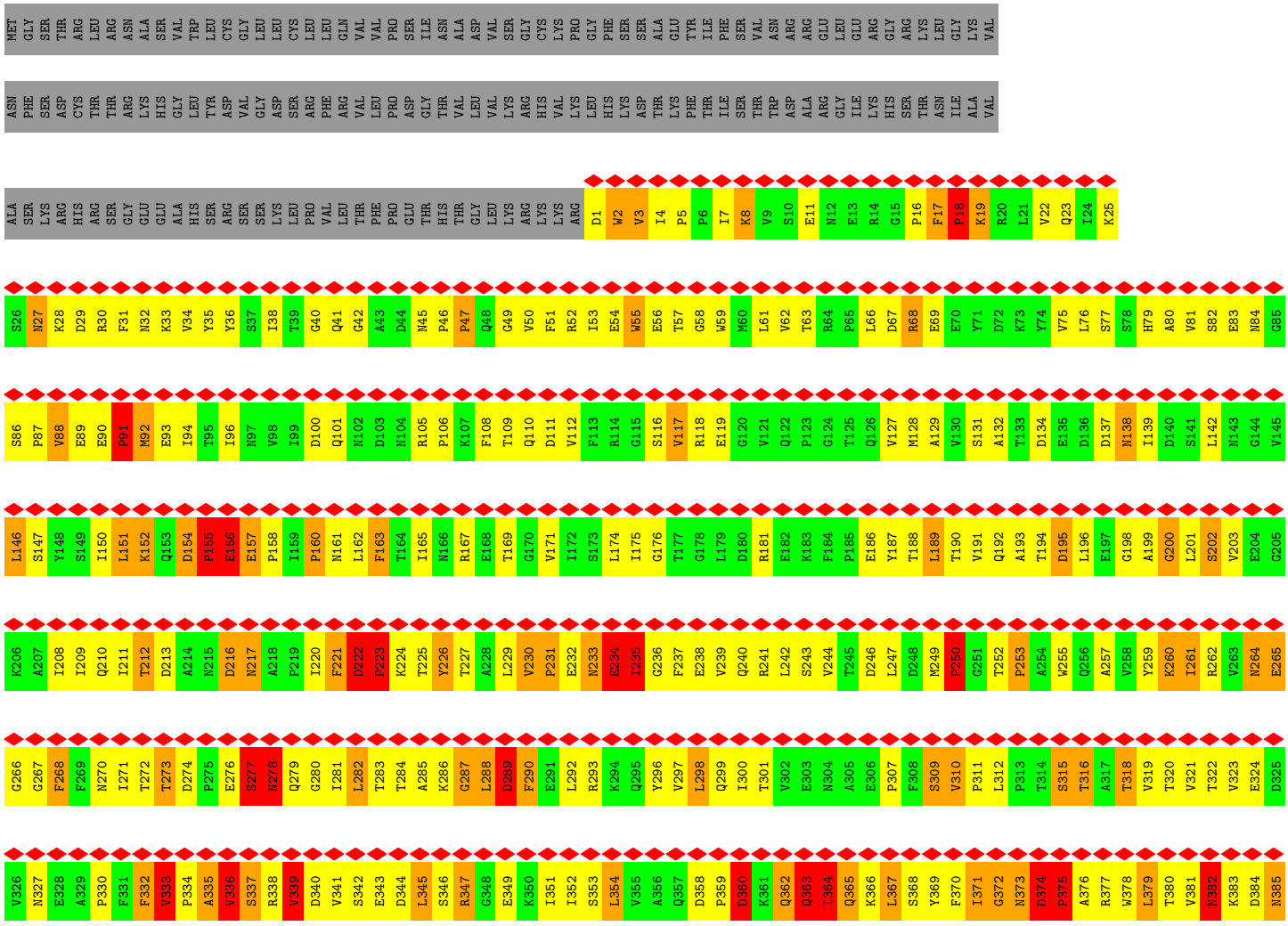



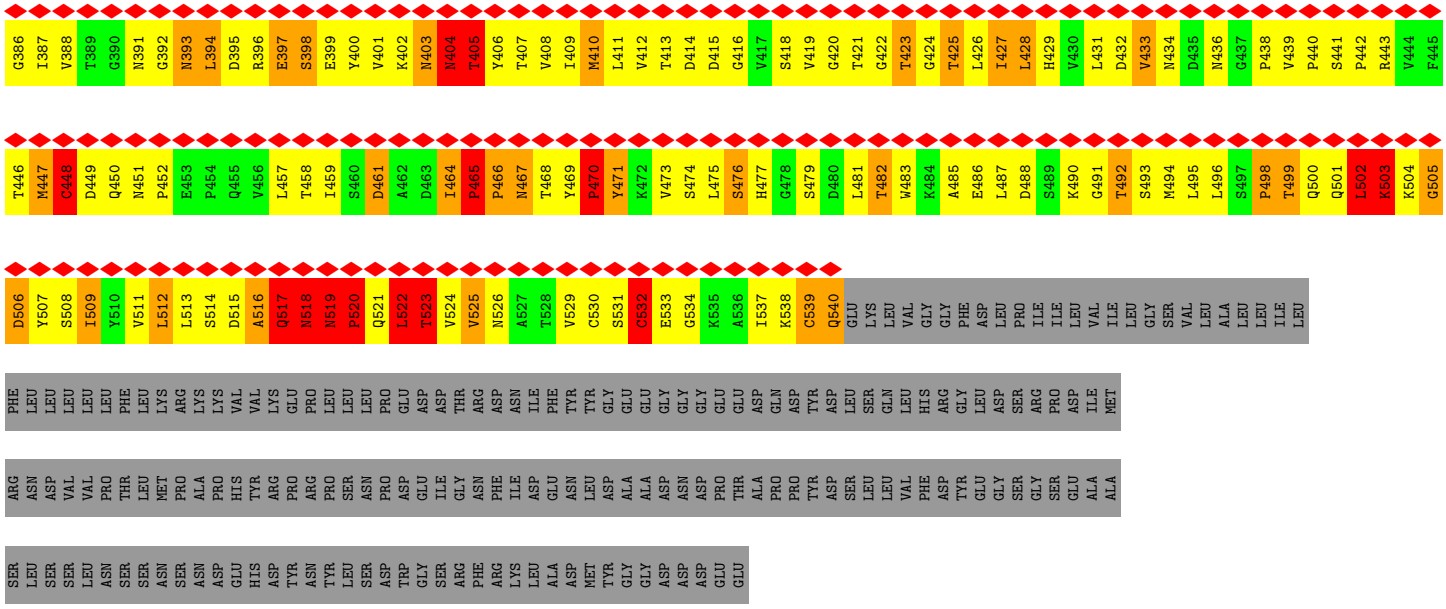



- Molecule 1: EP-cadherin

Chain B:

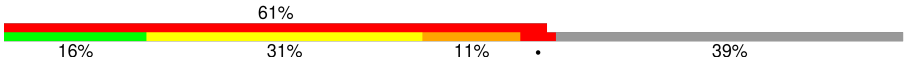


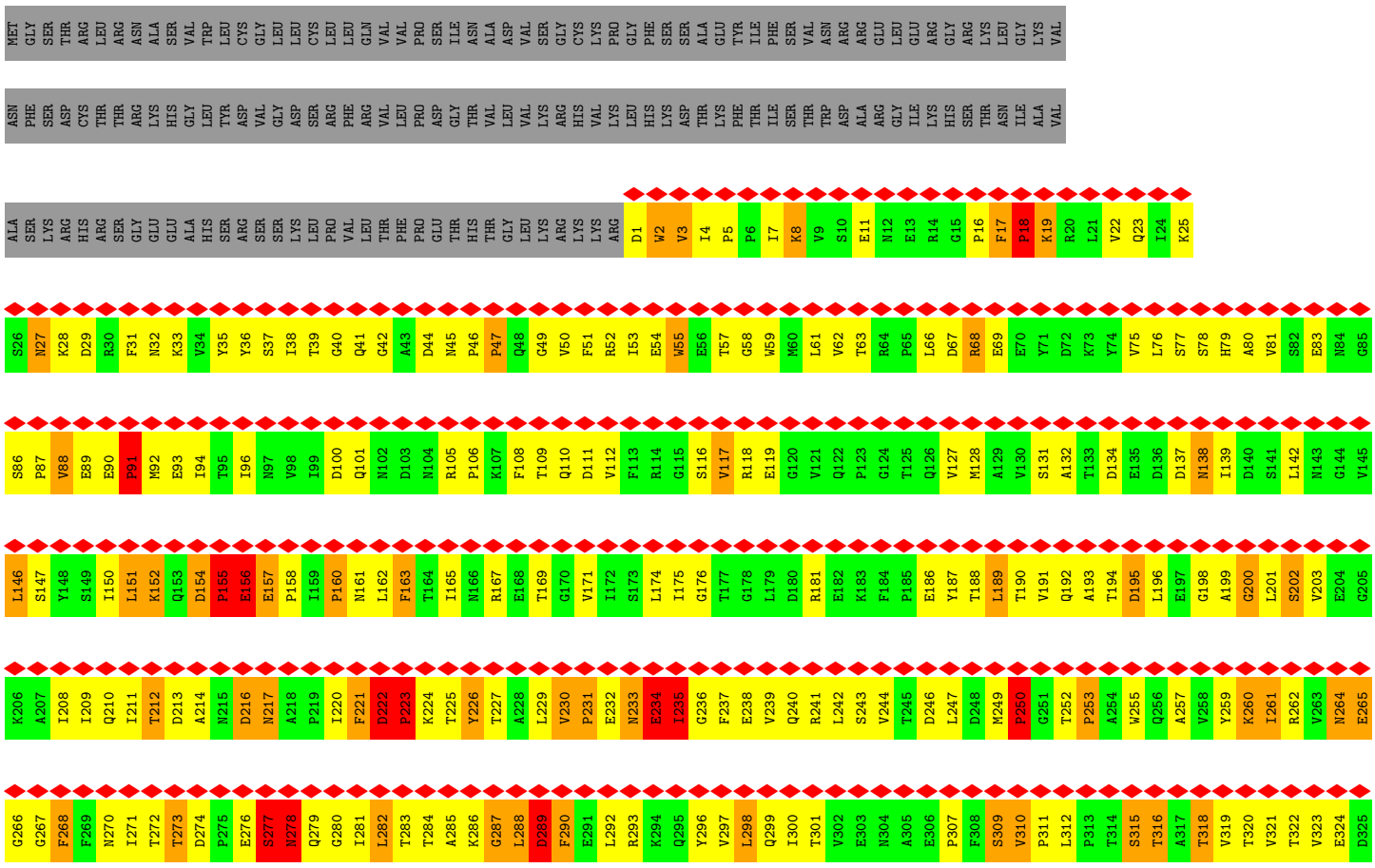



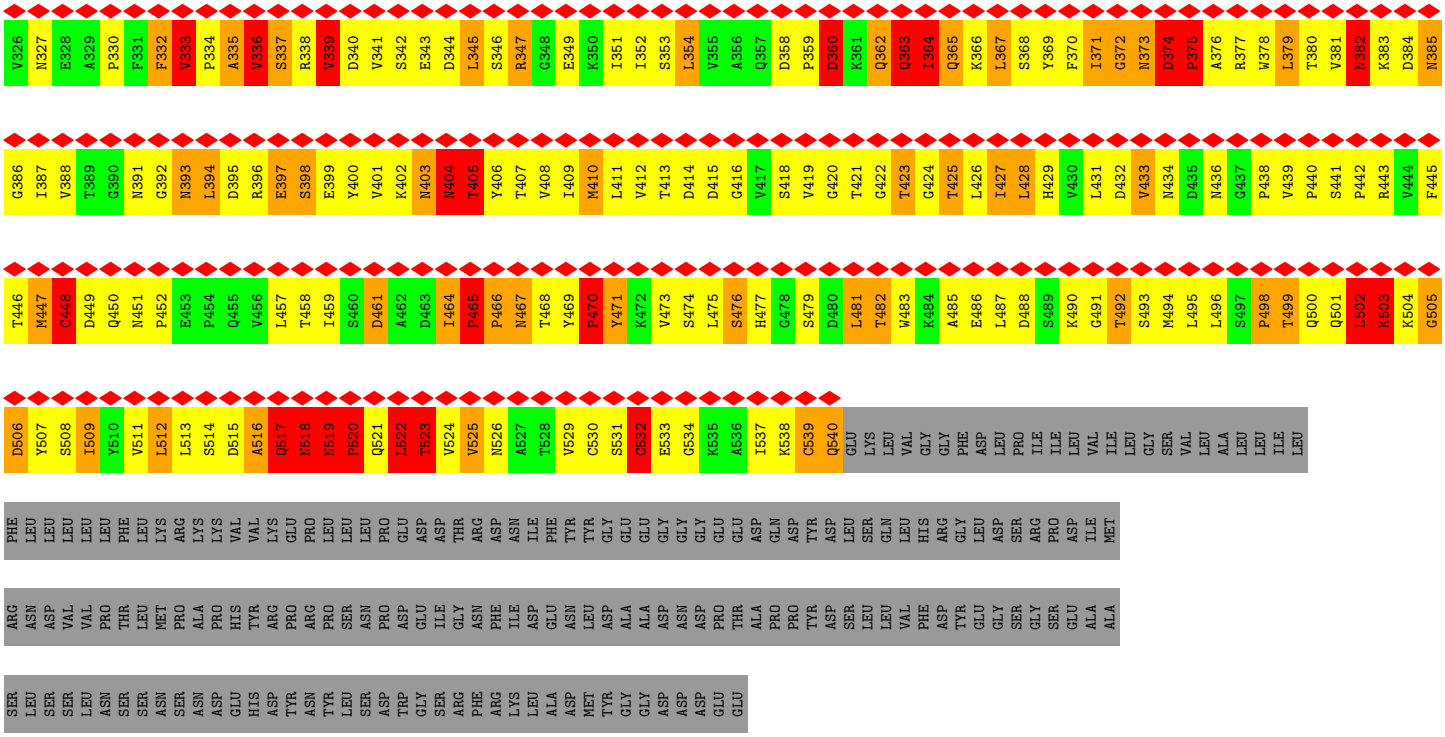



- Molecule 1: EP-cadherin

Chain C:




V326 N327 E328 A329 P330 F331 F332 V333 P334 A335 V336 S337 R338 V339 D340 V341 S342 E343 D344 L345 S346 R347 G348 E349 K350 I351 I362 S353 L354 V355 A356 Q357 D358 P359 D360 K361 Q362 Q363 I364 Q365 K366 L367 S368 Y369 F370 I371 G372 N373 D374 P375 A376 R377 W378 L379 T380 V381 N382 K383 D384 N385
G386 I387 V388 T389 G390 N391 G392 N393 L394 D395 R396 E397 S398 E399 Y400 V401 K402 N403 N404 T405 Y406 T407 V408 I409 M410 L411 V412 T413 D414 D415 G416 V417 S418 V419 G420 T421 G422 T423 G424 T425 L426 I427 L428 H429 V430 L431 D432 V433 N434 D435 N436 G437 P438 V439 P440 S441 P442 R443 V444 F445
T446 M447 C448 D449 Q450 N451 P452 E453 P454 Q455 V456 L457 T458 I459 S460 D461 A462 D463 I464 P465 P466 N467 T468 Y469 P470 Y471 K472 V473 S474 L475 S476 H477 G478 S479 D480 L481 T482 W483 K484 A485 E486 L487 D488 S489 K490 G491 T492 S493 M494 L495 L496 S497 P498 T499 Q500 Q501 L502 K503 K504 G505
D506 Y507 S508 I509 Y510 V511 L512 L513 S514 D515 A516 Q517 N518 N519 P520 Q521 L522 T523 V524 V525 N526 A527 T528 V529 C530 S531 C532 E533 G534 K535 A536 I537 K538 C539 Q540 GLU LYS LEU VAL GLY GLY PHE ASP LEU PRO ILE ILE LEU VAL ILE LEU GLY SER VAL LEU ALA LEU LEU ILE LEU
PHE LEU LEU LEU LEU PHE LEU LYS ARG LYS LYS VAL VAL LYS GLU PRO LEU LEU LEU PRO GLU ASP ASP ASP THR ARG ASP ASP ASN ILE PHE TYR TYR GLY GLU GLU GLY GLY GLY GLU GLU ASP GLN ASP TYR ASP LEU SER GLN LEU HIS ARG GLY LEU ASP SER ARG PRO ASP ILE MET
ARG ASN ASP VAL VAL PRO THR LEU MET PRO ALA PRO HIS TYR ARG PRO ARG PRO SER ASN PRO ASP GLU ILE GLY ASN PHE ILE ASP GLU ASN LEU ASP ALA ALA ASP ASN ASP PRO THR ALA PRO PRO TYR ASP SER LEU LEU VAL PHE ASP TYR GLU GLY SER GLY SER GLU ALA ALA
SER LEU SER SER LEU ASN SER SER ASN SER ASN ASP GLU HIS ASP TYR ASN TYR LEU SER ASP TRP GLY SER ARG PHE ARG LYS LEU ALA ASP MET TYR GLY GLY ASP ASP ASP GLU GLU

# 4 Experimental information (i)

| Property | Value | Source |
|---|---|---|
| EM reconstruction method | TOMOGRAPHY | Depositor |
| Imposed symmetry | POINT, C1 | Depositor |
| Number of tilted images used | Not provided | |
| Resolution determination method | Not provided | |
| CTF correction method | no CTF correction. Imaging at underfocus 0.4 micron with CM200FEG microscope at 50,000 magnification | Depositor |
| Microscope | FEI/PHILIPS CM200FEG | Depositor |
| Voltage (kV) | 200 | Depositor |
| Electron dose ($e^-/Å^2$) | 1200 | Depositor |
| Minimum defocus (nm) | 300 | Depositor |
| Maximum defocus (nm) | 500 | Depositor |
| Magnification | 68276 | Depositor |
| Image detector | GENERIC GATAN | Depositor |
| Maximum voxel value | 2603.000 | Depositor |
| Minimum voxel value | -1866.000 | Depositor |
| Average voxel value | 1323.980 | Depositor |
| Voxel value standard deviation | 218.755 | Depositor |
| Recommended contour level | 1760 | Depositor |
| Tomogram size (Å) | 3720.19, 3720.19, 617.61 | wwPDB |
| Tomogram dimensions | 512, 512, 85 | wwPDB |
| Tomogram angles (°) | 90, 90, 90 | wwPDB |
| Grid spacing (Å) | 7.266, 7.266, 7.266 | Depositor |

# 5 Model quality

## 5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: NAG, NDG, CA

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 | 0.70 | 8/4276 (0.2%) | 1.44 | 81/5839 (1.4%) |
| 1 | B | 0.70 | 8/4276 (0.2%) | 1.39 | 79/5839 (1.4%) |
| 1 | C | 0.70 | 8/4276 (0.2%) | 1.39 | 79/5839 (1.4%) |
| All | All | 0.70 | 24/12828 (0.2%) | 1.41 | 239/17517 (1.4%) |

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

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|---|---|---|---|
| 1 | A | 1 | 4 |
| 1 | B | 0 | 4 |
| 1 | C | 0 | 4 |
| All | All | 1 | 12 |

All (24) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | A | 335 | ALA | CA-CB | -8.37 | 1.34 | 1.52 |
| 1 | C | 335 | ALA | CA-CB | -8.35 | 1.34 | 1.52 |
| 1 | B | 335 | ALA | CA-CB | -8.33 | 1.34 | 1.52 |
| 1 | C | 539 | CYS | CB-SG | 8.18 | 1.96 | 1.82 |
| 1 | A | 539 | CYS | CB-SG | 8.17 | 1.96 | 1.82 |
| 1 | B | 539 | CYS | CB-SG | 8.15 | 1.96 | 1.82 |
| 1 | B | 223 | PRO | CG-CD | 7.02 | 1.73 | 1.50 |
| 1 | A | 223 | PRO | CG-CD | 7.00 | 1.73 | 1.50 |
| 1 | C | 223 | PRO | CG-CD | 7.00 | 1.73 | 1.50 |
| 1 | A | 523 | THR | N-CA | -6.26 | 1.33 | 1.46 |
| 1 | C | 523 | THR | N-CA | -6.25 | 1.33 | 1.46 |
| 1 | B | 523 | THR | N-CA | -6.24 | 1.33 | 1.46 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | A | 522 | LEU | N-CA | -5.98 | 1.34 | 1.46 |
| 1 | A | 18 | PRO | N-CD | 5.97 | 1.56 | 1.47 |
| 1 | C | 18 | PRO | N-CD | 5.97 | 1.56 | 1.47 |
| 1 | B | 522 | LEU | N-CA | -5.97 | 1.34 | 1.46 |
| 1 | C | 522 | LEU | N-CA | -5.96 | 1.34 | 1.46 |
| 1 | B | 18 | PRO | N-CD | 5.91 | 1.56 | 1.47 |
| 1 | A | 530 | CYS | CB-SG | 5.53 | 1.91 | 1.82 |
| 1 | C | 530 | CYS | CB-SG | 5.49 | 1.91 | 1.82 |
| 1 | B | 530 | CYS | CB-SG | 5.46 | 1.91 | 1.82 |
| 1 | A | 499 | THR | CA-CB | 5.05 | 1.66 | 1.53 |
| 1 | C | 499 | THR | CA-CB | 5.04 | 1.66 | 1.53 |
| 1 | B | 499 | THR | CA-CB | 5.02 | 1.66 | 1.53 |

All (239) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | A | 490 | LYS | N-CA-CB | -28.44 | 59.41 | 110.60 |
| 1 | A | 520 | PRO | CA-C-N | -13.30 | 87.95 | 117.20 |
| 1 | C | 520 | PRO | CA-C-N | -13.29 | 87.97 | 117.20 |
| 1 | B | 520 | PRO | CA-C-N | -13.28 | 87.99 | 117.20 |
| 1 | C | 290 | PHE | N-CA-C | 12.74 | 145.39 | 111.00 |
| 1 | B | 290 | PHE | N-CA-C | 12.73 | 145.38 | 111.00 |
| 1 | C | 235 | ILE | N-CA-C | 12.72 | 145.35 | 111.00 |
| 1 | A | 235 | ILE | N-CA-C | 12.72 | 145.34 | 111.00 |
| 1 | B | 235 | ILE | N-CA-C | 12.72 | 145.34 | 111.00 |
| 1 | A | 290 | PHE | N-CA-C | 12.71 | 145.32 | 111.00 |
| 1 | C | 374 | ASP | N-CA-C | 11.61 | 142.36 | 111.00 |
| 1 | B | 374 | ASP | N-CA-C | 11.61 | 142.35 | 111.00 |
| 1 | A | 374 | ASP | N-CA-C | 11.61 | 142.34 | 111.00 |
| 1 | A | 17 | PHE | C-N-CD | -11.55 | 95.19 | 120.60 |
| 1 | C | 17 | PHE | C-N-CD | -11.54 | 95.20 | 120.60 |
| 1 | B | 17 | PHE | C-N-CD | -11.54 | 95.22 | 120.60 |
| 1 | C | 398 | SER | N-CA-C | 11.38 | 141.74 | 111.00 |
| 1 | B | 398 | SER | N-CA-C | 11.37 | 141.70 | 111.00 |
| 1 | A | 398 | SER | N-CA-C | 11.36 | 141.68 | 111.00 |
| 1 | B | 465 | PRO | C-N-CD | -11.04 | 96.31 | 120.60 |
| 1 | A | 465 | PRO | C-N-CD | -11.03 | 96.33 | 120.60 |
| 1 | C | 465 | PRO | C-N-CD | -11.03 | 96.33 | 120.60 |
| 1 | C | 222 | ASP | CB-CG-OD2 | 10.07 | 127.36 | 118.30 |
| 1 | B | 222 | ASP | CB-CG-OD2 | 10.06 | 127.35 | 118.30 |
| 1 | A | 222 | ASP | CB-CG-OD2 | 10.03 | 127.33 | 118.30 |
| 1 | A | 236 | GLY | N-CA-C | -9.99 | 88.11 | 113.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | B | 236 | GLY | N-CA-C | -9.98 | 88.15 | 113.10 |
| 1 | C | 236 | GLY | N-CA-C | -9.97 | 88.16 | 113.10 |
| 1 | C | 230 | VAL | C-N-CD | -9.94 | 98.72 | 120.60 |
| 1 | A | 230 | VAL | C-N-CD | -9.94 | 98.73 | 120.60 |
| 1 | B | 230 | VAL | C-N-CD | -9.92 | 98.77 | 120.60 |
| 1 | A | 374 | ASP | CB-CA-C | -9.67 | 91.05 | 110.40 |
| 1 | C | 374 | ASP | CB-CA-C | -9.67 | 91.06 | 110.40 |
| 1 | B | 374 | ASP | CB-CA-C | -9.66 | 91.08 | 110.40 |
| 1 | C | 376 | ALA | N-CA-C | 9.66 | 137.08 | 111.00 |
| 1 | B | 376 | ALA | N-CA-C | 9.65 | 137.04 | 111.00 |
| 1 | A | 376 | ALA | N-CA-C | 9.64 | 137.04 | 111.00 |
| 1 | C | 522 | LEU | CA-CB-CG | -9.39 | 93.71 | 115.30 |
| 1 | B | 522 | LEU | CA-CB-CG | -9.38 | 93.74 | 115.30 |
| 1 | A | 522 | LEU | CA-CB-CG | -9.36 | 93.77 | 115.30 |
| 1 | C | 223 | PRO | N-CA-C | -9.31 | 87.89 | 112.10 |
| 1 | B | 223 | PRO | N-CA-C | -9.30 | 87.91 | 112.10 |
| 1 | B | 520 | PRO | N-CA-C | 9.30 | 136.28 | 112.10 |
| 1 | A | 221 | PHE | C-N-CA | -9.30 | 98.46 | 121.70 |
| 1 | B | 221 | PHE | C-N-CA | -9.29 | 98.46 | 121.70 |
| 1 | A | 223 | PRO | N-CA-C | -9.29 | 87.94 | 112.10 |
| 1 | A | 520 | PRO | N-CA-C | 9.29 | 136.25 | 112.10 |
| 1 | B | 481 | LEU | N-CA-C | -9.29 | 85.92 | 111.00 |
| 1 | C | 221 | PHE | C-N-CA | -9.28 | 98.50 | 121.70 |
| 1 | C | 481 | LEU | N-CA-C | -9.28 | 85.94 | 111.00 |
| 1 | A | 481 | LEU | N-CA-C | -9.27 | 85.97 | 111.00 |
| 1 | C | 520 | PRO | N-CA-C | 9.27 | 136.19 | 112.10 |
| 1 | C | 481 | LEU | CA-CB-CG | -8.76 | 95.16 | 115.30 |
| 1 | B | 481 | LEU | CA-CB-CG | -8.76 | 95.16 | 115.30 |
| 1 | A | 481 | LEU | CA-CB-CG | -8.75 | 95.17 | 115.30 |
| 1 | A | 289 | ASP | C-N-CA | -8.43 | 100.62 | 121.70 |
| 1 | B | 289 | ASP | C-N-CA | -8.42 | 100.66 | 121.70 |
| 1 | C | 289 | ASP | C-N-CA | -8.41 | 100.67 | 121.70 |
| 1 | A | 516 | ALA | N-CA-C | -8.35 | 88.47 | 111.00 |
| 1 | B | 516 | ALA | N-CA-C | -8.35 | 88.46 | 111.00 |
| 1 | C | 516 | ALA | N-CA-C | -8.35 | 88.46 | 111.00 |
| 1 | C | 222 | ASP | C-N-CD | -8.22 | 102.51 | 120.60 |
| 1 | B | 222 | ASP | C-N-CD | -8.21 | 102.54 | 120.60 |
| 1 | A | 290 | PHE | CA-C-N | -8.20 | 99.16 | 117.20 |
| 1 | B | 290 | PHE | CA-C-N | -8.19 | 99.18 | 117.20 |
| 1 | A | 222 | ASP | C-N-CD | -8.19 | 102.59 | 120.60 |
| 1 | C | 290 | PHE | CA-C-N | -8.17 | 99.22 | 117.20 |
| 1 | A | 46 | PRO | C-N-CD | -8.05 | 102.89 | 120.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | C | 46 | PRO | C-N-CD | -8.03 | 102.92 | 120.60 |
| 1 | B | 46 | PRO | C-N-CD | -8.03 | 102.93 | 120.60 |
| 1 | B | 233 | ASN | N-CA-C | 7.88 | 132.28 | 111.00 |
| 1 | C | 233 | ASN | N-CA-C | 7.87 | 132.26 | 111.00 |
| 1 | A | 233 | ASN | N-CA-C | 7.86 | 132.22 | 111.00 |
| 1 | A | 336 | VAL | N-CA-C | 7.82 | 132.10 | 111.00 |
| 1 | B | 336 | VAL | N-CA-C | 7.81 | 132.09 | 111.00 |
| 1 | C | 336 | VAL | N-CA-C | 7.80 | 132.05 | 111.00 |
| 1 | B | 522 | LEU | C-N-CA | -7.79 | 102.21 | 121.70 |
| 1 | C | 522 | LEU | C-N-CA | -7.78 | 102.25 | 121.70 |
| 1 | A | 522 | LEU | C-N-CA | -7.78 | 102.25 | 121.70 |
| 1 | B | 362 | GLN | N-CA-C | -7.71 | 90.18 | 111.00 |
| 1 | C | 362 | GLN | N-CA-C | -7.71 | 90.19 | 111.00 |
| 1 | A | 362 | GLN | N-CA-C | -7.71 | 90.20 | 111.00 |
| 1 | A | 234 | GLU | N-CA-C | -7.59 | 90.51 | 111.00 |
| 1 | B | 234 | GLU | N-CA-C | -7.58 | 90.52 | 111.00 |
| 1 | C | 234 | GLU | N-CA-C | -7.58 | 90.53 | 111.00 |
| 1 | A | 234 | GLU | C-N-CA | 7.42 | 140.24 | 121.70 |
| 1 | C | 234 | GLU | C-N-CA | 7.41 | 140.22 | 121.70 |
| 1 | B | 234 | GLU | C-N-CA | 7.41 | 140.22 | 121.70 |
| 1 | C | 521 | GLN | C-N-CA | -7.38 | 103.24 | 121.70 |
| 1 | A | 521 | GLN | C-N-CA | -7.38 | 103.25 | 121.70 |
| 1 | B | 521 | GLN | C-N-CA | -7.38 | 103.26 | 121.70 |
| 1 | A | 490 | LYS | CB-CA-C | 7.32 | 125.04 | 110.40 |
| 1 | C | 277 | SER | N-CA-C | -7.21 | 91.53 | 111.00 |
| 1 | B | 277 | SER | N-CA-C | -7.21 | 91.54 | 111.00 |
| 1 | A | 277 | SER | N-CA-C | -7.20 | 91.56 | 111.00 |
| 1 | A | 337 | SER | N-CA-C | -7.19 | 91.59 | 111.00 |
| 1 | C | 337 | SER | N-CA-C | -7.18 | 91.62 | 111.00 |
| 1 | B | 337 | SER | N-CA-C | -7.16 | 91.67 | 111.00 |
| 1 | B | 503 | LYS | N-CA-C | 7.01 | 129.94 | 111.00 |
| 1 | A | 503 | LYS | N-CA-C | 7.00 | 129.91 | 111.00 |
| 1 | C | 503 | LYS | N-CA-C | 7.00 | 129.89 | 111.00 |
| 1 | C | 523 | THR | N-CA-CB | -6.95 | 97.09 | 110.30 |
| 1 | B | 523 | THR | N-CA-CB | -6.95 | 97.10 | 110.30 |
| 1 | A | 523 | THR | N-CA-CB | -6.93 | 97.13 | 110.30 |
| 1 | C | 492 | THR | N-CA-C | 6.78 | 129.31 | 111.00 |
| 1 | A | 492 | THR | N-CA-C | 6.78 | 129.30 | 111.00 |
| 1 | B | 492 | THR | N-CA-C | 6.75 | 129.23 | 111.00 |
| 1 | B | 448 | CYS | CA-CB-SG | -6.70 | 101.95 | 114.00 |
| 1 | C | 448 | CYS | CA-CB-SG | -6.70 | 101.95 | 114.00 |
| 1 | A | 448 | CYS | CA-CB-SG | -6.68 | 101.98 | 114.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | C | 398 | SER | C-N-CA | -6.57 | 105.27 | 121.70 |
| 1 | A | 398 | SER | C-N-CA | -6.57 | 105.29 | 121.70 |
| 1 | B | 476 | SER | N-CA-C | 6.57 | 128.72 | 111.00 |
| 1 | A | 476 | SER | N-CA-C | 6.56 | 128.72 | 111.00 |
| 1 | C | 476 | SER | N-CA-C | 6.56 | 128.70 | 111.00 |
| 1 | B | 491 | GLY | N-CA-C | 6.55 | 129.47 | 113.10 |
| 1 | B | 398 | SER | C-N-CA | -6.55 | 105.33 | 121.70 |
| 1 | A | 491 | GLY | N-CA-C | 6.53 | 129.43 | 113.10 |
| 1 | C | 491 | GLY | N-CA-C | 6.51 | 129.38 | 113.10 |
| 1 | C | 525 | VAL | N-CA-C | -6.51 | 93.42 | 111.00 |
| 1 | B | 525 | VAL | N-CA-C | -6.50 | 93.46 | 111.00 |
| 1 | A | 525 | VAL | N-CA-C | -6.48 | 93.50 | 111.00 |
| 1 | C | 335 | ALA | N-CA-C | -6.32 | 93.92 | 111.00 |
| 1 | A | 335 | ALA | N-CA-C | -6.32 | 93.95 | 111.00 |
| 1 | B | 335 | ALA | N-CA-C | -6.31 | 93.96 | 111.00 |
| 1 | B | 532 | CYS | N-CA-C | 6.30 | 128.01 | 111.00 |
| 1 | A | 532 | CYS | N-CA-C | 6.30 | 128.00 | 111.00 |
| 1 | C | 532 | CYS | N-CA-C | 6.29 | 128.00 | 111.00 |
| 1 | B | 234 | GLU | CA-C-N | -6.28 | 103.38 | 117.20 |
| 1 | A | 234 | GLU | CA-C-N | -6.28 | 103.39 | 117.20 |
| 1 | C | 234 | GLU | CA-C-N | -6.27 | 103.40 | 117.20 |
| 1 | A | 222 | ASP | N-CA-C | 6.17 | 127.64 | 111.00 |
| 1 | C | 222 | ASP | N-CA-C | 6.17 | 127.65 | 111.00 |
| 1 | B | 222 | ASP | N-CA-C | 6.15 | 127.61 | 111.00 |
| 1 | A | 235 | ILE | CA-C-N | -6.14 | 103.91 | 116.20 |
| 1 | A | 397 | GLU | C-N-CA | -6.14 | 106.35 | 121.70 |
| 1 | C | 235 | ILE | CA-C-N | -6.14 | 103.93 | 116.20 |
| 1 | B | 235 | ILE | CA-C-N | -6.13 | 103.94 | 116.20 |
| 1 | B | 397 | GLU | C-N-CA | -6.12 | 106.40 | 121.70 |
| 1 | C | 397 | GLU | C-N-CA | -6.11 | 106.42 | 121.70 |
| 1 | A | 18 | PRO | CA-N-CD | -6.11 | 102.94 | 111.50 |
| 1 | C | 18 | PRO | CA-N-CD | -6.10 | 102.97 | 111.50 |
| 1 | B | 503 | LYS | CB-CA-C | -6.09 | 98.21 | 110.40 |
| 1 | A | 503 | LYS | CB-CA-C | -6.07 | 98.25 | 110.40 |
| 1 | B | 18 | PRO | CA-N-CD | -6.07 | 103.00 | 111.50 |
| 1 | B | 502 | LEU | N-CA-C | 6.07 | 127.40 | 111.00 |
| 1 | C | 503 | LYS | CB-CA-C | -6.07 | 98.25 | 110.40 |
| 1 | A | 502 | LEU | N-CA-C | 6.04 | 127.31 | 111.00 |
| 1 | C | 502 | LEU | N-CA-C | 6.03 | 127.29 | 111.00 |
| 1 | A | 2 | TRP | N-CA-C | -6.03 | 94.72 | 111.00 |
| 1 | C | 2 | TRP | N-CA-C | -6.02 | 94.75 | 111.00 |
| 1 | B | 2 | TRP | N-CA-C | -6.01 | 94.77 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | B | 374 | ASP | C-N-CD | 5.97 | 140.95 | 128.40 |
| 1 | C | 374 | ASP | C-N-CD | 5.97 | 140.94 | 128.40 |
| 1 | B | 222 | ASP | N-CA-CB | 5.96 | 121.32 | 110.60 |
| 1 | C | 222 | ASP | N-CA-CB | 5.96 | 121.32 | 110.60 |
| 1 | A | 374 | ASP | C-N-CD | 5.95 | 140.90 | 128.40 |
| 1 | A | 222 | ASP | N-CA-CB | 5.95 | 121.31 | 110.60 |
| 1 | C | 364 | ILE | N-CA-C | -5.93 | 94.99 | 111.00 |
| 1 | A | 364 | ILE | N-CA-C | -5.93 | 95.00 | 111.00 |
| 1 | B | 364 | ILE | N-CA-C | -5.93 | 95.00 | 111.00 |
| 1 | B | 376 | ALA | CA-C-N | -5.85 | 104.33 | 117.20 |
| 1 | A | 376 | ALA | CA-C-N | -5.83 | 104.36 | 117.20 |
| 1 | C | 376 | ALA | CA-C-N | -5.83 | 104.36 | 117.20 |
| 1 | A | 382 | ASN | N-CA-C | -5.83 | 95.27 | 111.00 |
| 1 | C | 382 | ASN | N-CA-C | -5.82 | 95.28 | 111.00 |
| 1 | B | 382 | ASN | N-CA-C | -5.81 | 95.31 | 111.00 |
| 1 | B | 471 | TYR | N-CA-C | 5.74 | 126.51 | 111.00 |
| 1 | C | 471 | TYR | N-CA-C | 5.74 | 126.49 | 111.00 |
| 1 | A | 471 | TYR | N-CA-C | 5.73 | 126.46 | 111.00 |
| 1 | C | 481 | LEU | CA-C-N | -5.70 | 104.66 | 117.20 |
| 1 | A | 481 | LEU | CA-C-N | -5.67 | 104.72 | 117.20 |
| 1 | B | 481 | LEU | CA-C-N | -5.67 | 104.72 | 117.20 |
| 1 | A | 374 | ASP | C-N-CA | -5.67 | 98.20 | 122.00 |
| 1 | B | 374 | ASP | C-N-CA | -5.67 | 98.20 | 122.00 |
| 1 | C | 374 | ASP | C-N-CA | -5.66 | 98.24 | 122.00 |
| 1 | B | 403 | ASN | N-CA-C | -5.63 | 95.81 | 111.00 |
| 1 | C | 403 | ASN | N-CA-C | -5.62 | 95.81 | 111.00 |
| 1 | A | 403 | ASN | N-CA-C | -5.62 | 95.83 | 111.00 |
| 1 | C | 221 | PHE | CA-C-N | 5.58 | 129.49 | 117.20 |
| 1 | B | 221 | PHE | CA-C-N | 5.58 | 129.48 | 117.20 |
| 1 | A | 221 | PHE | CA-C-N | 5.57 | 129.46 | 117.20 |
| 1 | A | 505 | GLY | N-CA-C | 5.57 | 127.02 | 113.10 |
| 1 | B | 505 | GLY | N-CA-C | 5.54 | 126.96 | 113.10 |
| 1 | B | 502 | LEU | CB-CA-C | -5.54 | 99.67 | 110.20 |
| 1 | C | 505 | GLY | N-CA-C | 5.54 | 126.94 | 113.10 |
| 1 | A | 502 | LEU | CB-CA-C | -5.52 | 99.71 | 110.20 |
| 1 | C | 502 | LEU | CB-CA-C | -5.51 | 99.72 | 110.20 |
| 1 | A | 157 | GLU | C-N-CD | -5.48 | 108.54 | 120.60 |
| 1 | B | 157 | GLU | C-N-CD | -5.47 | 108.57 | 120.60 |
| 1 | C | 157 | GLU | C-N-CD | -5.46 | 108.58 | 120.60 |
| 1 | B | 519 | ASN | N-CA-C | 5.35 | 125.45 | 111.00 |
| 1 | C | 519 | ASN | N-CA-C | 5.35 | 125.44 | 111.00 |
| 1 | A | 519 | ASN | N-CA-C | 5.35 | 125.44 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | A | 405 | THR | N-CA-C | 5.33 | 125.40 | 111.00 |
| 1 | C | 405 | THR | N-CA-C | 5.33 | 125.39 | 111.00 |
| 1 | B | 405 | THR | N-CA-C | 5.32 | 125.35 | 111.00 |
| 1 | A | 367 | LEU | CA-CB-CG | -5.31 | 103.08 | 115.30 |
| 1 | C | 367 | LEU | CA-CB-CG | -5.30 | 103.11 | 115.30 |
| 1 | B | 367 | LEU | CA-CB-CG | -5.29 | 103.12 | 115.30 |
| 1 | A | 521 | GLN | N-CA-C | -5.21 | 96.93 | 111.00 |
| 1 | C | 521 | GLN | N-CA-C | -5.21 | 96.93 | 111.00 |
| 1 | B | 521 | GLN | N-CA-C | -5.21 | 96.94 | 111.00 |
| 1 | A | 290 | PHE | O-C-N | 5.19 | 131.01 | 122.70 |
| 1 | C | 290 | PHE | O-C-N | 5.18 | 130.99 | 122.70 |
| 1 | C | 532 | CYS | N-CA-CB | -5.18 | 101.28 | 110.60 |
| 1 | C | 520 | PRO | C-N-CA | 5.17 | 134.63 | 121.70 |
| 1 | A | 532 | CYS | N-CA-CB | -5.16 | 101.31 | 110.60 |
| 1 | B | 290 | PHE | O-C-N | 5.16 | 130.96 | 122.70 |
| 1 | B | 520 | PRO | C-N-CA | 5.15 | 134.58 | 121.70 |
| 1 | B | 532 | CYS | N-CA-CB | -5.14 | 101.35 | 110.60 |
| 1 | A | 520 | PRO | C-N-CA | 5.13 | 134.54 | 121.70 |
| 1 | A | 18 | PRO | CA-CB-CG | -5.13 | 94.25 | 104.00 |
| 1 | B | 522 | LEU | N-CA-C | -5.12 | 97.17 | 111.00 |
| 1 | A | 522 | LEU | N-CA-C | -5.11 | 97.19 | 111.00 |
| 1 | B | 18 | PRO | CA-CB-CG | -5.11 | 94.28 | 104.00 |
| 1 | A | 339 | VAL | N-CA-C | 5.11 | 124.80 | 111.00 |
| 1 | C | 18 | PRO | CA-CB-CG | -5.11 | 94.29 | 104.00 |
| 1 | B | 339 | VAL | N-CA-C | 5.10 | 124.77 | 111.00 |
| 1 | C | 339 | VAL | N-CA-C | 5.10 | 124.77 | 111.00 |
| 1 | C | 522 | LEU | N-CA-C | -5.10 | 97.23 | 111.00 |
| 1 | B | 16 | PRO | C-N-CA | -5.09 | 108.98 | 121.70 |
| 1 | C | 16 | PRO | C-N-CA | -5.08 | 109.00 | 121.70 |
| 1 | A | 16 | PRO | C-N-CA | -5.07 | 109.02 | 121.70 |
| 1 | A | 332 | PHE | N-CA-C | -5.04 | 97.39 | 111.00 |
| 1 | C | 332 | PHE | N-CA-C | -5.04 | 97.40 | 111.00 |
| 1 | B | 234 | GLU | O-C-N | 5.03 | 130.75 | 122.70 |
| 1 | B | 332 | PHE | N-CA-C | -5.03 | 97.43 | 111.00 |
| 1 | A | 470 | PRO | N-CA-C | 5.02 | 125.16 | 112.10 |
| 1 | B | 221 | PHE | N-CA-C | 5.02 | 124.56 | 111.00 |
| 1 | C | 234 | GLU | O-C-N | 5.01 | 130.72 | 122.70 |
| 1 | C | 539 | CYS | N-CA-C | 5.01 | 124.53 | 111.00 |
| 1 | A | 539 | CYS | N-CA-C | 5.01 | 124.53 | 111.00 |
| 1 | B | 470 | PRO | N-CA-C | 5.01 | 125.13 | 112.10 |
| 1 | B | 539 | CYS | N-CA-C | 5.01 | 124.53 | 111.00 |
| 1 | C | 221 | PHE | N-CA-C | 5.01 | 124.53 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | A | 221 | PHE | N-CA-C | 5.01 | 124.52 | 111.00 |
| 1 | A | 234 | GLU | O-C-N | 5.00 | 130.71 | 122.70 |
| 1 | C | 470 | PRO | N-CA-C | 5.00 | 125.11 | 112.10 |

All (1) chirality outliers are listed below:

| Mol | Chain | Res | Type | Atom |
|---|---|---|---|---|
| 1 | A | 490 | LYS | CA |

All (12) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | A | 17 | PHE | Sidechain |
| 1 | A | 18 | PRO | Mainchain |
| 1 | A | 222 | ASP | Mainchain |
| 1 | A | 520 | PRO | Mainchain |
| 1 | B | 17 | PHE | Sidechain |
| 1 | B | 18 | PRO | Mainchain |
| 1 | B | 222 | ASP | Mainchain |
| 1 | B | 520 | PRO | Mainchain |
| 1 | C | 17 | PHE | Sidechain |
| 1 | C | 18 | PRO | Mainchain |
| 1 | C | 222 | ASP | Mainchain |
| 1 | C | 520 | PRO | Mainchain |

## 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 | 4191 | 0 | 4081 | 824 | 0 |
| 1 | B | 4191 | 0 | 4087 | 812 | 0 |
| 1 | C | 4191 | 0 | 4085 | 860 | 0 |
| 2 | A | 182 | 0 | 169 | 94 | 0 |
| 2 | B | 182 | 0 | 169 | 93 | 0 |
| 2 | C | 182 | 0 | 169 | 92 | 0 |
| 3 | A | 28 | 0 | 24 | 9 | 0 |
| 3 | B | 28 | 0 | 24 | 9 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|---|---|---|---|---|---|---|
| 3 | C | 28 | 0 | 24 | 8 | 0 |
| 4 | A | 12 | 0 | 0 | 0 | 0 |
| 4 | B | 12 | 0 | 0 | 0 | 0 |
| 4 | C | 12 | 0 | 0 | 0 | 0 |
| All | All | 13239 | 0 | 12832 | 2271 | 0 |

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 87.

