# Full wwPDB EM Validation Report ⓘ

Jun 3, 2026 – 05:48 PM EDT

| | | |
|---|---|---|
| PDB ID | : | 9YFG / pdb_00009yfg |
| EMDB ID | : | EMD-72891 |
| Title | : | Flagellar outer membrane complex in Vibrio cholerae at disassembled, closed state |
| Authors | : | Guo, W.; Yue, J.; Liu, J. |
| Deposited on | : | 2025-09-25 |
| Resolution | : | 3.55 Å(reported) |

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

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

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

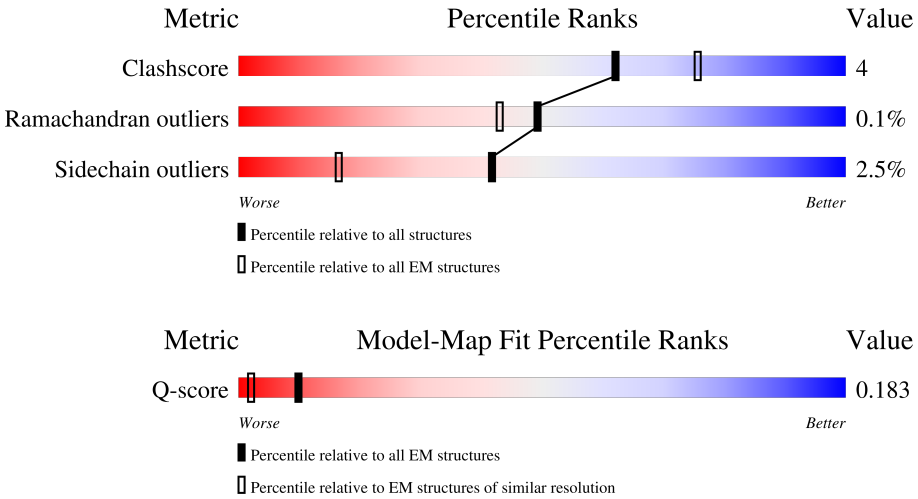
| | | |
|---|---|---|
| EMDB validation analysis | : | 0.0.1.dev132 |
| MolProbity | : | 4-5-2 with Phenix2.0 |
| Percentile statistics | : | 20250101.v01 (using entries in the PDB archive January 1st 2025) |
| EM percentile statistics | : | 202505.v01 (Using data in the EMDB archive up until May 2025)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

# 1 Overall quality at a glance

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

The reported resolution of this entry is 3.55 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) | Similar EM resolution (#Entries, resolution range(Å)) |
|---|---|---|---|
| Clashscore | 229148 | 23984 | - |
| Ramachandran outliers | 224038 | 23583 | - |
| Sidechain outliers | 223484 | 23102 | - |
| Q-score | - | 25397 | 12819 ( 3.05 - 4.05 ) |

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 | Aa | 227 | 84% 14% |
| 1 | Ab | 227 | 84% 14% |
| 1 | Ac | 227 | 85% 12% |
| 1 | Ad | 227 | 83% 15% |

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| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 1 | Ae | 227 |   |
| 1 | Af | 227 |   |
| 1 | Ag | 227 |   |
| 1 | Ah | 227 |   |
| 1 | Ai | 227 |   |
| 1 | Aj | 227 |   |
| 1 | Ak | 227 |   |
| 1 | Al | 227 |   |
| 1 | Am | 227 |   |
| 1 | An | 227 |   |
| 1 | Ao | 227 |   |
| 1 | Ap | 227 |   |
| 1 | Aq | 227 |   |
| 1 | Ar | 227 |   |
| 1 | As | 227 |   |
| 1 | At | 227 |   |
| 1 | Au | 227 |   |
| 1 | Av | 227 |   |
| 1 | Aw | 227 |   |
| 1 | Ax | 227 |   |
| 1 | Ay | 227 |   |
| 1 | Az | 227 |   |
| 2 | Ba | 343 |   |
| 2 | Bb | 343 |   |
| 2 | Bc | 343 |   |

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| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 2 | Bd | 343 | 86% 13% |
| 2 | Be | 343 | 82% 17% |
| 2 | Bf | 343 | 85% 15% |
| 2 | Bg | 343 | 85% 15% |
| 2 | Bh | 343 | 84% 15% |
| 2 | Bi | 343 | 85% 15% |
| 2 | Bj | 343 | 83% 17% |
| 2 | Bk | 343 | 83% 17% |
| 2 | Bl | 343 | 82% 18% |
| 2 | Bm | 343 | 81% 19% |
| 2 | Bn | 343 | 83% 17% |
| 2 | Bo | 343 | 84% 16% |
| 2 | Bp | 343 | 84% 16% |
| 2 | Bq | 343 | 83% 17% |
| 2 | Br | 343 | 85% 15% |
| 2 | Bs | 343 | 83% 17% |
| 2 | Bt | 343 | 88% 12% |
| 2 | Bu | 343 | 83% 16% |
| 2 | Bv | 343 | 83% 17% |
| 2 | Bw | 343 | 84% 15% |
| 2 | Bx | 343 | 83% 17% |
| 2 | By | 343 | 83% 17% |
| 2 | Bz | 343 | 86% 13% |
| 3 | Ca | 352 | 90% 10% |
| 3 | Cb | 352 | 82% 17% |

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| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 3 | Cc | 352 | 91% 9% |
| 3 | Cd | 352 | 89% 11% |
| 3 | Ce | 352 | 88% 13% |
| 3 | Cf | 352 | 88% 11% |
| 3 | Cg | 352 | 86% 14% |
| 3 | Ch | 352 | 86% 14% |
| 3 | Ci | 352 | 90% 9% |
| 3 | Cj | 352 | 88% 13% |
| 3 | Ck | 352 | 89% 11% |
| 3 | Cl | 352 | 91% 9% |
| 3 | Cm | 352 | 86% 14% |
| 3 | Cn | 352 | 89% 11% |
| 3 | Co | 352 | 88% 13% |
| 3 | Cp | 352 | 90% 10% |
| 3 | Cq | 352 | 88% 12% |
| 3 | Cr | 352 | 88% 12% |
| 3 | Cs | 352 | 88% 12% |
| 3 | Ct | 352 | 86% 13% |
| 3 | Cu | 352 | 89% 11% |
| 3 | Cv | 352 | 89% 11% |
| 3 | Cw | 352 | 89% 11% |
| 3 | Cx | 352 | 91% 9% |
| 3 | Cy | 352 | 89% 11% |
| 3 | Cz | 352 | 89% 10% |
| 4 | Da | 271 | 85% 9% 5% |

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| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 4 | Db | 271 | 86% 8% • 5% |
| 4 | Dc | 271 | 82% 13% • 5% |
| 4 | Dd | 271 | 84% 11% 5% |
| 4 | De | 271 | 82% 12% • 5% |
| 4 | Df | 271 | 81% 13% • 5% |
| 4 | Dg | 271 | 80% 14% • 5% |
| 4 | Dh | 271 | 85% 10% 5% |
| 4 | Di | 271 | 78% 15% • 5% |
| 4 | Dj | 271 | 81% 14% • 5% |
| 4 | Dk | 271 | 83% 11% • 5% |
| 4 | Dl | 271 | 85% 9% • 5% |
| 4 | Dm | 271 | 82% 13% 5% |
| 4 | Dn | 271 | 84% 11% 5% |
| 4 | Do | 271 | 83% 11% • 5% |
| 4 | Dp | 271 | 86% 9% 5% |
| 4 | Dq | 271 | 83% 11% • 5% |
| 4 | Dr | 271 | 83% 11% • 5% |
| 4 | Ds | 271 | 82% 11% • 5% |
| 4 | Dt | 271 | 83% 11% • 5% |
| 4 | Du | 271 | 79% 14% • 5% |
| 4 | Dv | 271 | 83% 11% • 5% |
| 4 | Dw | 271 | 82% 11% • 5% |
| 4 | Dx | 271 | 83% 11% 5% |
| 4 | Dy | 271 | 82% 12% • 5% |
| 4 | Dz | 271 | 86% 9% • 5% |

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| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 5 | Ea | 183 | 6% 85% 15% |
| 5 | Eb | 183 | 9% 90% 10% |
| 5 | Ec | 183 | 85% 15% |
| 5 | Ed | 183 | 9% 92% 7% |
| 5 | Ee | 183 | 7% 85% 15% |
| 5 | Ef | 183 | 8% 91% 9% |
| 5 | Eg | 183 | 84% 16% |
| 5 | Eh | 183 | 7% 89% 11% |
| 5 | Ei | 183 | 86% 14% |
| 5 | Ej | 183 | 7% 91% 9% |
| 5 | Ek | 183 | 5% 87% 13% |
| 5 | El | 183 | 7% 89% 11% |
| 5 | Em | 183 | 84% 16% |
| 5 | En | 183 | 5% 91% 9% |
| 5 | Eo | 183 | 5% 84% 15% |
| 5 | Ep | 183 | 91% 9% |
| 5 | Eq | 183 | 5% 84% 16% |
| 5 | Er | 183 | 88% 11% |
| 5 | Es | 183 | 85% 14% |
| 5 | Et | 183 | 5% 90% 10% |
| 5 | Eu | 183 | 85% 15% |
| 5 | Ev | 183 | 91% 9% |
| 5 | Ew | 183 | 86% 14% |
| 5 | Ex | 183 | 10% 92% 8% |
| 5 | Ey | 183 | 6% 86% 13% |

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| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 5 | Ez | 183 | 10% 89% 11% |
| 6 | Fa | 12 | 8% 92% 8% |
| 6 | Fb | 12 | 8% 100% |
| 6 | Fc | 12 | 92% 8% |
| 6 | Fd | 12 | 100% |
| 6 | Fe | 12 | 100% |
| 6 | Ff | 12 | 83% 17% |
| 6 | Fg | 12 | 92% 8% |
| 6 | Fh | 12 | 92% 8% |
| 6 | Fi | 12 | 100% |
| 6 | Fj | 12 | 100% |
| 6 | Fk | 12 | 100% |
| 6 | Fl | 12 | 92% 8% |
| 6 | Fm | 12 | 100% |
| 6 | Fn | 12 | 92% 8% |
| 6 | Fo | 12 | 8% 92% 8% |
| 6 | Fp | 12 | 100% |
| 6 | Fq | 12 | 100% |
| 6 | Fr | 12 | 92% 8% |
| 6 | Fs | 12 | 92% 8% |
| 6 | Ft | 12 | 92% 8% |
| 6 | Fu | 12 | 75% 25% |
| 6 | Fv | 12 | 92% 8% |
| 6 | Fw | 12 | 92% 8% |
| 6 | Fx | 12 | 100% |

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| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 6 | Fy | 12 | 100% |
| 6 | Fz | 12 | 92% 8% |
| 6 | Ga | 12 | 92% 8% |
| 6 | Gb | 12 | 83% 17% |
| 6 | Gc | 12 | 83% 17% |
| 6 | Gd | 12 | 75% 25% |
| 6 | Ge | 12 | 100% |
| 6 | Gf | 12 | 17% 100% |
| 6 | Gg | 12 | 100% |
| 6 | Gh | 12 | 92% 8% |
| 6 | Gi | 12 | 100% |
| 6 | Gj | 12 | 92% 8% |
| 6 | Gk | 12 | 92% 8% |
| 6 | Gl | 12 | 83% 17% |
| 6 | Gm | 12 | 100% |
| 6 | Gn | 12 | 92% 8% |
| 6 | Go | 12 | 83% 17% |
| 6 | Gp | 12 | 92% 8% |
| 6 | Gq | 12 | 75% 25% |
| 6 | Gr | 12 | 92% 8% |
| 6 | Gs | 12 | 8% 100% |
| 6 | Gt | 12 | 8% 92% 8% |
| 6 | Gu | 12 | 92% 8% |
| 6 | Gv | 12 | 92% 8% |
| 6 | Gw | 12 | 83% 17% |

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| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 6 | Gx | 12 | 100% |
| 6 | Gy | 12 | 92% 8% |
| 6 | Gz | 12 | 92% 8% |
| 7 | Ha | 105 | 84% 13% |
| 7 | Hc | 105 | 87% 11% |
| 7 | He | 105 | 90% 8% |
| 7 | Hg | 105 | 86% 13% |
| 7 | Hi | 105 | 91% 8% |
| 7 | Hk | 105 | 90% 10% |
| 7 | Hm | 105 | 90% 8% |
| 7 | Ho | 105 | 90% 10% |
| 7 | Hq | 105 | 86% 12% |
| 7 | Hs | 105 | 87% 11% |
| 7 | Hu | 105 | 87% 11% |
| 7 | Hw | 105 | 87% 11% |
| 7 | Hy | 105 | 90% 10% |
| 7 | Ia | 105 | 86% 12% |
| 7 | Ic | 105 | 90% 9% |
| 7 | Ie | 105 | 90% 8% |
| 7 | Ig | 105 | 85% 14% |
| 7 | Ii | 105 | 88% 11% |
| 7 | Ik | 105 | 89% 10% |
| 7 | Im | 105 | 84% 14% |
| 7 | Io | 105 | 86% 12% |
| 7 | Iq | 105 | 89% 9% |

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| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 7 | Is | 105 | 88% 10% |
| 7 | Iu | 105 | 88% 10% |
| 7 | Iw | 105 | 88% 10% |
| 7 | Iy | 105 | 90% 9% |
| 7 | Ja | 105 | 86% 12% |
| 7 | Jc | 105 | 84% 14% |
| 7 | Je | 105 | 83% 15% |
| 7 | Jg | 105 | 86% 11% |
| 7 | Ji | 105 | 83% 14% |
| 7 | Jk | 105 | 85% 12% |
| 7 | Jm | 105 | 87% 10% |
| 7 | Jo | 105 | 85% 14% |
| 7 | Jq | 105 | 84% 14% |
| 7 | Js | 105 | 85% 13% |
| 7 | Ju | 105 | 84% 14% |
| 7 | Jw | 105 | 87% 10% |
| 7 | Jy | 105 | 88% 11% |
| 7 | Ka | 105 | 87% 11% |
| 7 | Kc | 105 | 89% 10% |
| 7 | Ke | 105 | 86% 12% |
| 7 | Kg | 105 | 90% 9% |
| 7 | Ki | 105 | 89% 10% |
| 7 | Kk | 105 | 90% 9% |
| 7 | Km | 105 | 89% 10% |
| 7 | Ko | 105 | 89% 10% |

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| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 7 | Kq | 105 |   |
| 7 | Ks | 105 |   |
| 7 | Ku | 105 |   |
| 7 | Kw | 105 |   |
| 7 | Ky | 105 |   |
| 7 | La | 105 |   |
| 7 | Lc | 105 |   |
| 7 | Le | 105 |   |
| 7 | Lg | 105 |   |
| 7 | Li | 105 |   |
| 7 | Lk | 105 |   |
| 8 | Hb | 190 |   |
| 8 | Hd | 190 |   |
| 8 | Hf | 190 |   |
| 8 | Hh | 190 |   |
| 8 | Hj | 190 |   |
| 8 | Hl | 190 |   |
| 8 | Hn | 190 |   |
| 8 | Hp | 190 |   |
| 8 | Hr | 190 |   |
| 8 | Ht | 190 |   |
| 8 | Hv | 190 |   |
| 8 | Hx | 190 |   |
| 8 | Hz | 190 |   |
| 8 | Ib | 190 |   |

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| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 8 | Id | 190 | 87% 12% |
| 8 | If | 190 | 87% 12% |
| 8 | Ih | 190 | 85% 13% |
| 8 | Ij | 190 | 85% 14% |
| 8 | Il | 190 | 87% 12% |
| 8 | In | 190 | 87% 13% |
| 8 | Ip | 190 | 87% 13% |
| 8 | Ir | 190 | 86% 13% |
| 8 | It | 190 | 87% 12% |
| 8 | Iv | 190 | 85% 15% |
| 8 | Ix | 190 | 84% 15% |
| 8 | Iz | 190 | 84% 15% |
| 8 | Jb | 190 | 86% 13% |
| 8 | Jd | 190 | 84% 15% |
| 8 | Jf | 190 | 86% 13% |
| 8 | Jh | 190 | 85% 14% |
| 8 | Jj | 190 | 86% 13% |
| 8 | Jl | 190 | 88% 11% |
| 8 | Jn | 190 | 85% 14% |
| 8 | Jp | 190 | 88% 11% |
| 8 | Jr | 190 | 85% 14% |
| 8 | Jt | 190 | 86% 13% |
| 8 | Jv | 190 | 84% 15% |
| 8 | Jx | 190 | 86% 13% |
| 8 | Jz | 190 | 86% 12% |

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| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 8 | Kb | 190 | 86% 13% |
| 8 | Kd | 190 | 86% 13% |
| 8 | Kf | 190 | 88% 12% |
| 8 | Kh | 190 | 86% 13% |
| 8 | Kj | 190 | 87% 12% |
| 8 | Kl | 190 | 87% 12% |
| 8 | Kn | 190 | 89% 10% |
| 8 | Kp | 190 | 84% 15% |
| 8 | Kr | 190 | 84% 15% |
| 8 | Kt | 190 | 85% 13% |
| 8 | Kv | 190 | 86% 13% |
| 8 | Kx | 190 | 87% 12% |
| 8 | Kz | 190 | 86% 13% |
| 8 | Lb | 190 | 86% 12% |
| 8 | Ld | 190 | 83% 16% |
| 8 | Lf | 190 | 84% 15% |
| 8 | Lh | 190 | 83% 16% |
| 8 | Lj | 190 | 84% 15% |
| 8 | Ll | 190 | 82% 17% |

# 2 Entry composition (i)

There are 8 unique types of molecules in this entry. The entry contains 412635 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 Flagellar L-ring protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Aa | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Ab | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Ac | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Ad | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Ae | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Af | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Ag | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Ah | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Ai | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Aj | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Ak | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Al | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Am | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | An | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Ao | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Ap | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Aq | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Ar | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | As | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | At | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Au | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Av | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Aw | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Ax | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Ay | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |
| 1 | Az | 223 | Total | C | N | O | S | 0 | 0 |
| | | | 1674 | 1027 | 290 | 353 | 4 | | |

- Molecule 2 is a protein called Flagellar P-ring protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 2 | Ba | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bb | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bc | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bd | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Be | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bf | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bg | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bh | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bi | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bj | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 2 | Bk | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bl | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bm | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bn | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bo | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bp | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bq | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Br | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bs | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bt | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bu | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bv | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bw | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bx | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | By | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |
| 2 | Bz | 343 | Total | C | N | O | S | 0 | 0 |
| | | | 2501 | 1570 | 436 | 488 | 7 | | |

- Molecule 3 is a protein called Flagellar protein FlgT.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 3 | Ca | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cb | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cc | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 3 | Cd | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Ce | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cf | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cg | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Ch | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Ci | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cj | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Ck | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cl | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cm | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cn | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Co | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cp | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cq | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cr | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cs | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Ct | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cu | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cv | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cw | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cx | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 3 | Cy | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |
| 3 | Cz | 352 | Total | C | N | O | S | 0 | 0 |
| | | | 2770 | 1741 | 477 | 535 | 17 | | |

- Molecule 4 is a protein called Sodium-type flagellar protein MotY.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 4 | Da | 257 | Total | C | N | O | S | 0 | 0 |
| | | | 2085 | 1312 | 362 | 404 | 7 | | |
| 4 | Db | 258 | Total | C | N | O | S | 0 | 0 |
| | | | 2080 | 1310 | 358 | 405 | 7 | | |
| 4 | Dc | 257 | Total | C | N | O | S | 0 | 0 |
| | | | 2085 | 1312 | 362 | 404 | 7 | | |
| 4 | Dd | 258 | Total | C | N | O | S | 0 | 0 |
| | | | 2080 | 1310 | 358 | 405 | 7 | | |
| 4 | De | 257 | Total | C | N | O | S | 0 | 0 |
| | | | 2085 | 1312 | 362 | 404 | 7 | | |
| 4 | Df | 258 | Total | C | N | O | S | 0 | 0 |
| | | | 2080 | 1310 | 358 | 405 | 7 | | |
| 4 | Dg | 257 | Total | C | N | O | S | 0 | 0 |
| | | | 2085 | 1312 | 362 | 404 | 7 | | |
| 4 | Dh | 258 | Total | C | N | O | S | 0 | 0 |
| | | | 2080 | 1310 | 358 | 405 | 7 | | |
| 4 | Di | 257 | Total | C | N | O | S | 0 | 0 |
| | | | 2085 | 1312 | 362 | 404 | 7 | | |
| 4 | Dj | 258 | Total | C | N | O | S | 0 | 0 |
| | | | 2080 | 1310 | 358 | 405 | 7 | | |
| 4 | Dk | 257 | Total | C | N | O | S | 0 | 0 |
| | | | 2085 | 1312 | 362 | 404 | 7 | | |
| 4 | Dl | 258 | Total | C | N | O | S | 0 | 0 |
| | | | 2080 | 1310 | 358 | 405 | 7 | | |
| 4 | Dm | 257 | Total | C | N | O | S | 0 | 0 |
| | | | 2085 | 1312 | 362 | 404 | 7 | | |
| 4 | Dn | 258 | Total | C | N | O | S | 0 | 0 |
| | | | 2080 | 1310 | 358 | 405 | 7 | | |
| 4 | Do | 257 | Total | C | N | O | S | 0 | 0 |
| | | | 2085 | 1312 | 362 | 404 | 7 | | |
| 4 | Dp | 258 | Total | C | N | O | S | 0 | 0 |
| | | | 2080 | 1310 | 358 | 405 | 7 | | |
| 4 | Dq | 257 | Total | C | N | O | S | 0 | 0 |
| | | | 2085 | 1312 | 362 | 404 | 7 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 4 | Dr | 258 | Total | C | N | O | S | 0 | 0 |
| | | | 2080 | 1310 | 358 | 405 | 7 | | |
| 4 | Ds | 257 | Total | C | N | O | S | 0 | 0 |
| | | | 2085 | 1312 | 362 | 404 | 7 | | |
| 4 | Dt | 258 | Total | C | N | O | S | 0 | 0 |
| | | | 2080 | 1310 | 358 | 405 | 7 | | |
| 4 | Du | 257 | Total | C | N | O | S | 0 | 0 |
| | | | 2085 | 1312 | 362 | 404 | 7 | | |
| 4 | Dv | 258 | Total | C | N | O | S | 0 | 0 |
| | | | 2080 | 1310 | 358 | 405 | 7 | | |
| 4 | Dw | 257 | Total | C | N | O | S | 0 | 0 |
| | | | 2085 | 1312 | 362 | 404 | 7 | | |
| 4 | Dx | 258 | Total | C | N | O | S | 0 | 0 |
| | | | 2080 | 1310 | 358 | 405 | 7 | | |
| 4 | Dy | 257 | Total | C | N | O | S | 0 | 0 |
| | | | 2085 | 1312 | 362 | 404 | 7 | | |
| 4 | Dz | 258 | Total | C | N | O | S | 0 | 0 |
| | | | 2080 | 1310 | 358 | 405 | 7 | | |

- Molecule 5 is a protein called Sodium-type flagellar protein MotX.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 5 | Ea | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1466 | 926 | 259 | 275 | 6 | | |
| 5 | Eb | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1494 | 943 | 268 | 277 | 6 | | |
| 5 | Ec | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1466 | 926 | 259 | 275 | 6 | | |
| 5 | Ed | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1494 | 943 | 268 | 277 | 6 | | |
| 5 | Ee | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1466 | 926 | 259 | 275 | 6 | | |
| 5 | Ef | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1494 | 943 | 268 | 277 | 6 | | |
| 5 | Eg | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1466 | 926 | 259 | 275 | 6 | | |
| 5 | Eh | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1494 | 943 | 268 | 277 | 6 | | |
| 5 | Ei | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1466 | 926 | 259 | 275 | 6 | | |
| 5 | Ej | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1494 | 943 | 268 | 277 | 6 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 5 | Ek | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1466 | 926 | 259 | 275 | 6 | | |
| 5 | El | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1494 | 943 | 268 | 277 | 6 | | |
| 5 | Em | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1466 | 926 | 259 | 275 | 6 | | |
| 5 | En | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1494 | 943 | 268 | 277 | 6 | | |
| 5 | Eo | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1466 | 926 | 259 | 275 | 6 | | |
| 5 | Ep | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1494 | 943 | 268 | 277 | 6 | | |
| 5 | Eq | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1466 | 926 | 259 | 275 | 6 | | |
| 5 | Er | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1494 | 943 | 268 | 277 | 6 | | |
| 5 | Es | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1466 | 926 | 259 | 275 | 6 | | |
| 5 | Et | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1494 | 943 | 268 | 277 | 6 | | |
| 5 | Eu | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1466 | 926 | 259 | 275 | 6 | | |
| 5 | Ev | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1494 | 943 | 268 | 277 | 6 | | |
| 5 | Ew | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1466 | 926 | 259 | 275 | 6 | | |
| 5 | Ex | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1494 | 943 | 268 | 277 | 6 | | |
| 5 | Ey | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1466 | 926 | 259 | 275 | 6 | | |
| 5 | Ez | 183 | Total | C | N | O | S | 0 | 0 |
| | | | 1494 | 943 | 268 | 277 | 6 | | |

- Molecule 6 is a protein called FlgP.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 6 | Fa | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fb | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fc | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 6 | Fd | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fe | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Ff | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fg | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fh | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fi | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fj | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fk | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fl | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fm | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fn | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fo | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fp | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fq | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fr | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fs | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Ft | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fu | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fv | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fw | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fx | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 6 | Fy | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Fz | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Ga | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gb | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gc | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gd | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Ge | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gf | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gg | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gh | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gi | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gj | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gk | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gl | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gm | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gn | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Go | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gp | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gq | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gr | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gs | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 6 | Gt | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gu | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gv | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gw | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gx | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gy | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |
| 6 | Gz | 12 | Total | C | N | O | S | 0 | 0 |
| | | | 105 | 66 | 19 | 19 | 1 | | |

- Molecule 7 is a protein called Lipoprotein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 7 | Ha | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Hc | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | He | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Hg | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Hi | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Hk | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Hm | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ho | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Hq | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Hs | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Hu | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Hw | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 7 | Hy | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ia | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ic | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ie | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ig | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ii | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ik | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Im | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Io | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Iq | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Is | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Iu | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Iw | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Iy | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ja | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Jc | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Je | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Jg | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ji | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Jk | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Jm | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 7 | Jo | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Jq | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Js | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ju | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Jw | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Jy | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ka | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Kc | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ke | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Kg | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ki | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Kk | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Km | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ko | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Kq | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ks | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ku | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Kw | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Ky | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | La | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Lc | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 7 | Le | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Lg | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Li | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |
| 7 | Lk | 104 | Total | C | N | O | S | 0 | 0 |
| | | | 828 | 506 | 155 | 163 | 4 | | |

- Molecule 8 is a protein called FlgO domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 8 | Hb | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Hd | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Hf | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Hh | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Hj | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Hl | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Hn | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Hp | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Hr | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Ht | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Hv | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Hx | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Hz | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Ib | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Id | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 8 | If | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Ih | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Ij | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Il | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | In | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Ip | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Ir | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | It | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Iv | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Ix | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Iz | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Jb | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Jd | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Jf | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Jh | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Jj | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Jl | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Jn | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Jp | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Jr | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Jt | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 8 | Jv | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Jx | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Jz | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Kb | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Kd | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Kf | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Kh | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Kj | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Kl | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Kn | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Kp | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Kr | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Kt | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Kv | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Kx | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Kz | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Lb | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Ld | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Lf | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Lh | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |
| 8 | Lj | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |

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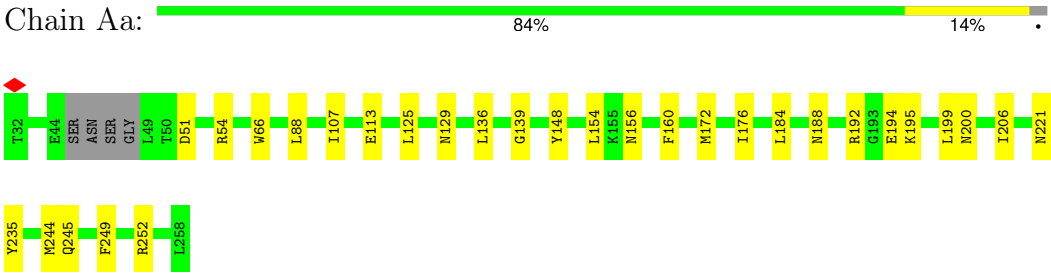
| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| 8 | Ll | 190 | Total | C | N | O | S | 0 | 0 |
| | | | 1482 | 928 | 260 | 287 | 7 | | |

# 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.

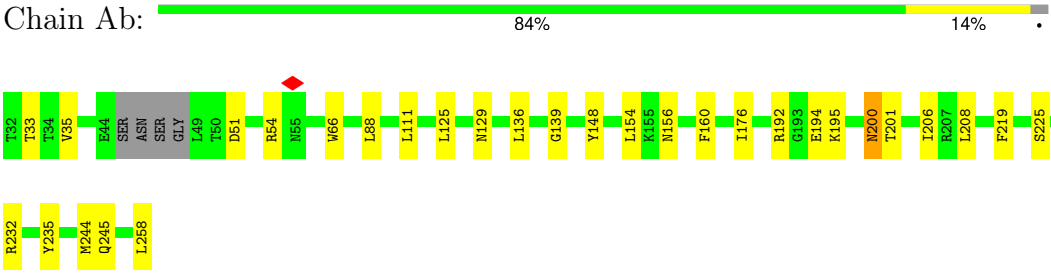
• Molecule 1: Flagellar L-ring protein

Chain Aa:



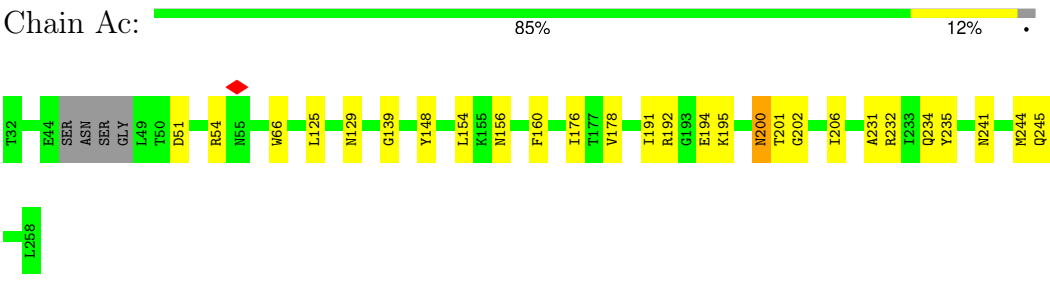

• Molecule 1: Flagellar L-ring protein

Chain Ab:



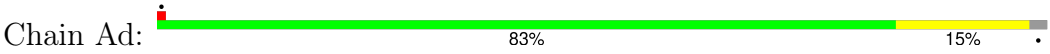

• Molecule 1: Flagellar L-ring protein

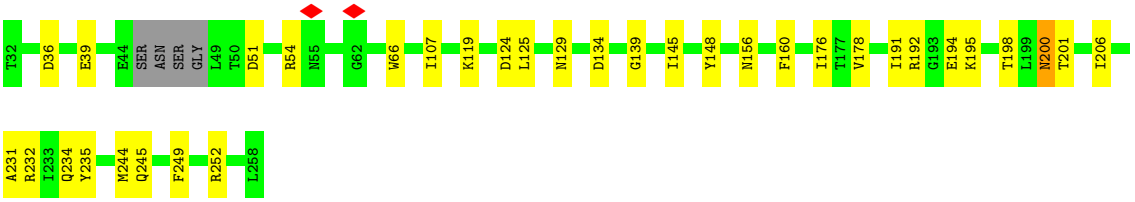
Chain Ac:




• Molecule 1: Flagellar L-ring protein

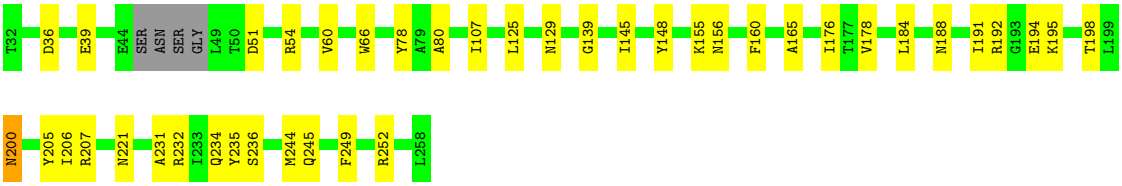
Chain Ad:





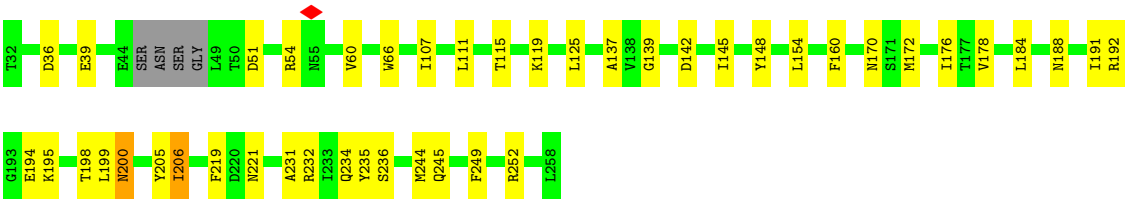

• Molecule 1: Flagellar L-ring protein

Chain Ae:

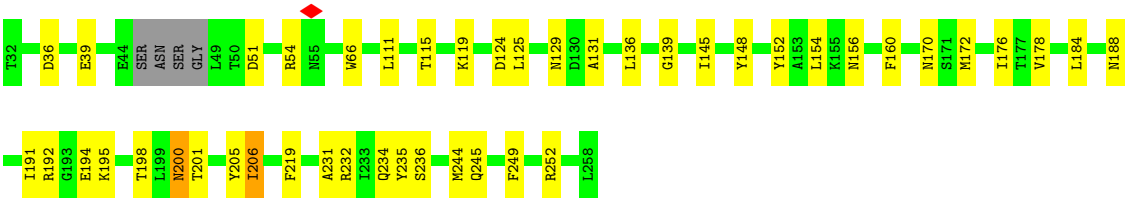

• Molecule 1: Flagellar L-ring protein

Chain Af:

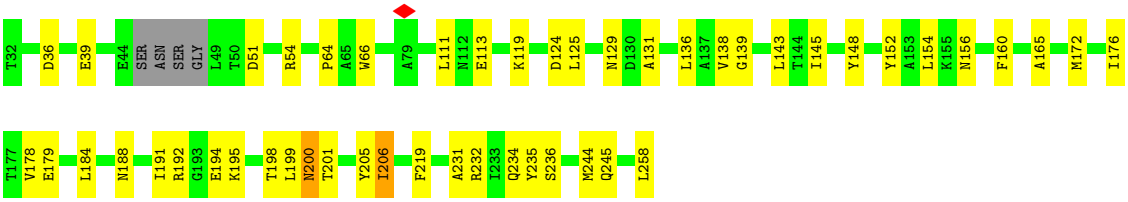

• Molecule 1: Flagellar L-ring protein

Chain Ag:

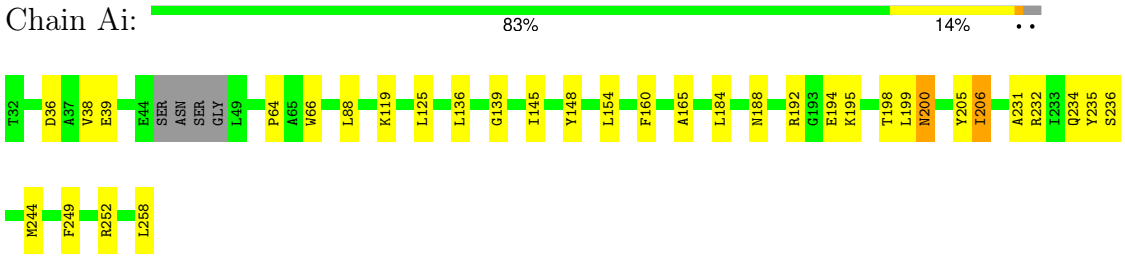

• Molecule 1: Flagellar L-ring protein

Chain Ah:

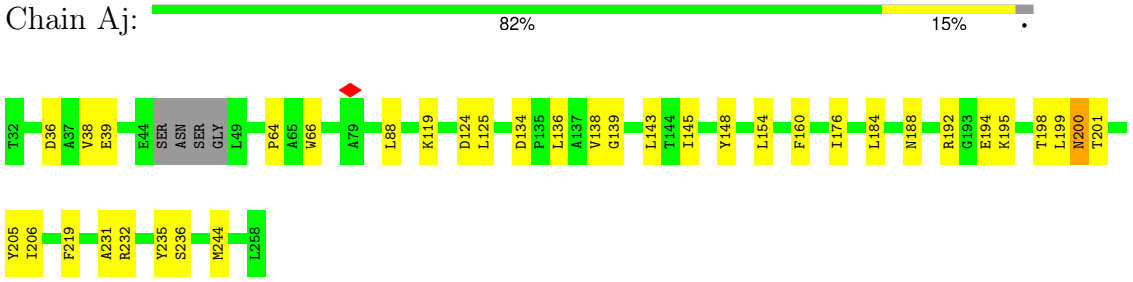

• Molecule 1: Flagellar L-ring protein

Chain Ai:



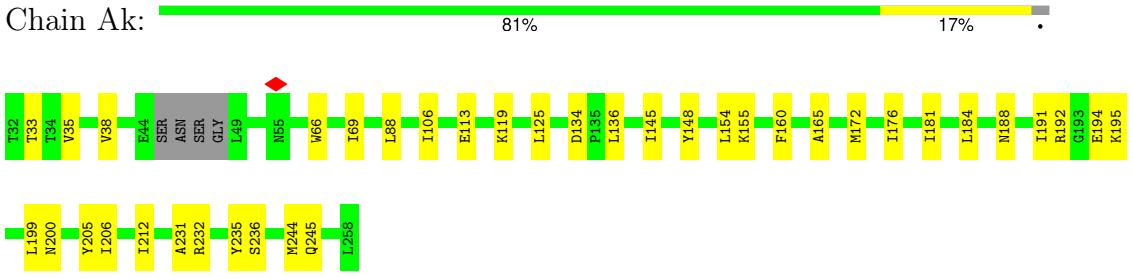

• Molecule 1: Flagellar L-ring protein

Chain Aj:



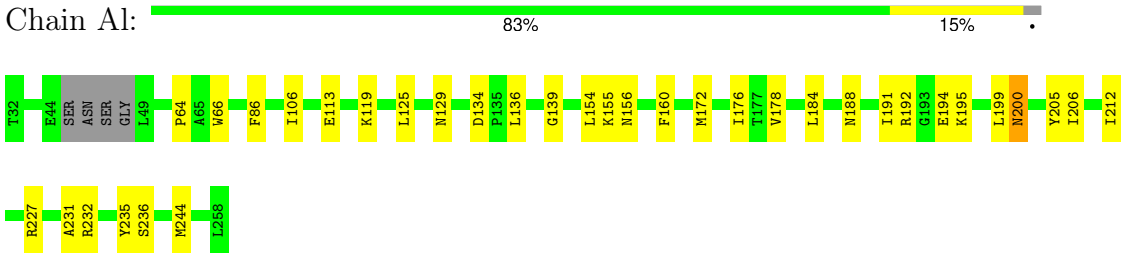

• Molecule 1: Flagellar L-ring protein

Chain Ak:



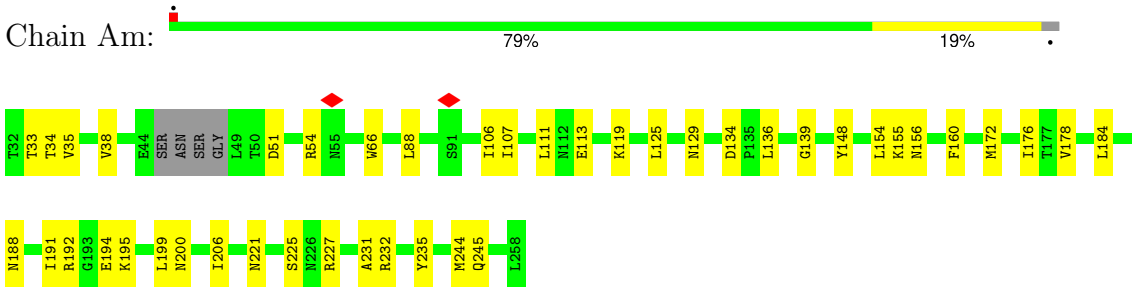

• Molecule 1: Flagellar L-ring protein

Chain Al:



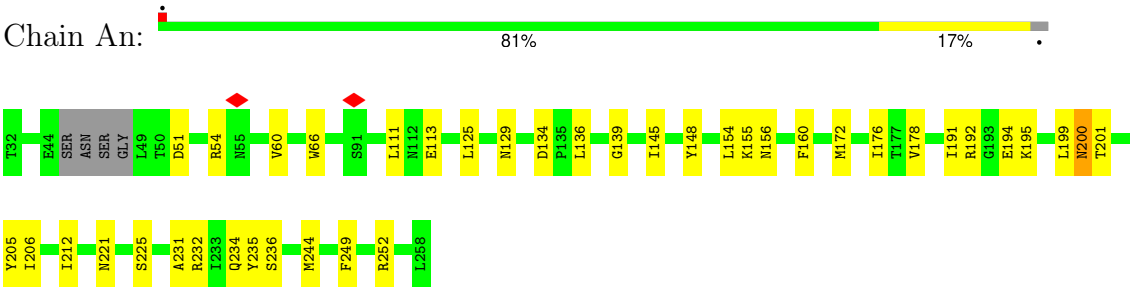

• Molecule 1: Flagellar L-ring protein

Chain Am:



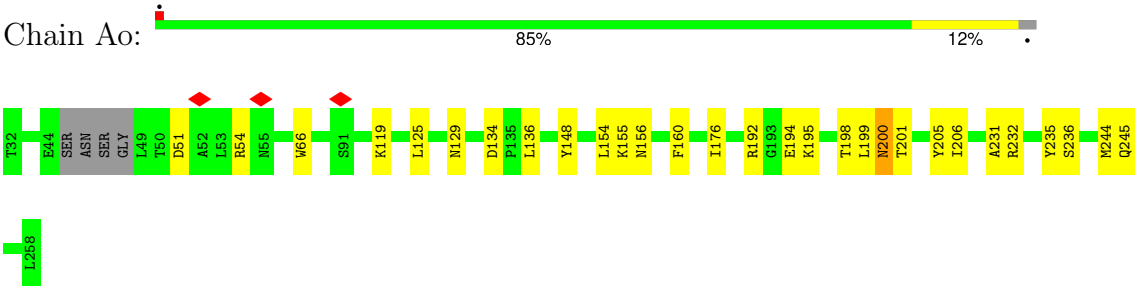
• Molecule 1: Flagellar L-ring protein

Chain An:



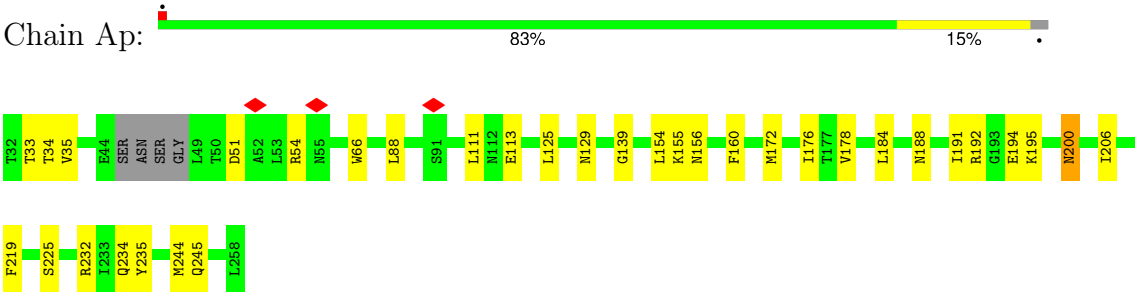

• Molecule 1: Flagellar L-ring protein

Chain Ao:



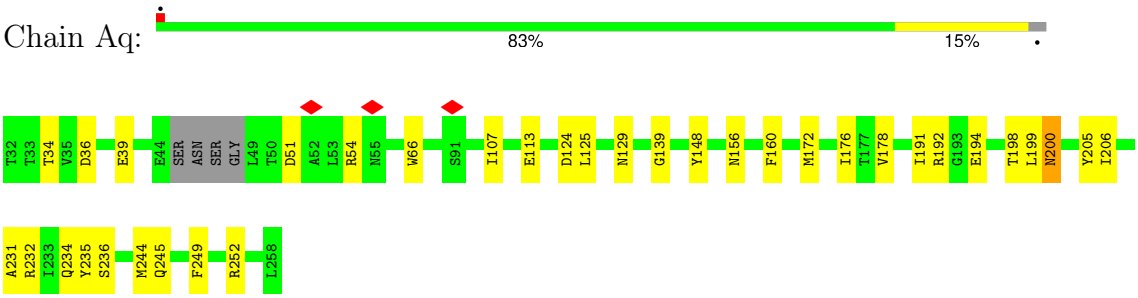

• Molecule 1: Flagellar L-ring protein

Chain Ap:



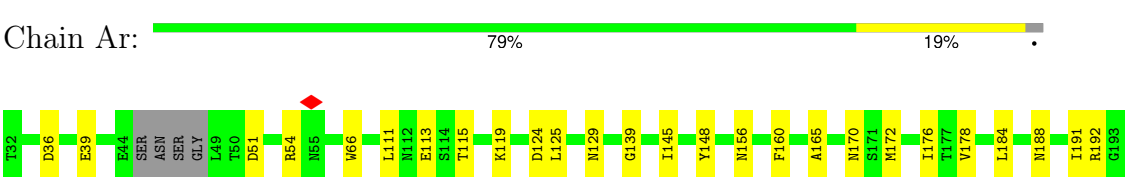

• Molecule 1: Flagellar L-ring protein

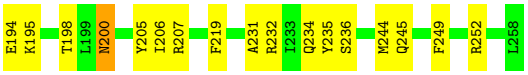
Chain Aq:




• Molecule 1: Flagellar L-ring protein

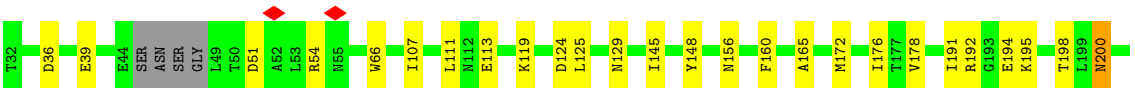
Chain Ar:






• Molecule 1: Flagellar L-ring protein

Chain As:

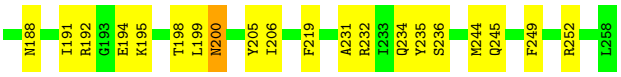





• Molecule 1: Flagellar L-ring protein

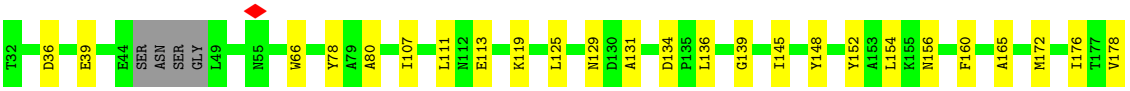
Chain At:

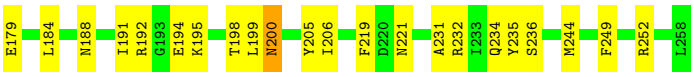





• Molecule 1: Flagellar L-ring protein

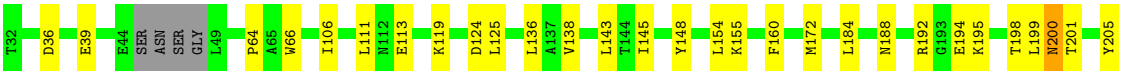
Chain Au:

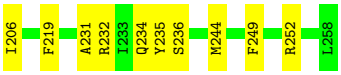




• Molecule 1: Flagellar L-ring protein

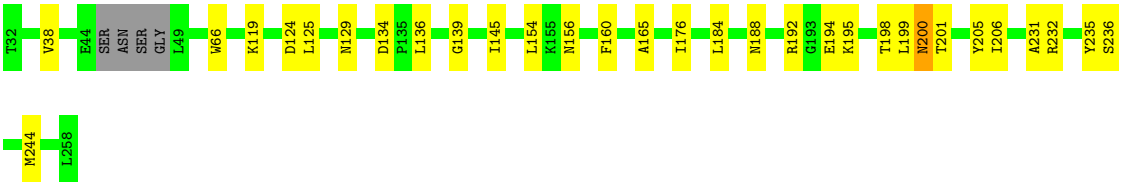
Chain Av:

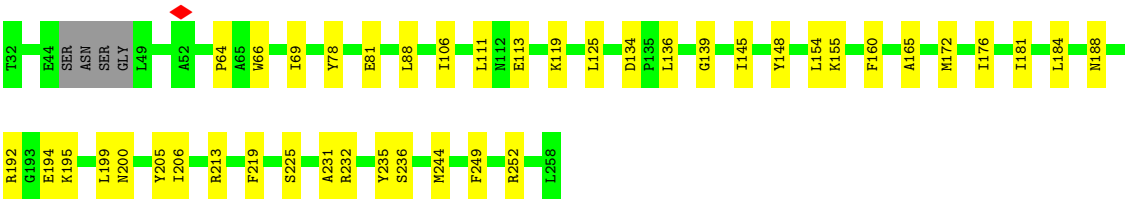

• Molecule 1: Flagellar L-ring protein

Chain Aw:



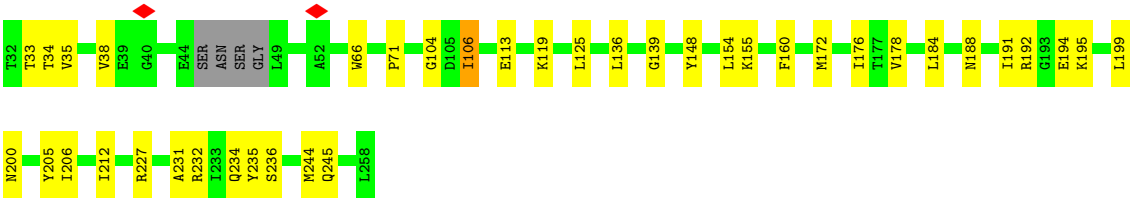

• Molecule 1: Flagellar L-ring protein

Chain Ax:

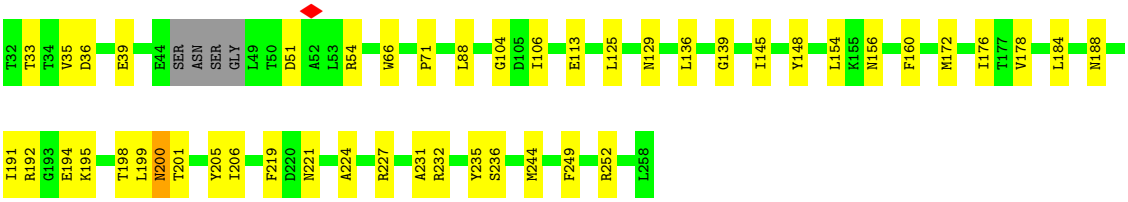

• Molecule 1: Flagellar L-ring protein

Chain Ay:

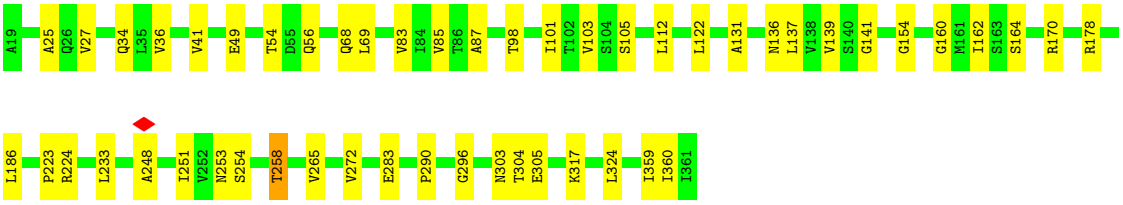

• Molecule 1: Flagellar L-ring protein

Chain Az:

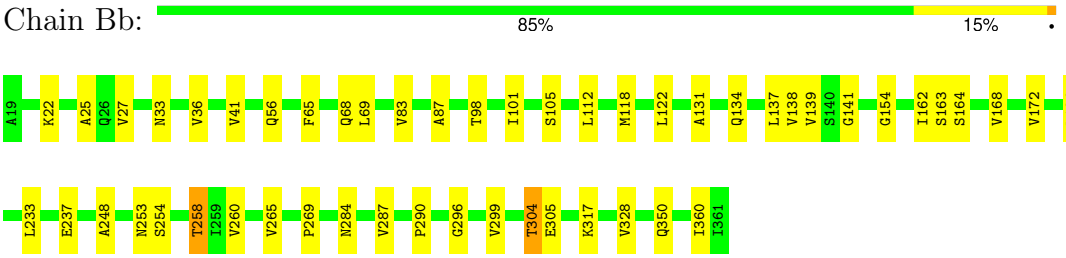

• Molecule 2: Flagellar P-ring protein

Chain Ba:

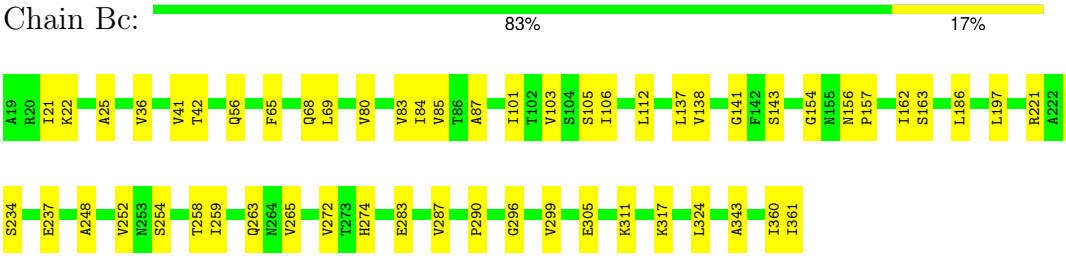

• Molecule 2: Flagellar P-ring protein

Chain Bb:



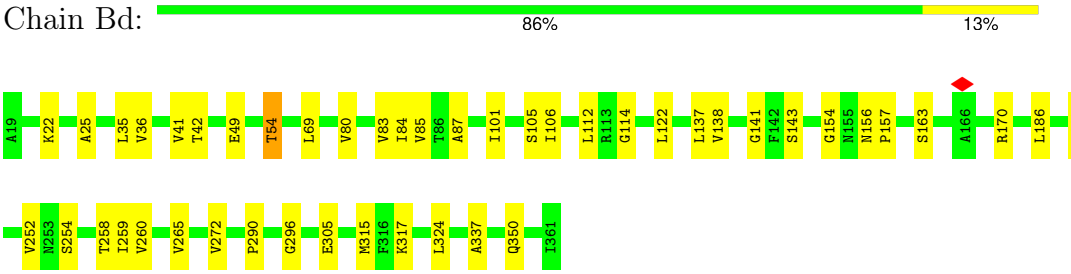

• Molecule 2: Flagellar P-ring protein

Chain Bc:



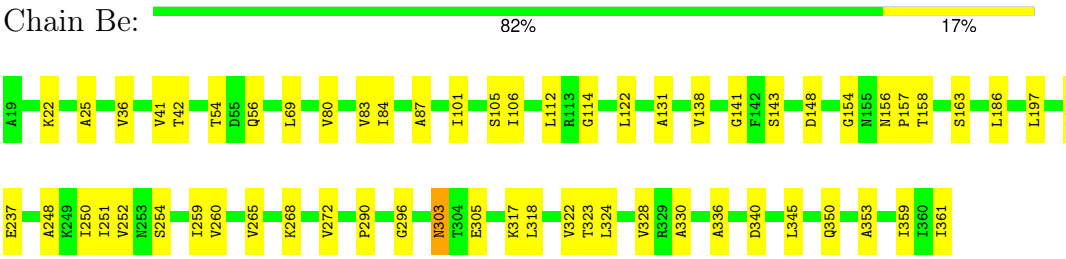

• Molecule 2: Flagellar P-ring protein

Chain Bd:



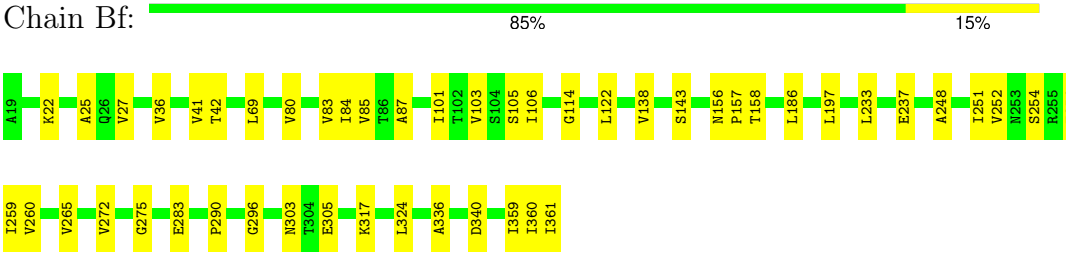

• Molecule 2: Flagellar P-ring protein

Chain Be:



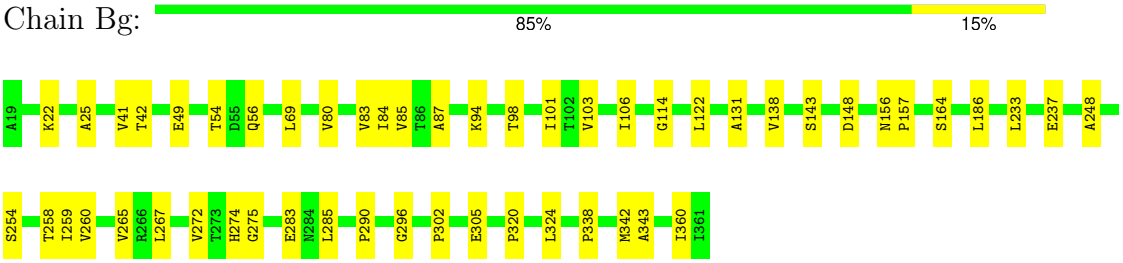

• Molecule 2: Flagellar P-ring protein

Chain Bf:



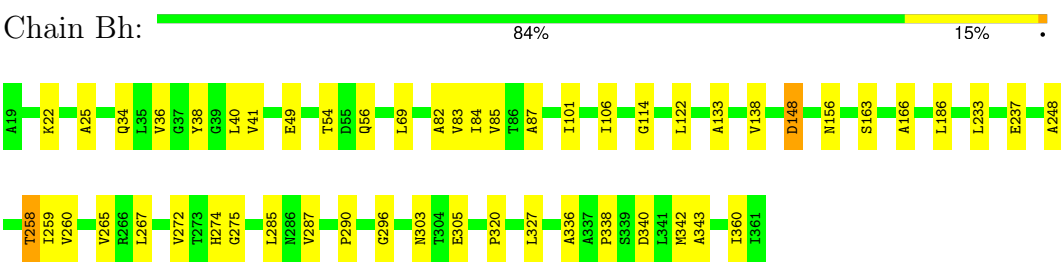
• Molecule 2: Flagellar P-ring protein

Chain Bg:



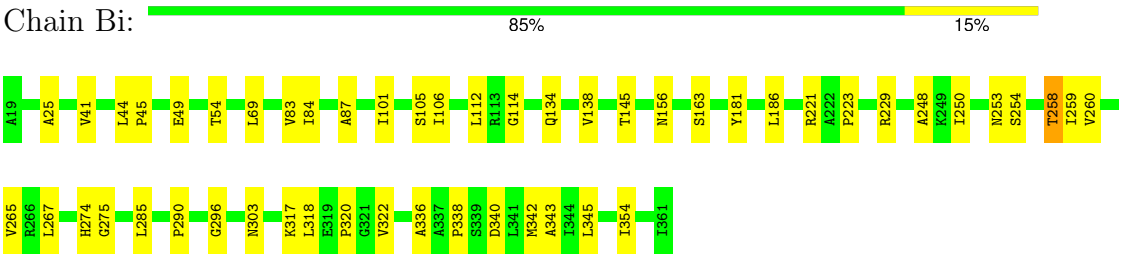

• Molecule 2: Flagellar P-ring protein

Chain Bh:



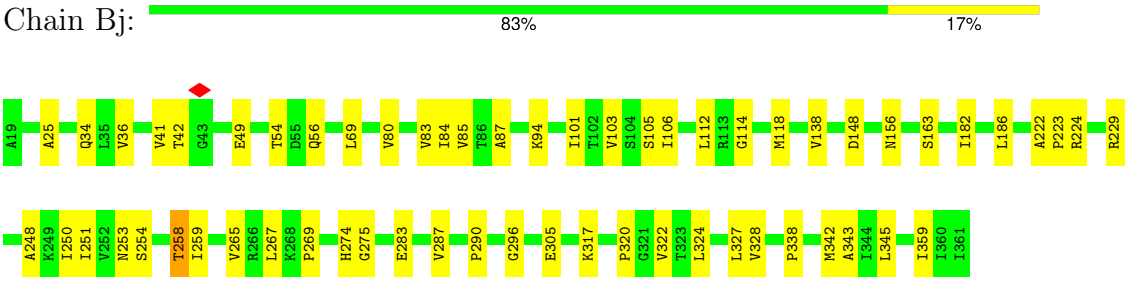

• Molecule 2: Flagellar P-ring protein

Chain Bi:



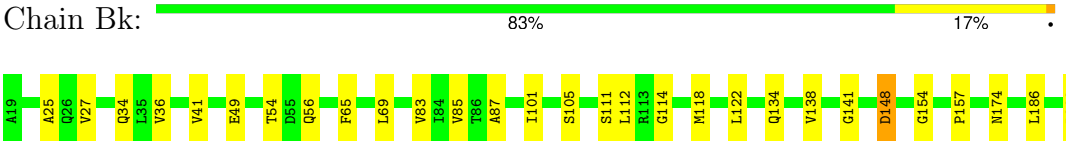

• Molecule 2: Flagellar P-ring protein

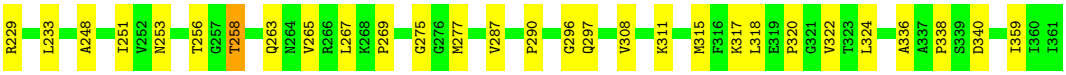
Chain Bj:




• Molecule 2: Flagellar P-ring protein

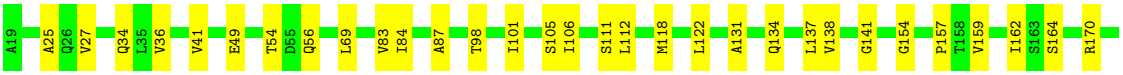
Chain Bk:






• Molecule 2: Flagellar P-ring protein

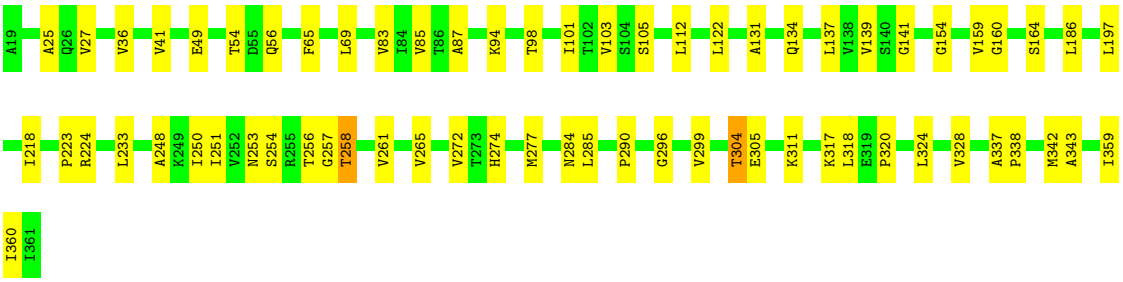
Chain Bl:



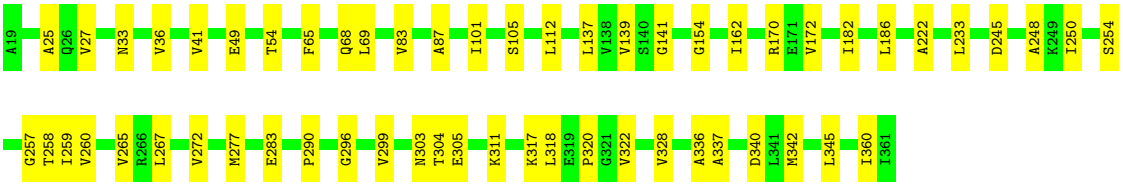
• Molecule 2: Flagellar P-ring protein

Chain Bm:

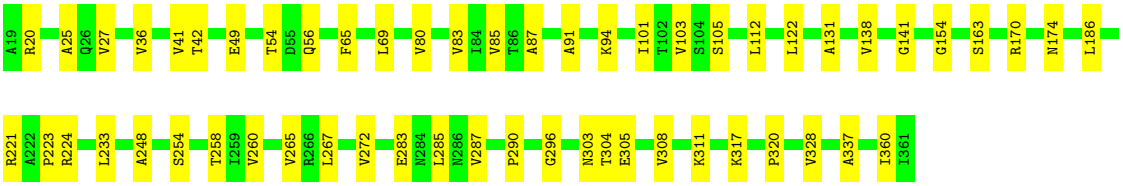

• Molecule 2: Flagellar P-ring protein

Chain Bn:

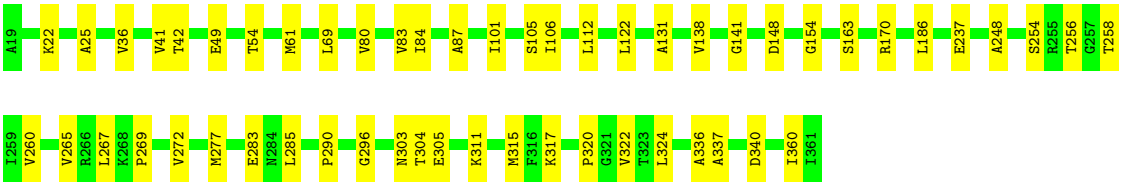

• Molecule 2: Flagellar P-ring protein

Chain Bo:

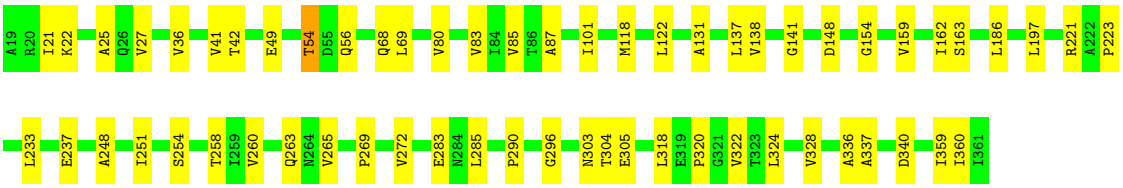

• Molecule 2: Flagellar P-ring protein

Chain Bp:



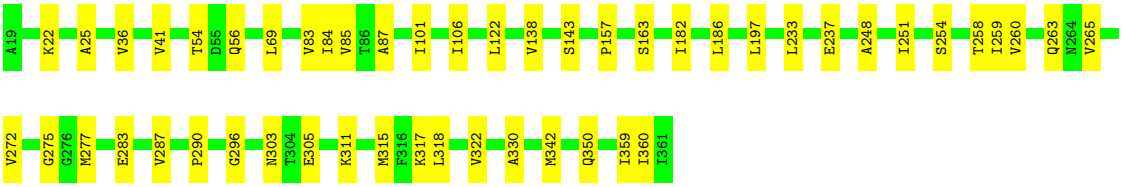

• Molecule 2: Flagellar P-ring protein

Chain Bq:

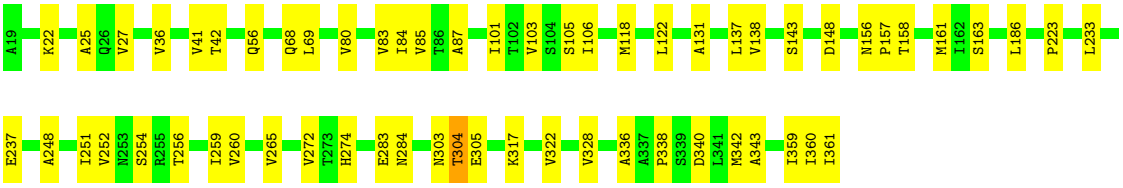

• Molecule 2: Flagellar P-ring protein

Chain Br:

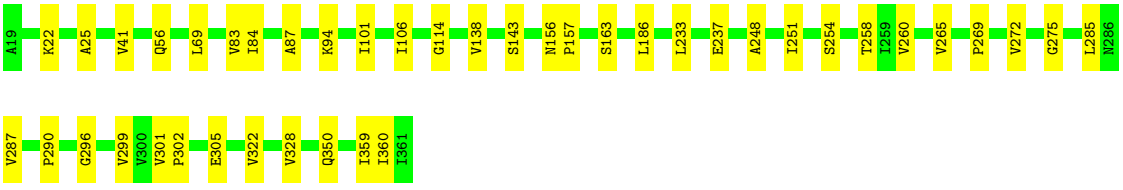

• Molecule 2: Flagellar P-ring protein

Chain Bs:

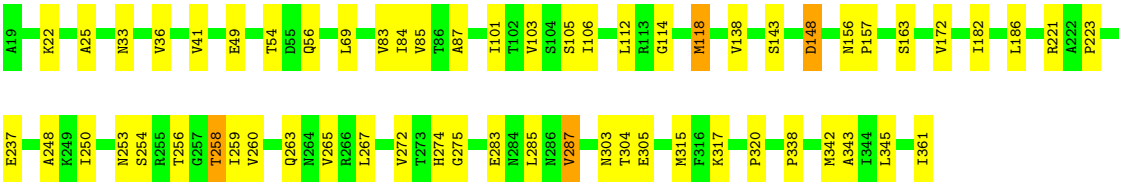

• Molecule 2: Flagellar P-ring protein

Chain Bt:

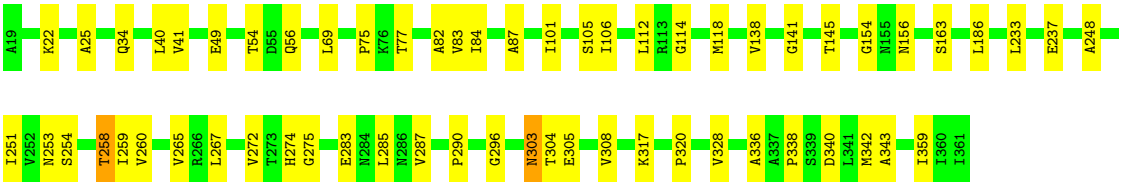

• Molecule 2: Flagellar P-ring protein

Chain Bu:



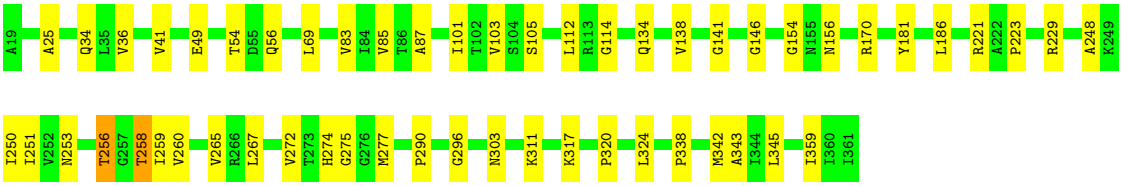

• Molecule 2: Flagellar P-ring protein

Chain Bv:

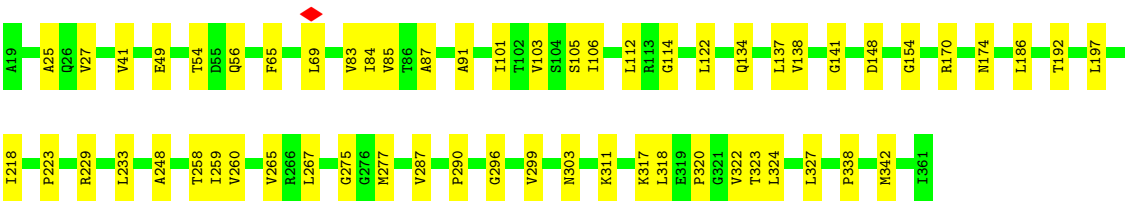

• Molecule 2: Flagellar P-ring protein

Chain Bw:

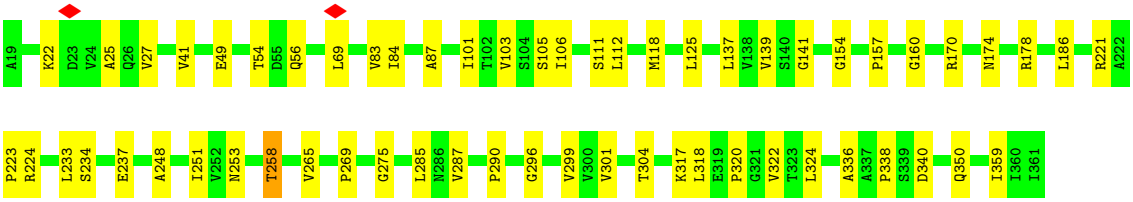

• Molecule 2: Flagellar P-ring protein

Chain Bx:

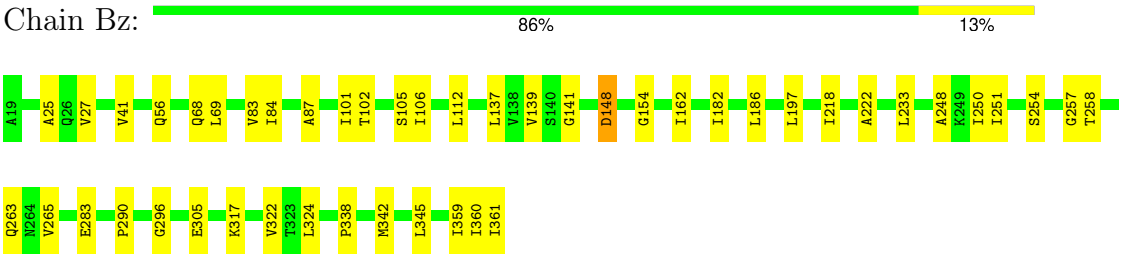

• Molecule 2: Flagellar P-ring protein

Chain By:

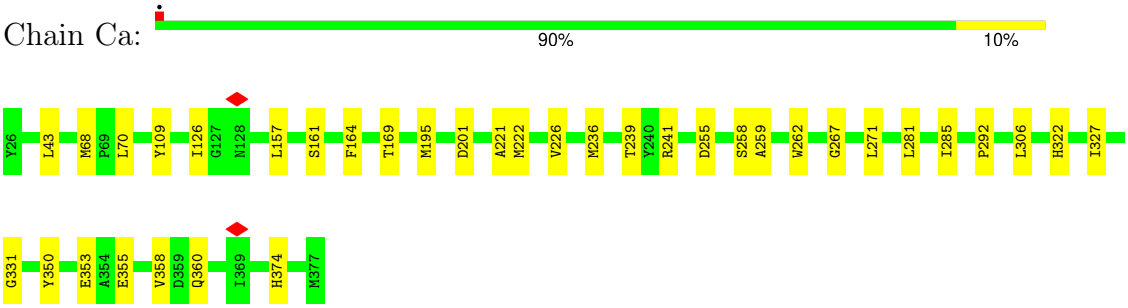

• Molecule 2: Flagellar P-ring protein

Chain Bz:



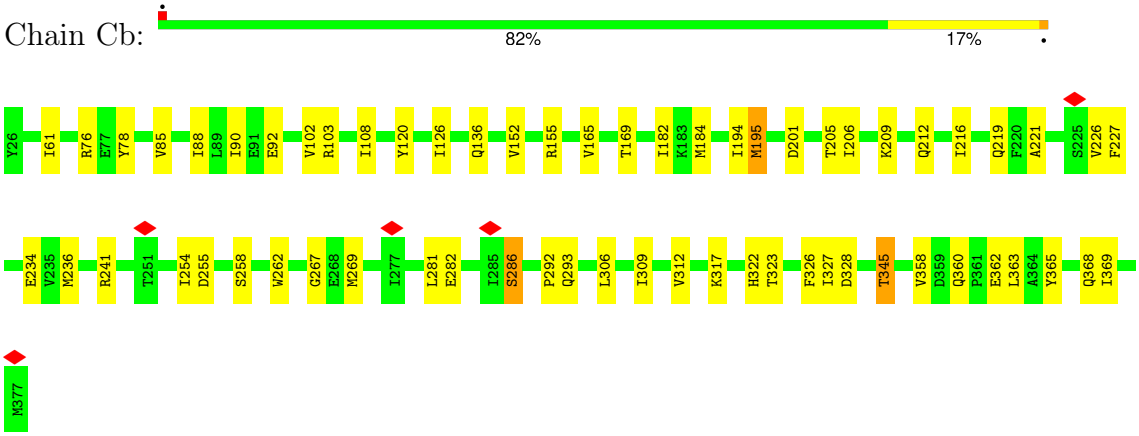

• Molecule 3: Flagellar protein FlgT

Chain Ca:



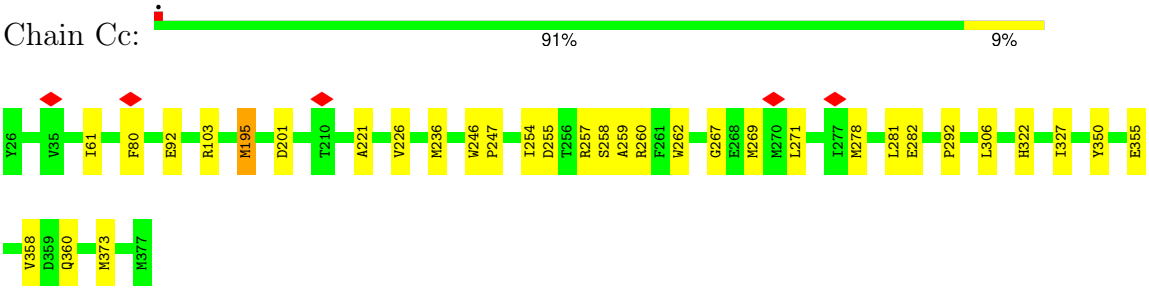

• Molecule 3: Flagellar protein FlgT

Chain Cb:



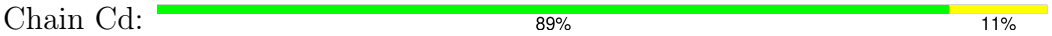

• Molecule 3: Flagellar protein FlgT

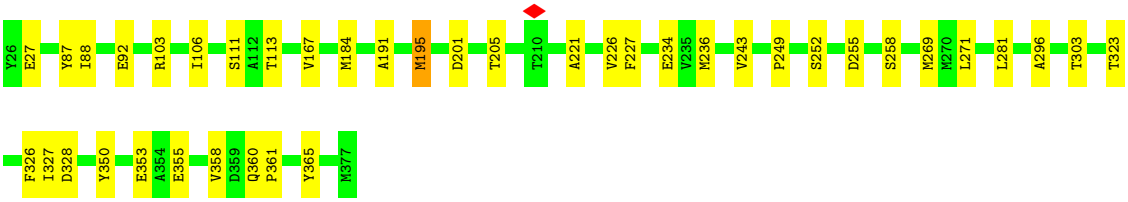
Chain Cc:




• Molecule 3: Flagellar protein FlgT

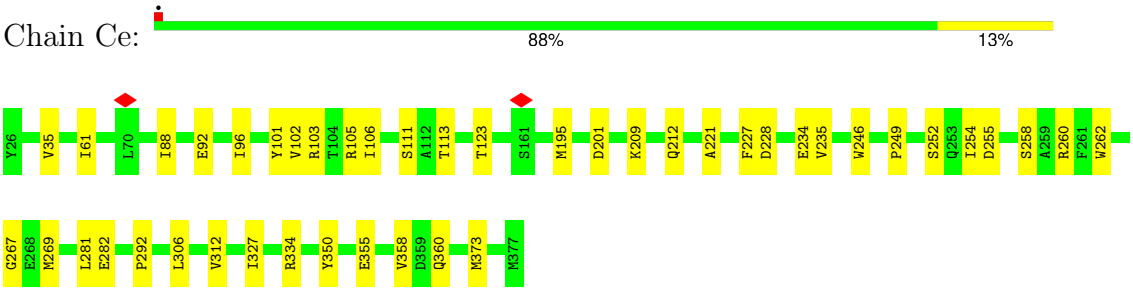
Chain Cd:





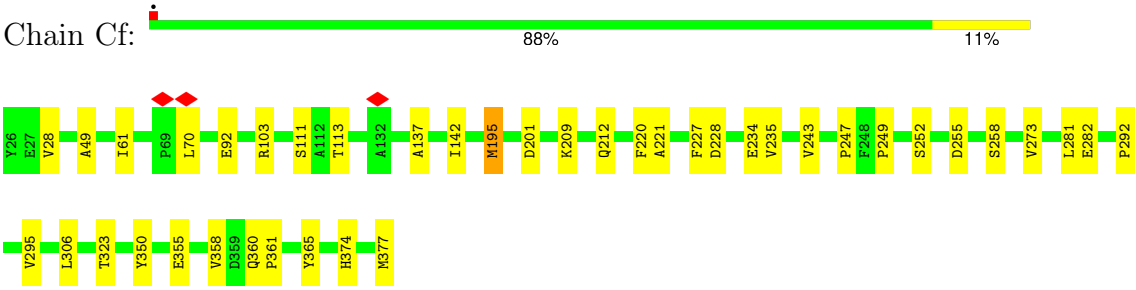

• Molecule 3: Flagellar protein FlgT

Chain Ce:



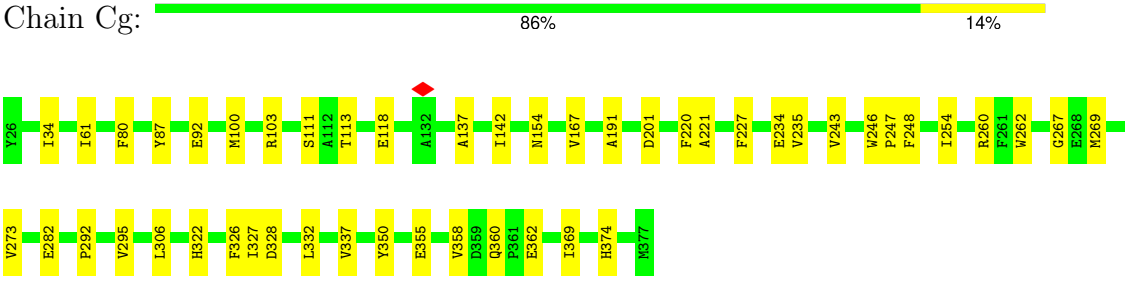

• Molecule 3: Flagellar protein FlgT

Chain Cf:



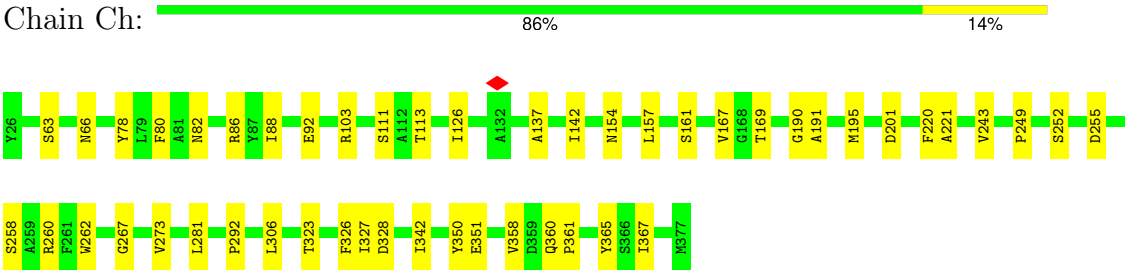

• Molecule 3: Flagellar protein FlgT

Chain Cg:



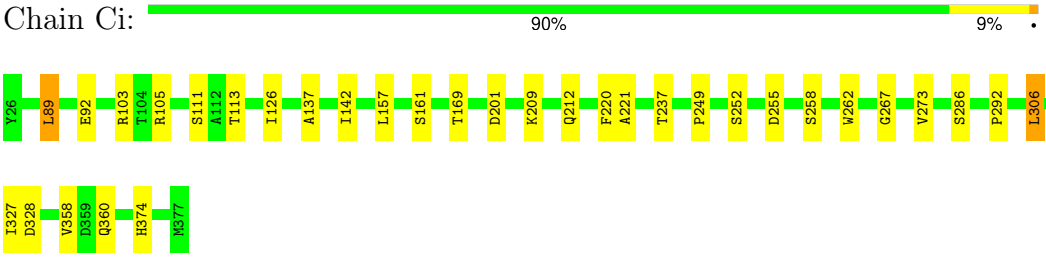

• Molecule 3: Flagellar protein FlgT

Chain Ch:



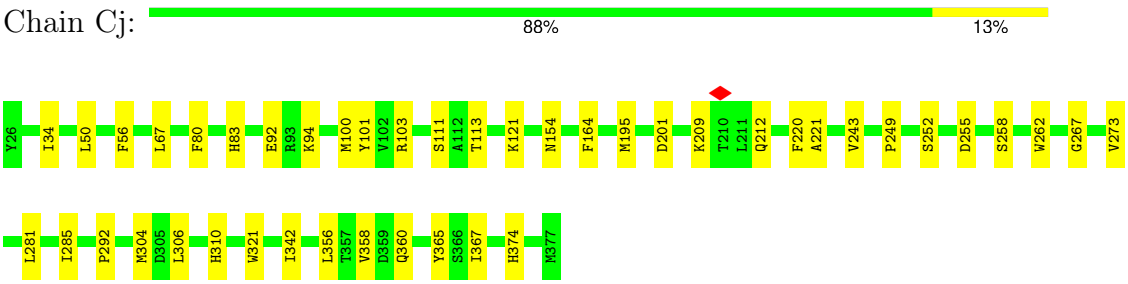
• Molecule 3: Flagellar protein FlgT

Chain Ci:



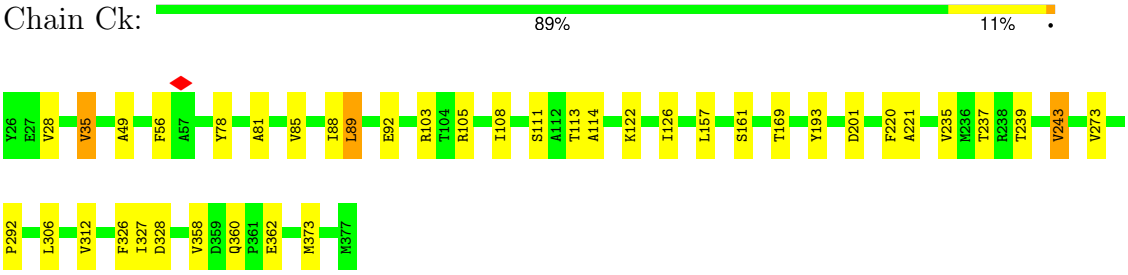

• Molecule 3: Flagellar protein FlgT

Chain Cj:



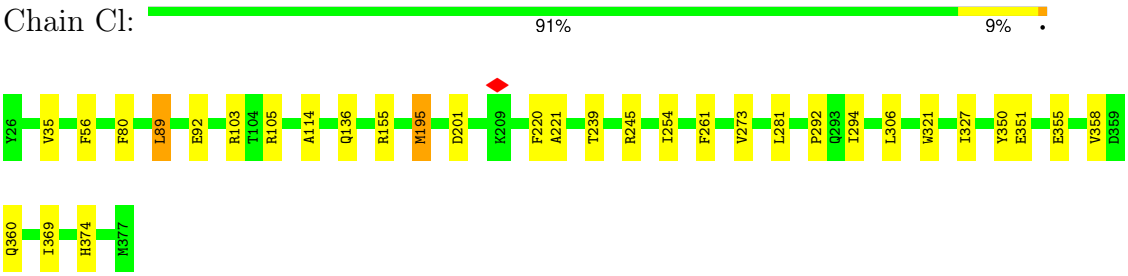

• Molecule 3: Flagellar protein FlgT

Chain Ck:



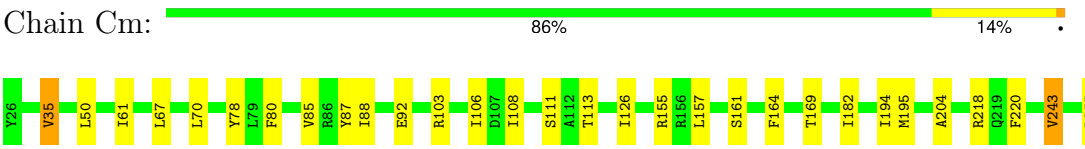

• Molecule 3: Flagellar protein FlgT

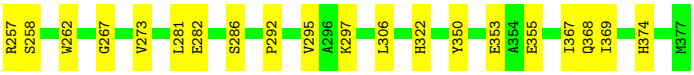
Chain Cl:




• Molecule 3: Flagellar protein FlgT

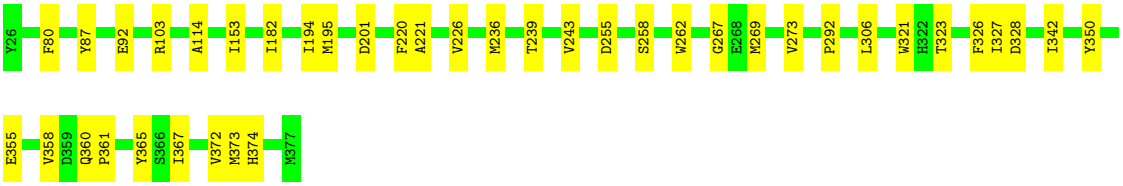
Chain Cm:





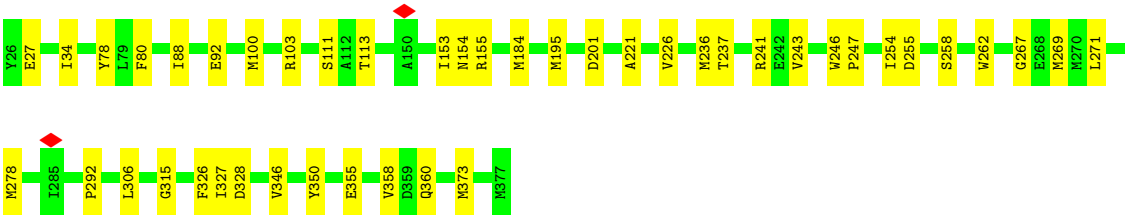

• Molecule 3: Flagellar protein FlgT

Chain Cn:


• Molecule 3: Flagellar protein FlgT

Chain Co:


• Molecule 3: Flagellar protein FlgT

Chain Cp:



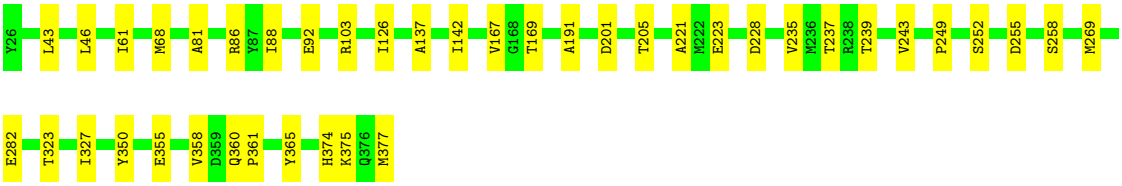
• Molecule 3: Flagellar protein FlgT

Chain Cq:



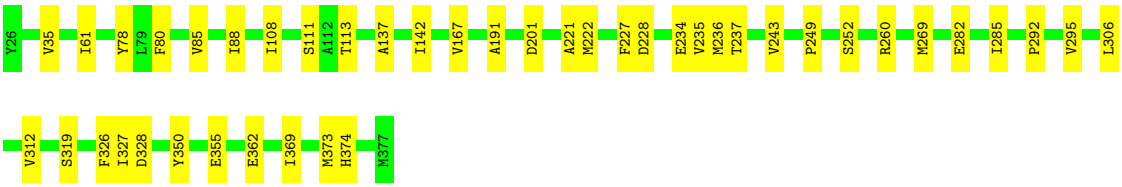
• Molecule 3: Flagellar protein FlgT

Chain Cr:



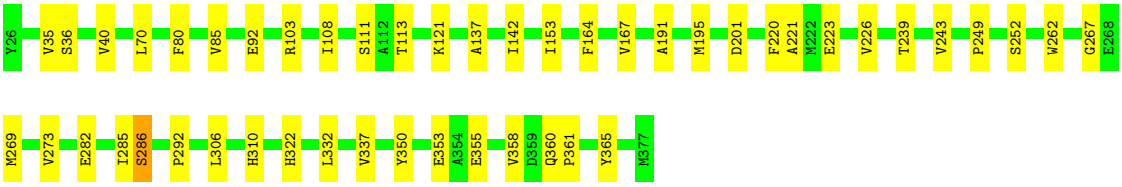

• Molecule 3: Flagellar protein FlgT

Chain Cs:

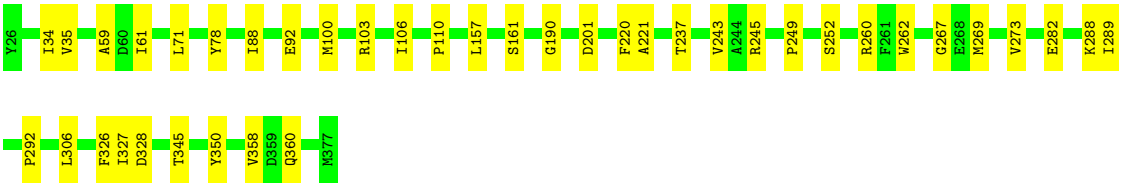

• Molecule 3: Flagellar protein FlgT

Chain Ct:

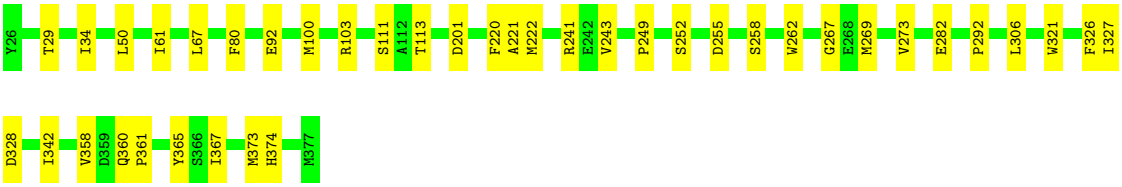

• Molecule 3: Flagellar protein FlgT

Chain Cu:

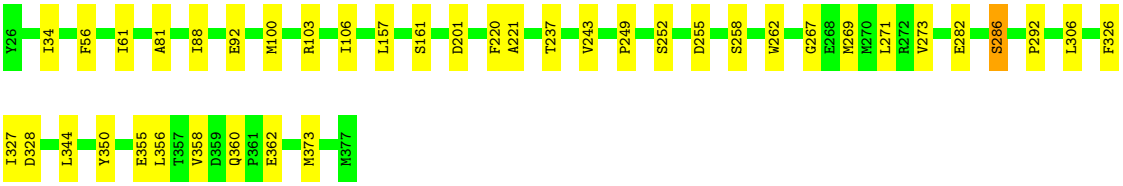

• Molecule 3: Flagellar protein FlgT

Chain Cv:

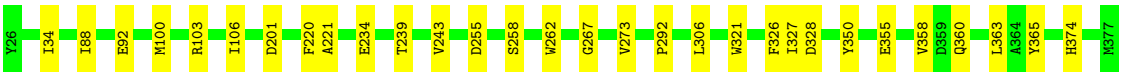

• Molecule 3: Flagellar protein FlgT

Chain Cw:



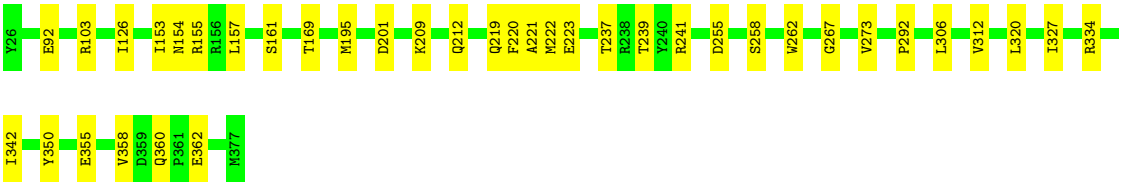

• Molecule 3: Flagellar protein FlgT

Chain Cx:

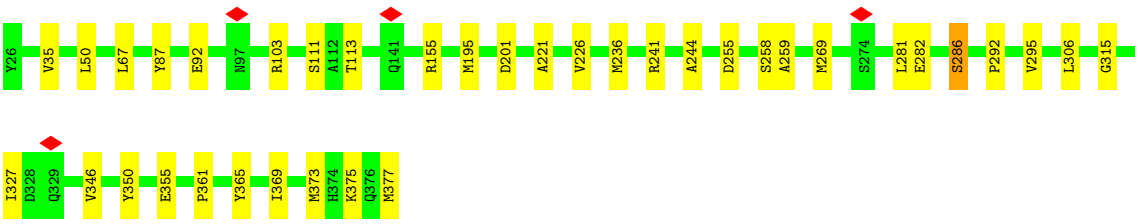

• Molecule 3: Flagellar protein FlgT

Chain Cy:

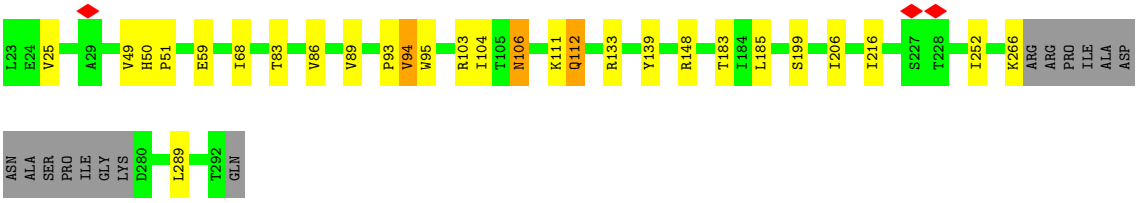

• Molecule 3: Flagellar protein FlgT

Chain Cz:

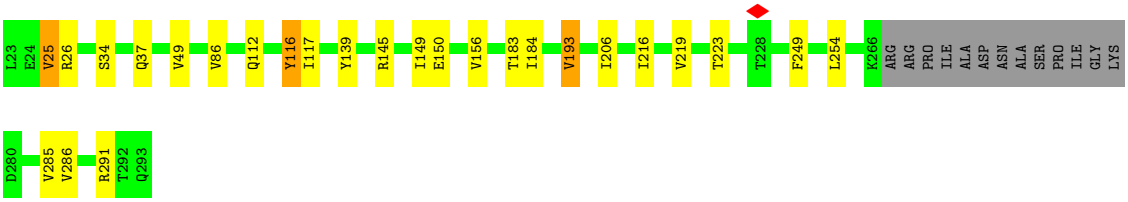

• Molecule 4: Sodium-type flagellar protein MotY

Chain Da:

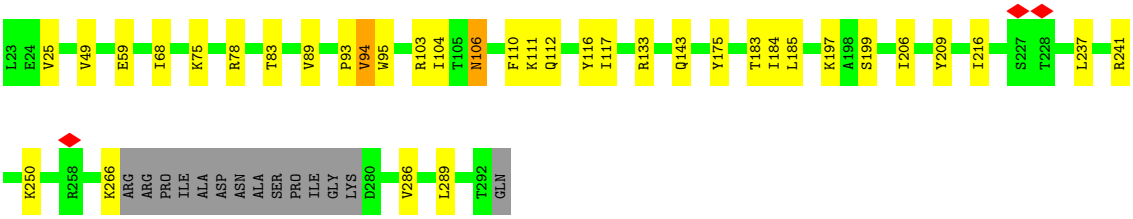

• Molecule 4: Sodium-type flagellar protein MotY

Chain Db:



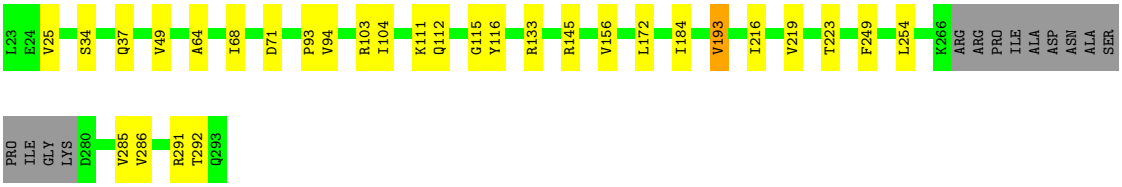

• Molecule 4: Sodium-type flagellar protein MotY

Chain Dc:


• Molecule 4: Sodium-type flagellar protein MotY

Chain Dd:


• Molecule 4: Sodium-type flagellar protein MotY

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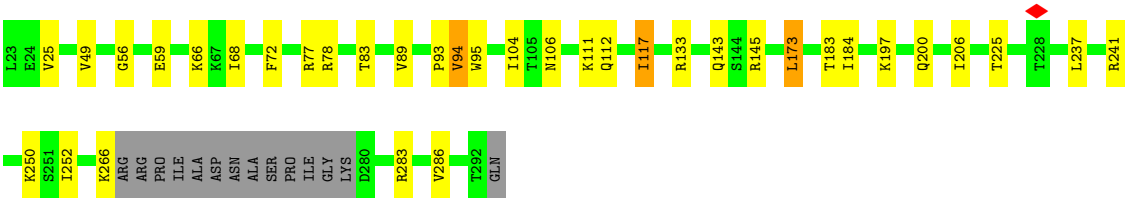


• Molecule 4: Sodium-type flagellar protein MotY

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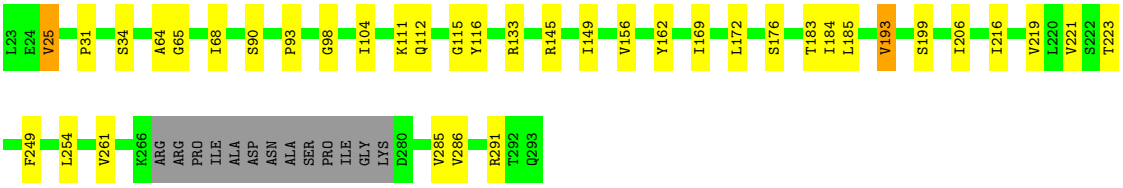
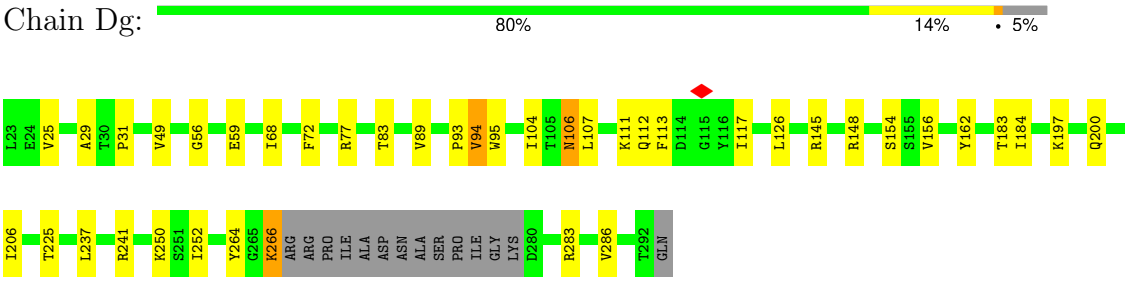



• Molecule 4: Sodium-type flagellar protein MotY

Chain Dg:




• Molecule 4: Sodium-type flagellar protein MotY

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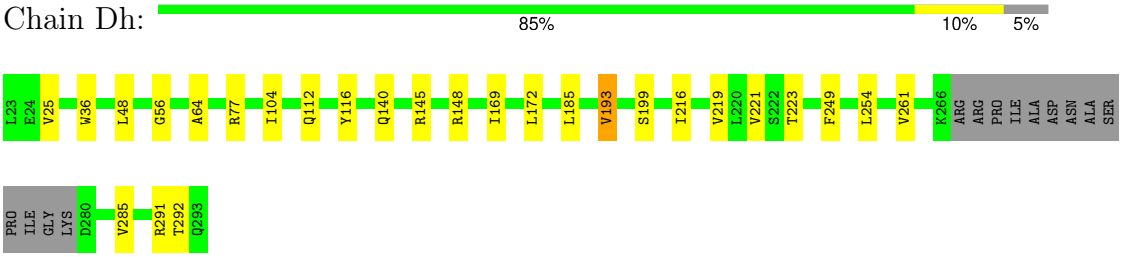


• Molecule 4: Sodium-type flagellar protein MotY

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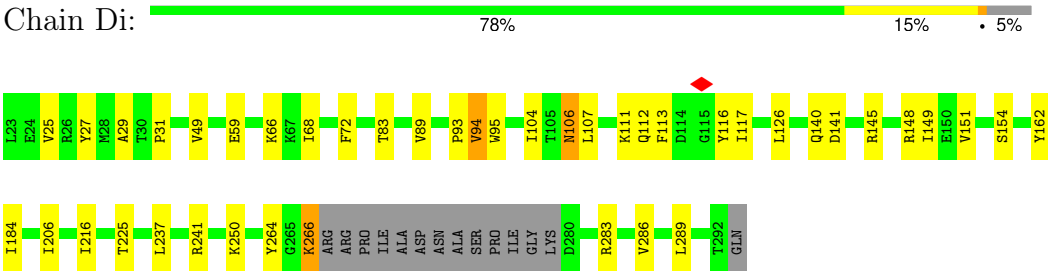


• Molecule 4: Sodium-type flagellar protein MotY

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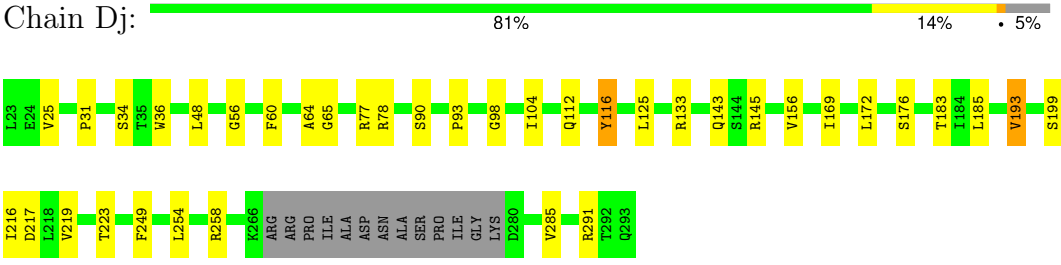


• Molecule 4: Sodium-type flagellar protein MotY

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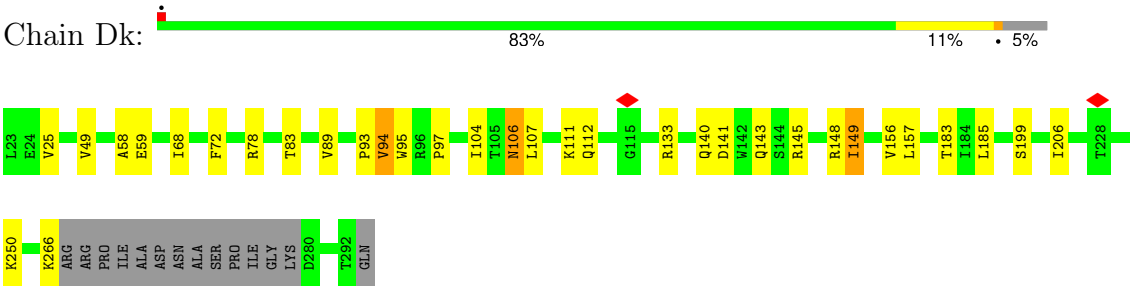

• Molecule 4: Sodium-type flagellar protein MotY

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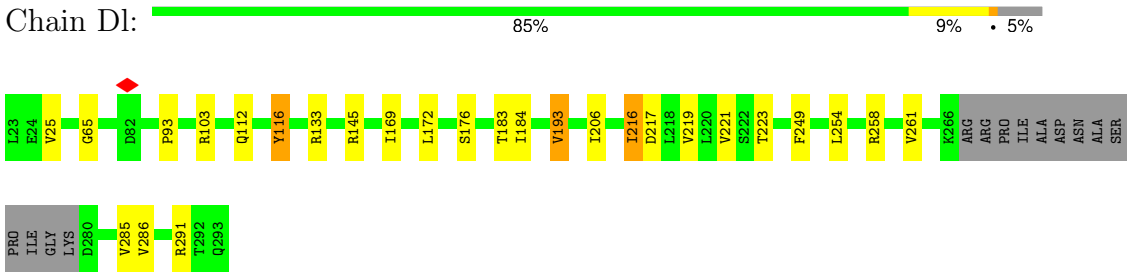


• Molecule 4: Sodium-type flagellar protein MotY

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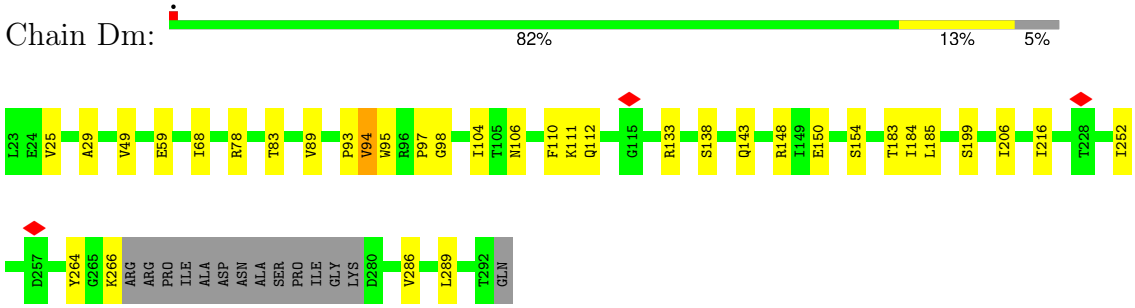
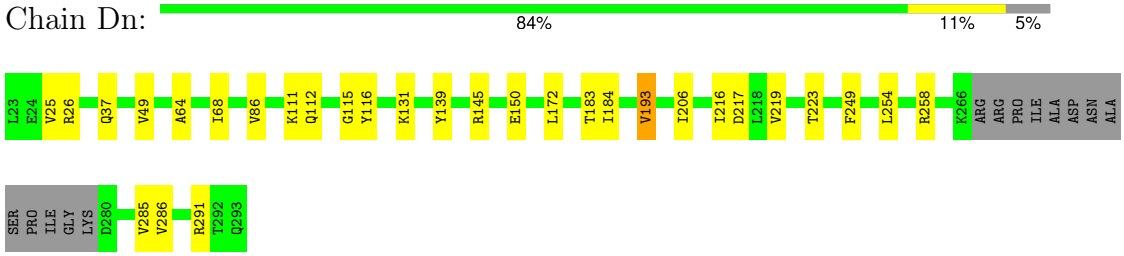


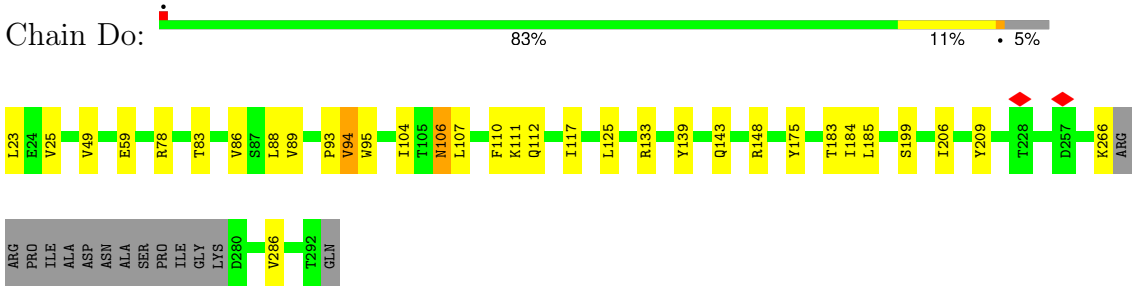

• Molecule 4: Sodium-type flagellar protein MotY

Chain Dn:




• Molecule 4: Sodium-type flagellar protein MotY

Chain Do:




• Molecule 4: Sodium-type flagellar protein MotY

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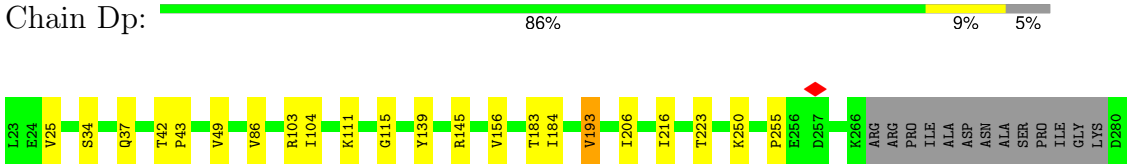

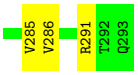


• Molecule 4: Sodium-type flagellar protein MotY

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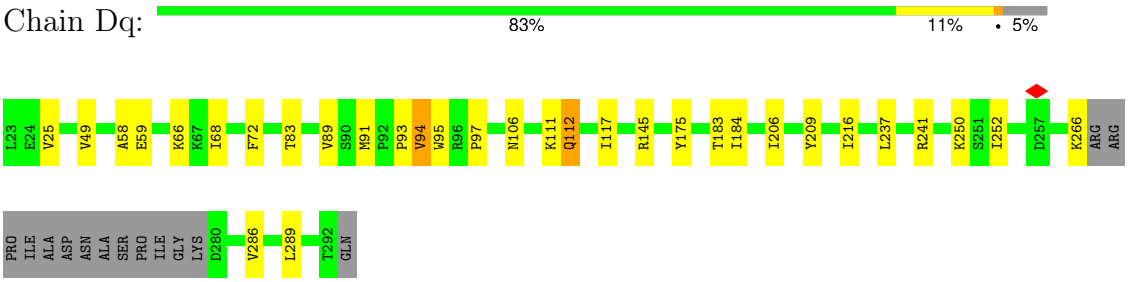
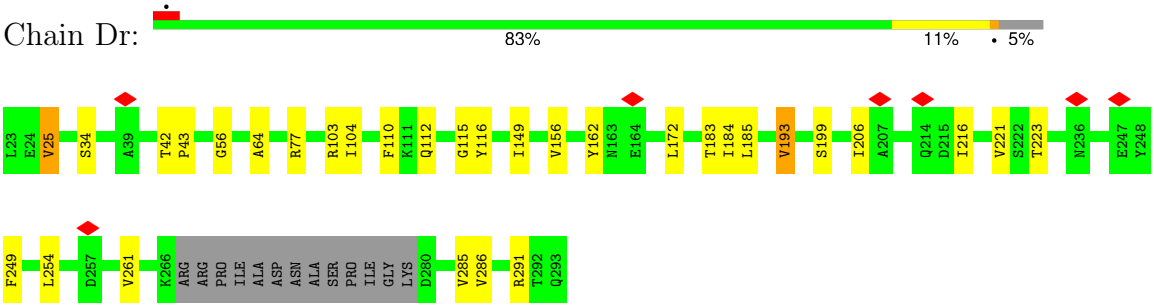


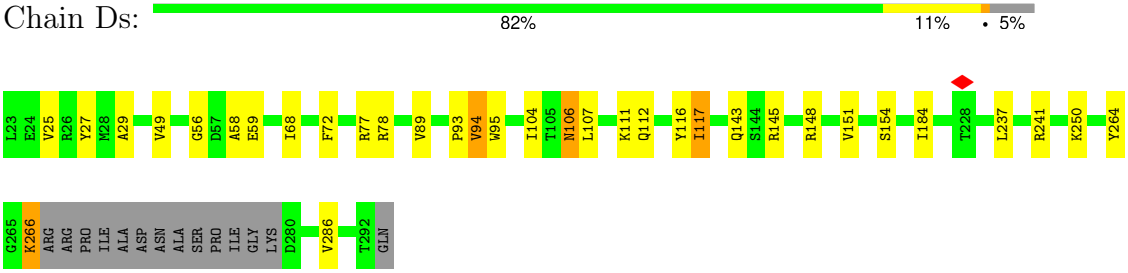

• Molecule 4: Sodium-type flagellar protein MotY

Chain Dr:




• Molecule 4: Sodium-type flagellar protein MotY

Chain Ds:




• Molecule 4: Sodium-type flagellar protein MotY

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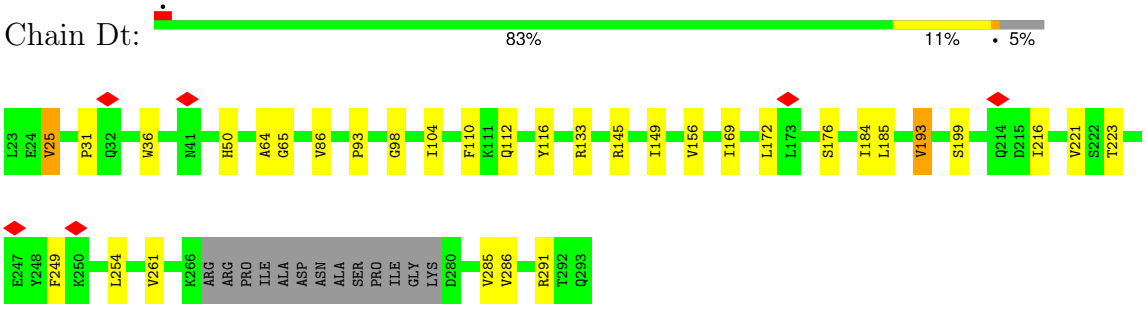
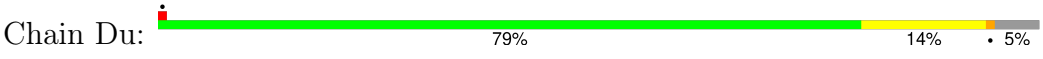
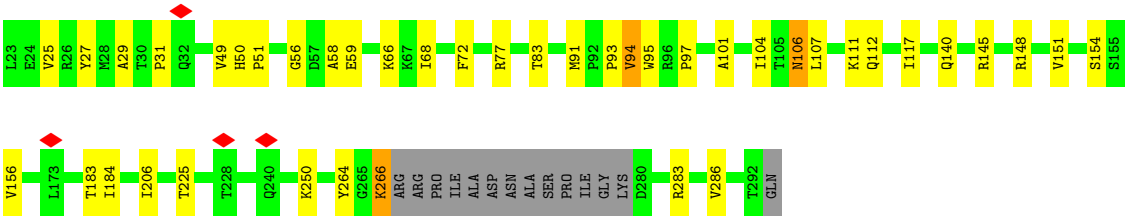



• Molecule 4: Sodium-type flagellar protein MotY

Chain Du:






• Molecule 4: Sodium-type flagellar protein MotY

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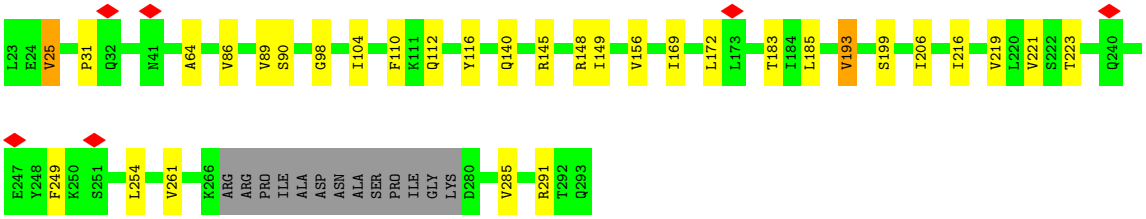
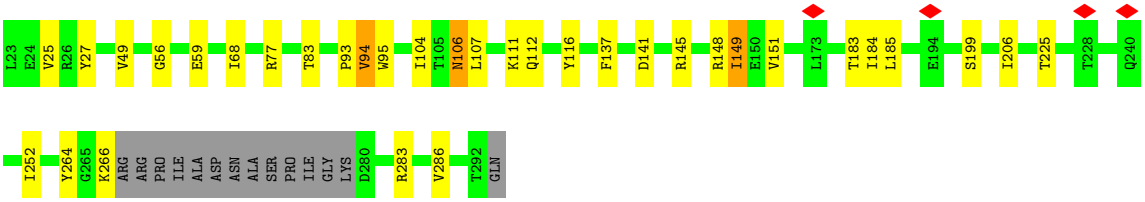


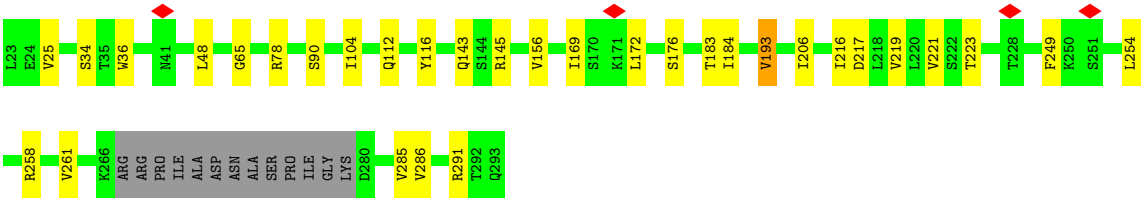

• Molecule 4: Sodium-type flagellar protein MotY

Chain Dw:

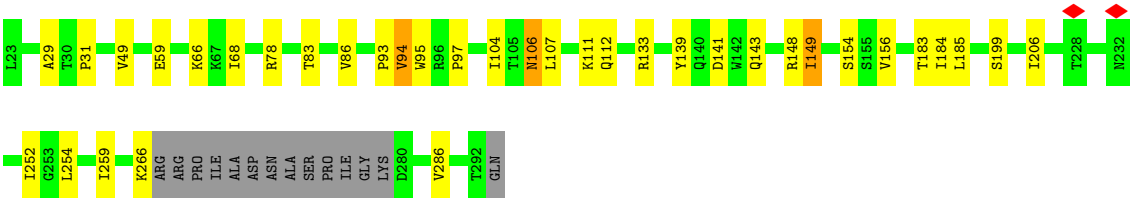

• Molecule 4: Sodium-type flagellar protein MotY

Chain Dx:


• Molecule 4: Sodium-type flagellar protein MotY

Chain Dy:

• Molecule 4: Sodium-type flagellar protein MotY

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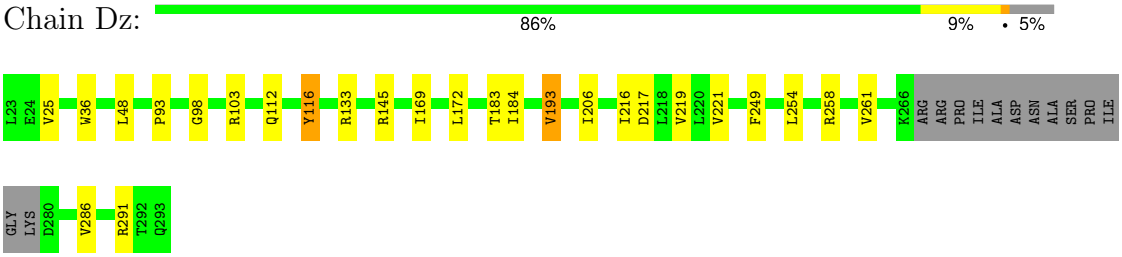
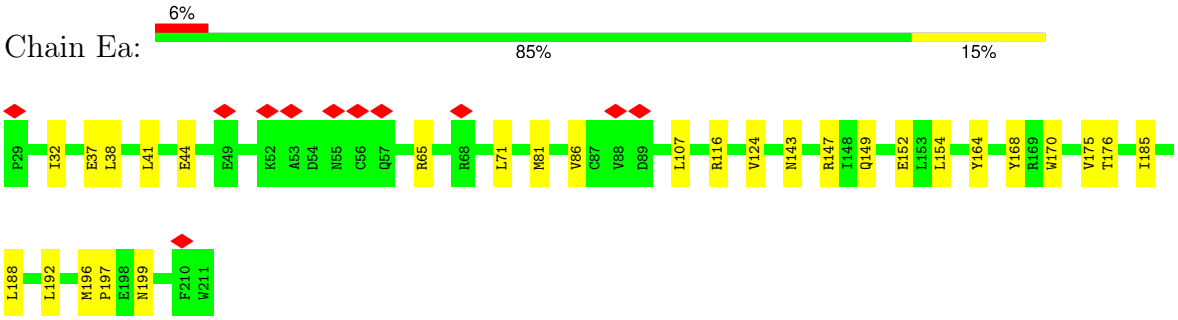


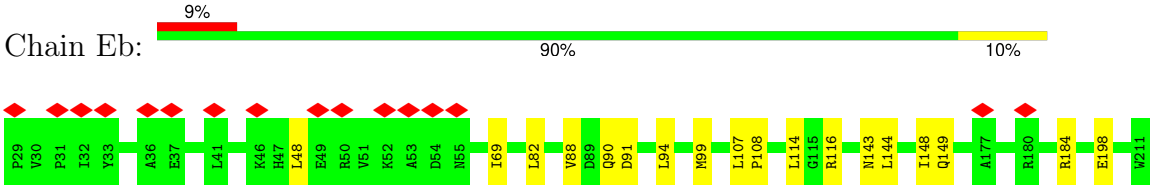

• Molecule 5: Sodium-type flagellar protein MotX

Chain Ea:




• Molecule 5: Sodium-type flagellar protein MotX

Chain Eb:




• Molecule 5: Sodium-type flagellar protein MotX

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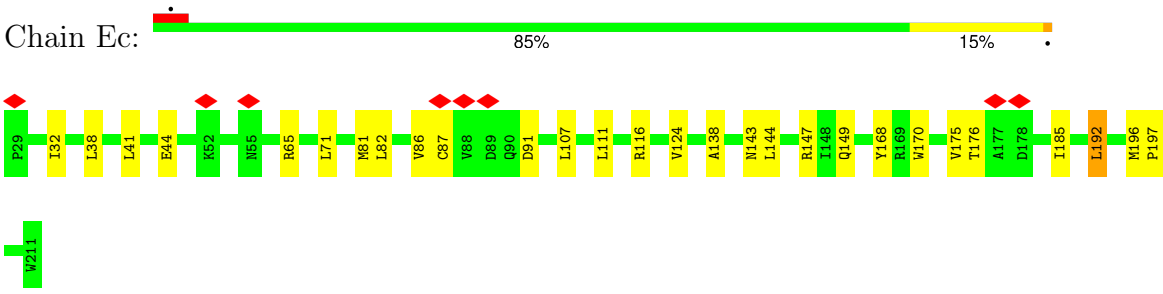


• Molecule 5: Sodium-type flagellar protein MotX

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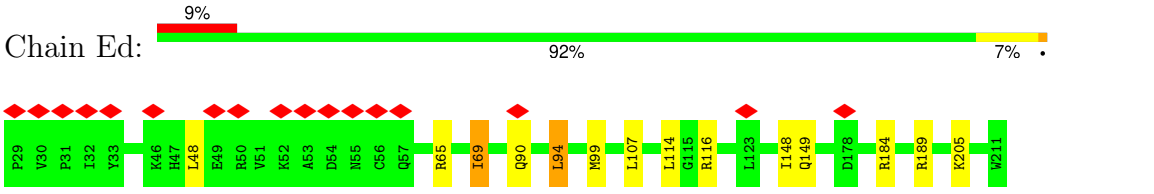


• Molecule 5: Sodium-type flagellar protein MotX

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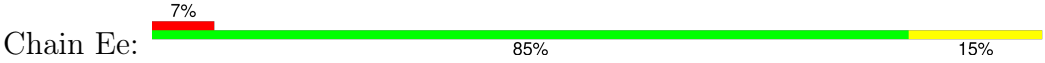
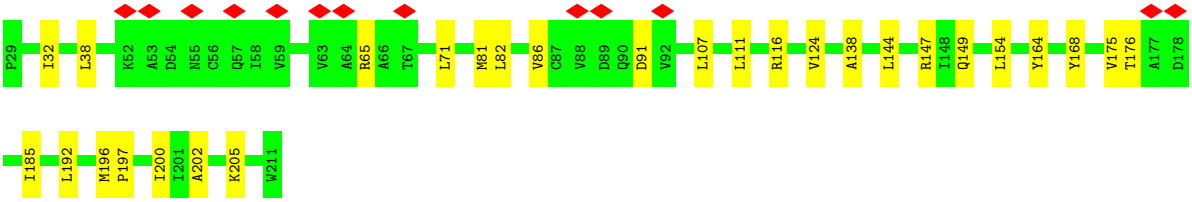
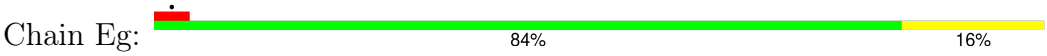


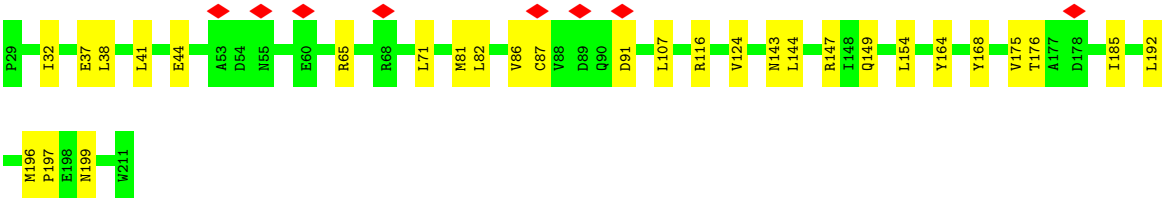



• Molecule 5: Sodium-type flagellar protein MotX

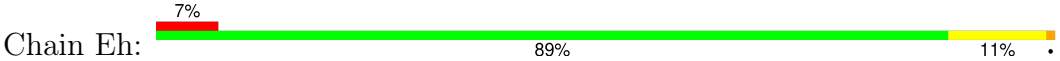


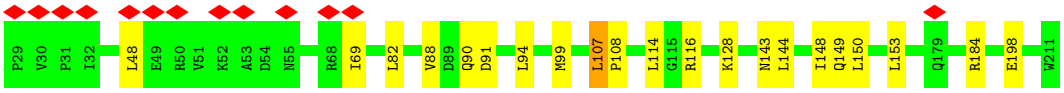
• Molecule 5: Sodium-type flagellar protein MotX



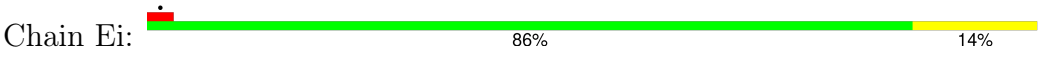




• Molecule 5: Sodium-type flagellar protein MotX



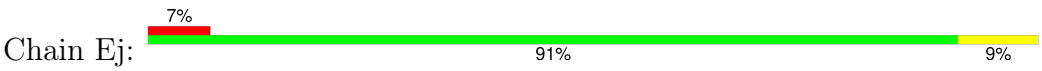




• Molecule 5: Sodium-type flagellar protein MotX





• Molecule 5: Sodium-type flagellar protein MotX





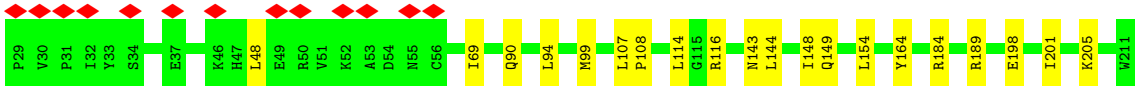
• Molecule 5: Sodium-type flagellar protein MotX

Chain Ek:



• Molecule 5: Sodium-type flagellar protein MotX

Chain El:


• Molecule 5: Sodium-type flagellar protein MotX

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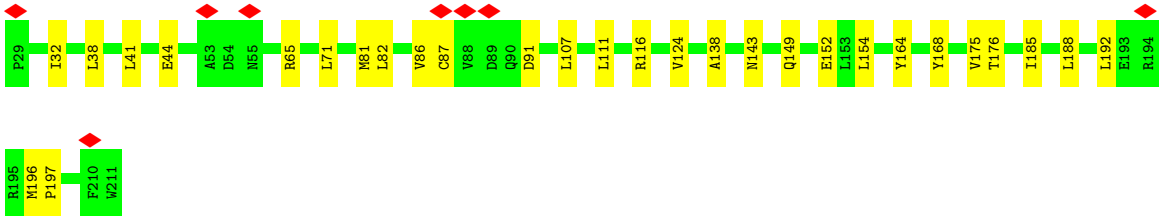


• Molecule 5: Sodium-type flagellar protein MotX

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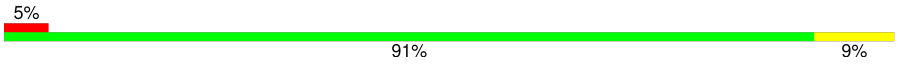


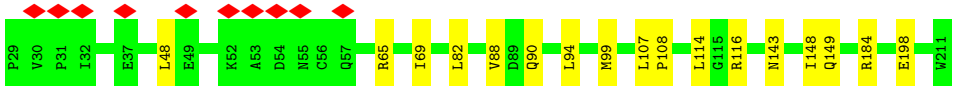


• Molecule 5: Sodium-type flagellar protein MotX

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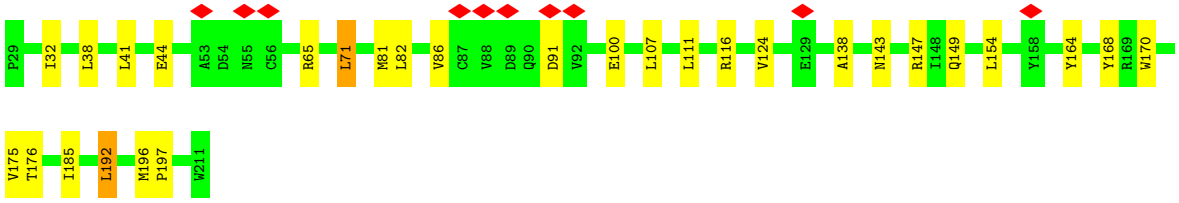


• Molecule 5: Sodium-type flagellar protein MotX

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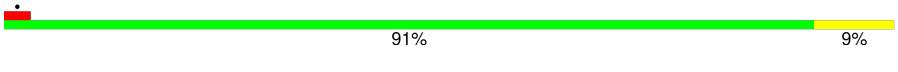


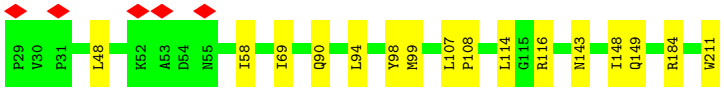

• Molecule 5: Sodium-type flagellar protein MotX

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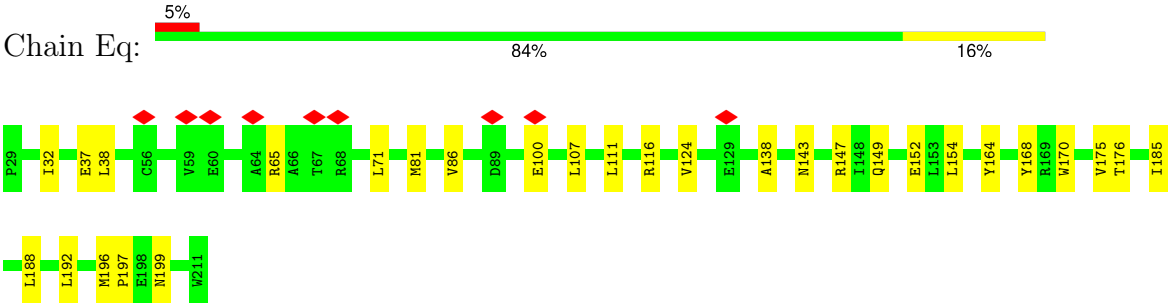


• Molecule 5: Sodium-type flagellar protein MotX

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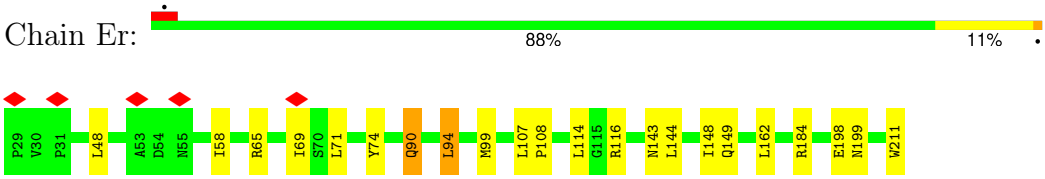


• Molecule 5: Sodium-type flagellar protein MotX

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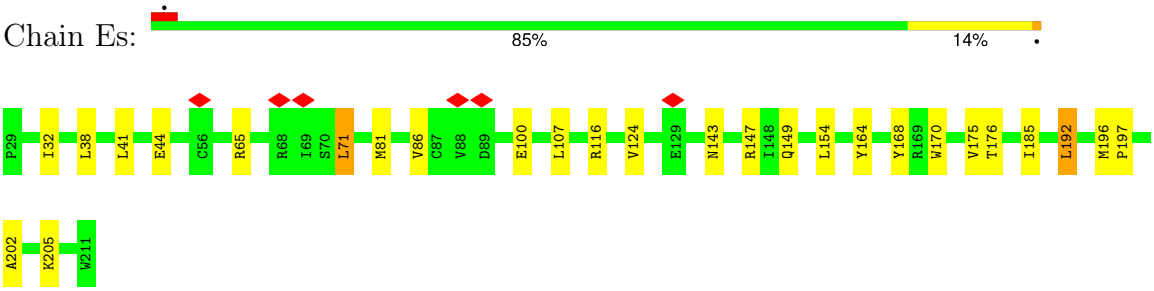


• Molecule 5: Sodium-type flagellar protein MotX

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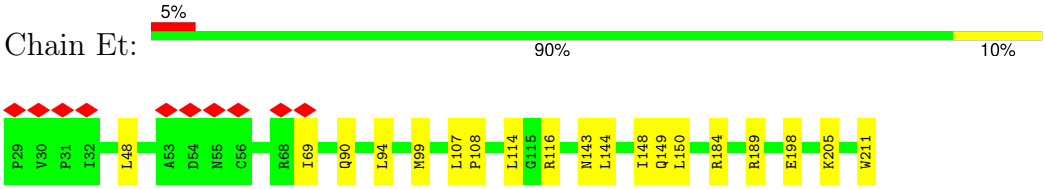


• Molecule 5: Sodium-type flagellar protein MotX

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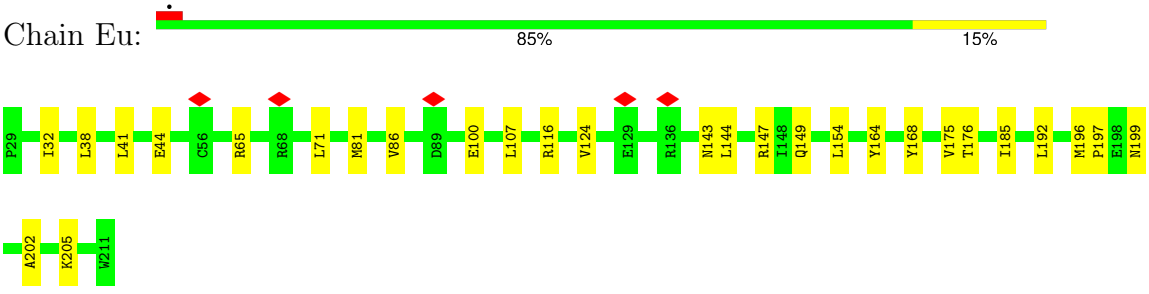


• Molecule 5: Sodium-type flagellar protein MotX

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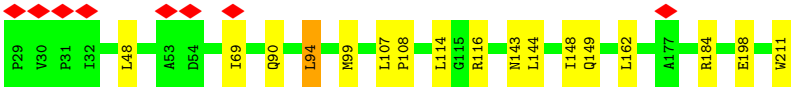


• Molecule 5: Sodium-type flagellar protein MotX

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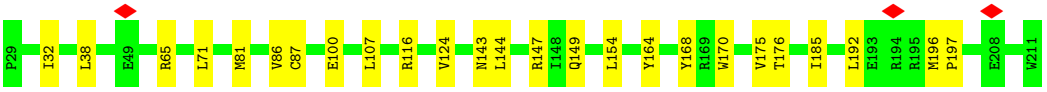
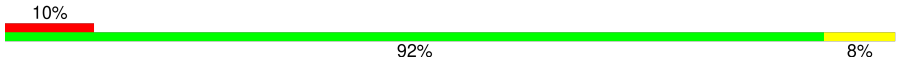
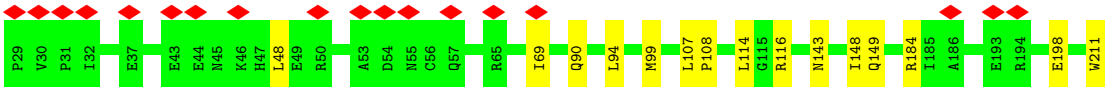



• Molecule 5: Sodium-type flagellar protein MotX

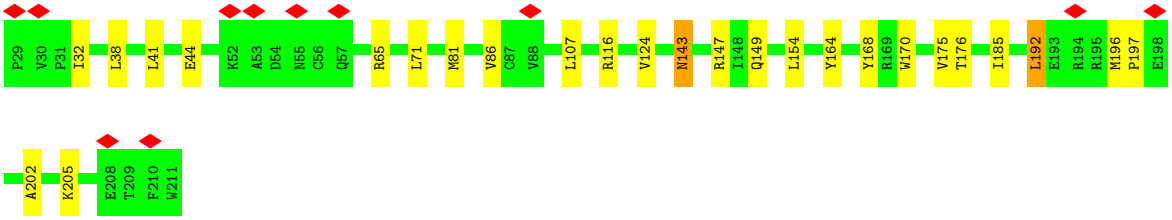
Chain Ex:



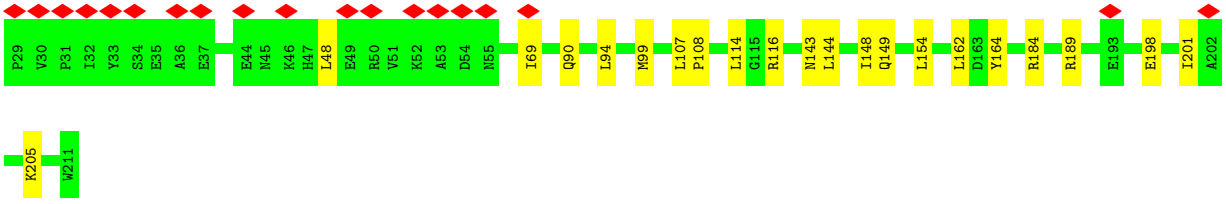

• Molecule 5: Sodium-type flagellar protein MotX

Chain Ey:

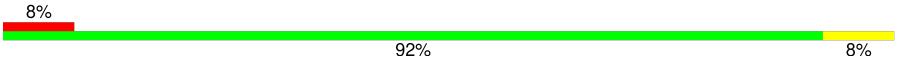

• Molecule 5: Sodium-type flagellar protein MotX

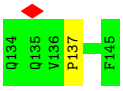
Chain Ez:


• Molecule 6: FlgP

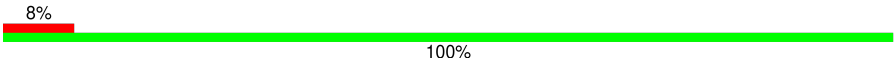
Chain Fa:




• Molecule 6: FlgP

Chain Fb:





• Molecule 6: FlgP

Chain Fc:



• Molecule 6: FlgP

Chain Fd:


There are no outlier residues recorded for this chain.