All (2271) 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:A:46:PRO:HB2 | 1:C:35:TYR:CE2 | 1.24 | 1.62 |
| 1:B:464:ILE:HD12 | 1:B:465:PRO:CD | 1.30 | 1.58 |
| 1:C:464:ILE:HD12 | 1:C:465:PRO:CD | 1.30 | 1.56 |
| 1:A:464:ILE:HD12 | 1:A:465:PRO:CD | 1.30 | 1.55 |
| 1:A:87:PRO:CG | 1:B:89:GLU:HB3 | 1.16 | 1.54 |
| 1:B:81:VAL:O | 1:C:2:TRP:CD2 | 1.68 | 1.44 |
| 1:A:43:ALA:HB1 | 1:C:79:HIS:CE1 | 1.32 | 1.44 |
| 1:C:464:ILE:CD1 | 1:C:465:PRO:HD2 | 1.50 | 1.41 |
| 1:B:464:ILE:CD1 | 1:B:465:PRO:HD2 | 1.50 | 1.41 |
| 1:A:464:ILE:CD1 | 1:A:465:PRO:HD2 | 1.50 | 1.37 |
| 1:B:86:SER:CB | 1:C:4:ILE:N | 1.87 | 1.36 |
| 1:A:87:PRO:CG | 1:B:89:GLU:CB | 2.03 | 1.36 |
| 1:B:82:SER:N | 1:C:2:TRP:CA | 1.86 | 1.36 |
| 1:A:46:PRO:CB | 1:C:35:TYR:CE2 | 2.10 | 1.34 |
| 1:A:40:GLY:O | 1:C:79:HIS:CB | 1.74 | 1.33 |
| 1:A:82:SER:O | 1:B:91:PRO:HD2 | 1.18 | 1.32 |
| 1:B:82:SER:N | 1:C:2:TRP:HA | 1.03 | 1.32 |
| 1:A:75:VAL:O | 1:C:87:PRO:CG | 1.80 | 1.29 |
| 1:B:81:VAL:C | 1:C:2:TRP:HA | 1.48 | 1.29 |
| 1:A:40:GLY:O | 1:C:79:HIS:HB3 | 1.21 | 1.29 |
| 1:B:86:SER:HB2 | 1:C:3:VAL:C | 1.50 | 1.29 |
| 1:A:43:ALA:CB | 1:C:79:HIS:CE1 | 1.82 | 1.28 |
| 1:A:82:SER:OG | 1:B:91:PRO:CB | 1.79 | 1.28 |
| 1:A:43:ALA:HB3 | 1:C:79:HIS:ND1 | 1.45 | 1.27 |
| 1:A:43:ALA:O | 1:C:39:THR:HG23 | 1.30 | 1.25 |
| 1:A:31:PHE:HB2 | 1:B:93:GLU:OE2 | 1.08 | 1.25 |
| 1:A:82:SER:OG | 1:B:91:PRO:HB2 | 1.12 | 1.23 |
| 1:C:540:GLN:O | 1:C:540:GLN:CD | 1.79 | 1.21 |
| 1:B:540:GLN:O | 1:B:540:GLN:CD | 1.79 | 1.20 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:87:PRO:HG3 | 1:B:89:GLU:CB | 1.66 | 1.19 |
| 1:A:540:GLN:O | 1:A:540:GLN:CD | 1.79 | 1.19 |
| 1:A:31:PHE:CB | 1:B:93:GLU:OE2 | 1.90 | 1.18 |
| 1:A:43:ALA:CB | 1:C:79:HIS:ND1 | 2.00 | 1.18 |
| 1:B:81:VAL:O | 1:C:2:TRP:CG | 1.96 | 1.18 |
| 1:B:450:GLN:HG2 | 1:B:532:CYS:O | 1.43 | 1.18 |
| 1:B:86:SER:HB3 | 1:C:4:ILE:N | 1.54 | 1.18 |
| 1:C:474:SER:HB2 | 1:C:512:LEU:HG | 1.25 | 1.18 |
| 1:A:84:ASN:HB2 | 1:B:79:HIS:CE1 | 1.77 | 1.17 |
| 1:A:46:PRO:HB2 | 1:C:35:TYR:CD2 | 1.79 | 1.17 |
| 1:C:482:THR:HG23 | 1:C:499:THR:CG2 | 1.75 | 1.17 |
| 1:C:8:LYS:H | 1:C:8:LYS:HD2 | 1.04 | 1.17 |
| 1:A:43:ALA:O | 1:C:39:THR:CG2 | 1.91 | 1.16 |
| 1:A:49:GLY:C | 1:C:44:ASP:OD1 | 1.83 | 1.16 |
| 1:A:75:VAL:O | 1:C:87:PRO:HG2 | 1.35 | 1.16 |
| 1:A:423:THR:HB | 2:A:810:NAG:C7 | 1.76 | 1.16 |
| 1:B:469:TYR:CG | 1:B:470:PRO:HD2 | 1.81 | 1.16 |
| 1:B:482:THR:HG23 | 1:B:499:THR:CG2 | 1.74 | 1.16 |
| 1:C:450:GLN:HG2 | 1:C:532:CYS:O | 1.44 | 1.16 |
| 1:B:86:SER:CB | 1:C:3:VAL:C | 2.12 | 1.15 |
| 1:A:482:THR:HG23 | 1:A:499:THR:CG2 | 1.75 | 1.15 |
| 1:B:234:GLU:H | 1:B:235:ILE:HG23 | 1.08 | 1.15 |
| 1:A:450:GLN:HG2 | 1:A:532:CYS:O | 1.44 | 1.15 |
| 1:A:8:LYS:H | 1:A:8:LYS:HD2 | 1.04 | 1.15 |
| 1:A:474:SER:HB2 | 1:A:512:LEU:HG | 1.25 | 1.15 |
| 1:C:469:TYR:CG | 1:C:470:PRO:HD2 | 1.81 | 1.15 |
| 1:A:469:TYR:CG | 1:A:470:PRO:HD2 | 1.81 | 1.14 |
| 1:B:423:THR:HB | 2:B:810:NAG:C7 | 1.76 | 1.13 |
| 1:C:423:THR:HB | 2:C:810:NAG:C7 | 1.76 | 1.13 |
| 1:B:8:LYS:H | 1:B:8:LYS:HD2 | 1.04 | 1.13 |
| 1:B:81:VAL:CA | 1:C:1:ASP:O | 1.94 | 1.13 |
| 1:B:301:THR:HG21 | 2:B:805:NAG:H82 | 1.29 | 1.12 |
| 1:B:403:ASN:HB2 | 2:B:902:NAG:H83 | 1.30 | 1.12 |
| 1:A:38:ILE:O | 1:C:91:PRO:HB2 | 1.46 | 1.12 |
| 1:B:30:ARG:HH12 | 1:C:25:LYS:C | 1.30 | 1.12 |
| 1:B:154:ASP:C | 2:B:801:NAG:H82 | 1.70 | 1.12 |
| 1:C:154:ASP:C | 2:C:801:NAG:H82 | 1.70 | 1.12 |
| 1:A:38:ILE:O | 1:C:91:PRO:CB | 1.73 | 1.11 |
| 1:A:89:GLU:OE1 | 1:B:1:ASP:C | 1.88 | 1.11 |
| 1:B:338:ARG:HD3 | 1:B:352:ILE:HG22 | 1.26 | 1.11 |
| 1:A:75:VAL:CG1 | 1:C:87:PRO:HD2 | 1.81 | 1.11 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:154:ASP:C | 2:A:801:NAG:H82 | 1.70 | 1.10 |
| 1:C:222:ASP:OD1 | 1:C:222:ASP:O | 1.69 | 1.10 |
| 1:A:46:PRO:CB | 1:C:35:TYR:HE2 | 1.53 | 1.10 |
| 1:A:41:GLN:HB2 | 1:C:81:VAL:HG11 | 1.22 | 1.10 |
| 1:A:75:VAL:HG12 | 1:C:87:PRO:HD2 | 1.30 | 1.10 |
| 1:B:222:ASP:O | 1:B:222:ASP:OD1 | 1.69 | 1.10 |
| 1:B:227:THR:HG21 | 2:B:807:NAG:C8 | 1.82 | 1.10 |
| 1:A:32:ASN:HD21 | 1:A:83:GLU:HB2 | 0.98 | 1.10 |
| 1:C:32:ASN:HD21 | 1:C:83:GLU:HB2 | 0.98 | 1.10 |
| 1:C:227:THR:HG21 | 2:C:807:NAG:C8 | 1.82 | 1.10 |
| 1:A:227:THR:HG21 | 2:A:807:NAG:C8 | 1.82 | 1.09 |
| 1:A:234:GLU:H | 1:A:235:ILE:HG23 | 1.08 | 1.09 |
| 1:A:75:VAL:HB | 1:C:87:PRO:HD3 | 1.31 | 1.09 |
| 1:A:301:THR:HG21 | 2:A:805:NAG:H82 | 1.29 | 1.09 |
| 1:C:338:ARG:HD3 | 1:C:352:ILE:HG22 | 1.26 | 1.09 |
| 1:A:222:ASP:OD1 | 1:A:222:ASP:O | 1.69 | 1.09 |
| 1:C:234:GLU:H | 1:C:235:ILE:HG23 | 1.08 | 1.09 |
| 1:C:403:ASN:HB2 | 2:C:902:NAG:H83 | 1.30 | 1.08 |
| 1:A:90:GLU:O | 1:B:1:ASP:OD1 | 1.70 | 1.08 |
| 1:A:338:ARG:HD3 | 1:A:352:ILE:HG22 | 1.26 | 1.07 |
| 1:A:482:THR:HG23 | 1:A:499:THR:HG22 | 1.09 | 1.07 |
| 1:A:485:ALA:O | 1:A:486:GLU:HG2 | 1.54 | 1.07 |
| 1:B:32:ASN:HD21 | 1:B:83:GLU:HB2 | 0.98 | 1.07 |
| 1:B:83:GLU:OE2 | 1:C:2:TRP:CZ2 | 2.07 | 1.07 |
| 1:C:450:GLN:CG | 1:C:532:CYS:O | 2.02 | 1.07 |
| 1:B:450:GLN:CG | 1:B:532:CYS:O | 2.02 | 1.07 |
| 1:A:450:GLN:CG | 1:A:532:CYS:O | 2.03 | 1.07 |
| 1:B:82:SER:HB3 | 1:C:2:TRP:HB3 | 1.36 | 1.07 |
| 1:B:485:ALA:O | 1:B:486:GLU:HG2 | 1.54 | 1.07 |
| 1:C:301:THR:HG21 | 2:C:805:NAG:H82 | 1.29 | 1.07 |
| 1:A:335:ALA:HB1 | 3:A:811:NDG:O6 | 1.54 | 1.06 |
| 1:A:403:ASN:HB2 | 2:A:902:NAG:H83 | 1.30 | 1.06 |
| 1:B:464:ILE:CD1 | 1:B:465:PRO:CD | 2.20 | 1.06 |
| 1:C:464:ILE:CD1 | 1:C:465:PRO:CD | 2.20 | 1.06 |
| 1:C:485:ALA:O | 1:C:486:GLU:HG2 | 1.54 | 1.06 |
| 1:B:474:SER:HB2 | 1:B:512:LEU:HG | 1.25 | 1.06 |
| 1:A:290:PHE:HB2 | 1:A:292:LEU:N | 1.69 | 1.06 |
| 1:B:335:ALA:HB1 | 3:B:811:NDG:O6 | 1.55 | 1.06 |
| 1:A:44:ASP:C | 1:C:79:HIS:N | 1.86 | 1.06 |
| 1:B:482:THR:HG23 | 1:B:499:THR:HG22 | 1.09 | 1.06 |
| 1:C:290:PHE:HB2 | 1:C:292:LEU:N | 1.69 | 1.06 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:290:PHE:HB2 | 1:B:292:LEU:N | 1.69 | 1.06 |
| 1:C:335:ALA:HB1 | 3:C:811:NDG:O6 | 1.54 | 1.05 |
| 1:A:90:GLU:HB2 | 1:B:2:TRP:HB2 | 1.35 | 1.05 |
| 1:B:337:SER:HA | 1:B:427:ILE:HG23 | 1.38 | 1.05 |
| 1:C:337:SER:HA | 1:C:427:ILE:HG23 | 1.38 | 1.05 |
| 1:A:87:PRO:CD | 1:B:89:GLU:HB3 | 1.86 | 1.05 |
| 1:B:81:VAL:O | 1:C:2:TRP:CE2 | 2.08 | 1.05 |
| 1:B:290:PHE:HB2 | 1:B:292:LEU:H | 0.89 | 1.05 |
| 1:C:482:THR:HG23 | 1:C:499:THR:HG22 | 1.09 | 1.05 |
| 1:C:290:PHE:HB2 | 1:C:292:LEU:H | 0.88 | 1.04 |
| 1:A:75:VAL:C | 1:C:87:PRO:HG2 | 1.78 | 1.04 |
| 1:A:84:ASN:CB | 1:B:79:HIS:HE1 | 1.70 | 1.04 |
| 1:B:86:SER:OG | 1:C:5:PRO:N | 1.90 | 1.04 |
| 1:A:469:TYR:CD1 | 1:A:470:PRO:HD2 | 1.92 | 1.04 |
| 1:B:469:TYR:CD1 | 1:B:470:PRO:HD2 | 1.91 | 1.03 |
| 1:C:469:TYR:CD1 | 1:C:470:PRO:HD2 | 1.91 | 1.03 |
| 1:A:77:SER:C | 1:C:90:GLU:OE2 | 1.95 | 1.03 |
| 1:A:464:ILE:CD1 | 1:A:465:PRO:CD | 2.20 | 1.03 |
| 1:A:522:LEU:HD22 | 1:A:523:THR:HB | 1.39 | 1.03 |
| 1:B:522:LEU:HD22 | 1:B:523:THR:HB | 1.39 | 1.03 |
| 1:B:482:THR:CG2 | 1:B:499:THR:N | 2.22 | 1.03 |
| 1:C:482:THR:CG2 | 1:C:499:THR:N | 2.22 | 1.03 |
| 1:A:84:ASN:HB2 | 1:B:79:HIS:HE1 | 0.91 | 1.03 |
| 1:A:39:THR:OG1 | 1:C:90:GLU:CA | 2.00 | 1.02 |
| 1:A:482:THR:CG2 | 1:A:499:THR:N | 2.22 | 1.02 |
| 1:C:403:ASN:HB2 | 2:C:902:NAG:C8 | 1.90 | 1.02 |
| 1:A:432:ASP:OD2 | 1:A:464:ILE:HG22 | 1.60 | 1.02 |
| 1:A:482:THR:HG21 | 1:A:499:THR:H | 1.23 | 1.02 |
| 1:B:403:ASN:HB2 | 2:B:902:NAG:C8 | 1.90 | 1.02 |
| 1:B:432:ASP:OD2 | 1:B:464:ILE:HG22 | 1.60 | 1.02 |
| 1:A:49:GLY:CA | 1:C:44:ASP:OD1 | 2.08 | 1.01 |
| 1:A:49:GLY:O | 1:C:44:ASP:OD1 | 1.77 | 1.01 |
| 1:A:403:ASN:HB2 | 2:A:902:NAG:C8 | 1.90 | 1.01 |
| 1:B:450:GLN:HB2 | 1:B:533:GLU:HA | 1.41 | 1.01 |
| 1:A:337:SER:HA | 1:A:427:ILE:HG23 | 1.38 | 1.01 |
| 1:B:274:ASP:O | 1:B:278:ASN:HA | 1.61 | 1.01 |
| 1:A:450:GLN:HB2 | 1:A:533:GLU:HA | 1.41 | 1.01 |
| 1:C:274:ASP:O | 1:C:278:ASN:HA | 1.61 | 1.01 |
| 1:B:188:THR:HG23 | 1:B:208:ILE:HG12 | 1.43 | 1.00 |
| 1:A:82:SER:HG | 1:B:91:PRO:CB | 1.61 | 1.00 |
| 1:A:290:PHE:HB2 | 1:A:292:LEU:H | 0.88 | 1.00 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:81:VAL:HA | 1:C:1:ASP:O | 1.22 | 1.00 |
| 1:A:40:GLY:O | 1:C:79:HIS:CG | 2.13 | 1.00 |
| 1:A:41:GLN:H | 1:C:81:VAL:CG1 | 1.75 | 1.00 |
| 1:A:274:ASP:O | 1:A:278:ASN:HA | 1.61 | 1.00 |
| 1:A:188:THR:HG23 | 1:A:208:ILE:HG12 | 1.43 | 0.99 |
| 1:A:482:THR:CG2 | 1:A:499:THR:H | 1.76 | 0.99 |
| 1:A:523:THR:HG23 | 1:A:524:VAL:H | 1.26 | 0.99 |
| 1:B:523:THR:HG23 | 1:B:524:VAL:H | 1.26 | 0.99 |
| 1:B:366:LYS:HG3 | 1:B:367:LEU:H | 1.28 | 0.99 |
| 1:B:482:THR:HG21 | 1:B:499:THR:H | 1.23 | 0.99 |
| 1:C:320:THR:HG21 | 2:C:807:NAG:N2 | 1.78 | 0.99 |
| 1:C:432:ASP:OD2 | 1:C:464:ILE:HG22 | 1.60 | 0.99 |
| 1:C:482:THR:HG21 | 1:C:499:THR:H | 1.23 | 0.99 |
| 1:A:40:GLY:C | 1:C:79:HIS:HB3 | 1.82 | 0.98 |
| 1:B:320:THR:HG21 | 2:B:807:NAG:N2 | 1.78 | 0.98 |
| 1:C:188:THR:HG23 | 1:C:208:ILE:HG12 | 1.43 | 0.98 |
| 1:A:78:SER:N | 1:C:90:GLU:OE2 | 1.97 | 0.98 |
| 1:A:35:TYR:OH | 1:C:93:GLU:OE2 | 1.80 | 0.98 |
| 1:A:320:THR:HG21 | 2:A:807:NAG:N2 | 1.78 | 0.98 |
| 1:B:83:GLU:HA | 1:C:2:TRP:CH2 | 1.99 | 0.98 |
| 1:C:450:GLN:HB2 | 1:C:533:GLU:HA | 1.41 | 0.98 |
| 1:C:522:LEU:HD22 | 1:C:523:THR:HB | 1.39 | 0.98 |
| 1:B:33:LYS:O | 1:C:2:TRP:CE2 | 2.17 | 0.98 |
| 1:A:41:GLN:N | 1:C:81:VAL:HG13 | 1.78 | 0.98 |
| 1:A:82:SER:O | 1:B:91:PRO:CD | 2.12 | 0.97 |
| 1:B:482:THR:CG2 | 1:B:499:THR:H | 1.76 | 0.97 |
| 1:C:366:LYS:HG3 | 1:C:367:LEU:H | 1.28 | 0.97 |
| 1:C:523:THR:HG23 | 1:C:524:VAL:H | 1.26 | 0.97 |
| 1:B:86:SER:HB2 | 1:C:4:ILE:N | 1.59 | 0.97 |
| 1:A:8:LYS:H | 1:A:8:LYS:CD | 1.74 | 0.97 |
| 1:C:482:THR:CG2 | 1:C:499:THR:H | 1.76 | 0.96 |
| 1:A:39:THR:OG1 | 1:C:89:GLU:O | 1.82 | 0.96 |
| 1:B:89:GLU:H | 1:C:1:ASP:N | 1.62 | 0.96 |
| 1:A:366:LYS:HG3 | 1:A:367:LEU:H | 1.28 | 0.96 |
| 1:C:8:LYS:H | 1:C:8:LYS:CD | 1.74 | 0.96 |
| 1:A:32:ASN:HD21 | 1:A:83:GLU:CB | 1.79 | 0.96 |
| 1:A:41:GLN:CB | 1:C:81:VAL:HG11 | 1.88 | 0.96 |
| 1:A:75:VAL:O | 1:C:87:PRO:HG3 | 1.65 | 0.96 |
| 1:A:235:ILE:CG1 | 1:A:287:GLY:HA2 | 1.96 | 0.96 |
| 1:B:8:LYS:H | 1:B:8:LYS:CD | 1.74 | 0.96 |
| 1:B:82:SER:CB | 1:C:2:TRP:HB3 | 1.90 | 0.96 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:32:ASN:HD21 | 1:B:83:GLU:CB | 1.79 | 0.96 |
| 1:B:235:ILE:CG1 | 1:B:287:GLY:HA2 | 1.96 | 0.96 |
| 1:A:48:GLN:NE2 | 1:C:53:ILE:HG21 | 1.81 | 0.96 |
| 1:B:227:THR:HG21 | 2:B:807:NAG:H83 | 1.48 | 0.96 |
| 1:B:89:GLU:N | 1:C:1:ASP:HB2 | 1.80 | 0.95 |
| 1:A:39:THR:OG1 | 1:C:90:GLU:HA | 1.66 | 0.95 |
| 1:A:78:SER:CA | 1:C:90:GLU:OE2 | 2.15 | 0.95 |
| 1:A:290:PHE:CB | 1:A:292:LEU:H | 1.79 | 0.95 |
| 1:B:81:VAL:C | 1:C:2:TRP:CA | 2.22 | 0.95 |
| 1:C:235:ILE:CG1 | 1:C:287:GLY:HA2 | 1.96 | 0.95 |
| 1:A:82:SER:OG | 1:B:91:PRO:CA | 2.14 | 0.94 |
| 1:A:366:LYS:CG | 1:A:367:LEU:H | 1.80 | 0.94 |
| 1:A:91:PRO:HB3 | 1:C:90:GLU:OE1 | 1.66 | 0.94 |
| 1:C:290:PHE:CB | 1:C:292:LEU:H | 1.79 | 0.94 |
| 1:C:366:LYS:CG | 1:C:367:LEU:H | 1.80 | 0.94 |
| 1:A:44:ASP:C | 1:C:79:HIS:H | 1.51 | 0.94 |
| 1:A:227:THR:HG21 | 2:A:807:NAG:H83 | 1.48 | 0.94 |
| 1:B:81:VAL:C | 1:C:2:TRP:CG | 2.31 | 0.94 |
| 1:A:49:GLY:HA3 | 1:C:44:ASP:OD1 | 1.67 | 0.94 |
| 1:B:366:LYS:CG | 1:B:367:LEU:H | 1.80 | 0.94 |
| 1:C:32:ASN:HD21 | 1:C:83:GLU:CB | 1.79 | 0.94 |
| 1:C:227:THR:HG21 | 2:C:807:NAG:H83 | 1.48 | 0.94 |
| 1:B:290:PHE:CB | 1:B:292:LEU:H | 1.79 | 0.93 |
| 1:A:289:ASP:O | 1:A:290:PHE:HB3 | 1.67 | 0.93 |
| 1:C:320:THR:HG21 | 2:C:807:NAG:HN2 | 1.31 | 0.93 |
| 1:C:396:ARG:HH22 | 1:C:464:ILE:HB | 1.33 | 0.93 |
| 1:C:482:THR:HG21 | 1:C:499:THR:N | 1.81 | 0.93 |
| 1:A:41:GLN:CB | 1:C:81:VAL:CG1 | 2.46 | 0.93 |
| 1:A:32:ASN:ND2 | 1:A:83:GLU:HB2 | 1.84 | 0.93 |
| 1:A:482:THR:HG21 | 1:A:499:THR:N | 1.81 | 0.93 |
| 1:A:396:ARG:HH22 | 1:A:464:ILE:HB | 1.33 | 0.93 |
| 1:B:464:ILE:HD12 | 1:B:465:PRO:HD2 | 0.94 | 0.93 |
| 1:B:86:SER:HB3 | 1:C:3:VAL:CB | 1.98 | 0.93 |
| 1:B:289:ASP:O | 1:B:290:PHE:HB3 | 1.67 | 0.93 |
| 1:A:195:ASP:HB2 | 1:A:201:LEU:H | 1.34 | 0.92 |
| 1:A:87:PRO:HG2 | 1:B:89:GLU:CB | 2.00 | 0.92 |
| 1:A:87:PRO:HG2 | 1:B:89:GLU:HB3 | 1.49 | 0.92 |
| 2:A:805:NAG:H62 | 2:A:806:NAG:C7 | 2.00 | 0.92 |
| 1:B:27:ASN:HD22 | 1:B:28:LYS:N | 1.66 | 0.92 |
| 1:A:446:THR:HG23 | 1:A:539:CYS:SG | 2.09 | 0.92 |
| 1:B:320:THR:HG21 | 2:B:807:NAG:HN2 | 1.31 | 0.92 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:C:805:NAG:H62 | 2:C:806:NAG:C7 | 2.00 | 0.92 |
| 1:C:446:THR:HG23 | 1:C:539:CYS:SG | 2.09 | 0.92 |
| 1:A:335:ALA:CB | 3:A:811:NDG:O6 | 2.18 | 0.92 |
| 1:B:446:THR:HG23 | 1:B:539:CYS:SG | 2.09 | 0.92 |
| 1:A:27:ASN:HD22 | 1:A:28:LYS:N | 1.66 | 0.92 |
| 1:C:403:ASN:HB2 | 2:C:902:NAG:C7 | 2.00 | 0.92 |
| 1:A:43:ALA:HB1 | 1:C:79:HIS:HE1 | 1.18 | 0.92 |
| 1:A:352:ILE:HG13 | 1:A:388:VAL:HB | 1.51 | 0.92 |
| 1:B:403:ASN:HB2 | 2:B:902:NAG:C7 | 2.00 | 0.92 |
| 1:C:404:ASN:O | 1:C:404:ASN:ND2 | 2.03 | 0.92 |
| 1:A:227:THR:HG21 | 2:A:807:NAG:C7 | 1.99 | 0.92 |
| 1:C:289:ASP:O | 1:C:290:PHE:HB3 | 1.67 | 0.92 |
| 1:C:335:ALA:CB | 3:C:811:NDG:O6 | 2.18 | 0.92 |
| 1:A:517:GLN:O | 1:A:519:ASN:N | 2.03 | 0.91 |
| 1:C:195:ASP:HB2 | 1:C:201:LEU:H | 1.34 | 0.91 |
| 1:C:227:THR:HG21 | 2:C:807:NAG:C7 | 1.99 | 0.91 |
| 1:B:227:THR:HG21 | 2:B:807:NAG:C7 | 1.99 | 0.91 |
| 1:C:27:ASN:HD22 | 1:C:28:LYS:N | 1.66 | 0.91 |
| 1:C:352:ILE:HG13 | 1:C:388:VAL:HB | 1.51 | 0.91 |
| 1:B:32:ASN:ND2 | 1:B:83:GLU:HB2 | 1.84 | 0.91 |
| 1:B:195:ASP:HB2 | 1:B:201:LEU:H | 1.34 | 0.91 |
| 1:B:464:ILE:HD12 | 1:B:465:PRO:HD3 | 1.53 | 0.91 |
| 1:C:32:ASN:ND2 | 1:C:83:GLU:HB2 | 1.84 | 0.91 |
| 1:A:403:ASN:HB2 | 2:A:902:NAG:C7 | 2.00 | 0.91 |
| 1:A:404:ASN:O | 1:A:404:ASN:ND2 | 2.03 | 0.91 |
| 2:B:805:NAG:H62 | 2:B:806:NAG:C7 | 1.99 | 0.91 |
| 1:C:340:ASP:HA | 1:C:429:HIS:HB3 | 1.53 | 0.91 |
| 1:B:335:ALA:CB | 3:B:811:NDG:O6 | 2.18 | 0.91 |
| 1:B:396:ARG:HH22 | 1:B:464:ILE:HB | 1.33 | 0.91 |
| 1:C:464:ILE:HD11 | 1:C:465:PRO:HD2 | 1.53 | 0.91 |
| 1:A:320:THR:HG21 | 2:A:807:NAG:HN2 | 1.31 | 0.91 |
| 2:A:805:NAG:O5 | 2:A:806:NAG:H83 | 1.71 | 0.91 |
| 1:B:352:ILE:HG13 | 1:B:388:VAL:HB | 1.51 | 0.91 |
| 2:C:805:NAG:O5 | 2:C:806:NAG:H83 | 1.71 | 0.91 |
| 1:A:90:GLU:HB2 | 1:B:2:TRP:CB | 2.00 | 0.90 |
| 1:B:404:ASN:ND2 | 1:B:404:ASN:O | 2.03 | 0.90 |
| 1:A:464:ILE:HD12 | 1:A:465:PRO:HD2 | 0.94 | 0.90 |
| 1:B:86:SER:OG | 1:C:4:ILE:C | 2.08 | 0.90 |
| 1:B:30:ARG:NH1 | 1:C:25:LYS:C | 2.00 | 0.90 |
| 1:B:82:SER:H | 1:C:2:TRP:HA | 1.12 | 0.90 |
| 1:B:518:ASN:O | 1:B:520:PRO:HD3 | 1.72 | 0.90 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:340:ASP:HA | 1:A:429:HIS:HB3 | 1.53 | 0.90 |
| 1:A:45:ASN:HA | 1:C:37:SER:N | 1.87 | 0.90 |
| 1:A:378:TRP:HB2 | 1:A:379:LEU:HD23 | 1.53 | 0.90 |
| 1:C:518:ASN:O | 1:C:520:PRO:HD3 | 1.72 | 0.90 |
| 1:B:89:GLU:H | 1:C:1:ASP:H3 | 1.16 | 0.90 |
| 1:C:464:ILE:HD12 | 1:C:465:PRO:HD2 | 0.94 | 0.90 |
| 1:A:234:GLU:N | 1:A:235:ILE:HG23 | 1.86 | 0.90 |
| 1:B:482:THR:HG21 | 1:B:499:THR:N | 1.81 | 0.90 |
| 2:B:805:NAG:O5 | 2:B:806:NAG:H83 | 1.71 | 0.90 |
| 1:A:518:ASN:O | 1:A:520:PRO:HD3 | 1.72 | 0.90 |
| 1:B:396:ARG:NH2 | 1:B:464:ILE:CG2 | 2.35 | 0.90 |
| 1:B:517:GLN:O | 1:B:519:ASN:N | 2.03 | 0.90 |
| 1:C:517:GLN:O | 1:C:519:ASN:N | 2.03 | 0.90 |
| 1:A:374:ASP:O | 1:A:375:PRO:C | 2.06 | 0.89 |
| 1:A:396:ARG:NH2 | 1:A:464:ILE:CG2 | 2.35 | 0.89 |
| 1:A:464:ILE:HD11 | 1:A:465:PRO:HD2 | 1.53 | 0.89 |
| 1:B:374:ASP:O | 1:B:375:PRO:C | 2.06 | 0.89 |
| 1:C:464:ILE:HD12 | 1:C:465:PRO:HD3 | 1.53 | 0.89 |
| 1:B:234:GLU:N | 1:B:235:ILE:HG23 | 1.86 | 0.89 |
| 1:A:523:THR:HG23 | 1:A:524:VAL:CG2 | 2.03 | 0.89 |
| 1:C:234:GLU:N | 1:C:235:ILE:HG23 | 1.86 | 0.89 |
| 1:C:523:THR:HG23 | 1:C:524:VAL:CG2 | 2.03 | 0.89 |
| 1:C:378:TRP:HB2 | 1:C:379:LEU:HD23 | 1.53 | 0.89 |
| 1:A:371:ILE:CD1 | 1:A:381:VAL:HG11 | 2.03 | 0.89 |
| 1:A:449:ASP:H | 1:A:532:CYS:HB3 | 1.37 | 0.89 |
| 1:B:338:ARG:HD3 | 1:B:352:ILE:CG2 | 2.02 | 0.89 |
| 1:B:464:ILE:HD11 | 1:B:465:PRO:HD2 | 1.53 | 0.89 |
| 1:C:371:ILE:CD1 | 1:C:381:VAL:HG11 | 2.03 | 0.89 |
| 1:B:154:ASP:HB3 | 1:B:155:PRO:HD2 | 1.54 | 0.89 |
| 1:C:221:PHE:HE1 | 1:C:315:SER:O | 1.56 | 0.89 |
| 1:C:396:ARG:NH2 | 1:C:464:ILE:CG2 | 2.35 | 0.89 |
| 1:B:523:THR:HG23 | 1:B:524:VAL:CG2 | 2.03 | 0.89 |
| 1:A:8:LYS:HD2 | 1:A:8:LYS:N | 1.87 | 0.89 |
| 1:C:154:ASP:HB3 | 1:C:155:PRO:HD2 | 1.54 | 0.89 |
| 1:B:8:LYS:HD2 | 1:B:8:LYS:N | 1.87 | 0.88 |
| 1:B:371:ILE:CD1 | 1:B:381:VAL:HG11 | 2.03 | 0.88 |
| 1:C:338:ARG:HD3 | 1:C:352:ILE:CG2 | 2.02 | 0.88 |
| 1:C:343:GLU:HB3 | 1:C:433:VAL:HG21 | 1.55 | 0.88 |
| 1:A:338:ARG:HD3 | 1:A:352:ILE:CG2 | 2.02 | 0.88 |
| 1:B:340:ASP:HA | 1:B:429:HIS:HB3 | 1.53 | 0.88 |
| 1:B:449:ASP:H | 1:B:532:CYS:HB3 | 1.37 | 0.88 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:449:ASP:H | 1:C:532:CYS:HB3 | 1.37 | 0.88 |
| 1:A:343:GLU:HB3 | 1:A:433:VAL:HG21 | 1.55 | 0.88 |
| 1:B:257:ALA:O | 1:B:273:THR:HG21 | 1.74 | 0.88 |
| 1:B:378:TRP:HB2 | 1:B:379:LEU:HD23 | 1.53 | 0.88 |
| 1:A:87:PRO:CD | 1:B:89:GLU:CB | 2.46 | 0.87 |
| 1:A:221:PHE:HE1 | 1:A:315:SER:O | 1.56 | 0.87 |
| 1:C:8:LYS:HD2 | 1:C:8:LYS:N | 1.87 | 0.87 |
| 1:B:86:SER:HB3 | 1:C:4:ILE:H | 1.35 | 0.87 |
| 1:B:483:TRP:CZ3 | 1:B:498:PRO:HG3 | 2.09 | 0.87 |
| 1:C:257:ALA:O | 1:C:273:THR:HG21 | 1.74 | 0.87 |
| 1:C:483:TRP:CZ3 | 1:C:498:PRO:HG3 | 2.09 | 0.87 |
| 1:A:75:VAL:CG1 | 1:C:87:PRO:CD | 2.53 | 0.87 |
| 1:A:154:ASP:HB3 | 1:A:155:PRO:HD2 | 1.54 | 0.87 |
| 1:C:320:THR:HG21 | 2:C:807:NAG:C2 | 2.05 | 0.87 |
| 1:A:318:THR:HG21 | 2:A:806:NAG:H5 | 1.56 | 0.87 |
| 1:A:333:VAL:HB | 1:A:334:PRO:HD3 | 1.56 | 0.87 |
| 1:A:464:ILE:HD12 | 1:A:465:PRO:HD3 | 1.53 | 0.87 |
| 1:C:486:GLU:HB2 | 1:C:495:LEU:HB2 | 1.56 | 0.87 |
| 1:A:441:SER:OG | 1:A:442:PRO:HD3 | 1.75 | 0.87 |
| 1:B:441:SER:OG | 1:B:442:PRO:HD3 | 1.75 | 0.87 |
| 1:A:49:GLY:HA3 | 1:C:44:ASP:CG | 1.95 | 0.87 |
| 1:B:320:THR:HG21 | 2:B:807:NAG:C2 | 2.05 | 0.87 |
| 1:A:75:VAL:HG12 | 1:C:87:PRO:CD | 2.05 | 0.86 |
| 1:A:257:ALA:O | 1:A:273:THR:HG21 | 1.74 | 0.86 |
| 1:A:320:THR:HG21 | 2:A:807:NAG:C2 | 2.05 | 0.86 |
| 1:A:440:PRO:CD | 1:A:522:LEU:HD12 | 2.05 | 0.86 |
| 1:B:318:THR:HG21 | 2:B:806:NAG:H5 | 1.56 | 0.86 |
| 1:A:483:TRP:CZ3 | 1:A:498:PRO:HG3 | 2.09 | 0.86 |
| 1:A:523:THR:HG23 | 1:A:524:VAL:N | 1.90 | 0.86 |
| 1:B:486:GLU:HB2 | 1:B:495:LEU:HB2 | 1.56 | 0.86 |
| 1:A:82:SER:HG | 1:B:91:PRO:HB2 | 0.90 | 0.86 |
| 1:C:235:ILE:HG13 | 1:C:287:GLY:HA2 | 1.58 | 0.86 |
| 1:B:343:GLU:HB3 | 1:B:433:VAL:HG21 | 1.55 | 0.86 |
| 1:A:486:GLU:HB2 | 1:A:495:LEU:HB2 | 1.56 | 0.86 |
| 1:B:423:THR:CB | 2:B:810:NAG:C7 | 2.54 | 0.86 |
| 1:C:441:SER:OG | 1:C:442:PRO:HD3 | 1.75 | 0.86 |
| 1:A:90:GLU:CB | 1:B:2:TRP:HB2 | 2.06 | 0.86 |
| 1:B:221:PHE:HE1 | 1:B:315:SER:O | 1.56 | 0.86 |
| 1:C:523:THR:HG23 | 1:C:524:VAL:N | 1.90 | 0.86 |
| 1:B:333:VAL:HB | 1:B:334:PRO:HD3 | 1.56 | 0.86 |
| 1:C:318:THR:HG21 | 2:C:806:NAG:H5 | 1.55 | 0.86 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:235:ILE:HG13 | 1:A:287:GLY:HA2 | 1.58 | 0.85 |
| 1:B:438:PRO:HB3 | 1:B:471:TYR:HE2 | 1.41 | 0.85 |
| 1:B:440:PRO:CD | 1:B:522:LEU:HD12 | 2.05 | 0.85 |
| 1:C:438:PRO:HB3 | 1:C:471:TYR:HE2 | 1.41 | 0.85 |
| 1:C:440:PRO:CD | 1:C:522:LEU:HD12 | 2.05 | 0.85 |
| 1:A:423:THR:CB | 2:A:810:NAG:C7 | 2.54 | 0.85 |
| 1:B:451:ASN:N | 1:B:533:GLU:O | 2.10 | 0.85 |
| 1:A:464:ILE:HD12 | 1:A:465:PRO:N | 1.91 | 0.85 |
| 1:A:483:TRP:HZ2 | 1:A:507:TYR:CE1 | 1.95 | 0.85 |
| 1:B:464:ILE:HD12 | 1:B:465:PRO:N | 1.91 | 0.85 |
| 1:C:333:VAL:HB | 1:C:334:PRO:HD3 | 1.56 | 0.85 |
| 1:C:374:ASP:O | 1:C:375:PRO:C | 2.06 | 0.85 |
| 1:A:375:PRO:HB3 | 1:A:400:TYR:CE2 | 2.12 | 0.85 |
| 1:C:483:TRP:HZ2 | 1:C:507:TYR:CE1 | 1.95 | 0.85 |
| 1:B:483:TRP:HZ2 | 1:B:507:TYR:CE1 | 1.95 | 0.85 |
| 1:C:423:THR:CB | 2:C:810:NAG:C7 | 2.54 | 0.84 |
| 1:A:87:PRO:HG2 | 1:B:89:GLU:CG | 2.06 | 0.84 |
| 1:C:375:PRO:HB3 | 1:C:400:TYR:CE2 | 2.12 | 0.84 |
| 1:C:440:PRO:HD2 | 1:C:522:LEU:HD12 | 1.59 | 0.84 |
| 1:B:483:TRP:HZ2 | 1:B:507:TYR:HE1 | 1.24 | 0.84 |
| 1:A:440:PRO:HD2 | 1:A:522:LEU:HD12 | 1.59 | 0.84 |
| 1:B:84:ASN:ND2 | 1:C:5:PRO:HD3 | 1.92 | 0.84 |
| 1:B:523:THR:HG23 | 1:B:524:VAL:N | 1.90 | 0.84 |
| 1:A:89:GLU:OE2 | 1:B:3:VAL:HG13 | 1.76 | 0.84 |
| 1:A:483:TRP:HZ2 | 1:A:507:TYR:HE1 | 1.24 | 0.84 |
| 1:B:235:ILE:HG13 | 1:B:287:GLY:HA2 | 1.58 | 0.84 |
| 1:C:155:PRO:HB2 | 2:C:801:NAG:H81 | 1.59 | 0.84 |
| 1:C:464:ILE:HD12 | 1:C:465:PRO:N | 1.91 | 0.84 |
| 1:A:230:VAL:O | 1:A:324:GLU:N | 2.11 | 0.84 |
| 1:C:396:ARG:NE | 1:C:432:ASP:HB2 | 1.93 | 0.84 |
| 1:A:44:ASP:OD2 | 1:C:79:HIS:ND1 | 1.98 | 0.83 |
| 1:A:48:GLN:NE2 | 1:C:53:ILE:CG2 | 2.39 | 0.83 |
| 1:B:86:SER:CB | 1:C:4:ILE:CA | 2.56 | 0.83 |
| 1:A:396:ARG:NE | 1:A:432:ASP:HB2 | 1.93 | 0.83 |
| 1:A:451:ASN:N | 1:A:533:GLU:O | 2.10 | 0.83 |
| 1:A:469:TYR:CG | 1:A:470:PRO:CD | 2.61 | 0.83 |
| 1:B:375:PRO:HB3 | 1:B:400:TYR:CE2 | 2.12 | 0.83 |
| 1:C:448:CYS:O | 1:C:452:PRO:HG3 | 1.79 | 0.83 |
| 1:A:423:THR:HB | 2:A:810:NAG:N2 | 1.93 | 0.83 |
| 1:B:147:SER:OG | 1:B:167:ARG:HD2 | 1.78 | 0.83 |
| 1:C:32:ASN:ND2 | 1:C:83:GLU:H | 1.76 | 0.83 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:451:ASN:N | 1:C:533:GLU:O | 2.10 | 0.83 |
| 1:C:28:LYS:HD3 | 1:C:88:VAL:HG12 | 1.61 | 0.83 |
| 1:A:32:ASN:ND2 | 1:A:83:GLU:H | 1.77 | 0.83 |
| 1:A:155:PRO:HB2 | 2:A:801:NAG:H81 | 1.59 | 0.83 |
| 1:B:81:VAL:HA | 1:C:1:ASP:C | 1.98 | 0.83 |
| 1:B:230:VAL:O | 1:B:324:GLU:N | 2.11 | 0.83 |
| 1:B:440:PRO:HD2 | 1:B:522:LEU:HD12 | 1.59 | 0.83 |
| 1:C:147:SER:OG | 1:C:167:ARG:HD2 | 1.78 | 0.83 |
| 1:A:43:ALA:HB3 | 1:C:79:HIS:CG | 2.09 | 0.83 |
| 1:A:423:THR:CB | 2:A:810:NAG:N2 | 2.42 | 0.83 |
| 1:A:89:GLU:OE1 | 1:B:1:ASP:CA | 2.09 | 0.83 |
| 1:A:234:GLU:H | 1:A:235:ILE:CG2 | 1.92 | 0.83 |
| 1:A:289:ASP:O | 1:A:289:ASP:OD2 | 1.97 | 0.83 |
| 1:B:289:ASP:O | 1:B:289:ASP:OD2 | 1.97 | 0.83 |
| 1:B:396:ARG:NE | 1:B:432:ASP:HB2 | 1.93 | 0.83 |
| 1:A:87:PRO:HD3 | 1:B:89:GLU:HB2 | 1.61 | 0.83 |
| 1:B:423:THR:HB | 2:B:810:NAG:N2 | 1.93 | 0.83 |
| 1:B:448:CYS:O | 1:B:452:PRO:HG3 | 1.79 | 0.83 |
| 1:A:438:PRO:HB3 | 1:A:471:TYR:HE2 | 1.41 | 0.82 |
| 1:A:448:CYS:O | 1:A:452:PRO:HG3 | 1.79 | 0.82 |
| 1:B:28:LYS:HD3 | 1:B:88:VAL:HG12 | 1.61 | 0.82 |
| 1:B:32:ASN:ND2 | 1:B:83:GLU:H | 1.77 | 0.82 |
| 1:C:469:TYR:CG | 1:C:470:PRO:CD | 2.61 | 0.82 |
| 1:B:83:GLU:OE2 | 1:C:2:TRP:HZ2 | 1.59 | 0.82 |
| 1:B:88:VAL:H | 1:C:1:ASP:CA | 1.92 | 0.82 |
| 1:B:423:THR:CB | 2:B:810:NAG:N2 | 2.42 | 0.82 |
| 1:C:446:THR:HG21 | 1:C:537:ILE:O | 1.79 | 0.82 |
| 1:A:540:GLN:O | 1:A:540:GLN:OE1 | 1.97 | 0.82 |
| 1:B:154:ASP:HB3 | 2:B:801:NAG:HN2 | 1.45 | 0.82 |
| 1:A:87:PRO:HD3 | 1:B:89:GLU:CB | 2.10 | 0.82 |
| 1:C:230:VAL:O | 1:C:324:GLU:N | 2.11 | 0.82 |
| 1:A:44:ASP:HA | 1:C:77:SER:O | 1.79 | 0.82 |
| 1:A:154:ASP:HB3 | 2:A:801:NAG:N2 | 1.95 | 0.82 |
| 1:B:155:PRO:HB2 | 2:B:801:NAG:H81 | 1.59 | 0.82 |
| 1:C:423:THR:CB | 2:C:810:NAG:N2 | 2.42 | 0.82 |
| 1:A:154:ASP:HB3 | 2:A:801:NAG:HN2 | 1.44 | 0.82 |
| 1:B:482:THR:HG21 | 1:B:500:GLN:N | 1.94 | 0.82 |
| 1:A:75:VAL:HB | 1:C:87:PRO:CD | 2.10 | 0.81 |
| 1:B:154:ASP:HB3 | 2:B:801:NAG:N2 | 1.95 | 0.81 |
| 1:C:423:THR:HB | 2:C:810:NAG:N2 | 1.93 | 0.81 |
| 1:C:482:THR:HG21 | 1:C:500:GLN:N | 1.94 | 0.81 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:446:THR:HG21 | 1:A:537:ILE:O | 1.79 | 0.81 |
| 1:C:154:ASP:HB3 | 2:C:801:NAG:N2 | 1.95 | 0.81 |
| 1:B:469:TYR:CG | 1:B:470:PRO:CD | 2.61 | 0.81 |
| 1:B:299:GLN:HG2 | 1:B:318:THR:HG23 | 1.63 | 0.81 |
| 1:C:277:SER:C | 1:C:278:ASN:HD22 | 1.84 | 0.81 |
| 1:C:540:GLN:O | 1:C:540:GLN:OE1 | 1.97 | 0.81 |
| 1:B:290:PHE:CE2 | 1:B:293:ARG:HB2 | 2.16 | 0.81 |
| 1:C:289:ASP:O | 1:C:289:ASP:OD2 | 1.97 | 0.81 |
| 1:A:469:TYR:CD2 | 1:A:470:PRO:HD2 | 2.16 | 0.81 |
| 1:A:482:THR:HG21 | 1:A:500:GLN:N | 1.94 | 0.81 |
| 1:B:446:THR:HG21 | 1:B:537:ILE:O | 1.79 | 0.81 |
| 1:C:290:PHE:CE2 | 1:C:293:ARG:HB2 | 2.16 | 0.81 |
| 1:A:265:GLU:HB3 | 1:A:268:PHE:HE2 | 1.46 | 0.81 |
| 1:A:486:GLU:O | 1:A:494:MET:HA | 1.81 | 0.81 |
| 1:B:265:GLU:HB3 | 1:B:268:PHE:HE2 | 1.46 | 0.81 |
| 1:C:154:ASP:HB3 | 2:C:801:NAG:HN2 | 1.45 | 0.81 |
| 1:C:396:ARG:HH21 | 1:C:464:ILE:HG22 | 1.46 | 0.81 |
| 1:A:290:PHE:CE2 | 1:A:293:ARG:HB2 | 2.16 | 0.81 |
| 1:A:517:GLN:C | 1:A:519:ASN:H | 1.84 | 0.81 |
| 1:B:277:SER:C | 1:B:278:ASN:HD22 | 1.83 | 0.81 |
| 1:A:396:ARG:HH21 | 1:A:464:ILE:HG22 | 1.46 | 0.80 |
| 1:B:290:PHE:HD2 | 1:B:293:ARG:H | 1.28 | 0.80 |
| 1:A:299:GLN:HG2 | 1:A:318:THR:HG23 | 1.62 | 0.80 |
| 1:C:517:GLN:C | 1:C:519:ASN:H | 1.84 | 0.80 |
| 1:B:30:ARG:NH1 | 1:C:25:LYS:HG2 | 1.95 | 0.80 |
| 1:B:81:VAL:CA | 1:C:2:TRP:HA | 2.10 | 0.80 |
| 1:B:540:GLN:O | 1:B:540:GLN:OE1 | 1.97 | 0.80 |
| 1:C:299:GLN:HG2 | 1:C:318:THR:HG23 | 1.62 | 0.80 |
| 1:A:28:LYS:HD3 | 1:A:88:VAL:HG12 | 1.61 | 0.80 |
| 1:A:77:SER:O | 1:C:90:GLU:OE2 | 1.97 | 0.80 |
| 1:A:84:ASN:CG | 1:B:77:SER:OG | 2.19 | 0.80 |
| 1:A:432:ASP:OD2 | 1:A:464:ILE:CG2 | 2.30 | 0.80 |
| 1:B:432:ASP:OD2 | 1:B:464:ILE:CG2 | 2.30 | 0.80 |
| 1:B:517:GLN:C | 1:B:519:ASN:H | 1.84 | 0.80 |
| 1:C:234:GLU:H | 1:C:235:ILE:CG2 | 1.92 | 0.80 |
| 1:C:265:GLU:HB3 | 1:C:268:PHE:HE2 | 1.46 | 0.80 |
| 1:C:127:VAL:HG13 | 1:C:128:MET:H | 1.46 | 0.80 |
| 1:C:486:GLU:O | 1:C:494:MET:HA | 1.81 | 0.80 |
| 2:C:904:NAG:O7 | 2:C:904:NAG:H3 | 1.82 | 0.80 |
| 1:B:30:ARG:NH2 | 1:C:25:LYS:O | 2.01 | 0.80 |
| 1:B:486:GLU:O | 1:B:494:MET:HA | 1.81 | 0.80 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:469:TYR:CD2 | 1:C:470:PRO:HD2 | 2.16 | 0.80 |
| 1:A:365:GLN:HG3 | 1:A:365:GLN:O | 1.82 | 0.80 |
| 1:C:290:PHE:HZ | 1:C:296:TYR:HH | 1.30 | 0.80 |
| 1:B:469:TYR:CD2 | 1:B:470:PRO:HD2 | 2.16 | 0.80 |
| 1:A:82:SER:C | 1:B:91:PRO:HD2 | 2.01 | 0.79 |
| 1:B:396:ARG:HD3 | 1:B:431:LEU:C | 2.02 | 0.79 |
| 1:A:27:ASN:HD22 | 1:A:27:ASN:C | 1.85 | 0.79 |
| 1:A:127:VAL:HG13 | 1:A:128:MET:H | 1.46 | 0.79 |
| 1:A:290:PHE:HD2 | 1:A:293:ARG:H | 1.28 | 0.79 |
| 1:B:540:GLN:O | 1:B:540:GLN:CG | 2.31 | 0.79 |
| 1:B:195:ASP:HB3 | 1:B:200:GLY:HA3 | 1.65 | 0.79 |
| 1:B:482:THR:OG1 | 1:B:500:GLN:HG2 | 1.82 | 0.79 |
| 1:C:290:PHE:HD2 | 1:C:293:ARG:H | 1.28 | 0.79 |
| 1:C:406:TYR:CD1 | 2:C:808:NAG:H83 | 2.17 | 0.79 |
| 1:C:449:ASP:HB3 | 1:C:532:CYS:H | 1.47 | 0.79 |
| 1:B:86:SER:HB2 | 1:C:3:VAL:O | 1.82 | 0.79 |
| 1:B:232:GLU:HG3 | 1:B:290:PHE:N | 1.98 | 0.79 |
| 1:B:523:THR:CG2 | 1:B:524:VAL:H | 1.94 | 0.79 |
| 1:A:44:ASP:O | 1:C:38:ILE:HA | 1.83 | 0.79 |
| 1:A:496:LEU:HD21 | 1:A:509:ILE:HD13 | 1.63 | 0.79 |
| 1:B:27:ASN:HD22 | 1:B:27:ASN:C | 1.85 | 0.79 |
| 1:B:496:LEU:HD21 | 1:B:509:ILE:HD13 | 1.63 | 0.79 |
| 2:B:904:NAG:H3 | 2:B:904:NAG:O7 | 1.82 | 0.79 |
| 1:C:155:PRO:C | 1:C:157:GLU:H | 1.86 | 0.79 |
| 1:C:432:ASP:OD2 | 1:C:464:ILE:CG2 | 2.30 | 0.79 |
| 1:C:496:LEU:HD21 | 1:C:509:ILE:HD13 | 1.63 | 0.79 |
| 1:A:195:ASP:HB3 | 1:A:200:GLY:HA3 | 1.65 | 0.79 |
| 1:A:485:ALA:O | 1:A:486:GLU:CG | 2.30 | 0.79 |
| 1:C:483:TRP:HZ2 | 1:C:507:TYR:HE1 | 1.24 | 0.79 |
| 1:A:449:ASP:HB3 | 1:A:532:CYS:H | 1.47 | 0.79 |
| 1:B:127:VAL:HG13 | 1:B:128:MET:H | 1.46 | 0.79 |
| 2:C:809:NAG:H61 | 2:C:810:NAG:H62 | 1.65 | 0.79 |
| 1:A:406:TYR:CD1 | 2:A:808:NAG:H83 | 2.17 | 0.79 |
| 1:B:234:GLU:H | 1:B:235:ILE:CG2 | 1.92 | 0.79 |
| 1:B:365:GLN:O | 1:B:365:GLN:HG3 | 1.82 | 0.79 |
| 1:C:232:GLU:HG3 | 1:C:290:PHE:N | 1.98 | 0.79 |
| 1:A:222:ASP:OD1 | 1:A:222:ASP:C | 2.20 | 0.79 |
| 1:A:277:SER:C | 1:A:278:ASN:HD22 | 1.84 | 0.79 |
| 1:C:396:ARG:HD3 | 1:C:431:LEU:C | 2.03 | 0.79 |
| 1:C:482:THR:OG1 | 1:C:500:GLN:HG2 | 1.82 | 0.79 |
| 1:A:78:SER:C | 1:C:90:GLU:OE2 | 2.21 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:155:PRO:C | 1:A:157:GLU:H | 1.86 | 0.78 |
| 1:B:30:ARG:CZ | 1:C:25:LYS:O | 2.30 | 0.78 |
| 1:C:238:GLU:HA | 1:C:283:THR:HG22 | 1.66 | 0.78 |
| 1:A:156:GLU:HG3 | 1:A:160:PRO:HB3 | 1.66 | 0.78 |
| 1:A:396:ARG:HD3 | 1:A:431:LEU:C | 2.03 | 0.78 |
| 1:B:396:ARG:HH21 | 1:B:464:ILE:HG22 | 1.46 | 0.78 |
| 1:C:156:GLU:HG3 | 1:C:160:PRO:HB3 | 1.66 | 0.78 |
| 1:C:154:ASP:CB | 1:C:155:PRO:HD2 | 2.13 | 0.78 |
| 1:C:485:ALA:O | 1:C:486:GLU:CG | 2.30 | 0.78 |
| 1:A:482:THR:OG1 | 1:A:500:GLN:HG2 | 1.82 | 0.78 |
| 1:B:30:ARG:HA | 1:C:27:ASN:OD1 | 1.82 | 0.78 |
| 1:B:86:SER:HB2 | 1:C:4:ILE:CA | 2.14 | 0.78 |
| 1:B:155:PRO:C | 1:B:157:GLU:H | 1.86 | 0.78 |
| 1:C:222:ASP:OD1 | 1:C:222:ASP:C | 2.20 | 0.78 |
| 1:B:147:SER:OG | 1:B:167:ARG:CG | 2.32 | 0.78 |
| 1:B:485:ALA:O | 1:B:486:GLU:CG | 2.30 | 0.78 |
| 1:C:147:SER:OG | 1:C:167:ARG:CD | 2.32 | 0.78 |
| 1:B:406:TYR:CD1 | 2:B:808:NAG:H83 | 2.17 | 0.78 |
| 2:B:809:NAG:H61 | 2:B:810:NAG:H62 | 1.65 | 0.78 |
| 1:C:147:SER:OG | 1:C:167:ARG:CG | 2.32 | 0.78 |
| 1:A:75:VAL:CB | 1:C:87:PRO:HD3 | 2.10 | 0.78 |
| 2:A:904:NAG:O7 | 2:A:904:NAG:H3 | 1.82 | 0.78 |
| 1:B:147:SER:OG | 1:B:167:ARG:CD | 2.32 | 0.78 |
| 1:A:154:ASP:CB | 1:A:155:PRO:HD2 | 2.13 | 0.78 |
| 1:A:371:ILE:HD11 | 1:A:381:VAL:HG11 | 1.64 | 0.78 |
| 1:B:89:GLU:N | 1:C:1:ASP:CB | 2.47 | 0.78 |
| 1:B:371:ILE:HD11 | 1:B:381:VAL:HG11 | 1.64 | 0.78 |
| 1:A:89:GLU:OE1 | 1:B:2:TRP:N | 2.18 | 0.77 |
| 1:A:290:PHE:HZ | 1:A:296:TYR:HH | 1.31 | 0.77 |
| 1:A:432:ASP:CG | 1:A:464:ILE:HG22 | 2.05 | 0.77 |
| 1:B:30:ARG:NH1 | 1:C:25:LYS:O | 2.15 | 0.77 |
| 1:B:154:ASP:CB | 1:B:155:PRO:HD2 | 2.13 | 0.77 |
| 1:B:524:VAL:CG2 | 2:B:904:NAG:H81 | 2.14 | 0.77 |
| 1:A:232:GLU:HG3 | 1:A:290:PHE:N | 1.98 | 0.77 |
| 1:A:540:GLN:O | 1:A:540:GLN:CG | 2.30 | 0.77 |
| 1:B:33:LYS:O | 1:C:2:TRP:NE1 | 2.09 | 0.77 |
| 1:B:501:GLN:O | 1:B:501:GLN:HG2 | 1.84 | 0.77 |
| 1:C:289:ASP:O | 1:C:290:PHE:CB | 2.25 | 0.77 |
| 1:C:371:ILE:HD11 | 1:C:381:VAL:HG11 | 1.64 | 0.77 |
| 1:A:89:GLU:CD | 1:B:1:ASP:H3 | 1.86 | 0.77 |
| 1:A:523:THR:CG2 | 1:A:524:VAL:N | 2.46 | 0.77 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:82:SER:N | 1:C:2:TRP:CB | 2.35 | 0.77 |
| 1:A:41:GLN:N | 1:C:81:VAL:CG1 | 2.41 | 0.77 |
| 1:B:301:THR:HG21 | 2:B:805:NAG:C8 | 2.12 | 0.77 |
| 1:B:523:THR:HG23 | 1:B:524:VAL:HG22 | 1.67 | 0.77 |
| 1:C:365:GLN:HG3 | 1:C:365:GLN:O | 1.82 | 0.77 |
| 1:A:301:THR:HG21 | 2:A:805:NAG:C8 | 2.12 | 0.77 |
| 1:A:505:GLY:C | 1:A:506:ASP:OD1 | 2.23 | 0.77 |
| 2:A:809:NAG:H61 | 2:A:810:NAG:H62 | 1.65 | 0.77 |
| 1:B:222:ASP:OD1 | 1:B:222:ASP:C | 2.20 | 0.77 |
| 1:B:505:GLY:C | 1:B:506:ASP:OD1 | 2.23 | 0.77 |
| 1:C:27:ASN:HD22 | 1:C:27:ASN:C | 1.85 | 0.77 |
| 1:C:540:GLN:O | 1:C:540:GLN:CG | 2.30 | 0.77 |
| 1:B:362:GLN:O | 1:B:364:ILE:HG23 | 1.85 | 0.77 |
| 1:B:194:THR:HB | 1:B:198:GLY:HA2 | 1.66 | 0.77 |
| 1:B:449:ASP:HB3 | 1:B:532:CYS:H | 1.47 | 0.77 |
| 1:C:505:GLY:C | 1:C:506:ASP:OD1 | 2.23 | 0.77 |
| 1:C:524:VAL:CG2 | 2:C:904:NAG:H81 | 2.14 | 0.77 |
| 1:C:195:ASP:HB3 | 1:C:200:GLY:HA3 | 1.65 | 0.77 |
| 1:A:238:GLU:HA | 1:A:283:THR:HG22 | 1.66 | 0.76 |
| 1:B:223:PRO:HD2 | 1:B:226:TYR:OH | 1.85 | 0.76 |
| 1:C:440:PRO:HB3 | 1:C:457:LEU:HD21 | 1.67 | 0.76 |
| 1:C:523:THR:HG23 | 1:C:524:VAL:HG22 | 1.67 | 0.76 |
| 1:B:186:GLU:O | 2:B:801:NAG:O7 | 2.03 | 0.76 |
| 1:B:238:GLU:HA | 1:B:283:THR:HG22 | 1.66 | 0.76 |
| 1:B:432:ASP:CG | 1:B:464:ILE:HG22 | 2.05 | 0.76 |
| 1:C:194:THR:HB | 1:C:198:GLY:HA2 | 1.67 | 0.76 |
| 1:C:196:LEU:HB2 | 1:C:199:ALA:HB3 | 1.67 | 0.76 |
| 1:C:362:GLN:O | 1:C:364:ILE:HG23 | 1.85 | 0.76 |
| 1:A:524:VAL:CG2 | 2:A:904:NAG:H81 | 2.14 | 0.76 |
| 1:B:82:SER:HB3 | 1:C:2:TRP:CB | 2.14 | 0.76 |
| 1:C:186:GLU:O | 2:C:801:NAG:O7 | 2.03 | 0.76 |
| 1:C:501:GLN:HG2 | 1:C:501:GLN:O | 1.84 | 0.76 |
| 1:A:272:THR:HG22 | 1:A:273:THR:H | 1.51 | 0.76 |
| 1:A:366:LYS:CG | 1:A:367:LEU:N | 2.48 | 0.76 |
| 1:B:156:GLU:HG3 | 1:B:160:PRO:HB3 | 1.66 | 0.76 |
| 1:A:194:THR:HB | 1:A:198:GLY:HA2 | 1.66 | 0.76 |
| 1:A:501:GLN:HG2 | 1:A:501:GLN:O | 1.84 | 0.76 |
| 1:B:188:THR:HG23 | 1:B:208:ILE:CG1 | 2.16 | 0.76 |
| 1:A:362:GLN:O | 1:A:364:ILE:HG23 | 1.85 | 0.76 |
| 1:B:82:SER:CA | 1:C:2:TRP:CA | 2.62 | 0.76 |
| 1:B:523:THR:CG2 | 1:B:524:VAL:N | 2.46 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:432:ASP:CG | 1:C:464:ILE:HG22 | 2.05 | 0.76 |
| 1:A:188:THR:HG23 | 1:A:208:ILE:CG1 | 2.16 | 0.75 |
| 1:A:371:ILE:HD12 | 1:A:410:MET:HB3 | 1.68 | 0.75 |
| 1:C:223:PRO:HD2 | 1:C:226:TYR:OH | 1.85 | 0.75 |
| 1:C:241:ARG:HE | 1:C:281:ILE:HD12 | 1.51 | 0.75 |
| 1:C:366:LYS:CG | 1:C:367:LEU:N | 2.48 | 0.75 |
| 1:A:241:ARG:HE | 1:A:281:ILE:HD12 | 1.51 | 0.75 |
| 1:A:289:ASP:O | 1:A:290:PHE:CB | 2.25 | 0.75 |
| 1:A:448:CYS:SG | 1:A:537:ILE:HG22 | 2.27 | 0.75 |
| 1:A:523:THR:HG23 | 1:A:524:VAL:HG22 | 1.67 | 0.75 |
| 1:B:290:PHE:CD2 | 1:B:293:ARG:N | 2.55 | 0.75 |
| 1:B:440:PRO:HB3 | 1:B:457:LEU:HD21 | 1.68 | 0.75 |
| 1:A:440:PRO:HB3 | 1:A:457:LEU:HD21 | 1.67 | 0.75 |
| 1:B:80:ALA:CB | 1:C:1:ASP:HA | 2.17 | 0.75 |
| 1:A:90:GLU:HB3 | 1:B:2:TRP:HD1 | 1.52 | 0.75 |
| 1:A:196:LEU:HB2 | 1:A:199:ALA:HB3 | 1.67 | 0.75 |
| 1:B:196:LEU:HB2 | 1:B:199:ALA:HB3 | 1.67 | 0.75 |
| 1:C:482:THR:CG2 | 1:C:499:THR:CG2 | 2.62 | 0.75 |
| 1:A:186:GLU:O | 2:A:801:NAG:O7 | 2.03 | 0.75 |
| 1:A:223:PRO:HD2 | 1:A:226:TYR:OH | 1.85 | 0.75 |
| 1:B:272:THR:HG22 | 1:B:273:THR:H | 1.51 | 0.75 |
| 1:B:290:PHE:HZ | 1:B:296:TYR:HH | 1.33 | 0.75 |
| 1:C:272:THR:HG22 | 1:C:273:THR:H | 1.51 | 0.75 |
| 1:A:87:PRO:HG3 | 1:B:89:GLU:HB3 | 0.75 | 0.75 |
| 1:C:396:ARG:HH21 | 1:C:464:ILE:CG2 | 1.99 | 0.75 |
| 1:B:396:ARG:NH2 | 1:B:464:ILE:HB | 2.02 | 0.75 |
| 1:C:301:THR:HG21 | 2:C:805:NAG:C8 | 2.12 | 0.75 |
| 1:A:84:ASN:HD22 | 1:B:79:HIS:CE1 | 2.04 | 0.75 |
| 1:A:90:GLU:C | 1:B:1:ASP:OD1 | 2.26 | 0.75 |
| 1:A:396:ARG:NH2 | 1:A:464:ILE:HB | 2.02 | 0.75 |
| 1:B:449:ASP:HB3 | 1:B:532:CYS:N | 2.02 | 0.75 |
| 1:B:450:GLN:HG3 | 1:B:533:GLU:OE2 | 1.87 | 0.74 |
| 1:A:449:ASP:HB3 | 1:A:532:CYS:N | 2.02 | 0.74 |
| 1:C:448:CYS:SG | 1:C:537:ILE:HG22 | 2.27 | 0.74 |
| 1:C:449:ASP:HB3 | 1:C:532:CYS:N | 2.02 | 0.74 |
| 1:B:241:ARG:HE | 1:B:281:ILE:HD12 | 1.51 | 0.74 |
| 1:B:448:CYS:SG | 1:B:537:ILE:HG22 | 2.27 | 0.74 |
| 1:A:450:GLN:HG3 | 1:A:533:GLU:OE2 | 1.88 | 0.74 |
| 1:C:188:THR:HG23 | 1:C:208:ILE:CG1 | 2.16 | 0.74 |
| 1:B:364:ILE:HG13 | 1:B:364:ILE:O | 1.87 | 0.74 |
| 1:A:396:ARG:HH21 | 1:A:464:ILE:CG2 | 1.99 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:451:ASN:O | 1:C:534:GLY:HA2 | 1.88 | 0.74 |
| 1:A:364:ILE:O | 1:A:364:ILE:HG13 | 1.86 | 0.74 |
| 1:B:366:LYS:CG | 1:B:367:LEU:N | 2.48 | 0.74 |
| 1:B:223:PRO:HB2 | 1:B:226:TYR:CE2 | 2.23 | 0.74 |
| 1:B:298:LEU:N | 1:B:298:LEU:HD23 | 2.03 | 0.74 |
| 1:C:290:PHE:CD2 | 1:C:293:ARG:N | 2.55 | 0.74 |
| 1:C:450:GLN:HG3 | 1:C:533:GLU:OE2 | 1.88 | 0.74 |
| 1:A:87:PRO:HG2 | 1:B:89:GLU:HG3 | 1.67 | 0.73 |
| 1:B:451:ASN:O | 1:B:534:GLY:HA2 | 1.88 | 0.73 |
| 1:A:290:PHE:HE2 | 1:A:293:ARG:HB2 | 1.52 | 0.73 |
| 1:B:371:ILE:HD12 | 1:B:410:MET:HB3 | 1.68 | 0.73 |
| 1:C:298:LEU:HD23 | 1:C:298:LEU:N | 2.03 | 0.73 |
| 1:C:371:ILE:HD12 | 1:C:410:MET:HB3 | 1.68 | 0.73 |
| 1:A:223:PRO:HB2 | 1:A:226:TYR:CE2 | 2.23 | 0.73 |
| 1:B:81:VAL:O | 1:C:2:TRP:CD1 | 2.42 | 0.73 |
| 1:C:223:PRO:HB2 | 1:C:226:TYR:CE2 | 2.23 | 0.73 |
| 1:C:320:THR:CG2 | 2:C:807:NAG:HN2 | 2.01 | 0.73 |
| 1:C:373:ASN:ND2 | 1:C:374:ASP:H | 1.87 | 0.73 |
| 1:A:333:VAL:CB | 1:A:334:PRO:HD3 | 2.18 | 0.73 |
| 1:A:373:ASN:ND2 | 1:A:374:ASP:H | 1.87 | 0.73 |
| 1:C:33:LYS:HB3 | 1:C:83:GLU:HG2 | 1.71 | 0.73 |
| 1:B:373:ASN:ND2 | 1:B:374:ASP:H | 1.87 | 0.73 |
| 1:A:276:GLU:HG3 | 1:A:277:SER:H | 1.54 | 0.73 |
| 1:A:474:SER:CB | 1:A:512:LEU:HG | 2.14 | 0.73 |
| 1:A:75:VAL:CB | 1:C:87:PRO:CD | 2.67 | 0.73 |
| 1:A:273:THR:O | 2:A:803:NAG:H82 | 1.89 | 0.73 |
| 1:B:33:LYS:HB3 | 1:B:83:GLU:HG2 | 1.71 | 0.73 |
| 1:B:86:SER:HB3 | 1:C:3:VAL:HB | 1.71 | 0.73 |
| 1:B:333:VAL:CB | 1:B:334:PRO:HD3 | 2.18 | 0.73 |
| 1:C:364:ILE:O | 1:C:364:ILE:CG1 | 2.37 | 0.73 |
| 1:C:511:VAL:HG23 | 1:C:523:THR:O | 1.89 | 0.73 |
| 1:C:320:THR:CG2 | 2:C:807:NAG:N2 | 2.52 | 0.72 |
| 1:C:396:ARG:NH2 | 1:C:464:ILE:HB | 2.02 | 0.72 |
| 1:A:320:THR:CG2 | 2:A:807:NAG:N2 | 2.52 | 0.72 |
| 1:C:368:SER:HG | 1:C:370:PHE:HE1 | 1.37 | 0.72 |
| 1:B:273:THR:O | 2:B:803:NAG:H82 | 1.89 | 0.72 |
| 1:B:396:ARG:HH21 | 1:B:464:ILE:CG2 | 1.98 | 0.72 |
| 1:C:333:VAL:CB | 1:C:334:PRO:HD3 | 2.18 | 0.72 |
| 1:A:35:TYR:HB3 | 1:B:90:GLU:OE1 | 1.89 | 0.72 |
| 1:B:320:THR:CG2 | 2:B:807:NAG:N2 | 2.52 | 0.72 |
| 1:A:298:LEU:N | 1:A:298:LEU:HD23 | 2.03 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:290:PHE:HE2 | 1:C:293:ARG:HB2 | 1.52 | 0.72 |
| 1:C:342:SER:HA | 1:C:431:LEU:HB2 | 1.71 | 0.72 |
| 1:A:451:ASN:O | 1:A:534:GLY:HA2 | 1.88 | 0.72 |
| 1:A:511:VAL:HG23 | 1:A:523:THR:O | 1.89 | 0.72 |
| 1:A:87:PRO:CG | 1:B:89:GLU:CG | 2.67 | 0.72 |
| 1:A:342:SER:HA | 1:A:431:LEU:HB2 | 1.71 | 0.72 |
| 1:B:342:SER:HA | 1:B:431:LEU:HB2 | 1.71 | 0.72 |
| 1:B:276:GLU:CG | 1:B:277:SER:H | 2.03 | 0.72 |
| 1:B:276:GLU:HG3 | 1:B:277:SER:H | 1.54 | 0.72 |
| 1:B:366:LYS:HG3 | 1:B:367:LEU:N | 2.04 | 0.72 |
| 1:B:394:LEU:N | 1:B:394:LEU:HD12 | 2.05 | 0.72 |
| 1:C:366:LYS:HG3 | 1:C:367:LEU:N | 2.04 | 0.72 |
| 1:C:474:SER:CB | 1:C:512:LEU:HG | 2.14 | 0.72 |
| 1:C:364:ILE:O | 1:C:364:ILE:HG13 | 1.87 | 0.72 |
| 1:A:33:LYS:HB3 | 1:A:83:GLU:HG2 | 1.71 | 0.72 |
| 1:B:474:SER:CB | 1:B:512:LEU:HG | 2.14 | 0.72 |
| 1:C:273:THR:O | 2:C:803:NAG:H82 | 1.89 | 0.72 |
| 1:A:28:LYS:NZ | 1:B:4:ILE:H | 1.87 | 0.71 |
| 1:A:90:GLU:HB3 | 1:B:2:TRP:CD1 | 2.25 | 0.71 |
| 1:A:405:THR:OG1 | 1:A:406:TYR:N | 2.22 | 0.71 |
| 1:B:80:ALA:HB3 | 1:C:1:ASP:HA | 1.71 | 0.71 |
| 1:C:276:GLU:HG3 | 1:C:277:SER:H | 1.54 | 0.71 |
| 1:A:364:ILE:O | 1:A:364:ILE:CG1 | 2.37 | 0.71 |
| 1:C:474:SER:HB2 | 1:C:512:LEU:CG | 2.15 | 0.71 |
| 1:A:227:THR:O | 2:A:812:NAG:O5 | 2.09 | 0.71 |
| 1:A:482:THR:CG2 | 1:A:499:THR:CG2 | 2.62 | 0.71 |
| 1:B:511:VAL:HG23 | 1:B:523:THR:O | 1.89 | 0.71 |
| 1:A:276:GLU:CG | 1:A:277:SER:H | 2.03 | 0.71 |
| 1:A:320:THR:CG2 | 2:A:807:NAG:HN2 | 2.02 | 0.71 |
| 1:A:394:LEU:HD12 | 1:A:394:LEU:N | 2.05 | 0.71 |
| 1:C:227:THR:O | 2:C:812:NAG:O5 | 2.09 | 0.71 |
| 1:C:229:LEU:HD23 | 1:C:322:THR:HB | 1.73 | 0.71 |
| 1:C:276:GLU:CG | 1:C:277:SER:H | 2.03 | 0.71 |
| 1:B:364:ILE:O | 1:B:364:ILE:CG1 | 2.37 | 0.71 |
| 1:C:394:LEU:HD12 | 1:C:394:LEU:N | 2.05 | 0.71 |
| 1:A:434:ASN:OD1 | 1:A:467:ASN:HB3 | 1.91 | 0.71 |
| 1:B:227:THR:O | 2:B:812:NAG:O5 | 2.09 | 0.71 |
| 1:B:414:ASP:HB3 | 1:B:420:GLY:HA3 | 1.73 | 0.71 |
| 1:C:316:THR:O | 2:C:806:NAG:H82 | 1.91 | 0.71 |
| 1:A:48:GLN:HE22 | 1:C:53:ILE:HG21 | 1.54 | 0.71 |
| 1:A:48:GLN:HE22 | 1:C:53:ILE:CG2 | 2.03 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:35:TYR:N | 1:C:2:TRP:CE2 | 2.56 | 0.71 |
| 1:B:229:LEU:HD23 | 1:B:322:THR:HB | 1.73 | 0.71 |
| 1:C:337:SER:CA | 1:C:427:ILE:HG23 | 2.20 | 0.71 |
| 1:C:434:ASN:OD1 | 1:C:467:ASN:HB3 | 1.91 | 0.71 |
| 1:A:290:PHE:CD2 | 1:A:293:ARG:N | 2.55 | 0.71 |
| 1:A:474:SER:HB2 | 1:A:512:LEU:CG | 2.15 | 0.71 |
| 1:B:316:THR:O | 2:B:806:NAG:H82 | 1.91 | 0.71 |
| 1:A:187:TYR:HA | 2:A:801:NAG:C7 | 2.21 | 0.71 |
| 1:A:368:SER:HG | 1:A:370:PHE:HE1 | 1.39 | 0.71 |
| 1:A:438:PRO:HB3 | 1:A:471:TYR:CE2 | 2.26 | 0.71 |
| 1:C:187:TYR:HA | 2:C:801:NAG:C7 | 2.21 | 0.71 |
| 1:A:366:LYS:HG3 | 1:A:367:LEU:N | 2.04 | 0.70 |
| 1:A:414:ASP:HB3 | 1:A:420:GLY:HA3 | 1.73 | 0.70 |
| 1:C:403:ASN:CB | 2:C:902:NAG:N2 | 2.54 | 0.70 |
| 1:C:523:THR:CG2 | 1:C:524:VAL:N | 2.46 | 0.70 |
| 1:B:290:PHE:HE2 | 1:B:293:ARG:HB2 | 1.52 | 0.70 |
| 1:B:403:ASN:CB | 2:B:902:NAG:N2 | 2.54 | 0.70 |
| 1:B:434:ASN:OD1 | 1:B:467:ASN:HB3 | 1.90 | 0.70 |
| 1:B:482:THR:CG2 | 1:B:499:THR:CG2 | 2.62 | 0.70 |
| 1:B:83:GLU:OE2 | 1:C:2:TRP:CH2 | 2.44 | 0.70 |
| 1:B:438:PRO:HB3 | 1:B:471:TYR:CE2 | 2.26 | 0.70 |
| 1:C:485:ALA:C | 1:C:486:GLU:HG2 | 2.11 | 0.70 |
| 1:A:316:THR:O | 2:A:806:NAG:H82 | 1.91 | 0.70 |
| 1:B:187:TYR:HA | 2:B:801:NAG:C7 | 2.21 | 0.70 |
| 1:A:403:ASN:CB | 2:A:902:NAG:N2 | 2.54 | 0.70 |
| 1:B:320:THR:CG2 | 2:B:807:NAG:HN2 | 2.02 | 0.70 |
| 1:C:396:ARG:HE | 1:C:432:ASP:HB2 | 1.57 | 0.70 |
| 1:B:337:SER:CA | 1:B:427:ILE:HG23 | 2.20 | 0.70 |
| 1:C:483:TRP:CZ2 | 1:C:507:TYR:HE1 | 2.09 | 0.70 |
| 1:B:485:ALA:C | 1:B:486:GLU:HG2 | 2.11 | 0.70 |
| 1:B:523:THR:HG23 | 1:B:524:VAL:HG23 | 1.74 | 0.70 |
| 1:A:46:PRO:HB2 | 1:C:35:TYR:HE2 | 0.91 | 0.69 |
| 1:A:289:ASP:O | 1:A:289:ASP:CG | 2.29 | 0.69 |
| 1:A:523:THR:HG23 | 1:A:524:VAL:HG23 | 1.74 | 0.69 |
| 1:A:53:ILE:HG13 | 1:A:59:TRP:O | 1.93 | 0.69 |
| 1:A:229:LEU:HD23 | 1:A:322:THR:HB | 1.73 | 0.69 |
| 1:A:485:ALA:C | 1:A:486:GLU:HG2 | 2.11 | 0.69 |
| 1:B:27:ASN:C | 1:B:27:ASN:ND2 | 2.46 | 0.69 |
| 1:B:186:GLU:OE1 | 2:B:801:NAG:H62 | 1.93 | 0.69 |
| 1:B:289:ASP:O | 1:B:289:ASP:CG | 2.30 | 0.69 |
| 1:B:483:TRP:CZ2 | 1:B:507:TYR:HE1 | 2.09 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:289:ASP:O | 1:C:289:ASP:CG | 2.30 | 0.69 |
| 1:B:396:ARG:HE | 1:B:432:ASP:HB2 | 1.57 | 0.69 |
| 1:C:414:ASP:HB3 | 1:C:420:GLY:HA3 | 1.73 | 0.69 |
| 1:A:27:ASN:C | 1:A:27:ASN:ND2 | 2.46 | 0.69 |
| 1:B:53:ILE:HG13 | 1:B:59:TRP:O | 1.93 | 0.69 |
| 1:B:289:ASP:O | 1:B:290:PHE:CB | 2.25 | 0.69 |
| 1:C:186:GLU:OE1 | 2:C:801:NAG:H62 | 1.93 | 0.69 |
| 1:C:405:THR:OG1 | 1:C:406:TYR:N | 2.22 | 0.69 |
| 1:C:438:PRO:HB3 | 1:C:471:TYR:CE2 | 2.26 | 0.69 |
| 1:A:186:GLU:OE1 | 2:A:801:NAG:H62 | 1.93 | 0.69 |
| 1:A:396:ARG:HE | 1:A:432:ASP:HB2 | 1.57 | 0.69 |
| 1:B:242:LEU:HD12 | 1:B:280:GLY:O | 1.93 | 0.69 |
| 1:B:396:ARG:HD3 | 1:B:431:LEU:O | 1.93 | 0.69 |
| 1:A:337:SER:CA | 1:A:427:ILE:HG23 | 2.20 | 0.68 |
| 1:B:1:ASP:CG | 1:B:2:TRP:H | 1.96 | 0.68 |
| 1:C:195:ASP:HB2 | 1:C:201:LEU:N | 2.08 | 0.68 |
| 1:C:242:LEU:HD12 | 1:C:280:GLY:O | 1.93 | 0.68 |
| 1:A:48:GLN:HG3 | 1:C:37:SER:HB2 | 1.76 | 0.68 |
| 1:B:88:VAL:H | 1:C:1:ASP:C | 1.97 | 0.68 |
| 1:B:282:LEU:HD23 | 1:B:283:THR:N | 2.08 | 0.68 |
| 1:A:242:LEU:HD12 | 1:A:280:GLY:O | 1.93 | 0.68 |
| 1:C:53:ILE:HG13 | 1:C:59:TRP:O | 1.93 | 0.68 |
| 1:C:482:THR:HG21 | 1:C:500:GLN:H | 1.58 | 0.68 |
| 1:C:371:ILE:CG2 | 1:C:372:GLY:N | 2.57 | 0.68 |
| 1:B:272:THR:HG22 | 1:B:273:THR:N | 2.09 | 0.68 |
| 1:C:347:ARG:CD | 1:C:392:GLY:H | 2.07 | 0.68 |
| 1:B:87:PRO:HA | 1:C:1:ASP:O | 1.94 | 0.68 |
| 1:B:290:PHE:HZ | 1:B:296:TYR:OH | 1.77 | 0.68 |
| 1:B:396:ARG:HE | 1:B:432:ASP:CB | 2.07 | 0.68 |
| 1:C:155:PRO:HB2 | 2:C:801:NAG:C8 | 2.24 | 0.68 |
| 1:A:282:LEU:HD23 | 1:A:283:THR:H | 1.59 | 0.68 |
| 1:A:347:ARG:CD | 1:A:392:GLY:H | 2.07 | 0.68 |
| 1:B:155:PRO:HB2 | 2:B:801:NAG:C8 | 2.24 | 0.68 |
| 1:B:347:ARG:CD | 1:B:392:GLY:H | 2.07 | 0.68 |
| 1:A:282:LEU:HD23 | 1:A:283:THR:N | 2.08 | 0.68 |
| 1:B:440:PRO:HA | 1:B:458:THR:O | 1.94 | 0.68 |
| 1:C:282:LEU:HD23 | 1:C:283:THR:N | 2.08 | 0.68 |
| 1:C:396:ARG:HD3 | 1:C:431:LEU:O | 1.94 | 0.68 |
| 1:A:137:ASP:OD2 | 1:A:139:ILE:HG22 | 1.94 | 0.67 |
| 1:C:232:GLU:HG2 | 1:C:289:ASP:HA | 1.76 | 0.67 |
| 1:A:155:PRO:HB2 | 2:A:801:NAG:C8 | 2.24 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:272:THR:HG22 | 1:A:273:THR:N | 2.09 | 0.67 |
| 1:C:401:VAL:HG13 | 1:C:405:THR:O | 1.95 | 0.67 |
| 1:A:482:THR:HG21 | 1:A:500:GLN:H | 1.58 | 0.67 |
| 1:B:396:ARG:NH2 | 1:B:464:ILE:CB | 2.58 | 0.67 |
| 1:C:137:ASP:OD2 | 1:C:139:ILE:HG22 | 1.94 | 0.67 |
| 1:C:221:PHE:CE1 | 1:C:315:SER:O | 2.45 | 0.67 |
| 1:A:232:GLU:HG2 | 1:A:289:ASP:HA | 1.77 | 0.67 |
| 1:A:371:ILE:CG2 | 1:A:372:GLY:N | 2.57 | 0.67 |
| 1:B:232:GLU:HG2 | 1:B:289:ASP:HA | 1.77 | 0.67 |
| 1:B:371:ILE:CG2 | 1:B:372:GLY:N | 2.57 | 0.67 |
| 1:B:401:VAL:HG13 | 1:B:405:THR:O | 1.95 | 0.67 |
| 1:C:396:ARG:NH2 | 1:C:464:ILE:CB | 2.58 | 0.67 |
| 1:C:423:THR:HB | 2:C:810:NAG:C8 | 2.24 | 0.67 |
| 1:C:523:THR:HG23 | 1:C:524:VAL:HG23 | 1.74 | 0.67 |
| 1:A:1:ASP:CG | 1:A:2:TRP:H | 1.96 | 0.67 |
| 2:A:902:NAG:H3 | 2:A:902:NAG:O7 | 1.95 | 0.67 |
| 1:B:333:VAL:HB | 1:B:334:PRO:CD | 2.24 | 0.67 |
| 1:B:347:ARG:CG | 1:B:392:GLY:H | 2.08 | 0.67 |
| 1:C:440:PRO:HA | 1:C:458:THR:O | 1.94 | 0.67 |
| 1:A:347:ARG:CG | 1:A:392:GLY:H | 2.08 | 0.67 |
| 1:A:195:ASP:HB2 | 1:A:201:LEU:N | 2.08 | 0.67 |
| 1:A:290:PHE:HZ | 1:A:296:TYR:OH | 1.77 | 0.67 |
| 1:A:403:ASN:HB2 | 2:A:902:NAG:N2 | 2.10 | 0.67 |
| 1:A:423:THR:HB | 2:A:810:NAG:C8 | 2.24 | 0.67 |
| 1:C:224:LYS:HE3 | 1:C:316:THR:O | 1.95 | 0.67 |
| 1:C:272:THR:HG22 | 1:C:273:THR:N | 2.09 | 0.67 |
| 1:B:187:TYR:HA | 2:B:801:NAG:C8 | 2.25 | 0.67 |
| 1:B:224:LYS:HE3 | 1:B:316:THR:O | 1.95 | 0.67 |
| 1:C:282:LEU:HD23 | 1:C:283:THR:H | 1.58 | 0.67 |
| 1:C:320:THR:HG21 | 2:C:807:NAG:H2 | 1.76 | 0.67 |
| 1:A:224:LYS:HE3 | 1:A:316:THR:O | 1.95 | 0.67 |
| 1:B:221:PHE:CE1 | 1:B:315:SER:O | 2.45 | 0.67 |
| 1:B:403:ASN:HB2 | 2:B:902:NAG:N2 | 2.10 | 0.67 |
| 1:A:187:TYR:HA | 2:A:801:NAG:C8 | 2.25 | 0.67 |
| 1:A:396:ARG:HD3 | 1:A:431:LEU:O | 1.94 | 0.67 |
| 1:C:347:ARG:HD2 | 1:C:392:GLY:H | 1.60 | 0.67 |
| 1:C:524:VAL:HG21 | 2:C:904:NAG:H81 | 1.76 | 0.67 |
| 1:A:366:LYS:HG3 | 1:A:367:LEU:HG | 1.77 | 0.66 |
| 1:B:87:PRO:C | 1:C:3:VAL:N | 2.48 | 0.66 |
| 1:B:423:THR:HB | 2:B:810:NAG:C8 | 2.24 | 0.66 |
| 1:C:464:ILE:O | 1:C:467:ASN:HB2 | 1.96 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:222:ASP:O | 1:A:222:ASP:CG | 2.32 | 0.66 |
| 1:A:347:ARG:HD2 | 1:A:392:GLY:H | 1.60 | 0.66 |
| 1:A:396:ARG:NH2 | 1:A:464:ILE:CB | 2.58 | 0.66 |
| 1:B:482:THR:HG21 | 1:B:500:GLN:H | 1.58 | 0.66 |
| 1:C:187:TYR:HA | 2:C:801:NAG:C8 | 2.25 | 0.66 |
| 1:C:290:PHE:HZ | 1:C:296:TYR:OH | 1.76 | 0.66 |
| 1:A:440:PRO:HA | 1:A:458:THR:O | 1.94 | 0.66 |
| 2:B:902:NAG:H3 | 2:B:902:NAG:O7 | 1.95 | 0.66 |
| 1:C:396:ARG:HE | 1:C:432:ASP:CB | 2.07 | 0.66 |
| 1:C:403:ASN:HB2 | 2:C:902:NAG:N2 | 2.10 | 0.66 |
| 1:A:46:PRO:HB3 | 1:C:35:TYR:CE2 | 2.26 | 0.66 |
| 1:A:396:ARG:HE | 1:A:432:ASP:CB | 2.07 | 0.66 |
| 1:B:282:LEU:HD23 | 1:B:283:THR:H | 1.58 | 0.66 |
| 1:B:373:ASN:ND2 | 1:B:374:ASP:N | 2.43 | 0.66 |
| 1:B:464:ILE:O | 1:B:467:ASN:HB2 | 1.96 | 0.66 |
| 1:C:373:ASN:ND2 | 1:C:374:ASP:N | 2.43 | 0.66 |
| 1:A:88:VAL:HA | 1:B:92:MET:HG2 | 1.76 | 0.66 |
| 1:A:320:THR:HG21 | 2:A:807:NAG:H2 | 1.76 | 0.66 |
| 1:B:137:ASP:OD2 | 1:B:139:ILE:HG22 | 1.94 | 0.66 |
| 2:C:902:NAG:O7 | 2:C:902:NAG:H3 | 1.95 | 0.66 |
| 1:B:440:PRO:HD2 | 1:B:522:LEU:CD1 | 2.26 | 0.66 |
| 1:B:482:THR:OG1 | 1:B:500:GLN:CG | 2.44 | 0.66 |
| 1:C:440:PRO:HD2 | 1:C:522:LEU:CD1 | 2.26 | 0.66 |
| 1:C:524:VAL:HG23 | 2:C:904:NAG:H81 | 1.78 | 0.66 |
| 1:A:401:VAL:HG13 | 1:A:405:THR:O | 1.95 | 0.66 |
| 1:B:88:VAL:N | 1:C:1:ASP:CA | 2.58 | 0.66 |
| 1:B:347:ARG:HD2 | 1:B:392:GLY:H | 1.60 | 0.66 |
| 1:C:366:LYS:HG3 | 1:C:367:LEU:HG | 1.77 | 0.66 |
| 2:C:809:NAG:C6 | 2:C:810:NAG:H62 | 2.26 | 0.66 |
| 1:A:32:ASN:CG | 1:A:33:LYS:H | 1.98 | 0.66 |
| 1:A:82:SER:OG | 1:B:91:PRO:C | 2.33 | 0.66 |
| 1:A:373:ASN:ND2 | 1:A:374:ASP:N | 2.43 | 0.66 |
| 1:A:446:THR:CG2 | 1:A:537:ILE:O | 2.44 | 0.66 |
| 1:B:32:ASN:CG | 1:B:33:LYS:H | 1.98 | 0.66 |
| 1:B:366:LYS:HG3 | 1:B:367:LEU:HG | 1.77 | 0.66 |
| 1:C:446:THR:CG2 | 1:C:537:ILE:O | 2.44 | 0.66 |
| 1:A:482:THR:OG1 | 1:A:500:GLN:CG | 2.44 | 0.66 |
| 1:B:320:THR:HG21 | 2:B:807:NAG:H2 | 1.76 | 0.66 |
| 1:C:232:GLU:HG3 | 1:C:290:PHE:H | 1.61 | 0.66 |
| 1:A:483:TRP:CZ2 | 1:A:507:TYR:HE1 | 2.09 | 0.66 |
| 1:A:488:ASP:HB2 | 1:A:493:SER:OG | 1.97 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:A:805:NAG:C6 | 2:A:806:NAG:C7 | 2.74 | 0.65 |
| 1:B:524:VAL:HG21 | 2:B:904:NAG:H81 | 1.77 | 0.65 |
| 1:C:265:GLU:HB3 | 1:C:268:PHE:CE2 | 2.31 | 0.65 |
| 1:A:524:VAL:HG21 | 2:A:904:NAG:H81 | 1.77 | 0.65 |
| 1:B:405:THR:OG1 | 1:B:406:TYR:N | 2.22 | 0.65 |
| 1:B:440:PRO:HD3 | 1:B:522:LEU:HD12 | 1.78 | 0.65 |
| 1:A:28:LYS:NZ | 1:B:4:ILE:N | 2.38 | 0.65 |
| 1:C:32:ASN:CG | 1:C:33:LYS:H | 1.99 | 0.65 |
| 1:C:212:THR:HG22 | 1:C:213:ASP:H | 1.62 | 0.65 |
| 1:B:86:SER:HB3 | 1:C:3:VAL:C | 1.99 | 0.65 |
| 1:B:341:VAL:HG21 | 1:B:345:LEU:HD12 | 1.79 | 0.65 |
| 1:C:488:ASP:HB2 | 1:C:493:SER:OG | 1.97 | 0.65 |
| 1:C:32:ASN:ND2 | 1:C:83:GLU:N | 2.44 | 0.65 |
| 1:C:341:VAL:HG21 | 1:C:345:LEU:HD12 | 1.79 | 0.65 |
| 1:A:32:ASN:ND2 | 1:A:83:GLU:N | 2.44 | 0.65 |
| 1:A:327:ASN:HA | 1:A:360:ASP:OD2 | 1.97 | 0.65 |
| 1:A:464:ILE:O | 1:A:467:ASN:HB2 | 1.96 | 0.65 |
| 1:B:195:ASP:HB2 | 1:B:201:LEU:N | 2.08 | 0.65 |