• Molecule 6: FlgP

Chain Fe:


There are no outlier residues recorded for this chain.

• Molecule 6: FlgP

Chain Ff:



• Molecule 6: FlgP

Chain Fg:



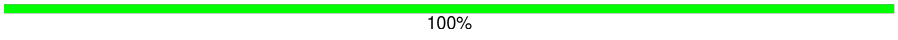
• Molecule 6: FlgP

Chain Fh:



• Molecule 6: FlgP

Chain Fi:




There are no outlier residues recorded for this chain.

• Molecule 6: FlgP

Chain Fj:


There are no outlier residues recorded for this chain.

• Molecule 6: FlgP

Chain Fk:


There are no outlier residues recorded for this chain.

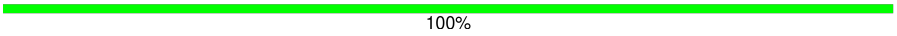
• Molecule 6: FlgP

Chain Fl:



• Molecule 6: FlgP

Chain Fm:




There are no outlier residues recorded for this chain.

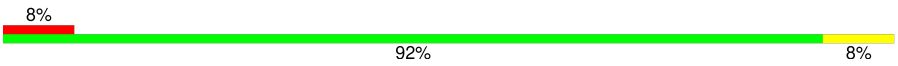
• Molecule 6: FlgP

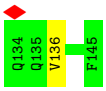
Chain Fn:



• Molecule 6: FlgP

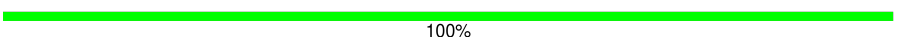
Chain Fo:




• Molecule 6: FlgP

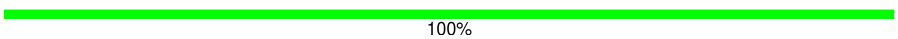
Chain Fp:




There are no outlier residues recorded for this chain.

• Molecule 6: FlgP

Chain Fq:




There are no outlier residues recorded for this chain.

• Molecule 6: FlgP

Chain Fr:



• Molecule 6: FlgP

Chain Fs:



• Molecule 6: FlgP

Chain Ft:



• Molecule 6: FlgP

Chain Fu:



• Molecule 6: FlgP

Chain Fv:



• Molecule 6: FlgP

Chain Fw:



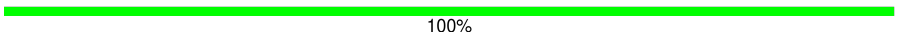
• Molecule 6: FlgP

Chain Fx:


There are no outlier residues recorded for this chain.

• Molecule 6: FlgP

Chain Fy:



There are no outlier residues recorded for this chain.

• Molecule 6: FlgP

Chain Fz:



• Molecule 6: FlgP

Chain Ga:



• Molecule 6: FlgP

Chain Gb:



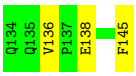
• Molecule 6: FlgP

Chain Gc:



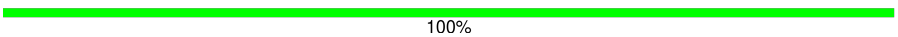
• Molecule 6: FlgP

Chain Gd:


• Molecule 6: FlgP

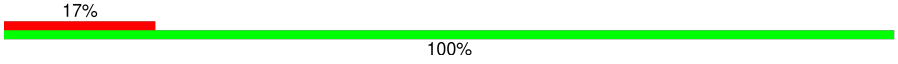
Chain Ge:

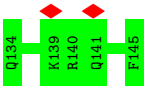



There are no outlier residues recorded for this chain.

• Molecule 6: FlgP

Chain Gf:



- Molecule 6: FlgP

Chain Gg: 

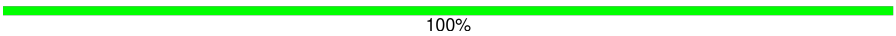

There are no outlier residues recorded for this chain.

- Molecule 6: FlgP

Chain Gh: 



- Molecule 6: FlgP

Chain Gi: 


There are no outlier residues recorded for this chain.

- Molecule 6: FlgP

Chain Gj: 



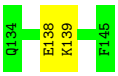
- Molecule 6: FlgP

Chain Gk: 

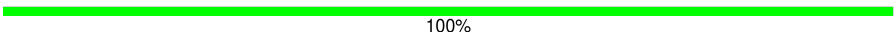


- Molecule 6: FlgP

Chain Gl: 


- Molecule 6: FlgP

Chain Gm: 


There are no outlier residues recorded for this chain.

- Molecule 6: FlgP

Chain Gn: 


• Molecule 6: FlgP

Chain Go:



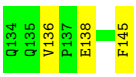
• Molecule 6: FlgP

Chain Gp:



• Molecule 6: FlgP

Chain Gq:


• Molecule 6: FlgP

Chain Gr:



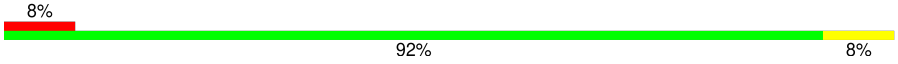
• Molecule 6: FlgP

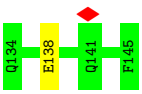
Chain Gs:



• Molecule 6: FlgP

Chain Gt:




• Molecule 6: FlgP

Chain Gu:


• Molecule 6: FlgP

Chain Gv:



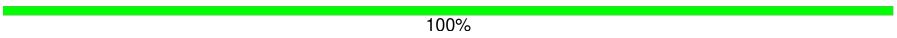
• Molecule 6: FlgP

Chain Gw:



• Molecule 6: FlgP

Chain Gx:




There are no outlier residues recorded for this chain.

• Molecule 6: FlgP

Chain Gy:



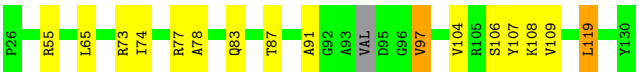
• Molecule 6: FlgP

Chain Gz:



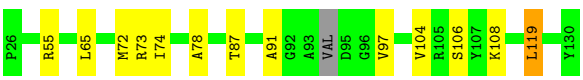
• Molecule 7: Lipoprotein

Chain Ha:

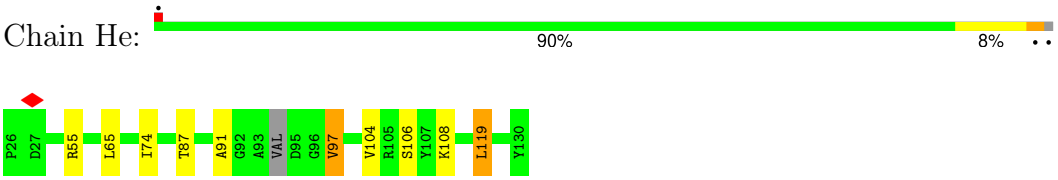

• Molecule 7: Lipoprotein

Chain Hc:

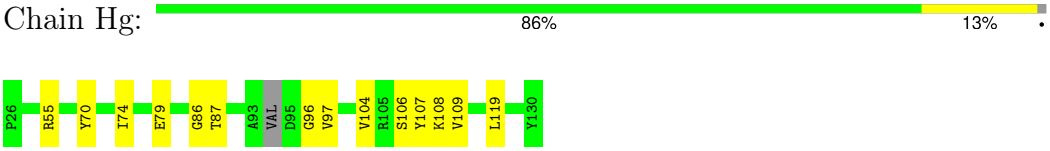
• Molecule 7: Lipoprotein

Chain He:



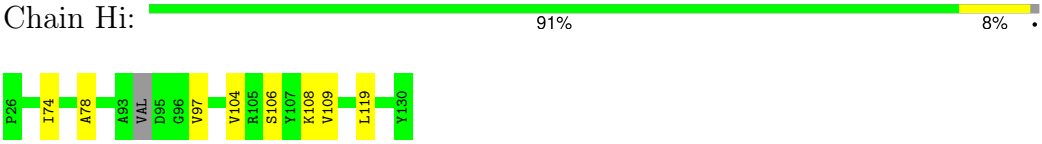

• Molecule 7: Lipoprotein

Chain Hg:



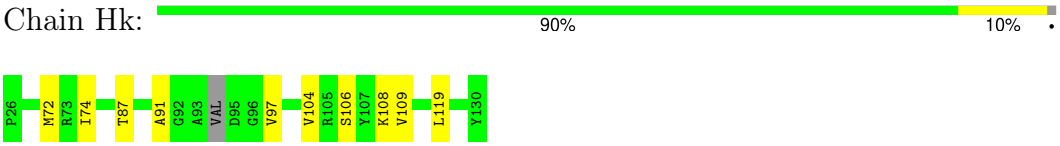

• Molecule 7: Lipoprotein

Chain Hi:



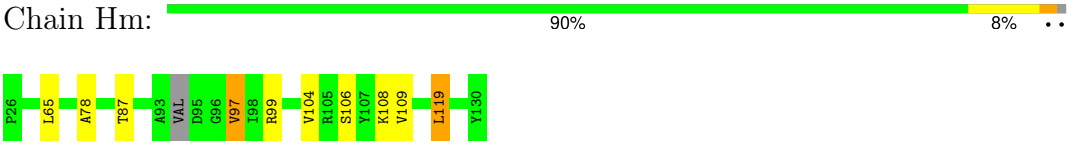

• Molecule 7: Lipoprotein

Chain Hk:



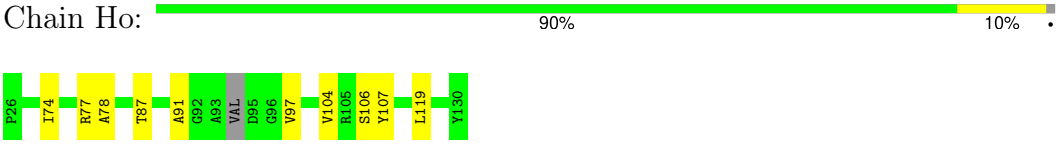

• Molecule 7: Lipoprotein

Chain Hm:



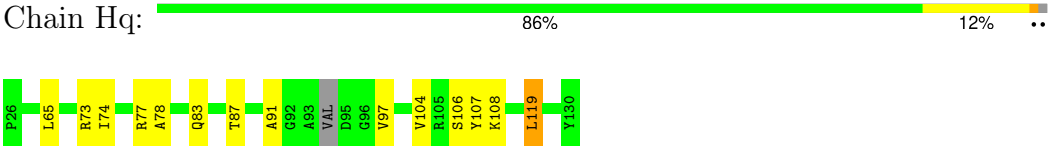

• Molecule 7: Lipoprotein

Chain Ho:



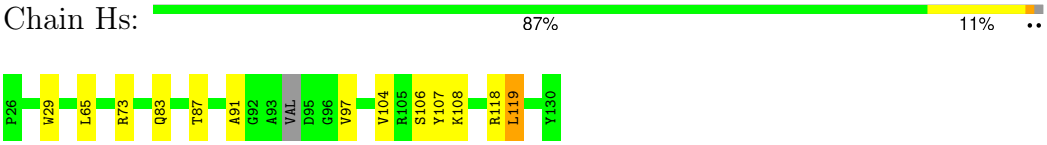

• Molecule 7: Lipoprotein

Chain Hq:



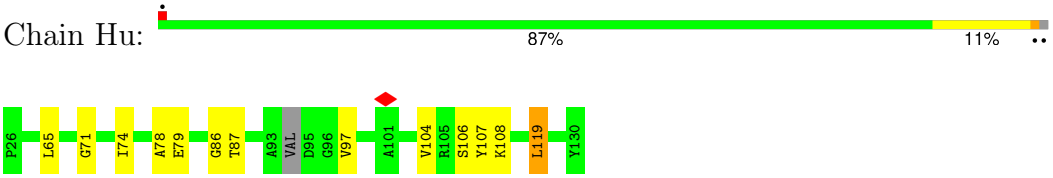
• Molecule 7: Lipoprotein

Chain Hs:



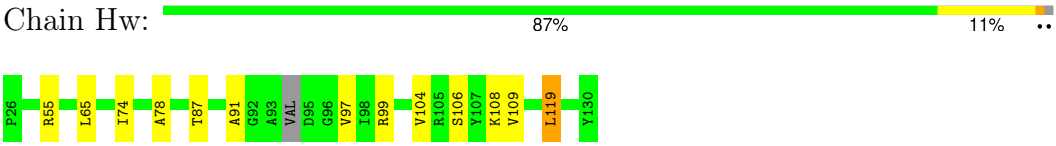

• Molecule 7: Lipoprotein

Chain Hu:



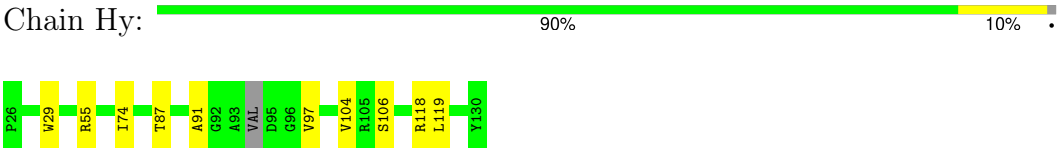

• Molecule 7: Lipoprotein

Chain Hw:



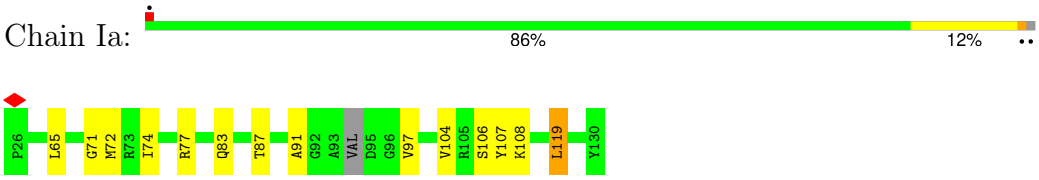

• Molecule 7: Lipoprotein

Chain Hy:



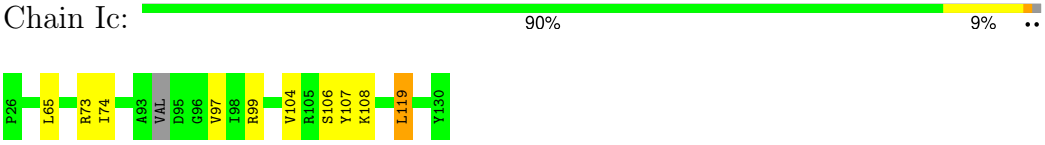

• Molecule 7: Lipoprotein

Chain Ia:



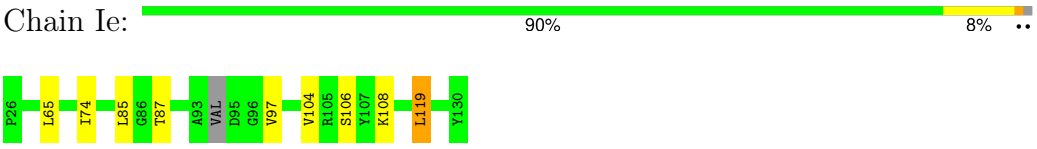

• Molecule 7: Lipoprotein

Chain Ic:



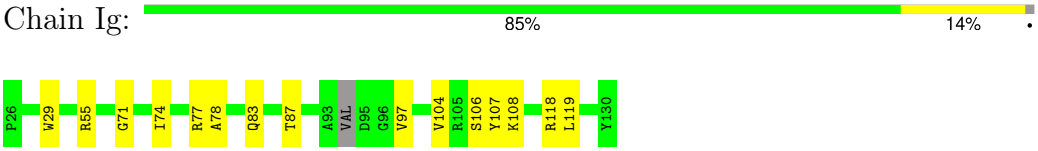

• Molecule 7: Lipoprotein

Chain Ie:



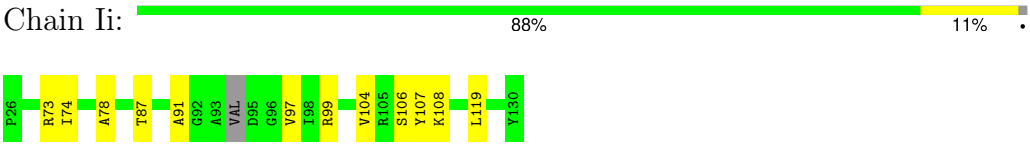
• Molecule 7: Lipoprotein

Chain Ig:



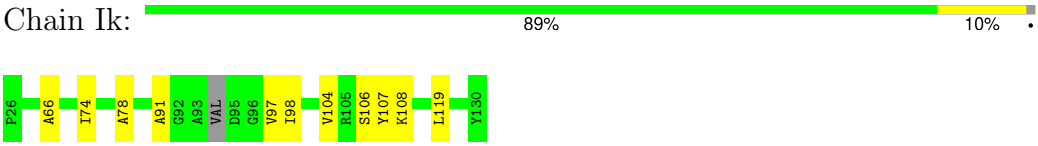

• Molecule 7: Lipoprotein

Chain Ii:



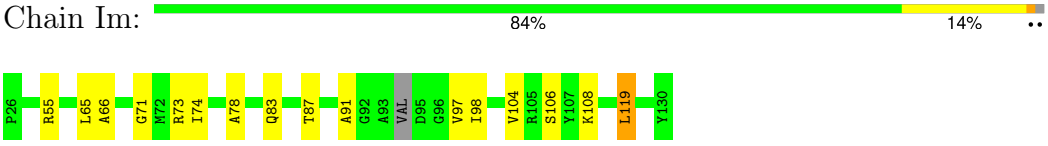

• Molecule 7: Lipoprotein

Chain Ik:



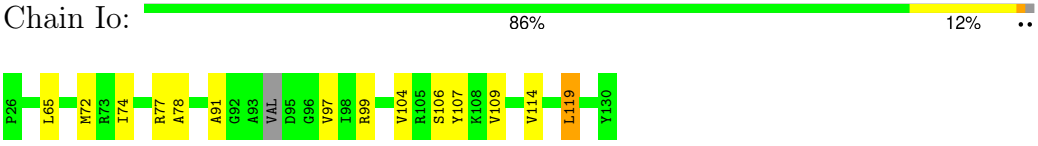

• Molecule 7: Lipoprotein

Chain Im:



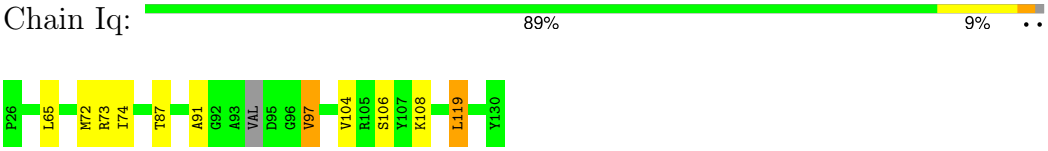

• Molecule 7: Lipoprotein

Chain Io:



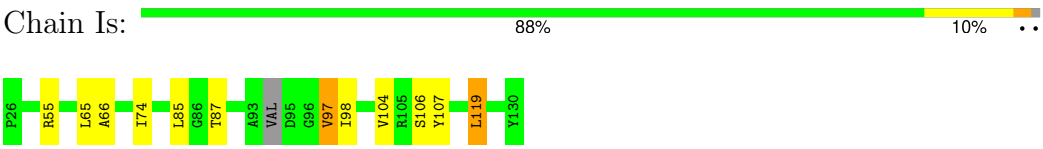

• Molecule 7: Lipoprotein

Chain Iq:



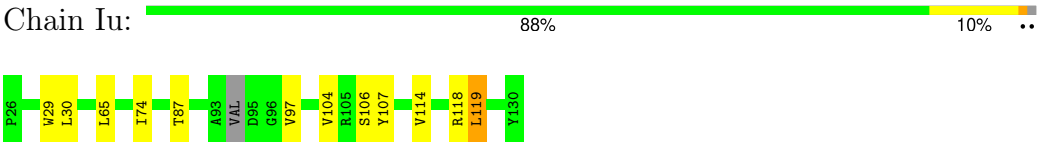

• Molecule 7: Lipoprotein

Chain Is:



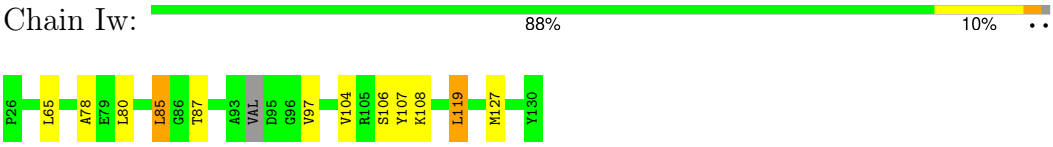

• Molecule 7: Lipoprotein

Chain Iu:



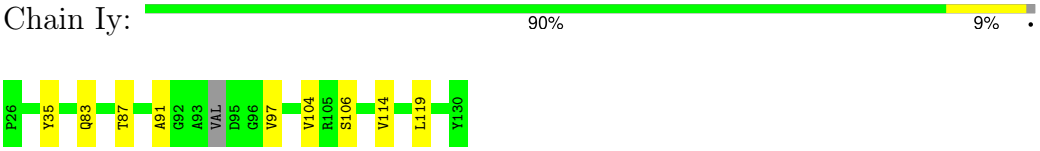

• Molecule 7: Lipoprotein

Chain Iw:



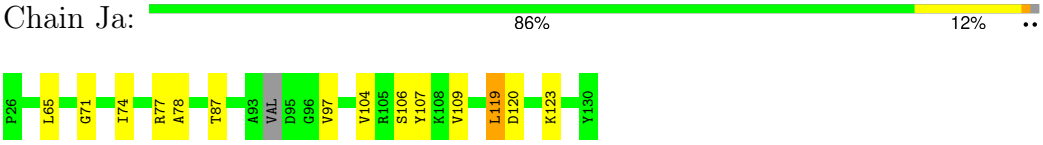

• Molecule 7: Lipoprotein

Chain Iy:



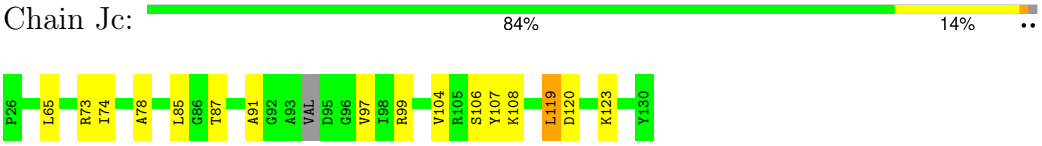

• Molecule 7: Lipoprotein

Chain Ja:



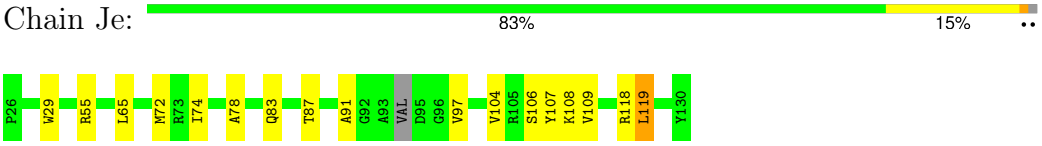

• Molecule 7: Lipoprotein

Chain Jc:



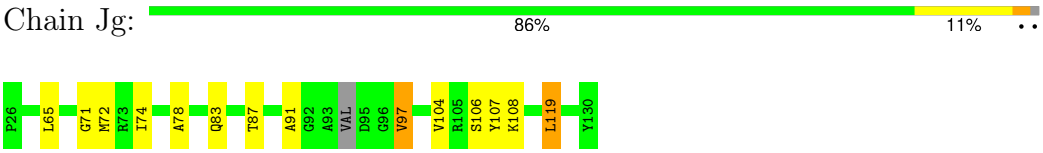

• Molecule 7: Lipoprotein

Chain Je:



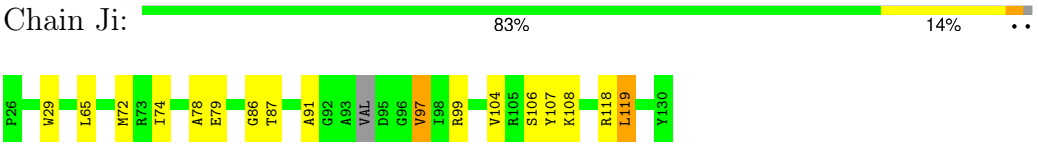

• Molecule 7: Lipoprotein

Chain Jg:



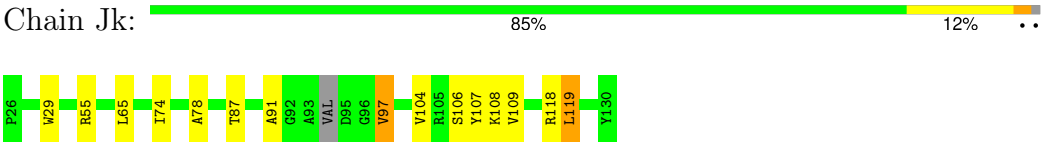

• Molecule 7: Lipoprotein

Chain Ji:



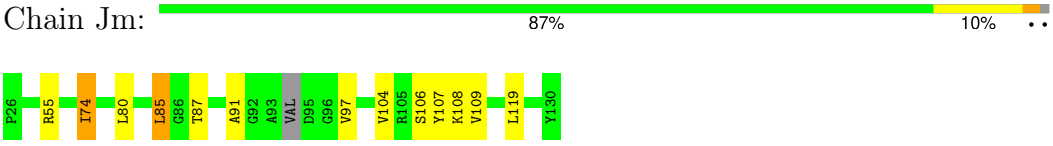

• Molecule 7: Lipoprotein

Chain Jk:



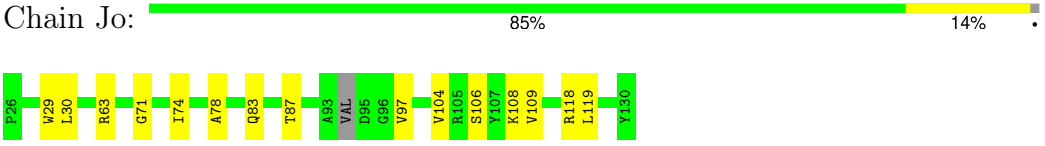

• Molecule 7: Lipoprotein

Chain Jm:



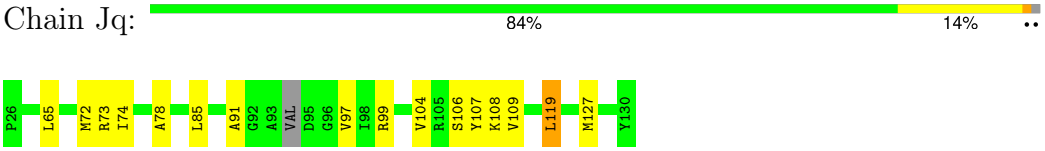

• Molecule 7: Lipoprotein

Chain Jo:



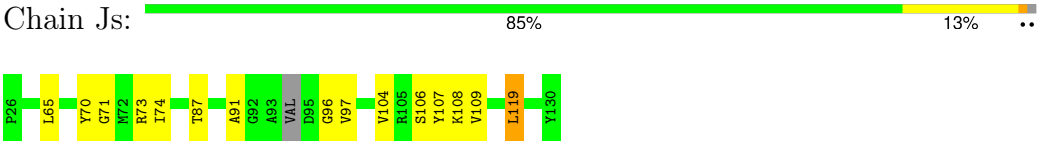

• Molecule 7: Lipoprotein

Chain Jq:



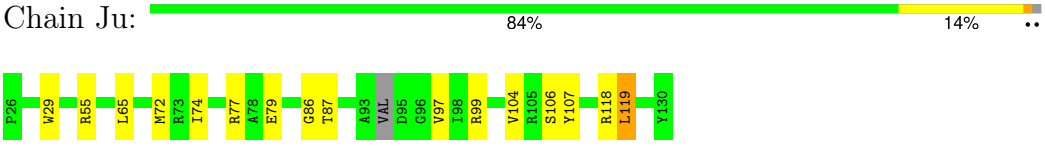

• Molecule 7: Lipoprotein

Chain Js:



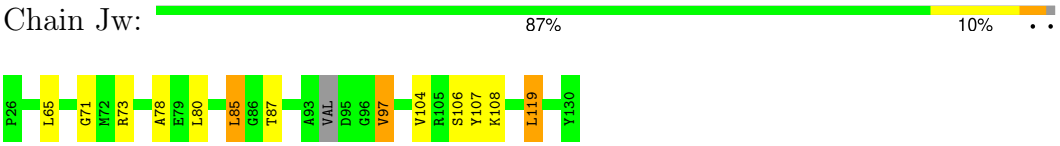

• Molecule 7: Lipoprotein

Chain Ju:



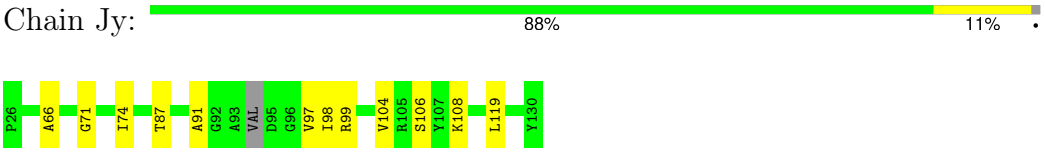

• Molecule 7: Lipoprotein

Chain Jw:



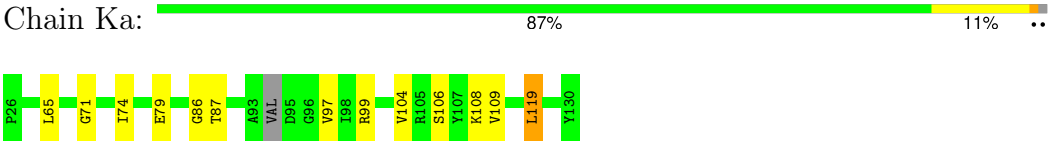

• Molecule 7: Lipoprotein

Chain Jy:



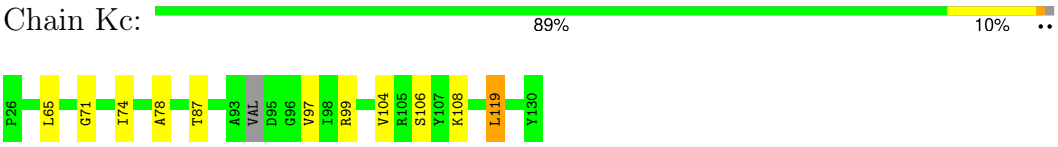

• Molecule 7: Lipoprotein

Chain Ka:



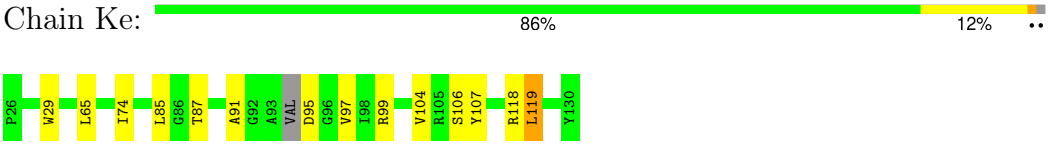

• Molecule 7: Lipoprotein

Chain Kc:



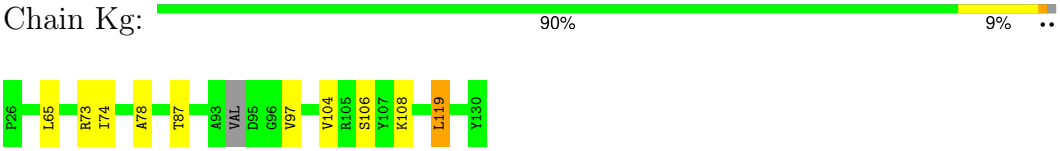

• Molecule 7: Lipoprotein

Chain Ke:



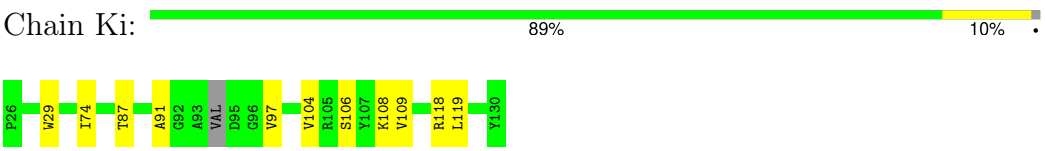

• Molecule 7: Lipoprotein

Chain Kg:



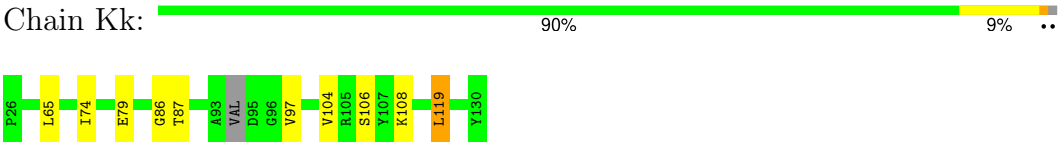

• Molecule 7: Lipoprotein

Chain Ki:



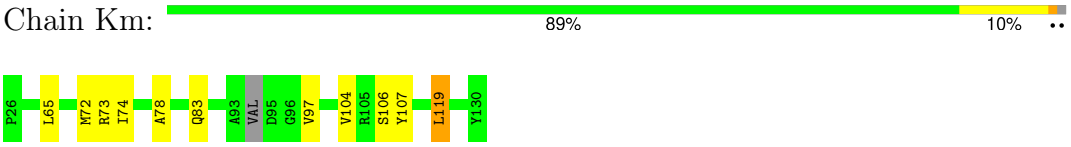

• Molecule 7: Lipoprotein

Chain Kk:



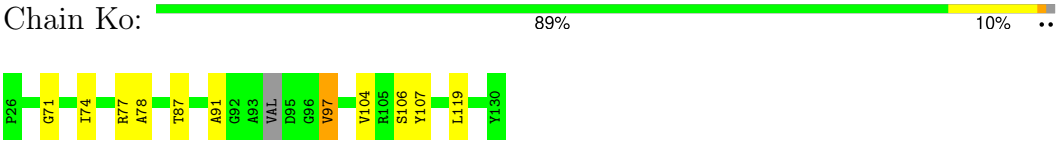

• Molecule 7: Lipoprotein

Chain Km:



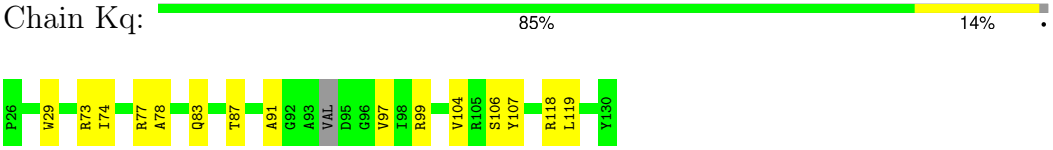

• Molecule 7: Lipoprotein

Chain Ko:



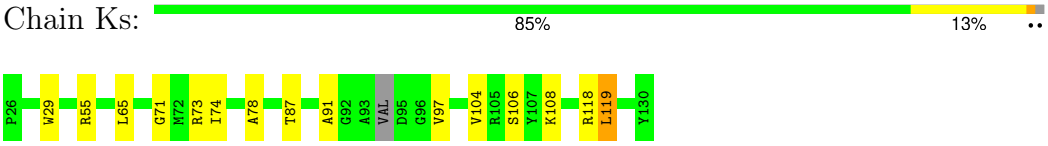

• Molecule 7: Lipoprotein

Chain Kq:



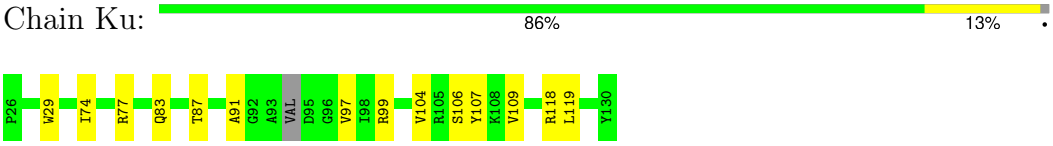

• Molecule 7: Lipoprotein

Chain Ks:



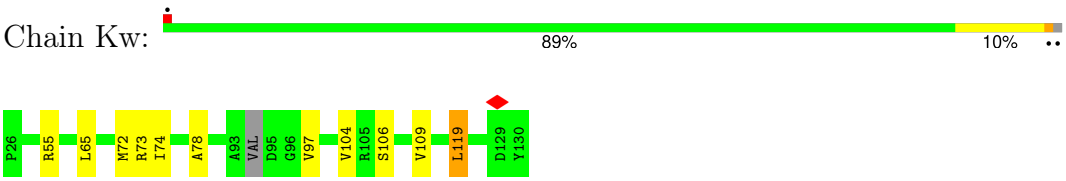

• Molecule 7: Lipoprotein

Chain Ku:



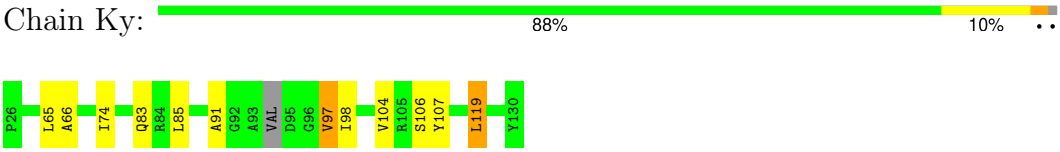

• Molecule 7: Lipoprotein

Chain Kw:



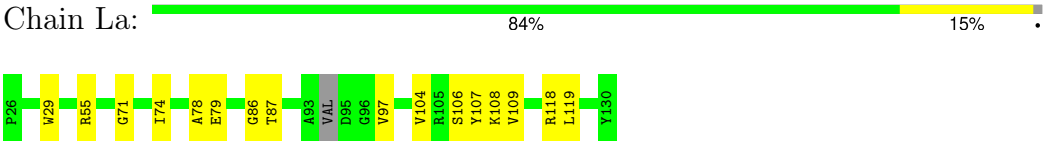

• Molecule 7: Lipoprotein

Chain Ky:



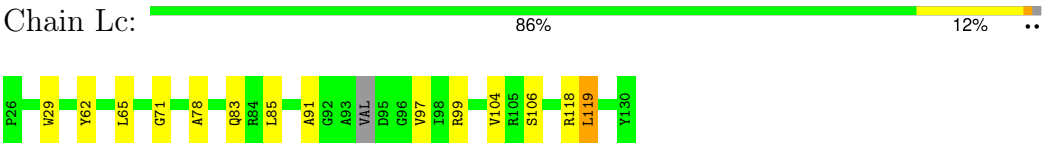

• Molecule 7: Lipoprotein

Chain La:



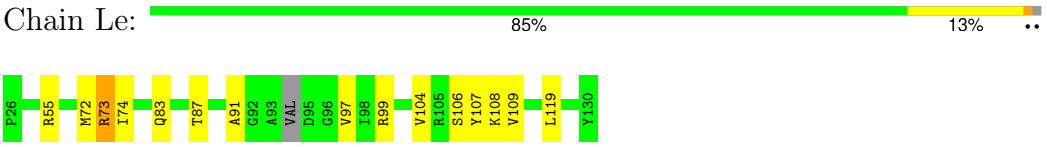

• Molecule 7: Lipoprotein

Chain Lc:



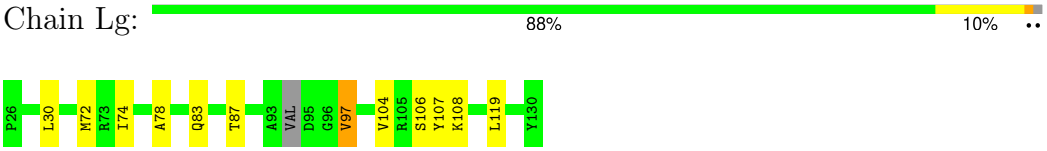

• Molecule 7: Lipoprotein

Chain Le:



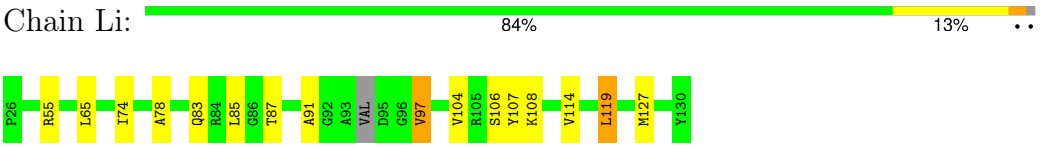

• Molecule 7: Lipoprotein

Chain Lg:



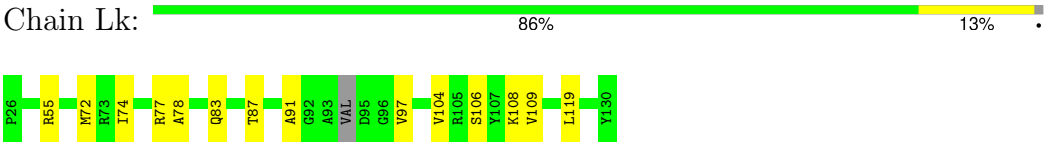

• Molecule 7: Lipoprotein

Chain Li:



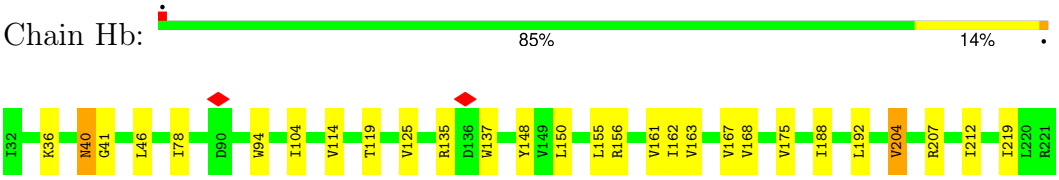

• Molecule 7: Lipoprotein

Chain Lk:



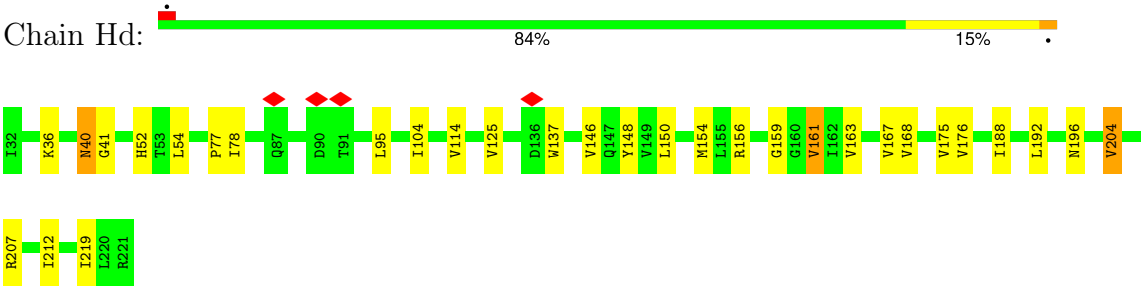

• Molecule 8: FlgO domain-containing protein

Chain Hb:



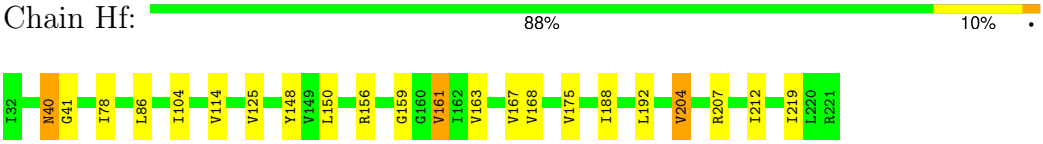

• Molecule 8: FlgO domain-containing protein

Chain Hd:



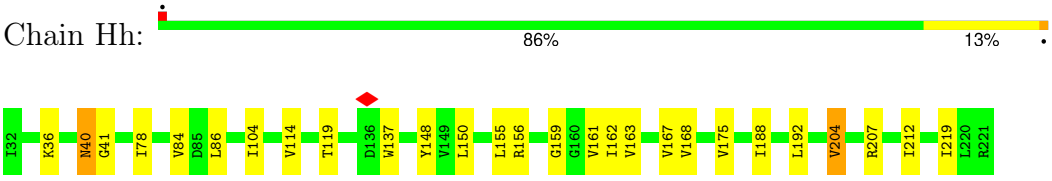

• Molecule 8: FlgO domain-containing protein

Chain Hf:



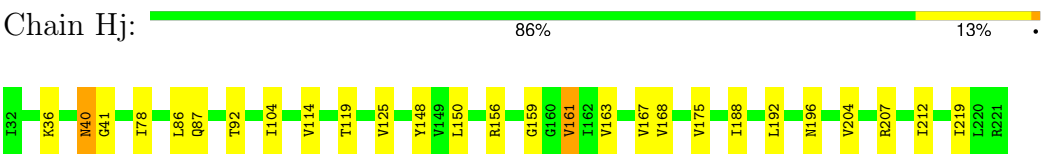

• Molecule 8: FlgO domain-containing protein

Chain Hh:



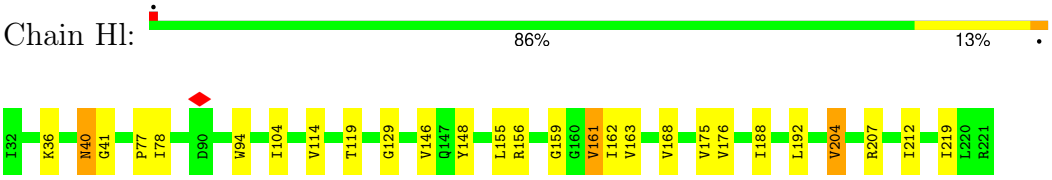

• Molecule 8: FlgO domain-containing protein

Chain Hj:



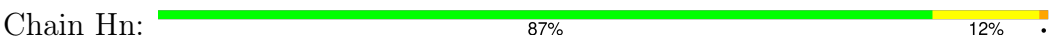

• Molecule 8: FlgO domain-containing protein

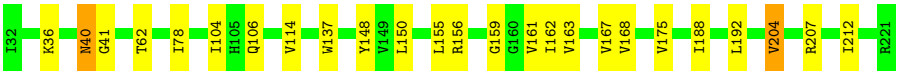
Chain Hl:




• Molecule 8: FlgO domain-containing protein

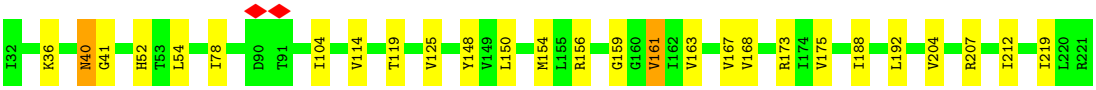
Chain Hn:





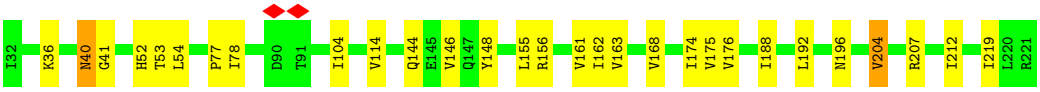

• Molecule 8: FlgO domain-containing protein

Chain Hp:

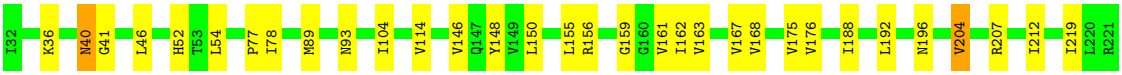

• Molecule 8: FlgO domain-containing protein

Chain Hr:

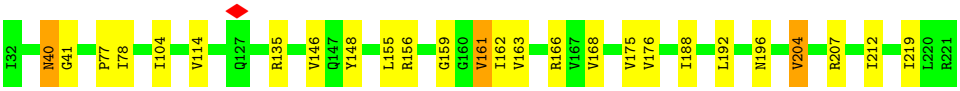

• Molecule 8: FlgO domain-containing protein

Chain Ht:

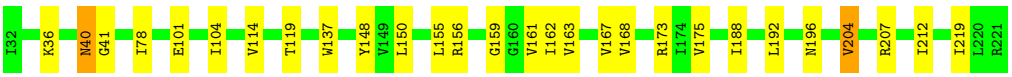

• Molecule 8: FlgO domain-containing protein

Chain Hv:


• Molecule 8: FlgO domain-containing protein

Chain Hx:

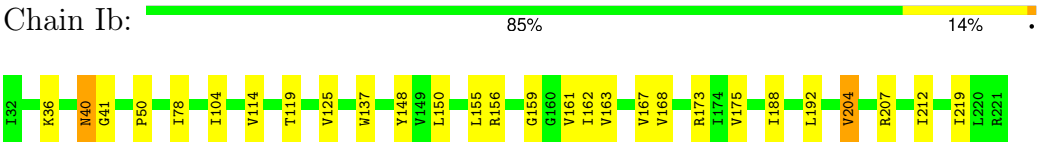

• Molecule 8: FlgO domain-containing protein

Chain Hz:



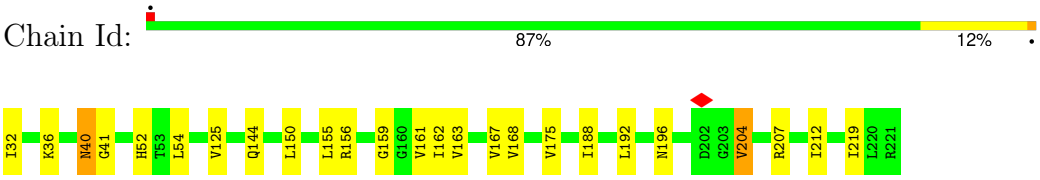
• Molecule 8: FlgO domain-containing protein

Chain Ib:



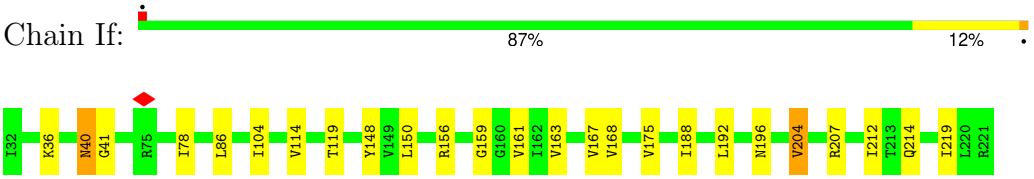

• Molecule 8: FlgO domain-containing protein

Chain Id:



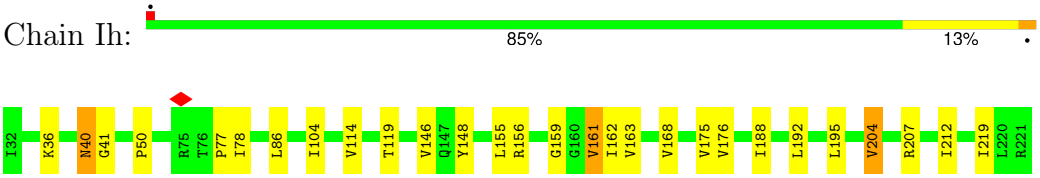

• Molecule 8: FlgO domain-containing protein

Chain If:



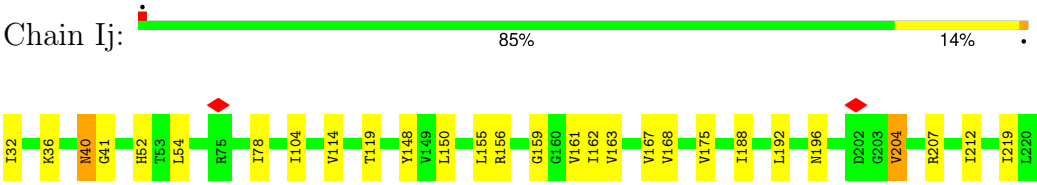

• Molecule 8: FlgO domain-containing protein

Chain Ih:



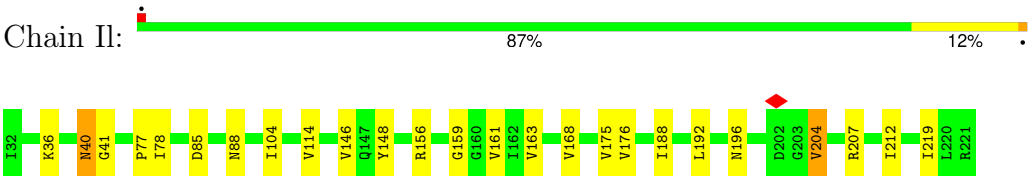

• Molecule 8: FlgO domain-containing protein

Chain Ij:



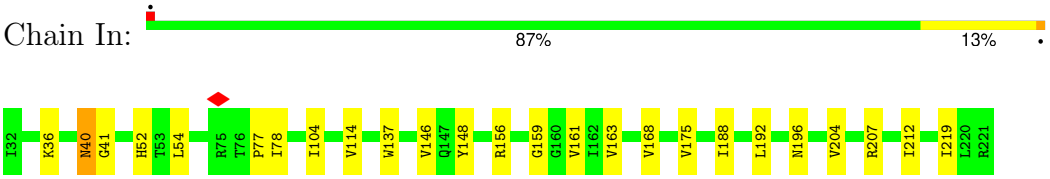

• Molecule 8: FlgO domain-containing protein

Chain Il:



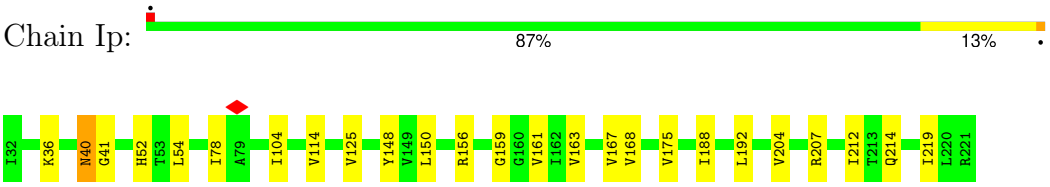

• Molecule 8: FlgO domain-containing protein

Chain In:



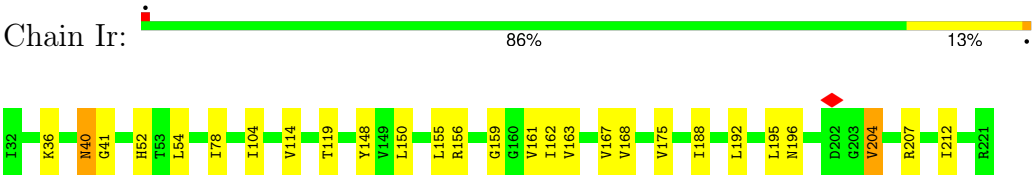
• Molecule 8: FlgO domain-containing protein

Chain Ip:



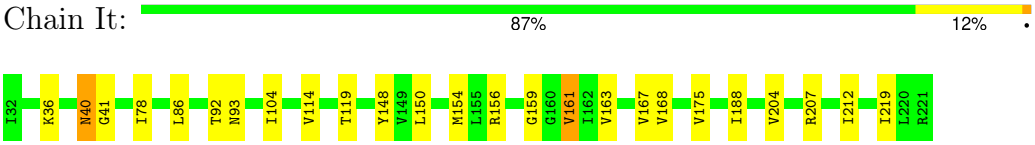

• Molecule 8: FlgO domain-containing protein

Chain Ir:



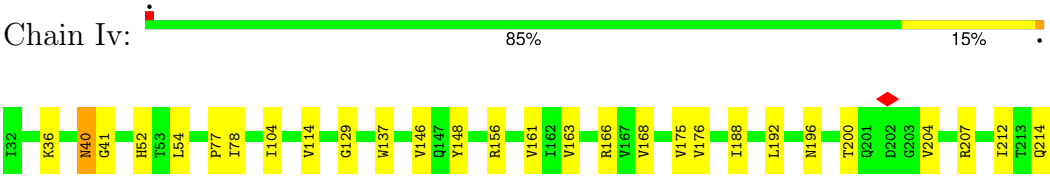

• Molecule 8: FlgO domain-containing protein

Chain It:



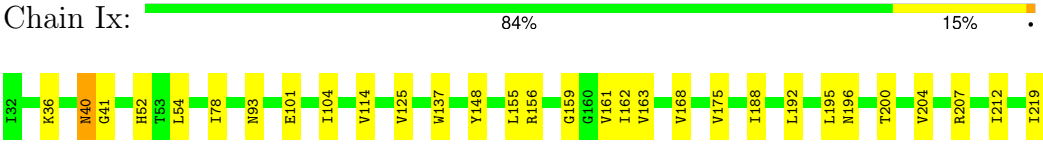

• Molecule 8: FlgO domain-containing protein

Chain Iv:



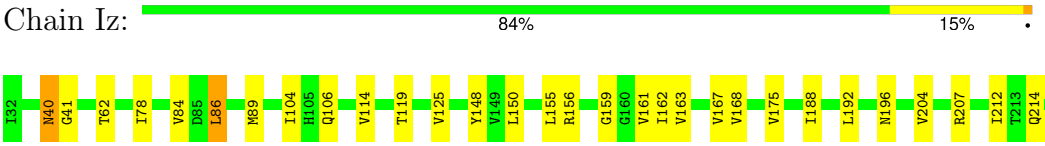

• Molecule 8: FlgO domain-containing protein

Chain Ix:



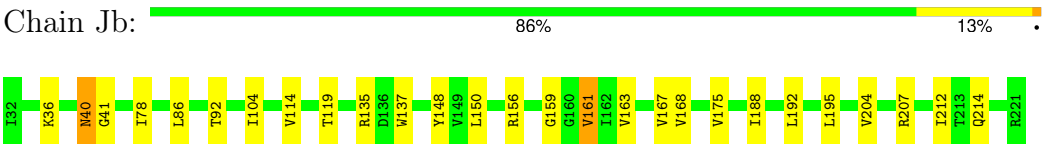

• Molecule 8: FlgO domain-containing protein

Chain Iz:



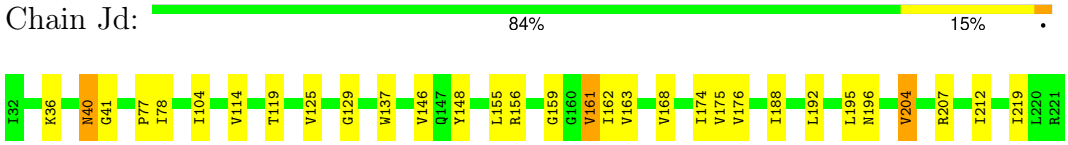

• Molecule 8: FlgO domain-containing protein

Chain Jb:



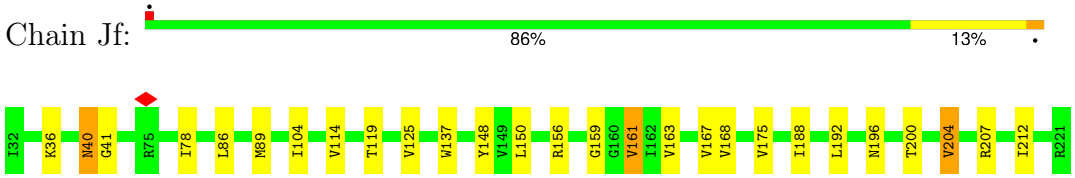
• Molecule 8: FlgO domain-containing protein

Chain Jd:



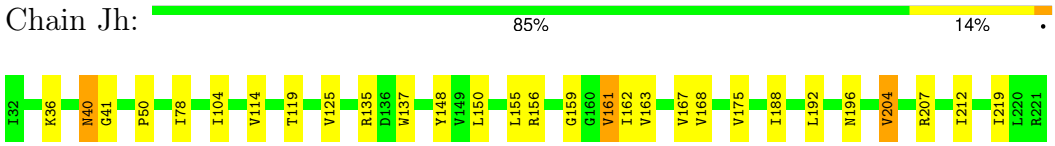

• Molecule 8: FlgO domain-containing protein

Chain Jf:



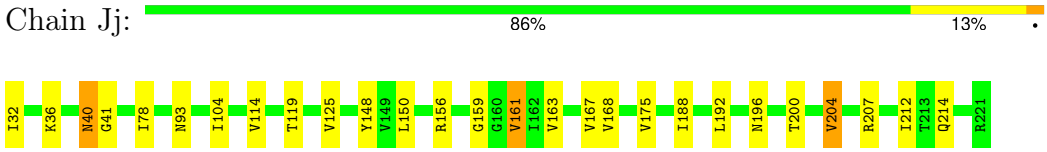

• Molecule 8: FlgO domain-containing protein

Chain Jh:



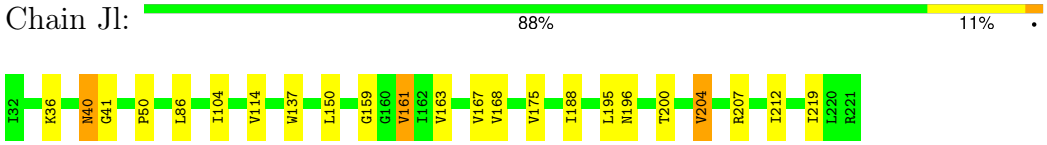

• Molecule 8: FlgO domain-containing protein

Chain Jj:



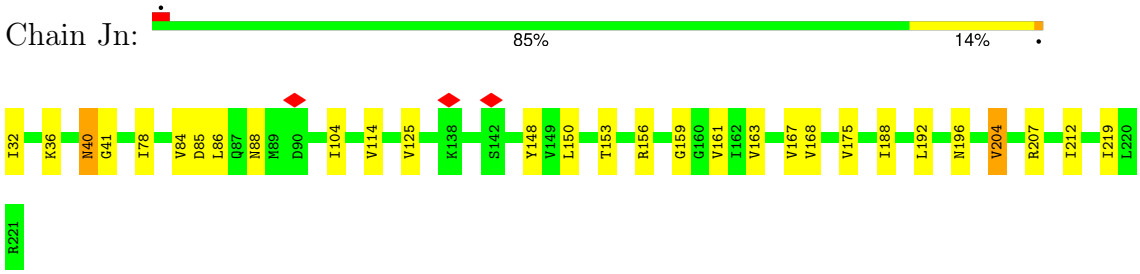

• Molecule 8: FlgO domain-containing protein

Chain Jl:



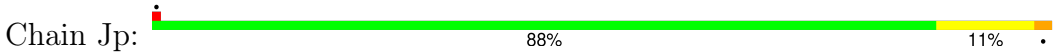

• Molecule 8: FlgO domain-containing protein

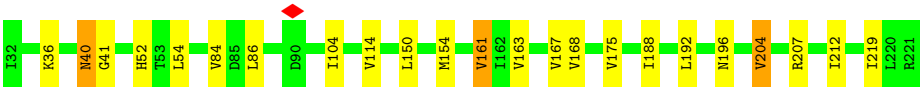
Chain Jn:




• Molecule 8: FlgO domain-containing protein

Chain Jp:





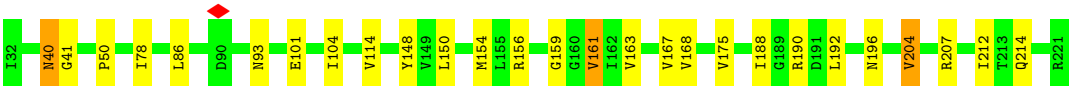

• Molecule 8: FlgO domain-containing protein

Chain Jr:



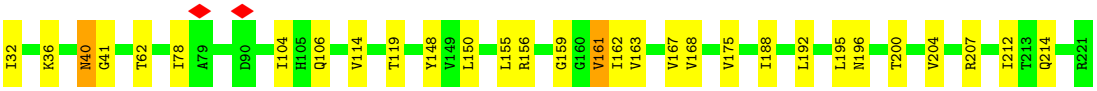
• Molecule 8: FlgO domain-containing protein

Chain Jt:


• Molecule 8: FlgO domain-containing protein

Chain Jv:

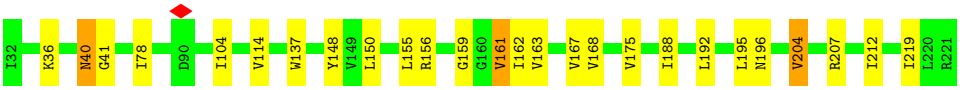

• Molecule 8: FlgO domain-containing protein

Chain Jx:



• Molecule 8: FlgO domain-containing protein

Chain Jz:

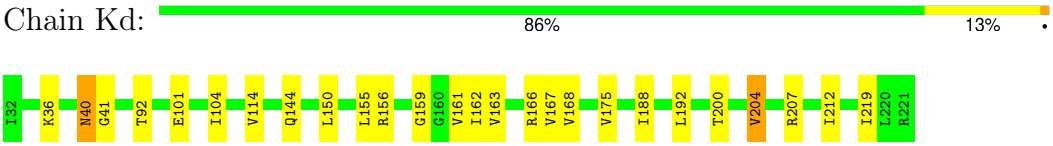

• Molecule 8: FlgO domain-containing protein

Chain Kb:



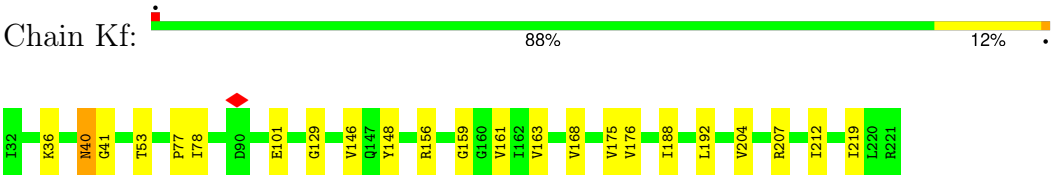
• Molecule 8: FlgO domain-containing protein

Chain Kd:



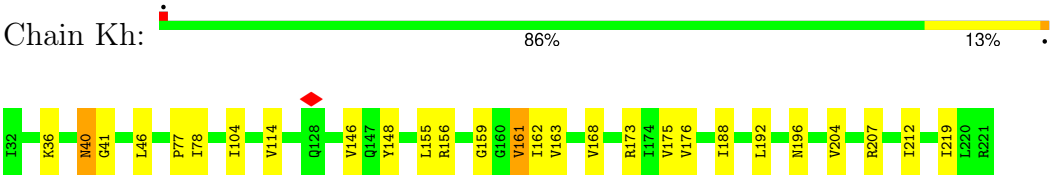

• Molecule 8: FlgO domain-containing protein

Chain Kf:



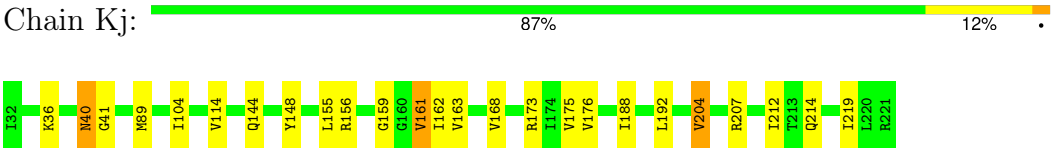

• Molecule 8: FlgO domain-containing protein

Chain Kh:



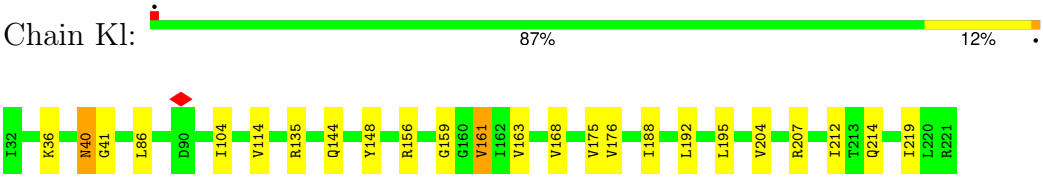

• Molecule 8: FlgO domain-containing protein

Chain Kj:



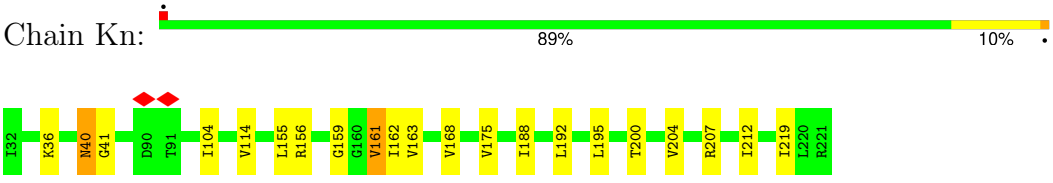

• Molecule 8: FlgO domain-containing protein

Chain Kl:



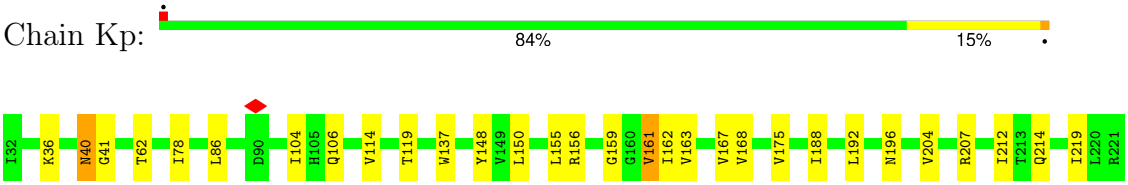

• Molecule 8: FlgO domain-containing protein

Chain Kn:



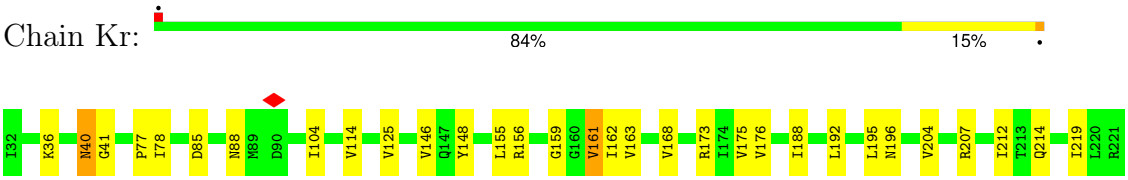

• Molecule 8: FlgO domain-containing protein

Chain Kp:



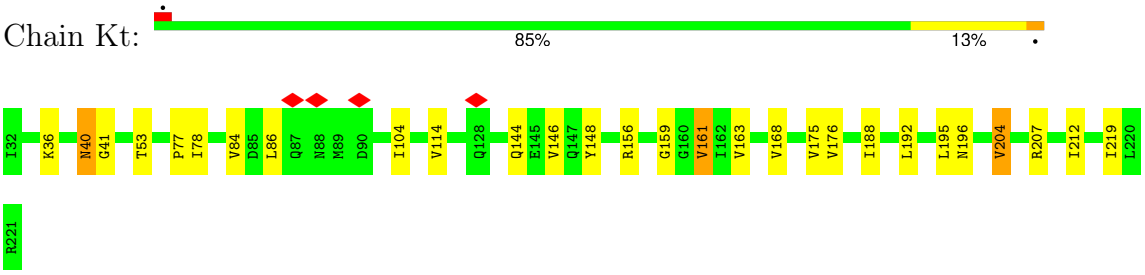
• Molecule 8: FlgO domain-containing protein

Chain Kr:



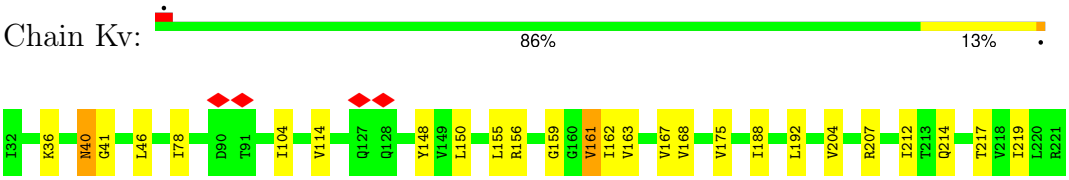

• Molecule 8: FlgO domain-containing protein

Chain Kt:



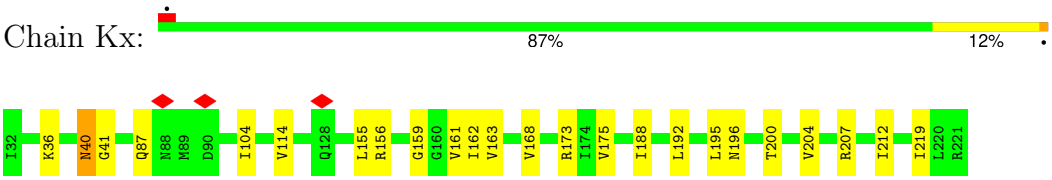

• Molecule 8: FlgO domain-containing protein

Chain Kv:



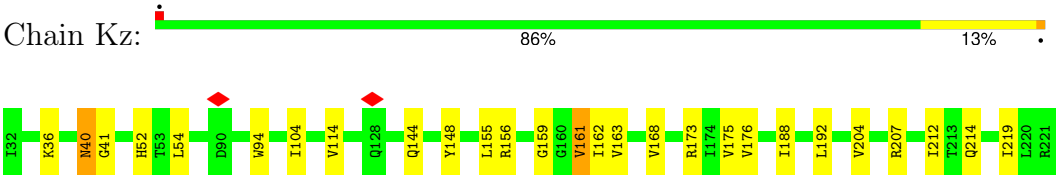

• Molecule 8: FlgO domain-containing protein

Chain Kx:



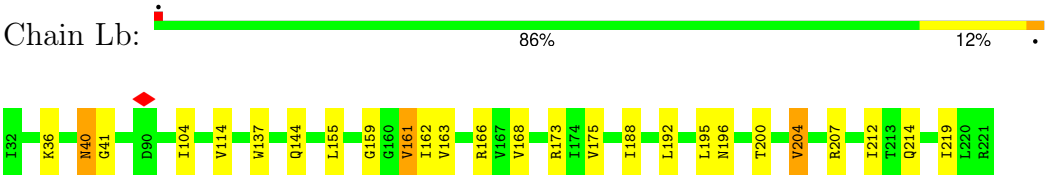

• Molecule 8: FlgO domain-containing protein

Chain Kz:



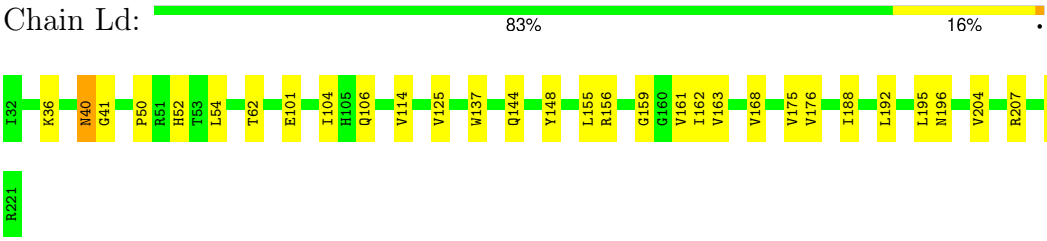

• Molecule 8: FlgO domain-containing protein

Chain Lb:



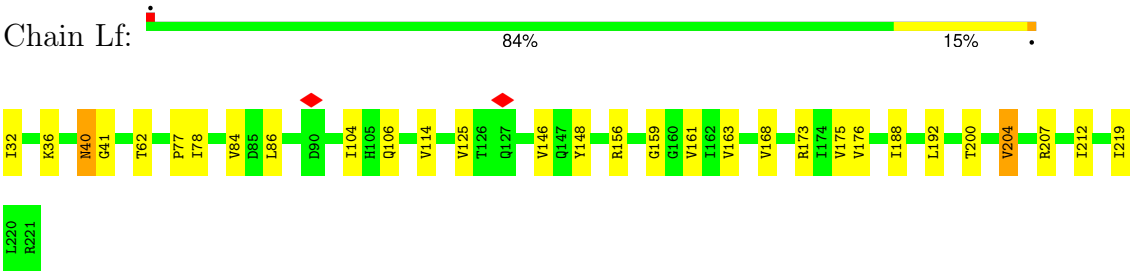

• Molecule 8: FlgO domain-containing protein

Chain Ld:



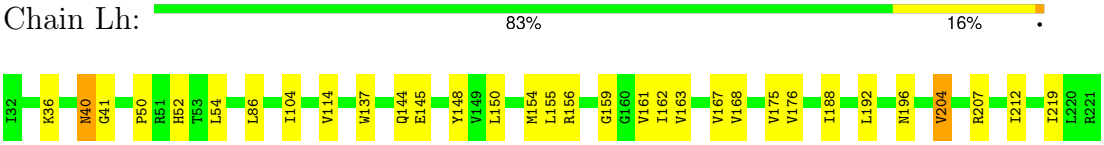

• Molecule 8: FlgO domain-containing protein

Chain Lf:



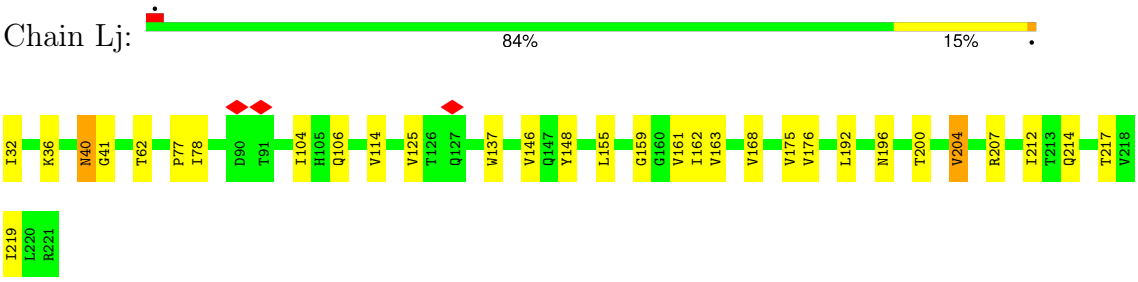

• Molecule 8: FlgO domain-containing protein

Chain Lh:



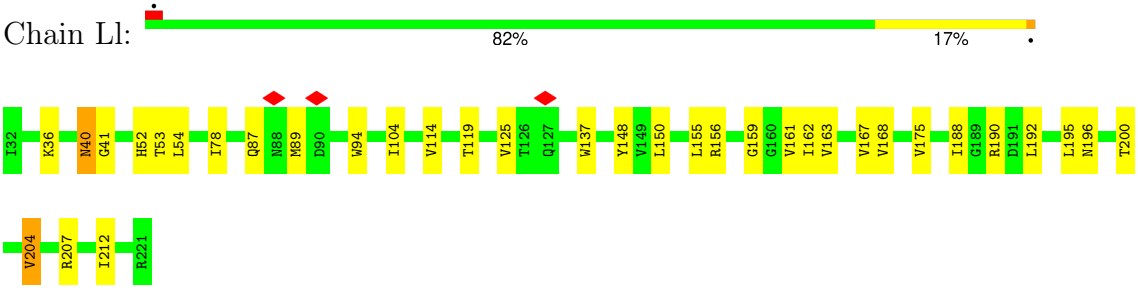

• Molecule 8: FlgO domain-containing protein

Chain Lj:




• Molecule 8: FlgO domain-containing protein

Chain Ll:



# 4 Experimental information (i)

| Property | Value | Source |
|---|---|---|
| EM reconstruction method | SINGLE PARTICLE | Depositor |
| Imposed symmetry | POINT, C1 | Depositor |
| Number of particles used | 177296 | Depositor |
| Resolution determination method | FSC 0.143 CUT-OFF | Depositor |
| CTF correction method | PHASE FLIPPING AND AMPLITUDE CORRECTION | Depositor |
| Microscope | TFS KRIOS | Depositor |
| Voltage (kV) | 300 | Depositor |
| Electron dose ($e^-/Å^2$) | 70 | Depositor |
| Minimum defocus (nm) | 1600 | Depositor |
| Maximum defocus (nm) | 2200 | Depositor |
| Magnification | Not provided | |
| Image detector | GATAN K3 (6k x 4k) | Depositor |
| Maximum map value | 0.772 | Depositor |
| Minimum map value | -0.417 | Depositor |
| Average map value | 0.001 | Depositor |
| Map value standard deviation | 0.052 | Depositor |
| Recommended contour level | 0.05 | Depositor |
| Map size (Å) | 640.63995, 640.63995, 640.63995 | wwPDB |
| Map dimensions | 448, 448, 448 | wwPDB |
| Map angles (°) | 90.0, 90.0, 90.0 | wwPDB |
| Pixel spacing (Å) | 1.43, 1.43, 1.43 | Depositor |

# 5 Model quality

## 5.1 Standard geometry

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Chain | Bond lengths | | Bond angles | |
|---|---|---|---|---|---|
| | | RMSZ | #$\|Z\|>5$ | RMSZ | #$\|Z\|>5$ |
| 1 | Aa | 0.11 | 0/1699 | 0.26 | 0/2303 |
| 1 | Ab | 0.11 | 0/1699 | 0.27 | 0/2303 |
| 1 | Ac | 0.11 | 0/1699 | 0.28 | 0/2303 |
| 1 | Ad | 0.11 | 0/1699 | 0.29 | 0/2303 |
| 1 | Ae | 0.11 | 0/1699 | 0.28 | 0/2303 |
| 1 | Af | 0.11 | 0/1699 | 0.28 | 0/2303 |
| 1 | Ag | 0.11 | 0/1699 | 0.29 | 0/2303 |
| 1 | Ah | 0.11 | 0/1699 | 0.28 | 0/2303 |
| 1 | Ai | 0.12 | 0/1699 | 0.28 | 0/2303 |
| 1 | Aj | 0.11 | 0/1699 | 0.27 | 0/2303 |
| 1 | Ak | 0.11 | 0/1699 | 0.27 | 0/2303 |
| 1 | Al | 0.11 | 0/1699 | 0.28 | 0/2303 |
| 1 | Am | 0.11 | 0/1699 | 0.27 | 0/2303 |
| 1 | An | 0.11 | 0/1699 | 0.27 | 0/2303 |
| 1 | Ao | 0.11 | 0/1699 | 0.27 | 0/2303 |
| 1 | Ap | 0.11 | 0/1699 | 0.28 | 0/2303 |
| 1 | Aq | 0.11 | 0/1699 | 0.28 | 0/2303 |
| 1 | Ar | 0.11 | 0/1699 | 0.27 | 0/2303 |
| 1 | As | 0.11 | 0/1699 | 0.28 | 0/2303 |
| 1 | At | 0.12 | 0/1699 | 0.28 | 0/2303 |
| 1 | Au | 0.12 | 0/1699 | 0.29 | 0/2303 |
| 1 | Av | 0.12 | 0/1699 | 0.27 | 0/2303 |
| 1 | Aw | 0.11 | 0/1699 | 0.27 | 0/2303 |
| 1 | Ax | 0.11 | 0/1699 | 0.26 | 0/2303 |
| 1 | Ay | 0.11 | 0/1699 | 0.28 | 0/2303 |
| 1 | Az | 0.11 | 0/1699 | 0.28 | 0/2303 |
| 2 | Ba | 0.12 | 0/2535 | 0.28 | 0/3442 |
| 2 | Bb | 0.12 | 0/2535 | 0.28 | 0/3442 |
| 2 | Bc | 0.13 | 0/2535 | 0.28 | 0/3442 |
| 2 | Bd | 0.13 | 0/2535 | 0.28 | 0/3442 |
| 2 | Be | 0.12 | 0/2535 | 0.28 | 0/3442 |
| 2 | Bf | 0.13 | 0/2535 | 0.29 | 0/3442 |
| 2 | Bg | 0.12 | 0/2535 | 0.28 | 0/3442 |
| 2 | Bh | 0.13 | 0/2535 | 0.28 | 0/3442 |

| Mol | Chain | Bond lengths | | Bond angles | |
|---|---|---|---|---|---|
| | | RMSZ | #\|Z\| >5 | RMSZ | #\|Z\| >5 |
| 2 | Bi | 0.12 | 0/2535 | 0.29 | 0/3442 |
| 2 | Bj | 0.12 | 0/2535 | 0.28 | 0/3442 |
| 2 | Bk | 0.13 | 0/2535 | 0.30 | 1/3442 (0.0%) |
| 2 | Bl | 0.13 | 0/2535 | 0.30 | 0/3442 |
| 2 | Bm | 0.13 | 0/2535 | 0.29 | 0/3442 |
| 2 | Bn | 0.13 | 0/2535 | 0.28 | 0/3442 |
| 2 | Bo | 0.12 | 0/2535 | 0.28 | 0/3442 |
| 2 | Bp | 0.13 | 0/2535 | 0.28 | 0/3442 |
| 2 | Bq | 0.13 | 0/2535 | 0.29 | 0/3442 |
| 2 | Br | 0.13 | 0/2535 | 0.29 | 0/3442 |
| 2 | Bs | 0.13 | 0/2535 | 0.29 | 0/3442 |
| 2 | Bt | 0.13 | 0/2535 | 0.28 | 0/3442 |
| 2 | Bu | 0.13 | 0/2535 | 0.28 | 0/3442 |
| 2 | Bv | 0.12 | 0/2535 | 0.30 | 0/3442 |
| 2 | Bw | 0.12 | 0/2535 | 0.27 | 0/3442 |
| 2 | Bx | 0.12 | 0/2535 | 0.28 | 0/3442 |
| 2 | By | 0.13 | 0/2535 | 0.29 | 0/3442 |
| 2 | Bz | 0.12 | 0/2535 | 0.29 | 0/3442 |
| 3 | Ca | 0.13 | 0/2816 | 0.28 | 0/3809 |
| 3 | Cb | 0.12 | 0/2816 | 0.27 | 0/3809 |
| 3 | Cc | 0.10 | 0/2816 | 0.27 | 0/3809 |
| 3 | Cd | 0.11 | 0/2816 | 0.28 | 0/3809 |
| 3 | Ce | 0.11 | 0/2816 | 0.27 | 0/3809 |
| 3 | Cf | 0.11 | 0/2816 | 0.27 | 0/3809 |
| 3 | Cg | 0.11 | 0/2816 | 0.29 | 0/3809 |
| 3 | Ch | 0.11 | 0/2816 | 0.28 | 0/3809 |
| 3 | Ci | 0.11 | 0/2816 | 0.27 | 0/3809 |
| 3 | Cj | 0.12 | 0/2816 | 0.27 | 0/3809 |
| 3 | Ck | 0.11 | 0/2816 | 0.28 | 1/3809 (0.0%) |
| 3 | Cl | 0.12 | 0/2816 | 0.30 | 1/3809 (0.0%) |
| 3 | Cm | 0.11 | 0/2816 | 0.26 | 0/3809 |
| 3 | Cn | 0.11 | 0/2816 | 0.29 | 1/3809 (0.0%) |
| 3 | Co | 0.11 | 0/2816 | 0.27 | 0/3809 |
| 3 | Cp | 0.11 | 0/2816 | 0.27 | 0/3809 |
| 3 | Cq | 0.11 | 0/2816 | 0.28 | 0/3809 |
| 3 | Cr | 0.11 | 0/2816 | 0.27 | 0/3809 |
| 3 | Cs | 0.11 | 0/2816 | 0.27 | 0/3809 |
| 3 | Ct | 0.11 | 0/2816 | 0.27 | 0/3809 |
| 3 | Cu | 0.11 | 0/2816 | 0.28 | 0/3809 |
| 3 | Cv | 0.11 | 0/2816 | 0.28 | 0/3809 |
| 3 | Cw | 0.11 | 0/2816 | 0.27 | 0/3809 |
| 3 | Cx | 0.10 | 0/2816 | 0.26 | 0/3809 |
| 3 | Cy | 0.11 | 0/2816 | 0.26 | 0/3809 |

| Mol | Chain | Bond lengths | | Bond angles | |
|---|---|---|---|---|---|
| | | RMSZ | #\|Z\| >5 | RMSZ | #\|Z\| >5 |
| 3 | Cz | 0.11 | 0/2816 | 0.26 | 0/3809 |
| 4 | Da | 0.12 | 0/2129 | 0.30 | 0/2882 |
| 4 | Db | 0.12 | 0/2124 | 0.30 | 0/2877 |
| 4 | Dc | 0.12 | 0/2129 | 0.29 | 0/2882 |
| 4 | Dd | 0.12 | 0/2124 | 0.31 | 0/2877 |
| 4 | De | 0.12 | 0/2129 | 0.29 | 0/2882 |
| 4 | Df | 0.13 | 0/2124 | 0.34 | 0/2877 |
| 4 | Dg | 0.12 | 0/2129 | 0.30 | 0/2882 |
| 4 | Dh | 0.12 | 0/2124 | 0.31 | 0/2877 |
| 4 | Di | 0.12 | 0/2129 | 0.31 | 0/2882 |
| 4 | Dj | 0.12 | 0/2124 | 0.32 | 0/2877 |
| 4 | Dk | 0.12 | 0/2129 | 0.30 | 0/2882 |
| 4 | Dl | 0.12 | 0/2124 | 0.31 | 0/2877 |
| 4 | Dm | 0.12 | 0/2129 | 0.30 | 0/2882 |
| 4 | Dn | 0.12 | 0/2124 | 0.32 | 0/2877 |
| 4 | Do | 0.12 | 0/2129 | 0.29 | 0/2882 |
| 4 | Dp | 0.12 | 0/2124 | 0.31 | 0/2877 |
| 4 | Dq | 0.12 | 0/2129 | 0.29 | 0/2882 |
| 4 | Dr | 0.12 | 0/2124 | 0.32 | 0/2877 |
| 4 | Ds | 0.12 | 0/2129 | 0.29 | 0/2882 |
| 4 | Dt | 0.12 | 0/2124 | 0.32 | 0/2877 |
| 4 | Du | 0.12 | 0/2129 | 0.30 | 0/2882 |
| 4 | Dv | 0.12 | 0/2124 | 0.32 | 0/2877 |
| 4 | Dw | 0.12 | 0/2129 | 0.30 | 0/2882 |
| 4 | Dx | 0.12 | 0/2124 | 0.32 | 0/2877 |
| 4 | Dy | 0.12 | 0/2129 | 0.30 | 0/2882 |
| 4 | Dz | 0.12 | 0/2124 | 0.30 | 0/2877 |
| 5 | Ea | 0.11 | 0/1494 | 0.27 | 0/2027 |
| 5 | Eb | 0.11 | 0/1523 | 0.28 | 0/2062 |
| 5 | Ec | 0.11 | 0/1494 | 0.27 | 0/2027 |
| 5 | Ed | 0.11 | 0/1523 | 0.29 | 0/2062 |
| 5 | Ee | 0.10 | 0/1494 | 0.27 | 0/2027 |
| 5 | Ef | 0.11 | 0/1523 | 0.29 | 0/2062 |
| 5 | Eg | 0.11 | 0/1494 | 0.27 | 0/2027 |
| 5 | Eh | 0.11 | 0/1523 | 0.28 | 0/2062 |
| 5 | Ei | 0.11 | 0/1494 | 0.27 | 0/2027 |
| 5 | Ej | 0.11 | 0/1523 | 0.26 | 0/2062 |
| 5 | Ek | 0.11 | 0/1494 | 0.28 | 0/2027 |
| 5 | El | 0.11 | 0/1523 | 0.26 | 0/2062 |
| 5 | Em | 0.11 | 0/1494 | 0.28 | 0/2027 |
| 5 | En | 0.17 | 0/1523 | 0.29 | 0/2062 |
| 5 | Eo | 0.11 | 0/1494 | 0.27 | 0/2027 |
| 5 | Ep | 0.12 | 0/1523 | 0.26 | 0/2062 |

| Mol | Chain | Bond lengths | | Bond angles | |
|---|---|---|---|---|---|
| | | RMSZ | #\|Z\| >5 | RMSZ | #\|Z\| >5 |
| 5 | Eq | 0.10 | 0/1494 | 0.27 | 0/2027 |
| 5 | Er | 0.11 | 0/1523 | 0.28 | 0/2062 |
| 5 | Es | 0.11 | 0/1494 | 0.27 | 0/2027 |
| 5 | Et | 0.11 | 0/1523 | 0.26 | 0/2062 |
| 5 | Eu | 0.11 | 0/1494 | 0.28 | 0/2027 |
| 5 | Ev | 0.11 | 0/1523 | 0.28 | 0/2062 |
| 5 | Ew | 0.11 | 0/1494 | 0.28 | 0/2027 |
| 5 | Ex | 0.11 | 0/1523 | 0.28 | 0/2062 |
| 5 | Ey | 0.11 | 0/1494 | 0.28 | 0/2027 |
| 5 | Ez | 0.11 | 0/1523 | 0.28 | 0/2062 |
| 6 | Fa | 0.15 | 0/106 | 0.35 | 0/139 |
| 6 | Fb | 0.13 | 0/106 | 0.33 | 0/139 |
| 6 | Fc | 0.13 | 0/106 | 0.32 | 0/139 |
| 6 | Fd | 0.16 | 0/106 | 0.33 | 0/139 |
| 6 | Fe | 0.14 | 0/106 | 0.37 | 0/139 |
| 6 | Ff | 0.14 | 0/106 | 0.36 | 0/139 |
| 6 | Fg | 0.13 | 0/106 | 0.33 | 0/139 |
| 6 | Fh | 0.14 | 0/106 | 0.34 | 0/139 |
| 6 | Fi | 0.13 | 0/106 | 0.39 | 0/139 |
| 6 | Fj | 0.13 | 0/106 | 0.35 | 0/139 |
| 6 | Fk | 0.15 | 0/106 | 0.35 | 0/139 |
| 6 | Fl | 0.14 | 0/106 | 0.36 | 0/139 |
| 6 | Fm | 0.15 | 0/106 | 0.34 | 0/139 |
| 6 | Fn | 0.16 | 0/106 | 0.33 | 0/139 |
| 6 | Fo | 0.14 | 0/106 | 0.36 | 0/139 |
| 6 | Fp | 0.14 | 0/106 | 0.36 | 0/139 |
| 6 | Fq | 0.16 | 0/106 | 0.33 | 0/139 |
| 6 | Fr | 0.17 | 0/106 | 0.36 | 0/139 |
| 6 | Fs | 0.13 | 0/106 | 0.37 | 0/139 |
| 6 | Ft | 0.14 | 0/106 | 0.36 | 0/139 |
| 6 | Fu | 0.15 | 0/106 | 0.35 | 0/139 |
| 6 | Fv | 0.18 | 0/106 | 0.35 | 0/139 |
| 6 | Fw | 0.14 | 0/106 | 0.35 | 0/139 |
| 6 | Fx | 0.15 | 0/106 | 0.38 | 0/139 |
| 6 | Fy | 0.13 | 0/106 | 0.32 | 0/139 |
| 6 | Fz | 0.18 | 0/106 | 0.47 | 0/139 |
| 6 | Ga | 0.14 | 0/106 | 0.37 | 0/139 |
| 6 | Gb | 0.14 | 0/106 | 0.40 | 0/139 |
| 6 | Gc | 0.15 | 0/106 | 0.38 | 0/139 |
| 6 | Gd | 0.12 | 0/106 | 0.36 | 0/139 |
| 6 | Ge | 0.19 | 0/106 | 0.45 | 0/139 |
| 6 | Gf | 0.14 | 0/106 | 0.37 | 0/139 |
| 6 | Gg | 0.14 | 0/106 | 0.38 | 0/139 |

| Mol | Chain | Bond lengths | | Bond angles | |
|---|---|---|---|---|---|
| | | RMSZ | #\|Z\| >5 | RMSZ | #\|Z\| >5 |
| 6 | Gh | 0.14 | 0/106 | 0.42 | 0/139 |
| 6 | Gi | 0.14 | 0/106 | 0.40 | 0/139 |
| 6 | Gj | 0.12 | 0/106 | 0.37 | 0/139 |
| 6 | Gk | 0.14 | 0/106 | 0.39 | 0/139 |
| 6 | Gl | 0.14 | 0/106 | 0.36 | 0/139 |
| 6 | Gm | 0.14 | 0/106 | 0.35 | 0/139 |
| 6 | Gn | 0.14 | 0/106 | 0.47 | 0/139 |
| 6 | Go | 0.12 | 0/106 | 0.36 | 0/139 |
| 6 | Gp | 0.15 | 0/106 | 0.36 | 0/139 |
| 6 | Gq | 0.11 | 0/106 | 0.38 | 0/139 |
| 6 | Gr | 0.15 | 0/106 | 0.40 | 0/139 |
| 6 | Gs | 0.12 | 0/106 | 0.42 | 0/139 |
| 6 | Gt | 0.15 | 0/106 | 0.41 | 0/139 |
| 6 | Gu | 0.13 | 0/106 | 0.39 | 0/139 |
| 6 | Gv | 0.13 | 0/106 | 0.40 | 0/139 |
| 6 | Gw | 0.18 | 0/106 | 0.53 | 0/139 |
| 6 | Gx | 0.16 | 0/106 | 0.39 | 0/139 |
| 6 | Gy | 0.17 | 0/106 | 0.47 | 0/139 |
| 6 | Gz | 0.15 | 0/106 | 0.36 | 0/139 |
| 7 | Ha | 0.10 | 0/836 | 0.25 | 0/1119 |
| 7 | Hc | 0.10 | 0/836 | 0.25 | 0/1119 |
| 7 | He | 0.10 | 0/836 | 0.27 | 0/1119 |
| 7 | Hg | 0.10 | 0/836 | 0.28 | 0/1119 |
| 7 | Hi | 0.10 | 0/836 | 0.25 | 0/1119 |
| 7 | Hk | 0.09 | 0/836 | 0.28 | 0/1119 |
| 7 | Hm | 0.10 | 0/836 | 0.25 | 0/1119 |
| 7 | Ho | 0.09 | 0/836 | 0.26 | 0/1119 |
| 7 | Hq | 0.10 | 0/836 | 0.25 | 0/1119 |
| 7 | Hs | 0.10 | 0/836 | 0.26 | 0/1119 |
| 7 | Hu | 0.10 | 0/836 | 0.26 | 0/1119 |
| 7 | Hw | 0.09 | 0/836 | 0.24 | 0/1119 |
| 7 | Hy | 0.11 | 0/836 | 0.25 | 0/1119 |
| 7 | Ia | 0.11 | 0/836 | 0.27 | 0/1119 |
| 7 | Ic | 0.10 | 0/836 | 0.26 | 0/1119 |
| 7 | Ie | 0.10 | 0/836 | 0.27 | 0/1119 |
| 7 | Ig | 0.10 | 0/836 | 0.25 | 0/1119 |
| 7 | Ii | 0.11 | 0/836 | 0.27 | 0/1119 |
| 7 | Ik | 0.10 | 0/836 | 0.27 | 0/1119 |
| 7 | Im | 0.10 | 0/836 | 0.25 | 0/1119 |
| 7 | Io | 0.11 | 0/836 | 0.26 | 0/1119 |
| 7 | Iq | 0.10 | 0/836 | 0.26 | 0/1119 |
| 7 | Is | 0.11 | 0/836 | 0.25 | 0/1119 |
| 7 | Iu | 0.10 | 0/836 | 0.25 | 0/1119 |

| Mol | Chain | Bond lengths | | Bond angles | |
|---|---|---|---|---|---|
| | | RMSZ | #\|Z\| >5 | RMSZ | #\|Z\| >5 |
| 7 | Iw | 0.10 | 0/836 | 0.27 | 0/1119 |
| 7 | Iy | 0.10 | 0/836 | 0.27 | 0/1119 |
| 7 | Ja | 0.10 | 0/836 | 0.26 | 0/1119 |
| 7 | Jc | 0.10 | 0/836 | 0.27 | 0/1119 |
| 7 | Je | 0.10 | 0/836 | 0.27 | 0/1119 |
| 7 | Jg | 0.09 | 0/836 | 0.25 | 0/1119 |
| 7 | Ji | 0.10 | 0/836 | 0.25 | 0/1119 |
| 7 | Jk | 0.10 | 0/836 | 0.26 | 0/1119 |
| 7 | Jm | 0.11 | 0/836 | 0.27 | 0/1119 |
| 7 | Jo | 0.09 | 0/836 | 0.26 | 0/1119 |
| 7 | Jq | 0.10 | 0/836 | 0.28 | 0/1119 |
| 7 | Js | 0.10 | 0/836 | 0.25 | 0/1119 |
| 7 | Ju | 0.09 | 0/836 | 0.26 | 0/1119 |
| 7 | Jw | 0.10 | 0/836 | 0.26 | 0/1119 |
| 7 | Jy | 0.10 | 0/836 | 0.27 | 0/1119 |
| 7 | Ka | 0.09 | 0/836 | 0.25 | 0/1119 |
| 7 | Kc | 0.11 | 0/836 | 0.26 | 0/1119 |
| 7 | Ke | 0.10 | 0/836 | 0.27 | 0/1119 |
| 7 | Kg | 0.09 | 0/836 | 0.25 | 0/1119 |
| 7 | Ki | 0.11 | 0/836 | 0.26 | 0/1119 |
| 7 | Kk | 0.10 | 0/836 | 0.26 | 0/1119 |
| 7 | Km | 0.11 | 0/836 | 0.28 | 0/1119 |
| 7 | Ko | 0.10 | 0/836 | 0.26 | 0/1119 |
| 7 | Kq | 0.09 | 0/836 | 0.24 | 0/1119 |
| 7 | Ks | 0.10 | 0/836 | 0.25 | 0/1119 |
| 7 | Ku | 0.11 | 0/836 | 0.27 | 0/1119 |
| 7 | Kw | 0.10 | 0/836 | 0.27 | 0/1119 |
| 7 | Ky | 0.10 | 0/836 | 0.25 | 0/1119 |
| 7 | La | 0.10 | 0/836 | 0.27 | 0/1119 |
| 7 | Lc | 0.09 | 0/836 | 0.25 | 0/1119 |
| 7 | Le | 0.10 | 0/836 | 0.25 | 0/1119 |
| 7 | Lg | 0.10 | 0/836 | 0.26 | 0/1119 |
| 7 | Li | 0.10 | 0/836 | 0.26 | 0/1119 |
| 7 | Lk | 0.10 | 0/836 | 0.26 | 0/1119 |
| 8 | Hb | 0.11 | 0/1508 | 0.28 | 0/2045 |
| 8 | Hd | 0.10 | 0/1508 | 0.28 | 0/2045 |
| 8 | Hf | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Hh | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Hj | 0.10 | 0/1508 | 0.26 | 0/2045 |
| 8 | Hl | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Hn | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Hp | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Hr | 0.10 | 0/1508 | 0.28 | 0/2045 |

| Mol | Chain | Bond lengths | | Bond angles | |
|---|---|---|---|---|---|
| | | RMSZ | #\|Z\| >5 | RMSZ | #\|Z\| >5 |
| 8 | Ht | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Hv | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Hx | 0.10 | 0/1508 | 0.26 | 0/2045 |
| 8 | Hz | 0.11 | 0/1508 | 0.29 | 0/2045 |
| 8 | Ib | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Id | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | If | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Ih | 0.11 | 0/1508 | 0.27 | 0/2045 |
| 8 | Ij | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Il | 0.10 | 0/1508 | 0.28 | 0/2045 |
| 8 | In | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Ip | 0.11 | 0/1508 | 0.27 | 0/2045 |
| 8 | Ir | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | It | 0.10 | 0/1508 | 0.28 | 0/2045 |
| 8 | Iv | 0.10 | 0/1508 | 0.28 | 0/2045 |
| 8 | Ix | 0.10 | 0/1508 | 0.28 | 0/2045 |
| 8 | Iz | 0.10 | 0/1508 | 0.28 | 0/2045 |
| 8 | Jb | 0.10 | 0/1508 | 0.26 | 0/2045 |
| 8 | Jd | 0.10 | 0/1508 | 0.28 | 0/2045 |
| 8 | Jf | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Jh | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Jj | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Jl | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Jn | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Jp | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Jr | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Jt | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Jv | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Jx | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Jz | 0.10 | 0/1508 | 0.29 | 0/2045 |
| 8 | Kb | 0.10 | 0/1508 | 0.26 | 0/2045 |
| 8 | Kd | 0.10 | 0/1508 | 0.26 | 0/2045 |
| 8 | Kf | 0.10 | 0/1508 | 0.28 | 0/2045 |
| 8 | Kh | 0.10 | 0/1508 | 0.28 | 0/2045 |
| 8 | Kj | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Kl | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Kn | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Kp | 0.11 | 0/1508 | 0.28 | 0/2045 |
| 8 | Kr | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Kt | 0.10 | 0/1508 | 0.28 | 0/2045 |
| 8 | Kv | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Kx | 0.10 | 0/1508 | 0.28 | 0/2045 |
| 8 | Kz | 0.11 | 0/1508 | 0.27 | 0/2045 |

| Mol | Chain | Bond lengths | | Bond angles | |
|---|---|---|---|---|---|
| | | RMSZ | #\|Z\| >5 | RMSZ | #\|Z\| >5 |
| 8 | Lb | 0.10 | 0/1508 | 0.28 | 0/2045 |
| 8 | Ld | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Lf | 0.10 | 0/1508 | 0.28 | 0/2045 |
| 8 | Lh | 0.10 | 0/1508 | 0.27 | 0/2045 |
| 8 | Lj | 0.10 | 0/1508 | 0.28 | 0/2045 |
| 8 | Ll | 0.10 | 0/1508 | 0.27 | 0/2045 |
| All | All | 0.11 | 0/419274 | 0.28 | 4/567168 (0.0%) |

There are no bond length outliers.

All (4) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 3 | Cn | 114 | ALA | CB-CA-C | -5.13 | 110.25 | 117.23 |
| 2 | Bk | 297 | GLN | CB-CA-C | -5.07 | 110.34 | 117.23 |
| 3 | Cl | 114 | ALA | CB-CA-C | -5.05 | 110.36 | 117.23 |
| 3 | Ck | 114 | ALA | CB-CA-C | -5.03 | 110.39 | 117.23 |

There are no chirality outliers.

There are no planarity outliers.

## 5.2 Too-close contacts (i)

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

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|---|---|---|---|---|---|---|
| 1 | Aa | 1674 | 0 | 1609 | 22 | 0 |
| 1 | Ab | 1674 | 0 | 1609 | 24 | 0 |
| 1 | Ac | 1674 | 0 | 1609 | 21 | 0 |
| 1 | Ad | 1674 | 0 | 1609 | 24 | 0 |
| 1 | Ae | 1674 | 0 | 1609 | 29 | 0 |
| 1 | Af | 1674 | 0 | 1609 | 30 | 0 |
| 1 | Ag | 1674 | 0 | 1609 | 34 | 0 |
| 1 | Ah | 1674 | 0 | 1609 | 37 | 0 |
| 1 | Ai | 1674 | 0 | 1609 | 30 | 0 |
| 1 | Aj | 1674 | 0 | 1609 | 29 | 0 |
| 1 | Ak | 1674 | 0 | 1609 | 27 | 0 |
| 1 | Al | 1674 | 0 | 1609 | 26 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|---|---|---|---|---|---|---|
| 1 | Am | 1674 | 0 | 1609 | 30 | 0 |
| 1 | An | 1674 | 0 | 1609 | 28 | 0 |
| 1 | Ao | 1674 | 0 | 1609 | 22 | 0 |
| 1 | Ap | 1674 | 0 | 1609 | 24 | 0 |
| 1 | Aq | 1674 | 0 | 1609 | 24 | 0 |
| 1 | Ar | 1674 | 0 | 1609 | 31 | 0 |
| 1 | As | 1674 | 0 | 1609 | 29 | 0 |
| 1 | At | 1674 | 0 | 1609 | 33 | 0 |
| 1 | Au | 1674 | 0 | 1609 | 34 | 0 |
| 1 | Av | 1674 | 0 | 1609 | 31 | 0 |
| 1 | Aw | 1674 | 0 | 1609 | 26 | 0 |
| 1 | Ax | 1674 | 0 | 1609 | 31 | 0 |
| 1 | Ay | 1674 | 0 | 1609 | 30 | 0 |
| 1 | Az | 1674 | 0 | 1609 | 33 | 0 |
| 2 | Ba | 2501 | 0 | 2549 | 35 | 0 |
| 2 | Bb | 2501 | 0 | 2549 | 35 | 0 |
| 2 | Bc | 2501 | 0 | 2549 | 38 | 0 |
| 2 | Bd | 2501 | 0 | 2549 | 32 | 0 |
| 2 | Be | 2501 | 0 | 2549 | 39 | 0 |
| 2 | Bf | 2501 | 0 | 2549 | 31 | 0 |
| 2 | Bg | 2501 | 0 | 2549 | 33 | 0 |
| 2 | Bh | 2501 | 0 | 2549 | 39 | 0 |
| 2 | Bi | 2501 | 0 | 2549 | 34 | 0 |
| 2 | Bj | 2501 | 0 | 2549 | 37 | 0 |
| 2 | Bk | 2501 | 0 | 2549 | 37 | 0 |
| 2 | Bl | 2501 | 0 | 2549 | 42 | 0 |
| 2 | Bm | 2501 | 0 | 2549 | 45 | 0 |
| 2 | Bn | 2501 | 0 | 2549 | 38 | 0 |
| 2 | Bo | 2501 | 0 | 2549 | 36 | 0 |
| 2 | Bp | 2501 | 0 | 2549 | 34 | 0 |
| 2 | Bq | 2501 | 0 | 2549 | 37 | 0 |
| 2 | Br | 2501 | 0 | 2549 | 32 | 0 |
| 2 | Bs | 2501 | 0 | 2549 | 39 | 0 |
| 2 | Bt | 2501 | 0 | 2549 | 30 | 0 |
| 2 | Bu | 2501 | 0 | 2549 | 42 | 0 |
| 2 | Bv | 2501 | 0 | 2549 | 40 | 0 |
| 2 | Bw | 2501 | 0 | 2549 | 38 | 0 |
| 2 | Bx | 2501 | 0 | 2549 | 37 | 0 |
| 2 | By | 2501 | 0 | 2549 | 40 | 0 |
| 2 | Bz | 2501 | 0 | 2549 | 29 | 0 |
| 3 | Ca | 2770 | 0 | 2749 | 21 | 0 |
| 3 | Cb | 2770 | 0 | 2749 | 36 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|---|---|---|---|---|---|---|
| 3 | Cc | 2770 | 0 | 2749 | 22 | 0 |
| 3 | Cd | 2770 | 0 | 2749 | 22 | 0 |
| 3 | Ce | 2770 | 0 | 2749 | 24 | 0 |
| 3 | Cf | 2770 | 0 | 2749 | 24 | 0 |
| 3 | Cg | 2770 | 0 | 2749 | 26 | 0 |
| 3 | Ch | 2770 | 0 | 2749 | 27 | 0 |
| 3 | Ci | 2770 | 0 | 2749 | 16 | 0 |
| 3 | Cj | 2770 | 0 | 2749 | 22 | 0 |
| 3 | Ck | 2770 | 0 | 2749 | 22 | 0 |
| 3 | Cl | 2770 | 0 | 2749 | 18 | 0 |
| 3 | Cm | 2770 | 0 | 2749 | 28 | 0 |
| 3 | Cn | 2770 | 0 | 2749 | 21 | 0 |
| 3 | Co | 2770 | 0 | 2749 | 25 | 0 |
| 3 | Cp | 2770 | 0 | 2749 | 21 | 0 |
| 3 | Cq | 2770 | 0 | 2749 | 27 | 0 |
| 3 | Cr | 2770 | 0 | 2749 | 23 | 0 |
| 3 | Cs | 2770 | 0 | 2749 | 23 | 0 |
| 3 | Ct | 2770 | 0 | 2749 | 27 | 0 |
| 3 | Cu | 2770 | 0 | 2749 | 22 | 0 |
| 3 | Cv | 2770 | 0 | 2749 | 23 | 0 |
| 3 | Cw | 2770 | 0 | 2749 | 22 | 0 |
| 3 | Cx | 2770 | 0 | 2749 | 14 | 0 |
| 3 | Cy | 2770 | 0 | 2749 | 25 | 0 |
| 3 | Cz | 2770 | 0 | 2749 | 23 | 0 |
| 4 | Da | 2085 | 0 | 2022 | 18 | 0 |
| 4 | Db | 2080 | 0 | 2003 | 15 | 0 |
| 4 | Dc | 2085 | 0 | 2022 | 19 | 0 |
| 4 | Dd | 2080 | 0 | 2003 | 16 | 0 |
| 4 | De | 2085 | 0 | 2022 | 19 | 0 |
| 4 | Df | 2080 | 0 | 2003 | 22 | 0 |
| 4 | Dg | 2085 | 0 | 2022 | 26 | 0 |
| 4 | Dh | 2080 | 0 | 2003 | 16 | 0 |
| 4 | Di | 2085 | 0 | 2022 | 27 | 0 |
| 4 | Dj | 2080 | 0 | 2003 | 24 | 0 |
| 4 | Dk | 2085 | 0 | 2022 | 21 | 0 |
| 4 | Dl | 2080 | 0 | 2003 | 15 | 0 |
| 4 | Dm | 2085 | 0 | 2022 | 19 | 0 |
| 4 | Dn | 2080 | 0 | 2003 | 16 | 0 |
| 4 | Do | 2085 | 0 | 2022 | 18 | 0 |
| 4 | Dp | 2080 | 0 | 2003 | 13 | 0 |
| 4 | Dq | 2085 | 0 | 2022 | 17 | 0 |
| 4 | Dr | 2080 | 0 | 2003 | 18 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|---|---|---|---|---|---|---|
| 4 | Ds | 2085 | 0 | 2022 | 20 | 0 |
| 4 | Dt | 2080 | 0 | 2003 | 19 | 0 |
| 4 | Du | 2085 | 0 | 2022 | 26 | 0 |
| 4 | Dv | 2080 | 0 | 2003 | 19 | 0 |
| 4 | Dw | 2085 | 0 | 2022 | 19 | 0 |
| 4 | Dx | 2080 | 0 | 2003 | 17 | 0 |
| 4 | Dy | 2085 | 0 | 2022 | 22 | 0 |
| 4 | Dz | 2080 | 0 | 2003 | 15 | 0 |
| 5 | Ea | 1466 | 0 | 1434 | 12 | 0 |
| 5 | Eb | 1494 | 0 | 1478 | 6 | 0 |
| 5 | Ec | 1466 | 0 | 1434 | 12 | 0 |
| 5 | Ed | 1494 | 0 | 1478 | 6 | 0 |
| 5 | Ee | 1466 | 0 | 1434 | 13 | 0 |
| 5 | Ef | 1494 | 0 | 1478 | 7 | 0 |
| 5 | Eg | 1466 | 0 | 1434 | 13 | 0 |
| 5 | Eh | 1494 | 0 | 1478 | 8 | 0 |
| 5 | Ei | 1466 | 0 | 1434 | 10 | 0 |
| 5 | Ej | 1494 | 0 | 1478 | 6 | 0 |
| 5 | Ek | 1466 | 0 | 1434 | 10 | 0 |
| 5 | El | 1494 | 0 | 1478 | 8 | 0 |
| 5 | Em | 1466 | 0 | 1434 | 12 | 0 |
| 5 | En | 1494 | 0 | 1478 | 7 | 0 |
| 5 | Eo | 1466 | 0 | 1434 | 14 | 0 |
| 5 | Ep | 1494 | 0 | 1478 | 7 | 0 |
| 5 | Eq | 1466 | 0 | 1434 | 13 | 0 |
| 5 | Er | 1494 | 0 | 1478 | 13 | 0 |
| 5 | Es | 1466 | 0 | 1434 | 13 | 0 |
| 5 | Et | 1494 | 0 | 1478 | 7 | 0 |
| 5 | Eu | 1466 | 0 | 1434 | 12 | 0 |
| 5 | Ev | 1494 | 0 | 1478 | 8 | 0 |
| 5 | Ew | 1466 | 0 | 1434 | 11 | 0 |
| 5 | Ex | 1494 | 0 | 1478 | 6 | 0 |
| 5 | Ey | 1466 | 0 | 1434 | 12 | 0 |
| 5 | Ez | 1494 | 0 | 1478 | 9 | 0 |
| 6 | Fa | 105 | 0 | 107 | 1 | 0 |
| 6 | Fb | 105 | 0 | 107 | 0 | 0 |
| 6 | Fc | 105 | 0 | 107 | 1 | 0 |
| 6 | Fd | 105 | 0 | 107 | 0 | 0 |
| 6 | Fe | 105 | 0 | 107 | 0 | 0 |
| 6 | Ff | 105 | 0 | 107 | 2 | 0 |
| 6 | Fg | 105 | 0 | 107 | 1 | 0 |
| 6 | Fh | 105 | 0 | 107 | 1 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|---|---|---|---|---|---|---|
| 6 | Fi | 105 | 0 | 107 | 0 | 0 |
| 6 | Fj | 105 | 0 | 107 | 0 | 0 |
| 6 | Fk | 105 | 0 | 107 | 0 | 0 |
| 6 | Fl | 105 | 0 | 107 | 1 | 0 |
| 6 | Fm | 105 | 0 | 107 | 0 | 0 |
| 6 | Fn | 105 | 0 | 107 | 1 | 0 |
| 6 | Fo | 105 | 0 | 107 | 1 | 0 |
| 6 | Fp | 105 | 0 | 107 | 0 | 0 |
| 6 | Fq | 105 | 0 | 107 | 0 | 0 |
| 6 | Fr | 105 | 0 | 107 | 1 | 0 |
| 6 | Fs | 105 | 0 | 107 | 1 | 0 |
| 6 | Ft | 105 | 0 | 107 | 2 | 0 |
| 6 | Fu | 105 | 0 | 107 | 4 | 0 |
| 6 | Fv | 105 | 0 | 107 | 1 | 0 |
| 6 | Fw | 105 | 0 | 107 | 1 | 0 |
| 6 | Fx | 105 | 0 | 107 | 0 | 0 |
| 6 | Fy | 105 | 0 | 107 | 0 | 0 |
| 6 | Fz | 105 | 0 | 107 | 1 | 0 |
| 6 | Ga | 105 | 0 | 107 | 1 | 0 |
| 6 | Gb | 105 | 0 | 107 | 2 | 0 |
| 6 | Gc | 105 | 0 | 107 | 2 | 0 |
| 6 | Gd | 105 | 0 | 107 | 2 | 0 |
| 6 | Ge | 105 | 0 | 107 | 0 | 0 |
| 6 | Gf | 105 | 0 | 107 | 0 | 0 |
| 6 | Gg | 105 | 0 | 107 | 0 | 0 |
| 6 | Gh | 105 | 0 | 107 | 0 | 0 |
| 6 | Gi | 105 | 0 | 107 | 0 | 0 |
| 6 | Gj | 105 | 0 | 107 | 1 | 0 |
| 6 | Gk | 105 | 0 | 107 | 1 | 0 |
| 6 | Gl | 105 | 0 | 107 | 1 | 0 |
| 6 | Gm | 105 | 0 | 107 | 0 | 0 |
| 6 | Gn | 105 | 0 | 107 | 0 | 0 |
| 6 | Go | 105 | 0 | 107 | 2 | 0 |
| 6 | Gp | 105 | 0 | 107 | 1 | 0 |
| 6 | Gq | 105 | 0 | 107 | 4 | 0 |
| 6 | Gr | 105 | 0 | 107 | 0 | 0 |
| 6 | Gs | 105 | 0 | 107 | 0 | 0 |
| 6 | Gt | 105 | 0 | 107 | 0 | 0 |
| 6 | Gu | 105 | 0 | 107 | 0 | 0 |
| 6 | Gv | 105 | 0 | 107 | 0 | 0 |
| 6 | Gw | 105 | 0 | 107 | 2 | 0 |
| 6 | Gx | 105 | 0 | 107 | 0 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|---|---|---|---|---|---|---|
| 6 | Gy | 105 | 0 | 107 | 0 | 0 |
| 6 | Gz | 105 | 0 | 107 | 1 | 0 |
| 7 | Ha | 828 | 0 | 820 | 12 | 0 |
| 7 | Hc | 828 | 0 | 820 | 9 | 0 |
| 7 | He | 828 | 0 | 820 | 7 | 0 |
| 7 | Hg | 828 | 0 | 820 | 7 | 0 |
| 7 | Hi | 828 | 0 | 820 | 4 | 0 |
| 7 | Hk | 828 | 0 | 820 | 5 | 0 |
| 7 | Hm | 828 | 0 | 820 | 7 | 0 |
| 7 | Ho | 828 | 0 | 820 | 6 | 0 |
| 7 | Hq | 828 | 0 | 820 | 10 | 0 |
| 7 | Hs | 828 | 0 | 820 | 9 | 0 |
| 7 | Hu | 828 | 0 | 820 | 8 | 0 |
| 7 | Hw | 828 | 0 | 820 | 8 | 0 |
| 7 | Hy | 828 | 0 | 820 | 5 | 0 |
| 7 | Ia | 828 | 0 | 820 | 9 | 0 |
| 7 | Ic | 828 | 0 | 820 | 7 | 0 |
| 7 | Ie | 828 | 0 | 820 | 4 | 0 |
| 7 | Ig | 828 | 0 | 820 | 10 | 0 |
| 7 | Ii | 828 | 0 | 820 | 8 | 0 |
| 7 | Ik | 828 | 0 | 820 | 7 | 0 |
| 7 | Im | 828 | 0 | 820 | 11 | 0 |
| 7 | Io | 828 | 0 | 820 | 10 | 0 |
| 7 | Iq | 828 | 0 | 820 | 8 | 0 |
| 7 | Is | 828 | 0 | 820 | 7 | 0 |
| 7 | Iu | 828 | 0 | 820 | 7 | 0 |
| 7 | Iw | 828 | 0 | 820 | 8 | 0 |
| 7 | Iy | 828 | 0 | 820 | 5 | 0 |
| 7 | Ja | 828 | 0 | 820 | 9 | 0 |
| 7 | Jc | 828 | 0 | 820 | 11 | 0 |
| 7 | Je | 828 | 0 | 820 | 11 | 0 |
| 7 | Jg | 828 | 0 | 820 | 11 | 0 |
| 7 | Ji | 828 | 0 | 820 | 12 | 0 |
| 7 | Jk | 828 | 0 | 820 | 10 | 0 |
| 7 | Jm | 828 | 0 | 820 | 8 | 0 |
| 7 | Jo | 828 | 0 | 820 | 9 | 0 |
| 7 | Jq | 828 | 0 | 820 | 10 | 0 |
| 7 | Js | 828 | 0 | 820 | 10 | 0 |
| 7 | Ju | 828 | 0 | 820 | 10 | 0 |
| 7 | Jw | 828 | 0 | 820 | 10 | 0 |
| 7 | Jy | 828 | 0 | 820 | 7 | 0 |
| 7 | Ka | 828 | 0 | 820 | 7 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|---|---|---|---|---|---|---|
| 7 | Kc | 828 | 0 | 820 | 7 | 0 |
| 7 | Ke | 828 | 0 | 820 | 7 | 0 |
| 7 | Kg | 828 | 0 | 820 | 7 | 0 |
| 7 | Ki | 828 | 0 | 820 | 5 | 0 |
| 7 | Kk | 828 | 0 | 820 | 5 | 0 |
| 7 | Km | 828 | 0 | 820 | 7 | 0 |
| 7 | Ko | 828 | 0 | 820 | 8 | 0 |
| 7 | Kq | 828 | 0 | 820 | 10 | 0 |
| 7 | Ks | 828 | 0 | 820 | 10 | 0 |
| 7 | Ku | 828 | 0 | 820 | 8 | 0 |
| 7 | Kw | 828 | 0 | 820 | 7 | 0 |
| 7 | Ky | 828 | 0 | 820 | 8 | 0 |
| 7 | La | 828 | 0 | 820 | 9 | 0 |
| 7 | Lc | 828 | 0 | 820 | 9 | 0 |
| 7 | Le | 828 | 0 | 820 | 10 | 0 |
| 7 | Lg | 828 | 0 | 820 | 9 | 0 |
| 7 | Li | 828 | 0 | 820 | 12 | 0 |
| 7 | Lk | 828 | 0 | 820 | 9 | 0 |
| 8 | Hb | 1482 | 0 | 1448 | 18 | 0 |
| 8 | Hd | 1482 | 0 | 1448 | 21 | 0 |
| 8 | Hf | 1482 | 0 | 1448 | 14 | 0 |
| 8 | Hh | 1482 | 0 | 1448 | 17 | 0 |
| 8 | Hj | 1482 | 0 | 1448 | 17 | 0 |
| 8 | Hl | 1482 | 0 | 1448 | 18 | 0 |
| 8 | Hn | 1482 | 0 | 1448 | 16 | 0 |
| 8 | Hp | 1482 | 0 | 1448 | 16 | 0 |
| 8 | Hr | 1482 | 0 | 1448 | 19 | 0 |
| 8 | Ht | 1482 | 0 | 1448 | 21 | 0 |
| 8 | Hv | 1482 | 0 | 1448 | 18 | 0 |
| 8 | Hx | 1482 | 0 | 1448 | 19 | 0 |
| 8 | Hz | 1482 | 0 | 1448 | 17 | 0 |
| 8 | Ib | 1482 | 0 | 1448 | 19 | 0 |
| 8 | Id | 1482 | 0 | 1448 | 18 | 0 |
| 8 | If | 1482 | 0 | 1448 | 16 | 0 |
| 8 | Ih | 1482 | 0 | 1448 | 18 | 0 |
| 8 | Ij | 1482 | 0 | 1448 | 18 | 0 |
| 8 | Il | 1482 | 0 | 1448 | 17 | 0 |
| 8 | In | 1482 | 0 | 1448 | 17 | 0 |
| 8 | Ip | 1482 | 0 | 1448 | 16 | 0 |
| 8 | Ir | 1482 | 0 | 1448 | 17 | 0 |
| 8 | It | 1482 | 0 | 1448 | 14 | 0 |
| 8 | Iv | 1482 | 0 | 1448 | 19 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|---|---|---|---|---|---|---|
| 8 | Ix | 1482 | 0 | 1448 | 21 | 0 |
| 8 | Iz | 1482 | 0 | 1448 | 19 | 0 |
| 8 | Jb | 1482 | 0 | 1448 | 17 | 0 |
| 8 | Jd | 1482 | 0 | 1448 | 20 | 0 |
| 8 | Jf | 1482 | 0 | 1448 | 17 | 0 |
| 8 | Jh | 1482 | 0 | 1448 | 19 | 0 |
| 8 | Jj | 1482 | 0 | 1448 | 17 | 0 |
| 8 | Jl | 1482 | 0 | 1448 | 15 | 0 |
| 8 | Jn | 1482 | 0 | 1448 | 20 | 0 |
| 8 | Jp | 1482 | 0 | 1448 | 15 | 0 |
| 8 | Jr | 1482 | 0 | 1448 | 17 | 0 |
| 8 | Jt | 1482 | 0 | 1448 | 18 | 0 |
| 8 | Jv | 1482 | 0 | 1448 | 17 | 0 |
| 8 | Jx | 1482 | 0 | 1448 | 16 | 0 |
| 8 | Jz | 1482 | 0 | 1448 | 17 | 0 |
| 8 | Kb | 1482 | 0 | 1448 | 18 | 0 |
| 8 | Kd | 1482 | 0 | 1448 | 17 | 0 |
| 8 | Kf | 1482 | 0 | 1448 | 16 | 0 |
| 8 | Kh | 1482 | 0 | 1448 | 19 | 0 |
| 8 | Kj | 1482 | 0 | 1448 | 18 | 0 |
| 8 | Kl | 1482 | 0 | 1448 | 17 | 0 |
| 8 | Kn | 1482 | 0 | 1448 | 13 | 0 |
| 8 | Kp | 1482 | 0 | 1448 | 18 | 0 |
| 8 | Kr | 1482 | 0 | 1448 | 21 | 0 |
| 8 | Kt | 1482 | 0 | 1448 | 20 | 0 |
| 8 | Kv | 1482 | 0 | 1448 | 16 | 0 |
| 8 | Kx | 1482 | 0 | 1448 | 17 | 0 |
| 8 | Kz | 1482 | 0 | 1448 | 18 | 0 |
| 8 | Lb | 1482 | 0 | 1448 | 19 | 0 |
| 8 | Ld | 1482 | 0 | 1448 | 22 | 0 |
| 8 | Lf | 1482 | 0 | 1448 | 20 | 0 |
| 8 | Lh | 1482 | 0 | 1448 | 21 | 0 |
| 8 | Lj | 1482 | 0 | 1448 | 20 | 0 |
| 8 | Ll | 1482 | 0 | 1448 | 23 | 0 |
| All | All | 412635 | 0 | 406871 | 3490 | 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 4.

All (3490) 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) |
|---|---|---|---|
| 2:Bk:56:GLN:HE22 | 2:Bl:69:LEU:H | 1.32 | 0.78 |
| 1:Ao:125:LEU:HB3 | 1:Ar:244:MET:HE3 | 1.70 | 0.73 |
| 1:Ad:125:LEU:HB3 | 1:Ag:244:MET:HE3 | 1.70 | 0.72 |
| 1:Aq:125:LEU:HB3 | 1:At:244:MET:HE3 | 1.72 | 0.72 |
| 2:Bx:56:GLN:HE22 | 2:By:69:LEU:H | 1.37 | 0.71 |
| 1:Aa:125:LEU:HB3 | 1:Ad:244:MET:HE3 | 1.71 | 0.71 |
| 2:Bj:56:GLN:HE22 | 2:Bk:69:LEU:H | 1.40 | 0.70 |
| 2:Bw:56:GLN:HE22 | 2:Bx:69:LEU:H | 1.38 | 0.70 |
| 5:Eh:99:MET:HB3 | 5:Eh:114:LEU:HD21 | 1.74 | 0.69 |
| 2:Bm:56:GLN:HE22 | 2:Bn:69:LEU:H | 1.38 | 0.69 |
| 4:Dg:68:ILE:HD11 | 4:Dh:112:GLN:HE21 | 1.58 | 0.69 |
| 1:Ab:125:LEU:HB3 | 1:Ae:244:MET:HE3 | 1.73 | 0.69 |
| 7:Io:106:SER:HB3 | 8:Ip:207:ARG:HB3 | 1.75 | 0.69 |
| 3:Ce:334:ARG:HE | 3:Cf:295:VAL:HG21 | 1.57 | 0.68 |
| 2:Ba:69:LEU:H | 2:Bz:56:GLN:HE22 | 1.41 | 0.68 |
| 2:Bl:56:GLN:HE22 | 2:Bm:69:LEU:H | 1.39 | 0.68 |
| 5:Ez:116:ARG:HA | 5:Ez:149:GLN:HE22 | 1.59 | 0.68 |
| 2:By:56:GLN:HE22 | 2:Bz:69:LEU:H | 1.42 | 0.68 |
| 1:Ai:125:LEU:HB3 | 1:Al:244:MET:HE3 | 1.76 | 0.67 |
| 4:Dk:68:ILE:HD11 | 4:Dl:112:GLN:HE21 | 1.59 | 0.67 |
| 7:Km:106:SER:HB3 | 8:Kn:207:ARG:HB3 | 1.75 | 0.67 |
| 1:Au:125:LEU:HB3 | 1:Ax:244:MET:HE3 | 1.77 | 0.67 |
| 1:An:232:ARG:HH22 | 1:Ao:194:GLU:HG3 | 1.60 | 0.66 |
| 4:Dy:68:ILE:HD11 | 4:Dz:112:GLN:HE21 | 1.60 | 0.66 |
| 1:Au:119:LYS:HB3 | 1:Aw:199:LEU:HD12 | 1.78 | 0.66 |
| 2:Bp:141:GLY:HA3 | 2:Bp:154:GLY:O | 1.95 | 0.66 |
| 1:Ae:125:LEU:HB3 | 1:Ah:244:MET:HE3 | 1.77 | 0.66 |
| 1:Ah:119:LYS:HB3 | 1:Aj:199:LEU:HD12 | 1.77 | 0.66 |
| 1:Ar:219:PHE:HA | 2:Bg:69:LEU:HD13 | 1.76 | 0.66 |
| 2:Bo:141:GLY:HA3 | 2:Bo:154:GLY:O | 1.96 | 0.66 |
| 8:Ht:40:ASN:HD22 | 8:Ht:41:GLY:H | 1.44 | 0.66 |
| 1:Aa:232:ARG:HH22 | 1:Ab:194:GLU:HG3 | 1.60 | 0.66 |
| 7:Ig:106:SER:HB3 | 8:Ih:207:ARG:HB3 | 1.78 | 0.66 |
| 1:Ah:125:LEU:HB3 | 1:Ak:244:MET:HE3 | 1.77 | 0.66 |
| 7:Le:106:SER:HB3 | 8:Lf:207:ARG:HB3 | 1.77 | 0.66 |
| 3:Cg:92:GLU:HB2 | 3:Cg:103:ARG:HB3 | 1.78 | 0.66 |
| 2:Be:224:ARG:HH12 | 3:Ch:323:THR:HB | 1.61 | 0.66 |
| 2:Bm:25:ALA:HB2 | 2:Bm:186:LEU:HD23 | 1.78 | 0.66 |
| 4:Di:68:ILE:HD11 | 4:Dj:112:GLN:HE21 | 1.58 | 0.65 |
| 5:Ev:99:MET:HB3 | 5:Ev:114:LEU:HD21 | 1.78 | 0.65 |
| 2:Be:303:ASN:HB2 | 2:Bh:148:ASP:HB2 | 1.79 | 0.65 |
| 3:Cy:92:GLU:HB2 | 3:Cy:103:ARG:HB3 | 1.78 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:Al:66:TRP:HA | 1:Al:192:ARG:HD3 | 1.78 | 0.65 |
| 1:Ay:232:ARG:HH22 | 1:Az:194:GLU:HG3 | 1.61 | 0.65 |
| 2:Bt:56:GLN:HE22 | 2:Bu:69:LEU:H | 1.43 | 0.65 |
| 5:Em:168:TYR:HB2 | 5:Em:196:MET:HE1 | 1.77 | 0.65 |
| 8:Jt:40:ASN:HD22 | 8:Jt:41:GLY:H | 1.43 | 0.65 |
| 1:Ao:232:ARG:HH22 | 1:Ap:194:GLU:HG3 | 1.61 | 0.65 |
| 2:Bg:283:GLU:HG2 | 2:Bg:305:GLU:HG2 | 1.78 | 0.65 |
| 4:Di:49:VAL:HG12 | 4:Di:59:GLU:HG2 | 1.78 | 0.65 |
| 8:Hv:40:ASN:HD22 | 8:Hv:41:GLY:H | 1.45 | 0.65 |
| 2:Bb:141:GLY:HA3 | 2:Bb:154:GLY:O | 1.96 | 0.65 |
| 2:Bu:56:GLN:HE22 | 2:Bv:69:LEU:H | 1.43 | 0.65 |
| 8:Kx:40:ASN:HD22 | 8:Kx:41:GLY:H | 1.45 | 0.65 |
| 7:Li:106:SER:HB3 | 8:Lj:207:ARG:HB3 | 1.77 | 0.65 |
| 8:Hp:40:ASN:HD22 | 8:Hp:41:GLY:H | 1.45 | 0.65 |
| 1:Ac:232:ARG:HH22 | 1:Ad:194:GLU:HG3 | 1.60 | 0.65 |
| 8:Ih:40:ASN:HD22 | 8:Ih:41:GLY:H | 1.45 | 0.65 |
| 8:Kt:40:ASN:HD22 | 8:Kt:41:GLY:H | 1.46 | 0.64 |
| 2:Br:283:GLU:HG2 | 2:Br:305:GLU:HG2 | 1.79 | 0.64 |
| 2:Bx:25:ALA:HB2 | 2:Bx:186:LEU:HD23 | 1.79 | 0.64 |
| 8:Iz:40:ASN:HD22 | 8:Iz:41:GLY:H | 1.45 | 0.64 |
| 2:Bc:283:GLU:HG2 | 2:Bc:305:GLU:HG2 | 1.79 | 0.64 |
| 2:Br:317:LYS:HB2 | 2:Bs:328:VAL:HG21 | 1.78 | 0.64 |
| 8:Ij:40:ASN:HD22 | 8:Ij:41:GLY:H | 1.45 | 0.64 |
| 2:Bj:269:PRO:HB2 | 2:Bk:263:GLN:HE21 | 1.62 | 0.64 |
| 3:Cu:92:GLU:HB2 | 3:Cu:103:ARG:HB3 | 1.80 | 0.64 |
| 4:Dw:49:VAL:HG12 | 4:Dw:59:GLU:HG2 | 1.79 | 0.64 |
| 8:Jh:40:ASN:HD22 | 8:Jh:41:GLY:H | 1.46 | 0.64 |
| 1:Ab:232:ARG:HH22 | 1:Ac:194:GLU:HG3 | 1.63 | 0.64 |
| 2:Bz:25:ALA:HB2 | 2:Bz:186:LEU:HD23 | 1.78 | 0.64 |
| 8:Ir:40:ASN:HD22 | 8:Ir:41:GLY:H | 1.46 | 0.64 |
| 8:Jd:40:ASN:HD22 | 8:Jd:41:GLY:H | 1.46 | 0.64 |
| 8:Ll:40:ASN:HD22 | 8:Ll:41:GLY:H | 1.45 | 0.64 |
| 1:Aj:125:LEU:HB3 | 1:Am:244:MET:HE3 | 1.79 | 0.64 |
| 1:Al:232:ARG:HH22 | 1:Am:194:GLU:HG3 | 1.62 | 0.64 |
| 1:Ap:219:PHE:HA | 2:Be:69:LEU:HD13 | 1.80 | 0.64 |
| 1:Aw:125:LEU:HB3 | 1:Az:244:MET:HE3 | 1.80 | 0.64 |
| 4:Dk:49:VAL:HG12 | 4:Dk:59:GLU:HG2 | 1.78 | 0.64 |
| 4:Dm:49:VAL:HG12 | 4:Dm:59:GLU:HG2 | 1.80 | 0.64 |
| 4:Dw:68:ILE:HD11 | 4:Dx:112:GLN:HE21 | 1.63 | 0.64 |
| 8:In:40:ASN:HD22 | 8:In:41:GLY:H | 1.46 | 0.64 |
| 1:Aw:125:LEU:HB2 | 1:Aw:160:PHE:HB3 | 1.80 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Kp:40:ASN:HD22 | 8:Kp:41:GLY:H | 1.46 | 0.64 |
| 2:Bh:56:GLN:HE22 | 2:Bi:69:LEU:H | 1.46 | 0.63 |
| 2:Bu:22:LYS:HB3 | 2:Bu:237:GLU:HG2 | 1.79 | 0.63 |
| 3:Cg:362:GLU:HG3 | 4:Dz:103:ARG:HH12 | 1.62 | 0.63 |
| 5:Ex:116:ARG:HA | 5:Ex:149:GLN:HE22 | 1.63 | 0.63 |
| 2:Ba:141:GLY:HA3 | 2:Ba:154:GLY:O | 1.97 | 0.63 |
| 8:Jj:40:ASN:HD22 | 8:Jj:41:GLY:H | 1.46 | 0.63 |
| 8:Kl:40:ASN:HD22 | 8:Kl:41:GLY:H | 1.46 | 0.63 |
| 5:Ef:116:ARG:HA | 5:Ef:149:GLN:HE22 | 1.64 | 0.63 |
| 3:Cj:92:GLU:HB2 | 3:Cj:103:ARG:HB3 | 1.80 | 0.63 |
| 3:Cx:92:GLU:HB2 | 3:Cx:103:ARG:HB3 | 1.80 | 0.63 |
| 5:Ef:99:MET:HB3 | 5:Ef:114:LEU:HD21 | 1.80 | 0.63 |
| 8:Hd:40:ASN:HD22 | 8:Hd:41:GLY:H | 1.46 | 0.63 |
| 2:Bk:25:ALA:HB2 | 2:Bk:186:LEU:HD23 | 1.80 | 0.63 |
| 2:Bs:22:LYS:HB3 | 2:Bs:237:GLU:HG2 | 1.80 | 0.63 |
| 8:Jb:40:ASN:HD22 | 8:Jb:41:GLY:H | 1.46 | 0.63 |
| 8:Kj:40:ASN:HD22 | 8:Kj:41:GLY:H | 1.47 | 0.63 |
| 7:Ju:106:SER:HB3 | 8:Jv:207:ARG:HB3 | 1.80 | 0.63 |
| 8:Kn:40:ASN:HD22 | 8:Kn:41:GLY:H | 1.47 | 0.63 |
| 1:Ac:125:LEU:HB3 | 1:Af:244:MET:HE3 | 1.80 | 0.63 |
| 1:Ap:232:ARG:HH22 | 1:Aq:194:GLU:HG3 | 1.64 | 0.63 |
| 1:Av:125:LEU:HB3 | 1:Ay:244:MET:HE3 | 1.80 | 0.63 |
| 8:Kb:40:ASN:HD22 | 8:Kb:41:GLY:H | 1.46 | 0.63 |
| 7:Kq:83:GLN:HE22 | 7:Kw:55:ARG:HH22 | 1.46 | 0.63 |
| 8:Lj:40:ASN:HD22 | 8:Lj:41:GLY:H | 1.45 | 0.63 |
| 2:Bw:25:ALA:HB2 | 2:Bw:186:LEU:HD23 | 1.81 | 0.63 |
| 4:Dv:249:PHE:HB3 | 4:Dv:254:LEU:HD23 | 1.80 | 0.63 |
| 8:Hx:40:ASN:HD22 | 8:Hx:41:GLY:H | 1.46 | 0.63 |
| 7:Iq:106:SER:HB3 | 8:Ir:207:ARG:HB3 | 1.79 | 0.63 |
| 1:Ax:232:ARG:HH22 | 1:Ay:194:GLU:HG3 | 1.64 | 0.63 |
| 3:Cc:92:GLU:HB2 | 3:Cc:103:ARG:HB3 | 1.80 | 0.63 |
| 5:Ea:168:TYR:HB2 | 5:Ea:196:MET:HE1 | 1.79 | 0.63 |
| 8:Jz:40:ASN:HD22 | 8:Jz:41:GLY:H | 1.47 | 0.63 |
| 8:Kf:156:ARG:HE | 8:Kf:192:LEU:HD13 | 1.63 | 0.63 |
| 2:Bz:141:GLY:HA3 | 2:Bz:154:GLY:O | 1.99 | 0.62 |
| 4:Dq:49:VAL:HG12 | 4:Dq:59:GLU:HG2 | 1.81 | 0.62 |
| 8:Ip:40:ASN:HD22 | 8:Ip:41:GLY:H | 1.46 | 0.62 |
| 8:Jz:156:ARG:HE | 8:Jz:192:LEU:HD13 | 1.63 | 0.62 |
| 2:Bj:283:GLU:HG2 | 2:Bj:305:GLU:HG2 | 1.80 | 0.62 |
| 8:Id:40:ASN:HD22 | 8:Id:41:GLY:H | 1.47 | 0.62 |
| 8:Jf:40:ASN:HD22 | 8:Jf:41:GLY:H | 1.46 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bn:141:GLY:HA3 | 2:Bn:154:GLY:O | 1.99 | 0.62 |
| 3:Cw:92:GLU:HB2 | 3:Cw:103:ARG:HB3 | 1.80 | 0.62 |
| 4:Dc:49:VAL:HG12 | 4:Dc:59:GLU:HG2 | 1.81 | 0.62 |
| 1:Aa:125:LEU:HB2 | 1:Aa:160:PHE:HB3 | 1.80 | 0.62 |
| 4:Ds:49:VAL:HG12 | 4:Ds:59:GLU:HG2 | 1.81 | 0.62 |
| 5:Eb:99:MET:HB3 | 5:Eb:114:LEU:HD21 | 1.79 | 0.62 |
| 8:Ib:40:ASN:HD22 | 8:Ib:41:GLY:H | 1.47 | 0.62 |
| 1:Aa:244:MET:HE3 | 1:Ax:125:LEU:HB3 | 1.80 | 0.62 |
| 2:Ba:87:ALA:HB2 | 2:Ba:101:ILE:HG22 | 1.82 | 0.62 |
| 5:Ev:116:ARG:HA | 5:Ev:149:GLN:HE22 | 1.65 | 0.62 |
| 8:Hf:40:ASN:HD22 | 8:Hf:41:GLY:H | 1.48 | 0.62 |
| 8:Jx:40:ASN:HD22 | 8:Jx:41:GLY:H | 1.46 | 0.62 |
| 8:Lh:40:ASN:HD22 | 8:Lh:41:GLY:H | 1.47 | 0.62 |
| 3:Ci:92:GLU:HB2 | 3:Ci:103:ARG:HB3 | 1.81 | 0.62 |
| 3:Ct:92:GLU:HB2 | 3:Ct:103:ARG:HB3 | 1.81 | 0.62 |
| 8:Jv:40:ASN:HD22 | 8:Jv:41:GLY:H | 1.47 | 0.62 |
| 8:Kf:40:ASN:HD22 | 8:Kf:41:GLY:H | 1.48 | 0.62 |
| 1:Ap:125:LEU:HB3 | 1:As:244:MET:HE3 | 1.82 | 0.62 |
| 1:Ar:125:LEU:HB3 | 1:Au:244:MET:HE3 | 1.81 | 0.62 |
| 8:Iv:40:ASN:HD22 | 8:Iv:41:GLY:H | 1.48 | 0.62 |
| 7:Je:106:SER:HB3 | 8:Jf:207:ARG:HB3 | 1.80 | 0.62 |
| 8:Jn:40:ASN:HD22 | 8:Jn:41:GLY:H | 1.46 | 0.62 |
| 2:By:87:ALA:HB2 | 2:By:101:ILE:HG22 | 1.82 | 0.62 |
| 3:Ca:43:LEU:HD21 | 3:Ca:68:MET:HE1 | 1.80 | 0.62 |
| 3:Cs:249:PRO:HG2 | 3:Cs:252:SER:HB3 | 1.80 | 0.62 |
| 7:Kq:78:ALA:HB3 | 7:Ks:91:ALA:HB3 | 1.82 | 0.62 |
| 2:Bj:25:ALA:HB2 | 2:Bj:186:LEU:HD23 | 1.82 | 0.62 |
| 2:Bl:290:PRO:HB3 | 2:Bl:296:GLY:HA3 | 1.80 | 0.62 |
| 2:Bo:56:GLN:HE22 | 2:Bp:69:LEU:H | 1.45 | 0.62 |
| 3:Cq:43:LEU:HD21 | 3:Cq:68:MET:HE1 | 1.82 | 0.62 |
| 8:Hh:40:ASN:HD22 | 8:Hh:41:GLY:H | 1.46 | 0.62 |
| 8:Jr:40:ASN:HD22 | 8:Jr:41:GLY:H | 1.47 | 0.62 |
| 8:Kv:40:ASN:HD22 | 8:Kv:41:GLY:H | 1.47 | 0.62 |
| 1:Ai:119:LYS:HB3 | 1:Ak:199:LEU:HD12 | 1.82 | 0.62 |
| 2:Bk:290:PRO:HB3 | 2:Bk:296:GLY:HA3 | 1.82 | 0.62 |
| 8:Il:40:ASN:HD22 | 8:Il:41:GLY:H | 1.47 | 0.62 |
| 8:Ix:40:ASN:HD22 | 8:Ix:41:GLY:H | 1.47 | 0.62 |
| 2:Ba:248:ALA:HB1 | 2:Ba:265:VAL:HG22 | 1.81 | 0.61 |
| 2:Bg:22:LYS:HB3 | 2:Bg:237:GLU:HG2 | 1.82 | 0.61 |
| 3:Ck:92:GLU:HB2 | 3:Ck:103:ARG:HB3 | 1.81 | 0.61 |
| 4:Dy:49:VAL:HG12 | 4:Dy:59:GLU:HG2 | 1.82 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 5:Eq:81:MET:HG3 | 5:Eq:86:VAL:HB | 1.82 | 0.61 |
| 7:Ie:106:SER:HB3 | 8:If:207:ARG:HB3 | 1.80 | 0.61 |
| 7:Is:106:SER:HB3 | 8:It:207:ARG:HB3 | 1.81 | 0.61 |
| 7:Jq:72:MET:H | 7:Js:97:VAL:HG23 | 1.65 | 0.61 |
| 7:Kq:106:SER:HB3 | 8:Kr:207:ARG:HB3 | 1.82 | 0.61 |
| 7:Lg:106:SER:HB3 | 8:Lh:207:ARG:HB3 | 1.81 | 0.61 |
| 2:Ba:56:GLN:HE22 | 2:Bb:69:LEU:H | 1.47 | 0.61 |
| 2:Bb:269:PRO:HB2 | 2:Bc:263:GLN:HE21 | 1.65 | 0.61 |
| 7:Im:78:ALA:HB3 | 7:Io:91:ALA:HB3 | 1.83 | 0.61 |
| 8:Ip:156:ARG:HE | 8:Ip:192:LEU:HD13 | 1.64 | 0.61 |
| 8:Kd:40:ASN:HD22 | 8:Kd:41:GLY:H | 1.47 | 0.61 |
| 8:Lf:40:ASN:HD22 | 8:Lf:41:GLY:H | 1.48 | 0.61 |
| 3:Cn:92:GLU:HB2 | 3:Cn:103:ARG:HB3 | 1.81 | 0.61 |
| 4:Dj:249:PHE:HB3 | 4:Dj:254:LEU:HD23 | 1.80 | 0.61 |
| 5:El:116:ARG:HA | 5:El:149:GLN:HE22 | 1.64 | 0.61 |
| 7:Ik:106:SER:HB3 | 8:Il:207:ARG:HB3 | 1.80 | 0.61 |
| 1:Ab:125:LEU:HB2 | 1:Ab:160:PHE:HB3 | 1.81 | 0.61 |
| 2:Bh:87:ALA:HB2 | 2:Bh:101:ILE:HG22 | 1.81 | 0.61 |
| 2:Bp:283:GLU:HG2 | 2:Bp:305:GLU:HG2 | 1.82 | 0.61 |
| 2:Bx:317:LYS:HE3 | 2:By:324:LEU:HD23 | 1.82 | 0.61 |
| 5:Ej:99:MET:HB3 | 5:Ej:114:LEU:HD21 | 1.82 | 0.61 |
| 5:Er:99:MET:HB3 | 5:Er:114:LEU:HD21 | 1.81 | 0.61 |
| 8:Hn:40:ASN:HD22 | 8:Hn:41:GLY:H | 1.47 | 0.61 |
| 1:At:125:LEU:HB3 | 1:Aw:244:MET:HE3 | 1.81 | 0.61 |
| 3:Ca:226:VAL:HB | 3:Ca:236:MET:HB3 | 1.81 | 0.61 |
| 5:Et:99:MET:HB3 | 5:Et:114:LEU:HD21 | 1.81 | 0.61 |
| 8:Hr:40:ASN:HD22 | 8:Hr:41:GLY:H | 1.47 | 0.61 |
| 7:Jc:106:SER:HB3 | 8:Jd:207:ARG:HB3 | 1.81 | 0.61 |
| 8:Kr:40:ASN:HD22 | 8:Kr:41:GLY:H | 1.48 | 0.61 |
| 2:Bt:275:GLY:HA3 | 2:Bu:338:PRO:HG2 | 1.83 | 0.61 |
| 8:Hz:156:ARG:HE | 8:Hz:192:LEU:HD13 | 1.65 | 0.61 |
| 1:Af:125:LEU:HB3 | 1:Ai:244:MET:HE3 | 1.82 | 0.61 |
| 3:Cr:249:PRO:HG2 | 3:Cr:252:SER:HB3 | 1.82 | 0.61 |
| 7:Iy:106:SER:HB3 | 8:Iz:207:ARG:HB3 | 1.82 | 0.61 |
| 8:Jp:40:ASN:HD22 | 8:Jp:41:GLY:H | 1.47 | 0.61 |
| 7:Ky:106:SER:HB3 | 8:Kz:207:ARG:HB3 | 1.81 | 0.61 |
| 1:Ak:232:ARG:HH22 | 1:Al:194:GLU:HG3 | 1.65 | 0.61 |
| 1:As:125:LEU:HB3 | 1:Av:244:MET:HE3 | 1.81 | 0.61 |
| 2:Ba:283:GLU:HG2 | 2:Ba:305:GLU:HG2 | 1.82 | 0.61 |
| 3:Cl:92:GLU:HB2 | 3:Cl:103:ARG:HB3 | 1.82 | 0.61 |
| 5:Eo:168:TYR:HB2 | 5:Eo:196:MET:HE1 | 1.83 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Hx:156:ARG:HE | 8:Hx:192:LEU:HD13 | 1.65 | 0.61 |
| 7:Ks:106:SER:HB3 | 8:Kt:207:ARG:HB3 | 1.82 | 0.61 |
| 8:Lb:40:ASN:HD22 | 8:Lb:41:GLY:H | 1.49 | 0.61 |
| 1:At:119:LYS:HB3 | 1:Av:199:LEU:HD12 | 1.81 | 0.61 |
| 1:At:219:PHE:HD1 | 2:Bi:69:LEU:HD13 | 1.66 | 0.61 |
| 4:Dy:104:ILE:HG23 | 4:Dz:145:ARG:HD3 | 1.82 | 0.61 |
| 8:Jl:40:ASN:HD22 | 8:Jl:41:GLY:H | 1.49 | 0.61 |
| 2:Ba:25:ALA:HB2 | 2:Ba:186:LEU:HD23 | 1.83 | 0.61 |
| 2:Bk:275:GLY:HA3 | 2:Bl:338:PRO:HG2 | 1.82 | 0.61 |
| 3:Cb:92:GLU:HB2 | 3:Cb:103:ARG:HB3 | 1.83 | 0.61 |
| 8:Ih:156:ARG:HE | 8:Ih:192:LEU:HD13 | 1.66 | 0.61 |
| 1:Ab:244:MET:HE3 | 1:Ay:125:LEU:HB3 | 1.82 | 0.60 |
| 1:Am:232:ARG:HH22 | 1:An:194:GLU:HG3 | 1.66 | 0.60 |
| 2:Bb:87:ALA:HB2 | 2:Bb:101:ILE:HG22 | 1.83 | 0.60 |
| 2:Bo:360:ILE:HD12 | 2:Bq:163:SER:H | 1.66 | 0.60 |
| 2:By:223:PRO:HB3 | 4:Du:94:VAL:HG12 | 1.82 | 0.60 |
| 3:Cy:239:THR:HG21 | 3:Cz:155:ARG:HD3 | 1.81 | 0.60 |
| 4:Da:68:ILE:HD11 | 4:Db:112:GLN:HE21 | 1.65 | 0.60 |
| 2:Bk:87:ALA:HB2 | 2:Bk:101:ILE:HG22 | 1.82 | 0.60 |
| 2:Bu:87:ALA:HB2 | 2:Bu:101:ILE:HG22 | 1.83 | 0.60 |
| 3:Cq:92:GLU:HB2 | 3:Cq:103:ARG:HB3 | 1.82 | 0.60 |
| 7:Ig:78:ALA:HB3 | 7:Ii:91:ALA:HB3 | 1.83 | 0.60 |
| 1:Aa:194:GLU:HG3 | 1:Az:232:ARG:HH22 | 1.65 | 0.60 |
| 1:Ap:34:THR:HG21 | 3:Cf:247:PRO:HB2 | 1.83 | 0.60 |
| 1:Az:66:TRP:HA | 1:Az:192:ARG:HD3 | 1.83 | 0.60 |
| 2:Bw:34:GLN:HG2 | 2:Bx:134:GLN:HB3 | 1.82 | 0.60 |
| 8:Kh:40:ASN:HD22 | 8:Kh:41:GLY:H | 1.49 | 0.60 |
| 1:Ad:232:ARG:HH22 | 1:Ae:194:GLU:HG3 | 1.67 | 0.60 |
| 1:Ag:125:LEU:HB3 | 1:Aj:244:MET:HE3 | 1.83 | 0.60 |
| 3:Ch:92:GLU:HB2 | 3:Ch:103:ARG:HB3 | 1.82 | 0.60 |
| 4:De:49:VAL:HG12 | 4:De:59:GLU:HG2 | 1.83 | 0.60 |
| 5:Ed:116:ARG:HA | 5:Ed:149:GLN:HE22 | 1.66 | 0.60 |
| 8:Hl:40:ASN:HD22 | 8:Hl:41:GLY:H | 1.48 | 0.60 |
| 8:If:40:ASN:HD22 | 8:If:41:GLY:H | 1.47 | 0.60 |
| 7:Ku:106:SER:HB3 | 8:Kv:207:ARG:HB3 | 1.81 | 0.60 |
| 7:Lk:106:SER:HB3 | 8:Ll:207:ARG:HB3 | 1.81 | 0.60 |
| 1:Ae:232:ARG:HH22 | 1:Af:194:GLU:HG3 | 1.66 | 0.60 |
| 2:Be:22:LYS:HB3 | 2:Be:237:GLU:HG2 | 1.83 | 0.60 |
| 2:Bl:317:LYS:HB2 | 2:Bm:328:VAL:HG21 | 1.82 | 0.60 |
| 2:Bn:25:ALA:HB2 | 2:Bn:186:LEU:HD23 | 1.83 | 0.60 |
| 4:Dt:249:PHE:HB3 | 4:Dt:254:LEU:HD23 | 1.84 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Kz:40:ASN:HD22 | 8:Kz:41:GLY:H | 1.48 | 0.60 |
| 1:Ak:125:LEU:HB2 | 1:Ak:160:PHE:HB3 | 1.83 | 0.60 |
| 1:Ax:125:LEU:HB2 | 1:Ax:160:PHE:HB3 | 1.83 | 0.60 |
| 2:Bc:87:ALA:HB2 | 2:Bc:101:ILE:HG22 | 1.83 | 0.60 |
| 8:Hb:156:ARG:HE | 8:Hb:192:LEU:HD13 | 1.67 | 0.60 |
| 7:Ho:77:ARG:HH12 | 7:Hq:73:ARG:HH22 | 1.49 | 0.60 |
| 7:Kk:106:SER:HB3 | 8:Kl:207:ARG:HB3 | 1.84 | 0.60 |
| 1:Ah:119:LYS:HD2 | 1:Aj:199:LEU:HB2 | 1.84 | 0.60 |
| 3:Cq:61:ILE:HD11 | 3:Cq:282:GLU:HG3 | 1.83 | 0.60 |
| 4:Do:49:VAL:HG12 | 4:Do:59:GLU:HG2 | 1.84 | 0.60 |
| 1:Ar:129:ASN:HB2 | 1:Ar:156:ASN:HB3 | 1.83 | 0.60 |
| 2:Bo:248:ALA:HB1 | 2:Bo:265:VAL:HG22 | 1.83 | 0.60 |
| 2:Bu:25:ALA:HB2 | 2:Bu:186:LEU:HD23 | 1.84 | 0.60 |
| 5:Ep:116:ARG:HA | 5:Ep:149:GLN:HE22 | 1.67 | 0.60 |
| 5:Ep:148:ILE:HD12 | 5:Ep:184:ARG:HE | 1.66 | 0.60 |
| 5:Ex:99:MET:HB3 | 5:Ex:114:LEU:HD21 | 1.83 | 0.60 |
| 8:Hj:40:ASN:HD22 | 8:Hj:41:GLY:H | 1.48 | 0.60 |
| 7:Hy:106:SER:HB3 | 8:Hz:207:ARG:HB3 | 1.83 | 0.60 |
| 8:It:40:ASN:HD22 | 8:It:41:GLY:H | 1.48 | 0.60 |
| 1:Aj:125:LEU:HB2 | 1:Aj:160:PHE:HB3 | 1.84 | 0.60 |
| 2:Be:317:LYS:HE3 | 2:Bf:324:LEU:HD23 | 1.84 | 0.60 |
| 4:Da:49:VAL:HG12 | 4:Da:59:GLU:HG2 | 1.82 | 0.60 |
| 8:Hz:40:ASN:HD22 | 8:Hz:41:GLY:H | 1.49 | 0.60 |
| 7:Ko:106:SER:HB3 | 8:Kp:207:ARG:HB3 | 1.84 | 0.60 |
| 1:Ap:66:TRP:HA | 1:Ap:192:ARG:HD3 | 1.84 | 0.59 |
| 2:Bi:25:ALA:HB2 | 2:Bi:186:LEU:HD23 | 1.84 | 0.59 |
| 4:Dh:249:PHE:HB3 | 4:Dh:254:LEU:HD23 | 1.83 | 0.59 |
| 1:Am:66:TRP:HA | 1:Am:192:ARG:HD3 | 1.83 | 0.59 |
| 2:Bv:253:ASN:HB3 | 2:Bv:258:THR:HG23 | 1.83 | 0.59 |
| 2:Bx:303:ASN:H | 2:By:285:LEU:HD12 | 1.67 | 0.59 |
| 3:Cr:126:ILE:HB | 3:Cr:169:THR:HG22 | 1.84 | 0.59 |
| 4:Di:104:ILE:HG23 | 4:Dj:145:ARG:HD3 | 1.84 | 0.59 |
| 5:Ed:148:ILE:HD12 | 5:Ed:184:ARG:HE | 1.67 | 0.59 |
| 8:Hn:156:ARG:HE | 8:Hn:192:LEU:HD13 | 1.67 | 0.59 |
| 7:Jg:104:VAL:HG12 | 8:Jh:212:ILE:HG13 | 1.84 | 0.59 |
| 1:Ac:125:LEU:HB2 | 1:Ac:160:PHE:HB3 | 1.83 | 0.59 |
| 2:Bx:87:ALA:HB2 | 2:Bx:101:ILE:HG22 | 1.84 | 0.59 |
| 5:Ey:168:TYR:HB2 | 5:Ey:196:MET:HE1 | 1.85 | 0.59 |
| 1:Am:125:LEU:HB2 | 1:Am:160:PHE:HB3 | 1.85 | 0.59 |
| 8:Ld:40:ASN:HD22 | 8:Ld:41:GLY:H | 1.49 | 0.59 |
| 5:El:148:ILE:HD12 | 5:El:184:ARG:HE | 1.68 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 7:Hi:106:SER:HB3 | 8:Hj:207:ARG:HB3 | 1.83 | 0.59 |
| 7:Ji:78:ALA:HB3 | 7:Jk:91:ALA:HB3 | 1.83 | 0.59 |
| 1:Ao:125:LEU:HB2 | 1:Ao:160:PHE:HB3 | 1.84 | 0.59 |
| 2:Bc:360:ILE:HD12 | 2:Be:163:SER:H | 1.68 | 0.59 |
| 2:Bo:87:ALA:HB2 | 2:Bo:101:ILE:HG22 | 1.84 | 0.59 |
| 2:Br:303:ASN:HB2 | 2:Bu:148:ASP:HB2 | 1.84 | 0.59 |
| 2:By:41:VAL:HG23 | 2:By:83:VAL:HG21 | 1.85 | 0.59 |
| 3:Cp:92:GLU:HB2 | 3:Cp:103:ARG:HB3 | 1.84 | 0.59 |
| 3:Cw:220:PHE:HE2 | 3:Cw:273:VAL:HG11 | 1.67 | 0.59 |
| 5:El:99:MET:HB3 | 5:El:114:LEU:HD21 | 1.84 | 0.59 |
| 7:Je:78:ALA:HB3 | 7:Jg:91:ALA:HB3 | 1.84 | 0.59 |
| 2:Bm:141:GLY:HA3 | 2:Bm:154:GLY:O | 2.03 | 0.59 |
| 2:Bn:248:ALA:HB1 | 2:Bn:265:VAL:HG22 | 1.84 | 0.59 |
| 2:Bp:87:ALA:HB2 | 2:Bp:101:ILE:HG22 | 1.85 | 0.59 |
| 3:Cm:92:GLU:HB2 | 3:Cm:103:ARG:HB3 | 1.84 | 0.59 |
| 5:Er:116:ARG:HA | 5:Er:149:GLN:HE22 | 1.68 | 0.59 |
| 1:Am:125:LEU:HB3 | 1:Ap:244:MET:HE3 | 1.85 | 0.59 |
| 3:Cm:126:ILE:HB | 3:Cm:169:THR:HG22 | 1.85 | 0.59 |
| 4:Ds:68:ILE:HD11 | 4:Dt:112:GLN:HE21 | 1.68 | 0.59 |
| 1:Ai:125:LEU:HB2 | 1:Ai:160:PHE:HB3 | 1.85 | 0.59 |
| 1:Ar:36:ASP:HB3 | 1:Ar:39:GLU:HG2 | 1.85 | 0.59 |
| 4:Do:78:ARG:HB3 | 4:Do:143:GLN:HE22 | 1.67 | 0.59 |
| 5:Ei:81:MET:HG3 | 5:Ei:86:VAL:HB | 1.85 | 0.59 |
| 7:Ho:106:SER:HB3 | 8:Hp:207:ARG:HB3 | 1.83 | 0.59 |
| 8:Iv:156:ARG:HE | 8:Iv:192:LEU:HD13 | 1.68 | 0.59 |
| 7:Jk:106:SER:HB3 | 8:Jl:207:ARG:HB3 | 1.84 | 0.59 |
| 3:Cd:361:PRO:HB2 | 4:Dw:148:ARG:HD2 | 1.83 | 0.59 |
| 7:Hg:106:SER:HB3 | 8:Hh:207:ARG:HB3 | 1.84 | 0.59 |
| 1:Ah:234:GLN:HA | 1:Ai:198:THR:HB | 1.85 | 0.58 |
| 1:Az:125:LEU:HB2 | 1:Az:160:PHE:HB3 | 1.84 | 0.58 |
| 3:Cw:271:LEU:HD21 | 6:Gw:145:PHE:HB3 | 1.85 | 0.58 |
| 4:Ds:78:ARG:HB3 | 4:Ds:143:GLN:HE22 | 1.67 | 0.58 |
| 8:Hb:40:ASN:HD22 | 8:Hb:41:GLY:H | 1.50 | 0.58 |
| 1:Aq:34:THR:HG21 | 3:Cg:247:PRO:HB2 | 1.85 | 0.58 |
| 2:Bh:275:GLY:HA3 | 2:Bi:338:PRO:HG2 | 1.85 | 0.58 |
| 2:Bo:25:ALA:HB2 | 2:Bo:186:LEU:HD23 | 1.85 | 0.58 |
| 7:Jc:104:VAL:HG12 | 8:Jd:212:ILE:HG13 | 1.85 | 0.58 |
| 1:Ah:231:ALA:HB3 | 1:Ai:195:LYS:HG3 | 1.85 | 0.58 |
| 1:Ay:125:LEU:HB2 | 1:Ay:160:PHE:HB3 | 1.84 | 0.58 |
| 2:Ba:103:VAL:HB | 2:Ba:137:LEU:HD21 | 1.86 | 0.58 |
| 2:Bf:283:GLU:HG2 | 2:Bf:305:GLU:HG2 | 1.85 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bh:49:GLU:HG3 | 2:Bh:54:THR:HG21 | 1.85 | 0.58 |
| 2:Bt:87:ALA:HB2 | 2:Bt:101:ILE:HG22 | 1.84 | 0.58 |
| 2:By:269:PRO:HB2 | 2:Bz:263:GLN:HE21 | 1.68 | 0.58 |
| 5:Eq:168:TYR:HB2 | 5:Eq:196:MET:HE1 | 1.84 | 0.58 |
| 7:Hk:72:MET:H | 7:Hm:97:VAL:HG23 | 1.67 | 0.58 |
| 7:Ii:106:SER:HB3 | 8:Ij:207:ARG:HB3 | 1.84 | 0.58 |
| 1:Af:139:GLY:HA3 | 1:Ag:148:TYR:HD1 | 1.68 | 0.58 |
| 1:Ak:125:LEU:HB3 | 1:An:244:MET:HE3 | 1.86 | 0.58 |
| 1:Aw:232:ARG:HH22 | 1:Ax:194:GLU:HG3 | 1.68 | 0.58 |
| 2:Bb:248:ALA:HB1 | 2:Bb:265:VAL:HG22 | 1.84 | 0.58 |
| 2:Bh:25:ALA:HB2 | 2:Bh:186:LEU:HD23 | 1.84 | 0.58 |
| 2:Bx:41:VAL:HG23 | 2:Bx:83:VAL:HG21 | 1.86 | 0.58 |
| 4:Dg:49:VAL:HG12 | 4:Dg:59:GLU:HG2 | 1.85 | 0.58 |
| 7:Hq:104:VAL:HG12 | 8:Hr:212:ILE:HG13 | 1.85 | 0.58 |
| 7:Hw:106:SER:HB3 | 8:Hx:207:ARG:HB3 | 1.84 | 0.58 |
| 7:Ik:104:VAL:HG12 | 8:Il:212:ILE:HG13 | 1.86 | 0.58 |
| 8:In:156:ARG:HE | 8:In:192:LEU:HD13 | 1.68 | 0.58 |
| 1:Ao:66:TRP:HA | 1:Ao:192:ARG:HD3 | 1.85 | 0.58 |
| 2:Bb:25:ALA:HB2 | 2:Bb:186:LEU:HD23 | 1.85 | 0.58 |
| 2:Bc:56:GLN:HE22 | 2:Bd:69:LEU:H | 1.50 | 0.58 |
| 2:Bw:275:GLY:HA3 | 2:Bx:338:PRO:HG2 | 1.86 | 0.58 |
| 3:Cy:255:ASP:HB3 | 3:Cy:258:SER:HB3 | 1.84 | 0.58 |
| 4:Df:216:ILE:HA | 4:Df:291:ARG:HA | 1.86 | 0.58 |
| 4:Dr:184:ILE:HG12 | 4:Dr:286:VAL:HG22 | 1.83 | 0.58 |
| 7:Jg:106:SER:HB3 | 8:Jh:207:ARG:HB3 | 1.85 | 0.58 |
| 1:Ab:129:ASN:HB2 | 1:Ab:156:ASN:HB3 | 1.85 | 0.58 |
| 1:Ap:125:LEU:HB2 | 1:Ap:160:PHE:HB3 | 1.86 | 0.58 |
| 2:Be:87:ALA:HB2 | 2:Be:101:ILE:HG22 | 1.84 | 0.58 |
| 2:Bl:303:ASN:H | 2:Bm:285:LEU:HD12 | 1.68 | 0.58 |
| 2:Bx:275:GLY:HA3 | 2:By:338:PRO:HG2 | 1.85 | 0.58 |
| 3:Ch:342:ILE:HG21 | 3:Ch:367:ILE:HD11 | 1.86 | 0.58 |
| 3:Cl:239:THR:HG21 | 3:Cm:155:ARG:HD3 | 1.84 | 0.58 |
| 8:Hr:156:ARG:HE | 8:Hr:192:LEU:HD13 | 1.68 | 0.58 |
| 1:Ar:232:ARG:HH22 | 1:As:194:GLU:HG3 | 1.68 | 0.58 |
| 2:Bc:141:GLY:HA3 | 2:Bc:154:GLY:O | 2.04 | 0.58 |
| 3:Co:92:GLU:HB2 | 3:Co:103:ARG:HB3 | 1.85 | 0.58 |
| 4:De:68:ILE:HD11 | 4:Df:112:GLN:HE21 | 1.68 | 0.58 |
| 5:Eg:81:MET:HG3 | 5:Eg:86:VAL:HB | 1.86 | 0.58 |
| 5:Ej:148:ILE:HD12 | 5:Ej:184:ARG:HE | 1.69 | 0.58 |
| 8:Ir:156:ARG:HE | 8:Ir:192:LEU:HD13 | 1.69 | 0.58 |
| 8:Kd:156:ARG:HE | 8:Kd:192:LEU:HD13 | 1.68 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bc:254:SER:HB2 | 2:Be:138:VAL:HG22 | 1.85 | 0.58 |
| 4:Dj:90:SER:HB2 | 4:Dj:104:ILE:HD11 | 1.86 | 0.58 |
| 4:Dy:93:PRO:HB2 | 4:Dy:95:TRP:HE3 | 1.69 | 0.58 |
| 5:Er:148:ILE:HD12 | 5:Er:184:ARG:HE | 1.69 | 0.58 |
| 5:Ev:148:ILE:HD12 | 5:Ev:184:ARG:HE | 1.69 | 0.58 |
| 5:Ex:148:ILE:HD12 | 5:Ex:184:ARG:HE | 1.67 | 0.58 |
| 7:Kc:78:ALA:HB3 | 7:Ke:91:ALA:HB3 | 1.86 | 0.58 |
| 1:Au:66:TRP:HA | 1:Au:192:ARG:HD3 | 1.85 | 0.58 |
| 2:Bd:87:ALA:HB2 | 2:Bd:101:ILE:HG22 | 1.86 | 0.58 |
| 2:Bz:283:GLU:HG2 | 2:Bz:305:GLU:HG2 | 1.85 | 0.58 |
| 3:Cd:249:PRO:HG2 | 3:Cd:252:SER:HB3 | 1.85 | 0.58 |
| 4:Dh:216:ILE:HA | 4:Dh:291:ARG:HA | 1.86 | 0.58 |
| 5:Ee:81:MET:HG3 | 5:Ee:86:VAL:HB | 1.86 | 0.58 |
| 5:Ej:116:ARG:HA | 5:Ej:149:GLN:HE22 | 1.69 | 0.58 |
| 7:Hc:78:ALA:HB3 | 7:He:91:ALA:HB3 | 1.85 | 0.58 |
| 1:Af:232:ARG:HH22 | 1:Ag:194:GLU:HG3 | 1.69 | 0.58 |
| 2:Bd:141:GLY:HA3 | 2:Bd:154:GLY:O | 2.03 | 0.58 |
| 2:Bj:275:GLY:HA3 | 2:Bk:338:PRO:HG2 | 1.86 | 0.58 |
| 2:Bm:253:ASN:HB3 | 2:Bm:258:THR:HG23 | 1.85 | 0.58 |
| 3:Cr:43:LEU:HD21 | 3:Cr:68:MET:HE1 | 1.85 | 0.58 |
| 4:Dt:216:ILE:HA | 4:Dt:291:ARG:HA | 1.86 | 0.58 |
| 7:Lc:106:SER:HB3 | 8:Ld:207:ARG:HB3 | 1.86 | 0.58 |
| 1:Ac:66:TRP:HA | 1:Ac:192:ARG:HD3 | 1.86 | 0.57 |
| 1:Ag:234:GLN:HA | 1:Ah:198:THR:HB | 1.86 | 0.57 |
| 1:At:234:GLN:HA | 1:Au:198:THR:HB | 1.85 | 0.57 |
| 2:Bm:41:VAL:HG23 | 2:Bm:83:VAL:HG21 | 1.86 | 0.57 |
| 2:Bm:248:ALA:HB1 | 2:Bm:265:VAL:HG22 | 1.85 | 0.57 |
| 5:En:116:ARG:HA | 5:En:149:GLN:HE22 | 1.68 | 0.57 |
| 8:Iz:104:ILE:HG23 | 8:Iz:114:VAL:HG11 | 1.86 | 0.57 |
| 1:Ai:66:TRP:HA | 1:Ai:192:ARG:HD3 | 1.86 | 0.57 |
| 1:Az:219:PHE:HA | 2:Bo:69:LEU:HD13 | 1.87 | 0.57 |
| 2:Ba:324:LEU:HD23 | 2:Bz:317:LYS:HE3 | 1.86 | 0.57 |
| 2:Bl:87:ALA:HB2 | 2:Bl:101:ILE:HG22 | 1.86 | 0.57 |
| 2:Bn:245:ASP:HB2 | 2:Bo:20:ARG:HH12 | 1.69 | 0.57 |
| 2:Br:290:PRO:HB3 | 2:Br:296:GLY:HA3 | 1.86 | 0.57 |
| 2:Bu:275:GLY:HA3 | 2:Bv:338:PRO:HG2 | 1.86 | 0.57 |
| 2:By:25:ALA:HB2 | 2:By:186:LEU:HD23 | 1.86 | 0.57 |
| 2:Bz:248:ALA:HB1 | 2:Bz:265:VAL:HG22 | 1.87 | 0.57 |
| 3:Cs:201:ASP:HB3 | 3:Cs:221:ALA:HB3 | 1.86 | 0.57 |
| 3:Cx:220:PHE:HE2 | 3:Cx:273:VAL:HG11 | 1.68 | 0.57 |
| 7:Kq:104:VAL:HG12 | 8:Kr:212:ILE:HG13 | 1.86 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:Az:113:GLU:HB2 | 1:Az:172:MET:HB3 | 1.86 | 0.57 |
| 2:Bc:317:LYS:HE3 | 2:Bd:324:LEU:HD23 | 1.84 | 0.57 |
| 2:Bi:317:LYS:HE3 | 2:Bj:324:LEU:HD23 | 1.85 | 0.57 |
| 2:Bj:87:ALA:HB2 | 2:Bj:101:ILE:HG22 | 1.86 | 0.57 |
| 3:Cj:220:PHE:HE2 | 3:Cj:273:VAL:HG11 | 1.68 | 0.57 |
| 3:Cl:80:PHE:HA | 6:Fl:136:VAL:HG21 | 1.86 | 0.57 |
| 7:Hk:104:VAL:HG12 | 8:Hl:212:ILE:HG13 | 1.86 | 0.57 |
| 7:Ig:77:ARG:HH12 | 7:Ii:73:ARG:HH22 | 1.53 | 0.57 |
| 7:Jo:106:SER:HB3 | 8:Jp:207:ARG:HB3 | 1.85 | 0.57 |
| 7:Jw:104:VAL:HG12 | 8:Jx:212:ILE:HG13 | 1.85 | 0.57 |
| 1:Ag:119:LYS:HB3 | 1:Ai:199:LEU:HD12 | 1.85 | 0.57 |
| 1:Ap:51:ASP:HA | 1:Ap:54:ARG:HE | 1.68 | 0.57 |
| 7:Kc:106:SER:HB3 | 8:Kd:207:ARG:HB3 | 1.86 | 0.57 |
| 2:Bi:87:ALA:HB2 | 2:Bi:101:ILE:HG22 | 1.87 | 0.57 |
| 2:Bq:283:GLU:HG2 | 2:Bq:305:GLU:HB3 | 1.85 | 0.57 |
| 3:Ck:220:PHE:HE2 | 3:Ck:273:VAL:HG11 | 1.67 | 0.57 |
| 7:Ke:106:SER:HB3 | 8:Kf:207:ARG:HB3 | 1.85 | 0.57 |
| 7:Kg:106:SER:HB3 | 8:Kh:207:ARG:HB3 | 1.86 | 0.57 |
| 1:Aa:66:TRP:HA | 1:Aa:192:ARG:HD3 | 1.86 | 0.57 |
| 1:Ag:36:ASP:HB3 | 1:Ag:39:GLU:HG2 | 1.87 | 0.57 |
| 2:Bi:275:GLY:HA3 | 2:Bj:338:PRO:HG2 | 1.86 | 0.57 |
| 3:Cn:255:ASP:HB3 | 3:Cn:258:SER:HB3 | 1.86 | 0.57 |
| 4:Dg:184:ILE:HG12 | 4:Dg:286:VAL:HG22 | 1.86 | 0.57 |
| 8:Hr:77:PRO:HB2 | 8:Hr:146:VAL:HA | 1.87 | 0.57 |
| 7:Hu:106:SER:HB3 | 8:Hv:207:ARG:HB3 | 1.85 | 0.57 |
| 7:Ia:106:SER:HB3 | 8:Ib:207:ARG:HB3 | 1.86 | 0.57 |
| 7:Im:106:SER:HB3 | 8:In:207:ARG:HB3 | 1.85 | 0.57 |
| 7:Ja:106:SER:HB3 | 8:Jb:207:ARG:HB3 | 1.87 | 0.57 |
| 7:Je:104:VAL:HG12 | 8:Jf:212:ILE:HG13 | 1.87 | 0.57 |
| 7:Kg:104:VAL:HG12 | 8:Kh:212:ILE:HG13 | 1.86 | 0.57 |
| 2:Bc:272:VAL:HG22 | 2:Bd:260:VAL:HG22 | 1.86 | 0.57 |
| 2:Bl:248:ALA:HB1 | 2:Bl:265:VAL:HG22 | 1.87 | 0.57 |
| 2:Bl:277:MET:HE2 | 2:Bl:311:LYS:HD2 | 1.86 | 0.57 |
| 2:Bp:290:PRO:HB3 | 2:Bp:296:GLY:HA3 | 1.87 | 0.57 |
| 2:Br:22:LYS:HB3 | 2:Br:237:GLU:HG2 | 1.87 | 0.57 |
| 3:Cd:201:ASP:HB3 | 3:Cd:221:ALA:HB3 | 1.87 | 0.57 |
| 3:Ce:201:ASP:HB3 | 3:Ce:221:ALA:HB3 | 1.87 | 0.57 |
| 7:Ho:104:VAL:HG12 | 8:Hp:212:ILE:HG13 | 1.86 | 0.57 |
| 1:Ag:119:LYS:HD2 | 1:Ai:199:LEU:HB2 | 1.86 | 0.57 |
| 1:As:129:ASN:HB2 | 1:As:156:ASN:HB3 | 1.86 | 0.57 |
| 2:Bb:290:PRO:HB3 | 2:Bb:296:GLY:HA3 | 1.86 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bc:248:ALA:HB1 | 2:Bc:265:VAL:HG22 | 1.86 | 0.57 |
| 2:Bp:272:VAL:HG22 | 2:Bq:260:VAL:HG22 | 1.86 | 0.57 |
| 2:Bv:290:PRO:HB3 | 2:Bv:296:GLY:HA3 | 1.87 | 0.57 |
| 2:Bw:253:ASN:HB3 | 2:Bw:258:THR:HG23 | 1.84 | 0.57 |
| 5:Ea:81:MET:HG3 | 5:Ea:86:VAL:HB | 1.86 | 0.57 |
| 7:Hw:104:VAL:HG12 | 8:Hx:212:ILE:HG13 | 1.86 | 0.57 |
| 1:Ar:139:GLY:HA3 | 1:As:148:TYR:HD1 | 1.70 | 0.57 |
| 2:Bl:25:ALA:HB2 | 2:Bl:186:LEU:HD23 | 1.87 | 0.57 |
| 2:Bp:25:ALA:HB2 | 2:Bp:186:LEU:HD23 | 1.86 | 0.57 |
| 2:Bw:87:ALA:HB2 | 2:Bw:101:ILE:HG22 | 1.85 | 0.57 |
| 3:Cx:255:ASP:HB3 | 3:Cx:258:SER:HB3 | 1.87 | 0.57 |
| 4:Dk:104:ILE:HG23 | 4:Dl:145:ARG:HD3 | 1.86 | 0.57 |
| 5:Ef:148:ILE:HD12 | 5:Ef:184:ARG:HE | 1.70 | 0.57 |
| 7:Hq:77:ARG:HH12 | 7:Hs:73:ARG:HH21 | 1.53 | 0.57 |
| 8:Ij:156:ARG:HE | 8:Ij:192:LEU:HD13 | 1.70 | 0.57 |
| 1:An:125:LEU:HB2 | 1:An:160:PHE:HB3 | 1.86 | 0.57 |
| 1:At:51:ASP:HA | 1:At:54:ARG:HE | 1.70 | 0.57 |
| 1:Aw:136:LEU:HD13 | 1:Ax:154:LEU:HD13 | 1.87 | 0.57 |
| 2:Bc:290:PRO:HB3 | 2:Bc:296:GLY:HA3 | 1.86 | 0.57 |
| 3:Cb:206:ILE:HG13 | 3:Cb:216:ILE:HG12 | 1.87 | 0.57 |
| 5:Ey:81:MET:HG3 | 5:Ey:86:VAL:HB | 1.86 | 0.57 |
| 8:Jn:156:ARG:HE | 8:Jn:192:LEU:HD13 | 1.70 | 0.57 |
| 8:Jr:156:ARG:HE | 8:Jr:192:LEU:HD13 | 1.69 | 0.57 |
| 1:Al:125:LEU:HB2 | 1:Al:160:PHE:HB3 | 1.86 | 0.56 |
| 1:Ax:219:PHE:HD1 | 2:Bm:69:LEU:HD13 | 1.69 | 0.56 |
| 2:Bg:290:PRO:HB3 | 2:Bg:296:GLY:HA3 | 1.85 | 0.56 |
| 2:Bn:277:MET:HE2 | 2:Bn:311:LYS:HD2 | 1.87 | 0.56 |
| 2:Bs:283:GLU:HG2 | 2:Bs:305:GLU:HG3 | 1.87 | 0.56 |
| 4:Df:249:PHE:HB3 | 4:Df:254:LEU:HD23 | 1.87 | 0.56 |
| 4:Do:93:PRO:HB2 | 4:Do:95:TRP:HE3 | 1.68 | 0.56 |
| 8:Jb:104:ILE:HG23 | 8:Jb:114:VAL:HG11 | 1.87 | 0.56 |
| 7:Ji:106:SER:HB3 | 8:Jj:207:ARG:HB3 | 1.87 | 0.56 |
| 8:Jx:156:ARG:HE | 8:Jx:192:LEU:HD13 | 1.69 | 0.56 |
| 7:Jy:104:VAL:HG12 | 8:Jz:212:ILE:HG13 | 1.85 | 0.56 |
| 1:Aq:51:ASP:HA | 1:Aq:54:ARG:HE | 1.69 | 0.56 |
| 2:Bd:272:VAL:HG22 | 2:Be:260:VAL:HG22 | 1.86 | 0.56 |
| 2:By:275:GLY:HA3 | 2:Bz:338:PRO:HG2 | 1.86 | 0.56 |
| 3:Ck:85:VAL:HG22 | 3:Ck:108:ILE:HG12 | 1.85 | 0.56 |
| 4:Dj:216:ILE:HA | 4:Dj:291:ARG:HA | 1.88 | 0.56 |
| 5:Et:116:ARG:HA | 5:Et:149:GLN:HE22 | 1.70 | 0.56 |
| 8:Hp:156:ARG:HE | 8:Hp:192:LEU:HD13 | 1.70 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:At:119:LYS:HD2 | 1:Av:199:LEU:HB2 | 1.87 | 0.56 |
| 2:Ba:141:GLY:CA | 2:Ba:154:GLY:O | 2.54 | 0.56 |
| 2:Bg:275:GLY:HA3 | 2:Bh:338:PRO:HG2 | 1.88 | 0.56 |
| 2:Bi:318:LEU:HG | 2:Bi:320:PRO:HG3 | 1.86 | 0.56 |
| 2:Bn:87:ALA:HB2 | 2:Bn:101:ILE:HG22 | 1.86 | 0.56 |
| 2:Bn:283:GLU:HG2 | 2:Bn:305:GLU:HB3 | 1.88 | 0.56 |
| 3:Cp:226:VAL:HB | 3:Cp:236:MET:HB3 | 1.88 | 0.56 |
| 4:Dc:68:ILE:HD11 | 4:Dd:112:GLN:HE21 | 1.70 | 0.56 |
| 5:Eb:148:ILE:HD12 | 5:Eb:184:ARG:HE | 1.71 | 0.56 |
| 5:En:148:ILE:HD12 | 5:En:184:ARG:HE | 1.70 | 0.56 |
| 5:Et:148:ILE:HD12 | 5:Et:184:ARG:HE | 1.69 | 0.56 |
| 7:Hs:106:SER:HB3 | 8:Ht:207:ARG:HB3 | 1.88 | 0.56 |
| 7:Ks:78:ALA:HB3 | 7:Ku:91:ALA:HB3 | 1.87 | 0.56 |
| 1:Ag:245:GLN:HG3 | 1:Ah:200:ASN:HD21 | 1.71 | 0.56 |
| 1:An:125:LEU:HB3 | 1:Aq:244:MET:HE3 | 1.87 | 0.56 |
| 2:Ba:41:VAL:HG23 | 2:Ba:83:VAL:HG21 | 1.86 | 0.56 |
| 2:Bo:91:ALA:HB1 | 2:Bo:174:ASN:HD21 | 1.71 | 0.56 |
| 3:Ci:220:PHE:HE2 | 3:Ci:273:VAL:HG11 | 1.70 | 0.56 |
| 3:Cq:201:ASP:HB3 | 3:Cq:221:ALA:HB3 | 1.86 | 0.56 |
| 5:Ed:99:MET:HB3 | 5:Ed:114:LEU:HD21 | 1.87 | 0.56 |
| 7:Ig:104:VAL:HG12 | 8:Ih:212:ILE:HG13 | 1.87 | 0.56 |
| 8:Kj:156:ARG:HE | 8:Kj:192:LEU:HD13 | 1.70 | 0.56 |
| 1:Ar:206:ILE:HG12 | 1:Ar:235:TYR:HD1 | 1.71 | 0.56 |
| 1:At:206:ILE:HG12 | 1:At:235:TYR:HD1 | 1.70 | 0.56 |
| 2:Bj:253:ASN:HB3 | 2:Bj:258:THR:HG23 | 1.88 | 0.56 |
| 2:Bw:105:SER:HB2 | 2:Bw:112:LEU:HD11 | 1.87 | 0.56 |
| 3:Cb:293:GLN:HB2 | 3:Cb:369:ILE:HG23 | 1.86 | 0.56 |
| 3:Cq:358:VAL:HG12 | 3:Cq:360:GLN:H | 1.70 | 0.56 |
| 3:Cx:239:THR:HG21 | 3:Cy:155:ARG:HD3 | 1.88 | 0.56 |
| 4:Dc:93:PRO:HB2 | 4:Dc:95:TRP:HE3 | 1.70 | 0.56 |
| 4:Dq:111:LYS:HD2 | 5:Eo:197:PRO:HD3 | 1.87 | 0.56 |
| 4:Du:104:ILE:HG23 | 4:Dv:145:ARG:HD3 | 1.87 | 0.56 |
| 5:Eh:148:ILE:HD12 | 5:Eh:184:ARG:HE | 1.70 | 0.56 |
| 7:Js:104:VAL:HG12 | 8:Jt:212:ILE:HG13 | 1.88 | 0.56 |
| 1:Ae:139:GLY:HA3 | 1:Af:148:TYR:HD1 | 1.70 | 0.56 |
| 1:Ag:125:LEU:HB2 | 1:Ag:160:PHE:HB3 | 1.88 | 0.56 |
| 1:At:129:ASN:HB2 | 1:At:156:ASN:HB3 | 1.88 | 0.56 |
| 1:Aw:139:GLY:HA3 | 1:Ax:148:TYR:HD1 | 1.70 | 0.56 |
| 2:Bg:254:SER:HB2 | 2:Bi:138:VAL:HG22 | 1.88 | 0.56 |
| 2:Bn:360:ILE:HD12 | 2:Bp:163:SER:H | 1.70 | 0.56 |
| 3:Cb:195:MET:HE2 | 3:Cb:281:LEU:HD11 | 1.88 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 4:Dm:93:PRO:HB2 | 4:Dm:95:TRP:HE3 | 1.68 | 0.56 |
| 4:Dz:217:ASP:HA | 4:Dz:258:ARG:HD3 | 1.87 | 0.56 |
| 1:An:129:ASN:HB2 | 1:An:156:ASN:HB3 | 1.88 | 0.56 |
| 1:Au:234:GLN:HA | 1:Av:198:THR:HB | 1.87 | 0.56 |
| 1:Av:119:LYS:HB3 | 1:Ax:199:LEU:HD12 | 1.86 | 0.56 |
| 2:Bv:25:ALA:HB2 | 2:Bv:186:LEU:HD23 | 1.88 | 0.56 |
| 3:Ct:80:PHE:HA | 6:Ft:136:VAL:HG21 | 1.86 | 0.56 |
| 4:Dj:217:ASP:HA | 4:Dj:258:ARG:HD3 | 1.87 | 0.56 |
| 4:Dr:249:PHE:HB3 | 4:Dr:254:LEU:HD23 | 1.86 | 0.56 |
| 7:He:104:VAL:HG12 | 8:Hf:212:ILE:HG13 | 1.88 | 0.56 |
| 8:Jh:104:ILE:HG23 | 8:Jh:114:VAL:HG11 | 1.88 | 0.56 |
| 7:Jq:106:SER:HB3 | 8:Jr:207:ARG:HB3 | 1.88 | 0.56 |
| 7:Km:104:VAL:HG12 | 8:Kn:212:ILE:HG13 | 1.87 | 0.56 |
| 1:Ap:245:GLN:HG3 | 1:Aq:200:ASN:HD21 | 1.70 | 0.56 |
| 2:Bk:41:VAL:HG23 | 2:Bk:83:VAL:HG21 | 1.88 | 0.56 |
| 4:Dx:249:PHE:HB3 | 4:Dx:254:LEU:HD23 | 1.86 | 0.56 |
| 8:Ip:104:ILE:HG23 | 8:Ip:114:VAL:HG11 | 1.87 | 0.56 |
| 7:Iw:106:SER:HB3 | 8:Ix:207:ARG:HB3 | 1.87 | 0.56 |
| 7:Jo:78:ALA:HB3 | 7:Jq:91:ALA:HB3 | 1.86 | 0.56 |
| 8:Jr:104:ILE:HG23 | 8:Jr:114:VAL:HG11 | 1.88 | 0.56 |
| 1:Au:139:GLY:HA3 | 1:Av:148:TYR:HD1 | 1.71 | 0.56 |
| 2:Bd:290:PRO:HB3 | 2:Bd:296:GLY:HA3 | 1.88 | 0.56 |
| 2:Bz:141:GLY:CA | 2:Bz:154:GLY:O | 2.54 | 0.56 |
| 3:Cp:358:VAL:HG12 | 3:Cp:360:GLN:H | 1.70 | 0.56 |
| 5:En:99:MET:HB3 | 5:En:114:LEU:HD21 | 1.88 | 0.56 |
| 8:Ix:104:ILE:HG23 | 8:Ix:114:VAL:HG11 | 1.88 | 0.56 |
| 1:Ad:129:ASN:HB2 | 1:Ad:156:ASN:HB3 | 1.87 | 0.56 |
| 1:As:232:ARG:HH22 | 1:At:194:GLU:HG3 | 1.71 | 0.56 |
| 2:Bm:87:ALA:HB2 | 2:Bm:101:ILE:HG22 | 1.87 | 0.56 |
| 2:Bq:290:PRO:HB3 | 2:Bq:296:GLY:HA3 | 1.88 | 0.56 |
| 3:Cc:271:LEU:HD11 | 6:Gc:145:PHE:HE2 | 1.71 | 0.56 |
| 3:Cq:255:ASP:HB3 | 3:Cq:258:SER:HB3 | 1.88 | 0.56 |
| 3:Cr:361:PRO:HB2 | 4:Dk:148:ARG:HD2 | 1.88 | 0.56 |
| 4:De:111:LYS:HD2 | 5:Ec:197:PRO:HD3 | 1.87 | 0.56 |
| 4:Dj:78:ARG:HB3 | 4:Dj:143:GLN:HE21 | 1.70 | 0.56 |
| 8:Hl:155:LEU:HD23 | 8:Hl:162:ILE:HD11 | 1.88 | 0.56 |
| 8:Hv:156:ARG:HE | 8:Hv:192:LEU:HD13 | 1.71 | 0.56 |
| 7:Jq:104:VAL:HG12 | 8:Jr:212:ILE:HG13 | 1.86 | 0.56 |
| 8:Lj:77:PRO:HB2 | 8:Lj:146:VAL:HA | 1.88 | 0.56 |
| 1:Af:234:GLN:HA | 1:Ag:198:THR:HB | 1.88 | 0.55 |
| 2:Bf:254:SER:HB2 | 2:Bh:138:VAL:HG22 | 1.87 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bo:285:LEU:HD23 | 2:Bo:303:ASN:HB3 | 1.88 | 0.55 |
| 2:Bq:360:ILE:HD12 | 2:Bs:163:SER:H | 1.70 | 0.55 |
| 2:Br:87:ALA:HB2 | 2:Br:101:ILE:HG22 | 1.87 | 0.55 |
| 2:Bt:22:LYS:HB3 | 2:Bt:237:GLU:HG2 | 1.88 | 0.55 |
| 3:Cc:358:VAL:HG12 | 3:Cc:360:GLN:H | 1.72 | 0.55 |
| 4:Do:104:ILE:HG23 | 4:Dp:145:ARG:HD3 | 1.87 | 0.55 |