| 1:C:222:ASP:O | 1:C:222:ASP:CG | 2.32 | 0.65 |
| 1:C:347:ARG:CG | 1:C:392:GLY:H | 2.08 | 0.65 |
| 2:B:809:NAG:C6 | 2:B:810:NAG:H62 | 2.26 | 0.65 |
| 1:C:327:ASN:HA | 1:C:360:ASP:OD2 | 1.97 | 0.65 |
| 1:B:474:SER:HB2 | 1:B:512:LEU:CG | 2.15 | 0.65 |
| 1:B:482:THR:HG21 | 1:B:499:THR:CA | 2.27 | 0.65 |
| 1:C:333:VAL:HB | 1:C:334:PRO:CD | 2.24 | 0.65 |
| 2:A:809:NAG:C6 | 2:A:810:NAG:H62 | 2.26 | 0.65 |
| 1:B:88:VAL:N | 1:C:1:ASP:C | 2.50 | 0.65 |
| 1:C:440:PRO:HD3 | 1:C:522:LEU:HD12 | 1.78 | 0.65 |
| 1:A:364:ILE:O | 1:A:364:ILE:HD12 | 1.97 | 0.64 |
| 1:B:524:VAL:HG23 | 2:B:904:NAG:H81 | 1.78 | 0.64 |
| 1:C:364:ILE:O | 1:C:364:ILE:HD12 | 1.97 | 0.64 |
| 2:C:805:NAG:C6 | 2:C:806:NAG:C7 | 2.74 | 0.64 |
| 1:A:524:VAL:HG23 | 2:A:904:NAG:H81 | 1.78 | 0.64 |
| 1:C:347:ARG:HG3 | 1:C:392:GLY:H | 1.62 | 0.64 |
| 1:C:482:THR:OG1 | 1:C:500:GLN:CG | 2.44 | 0.64 |
| 1:B:364:ILE:O | 1:B:364:ILE:HD12 | 1.98 | 0.64 |
| 1:A:440:PRO:HD2 | 1:A:522:LEU:CD1 | 2.26 | 0.64 |
| 1:A:469:TYR:CD2 | 1:A:470:PRO:CD | 2.81 | 0.64 |
| 1:B:232:GLU:HG3 | 1:B:290:PHE:H | 1.61 | 0.64 |
| 1:B:446:THR:CG2 | 1:B:537:ILE:O | 2.44 | 0.64 |
| 1:C:346:SER:OG | 1:C:349:GLU:HG3 | 1.97 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:469:TYR:CD2 | 1:C:470:PRO:CD | 2.81 | 0.64 |
| 1:A:333:VAL:HB | 1:A:334:PRO:CD | 2.24 | 0.64 |
| 1:A:375:PRO:HB3 | 1:A:400:TYR:CD2 | 2.33 | 0.64 |
| 1:B:33:LYS:O | 1:C:2:TRP:CD1 | 2.46 | 0.64 |
| 1:B:504:LYS:NZ | 1:B:531:SER:OG | 2.31 | 0.64 |
| 2:B:904:NAG:O7 | 2:B:904:NAG:C3 | 2.45 | 0.64 |
| 1:A:212:THR:HG22 | 1:A:213:ASP:H | 1.62 | 0.64 |
| 1:B:347:ARG:HG3 | 1:B:392:GLY:H | 1.62 | 0.64 |
| 1:B:406:TYR:CE1 | 2:B:808:NAG:H83 | 2.32 | 0.64 |
| 1:B:409:ILE:HG12 | 1:B:425:THR:HG23 | 1.80 | 0.64 |
| 1:A:346:SER:OG | 1:A:349:GLU:HG3 | 1.97 | 0.64 |
| 1:B:35:TYR:HB2 | 1:C:2:TRP:CZ2 | 2.33 | 0.64 |
| 1:B:227:THR:CG2 | 2:B:807:NAG:C7 | 2.76 | 0.64 |
| 1:B:488:ASP:HB2 | 1:B:493:SER:OG | 1.97 | 0.64 |
| 1:C:406:TYR:CE1 | 2:C:808:NAG:H83 | 2.32 | 0.64 |
| 1:C:415:ASP:OD1 | 1:C:416:GLY:N | 2.27 | 0.64 |
| 1:A:486:GLU:O | 1:A:494:MET:CA | 2.46 | 0.64 |
| 1:B:32:ASN:ND2 | 1:B:83:GLU:N | 2.44 | 0.64 |
| 1:A:406:TYR:CE1 | 2:A:808:NAG:H83 | 2.32 | 0.64 |
| 1:A:486:GLU:O | 1:A:495:LEU:N | 2.31 | 0.64 |
| 1:C:364:ILE:O | 1:C:364:ILE:CD1 | 2.46 | 0.64 |
| 1:C:375:PRO:HB3 | 1:C:400:TYR:CD2 | 2.33 | 0.64 |
| 1:A:40:GLY:N | 1:C:79:HIS:HD1 | 1.96 | 0.63 |
| 1:A:232:GLU:HG3 | 1:A:290:PHE:H | 1.61 | 0.63 |
| 1:A:419:VAL:HG13 | 2:A:809:NAG:O7 | 1.98 | 0.63 |
| 1:B:364:ILE:O | 1:B:364:ILE:CD1 | 2.46 | 0.63 |
| 1:B:371:ILE:HG22 | 1:B:372:GLY:N | 2.14 | 0.63 |
| 1:A:154:ASP:O | 2:A:801:NAG:H82 | 1.98 | 0.63 |
| 1:A:482:THR:HG22 | 1:A:499:THR:N | 2.13 | 0.63 |
| 1:B:346:SER:OG | 1:B:349:GLU:HG3 | 1.97 | 0.63 |
| 1:C:371:ILE:HG22 | 1:C:372:GLY:N | 2.14 | 0.63 |
| 1:A:43:ALA:O | 1:C:39:THR:HG21 | 1.92 | 0.63 |
| 1:A:347:ARG:HG3 | 1:A:392:GLY:H | 1.62 | 0.63 |
| 1:A:518:ASN:O | 1:A:520:PRO:CD | 2.46 | 0.63 |
| 1:B:22:VAL:HG22 | 1:B:23:GLN:N | 2.14 | 0.63 |
| 1:B:486:GLU:O | 1:B:494:MET:CA | 2.46 | 0.63 |
| 1:C:409:ILE:HG12 | 1:C:425:THR:HG23 | 1.80 | 0.63 |
| 1:C:419:VAL:HG13 | 2:C:809:NAG:O7 | 1.98 | 0.63 |
| 1:A:40:GLY:O | 1:C:79:HIS:HB2 | 1.94 | 0.63 |
| 1:A:446:THR:CG2 | 1:A:539:CYS:SG | 2.86 | 0.63 |
| 1:C:154:ASP:O | 2:C:801:NAG:H82 | 1.98 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:C:904:NAG:O7 | 2:C:904:NAG:C3 | 2.45 | 0.63 |
| 1:A:341:VAL:HG21 | 1:A:345:LEU:HD12 | 1.79 | 0.63 |
| 1:B:154:ASP:O | 2:B:801:NAG:H82 | 1.98 | 0.63 |
| 1:B:419:VAL:HG13 | 2:B:809:NAG:O7 | 1.98 | 0.63 |
| 1:C:504:LYS:NZ | 1:C:531:SER:OG | 2.31 | 0.63 |
| 1:A:127:VAL:HG22 | 1:A:128:MET:N | 2.14 | 0.63 |
| 1:A:343:GLU:HB3 | 1:A:433:VAL:CG2 | 2.28 | 0.63 |
| 1:A:482:THR:HG21 | 1:A:499:THR:CA | 2.27 | 0.63 |
| 1:B:212:THR:HG22 | 1:B:213:ASP:H | 1.62 | 0.63 |
| 1:B:327:ASN:HA | 1:B:360:ASP:OD2 | 1.97 | 0.63 |
| 1:C:142:LEU:HB3 | 1:C:196:LEU:HA | 1.81 | 0.63 |
| 1:C:411:LEU:HD22 | 1:C:421:THR:HG23 | 1.81 | 0.63 |
| 1:A:142:LEU:HB3 | 1:A:196:LEU:HA | 1.81 | 0.63 |
| 1:B:154:ASP:CA | 2:B:801:NAG:H82 | 2.29 | 0.63 |
| 1:B:375:PRO:HB3 | 1:B:400:TYR:CD2 | 2.33 | 0.63 |
| 1:B:446:THR:CG2 | 1:B:539:CYS:SG | 2.86 | 0.63 |
| 1:C:482:THR:HG21 | 1:C:499:THR:CA | 2.27 | 0.63 |
| 1:B:403:ASN:CB | 2:B:902:NAG:C7 | 2.76 | 0.63 |
| 1:C:154:ASP:CA | 2:C:801:NAG:H82 | 2.29 | 0.63 |
| 1:A:87:PRO:CD | 1:B:89:GLU:HB2 | 2.22 | 0.63 |
| 1:A:364:ILE:O | 1:A:364:ILE:CD1 | 2.46 | 0.63 |
| 1:B:524:VAL:HG23 | 2:B:904:NAG:C8 | 2.29 | 0.63 |
| 1:C:22:VAL:HG22 | 1:C:23:GLN:N | 2.14 | 0.63 |
| 1:C:469:TYR:CE1 | 1:C:470:PRO:HD2 | 2.34 | 0.63 |
| 1:A:40:GLY:H | 1:C:79:HIS:HD1 | 1.47 | 0.62 |
| 1:A:154:ASP:CA | 2:A:801:NAG:H82 | 2.29 | 0.62 |
| 1:A:504:LYS:NZ | 1:A:531:SER:OG | 2.31 | 0.62 |
| 2:A:904:NAG:O7 | 2:A:904:NAG:C3 | 2.45 | 0.62 |
| 1:B:142:LEU:HB3 | 1:B:196:LEU:HA | 1.80 | 0.62 |
| 1:B:469:TYR:CD2 | 1:B:470:PRO:CD | 2.81 | 0.62 |
| 1:C:127:VAL:HG22 | 1:C:128:MET:N | 2.14 | 0.62 |
| 1:A:22:VAL:HG22 | 1:A:23:GLN:N | 2.14 | 0.62 |
| 1:A:39:THR:CB | 1:C:89:GLU:O | 2.46 | 0.62 |
| 1:C:147:SER:OG | 1:C:167:ARG:HG3 | 1.99 | 0.62 |
| 1:C:486:GLU:O | 1:C:494:MET:CA | 2.46 | 0.62 |
| 1:B:482:THR:HG22 | 1:B:499:THR:N | 2.13 | 0.62 |
| 1:C:446:THR:CG2 | 1:C:539:CYS:SG | 2.86 | 0.62 |
| 1:A:31:PHE:CG | 1:B:93:GLU:OE2 | 2.52 | 0.62 |
| 1:A:371:ILE:HG22 | 1:A:372:GLY:N | 2.14 | 0.62 |
| 1:A:524:VAL:HG23 | 2:A:904:NAG:C8 | 2.29 | 0.62 |
| 1:A:374:ASP:O | 1:A:375:PRO:O | 2.17 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:81:VAL:CA | 1:C:1:ASP:C | 2.62 | 0.62 |
| 1:B:343:GLU:HB3 | 1:B:433:VAL:CG2 | 2.28 | 0.62 |
| 1:B:368:SER:HG | 1:B:370:PHE:HE1 | 1.47 | 0.62 |
| 1:A:44:ASP:O | 1:C:38:ILE:CA | 2.44 | 0.62 |
| 1:A:409:ILE:HG12 | 1:A:425:THR:HG23 | 1.80 | 0.62 |
| 1:A:440:PRO:HD3 | 1:A:522:LEU:HD12 | 1.78 | 0.62 |
| 1:C:374:ASP:O | 1:C:375:PRO:O | 2.17 | 0.62 |
| 1:A:411:LEU:HD22 | 1:A:421:THR:HG23 | 1.81 | 0.62 |
| 1:B:147:SER:OG | 1:B:167:ARG:HG3 | 1.99 | 0.62 |
| 1:B:265:GLU:HB3 | 1:B:268:PHE:CE2 | 2.31 | 0.62 |
| 1:B:517:GLN:C | 1:B:519:ASN:N | 2.47 | 0.62 |
| 1:C:486:GLU:O | 1:C:495:LEU:N | 2.31 | 0.62 |
| 1:B:222:ASP:O | 1:B:222:ASP:CG | 2.32 | 0.62 |
| 1:B:486:GLU:O | 1:B:495:LEU:N | 2.32 | 0.62 |
| 1:B:508:SER:HB3 | 1:B:526:ASN:OD1 | 2.00 | 0.62 |
| 1:C:343:GLU:HB3 | 1:C:433:VAL:CG2 | 2.28 | 0.62 |
| 1:C:403:ASN:CB | 2:C:902:NAG:H83 | 2.21 | 0.62 |
| 1:A:508:SER:HB3 | 1:A:526:ASN:OD1 | 2.00 | 0.62 |
| 1:A:227:THR:CG2 | 2:A:807:NAG:C7 | 2.76 | 0.62 |
| 1:B:518:ASN:O | 1:B:520:PRO:CD | 2.46 | 0.62 |
| 1:C:524:VAL:HG23 | 2:C:904:NAG:C8 | 2.29 | 0.62 |
| 1:A:524:VAL:CG2 | 2:A:904:NAG:C8 | 2.78 | 0.61 |
| 1:B:411:LEU:HD22 | 1:B:421:THR:HG23 | 1.81 | 0.61 |
| 1:C:403:ASN:O | 1:C:405:THR:N | 2.33 | 0.61 |
| 1:B:81:VAL:CA | 1:C:2:TRP:CA | 2.76 | 0.61 |
| 1:B:449:ASP:H | 1:B:532:CYS:CB | 2.12 | 0.61 |
| 1:C:524:VAL:CG2 | 2:C:904:NAG:C8 | 2.78 | 0.61 |
| 1:A:221:PHE:CE1 | 1:A:315:SER:O | 2.45 | 0.61 |
| 1:B:212:THR:HG22 | 1:B:213:ASP:N | 2.15 | 0.61 |
| 1:A:181:ARG:NE | 1:A:213:ASP:OD1 | 2.34 | 0.61 |
| 1:A:403:ASN:O | 1:A:405:THR:N | 2.33 | 0.61 |
| 1:B:83:GLU:CA | 1:C:2:TRP:CH2 | 2.65 | 0.61 |
| 1:B:181:ARG:NE | 1:B:213:ASP:OD1 | 2.34 | 0.61 |
| 1:B:524:VAL:CG2 | 2:B:904:NAG:C8 | 2.78 | 0.61 |
| 1:C:154:ASP:O | 1:C:155:PRO:C | 2.36 | 0.61 |
| 1:C:181:ARG:NE | 1:C:213:ASP:OD1 | 2.34 | 0.61 |
| 1:C:235:ILE:HG12 | 1:C:287:GLY:HA2 | 1.82 | 0.61 |
| 1:B:68:ARG:HD3 | 1:B:100:ASP:HA | 1.82 | 0.61 |
| 1:B:379:LEU:HD23 | 1:B:379:LEU:H | 1.66 | 0.61 |
| 1:B:127:VAL:HG22 | 1:B:128:MET:N | 2.14 | 0.61 |
| 1:B:469:TYR:CE1 | 1:B:470:PRO:HD2 | 2.34 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:89:GLU:CD | 1:B:3:VAL:HG13 | 2.20 | 0.61 |
| 1:B:374:ASP:O | 1:B:375:PRO:O | 2.17 | 0.61 |
| 1:A:469:TYR:CE1 | 1:A:470:PRO:HD2 | 2.34 | 0.61 |
| 1:B:154:ASP:O | 1:B:155:PRO:C | 2.36 | 0.61 |
| 1:B:475:LEU:O | 1:B:479:SER:HB3 | 2.01 | 0.61 |
| 1:C:27:ASN:C | 1:C:27:ASN:ND2 | 2.46 | 0.61 |
| 1:A:415:ASP:OD1 | 1:A:416:GLY:N | 2.27 | 0.61 |
| 2:B:805:NAG:C6 | 2:B:806:NAG:C7 | 2.74 | 0.61 |
| 1:C:482:THR:HG22 | 1:C:499:THR:N | 2.13 | 0.61 |
| 1:C:68:ARG:HD3 | 1:C:100:ASP:HA | 1.82 | 0.61 |
| 1:C:212:THR:HG22 | 1:C:213:ASP:N | 2.15 | 0.61 |
| 1:A:265:GLU:HB3 | 1:A:268:PHE:CE2 | 2.31 | 0.60 |
| 1:C:189:LEU:N | 1:C:189:LEU:HD23 | 2.16 | 0.60 |
| 1:C:508:SER:HB3 | 1:C:526:ASN:OD1 | 2.00 | 0.60 |
| 1:A:379:LEU:HD23 | 1:A:379:LEU:H | 1.66 | 0.60 |
| 1:B:403:ASN:O | 1:B:405:THR:N | 2.33 | 0.60 |
| 1:C:517:GLN:C | 1:C:519:ASN:N | 2.46 | 0.60 |
| 1:A:68:ARG:HD3 | 1:A:100:ASP:HA | 1.82 | 0.60 |
| 1:A:371:ILE:CG2 | 1:A:372:GLY:H | 2.13 | 0.60 |
| 1:B:30:ARG:HH12 | 1:C:25:LYS:HG2 | 1.59 | 0.60 |
| 1:B:371:ILE:CG2 | 1:B:372:GLY:H | 2.13 | 0.60 |
| 1:C:379:LEU:HD23 | 1:C:379:LEU:H | 1.66 | 0.60 |
| 1:A:403:ASN:CB | 2:A:902:NAG:C7 | 2.76 | 0.60 |
| 1:B:239:VAL:HG13 | 1:B:240:GLN:H | 1.67 | 0.60 |
| 1:B:396:ARG:NH2 | 1:B:464:ILE:HG21 | 2.17 | 0.60 |
| 1:B:415:ASP:OD1 | 1:B:416:GLY:N | 2.27 | 0.60 |
| 1:A:232:GLU:CG | 1:A:290:PHE:N | 2.64 | 0.60 |
| 1:C:475:LEU:O | 1:C:479:SER:HB3 | 2.01 | 0.60 |
| 1:A:212:THR:HG22 | 1:A:213:ASP:N | 2.15 | 0.60 |
| 1:C:371:ILE:CG2 | 1:C:372:GLY:H | 2.13 | 0.60 |
| 1:A:336:VAL:HB | 1:A:426:LEU:HD23 | 1.84 | 0.60 |
| 1:B:86:SER:CB | 1:C:3:VAL:CA | 2.79 | 0.60 |
| 1:C:227:THR:CG2 | 2:C:807:NAG:C7 | 2.76 | 0.60 |
| 1:A:154:ASP:O | 1:A:155:PRO:C | 2.36 | 0.60 |
| 1:A:475:LEU:O | 1:A:479:SER:HB3 | 2.01 | 0.60 |
| 1:C:146:LEU:HA | 1:C:194:THR:O | 2.02 | 0.60 |
| 1:B:116:SER:HA | 1:B:210:GLN:O | 2.02 | 0.60 |
| 1:A:514:SER:HA | 1:A:517:GLN:O | 2.02 | 0.60 |
| 1:C:116:SER:HA | 1:C:210:GLN:O | 2.02 | 0.60 |
| 1:A:155:PRO:C | 1:A:157:GLU:N | 2.56 | 0.59 |
| 1:B:81:VAL:C | 1:C:2:TRP:CB | 2.70 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:116:SER:HA | 1:A:210:GLN:O | 2.02 | 0.59 |
| 1:B:447:MET:HB2 | 1:B:529:VAL:HG22 | 1.84 | 0.59 |
| 1:B:189:LEU:N | 1:B:189:LEU:HD23 | 2.17 | 0.59 |
| 1:A:189:LEU:HD23 | 1:A:189:LEU:N | 2.17 | 0.59 |
| 1:C:443:ARG:HG3 | 1:C:443:ARG:HH11 | 1.68 | 0.59 |
| 1:C:514:SER:HA | 1:C:517:GLN:O | 2.02 | 0.59 |
| 1:A:49:GLY:O | 1:A:63:THR:HG21 | 2.02 | 0.59 |
| 1:A:146:LEU:HA | 1:A:194:THR:O | 2.02 | 0.59 |
| 1:B:232:GLU:CG | 1:B:290:PHE:N | 2.64 | 0.59 |
| 1:C:268:PHE:HA | 1:C:285:ALA:HB3 | 1.85 | 0.59 |
| 1:A:239:VAL:HG13 | 1:A:240:GLN:H | 1.67 | 0.59 |
| 1:B:367:LEU:CB | 1:B:413:THR:O | 2.51 | 0.59 |
| 1:C:508:SER:HA | 1:C:526:ASN:HA | 1.84 | 0.59 |
| 1:C:518:ASN:O | 1:C:520:PRO:CD | 2.46 | 0.59 |
| 1:B:221:PHE:HA | 1:B:244:VAL:HG12 | 1.85 | 0.59 |
| 1:B:38:ILE:HG22 | 1:B:53:ILE:HG22 | 1.85 | 0.59 |
| 1:B:268:PHE:HA | 1:B:285:ALA:HB3 | 1.85 | 0.59 |
| 1:C:309:SER:O | 1:C:310:VAL:HG23 | 2.03 | 0.59 |
| 1:A:363:GLN:O | 1:A:364:ILE:HG22 | 2.03 | 0.59 |
| 1:A:38:ILE:HG22 | 1:A:53:ILE:HG22 | 1.85 | 0.59 |
| 1:A:154:ASP:CB | 2:A:801:NAG:HN2 | 2.16 | 0.59 |
| 1:A:268:PHE:HA | 1:A:285:ALA:HB3 | 1.85 | 0.59 |
| 1:A:286:LYS:O | 1:A:287:GLY:O | 2.21 | 0.59 |
| 1:B:232:GLU:HG2 | 1:B:289:ASP:CA | 2.33 | 0.59 |
| 1:B:299:GLN:C | 1:B:300:ILE:HD12 | 2.24 | 0.59 |
| 1:A:473:VAL:HA | 1:A:513:LEU:HD23 | 1.85 | 0.58 |
| 1:B:33:LYS:O | 1:C:2:TRP:CD2 | 2.56 | 0.58 |
| 1:B:514:SER:HA | 1:B:517:GLN:O | 2.02 | 0.58 |
| 1:C:335:ALA:HB1 | 3:C:811:NDG:C6 | 2.33 | 0.58 |
| 1:B:473:VAL:HA | 1:B:513:LEU:HD23 | 1.85 | 0.58 |
| 1:C:32:ASN:HD22 | 1:C:83:GLU:H | 1.51 | 0.58 |
| 1:C:38:ILE:HG22 | 1:C:53:ILE:HG22 | 1.85 | 0.58 |
| 1:C:367:LEU:CB | 1:C:413:THR:O | 2.51 | 0.58 |
| 1:C:403:ASN:CB | 2:C:902:NAG:C7 | 2.76 | 0.58 |
| 1:A:335:ALA:HB1 | 3:A:811:NDG:C6 | 2.33 | 0.58 |
| 1:B:195:ASP:CB | 1:B:200:GLY:HA3 | 2.33 | 0.58 |
| 1:B:309:SER:O | 1:B:310:VAL:HG23 | 2.03 | 0.58 |
| 1:B:443:ARG:HA | 1:B:525:VAL:HG13 | 1.85 | 0.58 |
| 1:C:363:GLN:O | 1:C:364:ILE:HG22 | 2.03 | 0.58 |
| 1:C:406:TYR:HB3 | 1:C:428:LEU:CD2 | 2.33 | 0.58 |
| 1:C:447:MET:HB2 | 1:C:529:VAL:HG22 | 1.84 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:449:ASP:H | 1:C:532:CYS:CB | 2.12 | 0.58 |
| 1:A:48:GLN:HG3 | 1:C:37:SER:CA | 2.31 | 0.58 |
| 1:A:154:ASP:CB | 1:A:155:PRO:CD | 2.82 | 0.58 |
| 1:A:367:LEU:CB | 1:A:413:THR:O | 2.51 | 0.58 |
| 1:A:508:SER:HA | 1:A:526:ASN:HA | 1.84 | 0.58 |
| 1:B:146:LEU:HA | 1:B:194:THR:O | 2.02 | 0.58 |
| 1:C:473:VAL:HA | 1:C:513:LEU:HD23 | 1.85 | 0.58 |
| 1:A:537:ILE:HG12 | 1:A:538:LYS:N | 2.19 | 0.58 |
| 1:B:336:VAL:HB | 1:B:426:LEU:HD23 | 1.84 | 0.58 |
| 1:B:363:GLN:O | 1:B:364:ILE:HG22 | 2.03 | 0.58 |
| 1:C:42:GLY:HA2 | 1:C:47:PRO:O | 2.04 | 0.58 |
| 1:C:232:GLU:HG2 | 1:C:289:ASP:CA | 2.33 | 0.58 |
| 1:A:235:ILE:HG12 | 1:A:287:GLY:HA2 | 1.82 | 0.58 |
| 1:C:221:PHE:HA | 1:C:244:VAL:HG12 | 1.85 | 0.58 |
| 1:C:232:GLU:CG | 1:C:290:PHE:N | 2.64 | 0.58 |
| 1:C:332:PHE:CD2 | 1:C:424:GLY:HA3 | 2.39 | 0.58 |
| 1:A:299:GLN:C | 1:A:300:ILE:HD12 | 2.24 | 0.58 |
| 1:A:443:ARG:HA | 1:A:525:VAL:HG13 | 1.85 | 0.58 |
| 1:B:443:ARG:HH11 | 1:B:443:ARG:HG3 | 1.67 | 0.58 |
| 1:C:49:GLY:O | 1:C:63:THR:HG21 | 2.02 | 0.58 |
| 1:C:195:ASP:CB | 1:C:200:GLY:HA3 | 2.33 | 0.58 |
| 1:C:226:TYR:CE2 | 1:C:242:LEU:HD23 | 2.39 | 0.58 |
| 1:C:299:GLN:C | 1:C:300:ILE:HD12 | 2.24 | 0.58 |
| 1:A:221:PHE:HA | 1:A:244:VAL:HG12 | 1.85 | 0.58 |
| 1:A:232:GLU:HG2 | 1:A:289:ASP:CA | 2.33 | 0.58 |
| 1:B:332:PHE:CD2 | 1:B:424:GLY:HA3 | 2.39 | 0.58 |
| 1:B:42:GLY:HA2 | 1:B:47:PRO:O | 2.04 | 0.58 |
| 1:B:49:GLY:O | 1:B:63:THR:HG21 | 2.02 | 0.58 |
| 1:B:154:ASP:CB | 1:B:155:PRO:CD | 2.82 | 0.58 |
| 1:B:406:TYR:HB3 | 1:B:428:LEU:CD2 | 2.33 | 0.58 |
| 1:B:508:SER:HA | 1:B:526:ASN:HA | 1.84 | 0.58 |
| 1:C:239:VAL:HG13 | 1:C:240:GLN:H | 1.67 | 0.58 |
| 1:C:240:GLN:HG3 | 1:C:241:ARG:N | 2.19 | 0.58 |
| 1:C:537:ILE:HG12 | 1:C:538:LYS:N | 2.19 | 0.58 |
| 1:A:309:SER:O | 1:A:310:VAL:HG23 | 2.03 | 0.58 |
| 1:A:406:TYR:HB3 | 1:A:428:LEU:CD2 | 2.33 | 0.58 |
| 1:C:443:ARG:HA | 1:C:525:VAL:HG13 | 1.85 | 0.58 |
| 1:A:48:GLN:NE2 | 1:C:37:SER:O | 2.24 | 0.57 |
| 1:C:154:ASP:CB | 1:C:155:PRO:CD | 2.82 | 0.57 |
| 1:C:286:LYS:O | 1:C:287:GLY:O | 2.21 | 0.57 |
| 1:C:336:VAL:HB | 1:C:426:LEU:HD23 | 1.84 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:45:ASN:CA | 1:C:37:SER:N | 2.56 | 0.57 |
| 1:A:320:THR:CG2 | 2:A:807:NAG:C2 | 2.76 | 0.57 |
| 1:A:335:ALA:HB1 | 3:A:811:NDG:H6 | 1.69 | 0.57 |
| 1:A:447:MET:HB2 | 1:A:529:VAL:HG22 | 1.84 | 0.57 |
| 1:B:450:GLN:HB2 | 1:B:533:GLU:CA | 2.26 | 0.57 |
| 1:C:406:TYR:HB3 | 1:C:428:LEU:HD21 | 1.86 | 0.57 |
| 1:A:332:PHE:CD2 | 1:A:424:GLY:HA3 | 2.39 | 0.57 |
| 1:B:286:LYS:O | 1:B:287:GLY:O | 2.21 | 0.57 |
| 1:A:330:PRO:HD3 | 1:A:414:ASP:HB2 | 1.86 | 0.57 |
| 1:A:443:ARG:HH11 | 1:A:443:ARG:HG3 | 1.67 | 0.57 |
| 1:A:505:GLY:HA2 | 1:A:529:VAL:H | 1.69 | 0.57 |
| 1:B:226:TYR:CE2 | 1:B:242:LEU:HD23 | 2.39 | 0.57 |
| 1:A:42:GLY:HA2 | 1:A:47:PRO:O | 2.04 | 0.57 |
| 1:A:222:ASP:N | 1:A:243:SER:O | 2.38 | 0.57 |
| 1:B:330:PRO:HD3 | 1:B:414:ASP:HB2 | 1.86 | 0.57 |
| 1:B:537:ILE:HG12 | 1:B:538:LYS:N | 2.19 | 0.57 |
| 1:A:68:ARG:HG3 | 1:A:69:GLU:N | 2.19 | 0.57 |
| 1:C:396:ARG:NH2 | 1:C:464:ILE:HG21 | 2.17 | 0.57 |
| 1:A:240:GLN:HG3 | 1:A:241:ARG:N | 2.19 | 0.57 |
| 1:B:505:GLY:HA2 | 1:B:529:VAL:H | 1.70 | 0.57 |
| 1:A:517:GLN:C | 1:A:519:ASN:N | 2.47 | 0.57 |
| 1:C:68:ARG:HG3 | 1:C:69:GLU:N | 2.19 | 0.57 |
| 1:C:189:LEU:HD21 | 1:C:209:ILE:HD12 | 1.87 | 0.57 |
| 1:C:330:PRO:HD3 | 1:C:414:ASP:HB2 | 1.86 | 0.57 |
| 1:A:189:LEU:HD21 | 1:A:209:ILE:HD12 | 1.87 | 0.57 |
| 1:A:195:ASP:CB | 1:A:200:GLY:HA3 | 2.33 | 0.57 |
| 1:C:108:PHE:CE1 | 1:C:203:VAL:HG23 | 2.40 | 0.57 |
| 1:A:369:TYR:HD1 | 1:A:383:LYS:O | 1.88 | 0.57 |
| 1:B:222:ASP:N | 1:B:243:SER:O | 2.38 | 0.57 |
| 1:C:320:THR:CG2 | 2:C:807:NAG:C2 | 2.76 | 0.57 |
| 1:B:82:SER:HB3 | 1:C:2:TRP:C | 2.25 | 0.56 |
| 1:B:240:GLN:HG3 | 1:B:241:ARG:N | 2.19 | 0.56 |
| 1:B:296:TYR:HB2 | 1:B:321:VAL:HB | 1.86 | 0.56 |
| 1:B:336:VAL:HG12 | 1:B:338:ARG:HB2 | 1.87 | 0.56 |
| 1:A:296:TYR:HB2 | 1:A:321:VAL:HB | 1.86 | 0.56 |
| 1:A:449:ASP:H | 1:A:532:CYS:CB | 2.12 | 0.56 |
| 1:C:155:PRO:N | 2:C:801:NAG:H82 | 2.20 | 0.56 |
| 1:C:296:TYR:HB2 | 1:C:321:VAL:HB | 1.86 | 0.56 |
| 1:C:369:TYR:HD1 | 1:C:383:LYS:O | 1.88 | 0.56 |
| 1:C:393:ASN:C | 1:C:394:LEU:HD12 | 2.25 | 0.56 |
| 1:C:505:GLY:HA2 | 1:C:529:VAL:H | 1.70 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:226:TYR:CE2 | 1:A:242:LEU:HD23 | 2.39 | 0.56 |
| 1:B:32:ASN:CG | 1:B:33:LYS:N | 2.59 | 0.56 |
| 1:B:155:PRO:C | 1:B:157:GLU:N | 2.56 | 0.56 |
| 1:B:378:TRP:O | 1:B:391:ASN:HB2 | 2.06 | 0.56 |
| 1:C:222:ASP:N | 1:C:243:SER:O | 2.38 | 0.56 |
| 1:A:108:PHE:CE1 | 1:A:203:VAL:HG23 | 2.40 | 0.56 |
| 1:A:396:ARG:NH2 | 1:A:464:ILE:HG21 | 2.17 | 0.56 |
| 1:B:394:LEU:N | 1:B:394:LEU:CD1 | 2.69 | 0.56 |
| 1:C:118:ARG:HA | 1:C:212:THR:HB | 1.87 | 0.56 |
| 1:A:155:PRO:N | 2:A:801:NAG:H82 | 2.20 | 0.56 |
| 1:A:336:VAL:HG12 | 1:A:338:ARG:HB2 | 1.87 | 0.56 |
| 1:B:108:PHE:CE1 | 1:B:203:VAL:HG23 | 2.40 | 0.56 |
| 1:B:118:ARG:HA | 1:B:212:THR:HB | 1.87 | 0.56 |
| 1:B:335:ALA:HB1 | 3:B:811:NDG:C6 | 2.33 | 0.56 |
| 1:A:48:GLN:NE2 | 1:C:53:ILE:HG22 | 2.20 | 0.56 |
| 1:A:76:LEU:HA | 1:C:87:PRO:HG2 | 1.88 | 0.56 |
| 1:B:32:ASN:HD22 | 1:B:83:GLU:H | 1.51 | 0.56 |
| 1:B:154:ASP:CB | 2:B:801:NAG:HN2 | 2.16 | 0.56 |
| 1:B:86:SER:CB | 1:C:3:VAL:CB | 2.79 | 0.56 |
| 1:B:86:SER:HB3 | 1:C:3:VAL:CA | 2.36 | 0.56 |
| 1:B:189:LEU:HD21 | 1:B:209:ILE:HD12 | 1.87 | 0.56 |
| 1:B:393:ASN:C | 1:B:394:LEU:HD12 | 2.25 | 0.56 |
| 1:C:32:ASN:CG | 1:C:33:LYS:N | 2.59 | 0.56 |
| 1:B:30:ARG:CA | 1:C:27:ASN:OD1 | 2.36 | 0.56 |
| 1:B:259:TYR:O | 1:B:260:LYS:HB3 | 2.05 | 0.56 |
| 1:B:333:VAL:CG2 | 1:B:334:PRO:HD3 | 2.36 | 0.56 |
| 1:B:369:TYR:HD1 | 1:B:383:LYS:O | 1.88 | 0.56 |
| 1:C:333:VAL:CG2 | 1:C:334:PRO:HD3 | 2.36 | 0.56 |
| 1:C:336:VAL:HG12 | 1:C:338:ARG:HB2 | 1.87 | 0.56 |
| 1:C:378:TRP:O | 1:C:391:ASN:HB2 | 2.06 | 0.56 |
| 1:A:162:LEU:O | 1:A:174:LEU:HD12 | 2.06 | 0.56 |
| 1:A:394:LEU:N | 1:A:394:LEU:CD1 | 2.69 | 0.55 |
| 1:B:155:PRO:N | 2:B:801:NAG:H82 | 2.20 | 0.55 |
| 1:B:365:GLN:O | 1:B:365:GLN:CG | 2.54 | 0.55 |
| 1:C:439:VAL:HG13 | 1:C:522:LEU:HD11 | 1.88 | 0.55 |
| 1:A:259:TYR:O | 1:A:260:LYS:HB3 | 2.05 | 0.55 |
| 1:B:68:ARG:HG3 | 1:B:69:GLU:N | 2.19 | 0.55 |
| 1:C:339:VAL:HG21 | 1:C:351:ILE:CG2 | 2.37 | 0.55 |
| 1:B:339:VAL:HG21 | 1:B:351:ILE:CG2 | 2.37 | 0.55 |
| 1:A:32:ASN:HD22 | 1:A:83:GLU:H | 1.51 | 0.55 |
| 1:A:118:ARG:HA | 1:A:212:THR:HB | 1.87 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:393:ASN:C | 1:A:394:LEU:HD12 | 2.25 | 0.55 |
| 1:A:459:ILE:HG21 | 1:A:471:TYR:CE2 | 2.42 | 0.55 |
| 1:B:272:THR:CG2 | 1:B:273:THR:H | 2.19 | 0.55 |
| 1:A:339:VAL:HG21 | 1:A:351:ILE:CG2 | 2.36 | 0.55 |
| 1:A:406:TYR:HB3 | 1:A:428:LEU:HD21 | 1.87 | 0.55 |
| 1:B:406:TYR:HB3 | 1:B:428:LEU:HD21 | 1.87 | 0.55 |
| 1:C:155:PRO:HG2 | 2:C:801:NAG:O7 | 2.07 | 0.55 |
| 1:C:394:LEU:N | 1:C:394:LEU:CD1 | 2.69 | 0.55 |
| 1:A:32:ASN:CG | 1:A:33:LYS:N | 2.59 | 0.55 |
| 1:A:154:ASP:CG | 1:A:155:PRO:CD | 2.75 | 0.55 |
| 1:A:241:ARG:NE | 1:A:281:ILE:HD12 | 2.22 | 0.55 |
| 1:A:439:VAL:HG13 | 1:A:522:LEU:HD11 | 1.88 | 0.55 |
| 1:B:278:ASN:HD22 | 1:B:278:ASN:N | 2.05 | 0.55 |
| 1:C:117:VAL:O | 1:C:211:ILE:HA | 2.07 | 0.55 |
| 1:C:432:ASP:CG | 1:C:464:ILE:CG2 | 2.74 | 0.55 |
| 1:C:459:ILE:HG21 | 1:C:471:TYR:CE2 | 2.42 | 0.55 |
| 1:B:403:ASN:CB | 2:B:902:NAG:H83 | 2.21 | 0.55 |
| 1:C:482:THR:HG21 | 1:C:499:THR:C | 2.27 | 0.55 |
| 1:A:272:THR:CG2 | 1:A:273:THR:H | 2.19 | 0.55 |
| 1:A:378:TRP:O | 1:A:391:ASN:HB2 | 2.06 | 0.55 |
| 1:B:28:LYS:HB3 | 1:B:88:VAL:HG11 | 1.89 | 0.55 |
| 1:B:482:THR:HG21 | 1:B:499:THR:C | 2.27 | 0.55 |
| 1:C:28:LYS:HB3 | 1:C:88:VAL:HG11 | 1.89 | 0.55 |
| 1:C:162:LEU:O | 1:C:174:LEU:HD12 | 2.06 | 0.55 |
| 1:A:155:PRO:HG2 | 2:A:801:NAG:O7 | 2.07 | 0.55 |
| 1:A:466:PRO:O | 1:A:468:THR:N | 2.40 | 0.55 |
| 1:B:117:VAL:O | 1:B:211:ILE:HA | 2.07 | 0.55 |
| 1:B:162:LEU:O | 1:B:174:LEU:HD12 | 2.06 | 0.55 |
| 1:C:226:TYR:O | 1:C:227:THR:CG2 | 2.55 | 0.55 |
| 1:A:41:GLN:CB | 1:C:81:VAL:HG13 | 2.35 | 0.55 |
| 1:A:45:ASN:ND2 | 1:C:79:HIS:CA | 2.40 | 0.55 |
| 1:A:169:THR:OG1 | 1:A:171:VAL:HG23 | 2.07 | 0.55 |
| 1:B:75:VAL:O | 1:B:76:LEU:HD23 | 2.07 | 0.55 |
| 1:B:226:TYR:O | 1:B:227:THR:CG2 | 2.55 | 0.55 |
| 1:B:330:PRO:HB3 | 1:B:358:ASP:HB2 | 1.89 | 0.55 |
| 1:B:466:PRO:O | 1:B:468:THR:N | 2.40 | 0.55 |
| 1:C:154:ASP:CG | 1:C:155:PRO:CD | 2.75 | 0.55 |
| 1:C:259:TYR:O | 1:C:260:LYS:HB3 | 2.05 | 0.55 |
| 1:C:363:GLN:C | 1:C:364:ILE:CG2 | 2.75 | 0.55 |
| 1:A:333:VAL:CG2 | 1:A:334:PRO:HD3 | 2.36 | 0.54 |
| 1:B:419:VAL:CG1 | 1:B:420:GLY:N | 2.70 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:226:TYR:HB2 | 1:A:319:VAL:HG22 | 1.90 | 0.54 |
| 1:B:438:PRO:HB2 | 1:B:513:LEU:HD12 | 1.89 | 0.54 |
| 1:C:268:PHE:CD2 | 1:C:268:PHE:N | 2.75 | 0.54 |
| 1:A:49:GLY:HA3 | 1:C:44:ASP:OD2 | 2.05 | 0.54 |
| 1:A:226:TYR:O | 1:A:227:THR:CG2 | 2.55 | 0.54 |
| 1:A:367:LEU:HD12 | 1:A:367:LEU:C | 2.28 | 0.54 |
| 1:A:419:VAL:CG1 | 1:A:420:GLY:N | 2.70 | 0.54 |
| 1:A:84:ASN:ND2 | 1:B:77:SER:OG | 2.41 | 0.54 |
| 1:B:155:PRO:HG2 | 2:B:801:NAG:O7 | 2.07 | 0.54 |
| 1:B:363:GLN:C | 1:B:364:ILE:CG2 | 2.75 | 0.54 |
| 1:C:75:VAL:O | 1:C:76:LEU:HD23 | 2.08 | 0.54 |
| 1:A:75:VAL:O | 1:A:76:LEU:HD23 | 2.08 | 0.54 |
| 1:A:482:THR:HG21 | 1:A:499:THR:C | 2.27 | 0.54 |
| 1:B:235:ILE:HG12 | 1:B:287:GLY:HA2 | 1.82 | 0.54 |
| 1:C:419:VAL:CG1 | 1:C:420:GLY:N | 2.70 | 0.54 |
| 1:B:88:VAL:H | 1:C:1:ASP:N | 2.05 | 0.54 |
| 1:B:154:ASP:CG | 1:B:155:PRO:CD | 2.75 | 0.54 |
| 1:B:367:LEU:C | 1:B:367:LEU:HD12 | 2.28 | 0.54 |
| 1:C:154:ASP:CB | 2:C:801:NAG:HN2 | 2.16 | 0.54 |
| 1:C:241:ARG:NE | 1:C:281:ILE:HD12 | 2.22 | 0.54 |
| 1:A:363:GLN:C | 1:A:364:ILE:CG2 | 2.76 | 0.54 |
| 1:A:438:PRO:HB2 | 1:A:513:LEU:HD12 | 1.89 | 0.54 |
| 1:C:226:TYR:HB2 | 1:C:319:VAL:HG22 | 1.89 | 0.54 |
| 1:C:466:PRO:O | 1:C:468:THR:N | 2.40 | 0.54 |
| 1:A:82:SER:OG | 1:B:91:PRO:N | 2.40 | 0.54 |
| 1:A:371:ILE:HG23 | 1:A:372:GLY:H | 1.73 | 0.54 |
| 1:B:432:ASP:CG | 1:B:464:ILE:CG2 | 2.74 | 0.54 |
| 1:B:439:VAL:HG13 | 1:B:522:LEU:HD11 | 1.88 | 0.54 |
| 1:C:169:THR:OG1 | 1:C:171:VAL:HG23 | 2.07 | 0.54 |
| 1:C:490:LYS:HG2 | 1:C:490:LYS:O | 2.08 | 0.54 |
| 1:A:22:VAL:HG22 | 1:A:23:GLN:H | 1.73 | 0.54 |
| 1:A:154:ASP:C | 2:A:801:NAG:C8 | 2.62 | 0.54 |
| 1:A:318:THR:CG2 | 2:A:806:NAG:H5 | 2.34 | 0.54 |
| 1:B:332:PHE:HD2 | 1:B:424:GLY:HA3 | 1.73 | 0.54 |
| 1:B:490:LYS:O | 1:B:490:LYS:HG2 | 2.08 | 0.54 |
| 1:C:276:GLU:CG | 1:C:277:SER:N | 2.71 | 0.54 |
| 1:A:117:VAL:O | 1:A:211:ILE:HA | 2.07 | 0.54 |
| 1:B:84:ASN:HD22 | 1:C:5:PRO:HD3 | 1.73 | 0.54 |
| 1:B:459:ILE:HG21 | 1:B:471:TYR:CE2 | 2.42 | 0.54 |
| 1:C:332:PHE:HD2 | 1:C:424:GLY:HA3 | 1.73 | 0.54 |
| 1:C:438:PRO:HB2 | 1:C:513:LEU:HD12 | 1.89 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:84:ASN:ND2 | 1:B:79:HIS:CE1 | 2.76 | 0.53 |
| 1:B:443:ARG:HG3 | 1:B:443:ARG:NH1 | 2.23 | 0.53 |
| 1:A:28:LYS:HB3 | 1:A:88:VAL:HG11 | 1.89 | 0.53 |
| 1:A:373:ASN:HB3 | 1:A:409:ILE:H | 1.74 | 0.53 |
| 1:B:450:GLN:CB | 1:B:532:CYS:O | 2.56 | 0.53 |
| 1:C:272:THR:CG2 | 1:C:273:THR:H | 2.19 | 0.53 |
| 1:C:371:ILE:HG23 | 1:C:372:GLY:H | 1.73 | 0.53 |
| 1:C:458:THR:HG22 | 1:C:493:SER:HB3 | 1.90 | 0.53 |
| 1:A:330:PRO:HB3 | 1:A:358:ASP:HB2 | 1.89 | 0.53 |
| 1:B:249:MET:O | 1:B:252:THR:HB | 2.08 | 0.53 |
| 1:B:268:PHE:CD2 | 1:B:268:PHE:N | 2.75 | 0.53 |
| 1:B:403:ASN:C | 1:B:405:THR:H | 2.12 | 0.53 |
| 1:B:458:THR:HG22 | 1:B:493:SER:HB3 | 1.90 | 0.53 |
| 1:A:48:GLN:HG3 | 1:C:37:SER:CB | 2.37 | 0.53 |
| 1:B:252:THR:HG23 | 1:B:253:PRO:HD2 | 1.90 | 0.53 |
| 1:B:276:GLU:CG | 1:B:277:SER:N | 2.71 | 0.53 |
| 1:C:318:THR:CG2 | 2:C:806:NAG:H5 | 2.34 | 0.53 |
| 1:C:330:PRO:HB3 | 1:C:358:ASP:HB2 | 1.89 | 0.53 |
| 1:C:365:GLN:O | 1:C:365:GLN:CG | 2.54 | 0.53 |
| 1:A:75:VAL:HG11 | 1:C:87:PRO:HD2 | 1.84 | 0.53 |
| 1:A:369:TYR:O | 1:A:383:LYS:HG2 | 2.09 | 0.53 |