| 8:Jd:156:ARG:HE | 8:Jd:192:LEU:HD13 | 1.71 | 0.55 |
| 1:Ag:231:ALA:HB3 | 1:Ah:195:LYS:HG3 | 1.87 | 0.55 |
| 1:Aj:232:ARG:HH22 | 1:Ak:194:GLU:HG3 | 1.70 | 0.55 |
| 2:Bv:87:ALA:HB2 | 2:Bv:101:ILE:HG22 | 1.88 | 0.55 |
| 2:Bz:87:ALA:HB2 | 2:Bz:101:ILE:HG22 | 1.87 | 0.55 |
| 3:Co:201:ASP:HB3 | 3:Co:221:ALA:HB3 | 1.86 | 0.55 |
| 3:Cp:342:ILE:HG21 | 3:Cp:367:ILE:HD11 | 1.87 | 0.55 |
| 3:Cr:358:VAL:HG12 | 3:Cr:360:GLN:H | 1.72 | 0.55 |
| 5:Ec:81:MET:HG3 | 5:Ec:86:VAL:HB | 1.87 | 0.55 |
| 7:Ha:104:VAL:HG12 | 8:Hb:212:ILE:HG13 | 1.88 | 0.55 |
| 7:Hm:104:VAL:HG12 | 8:Hn:212:ILE:HG13 | 1.88 | 0.55 |
| 7:Hu:78:ALA:HB3 | 7:Hw:91:ALA:HB3 | 1.88 | 0.55 |
| 8:Jv:104:ILE:HG23 | 8:Jv:114:VAL:HG11 | 1.88 | 0.55 |
| 1:Ak:66:TRP:HA | 1:Ak:192:ARG:HD3 | 1.88 | 0.55 |
| 2:Be:290:PRO:HB3 | 2:Be:296:GLY:HA3 | 1.89 | 0.55 |
| 2:Bi:223:PRO:HB3 | 4:De:94:VAL:HG12 | 1.88 | 0.55 |
| 2:Bl:141:GLY:CA | 2:Bl:154:GLY:O | 2.54 | 0.55 |
| 3:Cc:226:VAL:HB | 3:Cc:236:MET:HB3 | 1.87 | 0.55 |
| 3:Cs:61:ILE:HD11 | 3:Cs:282:GLU:HG3 | 1.87 | 0.55 |
| 3:Cu:78:TYR:HD2 | 3:Cu:88:ILE:HB | 1.71 | 0.55 |
| 3:Cu:249:PRO:HG2 | 3:Cu:252:SER:HB3 | 1.89 | 0.55 |
| 3:Cw:292:PRO:HB3 | 3:Cw:306:LEU:HD13 | 1.88 | 0.55 |
| 4:Dm:83:THR:HG22 | 4:Dm:111:LYS:HA | 1.89 | 0.55 |
| 5:Em:81:MET:HG3 | 5:Em:86:VAL:HB | 1.88 | 0.55 |
| 5:Ep:99:MET:HB3 | 5:Ep:114:LEU:HD21 | 1.87 | 0.55 |
| 8:It:104:ILE:HG23 | 8:It:114:VAL:HG11 | 1.88 | 0.55 |
| 7:Jm:104:VAL:HG12 | 8:Jn:212:ILE:HG13 | 1.88 | 0.55 |
| 8:Kb:156:ARG:HE | 8:Kb:192:LEU:HD13 | 1.71 | 0.55 |
| 7:Ki:104:VAL:HG12 | 8:Kj:212:ILE:HG13 | 1.89 | 0.55 |
| 1:Ab:66:TRP:HA | 1:Ab:192:ARG:HD3 | 1.87 | 0.55 |
| 2:Bz:290:PRO:HB3 | 2:Bz:296:GLY:HA3 | 1.88 | 0.55 |
| 3:Cm:157:LEU:HA | 3:Cm:161:SER:HB2 | 1.88 | 0.55 |
| 4:Dn:184:ILE:HG12 | 4:Dn:286:VAL:HG22 | 1.87 | 0.55 |
| 4:Dp:184:ILE:HG12 | 4:Dp:286:VAL:HG22 | 1.87 | 0.55 |
| 4:Dp:216:ILE:HA | 4:Dp:291:ARG:HA | 1.87 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 4:Dr:216:ILE:HA | 4:Dr:291:ARG:HA | 1.87 | 0.55 |
| 5:Ez:99:MET:HB3 | 5:Ez:114:LEU:HD21 | 1.87 | 0.55 |
| 8:Hb:36:LYS:HA | 8:Lj:159:GLY:HA3 | 1.89 | 0.55 |
| 7:Jk:104:VAL:HG12 | 8:Jl:212:ILE:HG13 | 1.89 | 0.55 |
| 8:Kp:156:ARG:HE | 8:Kp:192:LEU:HD13 | 1.70 | 0.55 |
| 8:Kr:159:GLY:HA3 | 8:Kv:36:LYS:HA | 1.88 | 0.55 |
| 1:Ab:219:PHE:HA | 2:Bq:69:LEU:HD13 | 1.89 | 0.55 |
| 1:Ac:129:ASN:HB2 | 1:Ac:156:ASN:HB3 | 1.87 | 0.55 |
| 1:Aq:206:ILE:HG12 | 1:Aq:235:TYR:HD1 | 1.72 | 0.55 |
| 1:As:206:ILE:HG12 | 1:As:235:TYR:HD1 | 1.70 | 0.55 |
| 2:Bi:253:ASN:HB3 | 2:Bi:258:THR:HG23 | 1.89 | 0.55 |
| 2:Bo:272:VAL:HG22 | 2:Bp:260:VAL:HG22 | 1.89 | 0.55 |
| 3:Cr:255:ASP:HB3 | 3:Cr:258:SER:HB3 | 1.88 | 0.55 |
| 8:Ij:104:ILE:HG23 | 8:Ij:114:VAL:HG11 | 1.88 | 0.55 |
| 1:Ac:244:MET:HE3 | 1:Az:125:LEU:HB3 | 1.88 | 0.55 |
| 1:Av:125:LEU:HB2 | 1:Av:160:PHE:HB3 | 1.87 | 0.55 |
| 2:Bq:87:ALA:HB2 | 2:Bq:101:ILE:HG22 | 1.87 | 0.55 |
| 5:Es:81:MET:HG3 | 5:Es:86:VAL:HB | 1.88 | 0.55 |
| 5:Ew:154:LEU:HB3 | 5:Ew:164:TYR:HE1 | 1.72 | 0.55 |
| 7:Ii:104:VAL:HG12 | 8:Ij:212:ILE:HG13 | 1.89 | 0.55 |
| 8:Kt:77:PRO:HB2 | 8:Kt:146:VAL:HA | 1.89 | 0.55 |
| 8:Lf:77:PRO:HB2 | 8:Lf:146:VAL:HA | 1.87 | 0.55 |
| 1:Aq:66:TRP:HA | 1:Aq:192:ARG:HD3 | 1.89 | 0.55 |
| 2:Bj:34:GLN:HG2 | 2:Bk:134:GLN:HB3 | 1.88 | 0.55 |
| 2:Bq:25:ALA:HB2 | 2:Bq:186:LEU:HD23 | 1.89 | 0.55 |
| 3:Cf:361:PRO:HB2 | 4:Dy:148:ARG:HD2 | 1.89 | 0.55 |
| 4:Dk:83:THR:HG22 | 4:Dk:111:LYS:HA | 1.89 | 0.55 |
| 4:Do:83:THR:HG22 | 4:Do:111:LYS:HA | 1.89 | 0.55 |
| 4:Dv:64:ALA:HB2 | 4:Dv:172:LEU:HD22 | 1.89 | 0.55 |
| 5:Eg:154:LEU:HB3 | 5:Eg:164:TYR:HE1 | 1.72 | 0.55 |
| 8:Id:156:ARG:HE | 8:Id:192:LEU:HD13 | 1.72 | 0.55 |
| 8:Jx:77:PRO:HB2 | 8:Jx:146:VAL:HA | 1.89 | 0.55 |
| 8:Kj:155:LEU:HD23 | 8:Kj:162:ILE:HD11 | 1.89 | 0.55 |
| 8:Kt:156:ARG:HE | 8:Kt:192:LEU:HD13 | 1.72 | 0.55 |
| 1:Ai:64:PRO:HB2 | 1:Aj:38:VAL:HG13 | 1.89 | 0.55 |
| 2:Bm:290:PRO:HB3 | 2:Bm:296:GLY:HA3 | 1.87 | 0.55 |
| 2:Br:272:VAL:HG22 | 2:Bs:260:VAL:HG22 | 1.89 | 0.55 |
| 2:Bx:290:PRO:HB3 | 2:Bx:296:GLY:HA3 | 1.88 | 0.55 |
| 3:Cr:201:ASP:HB3 | 3:Cr:221:ALA:HB3 | 1.87 | 0.55 |
| 4:Dn:249:PHE:HB3 | 4:Dn:254:LEU:HD23 | 1.88 | 0.55 |
| 5:Eb:116:ARG:HA | 5:Eb:149:GLN:HE22 | 1.70 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Hb:104:ILE:HG23 | 8:Hb:114:VAL:HG11 | 1.89 | 0.55 |
| 1:Aj:139:GLY:HA3 | 1:Ak:148:TYR:HD1 | 1.72 | 0.55 |
| 2:Bf:290:PRO:HB3 | 2:Bf:296:GLY:HA3 | 1.89 | 0.55 |
| 3:Co:358:VAL:HG12 | 3:Co:360:GLN:H | 1.71 | 0.55 |
| 3:Cz:195:MET:HE2 | 3:Cz:281:LEU:HD11 | 1.89 | 0.55 |
| 5:Ez:148:ILE:HD12 | 5:Ez:184:ARG:HE | 1.72 | 0.55 |
| 7:Ha:106:SER:HB3 | 8:Hb:207:ARG:HB3 | 1.89 | 0.55 |
| 8:Hl:77:PRO:HB2 | 8:Hl:146:VAL:HA | 1.88 | 0.55 |
| 8:Jj:104:ILE:HG23 | 8:Jj:114:VAL:HG11 | 1.89 | 0.55 |
| 7:Ke:104:VAL:HG12 | 8:Kf:212:ILE:HG13 | 1.89 | 0.55 |
| 8:Kv:159:GLY:HA3 | 8:Kz:36:LYS:HA | 1.88 | 0.55 |
| 1:Ag:51:ASP:HA | 1:Ag:54:ARG:HE | 1.71 | 0.55 |
| 1:Aq:129:ASN:HB2 | 1:Aq:156:ASN:HB3 | 1.89 | 0.55 |
| 1:Ay:113:GLU:HB2 | 1:Ay:172:MET:HB3 | 1.88 | 0.55 |
| 2:Be:254:SER:HB2 | 2:Bg:138:VAL:HG22 | 1.88 | 0.55 |
| 2:Bl:141:GLY:HA3 | 2:Bl:154:GLY:O | 2.07 | 0.55 |
| 2:Bn:254:SER:HB2 | 2:Bp:138:VAL:HG22 | 1.89 | 0.55 |
| 3:Co:80:PHE:HA | 6:Fo:136:VAL:HG21 | 1.90 | 0.55 |
| 3:Cx:358:VAL:HG12 | 3:Cx:360:GLN:H | 1.72 | 0.55 |
| 3:Cy:154:ASN:HD22 | 3:Cy:169:THR:HG23 | 1.72 | 0.55 |
| 4:De:104:ILE:HG23 | 4:Df:145:ARG:HD3 | 1.88 | 0.55 |
| 7:Hs:83:GLN:HE22 | 7:Hy:55:ARG:HH22 | 1.54 | 0.55 |
| 8:Ht:77:PRO:HB2 | 8:Ht:146:VAL:HA | 1.89 | 0.55 |
| 8:Jz:104:ILE:HG23 | 8:Jz:114:VAL:HG11 | 1.89 | 0.55 |
| 8:Kv:156:ARG:HE | 8:Kv:192:LEU:HD13 | 1.71 | 0.55 |
| 1:Ap:113:GLU:HB2 | 1:Ap:172:MET:HB3 | 1.89 | 0.54 |
| 2:Bc:22:LYS:HB3 | 2:Bc:237:GLU:HG2 | 1.89 | 0.54 |
| 2:Bf:22:LYS:HB3 | 2:Bf:237:GLU:HG2 | 1.90 | 0.54 |
| 2:Bx:105:SER:HB2 | 2:Bx:112:LEU:HD11 | 1.90 | 0.54 |
| 4:Do:184:ILE:HG12 | 4:Do:286:VAL:HG22 | 1.89 | 0.54 |
| 8:If:104:ILE:HG23 | 8:If:114:VAL:HG11 | 1.87 | 0.54 |
| 7:Ki:108:LYS:HD2 | 8:Kj:204:VAL:HG11 | 1.89 | 0.54 |
| 1:Af:125:LEU:HB2 | 1:Af:160:PHE:HB3 | 1.90 | 0.54 |
| 1:Af:245:GLN:HG3 | 1:Ag:200:ASN:HD21 | 1.72 | 0.54 |
| 1:Ap:139:GLY:HA3 | 1:Aq:148:TYR:HD1 | 1.72 | 0.54 |
| 1:At:231:ALA:HB3 | 1:Au:195:LYS:HG3 | 1.87 | 0.54 |
| 2:Bc:25:ALA:HB2 | 2:Bc:186:LEU:HD23 | 1.89 | 0.54 |
| 2:Bj:41:VAL:HG23 | 2:Bj:83:VAL:HG21 | 1.89 | 0.54 |
| 2:Bk:105:SER:HB2 | 2:Bk:112:LEU:HD11 | 1.89 | 0.54 |
| 2:Bl:275:GLY:HA3 | 2:Bm:338:PRO:HG2 | 1.89 | 0.54 |
| 2:Bp:254:SER:HB2 | 2:Br:138:VAL:HG22 | 1.89 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 3:Ch:111:SER:HB3 | 3:Ch:113:THR:HG22 | 1.89 | 0.54 |
| 4:Dx:217:ASP:HA | 4:Dx:258:ARG:HD3 | 1.87 | 0.54 |
| 5:Ec:32:ILE:HD13 | 5:Ec:65:ARG:HH22 | 1.72 | 0.54 |
| 7:Ha:91:ALA:HB3 | 7:Lk:78:ALA:HB3 | 1.88 | 0.54 |
| 7:Ja:78:ALA:HB3 | 7:Jc:91:ALA:HB3 | 1.88 | 0.54 |
| 8:Kd:104:ILE:HG23 | 8:Kd:114:VAL:HG11 | 1.89 | 0.54 |
| 1:Ae:206:ILE:HG12 | 1:Ae:235:TYR:HD1 | 1.72 | 0.54 |
| 2:Bb:141:GLY:CA | 2:Bb:154:GLY:O | 2.56 | 0.54 |
| 2:Br:360:ILE:HD12 | 2:Bt:163:SER:H | 1.73 | 0.54 |
| 2:Bs:303:ASN:H | 2:Bt:285:LEU:HD12 | 1.72 | 0.54 |
| 2:By:287:VAL:HG22 | 2:By:301:VAL:HG13 | 1.89 | 0.54 |
| 3:Cb:165:VAL:HG11 | 3:Cb:309:ILE:HD12 | 1.90 | 0.54 |
| 4:Dz:184:ILE:HG12 | 4:Dz:286:VAL:HG22 | 1.89 | 0.54 |
| 7:He:106:SER:HB3 | 8:Hf:207:ARG:HB3 | 1.88 | 0.54 |
| 7:Hg:104:VAL:HG12 | 8:Hh:212:ILE:HG13 | 1.89 | 0.54 |
| 7:Ic:108:LYS:HD2 | 8:Id:204:VAL:HG11 | 1.89 | 0.54 |
| 7:Iq:104:VAL:HG12 | 8:Ir:212:ILE:HG13 | 1.89 | 0.54 |
| 8:Jt:104:ILE:HG23 | 8:Jt:114:VAL:HG11 | 1.89 | 0.54 |
| 8:Kp:104:ILE:HG23 | 8:Kp:114:VAL:HG11 | 1.88 | 0.54 |
| 1:Ac:206:ILE:HG12 | 1:Ac:235:TYR:HD1 | 1.72 | 0.54 |
| 1:Aq:232:ARG:HH22 | 1:Ar:194:GLU:HG3 | 1.73 | 0.54 |
| 1:As:125:LEU:HB2 | 1:As:160:PHE:HB3 | 1.90 | 0.54 |
| 1:Ax:136:LEU:HD13 | 1:Ay:154:LEU:HD13 | 1.90 | 0.54 |
| 2:Bs:87:ALA:HB2 | 2:Bs:101:ILE:HG22 | 1.89 | 0.54 |
| 2:Bu:267:LEU:HB2 | 2:Bu:320:PRO:HG2 | 1.90 | 0.54 |
| 3:Ca:126:ILE:HB | 3:Ca:169:THR:HG22 | 1.89 | 0.54 |
| 3:Cm:195:MET:HE2 | 3:Cm:281:LEU:HD11 | 1.89 | 0.54 |
| 3:Cn:292:PRO:HB3 | 3:Cn:306:LEU:HD13 | 1.90 | 0.54 |
| 4:Dy:93:PRO:HD3 | 4:Dy:133:ARG:HA | 1.88 | 0.54 |
| 5:Ee:154:LEU:HB3 | 5:Ee:164:TYR:HE1 | 1.71 | 0.54 |
| 8:Hv:155:LEU:HD23 | 8:Hv:162:ILE:HD11 | 1.88 | 0.54 |
| 8:Ib:104:ILE:HG23 | 8:Ib:114:VAL:HG11 | 1.89 | 0.54 |
| 7:Jw:106:SER:HB3 | 8:Jx:207:ARG:HB3 | 1.88 | 0.54 |
| 8:Kb:77:PRO:HB2 | 8:Kb:146:VAL:HA | 1.90 | 0.54 |
| 8:Kn:155:LEU:HD23 | 8:Kn:162:ILE:HD11 | 1.90 | 0.54 |
| 7:Ku:83:GLN:HE22 | 7:La:55:ARG:HH22 | 1.56 | 0.54 |
| 1:Ap:129:ASN:HB2 | 1:Ap:156:ASN:HB3 | 1.88 | 0.54 |
| 2:By:22:LYS:HB3 | 2:By:237:GLU:HG2 | 1.89 | 0.54 |
| 3:Cd:358:VAL:HG12 | 3:Cd:360:GLN:H | 1.71 | 0.54 |
| 3:Ck:126:ILE:HB | 3:Ck:169:THR:HG22 | 1.89 | 0.54 |
| 3:Cl:195:MET:HE2 | 3:Cl:281:LEU:HD11 | 1.88 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 3:Cp:255:ASP:HB3 | 3:Cp:258:SER:HB3 | 1.90 | 0.54 |
| 4:Dd:223:THR:HG22 | 4:Dd:285:VAL:HG22 | 1.89 | 0.54 |
| 4:Dk:141:ASP:HB2 | 4:Dk:149:ILE:HG12 | 1.88 | 0.54 |
| 4:Dk:185:LEU:HD23 | 4:Dk:199:SER:HB2 | 1.89 | 0.54 |
| 4:Dv:216:ILE:HA | 4:Dv:291:ARG:HA | 1.89 | 0.54 |
| 5:Et:189:ARG:HH21 | 5:Et:205:LYS:HZ1 | 1.56 | 0.54 |
| 8:Ir:155:LEU:HD23 | 8:Ir:162:ILE:HD11 | 1.89 | 0.54 |
| 8:Iz:156:ARG:HE | 8:Iz:192:LEU:HD13 | 1.73 | 0.54 |
| 8:Jh:155:LEU:HD23 | 8:Jh:162:ILE:HD11 | 1.89 | 0.54 |
| 8:Kf:77:PRO:HB2 | 8:Kf:146:VAL:HA | 1.89 | 0.54 |
| 8:Kh:155:LEU:HD23 | 8:Kh:162:ILE:HD11 | 1.89 | 0.54 |
| 8:Kv:104:ILE:HG23 | 8:Kv:114:VAL:HG11 | 1.88 | 0.54 |
| 7:Li:108:LYS:HD2 | 8:Lj:204:VAL:HG11 | 1.90 | 0.54 |
| 2:Bg:87:ALA:HB2 | 2:Bg:101:ILE:HG22 | 1.90 | 0.54 |
| 3:Cb:120:TYR:HE1 | 3:Cb:312:VAL:HA | 1.71 | 0.54 |
| 3:Cb:262:TRP:HA | 3:Cb:267:GLY:HA3 | 1.90 | 0.54 |
| 4:Db:216:ILE:HA | 4:Db:291:ARG:HA | 1.89 | 0.54 |
| 4:Dq:66:LYS:HA | 5:Er:162:LEU:HD22 | 1.90 | 0.54 |
| 5:Em:154:LEU:HB3 | 5:Em:164:TYR:HE1 | 1.73 | 0.54 |
| 8:Hh:156:ARG:HE | 8:Hh:192:LEU:HD13 | 1.72 | 0.54 |
| 8:Hn:104:ILE:HG23 | 8:Hn:114:VAL:HG11 | 1.89 | 0.54 |
| 7:Kw:106:SER:HB3 | 8:Kx:207:ARG:HB3 | 1.88 | 0.54 |
| 8:Kz:156:ARG:HE | 8:Kz:192:LEU:HD13 | 1.72 | 0.54 |
| 1:Ad:139:GLY:HA3 | 1:Ae:148:TYR:HD1 | 1.73 | 0.54 |
| 1:Ad:245:GLN:HG3 | 1:Ae:200:ASN:HD21 | 1.73 | 0.54 |
| 1:Au:119:LYS:HD2 | 1:Aw:199:LEU:HB2 | 1.89 | 0.54 |
| 2:Bd:317:LYS:HE3 | 2:Be:324:LEU:HD23 | 1.90 | 0.54 |
| 3:Cv:220:PHE:HE2 | 3:Cv:273:VAL:HG11 | 1.73 | 0.54 |
| 8:Hp:104:ILE:HG23 | 8:Hp:114:VAL:HG11 | 1.88 | 0.54 |
| 8:Ib:156:ARG:HE | 8:Ib:192:LEU:HD13 | 1.72 | 0.54 |
| 7:Ju:104:VAL:HG12 | 8:Jv:212:ILE:HG13 | 1.90 | 0.54 |
| 7:Lk:108:LYS:HD2 | 8:Ll:204:VAL:HG11 | 1.89 | 0.54 |
| 2:Ba:34:GLN:HG2 | 2:Bb:134:GLN:HB3 | 1.90 | 0.54 |
| 2:Bl:253:ASN:HB3 | 2:Bl:258:THR:HG23 | 1.89 | 0.54 |
| 2:Bp:267:LEU:HB2 | 2:Bp:320:PRO:HB2 | 1.90 | 0.54 |
| 2:Bp:360:ILE:HD12 | 2:Br:163:SER:H | 1.72 | 0.54 |
| 4:Dr:64:ALA:HB2 | 4:Dr:172:LEU:HD22 | 1.90 | 0.54 |
| 4:Ds:93:PRO:HB2 | 4:Ds:95:TRP:HE3 | 1.73 | 0.54 |
| 4:Dy:83:THR:HG22 | 4:Dy:111:LYS:HA | 1.88 | 0.54 |
| 5:Ek:154:LEU:HB3 | 5:Ek:164:TYR:HE1 | 1.72 | 0.54 |
| 5:Eu:154:LEU:HB3 | 5:Eu:164:TYR:HE1 | 1.71 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 5:Ew:32:ILE:HD13 | 5:Ew:65:ARG:HH22 | 1.73 | 0.54 |
| 7:Je:108:LYS:HD2 | 8:Jf:204:VAL:HG11 | 1.89 | 0.54 |
| 8:Kp:155:LEU:HD23 | 8:Kp:162:ILE:HD11 | 1.88 | 0.54 |
| 1:Ad:206:ILE:HG12 | 1:Ad:235:TYR:HD1 | 1.73 | 0.54 |
| 1:Aq:36:ASP:HB3 | 1:Aq:39:GLU:HG2 | 1.90 | 0.54 |
| 1:Ar:66:TRP:HA | 1:Ar:192:ARG:HD3 | 1.89 | 0.54 |
| 2:Bc:42:THR:HG22 | 2:Bc:80:VAL:HG22 | 1.90 | 0.54 |
| 2:Bz:27:VAL:HG21 | 2:Bz:233:LEU:HD21 | 1.88 | 0.54 |
| 3:Cy:334:ARG:HE | 3:Cz:295:VAL:HG21 | 1.73 | 0.54 |
| 4:Da:83:THR:HG22 | 4:Da:111:LYS:HA | 1.88 | 0.54 |
| 4:Dm:93:PRO:HD3 | 4:Dm:133:ARG:HA | 1.88 | 0.54 |
| 7:Hm:106:SER:HB3 | 8:Hn:207:ARG:HB3 | 1.88 | 0.54 |
| 7:Jy:106:SER:HB3 | 8:Jz:207:ARG:HB3 | 1.90 | 0.54 |
| 1:Ac:245:GLN:HG3 | 1:Ad:200:ASN:HD21 | 1.73 | 0.54 |
| 1:Ad:125:LEU:HB2 | 1:Ad:160:PHE:HB3 | 1.90 | 0.54 |
| 1:Aj:184:LEU:HD12 | 1:Aj:188:ASN:HB2 | 1.89 | 0.54 |
| 1:Al:64:PRO:HB2 | 1:Am:38:VAL:HG13 | 1.90 | 0.54 |
| 1:Al:125:LEU:HB3 | 1:Ao:244:MET:HE3 | 1.90 | 0.54 |
| 3:Cb:201:ASP:HB3 | 3:Cb:221:ALA:HB3 | 1.90 | 0.54 |
| 3:Ci:292:PRO:HB3 | 3:Ci:306:LEU:HD13 | 1.90 | 0.54 |
| 4:Dv:104:ILE:HA | 4:Dw:145:ARG:HD3 | 1.90 | 0.54 |
| 4:Dw:141:ASP:HB2 | 4:Dw:149:ILE:HG12 | 1.90 | 0.54 |
| 5:Ei:154:LEU:HB3 | 5:Ei:164:TYR:HE1 | 1.73 | 0.54 |
| 8:Hf:104:ILE:HG23 | 8:Hf:114:VAL:HG11 | 1.90 | 0.54 |
| 8:Hj:104:ILE:HG23 | 8:Hj:114:VAL:HG11 | 1.90 | 0.54 |
| 7:Hu:104:VAL:HG12 | 8:Hv:212:ILE:HG13 | 1.90 | 0.54 |
| 8:In:77:PRO:HB2 | 8:In:146:VAL:HA | 1.90 | 0.54 |
| 7:Jo:104:VAL:HG12 | 8:Jp:212:ILE:HG13 | 1.90 | 0.54 |
| 8:Kr:168:VAL:HG12 | 8:Kr:175:VAL:HA | 1.90 | 0.54 |
| 8:Kv:155:LEU:HD23 | 8:Kv:162:ILE:HD11 | 1.90 | 0.54 |
| 1:Ay:66:TRP:HA | 1:Ay:192:ARG:HD3 | 1.89 | 0.53 |
| 8:Ir:104:ILE:HG23 | 8:Ir:114:VAL:HG11 | 1.90 | 0.53 |
| 8:Jv:159:GLY:HA3 | 8:Jz:36:LYS:HA | 1.90 | 0.53 |
| 8:Kb:104:ILE:HG23 | 8:Kb:114:VAL:HG11 | 1.90 | 0.53 |
| 7:Kg:108:LYS:HD2 | 8:Kh:204:VAL:HG11 | 1.89 | 0.53 |
| 7:Ko:77:ARG:HH12 | 7:Kq:73:ARG:HH21 | 1.56 | 0.53 |
| 1:Av:66:TRP:HA | 1:Av:192:ARG:HD3 | 1.89 | 0.53 |
| 2:Bb:41:VAL:HG23 | 2:Bb:83:VAL:HG21 | 1.90 | 0.53 |
| 2:Bi:285:LEU:HD23 | 2:Bi:303:ASN:HB3 | 1.90 | 0.53 |
| 2:Bk:34:GLN:HG2 | 2:Bl:134:GLN:HB3 | 1.91 | 0.53 |
| 2:Bp:315:MET:HG3 | 2:Bq:328:VAL:HG13 | 1.89 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 4:Dl:116:TYR:HE2 | 5:El:198:GLU:HB3 | 1.73 | 0.53 |
| 8:Hd:168:VAL:HG12 | 8:Hd:175:VAL:HA | 1.90 | 0.53 |
| 8:Id:168:VAL:HG12 | 8:Id:175:VAL:HA | 1.90 | 0.53 |
| 8:Ir:159:GLY:HA3 | 8:Iv:36:LYS:HA | 1.90 | 0.53 |
| 7:La:106:SER:HB3 | 8:Lb:207:ARG:HB3 | 1.91 | 0.53 |
| 1:Ah:125:LEU:HB2 | 1:Ah:160:PHE:HB3 | 1.90 | 0.53 |
| 3:Cf:61:ILE:HD11 | 3:Cf:282:GLU:HG3 | 1.89 | 0.53 |
| 3:Cg:358:VAL:HG12 | 3:Cg:360:GLN:H | 1.74 | 0.53 |
| 3:Cz:315:GLY:H | 3:Cz:346:VAL:HB | 1.73 | 0.53 |
| 4:Db:37:GLN:HG3 | 4:Db:49:VAL:HG23 | 1.90 | 0.53 |
| 4:Dc:83:THR:HG22 | 4:Dc:111:LYS:HA | 1.89 | 0.53 |
| 4:Dd:184:ILE:HG12 | 4:Dd:286:VAL:HG22 | 1.91 | 0.53 |
| 4:Dp:37:GLN:HG3 | 4:Dp:49:VAL:HG23 | 1.90 | 0.53 |
| 4:Dq:93:PRO:HB2 | 4:Dq:95:TRP:HE3 | 1.72 | 0.53 |
| 4:Dz:116:TYR:HE2 | 5:Ez:198:GLU:HB3 | 1.74 | 0.53 |
| 5:Ew:168:TYR:HB2 | 5:Ew:196:MET:HE1 | 1.90 | 0.53 |
| 8:Iv:77:PRO:HB2 | 8:Iv:146:VAL:HA | 1.90 | 0.53 |
| 8:Jt:93:ASN:HB2 | 8:Jt:156:ARG:HH22 | 1.73 | 0.53 |
| 8:Lf:156:ARG:HE | 8:Lf:192:LEU:HD13 | 1.72 | 0.53 |
| 1:Al:231:ALA:HB3 | 1:Am:195:LYS:HG3 | 1.90 | 0.53 |
| 1:Au:206:ILE:HG12 | 1:Au:235:TYR:HD1 | 1.74 | 0.53 |
| 2:Bm:141:GLY:CA | 2:Bm:154:GLY:O | 2.55 | 0.53 |
| 2:Bp:42:THR:HG22 | 2:Bp:80:VAL:HG22 | 1.89 | 0.53 |
| 2:Bw:41:VAL:HG23 | 2:Bw:83:VAL:HG21 | 1.90 | 0.53 |
| 2:Bx:267:LEU:HB2 | 2:Bx:320:PRO:HG2 | 1.90 | 0.53 |
| 2:By:290:PRO:HB3 | 2:By:296:GLY:HA3 | 1.89 | 0.53 |
| 4:Da:104:ILE:HG23 | 4:Db:145:ARG:HD3 | 1.90 | 0.53 |
| 4:Dn:217:ASP:HA | 4:Dn:258:ARG:HD3 | 1.90 | 0.53 |
| 7:Ho:78:ALA:HB3 | 7:Hq:91:ALA:HB3 | 1.89 | 0.53 |
| 8:Hv:77:PRO:HB2 | 8:Hv:146:VAL:HA | 1.90 | 0.53 |
| 7:Jq:78:ALA:HB3 | 7:Js:91:ALA:HB3 | 1.89 | 0.53 |
| 1:Af:231:ALA:HB3 | 1:Ag:195:LYS:HG3 | 1.89 | 0.53 |
| 1:Ap:206:ILE:HG12 | 1:Ap:235:TYR:HD1 | 1.73 | 0.53 |
| 1:Ay:33:THR:HG23 | 1:Ay:35:VAL:H | 1.74 | 0.53 |
| 2:Bm:360:ILE:HD12 | 2:Bo:163:SER:H | 1.74 | 0.53 |
| 2:Bo:254:SER:HB2 | 2:Bq:138:VAL:HG22 | 1.90 | 0.53 |
| 3:Ca:201:ASP:HB3 | 3:Ca:221:ALA:HB3 | 1.90 | 0.53 |
| 3:Co:292:PRO:HB3 | 3:Co:306:LEU:HD13 | 1.91 | 0.53 |
| 4:Du:49:VAL:HG12 | 4:Du:59:GLU:HG2 | 1.88 | 0.53 |
| 5:Ek:32:ILE:HD13 | 5:Ek:65:ARG:HH22 | 1.73 | 0.53 |
| 7:Ie:108:LYS:HD2 | 8:If:204:VAL:HG11 | 1.90 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Ld:104:ILE:HG23 | 8:Ld:114:VAL:HG11 | 1.89 | 0.53 |
| 1:Au:219:PHE:HA | 2:Bj:69:LEU:HD13 | 1.89 | 0.53 |
| 2:Bj:248:ALA:HB1 | 2:Bj:265:VAL:HG22 | 1.90 | 0.53 |
| 2:Bl:41:VAL:HG23 | 2:Bl:83:VAL:HG21 | 1.90 | 0.53 |
| 2:Bm:103:VAL:HB | 2:Bm:137:LEU:HD21 | 1.90 | 0.53 |
| 2:Bq:318:LEU:HG | 2:Bq:320:PRO:HG3 | 1.91 | 0.53 |
| 3:Cg:332:LEU:HD11 | 3:Ch:190:GLY:HA3 | 1.91 | 0.53 |
| 4:Dh:104:ILE:HA | 4:Di:145:ARG:HD3 | 1.91 | 0.53 |
| 4:Dq:184:ILE:HG12 | 4:Dq:286:VAL:HG22 | 1.91 | 0.53 |
| 7:Hc:106:SER:HB3 | 8:Hd:207:ARG:HB3 | 1.90 | 0.53 |
| 8:Ih:104:ILE:HG23 | 8:Ih:114:VAL:HG11 | 1.91 | 0.53 |
| 8:Jd:104:ILE:HG23 | 8:Jd:114:VAL:HG11 | 1.91 | 0.53 |
| 7:Je:72:MET:H | 7:Jg:97:VAL:HG23 | 1.74 | 0.53 |
| 7:Kk:108:LYS:HD2 | 8:Kl:204:VAL:HG11 | 1.90 | 0.53 |
| 7:Kw:104:VAL:HG12 | 8:Kx:212:ILE:HG13 | 1.90 | 0.53 |
| 8:Lf:104:ILE:HG23 | 8:Lf:114:VAL:HG11 | 1.90 | 0.53 |
| 8:Lf:168:VAL:HG12 | 8:Lf:175:VAL:HA | 1.90 | 0.53 |
| 2:Ba:49:GLU:HG3 | 2:Ba:54:THR:HG21 | 1.91 | 0.53 |
| 2:Bd:315:MET:HG3 | 2:Be:328:VAL:HG13 | 1.91 | 0.53 |
| 2:Bo:141:GLY:CA | 2:Bo:154:GLY:O | 2.57 | 0.53 |
| 3:Cf:377:MET:HE2 | 6:Ff:142:MET:HE1 | 1.90 | 0.53 |
| 3:Co:255:ASP:HB3 | 3:Co:258:SER:HB3 | 1.91 | 0.53 |
| 3:Cv:361:PRO:HB2 | 4:Do:148:ARG:HD2 | 1.91 | 0.53 |
| 4:Dc:184:ILE:HG12 | 4:Dc:286:VAL:HG22 | 1.89 | 0.53 |
| 4:Dn:219:VAL:HG21 | 4:Dn:254:LEU:HD21 | 1.91 | 0.53 |
| 5:Ek:81:MET:HG3 | 5:Ek:86:VAL:HB | 1.91 | 0.53 |
| 5:Ew:81:MET:HG3 | 5:Ew:86:VAL:HB | 1.90 | 0.53 |
| 8:Ih:77:PRO:HB2 | 8:Ih:146:VAL:HA | 1.90 | 0.53 |
| 8:Jd:77:PRO:HB2 | 8:Jd:146:VAL:HA | 1.89 | 0.53 |
| 8:Kh:77:PRO:HB2 | 8:Kh:146:VAL:HA | 1.91 | 0.53 |
| 8:Kh:148:TYR:HE1 | 8:Kh:176:VAL:HG21 | 1.74 | 0.53 |
| 8:Kx:155:LEU:HD23 | 8:Kx:162:ILE:HD11 | 1.90 | 0.53 |
| 8:Ll:104:ILE:HG23 | 8:Ll:114:VAL:HG11 | 1.88 | 0.53 |
| 1:Ae:129:ASN:HB2 | 1:Ae:156:ASN:HB3 | 1.90 | 0.53 |
| 1:Ae:234:GLN:HA | 1:Af:198:THR:HB | 1.91 | 0.53 |
| 1:Ag:66:TRP:HA | 1:Ag:192:ARG:HD3 | 1.90 | 0.53 |
| 1:Aj:64:PRO:HB2 | 1:Ak:38:VAL:HG13 | 1.90 | 0.53 |
| 1:Ay:231:ALA:HB3 | 1:Az:195:LYS:HG3 | 1.91 | 0.53 |
| 2:By:141:GLY:CA | 2:By:154:GLY:O | 2.56 | 0.53 |
| 3:Ck:362:GLU:HG3 | 4:Dd:103:ARG:HH12 | 1.74 | 0.53 |
| 7:Jg:83:GLN:HE22 | 7:Jm:55:ARG:HH22 | 1.56 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 7:Kk:104:VAL:HG12 | 8:Kl:212:ILE:HG13 | 1.91 | 0.53 |
| 7:Kw:78:ALA:HB3 | 7:Ky:91:ALA:HB3 | 1.91 | 0.53 |
| 1:Ad:36:ASP:HB3 | 1:Ad:39:GLU:HG2 | 1.90 | 0.53 |
| 4:Dc:104:ILE:HG23 | 4:Dd:145:ARG:HD3 | 1.90 | 0.53 |
| 5:Ey:116:ARG:HD3 | 5:Ey:149:GLN:HE22 | 1.74 | 0.53 |
| 8:Hr:168:VAL:HG12 | 8:Hr:175:VAL:HA | 1.91 | 0.53 |
| 8:Jf:104:ILE:HG23 | 8:Jf:114:VAL:HG11 | 1.91 | 0.53 |
| 1:Ad:66:TRP:HA | 1:Ad:192:ARG:HD3 | 1.91 | 0.53 |
| 2:Bn:141:GLY:CA | 2:Bn:154:GLY:O | 2.57 | 0.53 |
| 2:Bq:22:LYS:HB3 | 2:Bq:237:GLU:HG2 | 1.91 | 0.53 |
| 2:Bv:105:SER:HB2 | 2:Bv:112:LEU:HD11 | 1.90 | 0.53 |
| 3:Ch:292:PRO:HB3 | 3:Ch:306:LEU:HD13 | 1.90 | 0.53 |
| 4:Dl:217:ASP:HA | 4:Dl:258:ARG:HD3 | 1.91 | 0.53 |
| 5:Eu:32:ILE:HD13 | 5:Eu:65:ARG:HH22 | 1.74 | 0.53 |
| 8:Hv:168:VAL:HG12 | 8:Hv:175:VAL:HA | 1.91 | 0.53 |
| 7:Ii:78:ALA:HB3 | 7:Ik:91:ALA:HB3 | 1.89 | 0.53 |
| 8:Jx:104:ILE:HG23 | 8:Jx:114:VAL:HG11 | 1.91 | 0.53 |
| 8:Kj:214:GLN:HG3 | 8:Kl:195:LEU:HD21 | 1.91 | 0.53 |
| 1:Ab:139:GLY:HA3 | 1:Ac:148:TYR:HD1 | 1.74 | 0.52 |
| 1:As:51:ASP:HA | 1:As:54:ARG:HE | 1.74 | 0.52 |
| 1:At:36:ASP:HB3 | 1:At:39:GLU:HG2 | 1.91 | 0.52 |
| 1:Ax:69:ILE:HD12 | 1:Ax:181:ILE:HB | 1.91 | 0.52 |
| 2:Bf:143:SER:HB2 | 2:Bf:157:PRO:HG3 | 1.91 | 0.52 |
| 2:Bj:105:SER:HB2 | 2:Bj:112:LEU:HD11 | 1.91 | 0.52 |
| 2:Bm:105:SER:HB2 | 2:Bm:112:LEU:HD11 | 1.91 | 0.52 |
| 2:Br:85:VAL:HB | 2:Br:122:LEU:HD21 | 1.91 | 0.52 |
| 2:By:248:ALA:HB1 | 2:By:265:VAL:HG22 | 1.89 | 0.52 |
| 3:Ck:157:LEU:HA | 3:Ck:161:SER:HB2 | 1.91 | 0.52 |
| 3:Cz:201:ASP:HB3 | 3:Cz:221:ALA:HB3 | 1.91 | 0.52 |
| 4:Dd:216:ILE:HA | 4:Dd:291:ARG:HA | 1.90 | 0.52 |
| 4:Di:27:TYR:HB2 | 4:Di:151:VAL:HG22 | 1.90 | 0.52 |
| 4:Dy:141:ASP:HB2 | 4:Dy:149:ILE:HG12 | 1.89 | 0.52 |
| 7:Hc:104:VAL:HG12 | 8:Hd:212:ILE:HG13 | 1.91 | 0.52 |
| 7:Hs:104:VAL:HG12 | 8:Ht:212:ILE:HG13 | 1.89 | 0.52 |
| 8:Hv:78:ILE:HG12 | 8:Hv:148:TYR:HB2 | 1.91 | 0.52 |
| 7:Ic:106:SER:HB3 | 8:Id:207:ARG:HB3 | 1.91 | 0.52 |
| 7:Ka:104:VAL:HG12 | 8:Kb:212:ILE:HG13 | 1.91 | 0.52 |
| 8:Lj:168:VAL:HG12 | 8:Lj:175:VAL:HA | 1.91 | 0.52 |
| 2:Bb:122:LEU:HB2 | 2:Bb:131:ALA:HB3 | 1.92 | 0.52 |
| 2:Bi:274:HIS:HE1 | 2:Bi:343:ALA:HB3 | 1.75 | 0.52 |
| 2:Br:254:SER:HB2 | 2:Bt:138:VAL:HG22 | 1.92 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bw:248:ALA:HB1 | 2:Bw:265:VAL:HG22 | 1.91 | 0.52 |
| 2:Bz:41:VAL:HG23 | 2:Bz:83:VAL:HG21 | 1.90 | 0.52 |
| 4:De:93:PRO:HB2 | 4:De:95:TRP:HE3 | 1.72 | 0.52 |
| 4:Dx:216:ILE:HA | 4:Dx:291:ARG:HA | 1.91 | 0.52 |
| 7:Iu:104:VAL:HG12 | 8:Iv:212:ILE:HG13 | 1.92 | 0.52 |
| 8:Jh:156:ARG:HE | 8:Jh:192:LEU:HD13 | 1.74 | 0.52 |
| 1:An:113:GLU:HB2 | 1:An:172:MET:HB3 | 1.90 | 0.52 |
| 2:Bs:272:VAL:HG22 | 2:Bt:260:VAL:HG22 | 1.90 | 0.52 |
| 2:Bt:254:SER:HB2 | 2:Bv:138:VAL:HG22 | 1.90 | 0.52 |
| 2:Bt:287:VAL:HG22 | 2:Bt:301:VAL:HG13 | 1.91 | 0.52 |
| 2:Bx:49:GLU:HG3 | 2:Bx:54:THR:HG21 | 1.92 | 0.52 |
| 3:Cc:201:ASP:HB3 | 3:Cc:221:ALA:HB3 | 1.92 | 0.52 |
| 3:Ch:126:ILE:HB | 3:Ch:169:THR:HG22 | 1.92 | 0.52 |
| 3:Cl:220:PHE:HE2 | 3:Cl:273:VAL:HG11 | 1.74 | 0.52 |
| 4:Dq:68:ILE:HD11 | 4:Dr:112:GLN:HE21 | 1.73 | 0.52 |
| 8:Lj:155:LEU:HD23 | 8:Lj:162:ILE:HD11 | 1.91 | 0.52 |
| 2:Bb:137:LEU:HA | 2:Bb:162:ILE:HG12 | 1.92 | 0.52 |
| 2:Bm:139:VAL:HG12 | 2:Bm:141:GLY:H | 1.73 | 0.52 |
| 2:Bn:41:VAL:HG23 | 2:Bn:83:VAL:HG21 | 1.91 | 0.52 |
| 3:Cp:145:VAL:HA | 3:Cp:256:THR:HG21 | 1.92 | 0.52 |
| 4:Dl:216:ILE:HA | 4:Dl:291:ARG:HA | 1.91 | 0.52 |
| 4:Du:68:ILE:HD11 | 4:Dv:112:GLN:HE21 | 1.73 | 0.52 |
| 4:Dw:83:THR:HG22 | 4:Dw:111:LYS:HA | 1.92 | 0.52 |
| 5:Es:32:ILE:HD13 | 5:Es:65:ARG:HH22 | 1.74 | 0.52 |
| 5:Es:154:LEU:HB3 | 5:Es:164:TYR:HE1 | 1.73 | 0.52 |
| 8:Ih:168:VAL:HG12 | 8:Ih:175:VAL:HA | 1.91 | 0.52 |
| 8:Ip:159:GLY:HA3 | 8:It:36:LYS:HA | 1.91 | 0.52 |
| 7:Iu:106:SER:HB3 | 8:Iv:207:ARG:HB3 | 1.90 | 0.52 |
| 7:Ks:104:VAL:HG12 | 8:Kt:212:ILE:HG13 | 1.91 | 0.52 |
| 1:Aa:195:LYS:HG3 | 1:Az:231:ALA:HB3 | 1.90 | 0.52 |
| 1:Ae:51:ASP:HA | 1:Ae:54:ARG:HE | 1.73 | 0.52 |
| 3:Cb:85:VAL:HG22 | 3:Cb:108:ILE:HG12 | 1.92 | 0.52 |
| 3:Cf:201:ASP:HB3 | 3:Cf:221:ALA:HB3 | 1.91 | 0.52 |
| 3:Ci:126:ILE:HB | 3:Ci:169:THR:HG22 | 1.92 | 0.52 |
| 3:Cq:249:PRO:HG2 | 3:Cq:252:SER:HB3 | 1.91 | 0.52 |
| 4:Dw:93:PRO:HB2 | 4:Dw:95:TRP:HE3 | 1.75 | 0.52 |
| 7:Ha:78:ALA:HB3 | 7:Hc:91:ALA:HB3 | 1.91 | 0.52 |
| 8:Hd:78:ILE:HG12 | 8:Hd:148:TYR:HB2 | 1.92 | 0.52 |
| 7:Ji:104:VAL:HG12 | 8:Jj:212:ILE:HG13 | 1.92 | 0.52 |
| 7:Jm:106:SER:HB3 | 8:Jn:207:ARG:HB3 | 1.92 | 0.52 |
| 8:Jr:155:LEU:HD23 | 8:Jr:162:ILE:HD11 | 1.91 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Kh:156:ARG:HE | 8:Kh:192:LEU:HD13 | 1.75 | 0.52 |
| 1:Af:66:TRP:HA | 1:Af:192:ARG:HD3 | 1.92 | 0.52 |
| 1:Aj:136:LEU:HD13 | 1:Ak:154:LEU:HD13 | 1.91 | 0.52 |
| 1:An:66:TRP:HA | 1:An:192:ARG:HD3 | 1.91 | 0.52 |
| 2:Bq:137:LEU:HA | 2:Bq:162:ILE:HG12 | 1.91 | 0.52 |
| 3:Ce:358:VAL:HG12 | 3:Ce:360:GLN:H | 1.75 | 0.52 |
| 3:Cn:201:ASP:HB3 | 3:Cn:221:ALA:HB3 | 1.91 | 0.52 |
| 3:Ct:365:TYR:HE2 | 4:Dm:94:VAL:HG22 | 1.75 | 0.52 |
| 4:Dj:93:PRO:HD3 | 4:Dj:133:ARG:HA | 1.92 | 0.52 |
| 4:Dv:185:LEU:HD22 | 4:Dv:199:SER:HB3 | 1.92 | 0.52 |
| 5:Eg:32:ILE:HD13 | 5:Eg:65:ARG:HH22 | 1.74 | 0.52 |
| 5:Ek:168:TYR:HB2 | 5:Ek:196:MET:HE1 | 1.90 | 0.52 |
| 8:Id:155:LEU:HD23 | 8:Id:162:ILE:HD11 | 1.91 | 0.52 |
| 7:Ji:108:LYS:HD2 | 8:Jj:204:VAL:HG11 | 1.92 | 0.52 |
| 7:Jq:108:LYS:HD2 | 8:Jr:204:VAL:HG11 | 1.92 | 0.52 |
| 8:Kf:78:ILE:HG12 | 8:Kf:148:TYR:HB2 | 1.92 | 0.52 |
| 8:Kt:78:ILE:HG12 | 8:Kt:148:TYR:HB2 | 1.92 | 0.52 |
| 8:Lb:155:LEU:HD23 | 8:Lb:162:ILE:HD11 | 1.91 | 0.52 |
| 1:Ae:125:LEU:HB2 | 1:Ae:160:PHE:HB3 | 1.92 | 0.52 |
| 1:Af:36:ASP:HB3 | 1:Af:39:GLU:HG2 | 1.92 | 0.52 |
| 1:Ak:136:LEU:HD13 | 1:Al:154:LEU:HD13 | 1.92 | 0.52 |
| 1:Ak:184:LEU:HD12 | 1:Ak:188:ASN:HB2 | 1.91 | 0.52 |
| 1:Au:36:ASP:HB3 | 1:Au:39:GLU:HG2 | 1.92 | 0.52 |
| 1:Ax:184:LEU:HD12 | 1:Ax:188:ASN:HB2 | 1.91 | 0.52 |
| 2:Bm:27:VAL:HG21 | 2:Bm:233:LEU:HD21 | 1.92 | 0.52 |
| 2:Bt:360:ILE:HD12 | 2:Bv:163:SER:H | 1.75 | 0.52 |
| 3:Cv:262:TRP:HA | 3:Cv:267:GLY:HA3 | 1.92 | 0.52 |
| 4:Di:93:PRO:HB2 | 4:Di:95:TRP:HE3 | 1.75 | 0.52 |
| 7:Ik:78:ALA:HB3 | 7:Im:91:ALA:HB3 | 1.92 | 0.52 |
| 8:Iv:104:ILE:HG23 | 8:Iv:114:VAL:HG11 | 1.92 | 0.52 |
| 8:Lj:104:ILE:HG23 | 8:Lj:114:VAL:HG11 | 1.90 | 0.52 |
| 1:Ak:69:ILE:HD12 | 1:Ak:181:ILE:HB | 1.91 | 0.52 |
| 1:Ao:206:ILE:HG12 | 1:Ao:235:TYR:HD1 | 1.74 | 0.52 |
| 1:Ar:245:GLN:HG3 | 1:As:200:ASN:HD21 | 1.75 | 0.52 |
| 1:Ax:119:LYS:HD2 | 1:Az:199:LEU:HB2 | 1.92 | 0.52 |
| 2:Bc:41:VAL:HG23 | 2:Bc:83:VAL:HG21 | 1.92 | 0.52 |
| 2:Bd:252:VAL:HG22 | 2:Bd:259:ILE:HG12 | 1.91 | 0.52 |
| 2:Bp:248:ALA:HB1 | 2:Bp:265:VAL:HG22 | 1.92 | 0.52 |
| 3:Co:27:GLU:HG3 | 6:Go:134:GLN:HE22 | 1.74 | 0.52 |
| 4:Dj:219:VAL:HG21 | 4:Dj:254:LEU:HD21 | 1.91 | 0.52 |
| 5:Ee:32:ILE:HD13 | 5:Ee:65:ARG:HH22 | 1.75 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Ib:168:VAL:HG12 | 8:Ib:175:VAL:HA | 1.92 | 0.52 |
| 8:Kz:168:VAL:HG12 | 8:Kz:175:VAL:HA | 1.92 | 0.52 |
| 7:Li:78:ALA:HB3 | 7:Lk:91:ALA:HB3 | 1.92 | 0.52 |
| 3:Cn:361:PRO:HB2 | 4:Dg:148:ARG:HD2 | 1.90 | 0.52 |
| 3:Cz:361:PRO:HB2 | 4:Ds:148:ARG:HD2 | 1.92 | 0.52 |
| 8:Hh:104:ILE:HG23 | 8:Hh:114:VAL:HG11 | 1.90 | 0.52 |
| 8:Hz:168:VAL:HG12 | 8:Hz:175:VAL:HA | 1.92 | 0.52 |
| 8:Il:104:ILE:HG23 | 8:Il:114:VAL:HG11 | 1.92 | 0.52 |
| 8:Il:168:VAL:HG12 | 8:Il:175:VAL:HA | 1.91 | 0.52 |
| 7:Io:78:ALA:HB3 | 7:Iq:91:ALA:HB3 | 1.90 | 0.52 |
| 7:Jm:108:LYS:HD2 | 8:Jn:204:VAL:HG11 | 1.92 | 0.52 |
| 8:Kh:168:VAL:HG12 | 8:Kh:175:VAL:HA | 1.91 | 0.52 |
| 7:Kw:65:LEU:HD21 | 7:Kw:119:LEU:HB2 | 1.92 | 0.52 |
| 8:Lj:78:ILE:HG12 | 8:Lj:148:TYR:HB2 | 1.92 | 0.52 |
| 1:Ac:51:ASP:HA | 1:Ac:54:ARG:HE | 1.75 | 0.52 |
| 1:Ax:66:TRP:HA | 1:Ax:192:ARG:HD3 | 1.91 | 0.52 |
| 2:Bo:41:VAL:HG23 | 2:Bo:83:VAL:HG21 | 1.92 | 0.52 |
| 2:Bq:248:ALA:HB1 | 2:Bq:265:VAL:HG22 | 1.91 | 0.52 |
| 2:Bt:156:ASN:HD22 | 2:Bu:114:GLY:HA3 | 1.75 | 0.52 |
| 2:By:103:VAL:HB | 2:By:137:LEU:HD21 | 1.92 | 0.52 |
| 3:Cb:317:LYS:HG2 | 3:Cb:345:THR:HB | 1.92 | 0.52 |
| 3:Cp:61:ILE:HD11 | 3:Cp:282:GLU:HG3 | 1.91 | 0.52 |
| 3:Cv:326:PHE:HD1 | 3:Cv:328:ASP:H | 1.58 | 0.52 |
| 4:Dr:223:THR:HG22 | 4:Dr:285:VAL:HG22 | 1.92 | 0.52 |
| 8:Hb:168:VAL:HG12 | 8:Hb:175:VAL:HA | 1.92 | 0.52 |
| 8:Hd:77:PRO:HB2 | 8:Hd:146:VAL:HA | 1.91 | 0.52 |
| 8:Hx:104:ILE:HG23 | 8:Hx:114:VAL:HG11 | 1.90 | 0.52 |
| 8:Jn:104:ILE:HG23 | 8:Jn:114:VAL:HG11 | 1.92 | 0.52 |
| 7:Ko:104:VAL:HG12 | 8:Kp:212:ILE:HG13 | 1.92 | 0.52 |
| 7:La:104:VAL:HG12 | 8:Lb:212:ILE:HG13 | 1.92 | 0.52 |
| 1:Ah:139:GLY:HA3 | 1:Ai:148:TYR:HD1 | 1.75 | 0.51 |
| 1:Ai:206:ILE:HG23 | 1:Ai:235:TYR:HB2 | 1.91 | 0.51 |
| 1:Am:51:ASP:HA | 1:Am:54:ARG:HE | 1.74 | 0.51 |
| 1:Av:64:PRO:HB2 | 1:Aw:38:VAL:HG13 | 1.92 | 0.51 |
| 2:Bh:254:SER:HB2 | 2:Bj:138:VAL:HG22 | 1.91 | 0.51 |
| 3:Cr:92:GLU:HB2 | 3:Cr:103:ARG:HB3 | 1.91 | 0.51 |
| 4:Dg:104:ILE:HG23 | 4:Dh:145:ARG:HD3 | 1.92 | 0.51 |
| 4:Dk:93:PRO:HB2 | 4:Dk:95:TRP:HE3 | 1.74 | 0.51 |
| 4:Du:27:TYR:HB2 | 4:Du:151:VAL:HG22 | 1.92 | 0.51 |
| 8:Hv:159:GLY:HA3 | 8:Hz:36:LYS:HA | 1.92 | 0.51 |
| 8:Kt:219:ILE:HG23 | 8:Kv:192:LEU:HD12 | 1.92 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Ll:156:ARG:HE | 8:Ll:192:LEU:HD13 | 1.74 | 0.51 |
| 1:Ag:136:LEU:HD13 | 1:Ah:154:LEU:HD13 | 1.92 | 0.51 |
| 1:Av:36:ASP:HB3 | 1:Av:39:GLU:HG2 | 1.92 | 0.51 |
| 1:Az:51:ASP:HA | 1:Az:54:ARG:HE | 1.74 | 0.51 |
| 2:Be:56:GLN:HE22 | 2:Bf:69:LEU:H | 1.57 | 0.51 |
| 2:Bt:25:ALA:HB2 | 2:Bt:186:LEU:HD23 | 1.91 | 0.51 |
| 3:Co:315:GLY:H | 3:Co:346:VAL:HB | 1.74 | 0.51 |
| 3:Cw:61:ILE:HD11 | 3:Cw:282:GLU:HG3 | 1.90 | 0.51 |
| 4:Df:93:PRO:HD3 | 4:Df:133:ARG:HA | 1.92 | 0.51 |
| 7:Ha:108:LYS:HD2 | 8:Hb:204:VAL:HG11 | 1.91 | 0.51 |
| 8:Ht:78:ILE:HG12 | 8:Ht:148:TYR:HB2 | 1.92 | 0.51 |
| 7:Ia:104:VAL:HG12 | 8:Ib:212:ILE:HG13 | 1.91 | 0.51 |
| 7:Ie:104:VAL:HG12 | 8:If:212:ILE:HG13 | 1.92 | 0.51 |
| 7:Ja:104:VAL:HG12 | 8:Jb:212:ILE:HG13 | 1.93 | 0.51 |
| 8:Jf:156:ARG:HE | 8:Jf:192:LEU:HD13 | 1.75 | 0.51 |
| 7:Lc:29:TRP:HB3 | 7:Lc:118:ARG:HE | 1.75 | 0.51 |
| 1:Ay:139:GLY:HA3 | 1:Az:148:TYR:HD1 | 1.73 | 0.51 |
| 2:Bd:41:VAL:HG23 | 2:Bd:83:VAL:HG21 | 1.93 | 0.51 |
| 2:Bi:290:PRO:HB3 | 2:Bi:296:GLY:HA3 | 1.93 | 0.51 |
| 2:Bo:105:SER:HB2 | 2:Bo:112:LEU:HD11 | 1.92 | 0.51 |
| 2:Bs:56:GLN:HE22 | 2:Bt:69:LEU:H | 1.58 | 0.51 |
| 3:Co:153:ILE:HG21 | 3:Co:195:MET:HE1 | 1.91 | 0.51 |
| 3:Cy:126:ILE:HB | 3:Cy:169:THR:HG22 | 1.93 | 0.51 |
| 3:Cz:375:LYS:HG2 | 3:Cz:377:MET:HG2 | 1.92 | 0.51 |
| 4:De:184:ILE:HG12 | 4:De:286:VAL:HG22 | 1.92 | 0.51 |
| 5:Ey:147:ARG:HD3 | 5:Ey:170:TRP:HB3 | 1.92 | 0.51 |
| 7:Hk:106:SER:HB3 | 8:Hl:207:ARG:HB3 | 1.92 | 0.51 |
| 8:Ih:78:ILE:HG12 | 8:Ih:148:TYR:HB2 | 1.92 | 0.51 |
| 8:In:78:ILE:HG12 | 8:In:148:TYR:HB2 | 1.92 | 0.51 |
| 8:Ir:168:VAL:HG12 | 8:Ir:175:VAL:HA | 1.92 | 0.51 |
| 8:Iz:168:VAL:HG12 | 8:Iz:175:VAL:HA | 1.92 | 0.51 |
| 8:Jp:168:VAL:HG12 | 8:Jp:175:VAL:HA | 1.92 | 0.51 |
| 8:Kb:168:VAL:HG12 | 8:Kb:175:VAL:HA | 1.93 | 0.51 |
| 8:Lh:168:VAL:HG12 | 8:Lh:175:VAL:HA | 1.92 | 0.51 |
| 1:Aa:139:GLY:HA3 | 1:Ab:148:TYR:HD1 | 1.76 | 0.51 |
| 2:Bf:272:VAL:HG22 | 2:Bg:260:VAL:HG22 | 1.93 | 0.51 |
| 2:Bo:27:VAL:HG21 | 2:Bo:233:LEU:HD21 | 1.93 | 0.51 |
| 2:Bo:290:PRO:HB3 | 2:Bo:296:GLY:HA3 | 1.92 | 0.51 |
| 3:Cs:295:VAL:HA | 3:Cs:369:ILE:HG23 | 1.93 | 0.51 |
| 3:Ct:358:VAL:HG12 | 3:Ct:360:GLN:H | 1.75 | 0.51 |
| 8:Ix:168:VAL:HG12 | 8:Ix:175:VAL:HA | 1.91 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 7:Js:65:LEU:HD21 | 7:Js:119:LEU:HB2 | 1.92 | 0.51 |
| 7:Ki:106:SER:HB3 | 8:Kj:207:ARG:HB3 | 1.92 | 0.51 |
| 1:Ad:51:ASP:HA | 1:Ad:54:ARG:HE | 1.75 | 0.51 |
| 1:Ai:119:LYS:HD2 | 1:Ak:199:LEU:HB2 | 1.91 | 0.51 |
| 2:Bd:254:SER:HB2 | 2:Bf:138:VAL:HG22 | 1.93 | 0.51 |
| 2:Bi:105:SER:HB2 | 2:Bi:112:LEU:HD11 | 1.92 | 0.51 |
| 3:Ck:201:ASP:HB3 | 3:Ck:221:ALA:HB3 | 1.92 | 0.51 |
| 8:Hr:104:ILE:HG23 | 8:Hr:114:VAL:HG11 | 1.91 | 0.51 |
| 8:Jb:168:VAL:HG12 | 8:Jb:175:VAL:HA | 1.91 | 0.51 |
| 8:Jv:156:ARG:HE | 8:Jv:192:LEU:HD13 | 1.75 | 0.51 |
| 8:Kb:78:ILE:HG12 | 8:Kb:148:TYR:HB2 | 1.93 | 0.51 |
| 1:Aj:66:TRP:HA | 1:Aj:192:ARG:HD3 | 1.91 | 0.51 |
| 2:Bn:318:LEU:HG | 2:Bn:320:PRO:HG3 | 1.91 | 0.51 |
| 2:Bo:317:LYS:HE3 | 2:Bp:324:LEU:HD23 | 1.92 | 0.51 |
| 3:Cq:322:HIS:HB3 | 4:Dj:98:GLY:HA2 | 1.93 | 0.51 |
| 4:Dm:78:ARG:HB3 | 4:Dm:143:GLN:HE22 | 1.76 | 0.51 |
| 5:Ei:176:THR:HG22 | 5:Ei:185:ILE:HD12 | 1.93 | 0.51 |
| 5:Eq:32:ILE:HD13 | 5:Eq:65:ARG:HH22 | 1.75 | 0.51 |
| 7:Ic:104:VAL:HG12 | 8:Id:212:ILE:HG13 | 1.92 | 0.51 |
| 8:Id:159:GLY:HA3 | 8:Ih:36:LYS:HA | 1.91 | 0.51 |
| 7:Im:104:VAL:HG12 | 8:In:212:ILE:HG13 | 1.91 | 0.51 |
| 7:Iw:65:LEU:HD21 | 7:Iw:119:LEU:HB2 | 1.93 | 0.51 |
| 8:Jd:168:VAL:HG12 | 8:Jd:175:VAL:HA | 1.92 | 0.51 |
| 8:Jx:78:ILE:HG12 | 8:Jx:148:TYR:HB2 | 1.93 | 0.51 |
| 7:Ka:71:GLY:HA2 | 7:Kc:99:ARG:HG2 | 1.91 | 0.51 |
| 7:Li:104:VAL:HG12 | 8:Lj:212:ILE:HG13 | 1.92 | 0.51 |
| 1:Al:178:VAL:HG21 | 1:Al:191:ILE:HD12 | 1.92 | 0.51 |
| 2:Bh:290:PRO:HB3 | 2:Bh:296:GLY:HA3 | 1.92 | 0.51 |
| 2:Bj:49:GLU:HG3 | 2:Bj:54:THR:HG21 | 1.92 | 0.51 |
| 2:Bs:254:SER:HB2 | 2:Bu:138:VAL:HG22 | 1.93 | 0.51 |
| 3:Ce:334:ARG:HH21 | 3:Cf:295:VAL:HG11 | 1.76 | 0.51 |
| 4:Dk:156:VAL:HG12 | 4:Dk:157:LEU:HG | 1.93 | 0.51 |
| 5:Ec:168:TYR:HB2 | 5:Ec:196:MET:HE1 | 1.93 | 0.51 |
| 7:Ka:79:GLU:H | 7:Ka:86:GLY:HA3 | 1.75 | 0.51 |
| 8:Kn:159:GLY:HA3 | 8:Kr:36:LYS:HA | 1.91 | 0.51 |
| 1:Ae:231:ALA:HB3 | 1:Af:195:LYS:HG3 | 1.91 | 0.51 |
| 1:Ah:66:TRP:HA | 1:Ah:192:ARG:HD3 | 1.92 | 0.51 |
| 1:Av:136:LEU:HD13 | 1:Aw:154:LEU:HD13 | 1.93 | 0.51 |
| 2:Ba:290:PRO:HB3 | 2:Ba:296:GLY:HA3 | 1.93 | 0.51 |
| 2:Bc:105:SER:HB2 | 2:Bc:112:LEU:HD11 | 1.93 | 0.51 |
| 2:Bq:254:SER:HB2 | 2:Bs:138:VAL:HG22 | 1.93 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bq:285:LEU:HD23 | 2:Bq:303:ASN:HB3 | 1.91 | 0.51 |
| 2:Bx:248:ALA:HB1 | 2:Bx:265:VAL:HG22 | 1.92 | 0.51 |
| 3:Cj:80:PHE:HB3 | 3:Cj:83:HIS:HD1 | 1.76 | 0.51 |
| 3:Co:326:PHE:HD1 | 3:Co:328:ASP:H | 1.57 | 0.51 |
| 4:Df:223:THR:HG22 | 4:Df:285:VAL:HG22 | 1.92 | 0.51 |
| 4:Di:140:GLN:HA | 4:Di:148:ARG:HA | 1.92 | 0.51 |
| 4:Dl:93:PRO:HD3 | 4:Dl:133:ARG:HA | 1.92 | 0.51 |
| 4:Dv:90:SER:HB2 | 4:Dv:104:ILE:HD11 | 1.92 | 0.51 |
| 8:Hh:168:VAL:HG12 | 8:Hh:175:VAL:HA | 1.92 | 0.51 |
| 8:Jf:168:VAL:HG12 | 8:Jf:175:VAL:HA | 1.92 | 0.51 |
| 7:Jk:65:LEU:HD21 | 7:Jk:119:LEU:HB2 | 1.92 | 0.51 |
| 7:Ks:29:TRP:HB3 | 7:Ks:118:ARG:HE | 1.76 | 0.51 |
| 1:Ar:234:GLN:HA | 1:As:198:THR:HB | 1.92 | 0.51 |
| 1:Au:125:LEU:HB2 | 1:Au:160:PHE:HB3 | 1.92 | 0.51 |
| 1:Au:136:LEU:HD13 | 1:Av:154:LEU:HD13 | 1.93 | 0.51 |
| 1:Av:234:GLN:HA | 1:Aw:198:THR:HB | 1.91 | 0.51 |
| 2:Bg:25:ALA:HB2 | 2:Bg:186:LEU:HD23 | 1.93 | 0.51 |
| 2:Bi:254:SER:HB2 | 2:Bk:138:VAL:HG22 | 1.93 | 0.51 |
| 2:Br:56:GLN:HE22 | 2:Bs:69:LEU:H | 1.59 | 0.51 |
| 2:Bv:317:LYS:HE3 | 2:Bw:324:LEU:HD23 | 1.92 | 0.51 |
| 3:Ci:358:VAL:HG12 | 3:Ci:360:GLN:H | 1.76 | 0.51 |
| 4:Dm:104:ILE:HG23 | 4:Dn:145:ARG:HD3 | 1.93 | 0.51 |
| 4:Dt:223:THR:HG22 | 4:Dt:285:VAL:HG22 | 1.92 | 0.51 |
| 4:Dy:184:ILE:HG12 | 4:Dy:286:VAL:HG22 | 1.92 | 0.51 |
| 7:Ha:65:LEU:HD21 | 7:Ha:119:LEU:HB2 | 1.93 | 0.51 |
| 8:Il:77:PRO:HB2 | 8:Il:146:VAL:HA | 1.92 | 0.51 |
| 8:Jx:168:VAL:HG12 | 8:Jx:175:VAL:HA | 1.93 | 0.51 |
| 8:Kr:104:ILE:HG23 | 8:Kr:114:VAL:HG11 | 1.92 | 0.51 |
| 8:Lf:78:ILE:HG12 | 8:Lf:148:TYR:HB2 | 1.93 | 0.51 |
| 1:Ag:219:PHE:HD1 | 2:Bv:69:LEU:HD13 | 1.76 | 0.51 |
| 2:Bf:248:ALA:HB1 | 2:Bf:265:VAL:HG22 | 1.93 | 0.51 |
| 3:Co:78:TYR:HD2 | 3:Co:88:ILE:HB | 1.75 | 0.51 |
| 3:Cp:201:ASP:HB3 | 3:Cp:221:ALA:HB3 | 1.93 | 0.51 |
| 3:Ct:361:PRO:HB2 | 4:Dm:148:ARG:HD2 | 1.93 | 0.51 |
| 4:Da:93:PRO:HB2 | 4:Da:95:TRP:HE3 | 1.75 | 0.51 |
| 4:Da:185:LEU:HD23 | 4:Da:199:SER:HB2 | 1.93 | 0.51 |
| 4:De:56:GLY:HA2 | 4:De:77:ARG:HG3 | 1.92 | 0.51 |
| 4:Do:183:THR:HG21 | 4:Do:206:ILE:HD11 | 1.92 | 0.51 |
| 8:Hp:168:VAL:HG12 | 8:Hp:175:VAL:HA | 1.93 | 0.51 |
| 8:Kh:159:GLY:HA3 | 8:Kl:36:LYS:HA | 1.93 | 0.51 |
| 8:Kt:168:VAL:HG12 | 8:Kt:175:VAL:HA | 1.92 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:Ai:234:GLN:HA | 1:Aj:198:THR:HB | 1.92 | 0.50 |
| 1:Aq:139:GLY:HA3 | 1:Ar:148:TYR:HD1 | 1.76 | 0.50 |
| 2:Ba:105:SER:HB2 | 2:Ba:112:LEU:HD11 | 1.93 | 0.50 |
| 2:Bn:137:LEU:HA | 2:Bn:162:ILE:HG12 | 1.93 | 0.50 |
| 2:Bu:272:VAL:HG22 | 2:Bv:260:VAL:HG22 | 1.92 | 0.50 |
| 3:Cf:227:PHE:HE1 | 3:Cf:234:GLU:HG2 | 1.76 | 0.50 |
| 3:Cv:342:ILE:HG21 | 3:Cv:367:ILE:HD11 | 1.93 | 0.50 |
| 4:Dp:223:THR:HG22 | 4:Dp:285:VAL:HG22 | 1.92 | 0.50 |
| 4:Dz:93:PRO:HD3 | 4:Dz:133:ARG:HA | 1.92 | 0.50 |
| 8:Ht:93:ASN:HB2 | 8:Ht:156:ARG:HH22 | 1.76 | 0.50 |
| 7:Ji:65:LEU:HD21 | 7:Ji:119:LEU:HB2 | 1.93 | 0.50 |
| 8:Jv:155:LEU:HD23 | 8:Jv:162:ILE:HD11 | 1.92 | 0.50 |
| 8:Kr:148:TYR:HE1 | 8:Kr:176:VAL:HG21 | 1.76 | 0.50 |
| 8:Ld:168:VAL:HG12 | 8:Ld:175:VAL:HA | 1.93 | 0.50 |
| 8:Lh:104:ILE:HG23 | 8:Lh:114:VAL:HG11 | 1.93 | 0.50 |
| 1:An:139:GLY:HA3 | 1:Ao:148:TYR:HD1 | 1.77 | 0.50 |
| 1:Au:231:ALA:HB3 | 1:Av:195:LYS:HG3 | 1.93 | 0.50 |
| 2:Bg:41:VAL:HG23 | 2:Bg:83:VAL:HG21 | 1.93 | 0.50 |
| 2:Bv:41:VAL:HG23 | 2:Bv:83:VAL:HG21 | 1.93 | 0.50 |
| 2:Bv:336:ALA:HB1 | 2:Bv:340:ASP:HB2 | 1.93 | 0.50 |
| 3:Ck:239:THR:HG21 | 3:Cl:155:ARG:HD3 | 1.93 | 0.50 |
| 3:Cl:292:PRO:HB3 | 3:Cl:306:LEU:HD13 | 1.94 | 0.50 |
| 3:Cm:262:TRP:HA | 3:Cm:267:GLY:HA3 | 1.92 | 0.50 |
| 3:Cu:358:VAL:HG12 | 3:Cu:360:GLN:H | 1.76 | 0.50 |
| 3:Cy:223:GLU:HG2 | 3:Cy:239:THR:HG22 | 1.92 | 0.50 |
| 4:Dc:183:THR:HG21 | 4:Dc:206:ILE:HD11 | 1.93 | 0.50 |
| 4:Dt:64:ALA:HB2 | 4:Dt:172:LEU:HD22 | 1.93 | 0.50 |
| 5:Ek:144:LEU:HA | 5:Ek:147:ARG:HD2 | 1.94 | 0.50 |
| 8:Hj:168:VAL:HG12 | 8:Hj:175:VAL:HA | 1.93 | 0.50 |
| 7:Hq:78:ALA:HB3 | 7:Hs:91:ALA:HB3 | 1.94 | 0.50 |
| 7:Hu:108:LYS:HD2 | 8:Hv:204:VAL:HG11 | 1.93 | 0.50 |
| 8:If:159:GLY:HA3 | 8:Ij:36:LYS:HA | 1.93 | 0.50 |
| 7:Jy:108:LYS:HD2 | 8:Jz:204:VAL:HG11 | 1.93 | 0.50 |
| 7:Kw:72:MET:H | 7:Ky:97:VAL:HG23 | 1.76 | 0.50 |
| 2:Bf:275:GLY:HA3 | 2:Bg:338:PRO:HG2 | 1.93 | 0.50 |
| 2:Bz:137:LEU:HA | 2:Bz:162:ILE:HG12 | 1.94 | 0.50 |
| 3:Cb:362:GLU:HG2 | 3:Cb:363:LEU:HD23 | 1.94 | 0.50 |
| 3:Cg:292:PRO:HB3 | 3:Cg:306:LEU:HD13 | 1.93 | 0.50 |
| 3:Ch:358:VAL:HG12 | 3:Ch:360:GLN:H | 1.77 | 0.50 |
| 3:Ci:255:ASP:HB3 | 3:Ci:258:SER:HB3 | 1.93 | 0.50 |
| 3:Cq:350:TYR:HE2 | 3:Cq:355:GLU:HG3 | 1.76 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 5:Eo:154:LEU:HB3 | 5:Eo:164:TYR:HE1 | 1.77 | 0.50 |
| 8:Iv:168:VAL:HG12 | 8:Iv:175:VAL:HA | 1.93 | 0.50 |
| 8:Jd:78:ILE:HG12 | 8:Jd:148:TYR:HB2 | 1.93 | 0.50 |
| 7:Jg:65:LEU:HD21 | 7:Jg:119:LEU:HB2 | 1.93 | 0.50 |
| 8:Ll:155:LEU:HD23 | 8:Ll:162:ILE:HD11 | 1.92 | 0.50 |
| 1:Av:206:ILE:HG23 | 1:Av:235:TYR:HB2 | 1.93 | 0.50 |
| 2:Bf:252:VAL:HG22 | 2:Bf:259:ILE:HG12 | 1.94 | 0.50 |
| 2:Bq:141:GLY:HA3 | 2:Bq:154:GLY:O | 2.10 | 0.50 |
| 2:Bs:143:SER:HB2 | 2:Bs:157:PRO:HG3 | 1.93 | 0.50 |
| 2:Bu:223:PRO:HB3 | 4:Dq:94:VAL:HG12 | 1.94 | 0.50 |
| 3:Cl:201:ASP:HB3 | 3:Cl:221:ALA:HB3 | 1.93 | 0.50 |
| 3:Ct:332:LEU:HD11 | 3:Cu:190:GLY:HA3 | 1.94 | 0.50 |
| 3:Cy:157:LEU:HA | 3:Cy:161:SER:HB2 | 1.94 | 0.50 |
| 5:Ey:192:LEU:HD12 | 5:Ey:196:MET:HE2 | 1.94 | 0.50 |
| 8:Hf:168:VAL:HG12 | 8:Hf:175:VAL:HA | 1.94 | 0.50 |
| 8:Kx:104:ILE:HG23 | 8:Kx:114:VAL:HG11 | 1.92 | 0.50 |
| 8:Lb:168:VAL:HG12 | 8:Lb:175:VAL:HA | 1.94 | 0.50 |
| 1:Aa:129:ASN:HB2 | 1:Aa:156:ASN:HB3 | 1.93 | 0.50 |
| 1:Ad:234:GLN:HA | 1:Ae:198:THR:HB | 1.93 | 0.50 |
| 1:Av:119:LYS:HD2 | 1:Ax:199:LEU:HB2 | 1.93 | 0.50 |
| 1:Aw:184:LEU:HD12 | 1:Aw:188:ASN:HB2 | 1.93 | 0.50 |
| 1:Ay:178:VAL:HG21 | 1:Ay:191:ILE:HD12 | 1.93 | 0.50 |
| 2:Bk:267:LEU:HB2 | 2:Bk:320:PRO:HB2 | 1.92 | 0.50 |
| 2:Bl:122:LEU:HB2 | 2:Bl:131:ALA:HB3 | 1.93 | 0.50 |
| 2:Bu:49:GLU:HG3 | 2:Bu:54:THR:HG21 | 1.94 | 0.50 |
| 2:Bv:283:GLU:HG2 | 2:Bv:305:GLU:HG3 | 1.94 | 0.50 |
| 3:Cf:209:LYS:HD2 | 3:Cf:212:GLN:HB2 | 1.94 | 0.50 |
| 4:Dt:169:ILE:HG13 | 4:Dt:172:LEU:HD12 | 1.94 | 0.50 |
| 4:Dz:216:ILE:HA | 4:Dz:291:ARG:HA | 1.94 | 0.50 |
| 5:Ea:32:ILE:HD13 | 5:Ea:65:ARG:HH22 | 1.77 | 0.50 |
| 5:Ec:176:THR:HG22 | 5:Ec:185:ILE:HD12 | 1.94 | 0.50 |
| 5:Eo:81:MET:HG3 | 5:Eo:86:VAL:HB | 1.92 | 0.50 |
| 5:Ew:176:THR:HG22 | 5:Ew:185:ILE:HD12 | 1.93 | 0.50 |
| 8:It:168:VAL:HG12 | 8:It:175:VAL:HA | 1.92 | 0.50 |
| 8:Jh:219:ILE:HG23 | 8:Jj:192:LEU:HD12 | 1.93 | 0.50 |
| 8:Jr:166:ARG:HH22 | 8:Jt:101:GLU:HG2 | 1.76 | 0.50 |
| 8:Kp:168:VAL:HG12 | 8:Kp:175:VAL:HA | 1.94 | 0.50 |
| 8:Ld:156:ARG:HE | 8:Ld:192:LEU:HD13 | 1.77 | 0.50 |
| 2:Bl:197:LEU:HD22 | 2:Bl:218:ILE:HD13 | 1.94 | 0.50 |
| 2:Bt:290:PRO:HB3 | 2:Bt:296:GLY:HA3 | 1.93 | 0.50 |
| 3:Cc:195:MET:HE2 | 3:Cc:281:LEU:HD11 | 1.93 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 3:Cq:262:TRP:HA | 3:Cq:267:GLY:HA3 | 1.94 | 0.50 |
| 3:Cw:255:ASP:HB3 | 3:Cw:258:SER:HB3 | 1.94 | 0.50 |
| 3:Cy:292:PRO:HB3 | 3:Cy:306:LEU:HD13 | 1.93 | 0.50 |
| 4:Dd:111:LYS:H | 4:Dd:115:GLY:HA2 | 1.77 | 0.50 |
| 4:Ds:27:TYR:HB2 | 4:Ds:151:VAL:HG22 | 1.93 | 0.50 |
| 4:Dt:116:TYR:HE2 | 5:Et:198:GLU:HB3 | 1.76 | 0.50 |
| 5:Ey:32:ILE:HD13 | 5:Ey:65:ARG:HH22 | 1.77 | 0.50 |
| 5:Ey:154:LEU:HB3 | 5:Ey:164:TYR:HE1 | 1.75 | 0.50 |
| 8:Hd:104:ILE:HG23 | 8:Hd:114:VAL:HG11 | 1.92 | 0.50 |
| 7:Hq:106:SER:HB3 | 8:Hr:207:ARG:HB3 | 1.93 | 0.50 |
| 7:Ii:108:LYS:HD2 | 8:Ij:204:VAL:HG11 | 1.92 | 0.50 |
| 8:In:104:ILE:HG23 | 8:In:114:VAL:HG11 | 1.93 | 0.50 |
| 7:Io:104:VAL:HG12 | 8:Ip:212:ILE:HG13 | 1.93 | 0.50 |
| 7:Iq:65:LEU:HD21 | 7:Iq:119:LEU:HB2 | 1.94 | 0.50 |
| 8:Ix:155:LEU:HD23 | 8:Ix:162:ILE:HD11 | 1.94 | 0.50 |
| 8:Jl:219:ILE:HG23 | 8:Jn:192:LEU:HD12 | 1.94 | 0.50 |
| 7:Jm:80:LEU:HD13 | 7:Jm:85:LEU:HD12 | 1.93 | 0.50 |
| 8:Kj:159:GLY:HA3 | 8:Kn:36:LYS:HA | 1.94 | 0.50 |
| 8:Kx:156:ARG:HE | 8:Kx:192:LEU:HD13 | 1.77 | 0.50 |
| 1:Aa:184:LEU:HD12 | 1:Aa:188:ASN:HB2 | 1.94 | 0.50 |
| 1:Ag:129:ASN:HB2 | 1:Ag:156:ASN:HB3 | 1.94 | 0.50 |
| 1:Ag:206:ILE:HG12 | 1:Ag:235:TYR:HD1 | 1.77 | 0.50 |
| 1:Am:139:GLY:HA3 | 1:An:148:TYR:HD1 | 1.76 | 0.50 |
| 1:Ap:234:GLN:HA | 1:Aq:198:THR:HB | 1.94 | 0.50 |
| 1:As:36:ASP:HB3 | 1:As:39:GLU:HG2 | 1.94 | 0.50 |
| 1:As:231:ALA:HB3 | 1:At:195:LYS:HG3 | 1.92 | 0.50 |
| 1:Au:129:ASN:HB2 | 1:Au:156:ASN:HB3 | 1.93 | 0.50 |
| 1:Av:232:ARG:HH22 | 1:Aw:194:GLU:HG3 | 1.76 | 0.50 |
| 1:Ax:206:ILE:HG23 | 1:Ax:235:TYR:HB2 | 1.93 | 0.50 |
| 2:Bd:248:ALA:HB1 | 2:Bd:265:VAL:HG22 | 1.92 | 0.50 |
| 2:Bh:34:GLN:HG2 | 2:Bi:134:GLN:HB3 | 1.94 | 0.50 |
| 2:Bv:272:VAL:HG22 | 2:Bw:260:VAL:HG22 | 1.93 | 0.50 |
| 3:Cq:365:TYR:HE2 | 4:Dj:93:PRO:HA | 1.75 | 0.50 |
| 3:Ct:201:ASP:HB3 | 3:Ct:221:ALA:HB3 | 1.93 | 0.50 |
| 8:Jn:150:LEU:HB2 | 8:Jn:167:VAL:HG22 | 1.94 | 0.50 |
| 8:Jt:150:LEU:HB2 | 8:Jt:167:VAL:HG22 | 1.94 | 0.50 |
| 8:Kh:104:ILE:HG23 | 8:Kh:114:VAL:HG11 | 1.93 | 0.50 |
| 8:Kj:168:VAL:HG12 | 8:Kj:175:VAL:HA | 1.94 | 0.50 |
| 8:Kn:156:ARG:HE | 8:Kn:192:LEU:HD13 | 1.77 | 0.50 |
| 8:Ll:168:VAL:HG12 | 8:Ll:175:VAL:HA | 1.93 | 0.50 |
| 1:Ad:178:VAL:HG21 | 1:Ad:191:ILE:HD12 | 1.94 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:Af:51:ASP:HA | 1:Af:54:ARG:HE | 1.77 | 0.50 |
| 2:Bp:41:VAL:HG23 | 2:Bp:83:VAL:HG21 | 1.94 | 0.50 |
| 2:By:141:GLY:HA3 | 2:By:154:GLY:O | 2.12 | 0.50 |
| 3:Cb:255:ASP:HB3 | 3:Cb:258:SER:HB3 | 1.92 | 0.50 |
| 3:Cj:262:TRP:HA | 3:Cj:267:GLY:HA3 | 1.94 | 0.50 |
| 3:Cu:220:PHE:HE2 | 3:Cu:273:VAL:HG11 | 1.76 | 0.50 |
| 3:Cv:249:PRO:HG2 | 3:Cv:252:SER:HB3 | 1.92 | 0.50 |
| 4:Dm:183:THR:HG21 | 4:Dm:206:ILE:HD11 | 1.93 | 0.50 |
| 5:Eg:176:THR:HG22 | 5:Eg:185:ILE:HD12 | 1.94 | 0.50 |
| 5:Ey:176:THR:HG22 | 5:Ey:185:ILE:HD12 | 1.94 | 0.50 |
| 8:Hl:168:VAL:HG12 | 8:Hl:175:VAL:HA | 1.93 | 0.50 |
| 8:Jr:150:LEU:HB2 | 8:Jr:167:VAL:HG22 | 1.94 | 0.50 |
| 8:Kl:104:ILE:HG23 | 8:Kl:114:VAL:HG11 | 1.93 | 0.50 |
| 8:Kl:168:VAL:HG12 | 8:Kl:175:VAL:HA | 1.93 | 0.50 |
| 8:Kz:104:ILE:HG23 | 8:Kz:114:VAL:HG11 | 1.93 | 0.50 |
| 8:Lb:161:VAL:HG12 | 8:Lb:188:ILE:HD11 | 1.93 | 0.50 |
| 7:Lk:104:VAL:HG12 | 8:Ll:212:ILE:HG13 | 1.93 | 0.50 |
| 1:Aq:231:ALA:HB3 | 1:Ar:195:LYS:HG3 | 1.93 | 0.50 |
| 1:Aq:245:GLN:HG3 | 1:Ar:200:ASN:HD21 | 1.75 | 0.50 |
| 1:Ay:227:ARG:HH22 | 1:Az:221:ASN:HB3 | 1.77 | 0.50 |
| 2:Bd:305:GLU:HG3 | 2:Bg:148:ASP:HB2 | 1.94 | 0.50 |
| 2:Bh:248:ALA:HB1 | 2:Bh:265:VAL:HG22 | 1.93 | 0.50 |
| 2:Bl:105:SER:HB2 | 2:Bl:112:LEU:HD11 | 1.94 | 0.50 |
| 2:Bm:223:PRO:HB3 | 4:Di:94:VAL:HG12 | 1.93 | 0.50 |
| 2:By:224:ARG:HH22 | 3:Cb:323:THR:HB | 1.77 | 0.50 |
| 3:Ca:255:ASP:HB3 | 3:Ca:258:SER:HB3 | 1.94 | 0.50 |
| 4:Db:223:THR:HG22 | 4:Db:285:VAL:HG22 | 1.94 | 0.50 |
| 4:Dd:64:ALA:HB2 | 4:Dd:172:LEU:HD22 | 1.93 | 0.50 |
| 4:Dg:93:PRO:HB2 | 4:Dg:95:TRP:HE3 | 1.76 | 0.50 |
| 4:Dv:116:TYR:HE2 | 5:Ev:198:GLU:HB3 | 1.75 | 0.50 |
| 4:Dw:104:ILE:HG23 | 4:Dx:145:ARG:HD3 | 1.93 | 0.50 |
| 5:Ei:32:ILE:HD13 | 5:Ei:65:ARG:HH22 | 1.76 | 0.50 |
| 8:Hl:156:ARG:HE | 8:Hl:192:LEU:HD13 | 1.77 | 0.50 |
| 8:Hn:168:VAL:HG12 | 8:Hn:175:VAL:HA | 1.94 | 0.50 |
| 8:Ht:168:VAL:HG12 | 8:Ht:175:VAL:HA | 1.93 | 0.50 |
| 8:Hz:104:ILE:HG23 | 8:Hz:114:VAL:HG11 | 1.93 | 0.50 |
| 8:Kh:219:ILE:HG23 | 8:Kj:192:LEU:HD12 | 1.94 | 0.50 |
| 2:Bf:87:ALA:HB2 | 2:Bf:101:ILE:HG22 | 1.93 | 0.49 |
| 2:Bn:27:VAL:HG21 | 2:Bn:233:LEU:HD21 | 1.94 | 0.49 |
| 2:Bt:84:ILE:HG13 | 2:Bt:106:ILE:HD13 | 1.94 | 0.49 |
| 2:Bv:49:GLU:HG3 | 2:Bv:54:THR:HG21 | 1.94 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 3:Cb:282:GLU:HA | 3:Cb:286:SER:HB3 | 1.94 | 0.49 |
| 3:Cd:350:TYR:HE2 | 3:Cd:355:GLU:HG3 | 1.77 | 0.49 |
| 3:Ce:105:ARG:HH22 | 7:Hm:99:ARG:HH22 | 1.60 | 0.49 |
| 3:Ce:195:MET:HE2 | 3:Ce:281:LEU:HD11 | 1.94 | 0.49 |
| 3:Ch:220:PHE:HE2 | 3:Ch:273:VAL:HG11 | 1.77 | 0.49 |
| 4:Dn:86:VAL:HG13 | 4:Dn:139:TYR:HB3 | 1.95 | 0.49 |
| 4:Dq:58:ALA:HB1 | 4:Dq:72:PHE:HE1 | 1.77 | 0.49 |
| 4:Du:66:LYS:HA | 5:Ev:162:LEU:HD22 | 1.94 | 0.49 |
| 4:Dy:66:LYS:HG2 | 5:Ez:162:LEU:HD22 | 1.94 | 0.49 |
| 5:Eu:176:THR:HG22 | 5:Eu:185:ILE:HD12 | 1.94 | 0.49 |
| 8:If:168:VAL:HG12 | 8:If:175:VAL:HA | 1.94 | 0.49 |
| 8:Kn:104:ILE:HG23 | 8:Kn:114:VAL:HG11 | 1.93 | 0.49 |
| 8:Kn:168:VAL:HG12 | 8:Kn:175:VAL:HA | 1.94 | 0.49 |
| 8:Kr:155:LEU:HD23 | 8:Kr:162:ILE:HD11 | 1.93 | 0.49 |
| 8:Lf:219:ILE:HD12 | 8:Lh:192:LEU:HD12 | 1.94 | 0.49 |
| 1:Ai:232:ARG:HH22 | 1:Aj:194:GLU:HG3 | 1.77 | 0.49 |
| 1:Ak:119:LYS:HD2 | 1:Am:199:LEU:HB2 | 1.94 | 0.49 |
| 1:At:232:ARG:HH22 | 1:Au:194:GLU:HG3 | 1.77 | 0.49 |
| 3:Cz:111:SER:HB3 | 3:Cz:113:THR:HG22 | 1.93 | 0.49 |
| 4:Ds:264:TYR:HB3 | 4:Ds:266:LYS:HD2 | 1.94 | 0.49 |
| 8:Hl:104:ILE:HG23 | 8:Hl:114:VAL:HG11 | 1.93 | 0.49 |
| 7:Hq:83:GLN:HE22 | 7:Hw:55:ARG:HH22 | 1.59 | 0.49 |
| 7:Im:108:LYS:HD2 | 8:In:204:VAL:HG11 | 1.94 | 0.49 |
| 7:Iu:29:TRP:HB3 | 7:Iu:118:ARG:HE | 1.78 | 0.49 |
| 7:Jg:108:LYS:HD2 | 8:Jh:204:VAL:HG11 | 1.94 | 0.49 |
| 7:Ky:65:LEU:HD21 | 7:Ky:119:LEU:HB2 | 1.95 | 0.49 |
| 7:Lc:104:VAL:HG12 | 8:Ld:212:ILE:HG13 | 1.93 | 0.49 |
| 1:Ah:36:ASP:HB3 | 1:Ah:39:GLU:HG2 | 1.94 | 0.49 |
| 1:Am:129:ASN:HB2 | 1:Am:156:ASN:HB3 | 1.94 | 0.49 |
| 1:Au:184:LEU:HD12 | 1:Au:188:ASN:HB2 | 1.95 | 0.49 |
| 2:Bv:156:ASN:HD22 | 2:Bw:114:GLY:HA3 | 1.77 | 0.49 |
| 3:Cf:292:PRO:HB3 | 3:Cf:306:LEU:HD13 | 1.94 | 0.49 |
| 3:Cp:292:PRO:HB3 | 3:Cp:306:LEU:HD13 | 1.95 | 0.49 |
| 4:Da:111:LYS:HD2 | 5:Ey:197:PRO:HD3 | 1.93 | 0.49 |
| 4:Dk:78:ARG:HB3 | 4:Dk:143:GLN:HE22 | 1.77 | 0.49 |
| 4:Dl:169:ILE:HG13 | 4:Dl:172:LEU:HD12 | 1.94 | 0.49 |
| 4:Dm:111:LYS:HD2 | 5:Ek:197:PRO:HD3 | 1.93 | 0.49 |
| 4:Dq:83:THR:HG22 | 4:Dq:111:LYS:HA | 1.93 | 0.49 |
| 4:Dx:116:TYR:HE2 | 5:Ex:198:GLU:HB3 | 1.76 | 0.49 |
| 8:Hl:78:ILE:HG12 | 8:Hl:148:TYR:HB2 | 1.94 | 0.49 |
| 8:Hl:159:GLY:HA3 | 8:Hp:36:LYS:HA | 1.94 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Ix:93:ASN:HB2 | 8:Ix:156:ARG:HH22 | 1.76 | 0.49 |
| 7:Iy:104:VAL:HG12 | 8:Iz:212:ILE:HG13 | 1.93 | 0.49 |
| 8:Iz:159:GLY:HA3 | 8:Jd:36:LYS:HA | 1.94 | 0.49 |
| 8:Jh:168:VAL:HG12 | 8:Jh:175:VAL:HA | 1.94 | 0.49 |
| 8:Kr:219:ILE:HG23 | 8:Kt:192:LEU:HD12 | 1.95 | 0.49 |
| 1:Am:184:LEU:HD12 | 1:Am:188:ASN:HB2 | 1.94 | 0.49 |
| 1:Ax:231:ALA:HB3 | 1:Ay:195:LYS:HG3 | 1.95 | 0.49 |
| 2:Ba:223:PRO:HB3 | 4:Dw:94:VAL:HG12 | 1.93 | 0.49 |
| 2:Bi:41:VAL:HG23 | 2:Bi:83:VAL:HG21 | 1.93 | 0.49 |
| 3:Cq:226:VAL:HB | 3:Cq:236:MET:HB3 | 1.94 | 0.49 |
| 3:Cx:365:TYR:HB3 | 4:Dq:91:MET:HE1 | 1.95 | 0.49 |
| 3:Cy:153:ILE:HG21 | 3:Cy:195:MET:HE1 | 1.94 | 0.49 |
| 4:Dx:65:GLY:HA2 | 4:Dx:176:SER:HB2 | 1.94 | 0.49 |
| 4:Dz:249:PHE:HB3 | 4:Dz:254:LEU:HD23 | 1.93 | 0.49 |
| 5:Ea:154:LEU:HB3 | 5:Ea:164:TYR:HE1 | 1.77 | 0.49 |
| 8:Hn:150:LEU:HB2 | 8:Hn:167:VAL:HG22 | 1.95 | 0.49 |
| 8:Hr:78:ILE:HG12 | 8:Hr:148:TYR:HB2 | 1.95 | 0.49 |
| 7:Jo:108:LYS:HD2 | 8:Jp:204:VAL:HG11 | 1.95 | 0.49 |
| 7:Js:106:SER:HB3 | 8:Jt:207:ARG:HB3 | 1.93 | 0.49 |
| 8:Jv:150:LEU:HB2 | 8:Jv:167:VAL:HG22 | 1.93 | 0.49 |
| 8:Kp:150:LEU:HB2 | 8:Kp:167:VAL:HG22 | 1.94 | 0.49 |
| 8:Kx:168:VAL:HG12 | 8:Kx:175:VAL:HA | 1.95 | 0.49 |
| 2:Ba:360:ILE:HD12 | 2:Bc:163:SER:H | 1.78 | 0.49 |
| 2:Bg:272:VAL:HG22 | 2:Bh:260:VAL:HG22 | 1.93 | 0.49 |
| 2:Bp:141:GLY:CA | 2:Bp:154:GLY:O | 2.58 | 0.49 |
| 3:Cl:294:ILE:HG22 | 3:Cl:369:ILE:HG22 | 1.93 | 0.49 |
| 3:Cm:255:ASP:HB3 | 3:Cm:258:SER:HB3 | 1.93 | 0.49 |
| 3:Cr:137:ALA:HB1 | 3:Cr:142:ILE:HG13 | 1.94 | 0.49 |
| 3:Cr:375:LYS:HE3 | 3:Cr:377:MET:HE2 | 1.95 | 0.49 |
| 3:Cv:61:ILE:HD11 | 3:Cv:282:GLU:HG3 | 1.95 | 0.49 |
| 4:Dk:183:THR:HG21 | 4:Dk:206:ILE:HD11 | 1.93 | 0.49 |
| 4:Dp:111:LYS:H | 4:Dp:115:GLY:HA2 | 1.76 | 0.49 |
| 4:Dy:78:ARG:HB3 | 4:Dy:143:GLN:HE22 | 1.78 | 0.49 |
| 8:Il:219:ILE:HG23 | 8:In:192:LEU:HD12 | 1.94 | 0.49 |
| 8:In:168:VAL:HG12 | 8:In:175:VAL:HA | 1.94 | 0.49 |
| 8:Jv:168:VAL:HG12 | 8:Jv:175:VAL:HA | 1.93 | 0.49 |
| 8:Lb:104:ILE:HG23 | 8:Lb:114:VAL:HG11 | 1.94 | 0.49 |
| 1:Ai:36:ASP:HB3 | 1:Ai:39:GLU:HG2 | 1.94 | 0.49 |
| 1:Ai:139:GLY:HA3 | 1:Aj:148:TYR:HD1 | 1.76 | 0.49 |
| 1:Ao:51:ASP:HA | 1:Ao:54:ARG:HE | 1.76 | 0.49 |
| 1:At:125:LEU:HB2 | 1:At:160:PHE:HB3 | 1.93 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:Av:206:ILE:HG12 | 1:Av:235:TYR:HD1 | 1.77 | 0.49 |
| 2:Bb:56:GLN:HE22 | 2:Bc:69:LEU:H | 1.60 | 0.49 |
| 2:Bd:350:GLN:HG3 | 2:Be:361:ILE:HG21 | 1.95 | 0.49 |
| 2:Bk:317:LYS:HB2 | 2:Bl:328:VAL:HG21 | 1.94 | 0.49 |
| 2:Bo:42:THR:HG22 | 2:Bo:80:VAL:HG22 | 1.94 | 0.49 |
| 2:Bs:25:ALA:HB2 | 2:Bs:186:LEU:HD23 | 1.95 | 0.49 |
| 3:Cb:292:PRO:HB3 | 3:Cb:306:LEU:HD13 | 1.94 | 0.49 |
| 4:Ds:237:LEU:HB3 | 4:Ds:241:ARG:HH21 | 1.77 | 0.49 |
| 4:Dv:221:VAL:HB | 4:Dv:261:VAL:HG12 | 1.94 | 0.49 |
| 8:Hj:78:ILE:HG12 | 8:Hj:148:TYR:HB2 | 1.95 | 0.49 |
| 8:Ij:161:VAL:HG12 | 8:Ij:188:ILE:HD11 | 1.95 | 0.49 |
| 8:Il:78:ILE:HG12 | 8:Il:148:TYR:HB2 | 1.94 | 0.49 |
| 8:Jb:150:LEU:HB2 | 8:Jb:167:VAL:HG22 | 1.94 | 0.49 |
| 8:Kp:159:GLY:HA3 | 8:Kt:36:LYS:HA | 1.94 | 0.49 |
| 2:Be:41:VAL:HG23 | 2:Be:83:VAL:HG21 | 1.95 | 0.49 |
| 2:Bp:105:SER:HB2 | 2:Bp:112:LEU:HD11 | 1.94 | 0.49 |
| 2:Bt:143:SER:HB2 | 2:Bt:157:PRO:HG3 | 1.94 | 0.49 |
| 3:Cf:92:GLU:HB2 | 3:Cf:103:ARG:HB3 | 1.94 | 0.49 |
| 3:Cf:358:VAL:HG12 | 3:Cf:360:GLN:H | 1.78 | 0.49 |
| 3:Cx:262:TRP:HA | 3:Cx:267:GLY:HA3 | 1.93 | 0.49 |
| 5:Eg:144:LEU:HA | 5:Eg:147:ARG:HD2 | 1.95 | 0.49 |
| 7:Ha:97:VAL:HG23 | 7:Lk:72:MET:H | 1.77 | 0.49 |
| 7:Hq:108:LYS:HD2 | 8:Hr:204:VAL:HG11 | 1.94 | 0.49 |
| 8:Hx:168:VAL:HG12 | 8:Hx:175:VAL:HA | 1.95 | 0.49 |
| 8:Kh:78:ILE:HG12 | 8:Kh:148:TYR:HB2 | 1.94 | 0.49 |
| 1:Ah:232:ARG:HH22 | 1:Ai:194:GLU:HG3 | 1.78 | 0.49 |
| 2:By:27:VAL:HG21 | 2:By:233:LEU:HD21 | 1.95 | 0.49 |
| 3:Ck:292:PRO:HB3 | 3:Ck:306:LEU:HD13 | 1.95 | 0.49 |
| 3:Co:226:VAL:HB | 3:Co:236:MET:HB3 | 1.95 | 0.49 |
| 3:Cp:350:TYR:HE2 | 3:Cp:355:GLU:HG3 | 1.78 | 0.49 |
| 4:Db:86:VAL:HG13 | 4:Db:139:TYR:HB3 | 1.94 | 0.49 |
| 4:Dt:185:LEU:HD22 | 4:Dt:199:SER:HB3 | 1.95 | 0.49 |
| 7:Ha:77:ARG:HH12 | 7:Hc:73:ARG:HH21 | 1.60 | 0.49 |
| 8:Jd:161:VAL:HG12 | 8:Jd:188:ILE:HD11 | 1.95 | 0.49 |
| 7:Js:108:LYS:HD2 | 8:Jt:204:VAL:HG11 | 1.95 | 0.49 |
| 8:Jt:168:VAL:HG12 | 8:Jt:175:VAL:HA | 1.95 | 0.49 |
| 8:Kt:104:ILE:HG23 | 8:Kt:114:VAL:HG11 | 1.94 | 0.49 |
| 8:Ld:155:LEU:HD23 | 8:Ld:162:ILE:HD11 | 1.93 | 0.49 |
| 1:Ap:33:THR:HG23 | 1:Ap:35:VAL:H | 1.77 | 0.49 |
| 1:As:119:LYS:HD2 | 1:Au:199:LEU:HB2 | 1.95 | 0.49 |
| 2:Bb:254:SER:HB2 | 2:Bd:138:VAL:HG22 | 1.95 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bb:360:ILE:HD12 | 2:Bd:163:SER:H | 1.78 | 0.49 |
| 2:Br:315:MET:HG3 | 2:Bs:328:VAL:HG13 | 1.93 | 0.49 |
| 2:Bt:41:VAL:HG23 | 2:Bt:83:VAL:HG21 | 1.95 | 0.49 |
| 2:Bw:274:HIS:HE1 | 2:Bw:343:ALA:HB3 | 1.78 | 0.49 |
| 3:Ch:361:PRO:HB2 | 4:Da:148:ARG:HD2 | 1.94 | 0.49 |
| 3:Ck:111:SER:HB3 | 3:Ck:113:THR:HG22 | 1.94 | 0.49 |
| 3:Cn:326:PHE:HD1 | 3:Cn:328:ASP:H | 1.60 | 0.49 |
| 3:Cv:292:PRO:HB3 | 3:Cv:306:LEU:HD13 | 1.93 | 0.49 |
| 4:Dh:116:TYR:HE2 | 5:Eh:198:GLU:HB3 | 1.76 | 0.49 |
| 4:Ds:111:LYS:HD2 | 5:Eq:197:PRO:HD3 | 1.93 | 0.49 |
| 8:If:219:ILE:HG23 | 8:Ih:192:LEU:HD12 | 1.95 | 0.49 |
| 7:Im:71:GLY:HA2 | 7:Io:99:ARG:HG2 | 1.94 | 0.49 |
| 8:Iv:78:ILE:HG12 | 8:Iv:148:TYR:HB2 | 1.95 | 0.49 |
| 8:Iz:150:LEU:HB2 | 8:Iz:167:VAL:HG22 | 1.95 | 0.49 |
| 8:Jz:150:LEU:HB2 | 8:Jz:167:VAL:HG22 | 1.95 | 0.49 |
| 1:Al:119:LYS:HD2 | 1:An:199:LEU:HB2 | 1.95 | 0.49 |
| 1:Al:136:LEU:HD13 | 1:Am:154:LEU:HD13 | 1.95 | 0.49 |
| 1:Ay:184:LEU:HD12 | 1:Ay:188:ASN:HB2 | 1.95 | 0.49 |
| 2:Bk:141:GLY:HA3 | 2:Bk:154:GLY:O | 2.13 | 0.49 |
| 2:By:318:LEU:HG | 2:By:320:PRO:HD3 | 1.95 | 0.49 |
| 3:Cg:227:PHE:HE1 | 3:Cg:234:GLU:HG2 | 1.77 | 0.49 |
| 3:Ch:262:TRP:HA | 3:Ch:267:GLY:HA3 | 1.95 | 0.49 |
| 4:Di:183:THR:HG21 | 4:Di:206:ILE:HD11 | 1.95 | 0.49 |
| 4:Dm:184:ILE:HG12 | 4:Dm:286:VAL:HG22 | 1.95 | 0.49 |
| 5:Ee:176:THR:HG22 | 5:Ee:185:ILE:HD12 | 1.95 | 0.49 |
| 5:Em:192:LEU:HD12 | 5:Em:196:MET:HE2 | 1.94 | 0.49 |
| 7:Hm:108:LYS:HD2 | 8:Hn:204:VAL:HG11 | 1.95 | 0.49 |
| 8:Ip:219:ILE:HG23 | 8:Ir:192:LEU:HD12 | 1.94 | 0.49 |
| 7:Ja:77:ARG:HH12 | 7:Jc:73:ARG:HH21 | 1.60 | 0.49 |
| 8:Jx:148:TYR:HE1 | 8:Jx:176:VAL:HG21 | 1.78 | 0.49 |
| 8:Kd:150:LEU:HB2 | 8:Kd:167:VAL:HG22 | 1.95 | 0.49 |
| 8:Kd:159:GLY:HA3 | 8:Kh:36:LYS:HA | 1.95 | 0.49 |
| 8:Kj:173:ARG:HH21 | 8:Kl:144:GLN:HG2 | 1.78 | 0.49 |
| 8:Kr:77:PRO:HB2 | 8:Kr:146:VAL:HA | 1.94 | 0.49 |
| 7:Lc:65:LEU:HD21 | 7:Lc:119:LEU:HB2 | 1.94 | 0.49 |
| 1:Ag:232:ARG:HH22 | 1:Ah:194:GLU:HG3 | 1.78 | 0.48 |
| 1:An:111:LEU:HA | 1:An:225:SER:HB3 | 1.94 | 0.48 |
| 1:An:136:LEU:HD13 | 1:Ao:154:LEU:HD13 | 1.95 | 0.48 |
| 1:Aq:125:LEU:HB2 | 1:Aq:160:PHE:HB3 | 1.95 | 0.48 |
| 2:Bf:105:SER:HB3 | 2:Bf:158:THR:HB | 1.95 | 0.48 |
| 2:Bm:224:ARG:HH22 | 3:Cp:323:THR:HB | 1.78 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bu:85:VAL:HG22 | 2:Bu:103:VAL:HG22 | 1.94 | 0.48 |
| 2:Bu:283:GLU:HG2 | 2:Bu:305:GLU:HG2 | 1.96 | 0.48 |
| 3:Cd:255:ASP:HB3 | 3:Cd:258:SER:HB3 | 1.95 | 0.48 |
| 3:Ce:262:TRP:HA | 3:Ce:267:GLY:HA3 | 1.95 | 0.48 |
| 3:Cw:282:GLU:HA | 3:Cw:286:SER:HB3 | 1.95 | 0.48 |
| 8:Hx:159:GLY:HA3 | 8:Ib:36:LYS:HA | 1.94 | 0.48 |
| 7:Hy:29:TRP:HB3 | 7:Hy:118:ARG:HE | 1.78 | 0.48 |
| 7:Ia:108:LYS:HD2 | 8:Ib:204:VAL:HG11 | 1.95 | 0.48 |
| 8:Iv:161:VAL:HG12 | 8:Iv:188:ILE:HD11 | 1.95 | 0.48 |
| 8:Jj:168:VAL:HG12 | 8:Jj:175:VAL:HA | 1.93 | 0.48 |
| 8:Kf:161:VAL:HG12 | 8:Kf:188:ILE:HD11 | 1.95 | 0.48 |
| 2:Bc:141:GLY:CA | 2:Bc:154:GLY:O | 2.60 | 0.48 |
| 2:Bg:302:PRO:HG2 | 2:Bh:287:VAL:HG22 | 1.95 | 0.48 |
| 2:Bm:272:VAL:HG22 | 2:Bn:260:VAL:HG22 | 1.95 | 0.48 |
| 2:Br:143:SER:HB2 | 2:Br:157:PRO:HG3 | 1.94 | 0.48 |
| 3:Cb:365:TYR:HB3 | 4:Du:91:MET:HE1 | 1.95 | 0.48 |
| 3:Ce:255:ASP:HB3 | 3:Ce:258:SER:HB3 | 1.95 | 0.48 |
| 3:Ch:80:PHE:HA | 6:Fh:136:VAL:HG21 | 1.94 | 0.48 |
| 3:Cj:358:VAL:HG12 | 3:Cj:360:GLN:H | 1.78 | 0.48 |
| 4:Do:93:PRO:HD3 | 4:Do:133:ARG:HA | 1.95 | 0.48 |
| 4:Ds:56:GLY:HA2 | 4:Ds:77:ARG:HG3 | 1.94 | 0.48 |
| 4:Du:184:ILE:HG12 | 4:Du:286:VAL:HG22 | 1.96 | 0.48 |
| 7:Hg:108:LYS:HD2 | 8:Hh:204:VAL:HG11 | 1.94 | 0.48 |
| 7:Ju:79:GLU:H | 7:Ju:86:GLY:HA3 | 1.78 | 0.48 |
| 7:Lg:72:MET:H | 7:Li:97:VAL:HG23 | 1.78 | 0.48 |
| 1:Ab:206:ILE:HG12 | 1:Ab:235:TYR:HD1 | 1.78 | 0.48 |
| 1:Ar:125:LEU:HB2 | 1:Ar:160:PHE:HB3 | 1.95 | 0.48 |
| 2:Bk:318:LEU:HG | 2:Bk:320:PRO:HG3 | 1.94 | 0.48 |
| 2:Bv:248:ALA:HB1 | 2:Bv:265:VAL:HG22 | 1.94 | 0.48 |
| 2:Bx:103:VAL:HB | 2:Bx:137:LEU:HD21 | 1.93 | 0.48 |
| 3:Cd:111:SER:HB3 | 3:Cd:113:THR:HG22 | 1.95 | 0.48 |
| 3:Cr:365:TYR:HE2 | 4:Dk:94:VAL:HG22 | 1.77 | 0.48 |
| 4:Dv:31:PRO:HA | 4:Dv:156:VAL:HG21 | 1.95 | 0.48 |
| 4:Dx:219:VAL:HG21 | 4:Dx:254:LEU:HD21 | 1.95 | 0.48 |
| 7:Hg:79:GLU:H | 7:Hg:86:GLY:HA3 | 1.79 | 0.48 |
| 8:Hh:150:LEU:HB2 | 8:Hh:167:VAL:HG22 | 1.95 | 0.48 |
| 8:In:219:ILE:HG23 | 8:Ip:192:LEU:HD12 | 1.95 | 0.48 |
| 8:Jj:161:VAL:HG12 | 8:Jj:188:ILE:HD11 | 1.96 | 0.48 |
| 7:Kc:104:VAL:HG12 | 8:Kd:212:ILE:HG13 | 1.95 | 0.48 |
| 7:Lg:104:VAL:HG12 | 8:Lh:212:ILE:HG13 | 1.94 | 0.48 |
| 1:At:219:PHE:HA | 2:Bi:69:LEU:HD22 | 1.95 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bn:105:SER:HB2 | 2:Bn:112:LEU:HD11 | 1.95 | 0.48 |
| 2:Bp:285:LEU:HD23 | 2:Bp:303:ASN:HB3 | 1.96 | 0.48 |
| 3:Ce:92:GLU:HB2 | 3:Ce:103:ARG:HB3 | 1.95 | 0.48 |
| 3:Cs:227:PHE:HE1 | 3:Cs:234:GLU:HG2 | 1.79 | 0.48 |
| 3:Cw:56:PHE:HD1 | 6:Gw:139:LYS:HE3 | 1.79 | 0.48 |
| 4:Dh:219:VAL:HG21 | 4:Dh:254:LEU:HD21 | 1.95 | 0.48 |
| 4:Di:237:LEU:HB3 | 4:Di:241:ARG:HH21 | 1.77 | 0.48 |
| 4:Dn:37:GLN:HG3 | 4:Dn:49:VAL:HG23 | 1.96 | 0.48 |
| 4:Dp:104:ILE:HA | 4:Dq:145:ARG:HD3 | 1.95 | 0.48 |
| 5:Ek:116:ARG:HD3 | 5:Ek:149:GLN:HE22 | 1.78 | 0.48 |
| 7:Hk:108:LYS:HD2 | 8:Hl:204:VAL:HG11 | 1.94 | 0.48 |
| 8:It:161:VAL:HG12 | 8:It:188:ILE:HD11 | 1.96 | 0.48 |
| 8:Jz:155:LEU:HD23 | 8:Jz:162:ILE:HD11 | 1.94 | 0.48 |
| 8:Kf:168:VAL:HG12 | 8:Kf:175:VAL:HA | 1.96 | 0.48 |
| 1:Aj:119:LYS:HD2 | 1:Al:199:LEU:HB2 | 1.94 | 0.48 |
| 2:Bb:105:SER:HB2 | 2:Bb:112:LEU:HD11 | 1.95 | 0.48 |
| 2:Bh:84:ILE:HG13 | 2:Bh:106:ILE:HD13 | 1.95 | 0.48 |
| 2:Bl:317:LYS:HE3 | 2:Bm:324:LEU:HD23 | 1.96 | 0.48 |
| 2:Bu:248:ALA:HB1 | 2:Bu:265:VAL:HG22 | 1.94 | 0.48 |
| 3:Cb:61:ILE:HD11 | 3:Cb:282:GLU:HG3 | 1.95 | 0.48 |
| 3:Cm:35:VAL:HG21 | 3:Cm:243:VAL:HG22 | 1.96 | 0.48 |
| 3:Ct:137:ALA:HB1 | 3:Ct:142:ILE:HG13 | 1.95 | 0.48 |
| 4:Dc:78:ARG:HB3 | 4:Dc:143:GLN:HE22 | 1.77 | 0.48 |
| 4:Di:264:TYR:HB3 | 4:Di:266:LYS:HD2 | 1.96 | 0.48 |
| 4:Dy:29:ALA:HB3 | 4:Dy:154:SER:HB2 | 1.95 | 0.48 |
| 5:Ea:176:THR:HG22 | 5:Ea:185:ILE:HD12 | 1.95 | 0.48 |
| 8:Ij:168:VAL:HG12 | 8:Ij:175:VAL:HA | 1.96 | 0.48 |
| 7:Ju:77:ARG:HH12 | 7:Jw:73:ARG:HH21 | 1.60 | 0.48 |
| 1:Ad:231:ALA:HB3 | 1:Ae:195:LYS:HG3 | 1.95 | 0.48 |
| 1:Ai:184:LEU:HD12 | 1:Ai:188:ASN:HB2 | 1.96 | 0.48 |
| 1:Az:206:ILE:HG12 | 1:Az:235:TYR:HD1 | 1.78 | 0.48 |
| 2:Bg:85:VAL:HG22 | 2:Bg:103:VAL:HG22 | 1.95 | 0.48 |
| 2:Bg:143:SER:HB2 | 2:Bg:157:PRO:HG3 | 1.95 | 0.48 |
| 2:Bg:248:ALA:HB1 | 2:Bg:265:VAL:HG22 | 1.96 | 0.48 |
| 2:Br:84:ILE:HG13 | 2:Br:106:ILE:HD13 | 1.95 | 0.48 |
| 2:Bu:315:MET:HG3 | 2:Bv:328:VAL:HG13 | 1.94 | 0.48 |
| 2:Bx:27:VAL:HG21 | 2:Bx:233:LEU:HD21 | 1.95 | 0.48 |
| 3:Cd:269:MET:HE3 | 3:Cd:269:MET:HB3 | 1.79 | 0.48 |
| 3:Cj:50:LEU:HD21 | 3:Cj:67:LEU:HD23 | 1.96 | 0.48 |
| 4:Db:184:ILE:HG12 | 4:Db:286:VAL:HG22 | 1.96 | 0.48 |
| 4:Dm:68:ILE:HD11 | 4:Dn:112:GLN:HE21 | 1.79 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 7:Hi:104:VAL:HG12 | 8:Hj:212:ILE:HG13 | 1.94 | 0.48 |
| 7:Hy:104:VAL:HG12 | 8:Hz:212:ILE:HG13 | 1.96 | 0.48 |
| 8:Jf:78:ILE:HG12 | 8:Jf:148:TYR:HB2 | 1.96 | 0.48 |
| 8:Jr:168:VAL:HG12 | 8:Jr:175:VAL:HA | 1.95 | 0.48 |
| 8:Kl:156:ARG:HE | 8:Kl:192:LEU:HD13 | 1.77 | 0.48 |
| 1:Al:113:GLU:HB2 | 1:Al:172:MET:HB3 | 1.96 | 0.48 |
| 1:Al:184:LEU:HD12 | 1:Al:188:ASN:HB2 | 1.95 | 0.48 |
| 2:Ba:254:SER:HB2 | 2:Bc:138:VAL:HG22 | 1.96 | 0.48 |
| 2:Be:143:SER:HB2 | 2:Be:157:PRO:HG3 | 1.96 | 0.48 |
| 2:Bh:274:HIS:HE1 | 2:Bh:343:ALA:HB3 | 1.78 | 0.48 |
| 3:Cf:195:MET:HE2 | 3:Cf:281:LEU:HD11 | 1.96 | 0.48 |
| 3:Cv:92:GLU:HB2 | 3:Cv:103:ARG:HB2 | 1.96 | 0.48 |
| 3:Cx:292:PRO:HB3 | 3:Cx:306:LEU:HD13 | 1.96 | 0.48 |
| 4:Dw:183:THR:HG21 | 4:Dw:206:ILE:HD11 | 1.96 | 0.48 |
| 5:Eq:154:LEU:HB3 | 5:Eq:164:TYR:HE1 | 1.79 | 0.48 |
| 8:Hf:150:LEU:HB2 | 8:Hf:167:VAL:HG22 | 1.95 | 0.48 |
| 8:In:161:VAL:HG12 | 8:In:188:ILE:HD11 | 1.96 | 0.48 |
| 8:Iv:166:ARG:HH22 | 8:Ix:101:GLU:HG2 | 1.78 | 0.48 |
| 7:Jg:78:ALA:HB3 | 7:Ji:91:ALA:HB3 | 1.96 | 0.48 |
| 8:Jl:161:VAL:HG12 | 8:Jl:188:ILE:HD11 | 1.95 | 0.48 |
| 8:Kn:219:ILE:HG23 | 8:Kp:192:LEU:HD12 | 1.96 | 0.48 |
| 8:Kz:214:GLN:HG3 | 8:Lb:195:LEU:HD21 | 1.96 | 0.48 |
| 1:Ah:206:ILE:HG12 | 1:Ah:235:TYR:HD1 | 1.79 | 0.48 |
| 2:Bg:84:ILE:HG13 | 2:Bg:106:ILE:HD13 | 1.95 | 0.48 |
| 2:Bh:272:VAL:HG22 | 2:Bi:260:VAL:HG22 | 1.95 | 0.48 |
| 2:Bm:254:SER:HB2 | 2:Bo:138:VAL:HG22 | 1.96 | 0.48 |
| 2:Bx:318:LEU:HG | 2:Bx:320:PRO:HD3 | 1.96 | 0.48 |
| 3:Ca:195:MET:HE2 | 3:Ca:281:LEU:HD11 | 1.95 | 0.48 |
| 3:Cd:167:VAL:HG21 | 3:Cd:191:ALA:HB2 | 1.95 | 0.48 |
| 4:Df:104:ILE:HA | 4:Dg:145:ARG:HD3 | 1.96 | 0.48 |
| 4:Dh:64:ALA:HB2 | 4:Dh:172:LEU:HD22 | 1.96 | 0.48 |
| 8:Hz:161:VAL:HG12 | 8:Hz:188:ILE:HD11 | 1.96 | 0.48 |
| 8:Jp:104:ILE:HG23 | 8:Jp:114:VAL:HG11 | 1.96 | 0.48 |
| 7:Lg:108:LYS:HD2 | 8:Lh:204:VAL:HG11 | 1.96 | 0.48 |
| 1:Af:249:PHE:HA | 1:Af:252:ARG:HE | 1.79 | 0.48 |
| 1:Am:231:ALA:HB3 | 1:An:195:LYS:HG3 | 1.95 | 0.48 |
| 1:Av:184:LEU:HD12 | 1:Av:188:ASN:HB2 | 1.95 | 0.48 |
| 2:Bh:336:ALA:HB1 | 2:Bh:340:ASP:HB2 | 1.95 | 0.48 |
| 2:Bo:85:VAL:HG22 | 2:Bo:103:VAL:HG13 | 1.96 | 0.48 |
| 3:Cg:201:ASP:HB3 | 3:Cg:221:ALA:HB3 | 1.96 | 0.48 |
| 3:Co:34:ILE:HD11 | 3:Co:100:MET:HB2 | 1.96 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 3:Ct:282:GLU:HA | 3:Ct:286:SER:HB3 | 1.96 | 0.48 |
| 4:Db:116:TYR:HE2 | 5:Eb:198:GLU:HB3 | 1.78 | 0.48 |
| 4:Dk:106:ASN:HD22 | 4:Dk:107:LEU:H | 1.61 | 0.48 |
| 4:Ds:104:ILE:HG23 | 4:Dt:145:ARG:HD3 | 1.96 | 0.48 |
| 5:Ek:176:THR:HG22 | 5:Ek:185:ILE:HD12 | 1.95 | 0.48 |
| 5:Em:176:THR:HG22 | 5:Em:185:ILE:HD12 | 1.94 | 0.48 |
| 7:Hu:79:GLU:H | 7:Hu:86:GLY:HA3 | 1.79 | 0.48 |
| 8:If:156:ARG:HE | 8:If:192:LEU:HD13 | 1.79 | 0.48 |
| 8:Ih:161:VAL:HG12 | 8:Ih:188:ILE:HD11 | 1.96 | 0.48 |
| 8:Jl:168:VAL:HG12 | 8:Jl:175:VAL:HA | 1.96 | 0.48 |
| 1:Ae:66:TRP:HA | 1:Ae:192:ARG:HD3 | 1.96 | 0.48 |
| 1:Ak:245:GLN:HG3 | 1:Al:200:ASN:HD21 | 1.79 | 0.48 |
| 2:Bf:156:ASN:HD22 | 2:Bg:114:GLY:HA3 | 1.78 | 0.48 |
| 2:Bh:267:LEU:HB2 | 2:Bh:320:PRO:HG2 | 1.95 | 0.48 |
| 2:Bn:49:GLU:HG3 | 2:Bn:54:THR:HG21 | 1.95 | 0.48 |
| 2:Br:259:ILE:HD11 | 2:Br:342:MET:HG3 | 1.96 | 0.48 |
| 2:Bv:34:GLN:HG2 | 2:Bw:134:GLN:HB3 | 1.95 | 0.48 |
| 3:Ca:70:LEU:HD11 | 6:Fa:137:PRO:HD2 | 1.96 | 0.48 |
| 3:Cd:326:PHE:HD1 | 3:Cd:328:ASP:H | 1.62 | 0.48 |
| 3:Cj:249:PRO:HG2 | 3:Cj:252:SER:HB3 | 1.96 | 0.48 |
| 3:Cs:362:GLU:HG3 | 4:Dl:103:ARG:HH12 | 1.78 | 0.48 |
| 4:Dc:111:LYS:HD2 | 5:Ea:197:PRO:HD3 | 1.96 | 0.48 |
| 4:Dj:116:TYR:HE2 | 5:Ej:198:GLU:HB3 | 1.77 | 0.48 |
| 4:Do:175:TYR:HE1 | 4:Do:209:TYR:HB2 | 1.79 | 0.48 |
| 5:Eq:176:THR:HG22 | 5:Eq:185:ILE:HD12 | 1.96 | 0.48 |
| 5:Es:147:ARG:HD3 | 5:Es:170:TRP:HB3 | 1.94 | 0.48 |
| 8:Ij:150:LEU:HB2 | 8:Ij:167:VAL:HG22 | 1.96 | 0.48 |
| 8:Jh:161:VAL:HG12 | 8:Jh:188:ILE:HD11 | 1.96 | 0.48 |
| 8:Jn:161:VAL:HG12 | 8:Jn:188:ILE:HD11 | 1.96 | 0.48 |
| 1:Ae:245:GLN:HG3 | 1:Af:200:ASN:HD21 | 1.79 | 0.47 |
| 2:Bg:259:ILE:HD11 | 2:Bg:342:MET:HG3 | 1.96 | 0.47 |
| 2:Bi:156:ASN:HD22 | 2:Bj:114:GLY:HA3 | 1.79 | 0.47 |
| 2:Bv:259:ILE:HD11 | 2:Bv:342:MET:HG3 | 1.95 | 0.47 |
| 3:Cg:80:PHE:HA | 6:Fg:136:VAL:HG21 | 1.96 | 0.47 |
| 3:Ch:326:PHE:HD1 | 3:Ch:328:ASP:H | 1.62 | 0.47 |
| 3:Cz:292:PRO:HB3 | 3:Cz:306:LEU:HD13 | 1.96 | 0.47 |
| 4:Dc:93:PRO:HD3 | 4:Dc:133:ARG:HA | 1.96 | 0.47 |
| 4:Dn:111:LYS:H | 4:Dn:115:GLY:HA2 | 1.78 | 0.47 |
| 4:Do:88:LEU:HD21 | 4:Do:125:LEU:HD11 | 1.96 | 0.47 |
| 4:Dy:254:LEU:HB3 | 4:Dy:259:ILE:HD11 | 1.96 | 0.47 |
| 5:Em:32:ILE:HD13 | 5:Em:65:ARG:HH22 | 1.78 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Ir:161:VAL:HG12 | 8:Ir:188:ILE:HD11 | 1.96 | 0.47 |
| 8:Jn:168:VAL:HG12 | 8:Jn:175:VAL:HA | 1.95 | 0.47 |
| 8:Kd:161:VAL:HG12 | 8:Kd:188:ILE:HD11 | 1.96 | 0.47 |
| 8:Kd:168:VAL:HG12 | 8:Kd:175:VAL:HA | 1.96 | 0.47 |
| 8:Kx:159:GLY:HA3 | 8:Lb:36:LYS:HA | 1.96 | 0.47 |
| 8:Kz:155:LEU:HD23 | 8:Kz:162:ILE:HD11 | 1.96 | 0.47 |
| 7:Le:108:LYS:HD2 | 8:Lf:204:VAL:HG11 | 1.95 | 0.47 |
| 1:Ai:206:ILE:HG12 | 1:Ai:235:TYR:HD1 | 1.79 | 0.47 |
| 1:Am:206:ILE:HG12 | 1:Am:235:TYR:HD1 | 1.79 | 0.47 |
| 1:As:66:TRP:HA | 1:As:192:ARG:HD3 | 1.95 | 0.47 |
| 1:At:66:TRP:HA | 1:At:192:ARG:HD3 | 1.95 | 0.47 |
| 1:Aw:206:ILE:HG12 | 1:Aw:235:TYR:HD1 | 1.79 | 0.47 |
| 2:Bg:274:HIS:HE1 | 2:Bg:343:ALA:HB3 | 1.78 | 0.47 |
| 2:Bm:197:LEU:HD22 | 2:Bm:218:ILE:HD13 | 1.96 | 0.47 |
| 2:Bs:85:VAL:HB | 2:Bs:122:LEU:HD21 | 1.96 | 0.47 |
| 2:Bu:285:LEU:HD23 | 2:Bu:303:ASN:HB3 | 1.96 | 0.47 |
| 2:Bv:141:GLY:HA3 | 2:Bv:154:GLY:O | 2.14 | 0.47 |
| 2:By:317:LYS:HE3 | 2:Bz:324:LEU:HD23 | 1.94 | 0.47 |
| 3:Cg:137:ALA:HB1 | 3:Cg:142:ILE:HG13 | 1.96 | 0.47 |
| 3:Co:262:TRP:HA | 3:Co:267:GLY:HA3 | 1.95 | 0.47 |
| 3:Cr:86:ARG:HH12 | 7:Js:97:VAL:HB | 1.79 | 0.47 |
| 3:Cs:111:SER:HB3 | 3:Cs:113:THR:HG22 | 1.95 | 0.47 |
| 4:Dx:184:ILE:HG12 | 4:Dx:286:VAL:HG22 | 1.96 | 0.47 |
| 5:Ee:202:ALA:HA | 5:Ee:205:LYS:HZ2 | 1.79 | 0.47 |
| 5:Eo:192:LEU:HD12 | 5:Eo:196:MET:HE2 | 1.96 | 0.47 |
| 8:Hb:219:ILE:HG23 | 8:Hd:192:LEU:HD12 | 1.96 | 0.47 |
| 8:Jz:168:VAL:HG12 | 8:Jz:175:VAL:HA | 1.96 | 0.47 |
| 7:Kq:29:TRP:HB3 | 7:Kq:118:ARG:HE | 1.79 | 0.47 |
| 7:Ky:83:GLN:HE22 | 7:Le:55:ARG:HH22 | 1.61 | 0.47 |
| 7:Le:104:VAL:HG12 | 8:Lf:212:ILE:HG13 | 1.96 | 0.47 |
| 1:Ar:178:VAL:HG21 | 1:Ar:191:ILE:HD12 | 1.96 | 0.47 |
| 1:Au:113:GLU:HB2 | 1:Au:172:MET:HB3 | 1.95 | 0.47 |
| 2:By:221:ARG:HE | 4:Du:97:PRO:HD2 | 1.78 | 0.47 |
| 3:Cd:271:LEU:HD11 | 6:Gd:145:PHE:HE2 | 1.79 | 0.47 |
| 3:Ch:137:ALA:HB1 | 3:Ch:142:ILE:HG13 | 1.96 | 0.47 |
| 3:Ck:56:PHE:HD1 | 6:Gk:139:LYS:HE3 | 1.79 | 0.47 |
| 3:Cl:358:VAL:HG12 | 3:Cl:360:GLN:H | 1.78 | 0.47 |
| 3:Co:350:TYR:HE2 | 3:Co:355:GLU:HG3 | 1.78 | 0.47 |
| 3:Cq:63:SER:HA | 3:Cq:66:ASN:HD21 | 1.79 | 0.47 |
| 3:Ct:220:PHE:HE2 | 3:Ct:273:VAL:HG11 | 1.79 | 0.47 |
| 4:Dd:37:GLN:HG3 | 4:Dd:49:VAL:HG23 | 1.97 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 4:De:237:LEU:HB3 | 4:De:241:ARG:HH21 | 1.80 | 0.47 |
| 5:Ey:202:ALA:HA | 5:Ey:205:LYS:HZ2 | 1.78 | 0.47 |
| 8:Hx:219:ILE:HG23 | 8:Hz:192:LEU:HD12 | 1.95 | 0.47 |
| 8:Ib:78:ILE:HG12 | 8:Ib:148:TYR:HB2 | 1.96 | 0.47 |
| 8:Iz:161:VAL:HG12 | 8:Iz:188:ILE:HD11 | 1.97 | 0.47 |
| 7:Ji:29:TRP:HB3 | 7:Ji:118:ARG:HE | 1.79 | 0.47 |
| 7:Kg:78:ALA:HB3 | 7:Ki:91:ALA:HB3 | 1.95 | 0.47 |
| 8:Kj:104:ILE:HG23 | 8:Kj:114:VAL:HG11 | 1.95 | 0.47 |
| 8:Kt:161:VAL:HG12 | 8:Kt:188:ILE:HD11 | 1.96 | 0.47 |
| 1:Ab:245:GLN:HG3 | 1:Ac:200:ASN:HD21 | 1.79 | 0.47 |
| 1:Am:88:LEU:HB3 | 2:Ba:170:ARG:HH12 | 1.78 | 0.47 |