| 1:A:450:GLN:CB | 1:A:532:CYS:O | 2.56 | 0.53 |
| 1:B:105:ARG:HG3 | 1:B:106:PRO:HD2 | 1.91 | 0.53 |
| 1:B:217:ASN:N | 1:B:217:ASN:ND2 | 2.56 | 0.53 |
| 1:A:249:MET:O | 1:A:252:THR:HB | 2.09 | 0.53 |
| 1:A:522:LEU:CD2 | 1:A:523:THR:HB | 2.26 | 0.53 |
| 1:A:533:GLU:HA | 1:A:533:GLU:OE2 | 2.09 | 0.53 |
| 1:B:533:GLU:HA | 1:B:533:GLU:OE2 | 2.09 | 0.53 |
| 1:C:105:ARG:HG3 | 1:C:106:PRO:HD2 | 1.91 | 0.53 |
| 1:C:249:MET:O | 1:C:252:THR:HB | 2.09 | 0.53 |
| 1:C:367:LEU:C | 1:C:367:LEU:HD12 | 2.28 | 0.53 |
| 1:A:44:ASP:CB | 1:C:77:SER:C | 2.68 | 0.53 |
| 1:C:31:PHE:CD2 | 1:C:32:ASN:HB2 | 2.44 | 0.53 |
| 1:C:217:ASN:N | 1:C:217:ASN:ND2 | 2.56 | 0.53 |
| 1:C:312:LEU:O | 3:C:804:NDG:C8 | 2.57 | 0.53 |
| 1:C:482:THR:CG2 | 1:C:499:THR:CA | 2.87 | 0.53 |
| 1:A:45:ASN:ND2 | 1:C:79:HIS:CB | 2.69 | 0.53 |
| 1:A:88:VAL:HA | 1:B:92:MET:CG | 2.39 | 0.53 |
| 1:A:347:ARG:HG3 | 1:A:391:ASN:HA | 1.91 | 0.53 |
| 1:B:312:LEU:O | 3:B:804:NDG:C8 | 2.57 | 0.53 |
| 1:C:252:THR:HG23 | 1:C:253:PRO:HD2 | 1.90 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:242:LEU:O | 1:A:279:GLN:HB3 | 2.09 | 0.53 |
| 1:A:276:GLU:CG | 1:A:277:SER:N | 2.71 | 0.53 |
| 1:A:458:THR:HG22 | 1:A:493:SER:HB3 | 1.91 | 0.53 |
| 1:B:22:VAL:HG22 | 1:B:23:GLN:H | 1.73 | 0.53 |
| 1:B:169:THR:OG1 | 1:B:171:VAL:HG23 | 2.07 | 0.53 |
| 1:B:318:THR:CG2 | 2:B:806:NAG:H5 | 2.34 | 0.53 |
| 1:B:450:GLN:CB | 1:B:533:GLU:HA | 2.29 | 0.53 |
| 1:C:373:ASN:HB3 | 1:C:409:ILE:H | 1.74 | 0.53 |
| 1:C:443:ARG:HG3 | 1:C:443:ARG:NH1 | 2.23 | 0.53 |
| 1:C:450:GLN:CB | 1:C:532:CYS:O | 2.56 | 0.53 |
| 1:A:84:ASN:CG | 1:B:77:SER:HG | 2.12 | 0.53 |
| 1:A:105:ARG:HG3 | 1:A:106:PRO:HD2 | 1.91 | 0.53 |
| 1:A:367:LEU:HD13 | 1:A:412:VAL:HG23 | 1.91 | 0.53 |
| 1:A:512:LEU:HD11 | 1:A:519:ASN:HD21 | 1.74 | 0.53 |
| 1:B:352:ILE:CG1 | 1:B:388:VAL:HB | 2.33 | 0.53 |
| 1:B:367:LEU:HD13 | 1:B:412:VAL:HG23 | 1.91 | 0.53 |
| 1:B:482:THR:HG22 | 1:B:482:THR:O | 2.09 | 0.53 |
| 1:B:512:LEU:HD11 | 1:B:519:ASN:HD21 | 1.74 | 0.53 |
| 1:C:512:LEU:HD11 | 1:C:519:ASN:HD21 | 1.74 | 0.53 |
| 1:B:226:TYR:HB2 | 1:B:319:VAL:HG22 | 1.89 | 0.52 |
| 1:B:242:LEU:O | 1:B:279:GLN:HB3 | 2.09 | 0.52 |
| 1:B:426:LEU:O | 1:B:426:LEU:HD13 | 2.10 | 0.52 |
| 1:C:242:LEU:O | 1:C:279:GLN:HB3 | 2.09 | 0.52 |
| 1:C:268:PHE:C | 1:C:285:ALA:HB3 | 2.30 | 0.52 |
| 1:C:403:ASN:C | 1:C:405:THR:H | 2.12 | 0.52 |
| 1:A:217:ASN:N | 1:A:217:ASN:ND2 | 2.56 | 0.52 |
| 1:A:268:PHE:C | 1:A:285:ALA:HB3 | 2.30 | 0.52 |
| 1:A:312:LEU:O | 3:A:804:NDG:C8 | 2.57 | 0.52 |
| 1:A:523:THR:CG2 | 1:A:524:VAL:H | 1.94 | 0.52 |
| 1:C:155:PRO:C | 1:C:157:GLU:N | 2.56 | 0.52 |
| 1:A:194:THR:HG22 | 1:A:195:ASP:N | 2.25 | 0.52 |
| 1:B:194:THR:HG22 | 1:B:195:ASP:N | 2.25 | 0.52 |
| 1:B:268:PHE:C | 1:B:285:ALA:HB3 | 2.30 | 0.52 |
| 1:B:347:ARG:HG3 | 1:B:391:ASN:HA | 1.91 | 0.52 |
| 1:C:22:VAL:HG22 | 1:C:23:GLN:H | 1.73 | 0.52 |
| 1:A:82:SER:O | 1:B:90:GLU:OE2 | 2.25 | 0.52 |
| 1:A:403:ASN:C | 1:A:405:THR:H | 2.12 | 0.52 |
| 1:C:227:THR:CG2 | 2:C:807:NAG:H83 | 2.32 | 0.52 |
| 1:B:86:SER:OG | 1:C:4:ILE:CA | 2.57 | 0.52 |
| 1:B:227:THR:CG2 | 2:B:807:NAG:H83 | 2.32 | 0.52 |
| 1:C:369:TYR:O | 1:C:383:LYS:HG2 | 2.09 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:432:ASP:CG | 1:A:464:ILE:CG2 | 2.74 | 0.52 |
| 1:B:89:GLU:N | 1:C:1:ASP:H3 | 1.98 | 0.52 |
| 1:B:373:ASN:HB3 | 1:B:409:ILE:H | 1.74 | 0.52 |
| 1:C:28:LYS:CD | 1:C:88:VAL:HG12 | 2.38 | 0.52 |
| 1:C:221:PHE:HB3 | 1:C:223:PRO:O | 2.10 | 0.52 |
| 1:C:278:ASN:HD22 | 1:C:278:ASN:N | 2.05 | 0.52 |
| 1:C:272:THR:CG2 | 2:C:803:NAG:HN2 | 2.23 | 0.52 |
| 1:C:290:PHE:CE2 | 1:C:293:ARG:CB | 2.92 | 0.52 |
| 1:C:347:ARG:HD2 | 1:C:392:GLY:N | 2.25 | 0.52 |
| 1:C:367:LEU:HD13 | 1:C:412:VAL:HG23 | 1.91 | 0.52 |
| 1:C:533:GLU:HA | 1:C:533:GLU:OE2 | 2.09 | 0.52 |
| 1:A:90:GLU:CB | 1:B:2:TRP:CD1 | 2.92 | 0.52 |
| 1:A:252:THR:HG23 | 1:A:253:PRO:HD2 | 1.91 | 0.52 |
| 1:A:379:LEU:H | 1:A:379:LEU:CD2 | 2.22 | 0.52 |
| 1:B:369:TYR:O | 1:B:383:LYS:HG2 | 2.09 | 0.52 |
| 1:B:396:ARG:CZ | 1:B:432:ASP:HB2 | 2.40 | 0.52 |
| 1:C:138:ASN:HD22 | 1:C:138:ASN:C | 2.13 | 0.52 |
| 1:A:31:PHE:CD2 | 1:A:32:ASN:HB2 | 2.44 | 0.52 |
| 1:A:33:LYS:HB3 | 1:A:83:GLU:CG | 2.40 | 0.52 |
| 1:A:332:PHE:HD2 | 1:A:424:GLY:HA3 | 1.73 | 0.52 |
| 1:A:450:GLN:HB2 | 1:A:533:GLU:CA | 2.26 | 0.52 |
| 1:B:88:VAL:CG2 | 1:C:2:TRP:O | 2.47 | 0.52 |
| 1:B:155:PRO:CD | 2:B:801:NAG:H82 | 2.40 | 0.52 |
| 1:A:41:GLN:CA | 1:C:81:VAL:HG13 | 2.38 | 0.51 |
| 1:A:45:ASN:ND2 | 1:C:79:HIS:HB3 | 2.25 | 0.51 |
| 1:B:31:PHE:CD2 | 1:B:32:ASN:HB2 | 2.44 | 0.51 |
| 1:B:221:PHE:HB3 | 1:B:223:PRO:O | 2.10 | 0.51 |
| 1:C:347:ARG:HG3 | 1:C:391:ASN:HA | 1.91 | 0.51 |
| 1:C:505:GLY:O | 1:C:506:ASP:OD1 | 2.28 | 0.51 |
| 1:A:45:ASN:CG | 1:C:79:HIS:CB | 2.49 | 0.51 |
| 1:A:458:THR:HA | 1:A:493:SER:HA | 1.93 | 0.51 |
| 1:B:371:ILE:HG23 | 1:B:372:GLY:H | 1.73 | 0.51 |
| 1:B:482:THR:CG2 | 1:B:499:THR:CA | 2.87 | 0.51 |
| 1:C:450:GLN:CG | 1:C:533:GLU:OE2 | 2.58 | 0.51 |
| 1:B:8:LYS:CD | 1:B:8:LYS:N | 2.51 | 0.51 |
| 1:B:272:THR:CG2 | 2:B:803:NAG:HN2 | 2.23 | 0.51 |
| 1:C:155:PRO:CD | 2:C:801:NAG:H82 | 2.40 | 0.51 |
| 1:C:426:LEU:O | 1:C:426:LEU:HD13 | 2.09 | 0.51 |
| 1:A:471:TYR:CD1 | 1:A:471:TYR:N | 2.79 | 0.51 |
| 1:C:194:THR:HG22 | 1:C:195:ASP:N | 2.25 | 0.51 |
| 1:C:336:VAL:O | 1:C:426:LEU:HD22 | 2.10 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:428:LEU:O | 1:A:428:LEU:HD23 | 2.11 | 0.51 |
| 1:B:333:VAL:CB | 1:B:334:PRO:CD | 2.88 | 0.51 |
| 1:B:514:SER:HB3 | 1:B:517:GLN:O | 2.10 | 0.51 |
| 1:C:450:GLN:HB2 | 1:C:533:GLU:CA | 2.26 | 0.51 |
| 1:A:75:VAL:C | 1:C:87:PRO:CG | 2.53 | 0.51 |
| 1:A:426:LEU:O | 1:A:426:LEU:HD13 | 2.10 | 0.51 |
| 1:A:482:THR:CG2 | 1:A:499:THR:CA | 2.87 | 0.51 |
| 1:A:505:GLY:O | 1:A:506:ASP:OD1 | 2.28 | 0.51 |
| 1:C:151:LEU:HD12 | 1:C:190:THR:O | 2.11 | 0.51 |
| 1:C:352:ILE:HG13 | 1:C:388:VAL:CB | 2.33 | 0.51 |
| 1:C:396:ARG:CZ | 1:C:432:ASP:HB2 | 2.41 | 0.51 |
| 1:C:514:SER:HB3 | 1:C:517:GLN:O | 2.10 | 0.51 |
| 1:A:38:ILE:O | 1:C:91:PRO:HB3 | 1.94 | 0.51 |
| 1:A:151:LEU:HD12 | 1:A:190:THR:O | 2.11 | 0.51 |
| 1:A:155:PRO:CD | 2:A:801:NAG:H82 | 2.40 | 0.51 |
| 1:A:336:VAL:O | 1:A:426:LEU:HD22 | 2.10 | 0.51 |
| 1:A:514:SER:HB3 | 1:A:517:GLN:O | 2.10 | 0.51 |
| 1:B:450:GLN:CG | 1:B:533:GLU:OE2 | 2.58 | 0.51 |
| 1:B:471:TYR:N | 1:B:471:TYR:CD1 | 2.79 | 0.51 |
| 1:B:505:GLY:O | 1:B:506:ASP:OD1 | 2.28 | 0.51 |
| 1:B:522:LEU:CD2 | 1:B:523:THR:HB | 2.26 | 0.51 |
| 2:B:809:NAG:H61 | 2:B:810:NAG:C6 | 2.39 | 0.51 |
| 1:C:297:VAL:CG2 | 2:C:807:NAG:H62 | 2.41 | 0.51 |
| 1:A:365:GLN:O | 1:A:365:GLN:CG | 2.54 | 0.51 |
| 1:B:81:VAL:HA | 1:C:2:TRP:CA | 2.41 | 0.51 |
| 1:B:154:ASP:C | 2:B:801:NAG:C8 | 2.62 | 0.51 |
| 1:A:272:THR:CG2 | 2:A:803:NAG:HN2 | 2.23 | 0.51 |
| 1:B:142:LEU:O | 1:B:196:LEU:HD23 | 2.11 | 0.51 |
| 1:B:458:THR:HG22 | 1:B:493:SER:CB | 2.41 | 0.51 |
| 1:C:33:LYS:HB3 | 1:C:83:GLU:CG | 2.40 | 0.51 |
| 1:C:80:ALA:O | 1:C:88:VAL:HG23 | 2.11 | 0.51 |
| 1:A:142:LEU:O | 1:A:196:LEU:HD23 | 2.11 | 0.51 |
| 1:A:297:VAL:CG2 | 2:A:807:NAG:H62 | 2.41 | 0.51 |
| 1:C:142:LEU:O | 1:C:196:LEU:HD23 | 2.11 | 0.51 |
| 1:C:217:ASN:N | 1:C:217:ASN:HD22 | 2.09 | 0.51 |
| 1:B:138:ASN:C | 1:B:138:ASN:HD22 | 2.13 | 0.50 |
| 1:B:336:VAL:O | 1:B:426:LEU:HD22 | 2.10 | 0.50 |
| 1:B:382:ASN:OD1 | 1:B:385:ASN:N | 2.45 | 0.50 |
| 1:B:397:GLU:N | 1:B:397:GLU:OE1 | 2.44 | 0.50 |
| 1:C:458:THR:HG22 | 1:C:493:SER:CB | 2.42 | 0.50 |
| 1:A:138:ASN:HD22 | 1:A:138:ASN:C | 2.13 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:221:PHE:HB3 | 1:A:223:PRO:O | 2.10 | 0.50 |
| 1:A:347:ARG:HD2 | 1:A:392:GLY:N | 2.25 | 0.50 |
| 1:A:449:ASP:CB | 1:A:532:CYS:H | 2.22 | 0.50 |
| 1:A:450:GLN:CG | 1:A:533:GLU:OE2 | 2.58 | 0.50 |
| 1:A:496:LEU:HD21 | 1:A:509:ILE:CD1 | 2.38 | 0.50 |
| 1:B:88:VAL:HG22 | 1:C:2:TRP:O | 1.63 | 0.50 |
| 1:B:154:ASP:O | 2:B:801:NAG:C8 | 2.60 | 0.50 |
| 1:B:217:ASN:N | 1:B:217:ASN:HD22 | 2.09 | 0.50 |
| 1:B:428:LEU:HD23 | 1:B:428:LEU:O | 2.11 | 0.50 |
| 1:C:154:ASP:O | 2:C:801:NAG:C8 | 2.60 | 0.50 |
| 1:A:155:PRO:HG2 | 2:A:801:NAG:C7 | 2.42 | 0.50 |
| 1:A:396:ARG:CZ | 1:A:432:ASP:HB2 | 2.41 | 0.50 |
| 1:B:82:SER:CB | 1:C:2:TRP:CA | 2.89 | 0.50 |
| 1:B:261:ILE:HD11 | 1:B:264:ASN:HD22 | 1.77 | 0.50 |
| 1:A:154:ASP:O | 2:A:801:NAG:C8 | 2.60 | 0.50 |
| 1:B:28:LYS:CD | 1:B:88:VAL:HG12 | 2.38 | 0.50 |
| 1:B:368:SER:OG | 1:B:370:PHE:HE1 | 1.94 | 0.50 |
| 1:C:338:ARG:HB3 | 1:C:339:VAL:HG22 | 1.92 | 0.50 |
| 1:A:234:GLU:HB2 | 1:A:235:ILE:HG22 | 1.93 | 0.50 |
| 1:A:278:ASN:HD22 | 1:A:278:ASN:N | 2.05 | 0.50 |
| 1:B:347:ARG:HD2 | 1:B:392:GLY:N | 2.25 | 0.50 |
| 1:C:458:THR:HA | 1:C:493:SER:HA | 1.93 | 0.50 |
| 1:C:471:TYR:N | 1:C:471:TYR:CD1 | 2.79 | 0.50 |
| 1:A:449:ASP:CB | 1:A:532:CYS:N | 2.74 | 0.50 |
| 1:A:457:LEU:HD23 | 1:A:494:MET:SD | 2.52 | 0.50 |
| 1:B:419:VAL:HG22 | 2:B:809:NAG:H81 | 1.93 | 0.50 |
| 1:B:423:THR:HB | 2:B:810:NAG:H83 | 1.94 | 0.50 |
| 1:C:155:PRO:O | 1:C:157:GLU:N | 2.43 | 0.50 |
| 1:C:276:GLU:HG3 | 1:C:277:SER:N | 2.25 | 0.50 |
| 1:C:419:VAL:HG22 | 2:C:809:NAG:H81 | 1.93 | 0.50 |
| 1:C:522:LEU:CD2 | 1:C:523:THR:HB | 2.26 | 0.50 |
| 1:A:84:ASN:CB | 1:B:79:HIS:CE1 | 2.62 | 0.50 |
| 1:A:216:ASP:HB2 | 1:A:217:ASN:ND2 | 2.27 | 0.50 |
| 1:B:151:LEU:HD12 | 1:B:190:THR:O | 2.11 | 0.50 |
| 1:B:276:GLU:HG3 | 1:B:277:SER:N | 2.25 | 0.50 |
| 1:B:297:VAL:CG2 | 2:B:807:NAG:H62 | 2.41 | 0.50 |
| 1:B:338:ARG:HB3 | 1:B:339:VAL:HG22 | 1.92 | 0.50 |
| 1:B:457:LEU:HD23 | 1:B:494:MET:SD | 2.52 | 0.50 |
| 1:C:109:THR:HG22 | 1:C:110:GLN:HG3 | 1.94 | 0.50 |
| 1:C:234:GLU:HB2 | 1:C:235:ILE:HG22 | 1.93 | 0.50 |
| 1:C:333:VAL:CB | 1:C:334:PRO:CD | 2.88 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:363:GLN:C | 1:C:364:ILE:HG23 | 2.32 | 0.50 |
| 1:C:373:ASN:ND2 | 1:C:374:ASP:OD1 | 2.45 | 0.50 |
| 1:C:382:ASN:OD1 | 1:C:385:ASN:N | 2.45 | 0.50 |
| 1:C:432:ASP:CB | 1:C:464:ILE:CG2 | 2.89 | 0.50 |
| 1:A:11:GLU:OE2 | 1:A:69:GLU:OE1 | 2.30 | 0.50 |
| 1:A:39:THR:OG1 | 1:C:89:GLU:C | 2.47 | 0.50 |
| 1:A:186:GLU:OE1 | 2:A:801:NAG:C6 | 2.59 | 0.50 |
| 1:A:458:THR:HG22 | 1:A:493:SER:CB | 2.42 | 0.50 |
| 1:B:241:ARG:NE | 1:B:281:ILE:HD12 | 2.22 | 0.50 |
| 1:B:363:GLN:C | 1:B:364:ILE:HG23 | 2.32 | 0.50 |
| 1:B:432:ASP:CB | 1:B:464:ILE:CG2 | 2.89 | 0.50 |
| 1:B:458:THR:HA | 1:B:493:SER:HA | 1.93 | 0.50 |
| 2:B:807:NAG:H3 | 2:B:807:NAG:O7 | 2.11 | 0.50 |
| 1:C:241:ARG:HE | 1:C:281:ILE:CD1 | 2.24 | 0.50 |
| 1:C:428:LEU:O | 1:C:428:LEU:HD23 | 2.11 | 0.50 |
| 1:C:449:ASP:CB | 1:C:532:CYS:H | 2.22 | 0.50 |
| 1:A:80:ALA:O | 1:A:88:VAL:HG23 | 2.11 | 0.50 |
| 1:A:217:ASN:N | 1:A:217:ASN:HD22 | 2.10 | 0.50 |
| 1:A:266:GLY:N | 1:A:268:PHE:CE2 | 2.76 | 0.50 |
| 1:A:335:ALA:CB | 3:A:811:NDG:C6 | 2.90 | 0.50 |
| 1:A:382:ASN:OD1 | 1:A:385:ASN:N | 2.45 | 0.50 |
| 1:A:443:ARG:HG3 | 1:A:443:ARG:NH1 | 2.24 | 0.50 |
| 1:C:109:THR:HG22 | 1:C:110:GLN:CG | 2.42 | 0.50 |
| 1:C:327:ASN:OD1 | 1:C:360:ASP:OD1 | 2.30 | 0.50 |
| 1:A:44:ASP:CG | 1:C:79:HIS:ND1 | 2.63 | 0.49 |
| 1:A:338:ARG:HB3 | 1:A:339:VAL:HG22 | 1.92 | 0.49 |
| 1:B:27:ASN:C | 1:B:29:ASP:H | 2.15 | 0.49 |
| 1:B:109:THR:HG22 | 1:B:110:GLN:HG3 | 1.94 | 0.49 |
| 1:B:155:PRO:HG2 | 2:B:801:NAG:C7 | 2.42 | 0.49 |
| 1:B:496:LEU:HD21 | 1:B:509:ILE:CD1 | 2.38 | 0.49 |
| 1:C:27:ASN:C | 1:C:29:ASP:H | 2.16 | 0.49 |
| 1:C:155:PRO:HG2 | 2:C:801:NAG:C7 | 2.42 | 0.49 |
| 1:C:457:LEU:HD23 | 1:C:494:MET:SD | 2.52 | 0.49 |
| 1:A:27:ASN:C | 1:A:29:ASP:H | 2.15 | 0.49 |
| 1:A:419:VAL:HG22 | 2:A:809:NAG:H81 | 1.94 | 0.49 |
| 1:B:151:LEU:HD12 | 1:B:151:LEU:H | 1.78 | 0.49 |
| 1:C:216:ASP:HB2 | 1:C:217:ASN:ND2 | 2.27 | 0.49 |
| 1:C:397:GLU:OE1 | 1:C:397:GLU:N | 2.44 | 0.49 |
| 1:A:76:LEU:O | 1:A:94:ILE:N | 2.44 | 0.49 |
| 1:A:155:PRO:O | 1:A:157:GLU:N | 2.43 | 0.49 |
| 1:A:432:ASP:CB | 1:A:464:ILE:CG2 | 2.89 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:252:THR:CG2 | 1:B:253:PRO:HD2 | 2.43 | 0.49 |
| 1:B:273:THR:H | 2:B:803:NAG:HN2 | 1.61 | 0.49 |
| 1:A:82:SER:H | 1:B:90:GLU:C | 2.15 | 0.49 |
| 1:A:273:THR:H | 2:A:803:NAG:HN2 | 1.60 | 0.49 |
| 1:A:352:ILE:HG13 | 1:A:388:VAL:CB | 2.33 | 0.49 |
| 1:B:76:LEU:O | 1:B:94:ILE:N | 2.44 | 0.49 |
| 1:B:216:ASP:HB2 | 1:B:217:ASN:ND2 | 2.27 | 0.49 |
| 1:B:402:LYS:C | 1:B:403:ASN:O | 2.46 | 0.49 |
| 1:C:252:THR:CG2 | 1:C:253:PRO:HD2 | 2.43 | 0.49 |
| 1:A:261:ILE:HD11 | 1:A:264:ASN:HD22 | 1.77 | 0.49 |
| 1:A:290:PHE:CE2 | 1:A:293:ARG:CB | 2.92 | 0.49 |
| 1:A:327:ASN:OD1 | 1:A:360:ASP:OD1 | 2.30 | 0.49 |
| 1:A:363:GLN:C | 1:A:364:ILE:HG23 | 2.32 | 0.49 |
| 1:A:368:SER:OG | 1:A:370:PHE:HE1 | 1.94 | 0.49 |
| 1:A:512:LEU:HD11 | 1:A:519:ASN:ND2 | 2.28 | 0.49 |
| 1:B:234:GLU:HB2 | 1:B:235:ILE:HG22 | 1.93 | 0.49 |
| 1:C:367:LEU:HB2 | 1:C:413:THR:O | 2.12 | 0.49 |
| 1:A:282:LEU:CD2 | 1:A:283:THR:N | 2.76 | 0.49 |
| 1:A:482:THR:HG22 | 1:A:482:THR:O | 2.09 | 0.49 |
| 1:C:76:LEU:O | 1:C:94:ILE:N | 2.44 | 0.49 |
| 1:C:273:THR:H | 2:C:803:NAG:HN2 | 1.61 | 0.49 |
| 1:A:352:ILE:CG1 | 1:A:388:VAL:HB | 2.33 | 0.49 |
| 1:A:451:ASN:O | 1:A:534:GLY:CA | 2.60 | 0.49 |
| 2:A:807:NAG:O7 | 2:A:807:NAG:H3 | 2.11 | 0.49 |
| 1:B:281:ILE:HG23 | 1:B:281:ILE:O | 2.13 | 0.49 |
| 1:B:282:LEU:CD2 | 1:B:283:THR:N | 2.76 | 0.49 |
| 1:B:320:THR:CG2 | 2:B:807:NAG:C2 | 2.76 | 0.49 |
| 1:B:373:ASN:ND2 | 1:B:374:ASP:OD1 | 2.45 | 0.49 |
| 1:C:226:TYR:C | 1:C:227:THR:HG23 | 2.33 | 0.49 |
| 1:C:310:VAL:HG12 | 1:C:312:LEU:HG | 1.95 | 0.49 |
| 1:C:512:LEU:HD11 | 1:C:519:ASN:ND2 | 2.28 | 0.49 |
| 1:A:68:ARG:HD3 | 1:A:100:ASP:CA | 2.43 | 0.49 |
| 1:A:268:PHE:CD2 | 1:A:268:PHE:N | 2.75 | 0.49 |
| 1:B:82:SER:HB3 | 1:C:2:TRP:CA | 2.42 | 0.49 |
| 1:B:109:THR:HG22 | 1:B:110:GLN:CG | 2.42 | 0.49 |
| 1:B:192:GLN:HA | 1:B:203:VAL:O | 2.13 | 0.49 |
| 2:B:809:NAG:H62 | 2:B:810:NAG:O6 | 2.13 | 0.49 |
| 1:C:192:GLN:HA | 1:C:203:VAL:O | 2.13 | 0.49 |
| 1:C:336:VAL:CG1 | 1:C:338:ARG:HB2 | 2.43 | 0.49 |
| 1:A:151:LEU:HD12 | 1:A:151:LEU:H | 1.78 | 0.49 |
| 1:A:226:TYR:C | 1:A:227:THR:HG23 | 2.33 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:11:GLU:OE2 | 1:B:69:GLU:OE1 | 2.30 | 0.49 |
| 1:B:33:LYS:HB3 | 1:B:83:GLU:CG | 2.40 | 0.49 |
| 1:B:327:ASN:OD1 | 1:B:360:ASP:OD1 | 2.30 | 0.49 |
| 1:B:335:ALA:CB | 3:B:811:NDG:C6 | 2.90 | 0.49 |
| 1:C:151:LEU:HD12 | 1:C:151:LEU:H | 1.78 | 0.49 |
| 1:C:281:ILE:HG23 | 1:C:281:ILE:O | 2.13 | 0.49 |
| 1:C:449:ASP:CB | 1:C:532:CYS:N | 2.74 | 0.49 |
| 2:C:812:NAG:O7 | 2:C:812:NAG:C1 | 2.60 | 0.49 |
| 1:A:310:VAL:HG12 | 1:A:312:LEU:HG | 1.95 | 0.49 |
| 1:A:336:VAL:CG1 | 1:A:338:ARG:HB2 | 2.43 | 0.49 |
| 1:A:397:GLU:OE1 | 1:A:397:GLU:N | 2.45 | 0.49 |
| 1:A:423:THR:HB | 2:A:810:NAG:H83 | 1.94 | 0.49 |
| 1:A:432:ASP:CB | 1:A:464:ILE:HG21 | 2.43 | 0.49 |
| 1:B:310:VAL:HG12 | 1:B:312:LEU:HG | 1.95 | 0.49 |
| 1:C:224:LYS:HE3 | 2:C:806:NAG:H82 | 1.95 | 0.49 |
| 1:A:8:LYS:CD | 1:A:8:LYS:N | 2.51 | 0.48 |
| 1:A:365:GLN:HA | 1:A:416:GLY:HA3 | 1.95 | 0.48 |
| 2:A:809:NAG:H62 | 2:A:810:NAG:O6 | 2.13 | 0.48 |
| 1:B:154:ASP:CG | 1:B:155:PRO:HD2 | 2.33 | 0.48 |
| 1:B:186:GLU:OE1 | 2:B:801:NAG:C6 | 2.59 | 0.48 |
| 1:B:512:LEU:HD11 | 1:B:519:ASN:ND2 | 2.28 | 0.48 |
| 1:C:68:ARG:HD3 | 1:C:100:ASP:CA | 2.43 | 0.48 |
| 1:C:266:GLY:N | 1:C:268:PHE:CE2 | 2.76 | 0.48 |
| 1:A:41:GLN:HA | 1:A:45:ASN:HB2 | 1.95 | 0.48 |
| 1:A:367:LEU:HD13 | 1:A:412:VAL:CG2 | 2.43 | 0.48 |
| 1:B:41:GLN:HA | 1:B:45:ASN:HB2 | 1.96 | 0.48 |
| 1:B:266:GLY:N | 1:B:268:PHE:CE2 | 2.76 | 0.48 |
| 1:C:365:GLN:HA | 1:C:416:GLY:HA3 | 1.95 | 0.48 |
| 1:C:368:SER:OG | 1:C:370:PHE:HE1 | 1.94 | 0.48 |
| 1:C:371:ILE:HD12 | 1:C:371:ILE:HA | 1.65 | 0.48 |
| 2:C:809:NAG:H62 | 2:C:810:NAG:O6 | 2.13 | 0.48 |
| 1:A:89:GLU:OE2 | 1:B:3:VAL:CG1 | 2.55 | 0.48 |
| 1:A:154:ASP:CG | 1:A:155:PRO:HD2 | 2.33 | 0.48 |
| 1:A:224:LYS:HE3 | 2:A:806:NAG:H82 | 1.95 | 0.48 |
| 1:A:224:LYS:CE | 2:A:806:NAG:C8 | 2.91 | 0.48 |
| 1:B:224:LYS:CE | 2:B:806:NAG:C8 | 2.91 | 0.48 |
| 1:B:336:VAL:CG1 | 1:B:338:ARG:HB2 | 2.43 | 0.48 |
| 1:C:250:PRO:O | 1:C:255:TRP:CE3 | 2.66 | 0.48 |
| 1:C:261:ILE:HD11 | 1:C:264:ASN:HD22 | 1.77 | 0.48 |
| 2:C:807:NAG:H3 | 2:C:807:NAG:O7 | 2.11 | 0.48 |
| 1:A:43:ALA:HB3 | 1:C:79:HIS:HD1 | 1.63 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:432:ASP:CB | 1:B:464:ILE:HG21 | 2.43 | 0.48 |
| 1:C:119:GLU:OE2 | 1:C:216:ASP:OD1 | 2.32 | 0.48 |
| 1:C:186:GLU:OE1 | 2:C:801:NAG:C6 | 2.59 | 0.48 |
| 1:A:250:PRO:O | 1:A:255:TRP:CE3 | 2.66 | 0.48 |
| 1:C:11:GLU:OE2 | 1:C:69:GLU:OE1 | 2.30 | 0.48 |
| 1:A:373:ASN:ND2 | 1:A:374:ASP:OD1 | 2.45 | 0.48 |
| 1:B:151:LEU:O | 1:B:152:LYS:HB2 | 2.13 | 0.48 |
| 1:C:41:GLN:HA | 1:C:45:ASN:HB2 | 1.95 | 0.48 |
| 1:C:432:ASP:CB | 1:C:464:ILE:HG21 | 2.43 | 0.48 |
| 1:A:109:THR:HG22 | 1:A:110:GLN:CG | 2.42 | 0.48 |
| 1:A:109:THR:HG22 | 1:A:110:GLN:HG3 | 1.94 | 0.48 |
| 1:A:281:ILE:HG23 | 1:A:281:ILE:O | 2.13 | 0.48 |
| 1:B:119:GLU:OE2 | 1:B:216:ASP:OD1 | 2.32 | 0.48 |
| 1:B:155:PRO:O | 1:B:157:GLU:N | 2.43 | 0.48 |
| 1:B:352:ILE:HG13 | 1:B:388:VAL:CB | 2.33 | 0.48 |
| 1:B:367:LEU:HD13 | 1:B:412:VAL:CG2 | 2.43 | 0.48 |
| 1:A:46:PRO:CB | 1:C:35:TYR:CD2 | 2.72 | 0.48 |
| 1:A:192:GLN:HA | 1:A:203:VAL:O | 2.13 | 0.48 |
| 1:A:252:THR:CG2 | 1:A:253:PRO:HD2 | 2.43 | 0.48 |
| 1:A:333:VAL:CB | 1:A:334:PRO:CD | 2.88 | 0.48 |
| 1:B:67:ASP:OD2 | 1:B:69:GLU:HB2 | 2.13 | 0.48 |
| 1:B:150:ILE:HD11 | 1:B:165:ILE:HB | 1.96 | 0.48 |
| 1:B:367:LEU:HB2 | 1:B:413:THR:O | 2.12 | 0.48 |
| 2:B:812:NAG:O7 | 2:B:812:NAG:C1 | 2.60 | 0.48 |
| 1:C:154:ASP:CG | 1:C:155:PRO:HD2 | 2.33 | 0.48 |
| 1:C:224:LYS:CE | 2:C:806:NAG:C8 | 2.91 | 0.48 |
| 1:A:79:HIS:HD1 | 1:A:91:PRO:HG3 | 1.79 | 0.48 |
| 1:A:151:LEU:O | 1:A:152:LYS:HB2 | 2.13 | 0.48 |
| 1:B:226:TYR:C | 1:B:227:THR:HG23 | 2.33 | 0.48 |
| 1:C:366:LYS:HG2 | 1:C:367:LEU:H | 1.75 | 0.48 |
| 1:C:514:SER:CA | 1:C:517:GLN:O | 2.62 | 0.48 |
| 1:A:48:GLN:CG | 1:C:37:SER:CB | 2.92 | 0.48 |
| 1:A:367:LEU:HB2 | 1:A:413:THR:O | 2.12 | 0.48 |
| 1:B:225:THR:HA | 1:B:318:THR:O | 2.14 | 0.48 |
| 1:B:250:PRO:O | 1:B:255:TRP:CE3 | 2.66 | 0.48 |
| 1:B:365:GLN:HA | 1:B:416:GLY:HA3 | 1.95 | 0.48 |
| 1:C:150:ILE:HD11 | 1:C:165:ILE:HB | 1.96 | 0.48 |
| 1:C:335:ALA:CB | 3:C:811:NDG:C6 | 2.90 | 0.48 |
| 1:C:418:SER:O | 1:C:419:VAL:HG23 | 2.14 | 0.48 |
| 1:C:482:THR:HG22 | 1:C:482:THR:O | 2.08 | 0.48 |
| 1:A:366:LYS:HG2 | 1:A:367:LEU:H | 1.75 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:A:809:NAG:H61 | 2:A:810:NAG:C6 | 2.39 | 0.47 |
| 1:B:68:ARG:HD3 | 1:B:100:ASP:CA | 2.43 | 0.47 |
| 1:B:81:VAL:HA | 1:C:2:TRP:HA | 1.96 | 0.47 |
| 1:C:8:LYS:CD | 1:C:8:LYS:N | 2.51 | 0.47 |
| 1:C:67:ASP:OD2 | 1:C:69:GLU:HB2 | 2.13 | 0.47 |
| 1:A:67:ASP:OD2 | 1:A:69:GLU:HB2 | 2.13 | 0.47 |
| 1:A:119:GLU:OE2 | 1:A:216:ASP:OD1 | 2.32 | 0.47 |
| 1:A:246:ASP:C | 1:A:247:LEU:HD12 | 2.35 | 0.47 |
| 1:B:224:LYS:HE3 | 2:B:806:NAG:H82 | 1.95 | 0.47 |
| 1:B:418:SER:O | 1:B:419:VAL:HG23 | 2.14 | 0.47 |
| 2:B:809:NAG:C6 | 2:B:810:NAG:C6 | 2.92 | 0.47 |
| 1:C:451:ASN:O | 1:C:534:GLY:CA | 2.60 | 0.47 |
| 2:C:809:NAG:C6 | 2:C:810:NAG:C6 | 2.92 | 0.47 |
| 1:A:82:SER:C | 1:B:90:GLU:HG3 | 2.21 | 0.47 |
| 1:A:226:TYR:O | 1:A:227:THR:HG23 | 2.15 | 0.47 |
| 1:A:448:CYS:SG | 1:A:537:ILE:CG2 | 3.01 | 0.47 |
| 1:A:450:GLN:CB | 1:A:533:GLU:HA | 2.29 | 0.47 |
| 1:A:537:ILE:CG1 | 1:A:538:LYS:N | 2.77 | 0.47 |
| 1:B:537:ILE:CG1 | 1:B:538:LYS:N | 2.77 | 0.47 |
| 1:C:151:LEU:O | 1:C:152:LYS:HB2 | 2.13 | 0.47 |
| 1:A:76:LEU:N | 1:C:87:PRO:HG2 | 2.26 | 0.47 |
| 1:A:77:SER:OG | 1:C:90:GLU:OE1 | 2.30 | 0.47 |
| 1:A:514:SER:HG | 1:A:519:ASN:HA | 1.79 | 0.47 |
| 2:A:809:NAG:C6 | 2:A:810:NAG:C6 | 2.92 | 0.47 |
| 1:B:300:ILE:HD12 | 1:B:300:ILE:N | 2.29 | 0.47 |
| 1:C:226:TYR:O | 1:C:227:THR:HG23 | 2.15 | 0.47 |
| 1:A:227:THR:CG2 | 2:A:807:NAG:H83 | 2.32 | 0.47 |
| 1:B:514:SER:CA | 1:B:517:GLN:O | 2.62 | 0.47 |
| 1:C:261:ILE:CD1 | 1:C:264:ASN:ND2 | 2.77 | 0.47 |
| 1:C:367:LEU:HD13 | 1:C:412:VAL:CG2 | 2.43 | 0.47 |
| 1:A:117:VAL:O | 1:A:212:THR:N | 2.46 | 0.47 |
| 1:B:268:PHE:CA | 1:B:285:ALA:HB3 | 2.45 | 0.47 |
| 1:B:301:THR:CG2 | 1:B:316:THR:HG23 | 2.45 | 0.47 |
| 1:C:320:THR:CB | 2:C:807:NAG:N2 | 2.78 | 0.47 |
| 1:A:44:ASP:HB3 | 1:C:77:SER:C | 2.32 | 0.47 |
| 1:A:225:THR:HA | 1:A:318:THR:O | 2.14 | 0.47 |
| 1:A:261:ILE:CD1 | 1:A:264:ASN:ND2 | 2.77 | 0.47 |
| 1:A:300:ILE:HD12 | 1:A:300:ILE:N | 2.29 | 0.47 |
| 1:A:301:THR:CG2 | 1:A:316:THR:HG23 | 2.45 | 0.47 |
| 1:A:402:LYS:C | 1:A:403:ASN:O | 2.46 | 0.47 |
| 1:A:514:SER:CA | 1:A:517:GLN:O | 2.62 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:A:812:NAG:O7 | 2:A:812:NAG:C1 | 2.60 | 0.47 |
| 1:B:80:ALA:HB3 | 1:C:1:ASP:CA | 2.40 | 0.47 |
| 1:B:108:PHE:HE1 | 1:B:203:VAL:HG23 | 1.80 | 0.47 |
| 1:B:246:ASP:C | 1:B:247:LEU:HD12 | 2.35 | 0.47 |
| 1:B:261:ILE:CD1 | 1:B:264:ASN:ND2 | 2.77 | 0.47 |
| 1:B:449:ASP:CB | 1:B:532:CYS:N | 2.74 | 0.47 |
| 1:C:23:GLN:HB2 | 1:C:59:TRP:CE3 | 2.50 | 0.47 |
| 1:C:50:VAL:HB | 1:C:51:PHE:CD1 | 2.50 | 0.47 |
| 1:C:300:ILE:HD12 | 1:C:300:ILE:N | 2.30 | 0.47 |
| 1:C:352:ILE:CG1 | 1:C:388:VAL:HB | 2.33 | 0.47 |
| 1:C:423:THR:HB | 2:C:810:NAG:H83 | 1.93 | 0.47 |
| 1:A:108:PHE:HE1 | 1:A:203:VAL:HG23 | 1.80 | 0.47 |
| 1:C:36:TYR:O | 1:C:55:TRP:HA | 2.15 | 0.47 |
| 1:C:225:THR:HA | 1:C:318:THR:O | 2.14 | 0.47 |
| 1:C:282:LEU:CD2 | 1:C:283:THR:N | 2.76 | 0.47 |
| 1:C:481:LEU:HD12 | 1:C:481:LEU:HA | 1.50 | 0.47 |
| 1:A:23:GLN:HB2 | 1:A:59:TRP:CE3 | 2.50 | 0.47 |
| 1:A:39:THR:HA | 1:C:79:HIS:HD1 | 1.79 | 0.47 |
| 1:A:150:ILE:HD11 | 1:A:165:ILE:HB | 1.96 | 0.47 |
| 1:A:276:GLU:HG3 | 1:A:277:SER:N | 2.25 | 0.47 |
| 1:C:246:ASP:C | 1:C:247:LEU:HD12 | 2.35 | 0.47 |
| 1:A:268:PHE:CA | 1:A:285:ALA:HB3 | 2.45 | 0.47 |
| 1:A:320:THR:CB | 2:A:807:NAG:N2 | 2.78 | 0.47 |
| 1:B:36:TYR:O | 1:B:55:TRP:HA | 2.15 | 0.47 |
| 1:B:310:VAL:HG12 | 1:B:311:PRO:O | 2.15 | 0.47 |
| 1:C:301:THR:CG2 | 1:C:316:THR:HG23 | 2.45 | 0.47 |
| 1:C:448:CYS:SG | 1:C:537:ILE:CG2 | 3.01 | 0.47 |
| 1:C:496:LEU:HD21 | 1:C:509:ILE:CD1 | 2.38 | 0.47 |
| 1:C:537:ILE:CG1 | 1:C:538:LYS:N | 2.77 | 0.47 |
| 1:A:262:ARG:HG3 | 1:A:299:GLN:HB2 | 1.98 | 0.46 |
| 1:B:226:TYR:O | 1:B:227:THR:HG23 | 2.15 | 0.46 |
| 1:B:379:LEU:H | 1:B:379:LEU:CD2 | 2.22 | 0.46 |
| 1:C:402:LYS:C | 1:C:403:ASN:O | 2.46 | 0.46 |
| 1:A:41:GLN:CA | 1:C:81:VAL:CG1 | 2.92 | 0.46 |
| 1:A:310:VAL:HG12 | 1:A:311:PRO:O | 2.15 | 0.46 |
| 1:B:272:THR:HG23 | 2:B:803:NAG:HN2 | 1.81 | 0.46 |
| 1:C:272:THR:HG23 | 2:C:803:NAG:HN2 | 1.80 | 0.46 |
| 1:A:27:ASN:ND2 | 1:A:28:LYS:N | 2.50 | 0.46 |
| 1:B:50:VAL:HB | 1:B:51:PHE:CD1 | 2.50 | 0.46 |
| 1:C:54:GLU:HB2 | 1:C:57:THR:OG1 | 2.16 | 0.46 |
| 1:C:100:ASP:OD1 | 1:C:101:GLN:N | 2.49 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:268:PHE:CA | 1:C:285:ALA:HB3 | 2.45 | 0.46 |
| 1:C:271:ILE:HG23 | 1:C:271:ILE:O | 2.15 | 0.46 |
| 1:C:374:ASP:N | 1:C:374:ASP:OD1 | 2.49 | 0.46 |
| 1:C:408:VAL:O | 1:C:426:LEU:N | 2.49 | 0.46 |
| 2:C:809:NAG:H61 | 2:C:810:NAG:C6 | 2.39 | 0.46 |
| 1:B:270:ASN:OD1 | 1:B:271:ILE:N | 2.49 | 0.46 |
| 1:B:371:ILE:HD12 | 1:B:371:ILE:HA | 1.65 | 0.46 |
| 1:C:363:GLN:O | 1:C:364:ILE:CG2 | 2.63 | 0.46 |
| 1:C:373:ASN:CG | 1:C:374:ASP:H | 2.18 | 0.46 |
| 1:C:421:THR:HG21 | 2:C:809:NAG:H61 | 1.98 | 0.46 |
| 1:A:76:LEU:CA | 1:C:87:PRO:HG2 | 2.45 | 0.46 |
| 1:A:241:ARG:HE | 1:A:281:ILE:CD1 | 2.24 | 0.46 |
| 1:A:272:THR:HG23 | 2:A:803:NAG:HN2 | 1.81 | 0.46 |
| 1:A:374:ASP:N | 1:A:374:ASP:OD1 | 2.49 | 0.46 |
| 1:A:418:SER:O | 1:A:419:VAL:HG23 | 2.14 | 0.46 |
| 1:B:54:GLU:HB2 | 1:B:57:THR:OG1 | 2.16 | 0.46 |
| 1:B:227:THR:N | 2:B:812:NAG:H2 | 2.31 | 0.46 |
| 1:B:290:PHE:CE2 | 1:B:293:ARG:CB | 2.92 | 0.46 |
| 1:C:187:TYR:HE1 | 1:C:211:ILE:HD11 | 1.81 | 0.46 |
| 1:C:506:ASP:OD1 | 1:C:506:ASP:N | 2.49 | 0.46 |
| 1:A:194:THR:CG2 | 1:A:195:ASP:N | 2.79 | 0.46 |
| 1:A:270:ASN:OD1 | 1:A:271:ILE:N | 2.49 | 0.46 |
| 1:B:374:ASP:N | 1:B:374:ASP:OD1 | 2.49 | 0.46 |
| 1:A:50:VAL:HB | 1:A:51:PHE:CD1 | 2.50 | 0.46 |
| 1:A:64:ARG:HH12 | 1:C:44:ASP:HB2 | 1.80 | 0.46 |
| 1:A:187:TYR:HE1 | 1:A:211:ILE:HD11 | 1.81 | 0.46 |
| 1:A:403:ASN:CB | 2:A:902:NAG:H83 | 2.21 | 0.46 |
| 1:A:415:ASP:CG | 1:A:416:GLY:H | 2.16 | 0.46 |
| 1:B:23:GLN:HB2 | 1:B:59:TRP:CE3 | 2.50 | 0.46 |
| 1:B:109:THR:CB | 1:B:131:SER:HB2 | 2.46 | 0.46 |
| 1:B:320:THR:CB | 2:B:807:NAG:N2 | 2.78 | 0.46 |
| 1:B:363:GLN:O | 1:B:364:ILE:CG2 | 2.63 | 0.46 |
| 1:B:371:ILE:HD13 | 1:B:381:VAL:HG11 | 1.95 | 0.46 |
| 1:B:415:ASP:CG | 1:B:416:GLY:H | 2.17 | 0.46 |
| 1:B:459:ILE:HD12 | 1:B:459:ILE:N | 2.31 | 0.46 |
| 1:C:117:VAL:O | 1:C:212:THR:N | 2.46 | 0.46 |
| 1:A:5:PRO:HA | 1:A:6:PRO:HD3 | 1.86 | 0.46 |
| 1:A:373:ASN:CG | 1:A:374:ASP:H | 2.18 | 0.46 |
| 1:B:271:ILE:O | 1:B:271:ILE:HG23 | 2.15 | 0.46 |
| 1:C:374:ASP:C | 1:C:375:PRO:O | 2.54 | 0.46 |
| 1:A:40:GLY:CA | 1:C:79:HIS:HB3 | 2.45 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:54:GLU:HB2 | 1:A:57:THR:OG1 | 2.16 | 0.46 |
| 1:A:84:ASN:O | 1:B:79:HIS:CE1 | 2.69 | 0.46 |
| 1:A:506:ASP:OD1 | 1:A:506:ASP:N | 2.49 | 0.46 |
| 1:B:100:ASP:OD1 | 1:B:101:GLN:N | 2.49 | 0.46 |
| 1:B:187:TYR:HE1 | 1:B:211:ILE:HD11 | 1.81 | 0.46 |
| 1:B:373:ASN:CG | 1:B:374:ASP:H | 2.18 | 0.46 |
| 1:C:227:THR:N | 2:C:812:NAG:H2 | 2.31 | 0.46 |
| 1:C:310:VAL:HG12 | 1:C:311:PRO:O | 2.15 | 0.46 |
| 1:C:459:ILE:HD12 | 1:C:459:ILE:N | 2.31 | 0.46 |
| 1:A:36:TYR:O | 1:A:55:TRP:HA | 2.15 | 0.46 |
| 1:A:461:ASP:HB3 | 1:A:468:THR:CG2 | 2.46 | 0.46 |
| 1:B:227:THR:HG22 | 1:B:320:THR:HB | 1.98 | 0.46 |
| 2:B:805:NAG:C5 | 2:B:806:NAG:H83 | 2.46 | 0.46 |
| 1:C:109:THR:CB | 1:C:131:SER:HB2 | 2.46 | 0.46 |
| 1:C:514:SER:HG | 1:C:519:ASN:HA | 1.81 | 0.46 |
| 1:A:227:THR:HG22 | 1:A:320:THR:HB | 1.98 | 0.45 |
| 1:A:227:THR:N | 2:A:812:NAG:H2 | 2.31 | 0.45 |
| 1:B:194:THR:CG2 | 1:B:195:ASP:N | 2.79 | 0.45 |
| 1:C:270:ASN:OD1 | 1:C:271:ILE:N | 2.49 | 0.45 |
| 1:C:272:THR:CG2 | 1:C:273:THR:N | 2.76 | 0.45 |
| 1:C:473:VAL:CG2 | 1:C:487:LEU:HD21 | 2.47 | 0.45 |
| 1:A:44:ASP:OD1 | 1:C:91:PRO:HA | 2.16 | 0.45 |
| 1:A:100:ASP:OD1 | 1:A:101:GLN:N | 2.49 | 0.45 |
| 1:A:152:LYS:O | 1:A:189:LEU:HA | 2.17 | 0.45 |
| 1:A:363:GLN:O | 1:A:364:ILE:CG2 | 2.64 | 0.45 |
| 1:A:473:VAL:CG2 | 1:A:487:LEU:HD21 | 2.47 | 0.45 |
| 1:A:511:VAL:N | 1:A:523:THR:O | 2.46 | 0.45 |
| 1:B:506:ASP:OD1 | 1:B:506:ASP:N | 2.49 | 0.45 |
| 1:C:79:HIS:HD1 | 1:C:91:PRO:HG3 | 1.79 | 0.45 |
| 1:A:408:VAL:O | 1:A:426:LEU:N | 2.49 | 0.45 |
| 1:A:459:ILE:N | 1:A:459:ILE:HD12 | 2.31 | 0.45 |
| 1:B:421:THR:HG21 | 2:B:809:NAG:H61 | 1.98 | 0.45 |
| 1:C:262:ARG:HG3 | 1:C:299:GLN:HB2 | 1.98 | 0.45 |
| 1:A:380:THR:CG2 | 1:A:381:VAL:N | 2.79 | 0.45 |
| 1:C:155:PRO:CB | 2:C:801:NAG:C8 | 2.94 | 0.45 |
| 1:B:252:THR:HA | 1:B:253:PRO:HD3 | 1.81 | 0.45 |
| 1:C:152:LYS:O | 1:C:189:LEU:HA | 2.17 | 0.45 |
| 1:C:469:TYR:CD2 | 1:C:470:PRO:N | 2.85 | 0.45 |
| 1:A:162:LEU:HB2 | 1:A:163:PHE:CE1 | 2.52 | 0.45 |
| 1:B:261:ILE:HD11 | 1:B:264:ASN:ND2 | 2.32 | 0.45 |
| 1:B:380:THR:CG2 | 1:B:381:VAL:N | 2.79 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:336:VAL:HG11 | 1:C:338:ARG:HD2 | 1.99 | 0.45 |
| 1:C:450:GLN:CB | 1:C:533:GLU:OE2 | 2.64 | 0.45 |
| 1:A:109:THR:CB | 1:A:131:SER:HB2 | 2.46 | 0.45 |
| 1:A:155:PRO:CB | 2:A:801:NAG:C8 | 2.94 | 0.45 |
| 1:B:88:VAL:H | 1:C:1:ASP:H3 | 1.62 | 0.45 |
| 1:B:381:VAL:HA | 1:B:387:ILE:O | 2.16 | 0.45 |
| 1:B:461:ASP:HB3 | 1:B:468:THR:CG2 | 2.46 | 0.45 |
| 1:B:469:TYR:CD2 | 1:B:470:PRO:N | 2.85 | 0.45 |
| 1:C:461:ASP:HB3 | 1:C:468:THR:CG2 | 2.46 | 0.45 |
| 1:A:44:ASP:O | 1:C:78:SER:HA | 2.17 | 0.45 |
| 1:A:271:ILE:HG23 | 1:A:271:ILE:O | 2.15 | 0.45 |
| 1:A:380:THR:HG22 | 1:A:381:VAL:N | 2.32 | 0.45 |
| 1:A:469:TYR:CD2 | 1:A:470:PRO:N | 2.85 | 0.45 |
| 1:A:469:TYR:CE2 | 1:A:470:PRO:HB2 | 2.52 | 0.45 |
| 1:B:109:THR:HB | 1:B:131:SER:HB2 | 1.99 | 0.45 |
| 1:B:286:LYS:C | 1:B:287:GLY:O | 2.55 | 0.45 |
| 1:B:408:VAL:O | 1:B:426:LEU:N | 2.49 | 0.45 |
| 1:C:227:THR:HG22 | 1:C:320:THR:HB | 1.98 | 0.45 |
| 1:C:482:THR:O | 1:C:483:TRP:CD2 | 2.70 | 0.45 |
| 1:A:336:VAL:HG11 | 1:A:338:ARG:HD2 | 1.99 | 0.45 |
| 2:A:805:NAG:C5 | 2:A:806:NAG:H83 | 2.46 | 0.45 |
| 1:B:272:THR:CG2 | 1:B:273:THR:N | 2.76 | 0.45 |
| 1:B:426:LEU:HD13 | 1:B:426:LEU:C | 2.37 | 0.45 |
| 1:B:469:TYR:CE2 | 1:B:470:PRO:HB2 | 2.52 | 0.45 |
| 1:B:482:THR:O | 1:B:483:TRP:CD2 | 2.70 | 0.45 |
| 1:C:162:LEU:HB2 | 1:C:163:PHE:CE1 | 2.52 | 0.45 |
| 1:C:286:LYS:C | 1:C:287:GLY:O | 2.55 | 0.45 |
| 1:C:380:THR:CG2 | 1:C:381:VAL:N | 2.79 | 0.45 |
| 1:C:450:GLN:CB | 1:C:533:GLU:HA | 2.29 | 0.45 |
| 2:C:805:NAG:C5 | 2:C:806:NAG:H83 | 2.46 | 0.45 |
| 1:A:109:THR:HB | 1:A:131:SER:HB2 | 1.99 | 0.45 |
| 1:A:312:LEU:O | 3:A:804:NDG:H8C1 | 2.17 | 0.45 |
| 1:A:421:THR:HG21 | 2:A:809:NAG:H61 | 1.98 | 0.45 |
| 1:A:450:GLN:CB | 1:A:533:GLU:OE2 | 2.64 | 0.45 |
| 1:B:339:VAL:HG11 | 1:B:351:ILE:HG23 | 1.98 | 0.45 |
| 1:B:450:GLN:CB | 1:B:533:GLU:OE2 | 2.64 | 0.45 |
| 1:C:468:THR:C | 1:C:469:TYR:O | 2.54 | 0.45 |
| 1:C:469:TYR:CE2 | 1:C:470:PRO:HB2 | 2.52 | 0.45 |
| 1:C:519:ASN:CG | 1:C:519:ASN:O | 2.55 | 0.45 |
| 1:A:32:ASN:HD22 | 1:A:83:GLU:N | 2.13 | 0.44 |
| 1:A:440:PRO:HB3 | 1:A:457:LEU:CD2 | 2.43 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:482:THR:O | 1:A:483:TRP:CD2 | 2.70 | 0.44 |
| 1:B:152:LYS:O | 1:B:189:LEU:HA | 2.17 | 0.44 |
| 1:B:449:ASP:CB | 1:B:532:CYS:H | 2.22 | 0.44 |
| 1:B:473:VAL:CG2 | 1:B:487:LEU:HD21 | 2.47 | 0.44 |
| 1:C:426:LEU:HD13 | 1:C:426:LEU:C | 2.37 | 0.44 |
| 1:B:80:ALA:HB3 | 1:C:1:ASP:N | 2.32 | 0.44 |
| 1:B:82:SER:H | 1:C:2:TRP:CA | 1.92 | 0.44 |
| 1:B:440:PRO:HB3 | 1:B:457:LEU:CD2 | 2.43 | 0.44 |
| 1:C:67:ASP:OD1 | 1:C:69:GLU:HB2 | 2.18 | 0.44 |
| 1:C:108:PHE:HE1 | 1:C:203:VAL:HG23 | 1.80 | 0.44 |
| 1:C:194:THR:CG2 | 1:C:195:ASP:N | 2.79 | 0.44 |
| 1:C:261:ILE:HD11 | 1:C:264:ASN:ND2 | 2.32 | 0.44 |
| 1:C:312:LEU:O | 3:C:804:NDG:H8C1 | 2.17 | 0.44 |
| 1:C:440:PRO:HB3 | 1:C:457:LEU:CD2 | 2.43 | 0.44 |
| 1:A:45:ASN:HA | 1:C:37:SER:O | 2.18 | 0.44 |
| 1:A:64:ARG:NH1 | 1:C:44:ASP:HB2 | 2.33 | 0.44 |
| 1:A:187:TYR:CE1 | 1:A:211:ILE:HD11 | 2.52 | 0.44 |
| 1:B:32:ASN:ND2 | 1:B:83:GLU:CB | 2.62 | 0.44 |
| 1:B:299:GLN:CG | 1:B:318:THR:HG23 | 2.42 | 0.44 |
| 1:C:232:GLU:HA | 1:C:288:LEU:HD12 | 1.99 | 0.44 |
| 1:C:442:PRO:HD2 | 1:C:457:LEU:HD12 | 2.00 | 0.44 |
| 1:A:67:ASP:OD1 | 1:A:69:GLU:HB2 | 2.18 | 0.44 |
| 1:A:339:VAL:HG11 | 1:A:351:ILE:HG23 | 1.98 | 0.44 |
| 1:B:232:GLU:HA | 1:B:288:LEU:HD12 | 1.99 | 0.44 |
| 1:B:241:ARG:HE | 1:B:281:ILE:CD1 | 2.24 | 0.44 |
| 1:B:461:ASP:HB3 | 1:B:468:THR:HG22 | 2.00 | 0.44 |
| 1:B:485:ALA:O | 1:B:486:GLU:OE1 | 2.35 | 0.44 |
| 1:C:187:TYR:CE1 | 1:C:211:ILE:HD11 | 2.52 | 0.44 |
| 1:C:485:ALA:O | 1:C:486:GLU:OE1 | 2.35 | 0.44 |
| 1:A:374:ASP:C | 1:A:375:PRO:O | 2.54 | 0.44 |
| 1:A:461:ASP:HB3 | 1:A:468:THR:HG22 | 2.00 | 0.44 |
| 1:B:162:LEU:HB2 | 1:B:163:PHE:CE1 | 2.52 | 0.44 |
| 1:B:312:LEU:O | 3:B:804:NDG:H8C1 | 2.17 | 0.44 |
| 1:B:448:CYS:SG | 1:B:537:ILE:CG2 | 3.01 | 0.44 |
| 1:B:519:ASN:CG | 1:B:519:ASN:O | 2.55 | 0.44 |
| 1:C:151:LEU:HD12 | 1:C:151:LEU:N | 2.33 | 0.44 |
| 1:C:224:LYS:HE3 | 2:C:806:NAG:C8 | 2.48 | 0.44 |
| 1:C:339:VAL:HG11 | 1:C:351:ILE:HG23 | 1.98 | 0.44 |
| 1:A:4:ILE:HA | 1:A:5:PRO:HD3 | 1.72 | 0.44 |
| 1:B:67:ASP:OD1 | 1:B:69:GLU:HB2 | 2.18 | 0.44 |
| 1:B:86:SER:HA | 1:B:87:PRO:HD3 | 1.83 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:336:VAL:HG11 | 1:B:338:ARG:HD2 | 1.99 | 0.44 |
| 1:B:380:THR:HG22 | 1:B:381:VAL:N | 2.32 | 0.44 |
| 1:A:224:LYS:HE3 | 2:A:806:NAG:C8 | 2.48 | 0.44 |
| 1:A:381:VAL:HA | 1:A:387:ILE:O | 2.17 | 0.44 |
| 1:B:117:VAL:O | 1:B:212:THR:N | 2.46 | 0.44 |
| 1:B:151:LEU:HD12 | 1:B:151:LEU:N | 2.33 | 0.44 |
| 1:B:187:TYR:CE1 | 1:B:211:ILE:HD11 | 2.52 | 0.44 |
| 1:B:374:ASP:C | 1:B:375:PRO:O | 2.54 | 0.44 |
| 1:B:396:ARG:NH2 | 1:B:464:ILE:HG22 | 2.12 | 0.44 |
| 1:C:134:ASP:HB2 | 1:C:146:LEU:HD11 | 1.99 | 0.44 |
| 1:C:380:THR:HG22 | 1:C:381:VAL:N | 2.32 | 0.44 |
| 1:C:381:VAL:HA | 1:C:387:ILE:O | 2.17 | 0.44 |
| 1:A:49:GLY:HA2 | 1:C:39:THR:HB | 0.85 | 0.44 |
| 1:A:151:LEU:HD12 | 1:A:151:LEU:N | 2.33 | 0.44 |
| 1:A:426:LEU:HD13 | 1:A:426:LEU:C | 2.38 | 0.44 |
| 1:C:461:ASP:HB3 | 1:C:468:THR:HG22 | 2.00 | 0.44 |
| 1:A:45:ASN:HA | 1:C:37:SER:C | 2.37 | 0.44 |
| 1:A:261:ILE:HD11 | 1:A:264:ASN:ND2 | 2.32 | 0.44 |
| 1:A:485:ALA:O | 1:A:486:GLU:OE1 | 2.35 | 0.44 |
| 1:B:262:ARG:HG3 | 1:B:299:GLN:HB2 | 1.98 | 0.44 |
| 1:C:27:ASN:ND2 | 1:C:28:LYS:N | 2.50 | 0.44 |
| 1:C:86:SER:HA | 1:C:87:PRO:HD3 | 1.83 | 0.44 |
| 1:C:109:THR:HB | 1:C:131:SER:HB2 | 1.99 | 0.44 |
| 1:C:194:THR:HG23 | 1:C:201:LEU:O | 2.18 | 0.44 |
| 1:C:354:LEU:HD12 | 1:C:386:GLY:O | 2.18 | 0.44 |
| 1:B:220:ILE:O | 1:B:220:ILE:HG22 | 2.18 | 0.43 |
| 1:B:290:PHE:CD2 | 1:B:293:ARG:O | 2.71 | 0.43 |
| 1:B:468:THR:C | 1:B:469:TYR:O | 2.54 | 0.43 |
| 1:C:371:ILE:HD13 | 1:C:381:VAL:HG11 | 1.95 | 0.43 |
| 1:A:28:LYS:CD | 1:A:88:VAL:HG12 | 2.38 | 0.43 |
| 1:A:286:LYS:C | 1:A:287:GLY:O | 2.55 | 0.43 |
| 1:B:27:ASN:ND2 | 1:B:28:LYS:N | 2.50 | 0.43 |
| 1:B:34:VAL:HG22 | 1:C:2:TRP:HB2 | 2.00 | 0.43 |
| 1:B:134:ASP:HB2 | 1:B:146:LEU:HD11 | 1.99 | 0.43 |
| 1:B:247:LEU:HD12 | 1:B:247:LEU:N | 2.33 | 0.43 |
| 1:B:366:LYS:HG2 | 1:B:367:LEU:H | 1.75 | 0.43 |
| 1:B:442:PRO:HD2 | 1:B:457:LEU:HD12 | 2.00 | 0.43 |
| 1:B:502:LEU:HD23 | 1:B:502:LEU:HA | 1.82 | 0.43 |
| 1:B:524:VAL:HG21 | 2:B:904:NAG:C8 | 2.44 | 0.43 |
| 1:A:134:ASP:HB2 | 1:A:146:LEU:HD11 | 1.99 | 0.43 |
| 1:A:220:ILE:O | 1:A:220:ILE:HG22 | 2.18 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:247:LEU:HD12 | 1:A:247:LEU:N | 2.33 | 0.43 |
| 1:A:421:THR:CG2 | 1:A:422:GLY:N | 2.81 | 0.43 |
| 1:B:155:PRO:CB | 2:B:801:NAG:C8 | 2.94 | 0.43 |
| 1:C:247:LEU:HD12 | 1:C:247:LEU:N | 2.33 | 0.43 |
| 1:C:260:LYS:HB3 | 1:C:260:LYS:HE3 | 1.81 | 0.43 |
| 1:A:35:TYR:HB3 | 1:B:90:GLU:CD | 2.38 | 0.43 |
| 1:B:194:THR:HG23 | 1:B:201:LEU:O | 2.18 | 0.43 |
| 1:B:224:LYS:HE3 | 2:B:806:NAG:C8 | 2.48 | 0.43 |
| 1:B:297:VAL:HG21 | 2:B:807:NAG:H62 | 2.01 | 0.43 |
| 1:B:354:LEU:HD12 | 1:B:386:GLY:O | 2.18 | 0.43 |
| 1:A:82:SER:HG | 1:B:91:PRO:C | 2.19 | 0.43 |
| 1:A:232:GLU:HA | 1:A:288:LEU:HD12 | 1.99 | 0.43 |
| 1:A:297:VAL:HG21 | 2:A:807:NAG:H62 | 2.01 | 0.43 |
| 1:A:468:THR:C | 1:A:469:TYR:O | 2.54 | 0.43 |
| 1:B:4:ILE:HA | 1:B:5:PRO:HD3 | 1.72 | 0.43 |
| 1:B:421:THR:CG2 | 1:B:422:GLY:N | 2.81 | 0.43 |
| 1:C:220:ILE:O | 1:C:220:ILE:HG22 | 2.18 | 0.43 |
| 1:A:290:PHE:CD2 | 1:A:293:ARG:O | 2.71 | 0.43 |
| 1:B:195:ASP:HB3 | 1:B:196:LEU:HG | 2.01 | 0.43 |
| 1:A:344:ASP:O | 1:A:344:ASP:CG | 2.57 | 0.43 |
| 1:A:354:LEU:HD12 | 1:A:386:GLY:O | 2.18 | 0.43 |
| 1:A:519:ASN:CG | 1:A:519:ASN:O | 2.55 | 0.43 |
| 1:B:1:ASP:CG | 1:B:2:TRP:N | 2.70 | 0.43 |
| 1:B:518:ASN:C | 1:B:520:PRO:CD | 2.87 | 0.43 |
| 1:C:290:PHE:CD2 | 1:C:293:ARG:O | 2.71 | 0.43 |
| 1:C:368:SER:CB | 1:C:370:PHE:HE1 | 2.31 | 0.43 |
| 1:C:441:SER:CB | 1:C:442:PRO:HD3 | 2.47 | 0.43 |
| 1:C:539:CYS:HB3 | 1:C:540:GLN:H | 1.45 | 0.43 |
| 1:A:46:PRO:HD2 | 1:C:35:TYR:O | 2.19 | 0.43 |
| 2:A:805:NAG:H62 | 2:A:806:NAG:N2 | 2.31 | 0.43 |
| 1:B:239:VAL:HG13 | 1:B:240:GLN:N | 2.34 | 0.43 |
| 1:A:194:THR:HG23 | 1:A:201:LEU:O | 2.18 | 0.43 |
| 1:A:239:VAL:HG13 | 1:A:240:GLN:N | 2.33 | 0.43 |
| 1:A:419:VAL:HG13 | 1:A:420:GLY:N | 2.34 | 0.43 |
| 1:C:239:VAL:HG13 | 1:C:240:GLN:N | 2.33 | 0.43 |
| 1:A:48:GLN:O | 1:C:44:ASP:HB3 | 2.18 | 0.43 |
| 1:B:188:THR:H | 2:B:801:NAG:H83 | 1.84 | 0.43 |
| 1:B:367:LEU:H | 1:B:367:LEU:HG | 1.41 | 0.43 |
| 1:B:419:VAL:HG13 | 1:B:420:GLY:N | 2.34 | 0.43 |
| 2:B:810:NAG:O7 | 2:B:810:NAG:C1 | 2.67 | 0.43 |
| 1:C:175:ILE:CG2 | 1:C:176:GLY:N | 2.82 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:333:VAL:HG23 | 1:C:334:PRO:HD3 | 2.01 | 0.43 |
| 1:C:421:THR:CG2 | 1:C:422:GLY:N | 2.81 | 0.43 |
| 1:A:264:ASN:HB3 | 1:A:267:GLY:HA2 | 2.01 | 0.42 |
| 1:A:347:ARG:HG3 | 1:A:392:GLY:N | 2.33 | 0.42 |
| 1:B:522:LEU:HD23 | 1:B:522:LEU:HA | 1.36 | 0.42 |
| 1:C:22:VAL:CG2 | 1:C:23:GLN:N | 2.81 | 0.42 |
| 1:C:195:ASP:HB3 | 1:C:196:LEU:HG | 2.01 | 0.42 |
| 1:C:344:ASP:O | 1:C:344:ASP:CG | 2.57 | 0.42 |
| 1:C:409:ILE:HD13 | 3:C:811:NDG:H8C3 | 2.01 | 0.42 |
| 1:C:522:LEU:HD23 | 1:C:522:LEU:HA | 1.36 | 0.42 |
| 1:A:32:ASN:ND2 | 1:A:83:GLU:CB | 2.62 | 0.42 |
| 1:A:40:GLY:O | 1:A:45:ASN:HB2 | 2.19 | 0.42 |
| 1:A:89:GLU:CD | 1:B:1:ASP:N | 2.37 | 0.42 |
| 1:A:90:GLU:O | 1:A:91:PRO:O | 2.37 | 0.42 |
| 1:A:368:SER:CB | 1:A:370:PHE:HE1 | 2.31 | 0.42 |
| 1:A:371:ILE:HG13 | 1:A:410:MET:SD | 2.59 | 0.42 |
| 1:A:439:VAL:HA | 1:A:440:PRO:HD3 | 1.81 | 0.42 |
| 1:B:22:VAL:CG2 | 1:B:23:GLN:N | 2.81 | 0.42 |
| 1:B:32:ASN:HD22 | 1:B:83:GLU:N | 2.13 | 0.42 |
| 1:C:419:VAL:HG13 | 1:C:420:GLY:N | 2.33 | 0.42 |
| 1:A:154:ASP:HB3 | 2:A:801:NAG:C7 | 2.48 | 0.42 |
| 1:A:450:GLN:HG3 | 1:A:532:CYS:O | 2.10 | 0.42 |
| 1:B:451:ASN:O | 1:B:534:GLY:CA | 2.60 | 0.42 |
| 1:C:90:GLU:O | 1:C:91:PRO:O | 2.37 | 0.42 |
| 1:A:22:VAL:CG2 | 1:A:23:GLN:N | 2.81 | 0.42 |
| 1:A:347:ARG:HD2 | 1:A:392:GLY:CA | 2.50 | 0.42 |
| 1:A:371:ILE:HA | 1:A:410:MET:HB3 | 2.02 | 0.42 |
| 1:A:442:PRO:HD2 | 1:A:457:LEU:HD12 | 2.00 | 0.42 |
| 1:A:522:LEU:HB3 | 1:A:523:THR:H | 1.57 | 0.42 |
| 1:B:138:ASN:C | 1:B:138:ASN:ND2 | 2.73 | 0.42 |
| 1:B:261:ILE:HD13 | 1:B:261:ILE:H | 1.85 | 0.42 |
| 1:B:333:VAL:HG23 | 1:B:334:PRO:HD3 | 2.01 | 0.42 |
| 1:B:368:SER:CB | 1:B:370:PHE:HE1 | 2.31 | 0.42 |
| 1:C:127:VAL:HG13 | 1:C:128:MET:N | 2.25 | 0.42 |
| 1:C:138:ASN:C | 1:C:138:ASN:ND2 | 2.73 | 0.42 |
| 1:C:371:ILE:HG13 | 1:C:410:MET:SD | 2.59 | 0.42 |
| 1:A:298:LEU:N | 1:A:298:LEU:CD2 | 2.75 | 0.42 |
| 1:A:409:ILE:HD13 | 3:A:811:NDG:H8C3 | 2.01 | 0.42 |
| 1:A:518:ASN:C | 1:A:520:PRO:CD | 2.87 | 0.42 |
| 1:B:7:ILE:O | 1:B:96:ILE:HG23 | 2.20 | 0.42 |
| 1:B:30:ARG:HH12 | 1:C:25:LYS:CG | 2.31 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:88:VAL:HG21 | 1:C:2:TRP:HB2 | 1.85 | 0.42 |
| 1:B:482:THR:HG22 | 1:B:499:THR:H | 1.70 | 0.42 |
| 1:C:230:VAL:O | 1:C:323:VAL:HA | 2.20 | 0.42 |
| 1:C:250:PRO:HA | 1:C:255:TRP:CG | 2.55 | 0.42 |
| 1:C:515:ASP:OD1 | 1:C:516:ALA:N | 2.53 | 0.42 |
| 1:A:84:ASN:O | 1:B:79:HIS:ND1 | 2.53 | 0.42 |
| 1:A:138:ASN:C | 1:A:138:ASN:ND2 | 2.73 | 0.42 |
| 1:A:333:VAL:HG23 | 1:A:334:PRO:HD3 | 2.01 | 0.42 |
| 1:B:371:ILE:HG13 | 1:B:410:MET:SD | 2.59 | 0.42 |
| 1:C:67:ASP:CG | 1:C:69:GLU:HB2 | 2.40 | 0.42 |
| 1:A:44:ASP:C | 1:C:38:ILE:HA | 2.38 | 0.42 |
| 1:A:515:ASP:OD1 | 1:A:516:ALA:N | 2.53 | 0.42 |
| 1:B:83:GLU:CD | 1:C:2:TRP:CH2 | 2.93 | 0.42 |
| 1:B:347:ARG:HD2 | 1:B:392:GLY:CA | 2.50 | 0.42 |
| 1:B:441:SER:CB | 1:B:442:PRO:HD3 | 2.47 | 0.42 |
| 1:B:511:VAL:N | 1:B:523:THR:O | 2.46 | 0.42 |
| 1:C:40:GLY:O | 1:C:45:ASN:HB2 | 2.19 | 0.42 |
| 2:C:805:NAG:H62 | 2:C:806:NAG:N2 | 2.31 | 0.42 |
| 1:A:339:VAL:HG21 | 1:A:351:ILE:HG22 | 2.01 | 0.42 |
| 1:B:235:ILE:HD13 | 1:B:235:ILE:HG21 | 1.84 | 0.42 |
| 1:B:250:PRO:HA | 1:B:255:TRP:CG | 2.55 | 0.42 |
| 1:B:339:VAL:HG21 | 1:B:351:ILE:HG22 | 2.01 | 0.42 |
| 1:B:469:TYR:CE2 | 1:B:470:PRO:HD2 | 2.54 | 0.42 |
| 1:B:515:ASP:OD1 | 1:B:516:ALA:N | 2.53 | 0.42 |
| 1:C:7:ILE:O | 1:C:96:ILE:HG23 | 2.20 | 0.42 |
| 1:C:415:ASP:CG | 1:C:416:GLY:H | 2.16 | 0.42 |
| 1:A:3:VAL:HB | 1:A:4:ILE:H | 1.51 | 0.42 |
| 1:A:469:TYR:CE2 | 1:A:470:PRO:HD2 | 2.54 | 0.42 |
| 1:A:524:VAL:HG21 | 2:A:904:NAG:C8 | 2.44 | 0.42 |
| 1:A:539:CYS:HB3 | 1:A:540:GLN:H | 1.45 | 0.42 |
| 1:B:67:ASP:CG | 1:B:69:GLU:HB2 | 2.40 | 0.42 |
| 1:B:335:ALA:HB3 | 3:B:811:NDG:O6 | 2.15 | 0.42 |
| 1:C:4:ILE:HA | 1:C:5:PRO:HD3 | 1.72 | 0.42 |
| 1:C:32:ASN:HD22 | 1:C:83:GLU:N | 2.13 | 0.42 |
| 1:C:188:THR:H | 2:C:801:NAG:H83 | 1.84 | 0.42 |
| 1:C:239:VAL:HG11 | 1:C:282:LEU:HD22 | 2.02 | 0.42 |
| 1:C:347:ARG:HD2 | 1:C:392:GLY:CA | 2.50 | 0.42 |
| 1:C:439:VAL:HA | 1:C:440:PRO:HD3 | 1.81 | 0.42 |
| 1:C:505:GLY:H | 1:C:529:VAL:HB | 1.85 | 0.42 |
| 1:A:45:ASN:CA | 1:C:37:SER:C | 2.88 | 0.42 |
| 1:A:195:ASP:HB3 | 1:A:196:LEU:HG | 2.01 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:441:SER:CB | 1:A:442:PRO:HD3 | 2.47 | 0.42 |
| 1:B:40:GLY:O | 1:B:45:ASN:HB2 | 2.19 | 0.42 |
| 1:B:175:ILE:CG2 | 1:B:176:GLY:N | 2.82 | 0.42 |
| 1:B:230:VAL:O | 1:B:323:VAL:HA | 2.20 | 0.42 |
| 1:B:344:ASP:CG | 1:B:344:ASP:O | 2.57 | 0.42 |
| 1:C:261:ILE:H | 1:C:261:ILE:HD13 | 1.85 | 0.42 |
| 1:A:35:TYR:CZ | 1:C:93:GLU:OE2 | 2.69 | 0.41 |
| 1:A:108:PHE:HA | 1:A:132:ALA:CB | 2.50 | 0.41 |
| 1:A:239:VAL:HG11 | 1:A:282:LEU:HD22 | 2.02 | 0.41 |
| 1:A:502:LEU:HD22 | 1:A:503:LYS:H | 1.85 | 0.41 |
| 1:B:108:PHE:HA | 1:B:132:ALA:CB | 2.50 | 0.41 |
| 1:B:264:ASN:HB3 | 1:B:267:GLY:HA2 | 2.01 | 0.41 |
| 1:B:371:ILE:HA | 1:B:410:MET:HB3 | 2.02 | 0.41 |
| 1:B:505:GLY:H | 1:B:529:VAL:HB | 1.85 | 0.41 |
| 1:B:514:SER:HG | 1:B:519:ASN:HA | 1.85 | 0.41 |
| 1:C:108:PHE:HA | 1:C:132:ALA:CB | 2.50 | 0.41 |
| 1:C:264:ASN:HB3 | 1:C:267:GLY:HA2 | 2.01 | 0.41 |
| 1:C:367:LEU:H | 1:C:367:LEU:HG | 1.41 | 0.41 |
| 1:C:449:ASP:N | 1:C:532:CYS:HB3 | 2.19 | 0.41 |
| 1:A:188:THR:H | 2:A:801:NAG:H83 | 1.84 | 0.41 |
| 1:A:250:PRO:HA | 1:A:255:TRP:CG | 2.55 | 0.41 |
| 2:A:810:NAG:O7 | 2:A:810:NAG:C1 | 2.67 | 0.41 |
| 1:B:127:VAL:HG13 | 1:B:128:MET:N | 2.25 | 0.41 |
| 1:B:231:PRO:O | 1:B:235:ILE:HD13 | 2.21 | 0.41 |
| 1:B:347:ARG:HG3 | 1:B:392:GLY:N | 2.33 | 0.41 |
| 1:C:231:PRO:O | 1:C:288:LEU:HD12 | 2.20 | 0.41 |
| 1:A:48:GLN:CG | 1:C:37:SER:HB2 | 2.45 | 0.41 |
| 1:A:86:SER:HB3 | 1:B:92:MET:HB2 | 1.39 | 0.41 |
| 1:A:127:VAL:HG22 | 1:A:128:MET:HG3 | 2.03 | 0.41 |
| 1:A:505:GLY:H | 1:A:529:VAL:HB | 1.85 | 0.41 |
| 1:B:154:ASP:HB3 | 2:B:801:NAG:C7 | 2.48 | 0.41 |
| 1:B:231:PRO:O | 1:B:288:LEU:HD12 | 2.20 | 0.41 |
| 1:B:409:ILE:HD13 | 3:B:811:NDG:H8C3 | 2.01 | 0.41 |
| 1:B:449:ASP:N | 1:B:532:CYS:HB3 | 2.19 | 0.41 |
| 1:C:154:ASP:HB3 | 2:C:801:NAG:C7 | 2.48 | 0.41 |
| 1:B:33:LYS:O | 1:C:2:TRP:CG | 2.73 | 0.41 |
| 1:B:128:MET:HB3 | 1:B:129:ALA:H | 1.62 | 0.41 |
| 1:C:230:VAL:HG23 | 1:C:323:VAL:HA | 2.03 | 0.41 |
| 1:C:297:VAL:HG21 | 2:C:807:NAG:H62 | 2.01 | 0.41 |
| 1:C:518:ASN:C | 1:C:520:PRO:CD | 2.87 | 0.41 |
| 1:A:42:GLY:CA | 1:A:47:PRO:O | 2.69 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:A:175:ILE:CG2 | 1:A:176:GLY:N | 2.82 | 0.41 |
| 1:B:502:LEU:HD22 | 1:B:503:LYS:H | 1.85 | 0.41 |
| 1:C:3:VAL:HB | 1:C:4:ILE:H | 1.51 | 0.41 |
| 1:C:119:GLU:CG | 1:C:214:ALA:HB3 | 2.51 | 0.41 |
| 1:A:230:VAL:O | 1:A:323:VAL:HA | 2.20 | 0.41 |
| 1:A:230:VAL:HG23 | 1:A:323:VAL:HA | 2.03 | 0.41 |
| 1:A:231:PRO:O | 1:A:235:ILE:HD13 | 2.21 | 0.41 |
| 1:A:474:SER:N | 1:A:512:LEU:O | 2.53 | 0.41 |
| 1:B:19:LYS:HB3 | 1:B:62:VAL:HG12 | 2.03 | 0.41 |
| 1:B:230:VAL:HG23 | 1:B:323:VAL:HA | 2.03 | 0.41 |
| 1:C:319:VAL:CG1 | 1:C:320:THR:N | 2.84 | 0.41 |
| 1:C:502:LEU:HD22 | 1:C:503:LYS:H | 1.85 | 0.41 |
| 2:C:810:NAG:O7 | 2:C:810:NAG:C1 | 2.67 | 0.41 |
| 1:A:33:LYS:NZ | 1:A:56:GLU:OE1 | 2.42 | 0.41 |
| 1:A:400:TYR:O | 1:A:401:VAL:C | 2.59 | 0.41 |
| 1:B:474:SER:N | 1:B:512:LEU:O | 2.53 | 0.41 |
| 1:C:62:VAL:O | 1:C:62:VAL:HG13 | 2.21 | 0.41 |
| 1:A:68:ARG:HD3 | 1:A:100:ASP:CB | 2.51 | 0.41 |
| 1:A:82:SER:OG | 1:B:91:PRO:CD | 2.68 | 0.41 |
| 1:A:261:ILE:HD13 | 1:A:261:ILE:H | 1.85 | 0.41 |
| 1:B:68:ARG:HD3 | 1:B:100:ASP:CB | 2.51 | 0.41 |
| 1:B:108:PHE:CZ | 1:B:191:VAL:HG23 | 2.56 | 0.41 |
| 1:C:23:GLN:HB2 | 1:C:59:TRP:CD2 | 2.55 | 0.41 |
| 1:C:423:THR:CG2 | 2:C:810:NAG:N2 | 2.84 | 0.41 |
| 1:A:7:ILE:O | 1:A:96:ILE:HG23 | 2.20 | 0.41 |
| 1:A:23:GLN:HA | 1:A:58:GLY:O | 2.21 | 0.41 |
| 1:A:62:VAL:O | 1:A:62:VAL:HG13 | 2.21 | 0.41 |
| 1:A:108:PHE:HA | 1:A:132:ALA:HB2 | 2.03 | 0.41 |
| 1:A:138:ASN:HD22 | 1:A:138:ASN:N | 2.19 | 0.41 |
| 1:A:235:ILE:HD13 | 1:A:235:ILE:HG21 | 1.84 | 0.41 |
| 1:A:290:PHE:CG | 1:A:292:LEU:HB2 | 2.56 | 0.41 |
| 1:A:316:THR:OG1 | 2:A:806:NAG:H83 | 2.21 | 0.41 |
| 1:A:345:LEU:HD22 | 1:A:349:GLU:HB2 | 2.03 | 0.41 |
| 1:B:25:LYS:NZ | 1:B:29:ASP:OD2 | 2.39 | 0.41 |
| 1:B:33:LYS:NZ | 1:B:56:GLU:OE1 | 2.43 | 0.41 |
| 1:B:373:ASN:CG | 1:B:374:ASP:N | 2.75 | 0.41 |
| 1:B:448:CYS:C | 1:B:452:PRO:HG3 | 2.40 | 0.41 |
| 1:B:449:ASP:HB2 | 1:B:531:SER:HA | 2.03 | 0.41 |
| 1:C:23:GLN:HA | 1:C:58:GLY:O | 2.21 | 0.41 |
| 1:C:108:PHE:HA | 1:C:132:ALA:HB2 | 2.03 | 0.41 |
| 1:C:231:PRO:O | 1:C:235:ILE:HD13 | 2.21 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:C:336:VAL:H | 1:C:336:VAL:HG23 | 1.52 | 0.41 |
| 1:C:339:VAL:HG21 | 1:C:351:ILE:HG22 | 2.01 | 0.41 |
| 1:C:345:LEU:HD22 | 1:C:349:GLU:HB2 | 2.03 | 0.41 |
| 1:C:469:TYR:CE2 | 1:C:470:PRO:HD2 | 2.54 | 0.41 |
| 1:C:483:TRP:CZ2 | 1:C:507:TYR:CE1 | 2.87 | 0.41 |
| 1:A:45:ASN:ND2 | 1:C:80:ALA:C | 2.48 | 0.41 |
| 1:A:193:ALA:O | 1:A:202:SER:HA | 2.21 | 0.41 |
| 1:A:297:VAL:HG22 | 2:A:807:NAG:H62 | 2.03 | 0.41 |
| 1:B:108:PHE:HA | 1:B:132:ALA:HB2 | 2.03 | 0.41 |
| 1:B:111:ASP:O | 1:B:112:VAL:HG13 | 2.21 | 0.41 |
| 1:B:193:ALA:O | 1:B:202:SER:HA | 2.21 | 0.41 |
| 1:B:319:VAL:CG1 | 1:B:320:THR:N | 2.84 | 0.41 |
| 1:C:68:ARG:HD3 | 1:C:100:ASP:CB | 2.51 | 0.41 |
| 1:C:111:ASP:O | 1:C:112:VAL:HG13 | 2.21 | 0.41 |
| 1:C:118:ARG:CA | 1:C:212:THR:HB | 2.51 | 0.41 |
| 1:C:127:VAL:HG22 | 1:C:128:MET:HG3 | 2.03 | 0.41 |
| 1:C:290:PHE:CG | 1:C:292:LEU:HB2 | 2.56 | 0.41 |
| 1:C:448:CYS:C | 1:C:452:PRO:HG3 | 2.40 | 0.41 |
| 1:A:67:ASP:CG | 1:A:69:GLU:HB2 | 2.40 | 0.40 |
| 1:A:231:PRO:O | 1:A:288:LEU:HD12 | 2.20 | 0.40 |
| 1:B:378:TRP:HB2 | 1:B:379:LEU:H | 1.64 | 0.40 |
| 2:B:805:NAG:H62 | 2:B:806:NAG:N2 | 2.31 | 0.40 |
| 1:C:138:ASN:HD22 | 1:C:138:ASN:N | 2.19 | 0.40 |
| 1:C:226:TYR:O | 1:C:227:THR:HG22 | 2.21 | 0.40 |
| 1:C:274:ASP:O | 1:C:278:ASN:CA | 2.51 | 0.40 |
| 1:C:438:PRO:HB2 | 1:C:513:LEU:CD1 | 2.51 | 0.40 |
| 1:C:449:ASP:HB2 | 1:C:531:SER:HA | 2.03 | 0.40 |
| 1:C:474:SER:N | 1:C:512:LEU:O | 2.53 | 0.40 |
| 1:A:23:GLN:HB2 | 1:A:59:TRP:CD2 | 2.55 | 0.40 |
| 1:A:119:GLU:CG | 1:A:214:ALA:HB3 | 2.51 | 0.40 |
| 1:A:409:ILE:HD13 | 3:A:811:NDG:C8 | 2.51 | 0.40 |
| 1:B:316:THR:OG1 | 2:B:806:NAG:H83 | 2.21 | 0.40 |
| 1:B:540:GLN:O | 1:B:540:GLN:NE2 | 2.47 | 0.40 |
| 1:C:19:LYS:HB3 | 1:C:62:VAL:HG12 | 2.03 | 0.40 |
| 1:C:297:VAL:HG22 | 2:C:807:NAG:H62 | 2.03 | 0.40 |
| 1:C:445:PHE:CD2 | 1:C:445:PHE:N | 2.89 | 0.40 |
| 1:A:108:PHE:CZ | 1:A:191:VAL:HG23 | 2.56 | 0.40 |
| 1:A:373:ASN:CG | 1:A:374:ASP:N | 2.75 | 0.40 |
| 1:A:466:PRO:O | 1:A:469:TYR:N | 2.46 | 0.40 |
| 1:B:127:VAL:HG22 | 1:B:128:MET:HG3 | 2.03 | 0.40 |
| 1:B:239:VAL:HG11 | 1:B:282:LEU:HD22 | 2.02 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:B:272:THR:O | 1:B:281:ILE:HG22 | 2.21 | 0.40 |
| 1:B:400:TYR:O | 1:B:401:VAL:C | 2.59 | 0.40 |
| 1:C:108:PHE:CZ | 1:C:191:VAL:HG23 | 2.56 | 0.40 |
| 1:C:193:ALA:O | 1:C:202:SER:HA | 2.21 | 0.40 |
| 1:C:212:THR:CG2 | 1:C:213:ASP:N | 2.83 | 0.40 |
| 1:C:223:PRO:HB2 | 1:C:226:TYR:CZ | 2.56 | 0.40 |
| 1:C:316:THR:OG1 | 2:C:806:NAG:H83 | 2.21 | 0.40 |
| 1:C:371:ILE:HA | 1:C:410:MET:HB3 | 2.02 | 0.40 |
| 1:C:432:ASP:CG | 1:C:433:VAL:N | 2.74 | 0.40 |
| 1:A:28:LYS:NZ | 1:B:4:ILE:HG22 | 2.37 | 0.40 |
| 1:A:78:SER:C | 1:C:90:GLU:CD | 2.79 | 0.40 |
| 1:A:249:MET:HA | 1:A:250:PRO:HD3 | 1.85 | 0.40 |
| 1:A:319:VAL:CG1 | 1:A:320:THR:N | 2.84 | 0.40 |
| 1:A:371:ILE:HD12 | 1:A:371:ILE:HA | 1.65 | 0.40 |
| 1:A:423:THR:CG2 | 2:A:810:NAG:N2 | 2.84 | 0.40 |
| 1:B:23:GLN:HB2 | 1:B:59:TRP:CD2 | 2.55 | 0.40 |
| 1:B:23:GLN:HA | 1:B:58:GLY:O | 2.21 | 0.40 |
| 1:B:298:LEU:N | 1:B:298:LEU:CD2 | 2.75 | 0.40 |
| 1:B:396:ARG:HH21 | 1:B:432:ASP:CG | 2.25 | 0.40 |
| 1:B:423:THR:CG2 | 2:B:810:NAG:N2 | 2.84 | 0.40 |
| 1:C:42:GLY:CA | 1:C:47:PRO:O | 2.69 | 0.40 |
| 1:C:490:LYS:O | 1:C:490:LYS:CG | 2.67 | 0.40 |
| 1:A:111:ASP:O | 1:A:112:VAL:HG13 | 2.21 | 0.40 |
| 1:B:409:ILE:HD13 | 3:B:811:NDG:C8 | 2.51 | 0.40 |
| 1:B:432:ASP:CG | 1:B:433:VAL:N | 2.74 | 0.40 |
| 1:C:235:ILE:CD1 | 1:C:287:GLY:HA2 | 2.50 | 0.40 |
| 1:C:335:ALA:HB1 | 3:C:811:NDG:H6 | 1.76 | 0.40 |
| 1:C:400:TYR:O | 1:C:401:VAL:C | 2.59 | 0.40 |

There are no symmetry-related clashes.

## 5.3 Torsion angles (i)

### 5.3.1 Protein backbone (i)

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

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

| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles |
|---|---|---|---|---|---|---|
| 1 | A | 538/880 (61%) | 401 (74%) | 92 (17%) | 45 (8%) | 0 9 |
| 1 | B | 538/880 (61%) | 401 (74%) | 92 (17%) | 45 (8%) | 0 9 |
| 1 | C | 538/880 (61%) | 401 (74%) | 92 (17%) | 45 (8%) | 0 9 |
| All | All | 1614/2640 (61%) | 1203 (74%) | 276 (17%) | 135 (8%) | 1 9 |

All (135) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 91 | PRO |
| 1 | A | 155 | PRO |
| 1 | A | 235 | ILE |
| 1 | A | 347 | ARG |
| 1 | A | 363 | GLN |
| 1 | A | 364 | ILE |
| 1 | A | 374 | ASP |
| 1 | A | 404 | ASN |
| 1 | A | 467 | ASN |
| 1 | A | 476 | SER |
| 1 | A | 502 | LEU |
| 1 | A | 517 | GLN |
| 1 | A | 518 | ASN |
| 1 | A | 519 | ASN |
| 1 | B | 91 | PRO |
| 1 | B | 155 | PRO |
| 1 | B | 235 | ILE |
| 1 | B | 347 | ARG |
| 1 | B | 363 | GLN |
| 1 | B | 364 | ILE |
| 1 | B | 374 | ASP |
| 1 | B | 404 | ASN |
| 1 | B | 467 | ASN |
| 1 | B | 476 | SER |
| 1 | B | 502 | LEU |
| 1 | B | 517 | GLN |
| 1 | B | 518 | ASN |
| 1 | B | 519 | ASN |
| 1 | C | 91 | PRO |
| 1 | C | 155 | PRO |
| 1 | C | 235 | ILE |
| 1 | C | 347 | ARG |
| 1 | C | 363 | GLN |
| 1 | C | 364 | ILE |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | C | 374 | ASP |
| 1 | C | 404 | ASN |
| 1 | C | 467 | ASN |
| 1 | C | 476 | SER |
| 1 | C | 502 | LEU |
| 1 | C | 517 | GLN |
| 1 | C | 518 | ASN |
| 1 | C | 519 | ASN |
| 1 | A | 3 | VAL |
| 1 | A | 156 | GLU |
| 1 | A | 260 | LYS |
| 1 | A | 287 | GLY |
| 1 | A | 470 | PRO |
| 1 | A | 503 | LYS |
| 1 | B | 3 | VAL |
| 1 | B | 156 | GLU |
| 1 | B | 260 | LYS |
| 1 | B | 287 | GLY |
| 1 | B | 470 | PRO |
| 1 | B | 503 | LYS |
| 1 | C | 3 | VAL |
| 1 | C | 156 | GLU |
| 1 | C | 260 | LYS |
| 1 | C | 287 | GLY |
| 1 | C | 470 | PRO |
| 1 | C | 503 | LYS |
| 1 | A | 55 | TRP |
| 1 | A | 212 | THR |
| 1 | A | 250 | PRO |
| 1 | A | 333 | VAL |
| 1 | A | 360 | ASP |
| 1 | A | 372 | GLY |
| 1 | A | 377 | ARG |
| 1 | A | 506 | ASP |
| 1 | B | 55 | TRP |
| 1 | B | 212 | THR |
| 1 | B | 250 | PRO |
| 1 | B | 333 | VAL |
| 1 | B | 360 | ASP |
| 1 | B | 372 | GLY |
| 1 | B | 377 | ARG |
| 1 | B | 506 | ASP |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | C | 55 | TRP |
| 1 | C | 212 | THR |
| 1 | C | 250 | PRO |
| 1 | C | 333 | VAL |
| 1 | C | 360 | ASP |
| 1 | C | 372 | GLY |
| 1 | C | 377 | ARG |
| 1 | C | 506 | ASP |
| 1 | A | 152 | LYS |
| 1 | A | 223 | PRO |
| 1 | A | 359 | PRO |
| 1 | A | 375 | PRO |
| 1 | B | 152 | LYS |
| 1 | B | 223 | PRO |
| 1 | B | 359 | PRO |
| 1 | B | 375 | PRO |
| 1 | C | 152 | LYS |
| 1 | C | 223 | PRO |
| 1 | C | 359 | PRO |
| 1 | C | 375 | PRO |
| 1 | A | 160 | PRO |
| 1 | A | 265 | GLU |
| 1 | A | 278 | ASN |
| 1 | A | 289 | ASP |
| 1 | A | 482 | THR |
| 1 | B | 160 | PRO |
| 1 | B | 265 | GLU |
| 1 | B | 278 | ASN |
| 1 | B | 289 | ASP |
| 1 | B | 482 | THR |
| 1 | C | 160 | PRO |
| 1 | C | 265 | GLU |
| 1 | C | 278 | ASN |
| 1 | C | 289 | ASP |
| 1 | C | 482 | THR |
| 1 | A | 498 | PRO |
| 1 | A | 523 | THR |
| 1 | B | 498 | PRO |
| 1 | B | 523 | THR |
| 1 | C | 498 | PRO |
| 1 | C | 523 | THR |
| 1 | A | 154 | ASP |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 307 | PRO |
| 1 | B | 154 | ASP |
| 1 | B | 307 | PRO |
| 1 | C | 154 | ASP |
| 1 | C | 307 | PRO |
| 1 | A | 222 | ASP |
| 1 | B | 222 | ASP |
| 1 | C | 222 | ASP |
| 1 | A | 200 | GLY |
| 1 | B | 200 | GLY |
| 1 | C | 200 | GLY |
| 1 | A | 47 | PRO |
| 1 | A | 158 | PRO |
| 1 | B | 47 | PRO |
| 1 | B | 158 | PRO |
| 1 | C | 47 | PRO |
| 1 | C | 158 | 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 PDB entries followed by that with respect to all EM entries.

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

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles |
|---|---|---|---|---|---|
| 1 | A | 480/779 (62%) | 381 (79%) | 99 (21%) | 1 6 |
| 1 | B | 480/779 (62%) | 381 (79%) | 99 (21%) | 1 6 |
| 1 | C | 480/779 (62%) | 381 (79%) | 99 (21%) | 1 6 |
| All | All | 1440/2337 (62%) | 1143 (79%) | 297 (21%) | 3 6 |

All (297) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 8 | LYS |
| 1 | A | 18 | PRO |
| 1 | A | 19 | LYS |
| 1 | A | 27 | ASN |
| 1 | A | 52 | ARG |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 61 | LEU |
| 1 | A | 66 | LEU |
| 1 | A | 68 | ARG |
| 1 | A | 88 | VAL |
| 1 | A | 91 | PRO |
| 1 | A | 92 | MET |
| 1 | A | 117 | VAL |
| 1 | A | 138 | ASN |
| 1 | A | 146 | LEU |
| 1 | A | 151 | LEU |
| 1 | A | 155 | PRO |
| 1 | A | 156 | GLU |
| 1 | A | 161 | ASN |
| 1 | A | 163 | PHE |
| 1 | A | 189 | LEU |
| 1 | A | 195 | ASP |
| 1 | A | 202 | SER |
| 1 | A | 216 | ASP |
| 1 | A | 217 | ASN |
| 1 | A | 223 | PRO |
| 1 | A | 226 | TYR |
| 1 | A | 231 | PRO |
| 1 | A | 233 | ASN |
| 1 | A | 234 | GLU |
| 1 | A | 235 | ILE |
| 1 | A | 237 | PHE |
| 1 | A | 250 | PRO |
| 1 | A | 253 | PRO |
| 1 | A | 261 | ILE |
| 1 | A | 264 | ASN |
| 1 | A | 268 | PHE |
| 1 | A | 273 | THR |
| 1 | A | 277 | SER |
| 1 | A | 278 | ASN |
| 1 | A | 282 | LEU |
| 1 | A | 284 | THR |
| 1 | A | 288 | LEU |
| 1 | A | 298 | LEU |
| 1 | A | 309 | SER |
| 1 | A | 310 | VAL |
| 1 | A | 315 | SER |
| 1 | A | 316 | THR |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 318 | THR |
| 1 | A | 333 | VAL |
| 1 | A | 336 | VAL |
| 1 | A | 339 | VAL |
| 1 | A | 345 | LEU |
| 1 | A | 353 | SER |
| 1 | A | 354 | LEU |
| 1 | A | 360 | ASP |
| 1 | A | 363 | GLN |
| 1 | A | 364 | ILE |
| 1 | A | 365 | GLN |
| 1 | A | 371 | ILE |
| 1 | A | 373 | ASN |
| 1 | A | 375 | PRO |
| 1 | A | 379 | LEU |
| 1 | A | 382 | ASN |
| 1 | A | 384 | ASP |
| 1 | A | 385 | ASN |
| 1 | A | 393 | ASN |
| 1 | A | 394 | LEU |
| 1 | A | 395 | ASP |
| 1 | A | 398 | SER |
| 1 | A | 399 | GLU |
| 1 | A | 404 | ASN |
| 1 | A | 405 | THR |
| 1 | A | 407 | THR |
| 1 | A | 410 | MET |
| 1 | A | 423 | THR |
| 1 | A | 425 | THR |
| 1 | A | 427 | ILE |
| 1 | A | 428 | LEU |
| 1 | A | 433 | VAL |
| 1 | A | 436 | ASN |
| 1 | A | 447 | MET |
| 1 | A | 448 | CYS |
| 1 | A | 461 | ASP |
| 1 | A | 464 | ILE |
| 1 | A | 465 | PRO |
| 1 | A | 466 | PRO |
| 1 | A | 470 | PRO |
| 1 | A | 477 | HIS |
| 1 | A | 492 | THR |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 509 | ILE |
| 1 | A | 512 | LEU |
| 1 | A | 517 | GLN |
| 1 | A | 518 | ASN |
| 1 | A | 519 | ASN |
| 1 | A | 520 | PRO |
| 1 | A | 522 | LEU |
| 1 | A | 523 | THR |
| 1 | A | 532 | CYS |
| 1 | A | 540 | GLN |
| 1 | B | 8 | LYS |
| 1 | B | 18 | PRO |
| 1 | B | 19 | LYS |
| 1 | B | 27 | ASN |
| 1 | B | 52 | ARG |
| 1 | B | 61 | LEU |
| 1 | B | 66 | LEU |
| 1 | B | 68 | ARG |
| 1 | B | 88 | VAL |
| 1 | B | 91 | PRO |
| 1 | B | 92 | MET |
| 1 | B | 117 | VAL |
| 1 | B | 138 | ASN |
| 1 | B | 146 | LEU |
| 1 | B | 151 | LEU |
| 1 | B | 155 | PRO |
| 1 | B | 156 | GLU |
| 1 | B | 161 | ASN |
| 1 | B | 163 | PHE |
| 1 | B | 189 | LEU |
| 1 | B | 195 | ASP |
| 1 | B | 202 | SER |
| 1 | B | 216 | ASP |
| 1 | B | 217 | ASN |
| 1 | B | 223 | PRO |
| 1 | B | 226 | TYR |
| 1 | B | 231 | PRO |
| 1 | B | 233 | ASN |
| 1 | B | 234 | GLU |
| 1 | B | 235 | ILE |
| 1 | B | 237 | PHE |
| 1 | B | 250 | PRO |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | B | 253 | PRO |
| 1 | B | 261 | ILE |
| 1 | B | 264 | ASN |
| 1 | B | 268 | PHE |
| 1 | B | 273 | THR |
| 1 | B | 277 | SER |
| 1 | B | 278 | ASN |
| 1 | B | 282 | LEU |
| 1 | B | 284 | THR |
| 1 | B | 288 | LEU |
| 1 | B | 298 | LEU |
| 1 | B | 309 | SER |
| 1 | B | 310 | VAL |
| 1 | B | 315 | SER |
| 1 | B | 316 | THR |
| 1 | B | 318 | THR |
| 1 | B | 333 | VAL |
| 1 | B | 336 | VAL |
| 1 | B | 339 | VAL |
| 1 | B | 345 | LEU |
| 1 | B | 353 | SER |
| 1 | B | 354 | LEU |
| 1 | B | 360 | ASP |
| 1 | B | 363 | GLN |
| 1 | B | 364 | ILE |
| 1 | B | 365 | GLN |
| 1 | B | 371 | ILE |
| 1 | B | 373 | ASN |
| 1 | B | 375 | PRO |
| 1 | B | 379 | LEU |
| 1 | B | 382 | ASN |
| 1 | B | 384 | ASP |
| 1 | B | 385 | ASN |
| 1 | B | 393 | ASN |
| 1 | B | 394 | LEU |
| 1 | B | 395 | ASP |
| 1 | B | 398 | SER |
| 1 | B | 399 | GLU |
| 1 | B | 404 | ASN |
| 1 | B | 405 | THR |
| 1 | B | 407 | THR |
| 1 | B | 410 | MET |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | B | 423 | THR |
| 1 | B | 425 | THR |
| 1 | B | 427 | ILE |
| 1 | B | 428 | LEU |
| 1 | B | 433 | VAL |
| 1 | B | 436 | ASN |
| 1 | B | 447 | MET |
| 1 | B | 448 | CYS |
| 1 | B | 461 | ASP |
| 1 | B | 464 | ILE |
| 1 | B | 465 | PRO |
| 1 | B | 466 | PRO |
| 1 | B | 470 | PRO |
| 1 | B | 477 | HIS |
| 1 | B | 492 | THR |
| 1 | B | 509 | ILE |
| 1 | B | 512 | LEU |
| 1 | B | 517 | GLN |
| 1 | B | 518 | ASN |
| 1 | B | 519 | ASN |
| 1 | B | 520 | PRO |
| 1 | B | 522 | LEU |
| 1 | B | 523 | THR |
| 1 | B | 532 | CYS |
| 1 | B | 540 | GLN |
| 1 | C | 8 | LYS |
| 1 | C | 18 | PRO |
| 1 | C | 19 | LYS |
| 1 | C | 27 | ASN |
| 1 | C | 52 | ARG |
| 1 | C | 61 | LEU |
| 1 | C | 66 | LEU |
| 1 | C | 68 | ARG |
| 1 | C | 88 | VAL |
| 1 | C | 91 | PRO |
| 1 | C | 92 | MET |
| 1 | C | 117 | VAL |
| 1 | C | 138 | ASN |
| 1 | C | 146 | LEU |
| 1 | C | 151 | LEU |
| 1 | C | 155 | PRO |
| 1 | C | 156 | GLU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | C | 161 | ASN |
| 1 | C | 163 | PHE |
| 1 | C | 189 | LEU |
| 1 | C | 195 | ASP |
| 1 | C | 202 | SER |
| 1 | C | 216 | ASP |
| 1 | C | 217 | ASN |
| 1 | C | 223 | PRO |
| 1 | C | 226 | TYR |
| 1 | C | 231 | PRO |
| 1 | C | 233 | ASN |
| 1 | C | 234 | GLU |
| 1 | C | 235 | ILE |
| 1 | C | 237 | PHE |
| 1 | C | 250 | PRO |
| 1 | C | 253 | PRO |
| 1 | C | 261 | ILE |
| 1 | C | 264 | ASN |
| 1 | C | 268 | PHE |
| 1 | C | 273 | THR |
| 1 | C | 277 | SER |
| 1 | C | 278 | ASN |
| 1 | C | 282 | LEU |
| 1 | C | 284 | THR |
| 1 | C | 288 | LEU |
| 1 | C | 298 | LEU |
| 1 | C | 309 | SER |
| 1 | C | 310 | VAL |
| 1 | C | 315 | SER |
| 1 | C | 316 | THR |
| 1 | C | 318 | THR |
| 1 | C | 333 | VAL |
| 1 | C | 336 | VAL |
| 1 | C | 339 | VAL |
| 1 | C | 345 | LEU |
| 1 | C | 353 | SER |
| 1 | C | 354 | LEU |
| 1 | C | 360 | ASP |
| 1 | C | 363 | GLN |
| 1 | C | 364 | ILE |
| 1 | C | 365 | GLN |
| 1 | C | 371 | ILE |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | C | 373 | ASN |
| 1 | C | 375 | PRO |
| 1 | C | 379 | LEU |
| 1 | C | 382 | ASN |
| 1 | C | 384 | ASP |
| 1 | C | 385 | ASN |
| 1 | C | 393 | ASN |
| 1 | C | 394 | LEU |
| 1 | C | 395 | ASP |
| 1 | C | 398 | SER |
| 1 | C | 399 | GLU |
| 1 | C | 404 | ASN |
| 1 | C | 405 | THR |
| 1 | C | 407 | THR |
| 1 | C | 410 | MET |
| 1 | C | 423 | THR |
| 1 | C | 425 | THR |
| 1 | C | 427 | ILE |
| 1 | C | 428 | LEU |
| 1 | C | 433 | VAL |
| 1 | C | 436 | ASN |
| 1 | C | 447 | MET |
| 1 | C | 448 | CYS |
| 1 | C | 461 | ASP |
| 1 | C | 464 | ILE |
| 1 | C | 465 | PRO |
| 1 | C | 466 | PRO |
| 1 | C | 470 | PRO |
| 1 | C | 477 | HIS |
| 1 | C | 492 | THR |
| 1 | C | 509 | ILE |
| 1 | C | 512 | LEU |
| 1 | C | 517 | GLN |
| 1 | C | 518 | ASN |
| 1 | C | 519 | ASN |
| 1 | C | 520 | PRO |
| 1 | C | 522 | LEU |
| 1 | C | 523 | THR |
| 1 | C | 532 | CYS |
| 1 | C | 540 | GLN |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (71) such sidechains are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | A | 12 | ASN |
| 1 | A | 27 | ASN |
| 1 | A | 32 | ASN |
| 1 | A | 45 | ASN |
| 1 | A | 48 | GLN |
| 1 | A | 104 | ASN |
| 1 | A | 110 | GLN |
| 1 | A | 122 | GLN |
| 1 | A | 138 | ASN |
| 1 | A | 217 | ASN |
| 1 | A | 233 | ASN |
| 1 | A | 240 | GLN |
| 1 | A | 264 | ASN |
| 1 | A | 278 | ASN |
| 1 | A | 299 | GLN |
| 1 | A | 373 | ASN |
| 1 | A | 385 | ASN |
| 1 | A | 391 | ASN |
| 1 | A | 393 | ASN |
| 1 | A | 404 | ASN |
| 1 | A | 455 | GLN |
| 1 | A | 467 | ASN |
| 1 | A | 517 | GLN |
| 1 | A | 519 | ASN |
| 1 | B | 12 | ASN |
| 1 | B | 27 | ASN |
| 1 | B | 32 | ASN |
| 1 | B | 45 | ASN |
| 1 | B | 79 | HIS |
| 1 | B | 84 | ASN |
| 1 | B | 104 | ASN |
| 1 | B | 110 | GLN |
| 1 | B | 122 | GLN |
| 1 | B | 138 | ASN |
| 1 | B | 217 | ASN |
| 1 | B | 233 | ASN |
| 1 | B | 240 | GLN |
| 1 | B | 264 | ASN |
| 1 | B | 278 | ASN |
| 1 | B | 299 | GLN |
| 1 | B | 373 | ASN |
| 1 | B | 385 | ASN |
| 1 | B | 391 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | B | 393 | ASN |
| 1 | B | 404 | ASN |
| 1 | B | 455 | GLN |
| 1 | B | 467 | ASN |
| 1 | B | 517 | GLN |
| 1 | B | 519 | ASN |
| 1 | C | 12 | ASN |
| 1 | C | 27 | ASN |
| 1 | C | 32 | ASN |
| 1 | C | 104 | ASN |
| 1 | C | 110 | GLN |
| 1 | C | 122 | GLN |
| 1 | C | 138 | ASN |
| 1 | C | 217 | ASN |
| 1 | C | 233 | ASN |
| 1 | C | 240 | GLN |
| 1 | C | 264 | ASN |
| 1 | C | 278 | ASN |
| 1 | C | 299 | GLN |
| 1 | C | 373 | ASN |
| 1 | C | 385 | ASN |
| 1 | C | 391 | ASN |
| 1 | C | 393 | ASN |
| 1 | C | 404 | ASN |
| 1 | C | 455 | GLN |
| 1 | C | 467 | ASN |
| 1 | C | 517 | GLN |
| 1 | C | 519 | ASN |

### 5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry (i)

Of 81 ligands modelled in this entry, 36 are monoatomic - leaving 45 for Mogul analysis.

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

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Counts | RMSZ | $\#\|Z\| > 2$ | Counts | RMSZ | $\#\|Z\| > 2$ |
| 2 | NAG | A | 801 | 1 | 14,14,15 | 0.70 | 0 | 17,19,21 | 0.97 | 1 (5%) |
| 2 | NAG | A | 812 | 1 | 14,14,15 | 0.83 | 1 (7%) | 17,19,21 | 0.76 | 1 (5%) |
| 2 | NAG | A | 805 | 1 | 14,14,15 | 0.71 | 0 | 17,19,21 | 1.06 | 1 (5%) |
| 2 | NAG | C | 810 | 1 | 14,14,15 | 0.66 | 0 | 17,19,21 | 1.33 | 4 (23%) |
| 2 | NAG | B | 902 | 1 | 14,14,15 | 1.12 | 1 (7%) | 17,19,21 | 1.09 | 1 (5%) |
| 2 | NAG | C | 902 | 1 | 14,14,15 | 1.13 | 1 (7%) | 17,19,21 | 1.09 | 2 (11%) |
| 2 | NAG | B | 810 | 1 | 14,14,15 | 0.66 | 0 | 17,19,21 | 1.33 | 4 (23%) |
| 2 | NAG | A | 809 | 1 | 14,14,15 | 0.75 | 0 | 17,19,21 | 0.94 | 0 |
| 2 | NAG | C | 806 | 1 | 14,14,15 | 0.56 | 0 | 17,19,21 | 1.38 | 2 (11%) |
| 2 | NAG | C | 809 | 1 | 14,14,15 | 0.77 | 1 (7%) | 17,19,21 | 0.95 | 0 |
| 2 | NAG | C | 903 | 1 | 14,14,15 | 0.55 | 0 | 17,19,21 | 0.79 | 0 |
| 2 | NAG | A | 808 | 1 | 14,14,15 | 0.65 | 0 | 17,19,21 | 0.70 | 0 |
| 2 | NAG | B | 801 | 1 | 14,14,15 | 0.70 | 0 | 17,19,21 | 0.98 | 1 (5%) |
| 2 | NAG | B | 808 | 1 | 14,14,15 | 0.67 | 0 | 17,19,21 | 0.70 | 0 |
| 3 | NDG | C | 804 | 1 | 14,14,15 | 0.65 | 0 | 17,19,21 | 0.77 | 0 |
| 2 | NAG | A | 810 | 1 | 14,14,15 | 0.67 | 0 | 17,19,21 | 1.33 | 4 (23%) |
| 3 | NDG | C | 811 | 1 | 14,14,15 | 0.87 | 0 | 17,19,21 | 1.96 | 1 (5%) |
| 2 | NAG | C | 802 | 1 | 14,14,15 | 0.77 | 1 (7%) | 17,19,21 | 0.85 | 0 |
| 2 | NAG | B | 806 | 1 | 14,14,15 | 0.56 | 0 | 17,19,21 | 1.39 | 3 (17%) |
| 3 | NDG | B | 804 | 1 | 14,14,15 | 0.64 | 0 | 17,19,21 | 0.78 | 0 |
| 2 | NAG | B | 802 | 1 | 14,14,15 | 0.77 | 1 (7%) | 17,19,21 | 0.85 | 0 |
| 2 | NAG | A | 806 | 1 | 14,14,15 | 0.56 | 0 | 17,19,21 | 1.39 | 3 (17%) |
| 2 | NAG | A | 802 | 1 | 14,14,15 | 0.76 | 1 (7%) | 17,19,21 | 0.85 | 0 |
| 2 | NAG | B | 807 | 1 | 14,14,15 | 0.64 | 0 | 17,19,21 | 1.19 | 2 (11%) |
| 2 | NAG | A | 902 | 1 | 14,14,15 | 1.13 | 1 (7%) | 17,19,21 | 1.09 | 2 (11%) |
| 2 | NAG | C | 803 | 1 | 14,14,15 | 0.99 | 1 (7%) | 17,19,21 | 1.17 | 2 (11%) |
| 2 | NAG | A | 807 | 1 | 14,14,15 | 0.65 | 0 | 17,19,21 | 1.19 | 2 (11%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Counts | RMSZ | $\#\|Z\|>2$ | Counts | RMSZ | $\#\|Z\|>2$ |
| 2 | NAG | A | 904 | 1 | 14,14,15 | 0.76 | 1 (7%) | 17,19,21 | 0.70 | 1 (5%) |
| 3 | NDG | B | 811 | 1 | 14,14,15 | 0.86 | 0 | 17,19,21 | 1.97 | 1 (5%) |
| 2 | NAG | B | 803 | 1 | 14,14,15 | 0.99 | 1 (7%) | 17,19,21 | 1.16 | 2 (11%) |
| 3 | NDG | A | 804 | 1 | 14,14,15 | 0.65 | 0 | 17,19,21 | 0.78 | 0 |
| 2 | NAG | C | 805 | 1 | 14,14,15 | 0.71 | 0 | 17,19,21 | 1.06 | 1 (5%) |
| 2 | NAG | C | 812 | 1 | 14,14,15 | 0.84 | 1 (7%) | 17,19,21 | 0.76 | 1 (5%) |
| 2 | NAG | B | 903 | 1 | 14,14,15 | 0.55 | 0 | 17,19,21 | 0.79 | 0 |
| 2 | NAG | B | 805 | 1 | 14,14,15 | 0.71 | 0 | 17,19,21 | 1.06 | 1 (5%) |
| 2 | NAG | A | 803 | 1 | 14,14,15 | 0.99 | 1 (7%) | 17,19,21 | 1.15 | 2 (11%) |
| 2 | NAG | B | 809 | 1 | 14,14,15 | 0.77 | 1 (7%) | 17,19,21 | 0.94 | 0 |
| 2 | NAG | C | 807 | 1 | 14,14,15 | 0.64 | 0 | 17,19,21 | 1.20 | 2 (11%) |
| 2 | NAG | C | 904 | 1 | 14,14,15 | 0.77 | 1 (7%) | 17,19,21 | 0.70 | 1 (5%) |
| 2 | NAG | A | 903 | 1 | 14,14,15 | 0.55 | 0 | 17,19,21 | 0.79 | 0 |
| 3 | NDG | A | 811 | 1 | 14,14,15 | 0.88 | 0 | 17,19,21 | 1.96 | 1 (5%) |
| 2 | NAG | B | 812 | 1 | 14,14,15 | 0.84 | 1 (7%) | 17,19,21 | 0.76 | 1 (5%) |
| 2 | NAG | B | 904 | 1 | 14,14,15 | 0.77 | 1 (7%) | 17,19,21 | 0.70 | 1 (5%) |
| 2 | NAG | C | 808 | 1 | 14,14,15 | 0.66 | 0 | 17,19,21 | 0.70 | 0 |
| 2 | NAG | C | 801 | 1 | 14,14,15 | 0.70 | 0 | 17,19,21 | 0.98 | 1 (5%) |

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|---|---|---|---|---|---|---|---|
| 2 | NAG | A | 801 | 1 | - | 4/6/23/26 | 0/1/1/1 |
| 2 | NAG | A | 812 | 1 | - | 4/6/23/26 | 0/1/1/1 |
| 2 | NAG | A | 805 | 1 | 1/1/5/7 | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | C | 810 | 1 | - | 3/6/23/26 | 0/1/1/1 |
| 2 | NAG | B | 902 | 1 | 1/1/5/7 | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | C | 902 | 1 | 1/1/5/7 | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | B | 810 | 1 | - | 3/6/23/26 | 0/1/1/1 |
| 2 | NAG | A | 809 | 1 | - | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | C | 806 | 1 | 1/1/5/7 | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | C | 809 | 1 | - | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | C | 903 | 1 | 1/1/5/7 | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | A | 808 | 1 | - | 3/6/23/26 | 0/1/1/1 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|---|---|---|---|---|---|---|---|
| 2 | NAG | B | 801 | 1 | - | 4/6/23/26 | 0/1/1/1 |
| 2 | NAG | B | 808 | 1 | - | 3/6/23/26 | 0/1/1/1 |
| 3 | NDG | C | 804 | 1 | - | 0/6/23/26 | 0/1/1/1 |
| 2 | NAG | A | 810 | 1 | - | 3/6/23/26 | 0/1/1/1 |
| 3 | NDG | C | 811 | 1 | - | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | C | 802 | 1 | - | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | B | 806 | 1 | 1/1/5/7 | 2/6/23/26 | 0/1/1/1 |
| 3 | NDG | B | 804 | 1 | - | 0/6/23/26 | 0/1/1/1 |
| 2 | NAG | B | 802 | 1 | - | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | A | 806 | 1 | 1/1/5/7 | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | A | 802 | 1 | - | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | B | 807 | 1 | - | 5/6/23/26 | 0/1/1/1 |
| 2 | NAG | A | 902 | 1 | 1/1/5/7 | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | C | 803 | 1 | - | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | A | 807 | 1 | - | 5/6/23/26 | 0/1/1/1 |
| 2 | NAG | A | 904 | 1 | - | 3/6/23/26 | 0/1/1/1 |
| 3 | NDG | B | 811 | 1 | - | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | B | 803 | 1 | - | 2/6/23/26 | 0/1/1/1 |
| 3 | NDG | A | 804 | 1 | - | 0/6/23/26 | 0/1/1/1 |
| 2 | NAG | C | 805 | 1 | 1/1/5/7 | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | C | 812 | 1 | - | 4/6/23/26 | 0/1/1/1 |
| 2 | NAG | B | 903 | 1 | 1/1/5/7 | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | A | 803 | 1 | - | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | B | 805 | 1 | 1/1/5/7 | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | B | 809 | 1 | - | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | C | 807 | 1 | - | 5/6/23/26 | 0/1/1/1 |
| 2 | NAG | C | 904 | 1 | - | 3/6/23/26 | 0/1/1/1 |
| 2 | NAG | A | 903 | 1 | 1/1/5/7 | 2/6/23/26 | 0/1/1/1 |
| 3 | NDG | A | 811 | 1 | - | 2/6/23/26 | 0/1/1/1 |
| 2 | NAG | B | 812 | 1 | - | 4/6/23/26 | 0/1/1/1 |
| 2 | NAG | B | 904 | 1 | - | 3/6/23/26 | 0/1/1/1 |
| 2 | NAG | C | 808 | 1 | - | 3/6/23/26 | 0/1/1/1 |
| 2 | NAG | C | 801 | 1 | - | 4/6/23/26 | 0/1/1/1 |

All (17) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 2 | A | 902 | NAG | C1-C2 | 3.38 | 1.57 | 1.52 |
| 2 | C | 902 | NAG | C1-C2 | 3.38 | 1.56 | 1.52 |
| 2 | B | 902 | NAG | C1-C2 | 3.31 | 1.56 | 1.52 |
| 2 | C | 803 | NAG | O5-C5 | 2.64 | 1.48 | 1.43 |
| 2 | B | 803 | NAG | O5-C5 | 2.62 | 1.48 | 1.43 |
| 2 | A | 803 | NAG | O5-C5 | 2.62 | 1.48 | 1.43 |
| 2 | C | 904 | NAG | C1-C2 | -2.43 | 1.49 | 1.52 |
| 2 | B | 904 | NAG | C1-C2 | -2.41 | 1.49 | 1.52 |
| 2 | A | 904 | NAG | C1-C2 | -2.39 | 1.49 | 1.52 |
| 2 | C | 812 | NAG | C1-C2 | -2.36 | 1.49 | 1.52 |
| 2 | B | 812 | NAG | C1-C2 | -2.34 | 1.49 | 1.52 |
| 2 | A | 812 | NAG | C1-C2 | -2.33 | 1.49 | 1.52 |
| 2 | B | 802 | NAG | C1-C2 | 2.09 | 1.55 | 1.52 |
| 2 | C | 802 | NAG | C1-C2 | 2.08 | 1.55 | 1.52 |
| 2 | A | 802 | NAG | C1-C2 | 2.06 | 1.55 | 1.52 |
| 2 | C | 809 | NAG | C1-C2 | -2.04 | 1.49 | 1.52 |
| 2 | B | 809 | NAG | C1-C2 | -2.02 | 1.49 | 1.52 |

All (52) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 3 | B | 811 | NDG | C2-N2-C7 | -7.45 | 112.92 | 122.90 |
| 3 | A | 811 | NDG | C2-N2-C7 | -7.42 | 112.95 | 122.90 |
| 3 | C | 811 | NDG | C2-N2-C7 | -7.42 | 112.96 | 122.90 |
| 2 | A | 806 | NAG | C2-N2-C7 | -3.63 | 118.04 | 122.90 |
| 2 | B | 806 | NAG | C2-N2-C7 | -3.62 | 118.05 | 122.90 |
| 2 | C | 806 | NAG | C2-N2-C7 | -3.60 | 118.07 | 122.90 |
| 2 | B | 805 | NAG | C2-N2-C7 | -3.20 | 118.61 | 122.90 |
| 2 | A | 805 | NAG | C2-N2-C7 | -3.16 | 118.66 | 122.90 |
| 2 | C | 805 | NAG | C2-N2-C7 | -3.15 | 118.68 | 122.90 |
| 2 | C | 807 | NAG | C2-N2-C7 | -3.08 | 118.78 | 122.90 |
| 2 | B | 807 | NAG | C2-N2-C7 | -3.05 | 118.81 | 122.90 |
| 2 | A | 807 | NAG | C2-N2-C7 | -3.05 | 118.82 | 122.90 |
| 2 | C | 803 | NAG | C2-N2-C7 | -3.00 | 118.87 | 122.90 |
| 2 | A | 803 | NAG | C2-N2-C7 | -2.96 | 118.93 | 122.90 |
| 2 | B | 803 | NAG | C2-N2-C7 | -2.96 | 118.94 | 122.90 |
| 2 | C | 810 | NAG | C1-C2-N2 | 2.55 | 114.45 | 110.43 |
| 2 | A | 810 | NAG | C1-C2-N2 | 2.53 | 114.41 | 110.43 |
| 2 | B | 810 | NAG | C1-C2-N2 | 2.50 | 114.38 | 110.43 |
| 2 | C | 810 | NAG | C4-C3-C2 | -2.46 | 107.41 | 111.02 |
| 2 | C | 803 | NAG | C1-O5-C5 | 2.46 | 115.49 | 112.19 |
| 2 | B | 810 | NAG | C4-C3-C2 | -2.46 | 107.41 | 111.02 |
| 2 | A | 810 | NAG | C4-C3-C2 | -2.45 | 107.42 | 111.02 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 2 | A | 806 | NAG | C4-C3-C2 | -2.45 | 107.43 | 111.02 |
| 2 | B | 806 | NAG | C4-C3-C2 | -2.44 | 107.44 | 111.02 |
| 2 | B | 803 | NAG | C1-O5-C5 | 2.44 | 115.45 | 112.19 |
| 2 | C | 806 | NAG | C4-C3-C2 | -2.43 | 107.45 | 111.02 |
| 2 | A | 803 | NAG | C1-O5-C5 | 2.43 | 115.44 | 112.19 |
| 2 | A | 810 | NAG | O5-C1-C2 | -2.38 | 107.60 | 111.29 |
| 2 | B | 810 | NAG | O5-C1-C2 | -2.38 | 107.61 | 111.29 |
| 2 | C | 810 | NAG | O5-C1-C2 | -2.33 | 107.68 | 111.29 |
| 2 | B | 810 | NAG | C1-O5-C5 | -2.25 | 109.17 | 112.19 |
| 2 | C | 810 | NAG | C1-O5-C5 | -2.25 | 109.17 | 112.19 |
| 2 | A | 810 | NAG | C1-O5-C5 | -2.23 | 109.19 | 112.19 |
| 2 | B | 902 | NAG | O5-C1-C2 | 2.17 | 114.65 | 111.29 |
| 2 | A | 812 | NAG | C2-N2-C7 | -2.16 | 120.01 | 122.90 |
| 2 | A | 902 | NAG | O5-C1-C2 | 2.16 | 114.63 | 111.29 |
| 2 | C | 812 | NAG | C2-N2-C7 | -2.14 | 120.03 | 122.90 |
| 2 | B | 812 | NAG | C2-N2-C7 | -2.14 | 120.04 | 122.90 |
| 2 | A | 801 | NAG | C1-C2-N2 | -2.13 | 107.07 | 110.43 |
| 2 | B | 801 | NAG | C1-C2-N2 | -2.13 | 107.07 | 110.43 |
| 2 | C | 801 | NAG | C1-C2-N2 | -2.13 | 107.08 | 110.43 |
| 2 | C | 902 | NAG | O5-C1-C2 | 2.12 | 114.57 | 111.29 |
| 2 | B | 807 | NAG | O5-C1-C2 | -2.09 | 108.06 | 111.29 |
| 2 | C | 807 | NAG | O5-C1-C2 | -2.08 | 108.08 | 111.29 |
| 2 | A | 807 | NAG | O5-C1-C2 | -2.07 | 108.08 | 111.29 |
| 2 | C | 904 | NAG | C2-N2-C7 | -2.04 | 120.17 | 122.90 |
| 2 | A | 902 | NAG | C1-O5-C5 | 2.04 | 114.92 | 112.19 |
| 2 | B | 904 | NAG | C2-N2-C7 | -2.03 | 120.17 | 122.90 |
| 2 | C | 902 | NAG | C1-O5-C5 | 2.03 | 114.91 | 112.19 |
| 2 | B | 806 | NAG | O5-C1-C2 | -2.03 | 108.15 | 111.29 |
| 2 | A | 904 | NAG | C2-N2-C7 | -2.02 | 120.19 | 122.90 |
| 2 | A | 806 | NAG | O5-C1-C2 | -2.02 | 108.17 | 111.29 |

All (12) chirality outliers are listed below:

| Mol | Chain | Res | Type | Atom |
|---|---|---|---|---|
| 2 | A | 805 | NAG | C1 |
| 2 | A | 806 | NAG | C1 |
| 2 | A | 902 | NAG | C1 |
| 2 | A | 903 | NAG | C1 |
| 2 | B | 805 | NAG | C1 |
| 2 | B | 806 | NAG | C1 |
| 2 | B | 902 | NAG | C1 |
| 2 | B | 903 | NAG | C1 |

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| Mol | Chain | Res | Type | Atom |
|---|---|---|---|---|
| 2 | C | 805 | NAG | C1 |
| 2 | C | 806 | NAG | C1 |
| 2 | C | 902 | NAG | C1 |
| 2 | C | 903 | NAG | C1 |

All (114) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms |
|---|---|---|---|---|
| 2 | A | 807 | NAG | C3-C2-N2-C7 |
| 2 | A | 808 | NAG | C1-C2-N2-C7 |
| 2 | A | 810 | NAG | C1-C2-N2-C7 |
| 2 | A | 812 | NAG | C1-C2-N2-C7 |
| 2 | A | 902 | NAG | C3-C2-N2-C7 |
| 2 | A | 904 | NAG | C3-C2-N2-C7 |
| 2 | B | 807 | NAG | C3-C2-N2-C7 |
| 2 | B | 808 | NAG | C1-C2-N2-C7 |
| 2 | B | 810 | NAG | C1-C2-N2-C7 |
| 2 | B | 812 | NAG | C1-C2-N2-C7 |
| 2 | B | 902 | NAG | C3-C2-N2-C7 |
| 2 | B | 904 | NAG | C3-C2-N2-C7 |
| 2 | C | 807 | NAG | C3-C2-N2-C7 |
| 2 | C | 808 | NAG | C1-C2-N2-C7 |
| 2 | C | 810 | NAG | C1-C2-N2-C7 |
| 2 | C | 812 | NAG | C1-C2-N2-C7 |
| 2 | C | 902 | NAG | C3-C2-N2-C7 |
| 2 | C | 904 | NAG | C3-C2-N2-C7 |
| 3 | A | 811 | NDG | C4-C5-C6-O6 |
| 3 | B | 811 | NDG | C4-C5-C6-O6 |
| 3 | C | 811 | NDG | C4-C5-C6-O6 |
| 2 | A | 807 | NAG | C4-C5-C6-O6 |
| 2 | B | 807 | NAG | C4-C5-C6-O6 |
| 2 | C | 802 | NAG | C4-C5-C6-O6 |
| 2 | C | 807 | NAG | C4-C5-C6-O6 |
| 3 | A | 811 | NDG | O5-C5-C6-O6 |
| 3 | B | 811 | NDG | O5-C5-C6-O6 |
| 3 | C | 811 | NDG | O5-C5-C6-O6 |
| 2 | A | 802 | NAG | C4-C5-C6-O6 |
| 2 | B | 802 | NAG | C4-C5-C6-O6 |
| 2 | A | 809 | NAG | O5-C5-C6-O6 |
| 2 | B | 809 | NAG | O5-C5-C6-O6 |
| 2 | C | 809 | NAG | O5-C5-C6-O6 |
| 2 | A | 809 | NAG | C4-C5-C6-O6 |

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| Mol | Chain | Res | Type | Atoms |
|---|---|---|---|---|
| 2 | B | 809 | NAG | C4-C5-C6-O6 |
| 2 | C | 809 | NAG | C4-C5-C6-O6 |
| 2 | A | 807 | NAG | O5-C5-C6-O6 |
| 2 | B | 807 | NAG | O5-C5-C6-O6 |
| 2 | C | 807 | NAG | O5-C5-C6-O6 |
| 2 | A | 807 | NAG | C8-C7-N2-C2 |
| 2 | B | 807 | NAG | C8-C7-N2-C2 |
| 2 | C | 807 | NAG | C8-C7-N2-C2 |
| 2 | A | 805 | NAG | O5-C5-C6-O6 |
| 2 | B | 805 | NAG | O5-C5-C6-O6 |
| 2 | C | 805 | NAG | O5-C5-C6-O6 |
| 2 | B | 802 | NAG | O5-C5-C6-O6 |
| 2 | C | 802 | NAG | O5-C5-C6-O6 |
| 2 | A | 802 | NAG | O5-C5-C6-O6 |
| 2 | A | 904 | NAG | C4-C5-C6-O6 |
| 2 | B | 904 | NAG | C4-C5-C6-O6 |
| 2 | C | 904 | NAG | C4-C5-C6-O6 |
| 2 | A | 805 | NAG | C4-C5-C6-O6 |
| 2 | C | 805 | NAG | C4-C5-C6-O6 |
| 2 | B | 805 | NAG | C4-C5-C6-O6 |
| 2 | A | 810 | NAG | C4-C5-C6-O6 |
| 2 | B | 810 | NAG | C4-C5-C6-O6 |
| 2 | C | 810 | NAG | C4-C5-C6-O6 |
| 2 | A | 812 | NAG | O5-C5-C6-O6 |
| 2 | B | 812 | NAG | O5-C5-C6-O6 |
| 2 | C | 812 | NAG | O5-C5-C6-O6 |
| 2 | A | 807 | NAG | O7-C7-N2-C2 |
| 2 | B | 807 | NAG | O7-C7-N2-C2 |
| 2 | C | 807 | NAG | O7-C7-N2-C2 |
| 2 | A | 803 | NAG | C4-C5-C6-O6 |
| 2 | C | 803 | NAG | C4-C5-C6-O6 |
| 2 | B | 803 | NAG | C4-C5-C6-O6 |
| 2 | A | 810 | NAG | O5-C5-C6-O6 |
| 2 | B | 810 | NAG | O5-C5-C6-O6 |
| 2 | C | 810 | NAG | O5-C5-C6-O6 |
| 2 | A | 904 | NAG | O5-C5-C6-O6 |
| 2 | B | 904 | NAG | O5-C5-C6-O6 |
| 2 | C | 904 | NAG | O5-C5-C6-O6 |
| 2 | A | 801 | NAG | C4-C5-C6-O6 |
| 2 | B | 801 | NAG | C4-C5-C6-O6 |
| 2 | C | 801 | NAG | C4-C5-C6-O6 |
| 2 | A | 803 | NAG | O5-C5-C6-O6 |

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| Mol | Chain | Res | Type | Atoms |
|---|---|---|---|---|
| 2 | B | 803 | NAG | O5-C5-C6-O6 |
| 2 | C | 803 | NAG | O5-C5-C6-O6 |
| 2 | B | 903 | NAG | C4-C5-C6-O6 |
| 2 | A | 903 | NAG | C4-C5-C6-O6 |
| 2 | C | 903 | NAG | C4-C5-C6-O6 |
| 2 | B | 806 | NAG | C4-C5-C6-O6 |
| 2 | A | 806 | NAG | C4-C5-C6-O6 |
| 2 | A | 808 | NAG | C4-C5-C6-O6 |
| 2 | B | 808 | NAG | C4-C5-C6-O6 |
| 2 | C | 808 | NAG | C4-C5-C6-O6 |
| 2 | C | 806 | NAG | C4-C5-C6-O6 |
| 2 | A | 801 | NAG | C3-C2-N2-C7 |
| 2 | A | 903 | NAG | C3-C2-N2-C7 |
| 2 | B | 801 | NAG | C3-C2-N2-C7 |
| 2 | B | 903 | NAG | C3-C2-N2-C7 |
| 2 | C | 801 | NAG | C3-C2-N2-C7 |
| 2 | C | 903 | NAG | C3-C2-N2-C7 |
| 2 | A | 801 | NAG | O5-C5-C6-O6 |
| 2 | B | 801 | NAG | O5-C5-C6-O6 |
| 2 | C | 801 | NAG | O5-C5-C6-O6 |
| 2 | A | 801 | NAG | C1-C2-N2-C7 |
| 2 | A | 902 | NAG | C1-C2-N2-C7 |
| 2 | B | 801 | NAG | C1-C2-N2-C7 |
| 2 | B | 902 | NAG | C1-C2-N2-C7 |
| 2 | C | 801 | NAG | C1-C2-N2-C7 |
| 2 | C | 902 | NAG | C1-C2-N2-C7 |
| 2 | B | 806 | NAG | O5-C5-C6-O6 |
| 2 | C | 806 | NAG | O5-C5-C6-O6 |
| 2 | A | 806 | NAG | O5-C5-C6-O6 |
| 2 | A | 808 | NAG | C3-C2-N2-C7 |
| 2 | A | 812 | NAG | C3-C2-N2-C7 |
| 2 | B | 808 | NAG | C3-C2-N2-C7 |
| 2 | B | 812 | NAG | C3-C2-N2-C7 |
| 2 | C | 808 | NAG | C3-C2-N2-C7 |
| 2 | C | 812 | NAG | C3-C2-N2-C7 |
| 2 | B | 812 | NAG | C4-C5-C6-O6 |
| 2 | C | 812 | NAG | C4-C5-C6-O6 |
| 2 | A | 812 | NAG | C4-C5-C6-O6 |

There are no ring outliers.

39 monomers are involved in 305 short contacts:

| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|---|---|---|---|---|---|
| 2 | A | 801 | NAG | 22 | 0 |
| 2 | A | 812 | NAG | 3 | 0 |
| 2 | A | 805 | NAG | 7 | 0 |
| 2 | C | 810 | NAG | 13 | 0 |
| 2 | B | 902 | NAG | 8 | 0 |
| 2 | C | 902 | NAG | 8 | 0 |
| 2 | B | 810 | NAG | 13 | 0 |
| 2 | A | 809 | NAG | 8 | 0 |
| 2 | C | 806 | NAG | 12 | 0 |
| 2 | C | 809 | NAG | 8 | 0 |
| 2 | A | 808 | NAG | 2 | 0 |
| 2 | B | 801 | NAG | 22 | 0 |
| 2 | B | 808 | NAG | 2 | 0 |
| 3 | C | 804 | NDG | 2 | 0 |
| 2 | A | 810 | NAG | 13 | 0 |
| 3 | C | 811 | NDG | 6 | 0 |
| 2 | B | 806 | NAG | 12 | 0 |
| 3 | B | 804 | NDG | 2 | 0 |
| 2 | A | 806 | NAG | 12 | 0 |
| 2 | B | 807 | NAG | 16 | 0 |
| 2 | A | 902 | NAG | 8 | 0 |
| 2 | C | 803 | NAG | 4 | 0 |
| 2 | A | 807 | NAG | 17 | 0 |
| 2 | A | 904 | NAG | 8 | 0 |
| 3 | B | 811 | NDG | 7 | 0 |
| 2 | B | 803 | NAG | 4 | 0 |
| 3 | A | 804 | NDG | 2 | 0 |
| 2 | C | 805 | NAG | 7 | 0 |
| 2 | C | 812 | NAG | 3 | 0 |
| 2 | B | 805 | NAG | 7 | 0 |
| 2 | A | 803 | NAG | 4 | 0 |
| 2 | B | 809 | NAG | 8 | 0 |
| 2 | C | 807 | NAG | 17 | 0 |
| 2 | C | 904 | NAG | 7 | 0 |
| 3 | A | 811 | NDG | 7 | 0 |
| 2 | B | 812 | NAG | 3 | 0 |
| 2 | B | 904 | NAG | 8 | 0 |
| 2 | C | 808 | NAG | 2 | 0 |
| 2 | C | 801 | NAG | 21 | 0 |

## 5.7 Other polymers

There are no such residues in this entry.

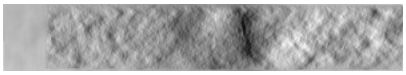
## 5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

# 6 Tomogram visualisation

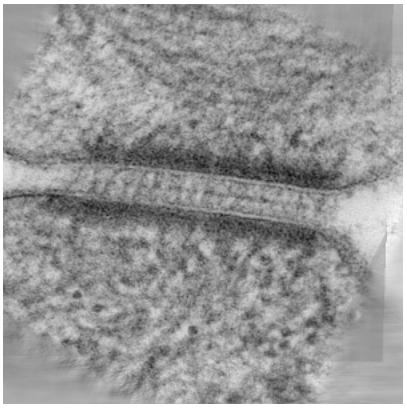
This section contains visualisations of the EMDB entry EMD-1052. These allow visual inspection of the internal detail of the tomogram and identification of artifacts.

## 6.1 Orthogonal projections



X

Y

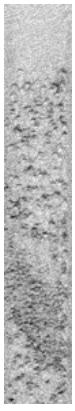


Z

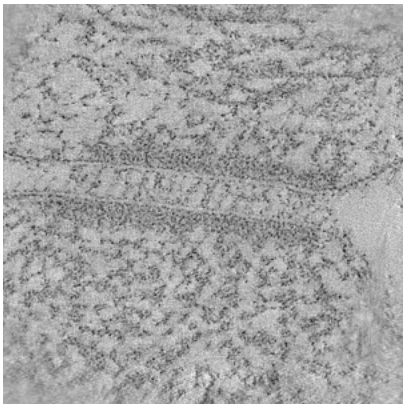
The images above show the tomogram projected in three orthogonal directions.

## 6.2 Central slices

X Index: 256



Y Index: 256

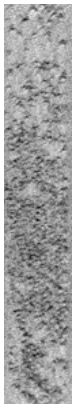


Z Index: 42

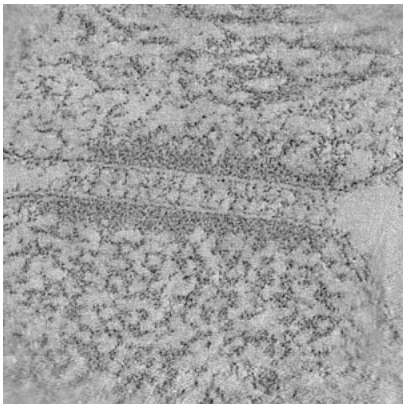
The images above show central slices of the tomogram in three orthogonal directions.

## 6.3 Largest variance slices (i)

X Index: 243



Y Index: 315



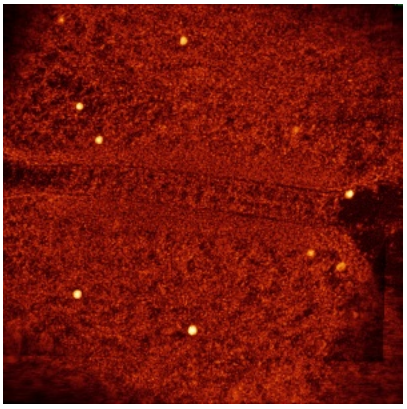
Z Index: 39

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

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

X

Y



Z

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

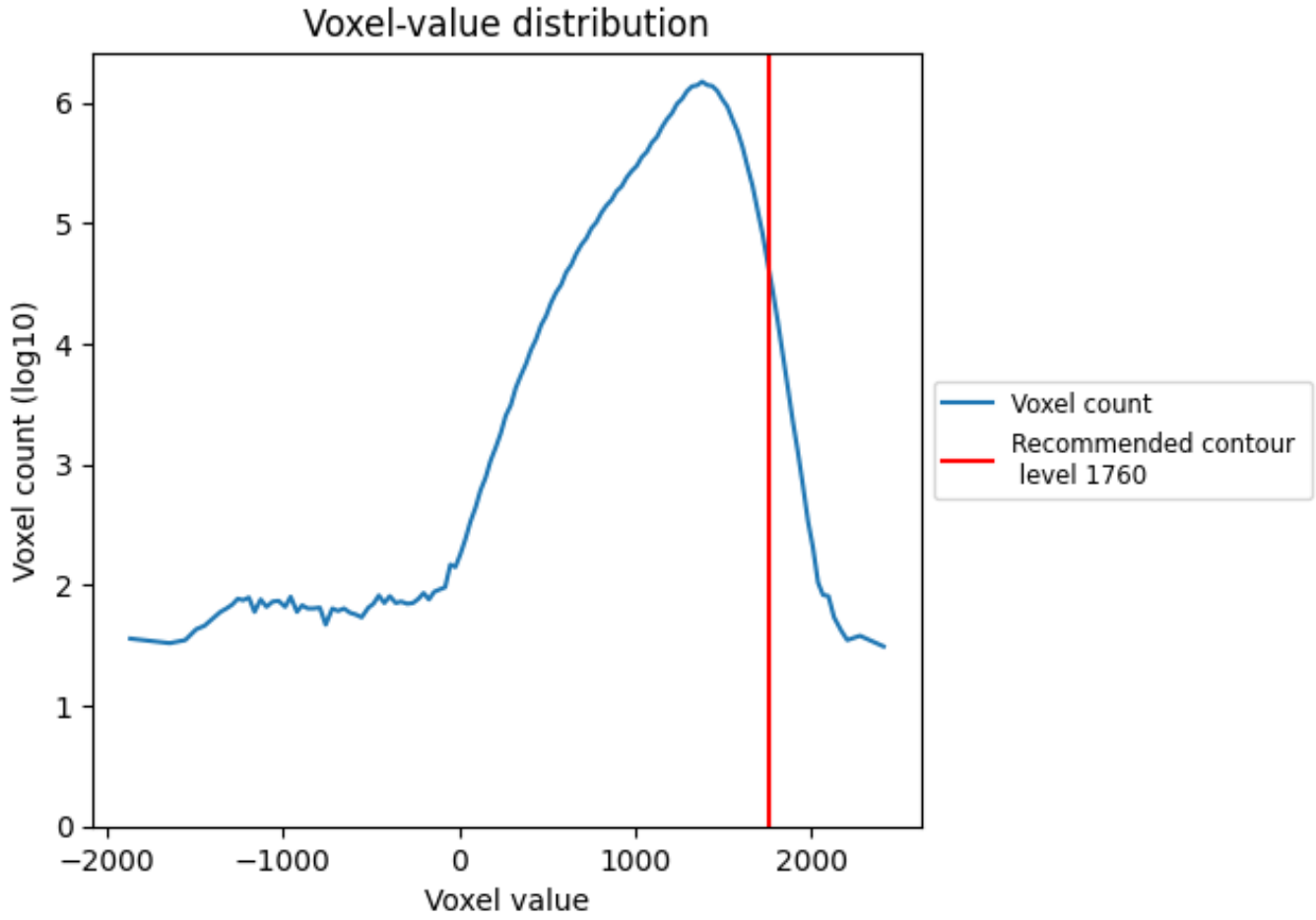
## 6.5 Mask visualisation (i)

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

# 7 Tomogram analysis

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

## 7.1 Voxel-value distribution




The voxel-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic.

# 8 Map-model fit

This section contains information regarding the fit between EMDB map EMD-1052 and PDB model 1Q5B. Per-residue inclusion information can be found in section 3 on page 8.

## 8.1 Map-model overlay

This section was not generated.

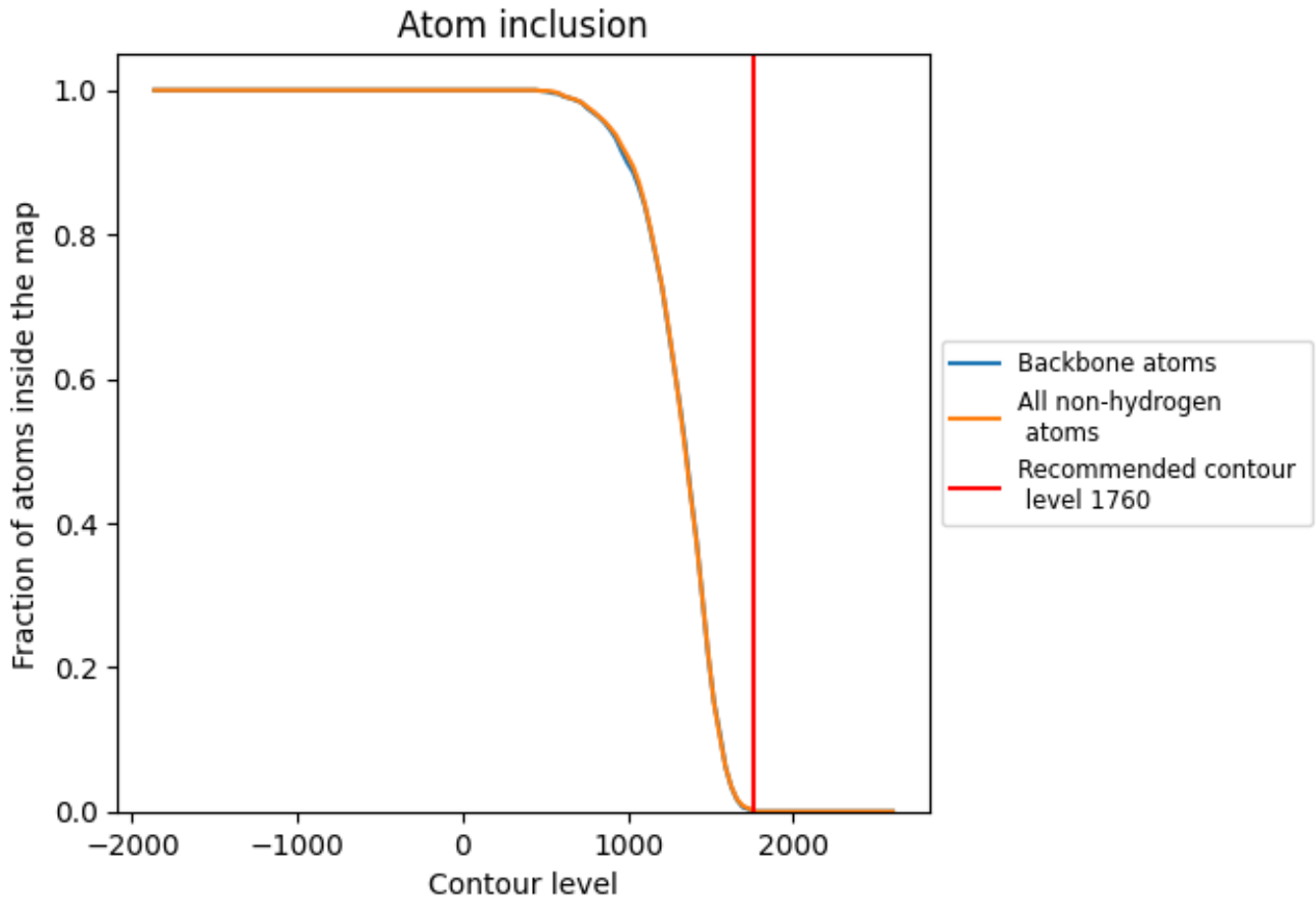
## 8.2 Q-score mapped to coordinate model


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

## 8.3 Atom inclusion mapped to coordinate model

This section was not generated.

## 8.4 Atom inclusion (i)




At the recommended contour level, 0% of all backbone atoms, 0% of all non-hydrogen atoms, are inside the map.

## 8.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (1760) and Q-score for the entire model and for each chain.


| Chain | Atom inclusion | Q-score |
|---|---|---|
| All | 0.0010 | 0.0040 |
| A | 0.0020 | 0.0070 |
| B | 0.0000 | 0.0030 |
| C | 0.0000 | 0.0020 |