| 1:As:234:GLN:HA | 1:At:198:THR:HB | 1.96 | 0.47 |
| 2:Bf:85:VAL:HB | 2:Bf:122:LEU:HD21 | 1.97 | 0.47 |
| 2:Bf:360:ILE:HD12 | 2:Bh:163:SER:H | 1.78 | 0.47 |
| 2:Bz:197:LEU:HD22 | 2:Bz:218:ILE:HD13 | 1.96 | 0.47 |
| 3:Cb:358:VAL:HG12 | 3:Cb:360:GLN:H | 1.78 | 0.47 |
| 3:Cs:306:LEU:HB3 | 3:Cs:312:VAL:HG21 | 1.95 | 0.47 |
| 3:Cy:201:ASP:HB3 | 3:Cy:221:ALA:HB3 | 1.96 | 0.47 |
| 3:Cy:262:TRP:HA | 3:Cy:267:GLY:HA3 | 1.97 | 0.47 |
| 4:Dg:197:LYS:HA | 4:Dg:200:GLN:HB2 | 1.97 | 0.47 |
| 4:Do:86:VAL:HG13 | 4:Do:139:TYR:HB3 | 1.96 | 0.47 |
| 4:Du:93:PRO:HB2 | 4:Du:95:TRP:HE3 | 1.78 | 0.47 |
| 5:Eh:116:ARG:HA | 5:Eh:149:GLN:HE22 | 1.78 | 0.47 |
| 7:He:65:LEU:HD21 | 7:He:119:LEU:HB2 | 1.96 | 0.47 |
| 8:Id:161:VAL:HG12 | 8:Id:188:ILE:HD11 | 1.97 | 0.47 |
| 7:Ig:71:GLY:HA2 | 7:Ii:99:ARG:HG2 | 1.95 | 0.47 |
| 7:Ji:79:GLU:H | 7:Ji:86:GLY:HA3 | 1.78 | 0.47 |
| 1:Aa:206:ILE:HG12 | 1:Aa:235:TYR:HD1 | 1.79 | 0.47 |
| 1:Ac:231:ALA:HB3 | 1:Ad:195:LYS:HG3 | 1.97 | 0.47 |
| 1:Ae:178:VAL:HG21 | 1:Ae:191:ILE:HD12 | 1.97 | 0.47 |
| 1:Ag:249:PHE:HA | 1:Ag:252:ARG:HE | 1.78 | 0.47 |
| 2:Br:25:ALA:HB2 | 2:Br:186:LEU:HD23 | 1.97 | 0.47 |
| 2:Bs:248:ALA:HB1 | 2:Bs:265:VAL:HG22 | 1.96 | 0.47 |
| 2:Bs:360:ILE:HD12 | 2:Bu:163:SER:H | 1.80 | 0.47 |
| 3:Cc:262:TRP:HA | 3:Cc:267:GLY:HA3 | 1.97 | 0.47 |
| 3:Cc:350:TYR:HE2 | 3:Cc:355:GLU:HG3 | 1.80 | 0.47 |
| 3:Ch:78:TYR:HD2 | 3:Ch:88:ILE:HB | 1.79 | 0.47 |
| 3:Cv:321:TRP:HE1 | 3:Cv:374:HIS:CE1 | 2.32 | 0.47 |
| 4:Dh:140:GLN:HA | 4:Dh:148:ARG:HA | 1.97 | 0.47 |
| 4:Dn:223:THR:HG22 | 4:Dn:285:VAL:HG22 | 1.96 | 0.47 |
| 4:Dt:184:ILE:HG12 | 4:Dt:286:VAL:HG22 | 1.95 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 5:Es:168:TYR:HB2 | 5:Es:196:MET:HE1 | 1.95 | 0.47 |
| 7:Ik:108:LYS:HD2 | 8:Il:204:VAL:HG11 | 1.96 | 0.47 |
| 7:Ka:106:SER:HB3 | 8:Kb:207:ARG:HB3 | 1.94 | 0.47 |
| 8:Kz:219:ILE:HG23 | 8:Lb:192:LEU:HD12 | 1.97 | 0.47 |
| 1:Ak:206:ILE:HG12 | 1:Ak:235:TYR:HD1 | 1.80 | 0.47 |
| 1:Aw:119:LYS:HB3 | 1:Ay:199:LEU:HD12 | 1.96 | 0.47 |
| 1:Ax:139:GLY:HA3 | 1:Ay:148:TYR:HD1 | 1.79 | 0.47 |
| 2:Bc:252:VAL:HG22 | 2:Bc:259:ILE:HG12 | 1.95 | 0.47 |
| 2:Bo:85:VAL:HG13 | 2:Bo:103:VAL:HG22 | 1.97 | 0.47 |
| 2:Bp:84:ILE:HG13 | 2:Bp:106:ILE:HD13 | 1.96 | 0.47 |
| 2:Bu:41:VAL:HG23 | 2:Bu:83:VAL:HG21 | 1.95 | 0.47 |
| 3:Cf:137:ALA:HB1 | 3:Cf:142:ILE:HG13 | 1.96 | 0.47 |
| 3:Cm:85:VAL:HG22 | 3:Cm:108:ILE:HG12 | 1.97 | 0.47 |
| 3:Cu:59:ALA:HB2 | 3:Cu:110:PRO:HG3 | 1.96 | 0.47 |
| 4:Dk:106:ASN:HD22 | 4:Dk:107:LEU:N | 2.13 | 0.47 |
| 4:Du:29:ALA:HB3 | 4:Du:154:SER:HB2 | 1.96 | 0.47 |
| 5:Eo:32:ILE:HD13 | 5:Eo:65:ARG:HH22 | 1.79 | 0.47 |
| 5:Es:116:ARG:HD3 | 5:Es:149:GLN:HE22 | 1.79 | 0.47 |
| 5:Es:192:LEU:HD12 | 5:Es:196:MET:HE2 | 1.97 | 0.47 |
| 8:Hb:161:VAL:HG12 | 8:Hb:188:ILE:HD11 | 1.96 | 0.47 |
| 8:Id:219:ILE:HG23 | 8:If:192:LEU:HD12 | 1.97 | 0.47 |
| 8:Ih:159:GLY:HA3 | 8:Il:36:LYS:HA | 1.97 | 0.47 |
| 7:Ku:104:VAL:HG12 | 8:Kv:212:ILE:HG13 | 1.96 | 0.47 |
| 1:Ae:36:ASP:HB3 | 1:Ae:39:GLU:HG2 | 1.95 | 0.47 |
| 1:Af:206:ILE:HG12 | 1:Af:235:TYR:HD1 | 1.80 | 0.47 |
| 1:Ag:111:LEU:HB3 | 1:Ag:172:MET:HG3 | 1.97 | 0.47 |
| 1:Ai:136:LEU:HD13 | 1:Aj:154:LEU:HD13 | 1.96 | 0.47 |
| 1:As:113:GLU:HB2 | 1:As:172:MET:HB3 | 1.96 | 0.47 |
| 1:Au:131:ALA:HB1 | 1:Au:152:TYR:HE1 | 1.79 | 0.47 |
| 1:Az:36:ASP:HB3 | 1:Az:39:GLU:HG2 | 1.96 | 0.47 |
| 1:Az:178:VAL:HG21 | 1:Az:191:ILE:HD12 | 1.95 | 0.47 |
| 2:Ba:272:VAL:HG22 | 2:Bb:260:VAL:HG22 | 1.95 | 0.47 |
| 2:Be:122:LEU:HB2 | 2:Be:131:ALA:HB3 | 1.97 | 0.47 |
| 2:Bq:272:VAL:HG22 | 2:Br:260:VAL:HG22 | 1.95 | 0.47 |
| 2:Bv:141:GLY:CA | 2:Bv:154:GLY:O | 2.63 | 0.47 |
| 3:Cg:246:TRP:HZ2 | 3:Cg:254:ILE:HD13 | 1.80 | 0.47 |
| 3:Cr:61:ILE:HD11 | 3:Cr:282:GLU:HG3 | 1.96 | 0.47 |
| 3:Cs:85:VAL:HG22 | 3:Cs:108:ILE:HG12 | 1.96 | 0.47 |
| 3:Cs:350:TYR:HE2 | 3:Cs:355:GLU:HG3 | 1.78 | 0.47 |
| 4:Df:64:ALA:HB2 | 4:Df:172:LEU:HD22 | 1.96 | 0.47 |
| 4:Dg:29:ALA:HB3 | 4:Dg:154:SER:HB2 | 1.97 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 4:Dn:216:ILE:HA | 4:Dn:291:ARG:HA | 1.97 | 0.47 |
| 4:Dv:140:GLN:HA | 4:Dv:148:ARG:HA | 1.96 | 0.47 |
| 4:Dw:185:LEU:HD23 | 4:Dw:199:SER:HB2 | 1.96 | 0.47 |
| 8:Hd:148:TYR:HE1 | 8:Hd:176:VAL:HG21 | 1.79 | 0.47 |
| 8:Hp:78:ILE:HG12 | 8:Hp:148:TYR:HB2 | 1.97 | 0.47 |
| 8:Hp:150:LEU:HB2 | 8:Hp:167:VAL:HG22 | 1.95 | 0.47 |
| 8:Hr:148:TYR:HE1 | 8:Hr:176:VAL:HG21 | 1.80 | 0.47 |
| 8:Ht:104:ILE:HG23 | 8:Ht:114:VAL:HG11 | 1.95 | 0.47 |
| 8:Ib:161:VAL:HG12 | 8:Ib:188:ILE:HD11 | 1.97 | 0.47 |
| 8:Jj:159:GLY:HA3 | 8:Jn:36:LYS:HA | 1.97 | 0.47 |
| 8:Jr:219:ILE:HG23 | 8:Jt:192:LEU:HD12 | 1.95 | 0.47 |
| 8:Kp:161:VAL:HG12 | 8:Kp:188:ILE:HD11 | 1.96 | 0.47 |
| 8:Kx:161:VAL:HG12 | 8:Kx:188:ILE:HD11 | 1.95 | 0.47 |
| 8:Kz:159:GLY:HA3 | 8:Ld:36:LYS:HA | 1.96 | 0.47 |
| 8:Kz:161:VAL:HG12 | 8:Kz:188:ILE:HD11 | 1.96 | 0.47 |
| 8:Ld:159:GLY:HA3 | 8:Lh:36:LYS:HA | 1.96 | 0.47 |
| 8:Lf:161:VAL:HG12 | 8:Lf:188:ILE:HD11 | 1.96 | 0.47 |
| 2:Bb:317:LYS:HE3 | 2:Bc:324:LEU:HD23 | 1.96 | 0.47 |
| 2:Bh:22:LYS:HB3 | 2:Bh:237:GLU:HG2 | 1.97 | 0.47 |
| 2:Bl:318:LEU:HD11 | 2:Bl:330:ALA:HB1 | 1.97 | 0.47 |
| 2:Bv:22:LYS:HB3 | 2:Bv:237:GLU:HG2 | 1.97 | 0.47 |
| 2:Bz:105:SER:HB2 | 2:Bz:112:LEU:HD11 | 1.97 | 0.47 |
| 3:Ci:111:SER:HB3 | 3:Ci:113:THR:HG22 | 1.97 | 0.47 |
| 3:Cs:236:MET:HB2 | 3:Cs:285:ILE:HD11 | 1.97 | 0.47 |
| 3:Cv:365:TYR:HE2 | 4:Do:94:VAL:HG22 | 1.79 | 0.47 |
| 4:Dt:93:PRO:HD3 | 4:Dt:133:ARG:HA | 1.96 | 0.47 |
| 7:Hc:55:ARG:HH22 | 7:Li:83:GLN:HE22 | 1.61 | 0.47 |
| 8:Hf:161:VAL:HG12 | 8:Hf:188:ILE:HD11 | 1.97 | 0.47 |
| 8:Jd:159:GLY:HA3 | 8:Jh:36:LYS:HA | 1.97 | 0.47 |
| 8:Jt:78:ILE:HG12 | 8:Jt:148:TYR:HB2 | 1.97 | 0.47 |
| 1:Am:33:THR:HG23 | 1:Am:35:VAL:H | 1.78 | 0.47 |
| 1:Am:119:LYS:HD2 | 1:Ao:199:LEU:HB2 | 1.96 | 0.47 |
| 2:Bd:143:SER:HB2 | 2:Bd:157:PRO:HG3 | 1.95 | 0.47 |
| 2:Bh:41:VAL:HG23 | 2:Bh:83:VAL:HG21 | 1.97 | 0.47 |
| 2:Bi:248:ALA:HB1 | 2:Bi:265:VAL:HG22 | 1.97 | 0.47 |
| 2:Bs:84:ILE:HG13 | 2:Bs:106:ILE:HD13 | 1.96 | 0.47 |
| 2:Bt:272:VAL:HG22 | 2:Bu:260:VAL:HG22 | 1.97 | 0.47 |
| 2:Bw:49:GLU:HG3 | 2:Bw:54:THR:HG21 | 1.97 | 0.47 |
| 3:Ce:227:PHE:HE1 | 3:Ce:234:GLU:HG2 | 1.80 | 0.47 |
| 3:Cg:111:SER:HB3 | 3:Cg:113:THR:HG22 | 1.97 | 0.47 |
| 3:Cj:255:ASP:HB3 | 3:Cj:258:SER:HB3 | 1.97 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 3:Cv:80:PHE:HA | 6:Fv:136:VAL:HG21 | 1.96 | 0.47 |
| 4:Db:249:PHE:HB3 | 4:Db:254:LEU:HD23 | 1.96 | 0.47 |
| 4:Df:185:LEU:HD22 | 4:Df:199:SER:HB3 | 1.96 | 0.47 |
| 4:Dt:25:VAL:HG13 | 4:Dt:149:ILE:HA | 1.97 | 0.47 |
| 4:Dv:223:THR:HG22 | 4:Dv:285:VAL:HG22 | 1.97 | 0.47 |
| 5:Ea:147:ARG:HD3 | 5:Ea:170:TRP:HB3 | 1.97 | 0.47 |
| 5:Eo:176:THR:HG22 | 5:Eo:185:ILE:HD12 | 1.96 | 0.47 |
| 5:Es:176:THR:HG22 | 5:Es:185:ILE:HD12 | 1.96 | 0.47 |
| 7:Ha:73:ARG:HH21 | 7:Lk:77:ARG:HH12 | 1.63 | 0.47 |
| 8:Hn:155:LEU:HD23 | 8:Hn:162:ILE:HD11 | 1.95 | 0.47 |
| 8:Ix:52:HIS:HD2 | 8:Ix:54:LEU:HB3 | 1.80 | 0.47 |
| 8:Ix:161:VAL:HG12 | 8:Ix:188:ILE:HD11 | 1.97 | 0.47 |
| 7:Je:65:LEU:HD21 | 7:Je:119:LEU:HB2 | 1.97 | 0.47 |
| 8:Kb:161:VAL:HG12 | 8:Kb:188:ILE:HD11 | 1.97 | 0.47 |
| 8:Kr:161:VAL:HG12 | 8:Kr:188:ILE:HD11 | 1.96 | 0.47 |
| 7:Lc:78:ALA:HB3 | 7:Le:91:ALA:HB3 | 1.96 | 0.47 |
| 1:Af:184:LEU:HD12 | 1:Af:188:ASN:HB2 | 1.96 | 0.47 |
| 1:Ao:245:GLN:HG3 | 1:Ap:200:ASN:HD21 | 1.80 | 0.47 |
| 2:Bd:85:VAL:HB | 2:Bd:122:LEU:HD21 | 1.97 | 0.47 |
| 2:Bd:141:GLY:CA | 2:Bd:154:GLY:O | 2.63 | 0.47 |
| 2:Bj:85:VAL:HG22 | 2:Bj:103:VAL:HG22 | 1.97 | 0.47 |
| 2:Bj:156:ASN:HD22 | 2:Bk:114:GLY:HA3 | 1.79 | 0.47 |
| 2:Br:41:VAL:HG23 | 2:Br:83:VAL:HG21 | 1.96 | 0.47 |
| 3:Cl:254:ILE:HD11 | 3:Cl:261:PHE:HB2 | 1.96 | 0.47 |
| 4:Df:116:TYR:HE2 | 5:Ef:198:GLU:HB3 | 1.79 | 0.47 |
| 5:Ei:116:ARG:HD3 | 5:Ei:149:GLN:HE22 | 1.80 | 0.47 |
| 5:Ek:192:LEU:HD12 | 5:Ek:196:MET:HE2 | 1.97 | 0.47 |
| 8:Hh:161:VAL:HG12 | 8:Hh:188:ILE:HD11 | 1.97 | 0.47 |
| 8:Kb:159:GLY:HA3 | 8:Kf:36:LYS:HA | 1.96 | 0.47 |
| 8:Kd:219:ILE:HG23 | 8:Kf:192:LEU:HD12 | 1.97 | 0.47 |
| 8:Kl:214:GLN:HG3 | 8:Kn:195:LEU:HD21 | 1.97 | 0.47 |
| 8:Kv:161:VAL:HG12 | 8:Kv:188:ILE:HD11 | 1.95 | 0.47 |
| 1:Ah:124:ASP:HB2 | 1:Ai:165:ALA:HB3 | 1.97 | 0.46 |
| 1:Aj:231:ALA:HB3 | 1:Ak:195:LYS:HG3 | 1.97 | 0.46 |
| 1:Al:191:ILE:HD13 | 1:Al:212:ILE:HD13 | 1.97 | 0.46 |
| 1:Am:178:VAL:HG21 | 1:Am:191:ILE:HD12 | 1.96 | 0.46 |
| 2:Ba:122:LEU:HB2 | 2:Ba:131:ALA:HB3 | 1.98 | 0.46 |
| 2:Bf:85:VAL:HG22 | 2:Bf:103:VAL:HG22 | 1.97 | 0.46 |
| 2:Bg:267:LEU:HB2 | 2:Bg:320:PRO:HG2 | 1.97 | 0.46 |
| 2:Bh:156:ASN:HD22 | 2:Bi:114:GLY:HA3 | 1.80 | 0.46 |
| 3:Ce:292:PRO:HB3 | 3:Ce:306:LEU:HD13 | 1.96 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 3:Cg:326:PHE:HD1 | 3:Cg:328:ASP:H | 1.63 | 0.46 |
| 3:Cn:350:TYR:HE2 | 3:Cn:355:GLU:HG3 | 1.81 | 0.46 |
| 3:Co:269:MET:HE3 | 3:Co:269:MET:HB3 | 1.83 | 0.46 |
| 3:Cx:201:ASP:HB3 | 3:Cx:221:ALA:HB3 | 1.97 | 0.46 |
| 5:Eg:168:TYR:HB2 | 5:Eg:196:MET:HE1 | 1.96 | 0.46 |
| 5:Eu:81:MET:HG3 | 5:Eu:86:VAL:HB | 1.96 | 0.46 |
| 7:Hu:71:GLY:HA2 | 7:Hw:99:ARG:HG2 | 1.95 | 0.46 |
| 8:Ib:159:GLY:HA3 | 8:If:36:LYS:HA | 1.96 | 0.46 |
| 8:Ip:161:VAL:HG12 | 8:Ip:188:ILE:HD11 | 1.97 | 0.46 |
| 8:Jb:161:VAL:HG12 | 8:Jb:188:ILE:HD11 | 1.97 | 0.46 |
| 7:Jk:78:ALA:HB3 | 7:Jm:91:ALA:HB3 | 1.97 | 0.46 |
| 7:Js:71:GLY:HA2 | 7:Ju:99:ARG:HG2 | 1.97 | 0.46 |
| 8:Jt:214:GLN:HG3 | 8:Jv:195:LEU:HD21 | 1.96 | 0.46 |
| 7:Kc:71:GLY:HA2 | 7:Ke:99:ARG:HG2 | 1.97 | 0.46 |
| 8:Kx:87:GLN:HE21 | 8:Kz:94:TRP:HB3 | 1.81 | 0.46 |
| 1:Aa:148:TYR:HD1 | 1:Az:139:GLY:HA3 | 1.80 | 0.46 |
| 1:Aj:206:ILE:HG12 | 1:Aj:235:TYR:HD1 | 1.81 | 0.46 |
| 1:Al:134:ASP:HB2 | 1:Am:155:LYS:HB2 | 1.96 | 0.46 |
| 2:Bg:156:ASN:HD22 | 2:Bh:114:GLY:HA3 | 1.80 | 0.46 |
| 2:Bh:285:LEU:HD23 | 2:Bh:303:ASN:HB3 | 1.96 | 0.46 |
| 2:Bk:253:ASN:HB3 | 2:Bk:258:THR:HG23 | 1.96 | 0.46 |
| 2:Bn:139:VAL:HG12 | 2:Bn:141:GLY:H | 1.80 | 0.46 |
| 2:Bo:49:GLU:HG3 | 2:Bo:54:THR:HG21 | 1.97 | 0.46 |
| 2:Bq:21:ILE:HG23 | 2:Bq:197:LEU:HD11 | 1.98 | 0.46 |
| 2:Bx:141:GLY:HA3 | 2:Bx:154:GLY:O | 2.16 | 0.46 |
| 2:Bz:139:VAL:HG12 | 2:Bz:141:GLY:H | 1.80 | 0.46 |
| 3:Cb:152:VAL:HG22 | 6:Gb:145:PHE:HA | 1.96 | 0.46 |
| 3:Cg:322:HIS:HB3 | 4:Dz:98:GLY:HA2 | 1.97 | 0.46 |
| 3:Cl:35:VAL:HG23 | 3:Cl:245:ARG:HG3 | 1.96 | 0.46 |
| 3:Ct:223:GLU:HG2 | 3:Ct:239:THR:HG22 | 1.97 | 0.46 |
| 4:Dc:237:LEU:HB3 | 4:Dc:241:ARG:HH21 | 1.80 | 0.46 |
| 4:Dg:126:LEU:HB3 | 4:Dg:162:TYR:HE1 | 1.80 | 0.46 |
| 4:Dn:64:ALA:HB2 | 4:Dn:172:LEU:HD22 | 1.96 | 0.46 |
| 4:Dr:34:SER:HB3 | 4:Dr:156:VAL:HB | 1.98 | 0.46 |
| 4:Dx:90:SER:HB2 | 4:Dx:104:ILE:HD11 | 1.98 | 0.46 |
| 5:Ei:168:TYR:HB2 | 5:Ei:196:MET:HE1 | 1.96 | 0.46 |
| 5:Ew:116:ARG:HD3 | 5:Ew:149:GLN:HE22 | 1.80 | 0.46 |
| 8:Hd:161:VAL:HG12 | 8:Hd:188:ILE:HD11 | 1.97 | 0.46 |
| 8:Hz:219:ILE:HG23 | 8:Ib:192:LEU:HD12 | 1.97 | 0.46 |
| 8:If:214:GLN:HG3 | 8:Ih:195:LEU:HD21 | 1.97 | 0.46 |
| 8:Il:156:ARG:HE | 8:Il:192:LEU:HD13 | 1.80 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:It:219:ILE:HG23 | 8:Iv:192:LEU:HD12 | 1.97 | 0.46 |
| 8:Kj:219:ILE:HG23 | 8:Kl:192:LEU:HD12 | 1.98 | 0.46 |
| 8:Kl:161:VAL:HG12 | 8:Kl:188:ILE:HD11 | 1.98 | 0.46 |
| 1:Ag:184:LEU:HD12 | 1:Ag:188:ASN:HB2 | 1.96 | 0.46 |
| 1:Aq:178:VAL:HG21 | 1:Aq:191:ILE:HD12 | 1.98 | 0.46 |
| 1:Ax:88:LEU:HB3 | 2:Bl:170:ARG:HH12 | 1.80 | 0.46 |
| 1:Ax:213:ARG:HE | 1:Ay:106:ILE:HG12 | 1.81 | 0.46 |
| 2:Bk:277:MET:HE2 | 2:Bk:311:LYS:HD2 | 1.97 | 0.46 |
| 2:Bt:269:PRO:HB2 | 2:Bu:263:GLN:HE21 | 1.81 | 0.46 |
| 2:Bu:156:ASN:HD22 | 2:Bv:114:GLY:HA3 | 1.81 | 0.46 |
| 3:Cb:227:PHE:HD1 | 3:Cb:234:GLU:HA | 1.81 | 0.46 |
| 3:Ci:326:PHE:HD1 | 3:Ci:328:ASP:H | 1.64 | 0.46 |
| 3:Cj:94:LYS:HG3 | 3:Cj:101:TYR:HB2 | 1.97 | 0.46 |
| 3:Cq:292:PRO:HB3 | 3:Cq:306:LEU:HD13 | 1.97 | 0.46 |
| 4:Dj:223:THR:HG22 | 4:Dj:285:VAL:HG22 | 1.97 | 0.46 |
| 4:Du:225:THR:HA | 4:Du:283:ARG:HA | 1.98 | 0.46 |
| 4:Dw:111:LYS:HD2 | 5:Eu:197:PRO:HD3 | 1.96 | 0.46 |
| 8:Hp:161:VAL:HG12 | 8:Hp:188:ILE:HD11 | 1.97 | 0.46 |
| 8:Hx:150:LEU:HB2 | 8:Hx:167:VAL:HG22 | 1.98 | 0.46 |
| 8:Il:161:VAL:HG12 | 8:Il:188:ILE:HD11 | 1.97 | 0.46 |
| 8:Ip:168:VAL:HG12 | 8:Ip:175:VAL:HA | 1.96 | 0.46 |
| 7:Ks:108:LYS:HD2 | 8:Kt:204:VAL:HG11 | 1.98 | 0.46 |
| 1:Au:249:PHE:HA | 1:Au:252:ARG:HE | 1.80 | 0.46 |
| 1:Ay:34:THR:HG21 | 3:Co:247:PRO:HB2 | 1.97 | 0.46 |
| 2:Ba:98:THR:HB | 2:Ba:164:SER:HA | 1.96 | 0.46 |
| 2:Bf:27:VAL:HG21 | 2:Bf:233:LEU:HD21 | 1.97 | 0.46 |
| 2:Bi:336:ALA:HB1 | 2:Bi:340:ASP:HB2 | 1.97 | 0.46 |
| 2:Bj:259:ILE:HD11 | 2:Bj:342:MET:HG3 | 1.98 | 0.46 |
| 2:Bm:277:MET:HE2 | 2:Bm:311:LYS:HD2 | 1.97 | 0.46 |
| 2:Bn:311:LYS:HE3 | 2:Bo:337:ALA:HB1 | 1.96 | 0.46 |
| 2:Bv:84:ILE:HG13 | 2:Bv:106:ILE:HD13 | 1.97 | 0.46 |
| 3:Cm:126:ILE:O | 3:Cm:169:THR:HA | 2.16 | 0.46 |
| 3:Cq:209:LYS:HD2 | 3:Cq:212:GLN:HB2 | 1.97 | 0.46 |
| 3:Cz:226:VAL:HB | 3:Cz:236:MET:HB3 | 1.98 | 0.46 |
| 4:De:93:PRO:HD3 | 4:De:133:ARG:HA | 1.98 | 0.46 |
| 4:Di:83:THR:HG22 | 4:Di:111:LYS:HA | 1.97 | 0.46 |
| 4:Ds:58:ALA:HB1 | 4:Ds:72:PHE:HE1 | 1.80 | 0.46 |
| 4:Dy:111:LYS:HD2 | 5:Ew:197:PRO:HD3 | 1.96 | 0.46 |
| 7:Ia:71:GLY:HA2 | 7:Ic:99:ARG:HG2 | 1.97 | 0.46 |
| 8:Ib:219:ILE:HG23 | 8:Id:192:LEU:HD12 | 1.97 | 0.46 |
| 8:Ij:219:ILE:HG23 | 8:Il:192:LEU:HD12 | 1.98 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Il:159:GLY:HA3 | 8:Ip:36:LYS:HA | 1.96 | 0.46 |
| 7:Jg:107:TYR:CZ | 8:Jj:196:ASN:HB3 | 2.50 | 0.46 |
| 7:Jk:108:LYS:HD2 | 8:Jl:204:VAL:HG11 | 1.98 | 0.46 |
| 7:Jo:29:TRP:HB3 | 7:Jo:118:ARG:HE | 1.80 | 0.46 |
| 7:Jo:71:GLY:HA2 | 7:Jq:99:ARG:HG2 | 1.96 | 0.46 |
| 8:Jr:159:GLY:HA3 | 8:Jv:36:LYS:HA | 1.96 | 0.46 |
| 8:Kx:219:ILE:HG23 | 8:Kz:192:LEU:HD12 | 1.98 | 0.46 |
| 1:Ae:249:PHE:HA | 1:Ae:252:ARG:HE | 1.79 | 0.46 |
| 1:Af:205:TYR:CZ | 1:Af:236:SER:HB3 | 2.51 | 0.46 |
| 1:Aw:205:TYR:CZ | 1:Aw:236:SER:HB3 | 2.51 | 0.46 |
| 2:Bf:41:VAL:HG23 | 2:Bf:83:VAL:HG21 | 1.98 | 0.46 |
| 3:Cf:350:TYR:HE2 | 3:Cf:355:GLU:HG3 | 1.81 | 0.46 |
| 3:Ch:63:SER:HA | 3:Ch:66:ASN:HD22 | 1.81 | 0.46 |
| 3:Cl:136:GLN:HE22 | 3:Cm:257:ARG:HB2 | 1.80 | 0.46 |
| 4:Dd:34:SER:HB3 | 4:Dd:156:VAL:HB | 1.97 | 0.46 |
| 4:Dz:183:THR:HG21 | 4:Dz:206:ILE:HD11 | 1.96 | 0.46 |
| 5:Ei:147:ARG:HD3 | 5:Ei:170:TRP:HB3 | 1.98 | 0.46 |
| 8:Hn:78:ILE:HG12 | 8:Hn:148:TYR:HB2 | 1.98 | 0.46 |
| 8:Ht:219:ILE:HG23 | 8:Hv:192:LEU:HD12 | 1.98 | 0.46 |
| 7:Io:77:ARG:HH12 | 7:Iq:73:ARG:HH22 | 1.62 | 0.46 |
| 8:Jd:137:TRP:HB3 | 8:Jf:125:VAL:HB | 1.96 | 0.46 |
| 8:Jd:148:TYR:HE1 | 8:Jd:176:VAL:HG21 | 1.79 | 0.46 |
| 7:Kk:79:GLU:H | 7:Kk:86:GLY:HA3 | 1.81 | 0.46 |
| 7:Km:83:GLN:HE22 | 7:Ks:55:ARG:HH22 | 1.64 | 0.46 |
| 1:Aj:88:LEU:HB3 | 2:Bx:170:ARG:HH12 | 1.79 | 0.46 |
| 1:An:206:ILE:HG12 | 1:An:235:TYR:HD1 | 1.79 | 0.46 |
| 1:As:245:GLN:HG3 | 1:At:200:ASN:HD21 | 1.81 | 0.46 |
| 1:At:111:LEU:HB3 | 1:At:172:MET:HG3 | 1.98 | 0.46 |
| 1:Aw:66:TRP:HA | 1:Aw:192:ARG:HD3 | 1.98 | 0.46 |
| 1:Ay:206:ILE:HG12 | 1:Ay:235:TYR:HD1 | 1.81 | 0.46 |
| 2:Bq:42:THR:HG22 | 2:Bq:80:VAL:HG22 | 1.97 | 0.46 |
| 2:Br:275:GLY:HA3 | 2:Bs:338:PRO:HG2 | 1.97 | 0.46 |
| 3:Cb:182:ILE:HG23 | 3:Cb:194:ILE:HD12 | 1.96 | 0.46 |
| 3:Cn:80:PHE:HD1 | 6:Fn:136:VAL:HG21 | 1.80 | 0.46 |
| 3:Cr:228:ASP:HB2 | 3:Cr:235:VAL:HG11 | 1.98 | 0.46 |
| 3:Cv:111:SER:HB3 | 3:Cv:113:THR:HG22 | 1.97 | 0.46 |
| 4:De:66:LYS:HA | 5:Ef:162:LEU:HD22 | 1.98 | 0.46 |
| 8:Hj:161:VAL:HG12 | 8:Hj:188:ILE:HD11 | 1.97 | 0.46 |
| 7:Hm:65:LEU:HD21 | 7:Hm:119:LEU:HB2 | 1.97 | 0.46 |
| 7:Hu:65:LEU:HD21 | 7:Hu:119:LEU:HB2 | 1.97 | 0.46 |
| 8:It:78:ILE:HG12 | 8:It:148:TYR:HB2 | 1.98 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 7:Ka:108:LYS:HD2 | 8:Kb:204:VAL:HG11 | 1.97 | 0.46 |
| 1:Ae:184:LEU:HD12 | 1:Ae:188:ASN:HB2 | 1.98 | 0.46 |
| 1:Ah:136:LEU:HD13 | 1:Ai:154:LEU:HD13 | 1.97 | 0.46 |
| 1:Ah:184:LEU:HD12 | 1:Ah:188:ASN:HB2 | 1.97 | 0.46 |
| 1:Ar:51:ASP:HA | 1:Ar:54:ARG:HE | 1.81 | 0.46 |
| 2:Bg:233:LEU:O | 2:Bg:237:GLU:HB2 | 2.15 | 0.46 |
| 2:Bq:56:GLN:HE22 | 2:Br:69:LEU:H | 1.64 | 0.46 |
| 2:Bx:324:LEU:HD12 | 2:Bx:327:LEU:HD23 | 1.98 | 0.46 |
| 3:Cs:78:TYR:HD2 | 3:Cs:88:ILE:HB | 1.80 | 0.46 |
| 3:Cz:269:MET:HE3 | 3:Cz:269:MET:HB3 | 1.86 | 0.46 |
| 4:Da:86:VAL:HG13 | 4:Da:139:TYR:HB3 | 1.98 | 0.46 |
| 4:Db:219:VAL:HG21 | 4:Db:254:LEU:HD21 | 1.98 | 0.46 |
| 4:Du:83:THR:HG22 | 4:Du:111:LYS:HA | 1.97 | 0.46 |
| 4:Du:111:LYS:HD2 | 5:Es:197:PRO:HD3 | 1.98 | 0.46 |
| 4:Dy:185:LEU:HD23 | 4:Dy:199:SER:HB2 | 1.98 | 0.46 |
| 8:Hl:161:VAL:HG12 | 8:Hl:188:ILE:HD11 | 1.98 | 0.46 |
| 8:Ip:214:GLN:HG3 | 8:Ir:195:LEU:HD21 | 1.98 | 0.46 |
| 8:Jn:159:GLY:HA3 | 8:Jr:36:LYS:HA | 1.97 | 0.46 |
| 8:Jp:161:VAL:HG12 | 8:Jp:188:ILE:HD11 | 1.98 | 0.46 |
| 8:Jz:161:VAL:HG12 | 8:Jz:188:ILE:HD11 | 1.98 | 0.46 |
| 8:Kn:161:VAL:HG12 | 8:Kn:188:ILE:HD11 | 1.96 | 0.46 |
| 8:Kv:214:GLN:HG3 | 8:Kx:195:LEU:HD21 | 1.98 | 0.46 |
| 7:Le:83:GLN:HE22 | 7:Lk:55:ARG:HH22 | 1.64 | 0.46 |
| 1:Aa:136:LEU:HD13 | 1:Ab:154:LEU:HD13 | 1.98 | 0.46 |
| 2:Bc:103:VAL:HB | 2:Bc:137:LEU:HD21 | 1.98 | 0.46 |
| 2:Be:248:ALA:HB1 | 2:Be:265:VAL:HG22 | 1.97 | 0.46 |
| 2:Bf:317:LYS:HE3 | 2:Bg:324:LEU:HD23 | 1.98 | 0.46 |
| 2:Bi:49:GLU:HG3 | 2:Bi:54:THR:HG21 | 1.97 | 0.46 |
| 2:Bi:317:LYS:HB2 | 2:Bj:328:VAL:HG21 | 1.98 | 0.46 |
| 2:Bn:272:VAL:HG22 | 2:Bo:260:VAL:HG22 | 1.98 | 0.46 |
| 2:Bs:274:HIS:HE1 | 2:Bs:343:ALA:HB3 | 1.80 | 0.46 |
| 2:Bu:118:MET:HE2 | 2:Bu:118:MET:HB3 | 1.68 | 0.46 |
| 2:Bw:141:GLY:HA3 | 2:Bw:154:GLY:O | 2.16 | 0.46 |
| 3:Ca:292:PRO:HB3 | 3:Ca:306:LEU:HD13 | 1.98 | 0.46 |
| 3:Cc:292:PRO:HB3 | 3:Cc:306:LEU:HD13 | 1.98 | 0.46 |
| 3:Cj:209:LYS:HE3 | 3:Cj:212:GLN:HB3 | 1.98 | 0.46 |
| 3:Ct:292:PRO:HB3 | 3:Ct:306:LEU:HD13 | 1.98 | 0.46 |
| 4:Df:184:ILE:HG12 | 4:Df:286:VAL:HG22 | 1.98 | 0.46 |
| 4:Dl:219:VAL:HG21 | 4:Dl:254:LEU:HD21 | 1.98 | 0.46 |
| 4:Dz:219:VAL:HG21 | 4:Dz:254:LEU:HD21 | 1.98 | 0.46 |
| 5:Eg:116:ARG:HD3 | 5:Eg:149:GLN:HE22 | 1.81 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Hh:159:GLY:HA3 | 8:Hl:36:LYS:HA | 1.97 | 0.46 |
| 8:Iv:219:ILE:HG23 | 8:Ix:192:LEU:HD12 | 1.97 | 0.46 |
| 8:Iz:155:LEU:HD23 | 8:Iz:162:ILE:HD11 | 1.98 | 0.46 |
| 7:Je:83:GLN:HE22 | 7:Jk:55:ARG:HH22 | 1.62 | 0.46 |
| 8:Jf:161:VAL:HG12 | 8:Jf:188:ILE:HD11 | 1.98 | 0.46 |
| 8:Kh:161:VAL:HG12 | 8:Kh:188:ILE:HD11 | 1.98 | 0.46 |
| 8:Kr:78:ILE:HG12 | 8:Kr:148:TYR:HB2 | 1.98 | 0.46 |
| 8:Lj:148:TYR:HE1 | 8:Lj:176:VAL:HG21 | 1.79 | 0.46 |
| 1:Ad:119:LYS:HD2 | 1:Af:199:LEU:HB2 | 1.98 | 0.46 |
| 1:Aj:36:ASP:HB3 | 1:Aj:39:GLU:HG2 | 1.97 | 0.46 |
| 1:Ak:88:LEU:HB3 | 2:By:170:ARG:HH12 | 1.81 | 0.46 |
| 1:Am:136:LEU:HD13 | 1:An:154:LEU:HD13 | 1.98 | 0.46 |
| 1:Ap:88:LEU:HB3 | 2:Bd:170:ARG:HH12 | 1.81 | 0.46 |
| 1:Av:231:ALA:HB3 | 1:Aw:195:LYS:HG3 | 1.98 | 0.46 |
| 1:Ay:71:PRO:HB3 | 1:Ay:104:GLY:HA3 | 1.98 | 0.46 |
| 2:Bf:25:ALA:HB2 | 2:Bf:186:LEU:HD23 | 1.98 | 0.46 |
| 2:Bh:253:ASN:HB3 | 2:Bh:258:THR:HG23 | 1.97 | 0.46 |
| 2:Bq:141:GLY:CA | 2:Bq:154:GLY:O | 2.64 | 0.46 |
| 2:Bs:41:VAL:HG23 | 2:Bs:83:VAL:HG21 | 1.97 | 0.46 |
| 2:By:290:PRO:HD3 | 2:By:299:VAL:HG22 | 1.97 | 0.46 |
| 3:Ca:164:PHE:HZ | 3:Ca:285:ILE:HB | 1.80 | 0.46 |
| 3:Ca:350:TYR:HE2 | 3:Ca:355:GLU:HG3 | 1.80 | 0.46 |
| 3:Cc:255:ASP:HB3 | 3:Cc:258:SER:HB3 | 1.97 | 0.46 |
| 3:Cv:358:VAL:HG12 | 3:Cv:360:GLN:H | 1.81 | 0.46 |
| 4:Dj:34:SER:HB3 | 4:Dj:156:VAL:HB | 1.97 | 0.46 |
| 4:Dj:185:LEU:HD22 | 4:Dj:199:SER:HB3 | 1.97 | 0.46 |
| 4:Dk:111:LYS:HD2 | 5:Ei:197:PRO:HD3 | 1.96 | 0.46 |
| 7:Ia:77:ARG:HH12 | 7:Ic:73:ARG:HH21 | 1.63 | 0.46 |
| 8:Ib:150:LEU:HB2 | 8:Ib:167:VAL:HG22 | 1.97 | 0.46 |
| 8:If:78:ILE:HG12 | 8:If:148:TYR:HB2 | 1.98 | 0.46 |
| 8:Ih:219:ILE:HG23 | 8:Ij:192:LEU:HD12 | 1.97 | 0.46 |
| 8:It:150:LEU:HB2 | 8:It:167:VAL:HG22 | 1.97 | 0.46 |
| 8:Jb:78:ILE:HG12 | 8:Jb:148:TYR:HB2 | 1.98 | 0.46 |
| 7:Kc:108:LYS:HD2 | 8:Kd:204:VAL:HG11 | 1.98 | 0.46 |
| 1:Al:139:GLY:HA3 | 1:Am:148:TYR:HD1 | 1.80 | 0.46 |
| 1:At:113:GLU:HB2 | 1:At:172:MET:HB3 | 1.98 | 0.46 |
| 1:At:178:VAL:HG21 | 1:At:191:ILE:HD12 | 1.98 | 0.46 |
| 2:Be:84:ILE:HG13 | 2:Be:106:ILE:HD13 | 1.97 | 0.46 |
| 2:Bk:269:PRO:HB2 | 2:Bl:263:GLN:HE21 | 1.79 | 0.46 |
| 2:Bm:274:HIS:HE1 | 2:Bm:343:ALA:HB3 | 1.81 | 0.46 |
| 2:Bo:221:ARG:HH21 | 4:Dk:97:PRO:HD2 | 1.80 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bs:284:ASN:HB2 | 2:Bs:304:THR:HG23 | 1.98 | 0.46 |
| 3:Cc:322:HIS:HB3 | 4:Dv:98:GLY:HA2 | 1.97 | 0.46 |
| 3:Ce:269:MET:HE3 | 3:Ce:269:MET:HB3 | 1.81 | 0.46 |
| 3:Cw:88:ILE:HG12 | 3:Cw:106:ILE:HG12 | 1.98 | 0.46 |
| 4:Dg:31:PRO:HB3 | 4:Dg:156:VAL:HG21 | 1.98 | 0.46 |
| 4:Dg:83:THR:HG22 | 4:Dg:111:LYS:HA | 1.97 | 0.46 |
| 4:Dh:56:GLY:HA2 | 4:Dh:77:ARG:HG3 | 1.96 | 0.46 |
| 8:Hj:156:ARG:HE | 8:Hj:192:LEU:HD13 | 1.81 | 0.46 |
| 8:Hr:161:VAL:HG12 | 8:Hr:188:ILE:HD11 | 1.98 | 0.46 |
| 8:Ht:161:VAL:HG12 | 8:Ht:188:ILE:HD11 | 1.98 | 0.46 |
| 8:If:161:VAL:HG12 | 8:If:188:ILE:HD11 | 1.98 | 0.46 |
| 8:Jj:93:ASN:HB2 | 8:Jj:156:ARG:HH22 | 1.81 | 0.46 |
| 7:Kc:65:LEU:HD21 | 7:Kc:119:LEU:HB2 | 1.98 | 0.46 |
| 1:Ag:131:ALA:HB1 | 1:Ag:152:TYR:HE1 | 1.81 | 0.45 |
| 1:Al:206:ILE:HG12 | 1:Al:235:TYR:HD1 | 1.80 | 0.45 |
| 1:Az:71:PRO:HB3 | 1:Az:104:GLY:HA3 | 1.97 | 0.45 |
| 2:Bd:22:LYS:HB3 | 2:Bd:237:GLU:HG2 | 1.97 | 0.45 |
| 2:Bj:317:LYS:HE3 | 2:Bk:324:LEU:HD23 | 1.98 | 0.45 |
| 2:Bn:290:PRO:HB3 | 2:Bn:296:GLY:HA3 | 1.98 | 0.45 |
| 2:By:105:SER:HB2 | 2:By:112:LEU:HD11 | 1.98 | 0.45 |
| 3:Ca:322:HIS:HB3 | 4:Dt:98:GLY:HA2 | 1.98 | 0.45 |
| 3:Cb:126:ILE:HB | 3:Cb:169:THR:HG22 | 1.98 | 0.45 |
| 3:Ce:228:ASP:HB2 | 3:Ce:235:VAL:HG11 | 1.97 | 0.45 |
| 3:Co:373:MET:HE3 | 3:Co:373:MET:HB2 | 1.86 | 0.45 |
| 3:Ct:36:SER:HB2 | 3:Ct:40:VAL:HG11 | 1.97 | 0.45 |
| 4:Dg:111:LYS:HD2 | 5:Ee:197:PRO:HD3 | 1.99 | 0.45 |
| 4:Dw:27:TYR:HB2 | 4:Dw:151:VAL:HG22 | 1.98 | 0.45 |
| 4:Dx:78:ARG:HB3 | 4:Dx:143:GLN:HE21 | 1.80 | 0.45 |
| 5:Eq:192:LEU:HD12 | 5:Eq:196:MET:HE2 | 1.97 | 0.45 |
| 8:Hp:52:HIS:HD2 | 8:Hp:54:LEU:HB3 | 1.81 | 0.45 |
| 8:Jf:137:TRP:HB3 | 8:Jh:125:VAL:HB | 1.98 | 0.45 |
| 8:Jx:161:VAL:HG12 | 8:Jx:188:ILE:HD11 | 1.98 | 0.45 |
| 7:La:108:LYS:HD2 | 8:Lb:204:VAL:HG11 | 1.98 | 0.45 |
| 1:Aa:154:LEU:HD13 | 1:Az:136:LEU:HD13 | 1.97 | 0.45 |
| 1:Ag:154:LEU:HD21 | 1:Ai:258:LEU:HD11 | 1.97 | 0.45 |
| 1:Ah:51:ASP:HA | 1:Ah:54:ARG:HE | 1.80 | 0.45 |
| 1:Am:111:LEU:HA | 1:Am:225:SER:HB3 | 1.98 | 0.45 |
| 1:An:234:GLN:HA | 1:Ao:198:THR:HB | 1.98 | 0.45 |
| 1:Av:205:TYR:CZ | 1:Av:236:SER:HB3 | 2.51 | 0.45 |
| 1:Ay:136:LEU:HD13 | 1:Az:154:LEU:HD13 | 1.98 | 0.45 |
| 2:Ba:224:ARG:HH22 | 3:Cd:323:THR:HB | 1.80 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bb:27:VAL:HG21 | 2:Bb:233:LEU:HD21 | 1.97 | 0.45 |
| 2:Be:25:ALA:HB2 | 2:Be:186:LEU:HD23 | 1.97 | 0.45 |
| 2:Bj:250:ILE:HG21 | 2:Bj:345:LEU:HD13 | 1.98 | 0.45 |
| 2:Bl:111:SER:HA | 2:Bl:157:PRO:HB2 | 1.98 | 0.45 |
| 2:Bt:248:ALA:HB1 | 2:Bt:265:VAL:HG22 | 1.99 | 0.45 |
| 3:Ci:321:TRP:HE1 | 3:Ci:374:HIS:CE1 | 2.34 | 0.45 |
| 3:Ct:121:LYS:HD2 | 3:Ct:310:HIS:HA | 1.97 | 0.45 |
| 3:Cw:326:PHE:HD1 | 3:Cw:328:ASP:H | 1.64 | 0.45 |
| 4:Dg:56:GLY:HA2 | 4:Dg:77:ARG:HG3 | 1.97 | 0.45 |
| 4:Dh:221:VAL:HB | 4:Dh:261:VAL:HG12 | 1.98 | 0.45 |
| 4:Di:111:LYS:HD2 | 5:Eg:197:PRO:HD3 | 1.97 | 0.45 |
| 7:Ha:83:GLN:HE22 | 7:Hg:55:ARG:HH22 | 1.65 | 0.45 |
| 8:Hb:78:ILE:HG12 | 8:Hb:148:TYR:HB2 | 1.98 | 0.45 |
| 7:He:108:LYS:HD2 | 8:Hf:204:VAL:HG11 | 1.99 | 0.45 |
| 8:Hv:104:ILE:HG23 | 8:Hv:114:VAL:HG11 | 1.98 | 0.45 |
| 8:Jt:161:VAL:HG12 | 8:Jt:188:ILE:HD11 | 1.98 | 0.45 |
| 7:La:107:TYR:CZ | 8:Ld:196:ASN:HB3 | 2.52 | 0.45 |
| 1:Ah:129:ASN:HB2 | 1:Ah:156:ASN:HB3 | 1.97 | 0.45 |
| 1:Aj:219:PHE:HD1 | 2:By:69:LEU:HD13 | 1.82 | 0.45 |
| 1:At:136:LEU:HD13 | 1:Au:154:LEU:HD13 | 1.98 | 0.45 |
| 1:At:184:LEU:HD12 | 1:At:188:ASN:HB2 | 1.98 | 0.45 |
| 2:Bd:25:ALA:HB2 | 2:Bd:186:LEU:HD23 | 1.97 | 0.45 |
| 2:Bp:22:LYS:HB3 | 2:Bp:237:GLU:HG2 | 1.98 | 0.45 |
| 2:Bu:274:HIS:HE1 | 2:Bu:343:ALA:HB3 | 1.82 | 0.45 |
| 2:Bw:85:VAL:HG22 | 2:Bw:103:VAL:HG22 | 1.98 | 0.45 |
| 3:Cg:295:VAL:HA | 3:Cg:369:ILE:HG23 | 1.98 | 0.45 |
| 3:Cv:201:ASP:HB3 | 3:Cv:221:ALA:HB3 | 1.98 | 0.45 |
| 4:Dr:221:VAL:HB | 4:Dr:261:VAL:HG12 | 1.97 | 0.45 |
| 4:Dt:65:GLY:HA2 | 4:Dt:176:SER:HB2 | 1.98 | 0.45 |
| 8:Hf:156:ARG:HE | 8:Hf:192:LEU:HD13 | 1.81 | 0.45 |
| 8:Hf:159:GLY:HA3 | 8:Hj:36:LYS:HA | 1.97 | 0.45 |
| 8:Hn:161:VAL:HG12 | 8:Hn:188:ILE:HD11 | 1.99 | 0.45 |
| 8:Ir:150:LEU:HB2 | 8:Ir:167:VAL:HG22 | 1.97 | 0.45 |
| 8:Jj:150:LEU:HB2 | 8:Jj:167:VAL:HG22 | 1.98 | 0.45 |
| 7:Jw:108:LYS:HD2 | 8:Jx:204:VAL:HG11 | 1.98 | 0.45 |
| 8:Kj:161:VAL:HG12 | 8:Kj:188:ILE:HD11 | 1.97 | 0.45 |
| 8:Kr:85:ASP:HB2 | 8:Kr:88:ASN:HB2 | 1.98 | 0.45 |
| 1:Af:178:VAL:HG21 | 1:Af:191:ILE:HD12 | 1.99 | 0.45 |
| 1:Aj:205:TYR:CZ | 1:Aj:236:SER:HB3 | 2.51 | 0.45 |
| 1:As:219:PHE:CD1 | 2:Bh:69:LEU:HD13 | 2.51 | 0.45 |
| 1:Az:88:LEU:HB3 | 2:Bn:170:ARG:HH12 | 1.81 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bb:284:ASN:HB2 | 2:Bb:304:THR:HG23 | 1.98 | 0.45 |
| 2:Bm:137:LEU:HD22 | 2:Bm:160:GLY:HA3 | 1.97 | 0.45 |
| 2:Bs:156:ASN:HD22 | 2:Bt:114:GLY:HA3 | 1.81 | 0.45 |
| 2:Bv:275:GLY:HA3 | 2:Bw:338:PRO:HG2 | 1.98 | 0.45 |
| 2:By:137:LEU:HD22 | 2:By:160:GLY:HA3 | 1.98 | 0.45 |
| 3:Cg:337:VAL:HG22 | 3:Ch:350:TYR:HE1 | 1.82 | 0.45 |
| 3:Cm:292:PRO:HB3 | 3:Cm:306:LEU:HD13 | 1.98 | 0.45 |
| 3:Ct:337:VAL:HG22 | 3:Cu:350:TYR:HE1 | 1.81 | 0.45 |
| 3:Cu:34:ILE:HD11 | 3:Cu:100:MET:HB2 | 1.99 | 0.45 |
| 3:Cy:220:PHE:HE2 | 3:Cy:273:VAL:HG11 | 1.81 | 0.45 |
| 4:Dd:71:ASP:HB3 | 4:Dd:116:TYR:HE1 | 1.81 | 0.45 |
| 5:Ea:192:LEU:HD12 | 5:Ea:196:MET:HE2 | 1.99 | 0.45 |
| 5:Ew:147:ARG:HD3 | 5:Ew:170:TRP:HB3 | 1.98 | 0.45 |
| 8:Hn:159:GLY:HA3 | 8:Hr:36:LYS:HA | 1.97 | 0.45 |
| 8:Ij:159:GLY:HA3 | 8:In:36:LYS:HA | 1.99 | 0.45 |
| 8:Kj:89:MET:HG3 | 8:Kl:135:ARG:HG3 | 1.99 | 0.45 |
| 8:Ll:150:LEU:HB2 | 8:Ll:167:VAL:HG22 | 1.97 | 0.45 |
| 1:Aa:245:GLN:HG3 | 1:Ab:200:ASN:HD21 | 1.81 | 0.45 |
| 1:Ai:205:TYR:CZ | 1:Ai:236:SER:HB3 | 2.52 | 0.45 |
| 2:Bg:122:LEU:HB2 | 2:Bg:131:ALA:HB3 | 1.99 | 0.45 |
| 2:Bq:269:PRO:HB2 | 2:Br:263:GLN:HE21 | 1.81 | 0.45 |
| 2:Bw:290:PRO:HB3 | 2:Bw:296:GLY:HA3 | 1.98 | 0.45 |
| 2:Bw:317:LYS:HE3 | 2:Bx:324:LEU:HD23 | 1.99 | 0.45 |
| 3:Cb:322:HIS:CD2 | 3:Cb:368:GLN:H | 2.34 | 0.45 |
| 3:Ch:249:PRO:HG2 | 3:Ch:252:SER:HB3 | 1.97 | 0.45 |
| 3:Ck:78:TYR:HD2 | 3:Ck:88:ILE:HB | 1.81 | 0.45 |
| 3:Cr:81:ALA:H | 6:Fr:136:VAL:HG21 | 1.82 | 0.45 |
| 3:Cz:350:TYR:HE2 | 3:Cz:355:GLU:HG3 | 1.81 | 0.45 |
| 4:Df:221:VAL:HB | 4:Df:261:VAL:HG12 | 1.98 | 0.45 |
| 4:Do:111:LYS:HD2 | 5:Em:197:PRO:HD3 | 1.98 | 0.45 |
| 5:Eq:147:ARG:HD3 | 5:Eq:170:TRP:HB3 | 1.97 | 0.45 |
| 8:Jh:159:GLY:HA3 | 8:Jl:36:LYS:HA | 1.98 | 0.45 |
| 8:Jj:78:ILE:HG12 | 8:Jj:148:TYR:HB2 | 1.99 | 0.45 |
| 8:Kp:214:GLN:HG3 | 8:Kr:195:LEU:HD21 | 1.99 | 0.45 |
| 7:La:78:ALA:HB3 | 7:Lc:91:ALA:HB3 | 1.98 | 0.45 |
| 8:Lh:150:LEU:HB2 | 8:Lh:167:VAL:HG22 | 1.99 | 0.45 |
| 1:Ac:249:PHE:HA | 1:Ac:252:ARG:HE | 1.81 | 0.45 |
| 1:Au:178:VAL:HG21 | 1:Au:191:ILE:HD12 | 1.98 | 0.45 |
| 2:Bm:98:THR:HB | 2:Bm:164:SER:HA | 1.98 | 0.45 |
| 2:Br:186:LEU:HD21 | 2:Br:197:LEU:HD13 | 1.99 | 0.45 |
| 2:Bv:267:LEU:HB2 | 2:Bv:320:PRO:HG2 | 1.99 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 3:Cf:255:ASP:HB3 | 3:Cf:258:SER:HB3 | 1.99 | 0.45 |
| 3:Cm:78:TYR:HD2 | 3:Cm:88:ILE:HB | 1.81 | 0.45 |
| 3:Cw:201:ASP:HB3 | 3:Cw:221:ALA:HB3 | 1.99 | 0.45 |
| 3:Cz:365:TYR:HE2 | 4:Ds:94:VAL:HG22 | 1.82 | 0.45 |
| 4:Da:93:PRO:HD3 | 4:Da:133:ARG:HA | 1.98 | 0.45 |
| 4:Dh:223:THR:HG22 | 4:Dh:285:VAL:HG22 | 1.98 | 0.45 |
| 4:Di:106:ASN:HD22 | 4:Di:107:LEU:H | 1.63 | 0.45 |
| 4:Dm:185:LEU:HD23 | 4:Dm:199:SER:HB2 | 1.99 | 0.45 |
| 5:Eo:82:LEU:HD21 | 5:Eo:91:ASP:HB2 | 1.99 | 0.45 |
| 8:Iz:219:ILE:HG23 | 8:Jb:192:LEU:HD12 | 1.99 | 0.45 |
| 8:Jp:219:ILE:HG23 | 8:Jr:192:LEU:HD12 | 1.98 | 0.45 |
| 8:Kl:148:TYR:HE1 | 8:Kl:176:VAL:HG21 | 1.82 | 0.45 |
| 1:Ag:139:GLY:HA3 | 1:Ah:148:TYR:HD1 | 1.82 | 0.45 |
| 1:As:205:TYR:CZ | 1:As:236:SER:HB3 | 2.52 | 0.45 |
| 1:At:205:TYR:CZ | 1:At:236:SER:HB3 | 2.52 | 0.45 |
| 2:Be:318:LEU:HD22 | 2:Be:330:ALA:HB1 | 1.99 | 0.45 |
| 2:Bl:34:GLN:HG2 | 2:Bm:134:GLN:HB3 | 1.99 | 0.45 |
| 2:Bp:122:LEU:HB2 | 2:Bp:131:ALA:HB3 | 1.97 | 0.45 |
| 2:Bp:311:LYS:HE3 | 2:Bq:337:ALA:HB1 | 1.98 | 0.45 |
| 2:Bs:85:VAL:HG22 | 2:Bs:103:VAL:HG22 | 1.99 | 0.45 |
| 2:Bu:253:ASN:HB3 | 2:Bu:258:THR:HG23 | 1.97 | 0.45 |
| 2:Bv:285:LEU:HD23 | 2:Bv:303:ASN:HB3 | 1.99 | 0.45 |
| 2:Bw:223:PRO:HD2 | 2:Bw:229:ARG:HA | 1.98 | 0.45 |
| 3:Ca:239:THR:HG21 | 3:Cb:155:ARG:HD3 | 1.98 | 0.45 |
| 3:Cc:269:MET:HE3 | 3:Cc:269:MET:HB3 | 1.81 | 0.45 |
| 3:Cg:34:ILE:HD11 | 3:Cg:100:MET:HB2 | 1.97 | 0.45 |
| 3:Ch:365:TYR:HE2 | 4:Da:94:VAL:HG22 | 1.81 | 0.45 |
| 3:Ci:209:LYS:HD3 | 3:Ci:212:GLN:HE21 | 1.81 | 0.45 |
| 3:Cu:292:PRO:HB3 | 3:Cu:306:LEU:HD13 | 1.99 | 0.45 |
| 4:Dd:93:PRO:HD3 | 4:Dd:133:ARG:HA | 1.99 | 0.45 |
| 4:Dg:106:ASN:HD22 | 4:Dg:107:LEU:H | 1.63 | 0.45 |
| 4:Dg:106:ASN:HD22 | 4:Dg:107:LEU:N | 2.15 | 0.45 |
| 4:Dh:185:LEU:HD22 | 4:Dh:199:SER:HB3 | 1.98 | 0.45 |
| 4:Dy:86:VAL:HG22 | 4:Dy:139:TYR:HB3 | 1.98 | 0.45 |
| 6:Fu:135:GLN:HG2 | 7:Kg:73:ARG:HH12 | 1.82 | 0.45 |
| 8:Jd:219:ILE:HG23 | 8:Jf:192:LEU:HD12 | 1.98 | 0.45 |
| 8:Jh:78:ILE:HG12 | 8:Jh:148:TYR:HB2 | 1.99 | 0.45 |
| 8:Jl:104:ILE:HG23 | 8:Jl:114:VAL:HG11 | 1.99 | 0.45 |
| 7:Jm:74:ILE:HG12 | 7:Jo:63:ARG:HA | 1.97 | 0.45 |
| 8:Jp:84:VAL:HG23 | 8:Jp:86:LEU:H | 1.81 | 0.45 |
| 8:Kl:159:GLY:HA3 | 8:Kp:36:LYS:HA | 1.98 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Kt:159:GLY:HA3 | 8:Kx:36:LYS:HA | 1.99 | 0.45 |
| 8:Ld:161:VAL:HG12 | 8:Ld:188:ILE:HD11 | 1.98 | 0.45 |
| 8:Ll:78:ILE:HG12 | 8:Ll:148:TYR:HB2 | 1.99 | 0.45 |
| 1:Ah:64:PRO:HB2 | 1:Ai:38:VAL:HG13 | 1.98 | 0.45 |
| 1:Ah:111:LEU:HB3 | 1:Ah:172:MET:HG3 | 1.98 | 0.45 |
| 1:An:231:ALA:HB3 | 1:Ao:195:LYS:HG3 | 1.98 | 0.45 |
| 1:Ap:178:VAL:HG21 | 1:Ap:191:ILE:HD12 | 1.98 | 0.45 |
| 2:Ba:27:VAL:HG21 | 2:Ba:233:LEU:HD21 | 1.98 | 0.45 |
| 2:Ba:139:VAL:HG12 | 2:Ba:141:GLY:H | 1.81 | 0.45 |
| 2:Bf:303:ASN:H | 2:Bg:285:LEU:HD12 | 1.82 | 0.45 |
| 2:Bi:84:ILE:HG13 | 2:Bi:106:ILE:HD13 | 1.97 | 0.45 |
| 2:Bj:290:PRO:HB3 | 2:Bj:296:GLY:HA3 | 1.99 | 0.45 |
| 2:Bk:223:PRO:HD2 | 2:Bk:229:ARG:HA | 1.99 | 0.45 |
| 2:Bo:267:LEU:HB2 | 2:Bo:320:PRO:HG2 | 1.99 | 0.45 |
| 2:Bq:336:ALA:HB1 | 2:Bq:340:ASP:HB2 | 1.99 | 0.45 |
| 2:Bv:75:PRO:HB2 | 2:Bv:77:THR:HG23 | 1.99 | 0.45 |
| 2:Bx:141:GLY:CA | 2:Bx:154:GLY:O | 2.65 | 0.45 |
| 3:Ca:262:TRP:HA | 3:Ca:267:GLY:HA3 | 1.99 | 0.45 |
| 3:Ci:157:LEU:HA | 3:Ci:161:SER:HB2 | 1.98 | 0.45 |
| 3:Cv:255:ASP:HB3 | 3:Cv:258:SER:HB3 | 1.99 | 0.45 |
| 4:De:78:ARG:HB3 | 4:De:143:GLN:HE22 | 1.82 | 0.45 |
| 4:Dj:36:TRP:HB3 | 4:Dj:48:LEU:HD11 | 1.99 | 0.45 |
| 4:Dj:64:ALA:HB2 | 4:Dj:172:LEU:HD22 | 1.97 | 0.45 |
| 4:Dn:183:THR:HG21 | 4:Dn:206:ILE:HD11 | 1.98 | 0.45 |
| 4:Dt:221:VAL:HB | 4:Dt:261:VAL:HG12 | 1.98 | 0.45 |
| 4:Du:264:TYR:HB3 | 4:Du:266:LYS:HD2 | 1.98 | 0.45 |
| 4:Dv:169:ILE:HG13 | 4:Dv:172:LEU:HD12 | 1.98 | 0.45 |
| 4:Dz:221:VAL:HB | 4:Dz:261:VAL:HG12 | 1.98 | 0.45 |
| 5:Ec:147:ARG:HD3 | 5:Ec:170:TRP:HB3 | 1.98 | 0.45 |
| 8:Hv:161:VAL:HG12 | 8:Hv:188:ILE:HD11 | 1.99 | 0.45 |
| 8:Hv:219:ILE:HG23 | 8:Hx:192:LEU:HD12 | 1.99 | 0.45 |
| 8:Hx:161:VAL:HG12 | 8:Hx:188:ILE:HD11 | 1.99 | 0.45 |
| 8:Ih:50:PRO:HB2 | 8:Ij:32:ILE:HA | 1.99 | 0.45 |
| 8:Ix:219:ILE:HG23 | 8:Iz:192:LEU:HD12 | 1.99 | 0.45 |
| 7:Ka:65:LEU:HD21 | 7:Ka:119:LEU:HB2 | 1.99 | 0.45 |
| 1:Ae:205:TYR:CZ | 1:Ae:236:SER:HB3 | 2.52 | 0.45 |
| 1:Ag:178:VAL:HG21 | 1:Ag:191:ILE:HD12 | 1.99 | 0.45 |
| 1:Ah:113:GLU:HB2 | 1:Ah:172:MET:HB3 | 1.99 | 0.45 |
| 1:Aj:124:ASP:HB2 | 1:Ak:165:ALA:HB3 | 1.99 | 0.45 |
| 1:Ar:249:PHE:HA | 1:Ar:252:ARG:HE | 1.82 | 0.45 |
| 1:As:249:PHE:HA | 1:As:252:ARG:HE | 1.82 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:At:249:PHE:HA | 1:At:252:ARG:HE | 1.82 | 0.45 |
| 2:Be:305:GLU:HG3 | 2:Bh:148:ASP:HB3 | 1.98 | 0.45 |
| 2:Bh:85:VAL:HB | 2:Bh:122:LEU:HD21 | 1.98 | 0.45 |
| 2:Bh:233:LEU:O | 2:Bh:237:GLU:HB2 | 2.17 | 0.45 |
| 2:Bn:267:LEU:HB2 | 2:Bn:320:PRO:HB2 | 1.99 | 0.45 |
| 2:Bp:49:GLU:HG3 | 2:Bp:54:THR:HG21 | 1.99 | 0.45 |
| 2:Bu:317:LYS:HB2 | 2:Bv:328:VAL:HG21 | 1.99 | 0.45 |
| 3:Cb:78:TYR:HD2 | 3:Cb:88:ILE:HB | 1.82 | 0.45 |
| 3:Cj:292:PRO:HG3 | 3:Cj:306:LEU:HD22 | 1.97 | 0.45 |
| 4:Dn:116:TYR:HE2 | 5:En:198:GLU:HB3 | 1.82 | 0.45 |
| 4:Dr:104:ILE:HA | 4:Ds:145:ARG:HD3 | 1.97 | 0.45 |
| 5:Ea:152:GLU:HG3 | 5:Ea:188:LEU:HD21 | 1.99 | 0.45 |
| 8:Hj:87:GLN:HE21 | 8:Hl:94:TRP:HB3 | 1.81 | 0.45 |
| 8:Ij:78:ILE:HG12 | 8:Ij:148:TYR:HB2 | 1.99 | 0.45 |
| 7:Iu:65:LEU:HD21 | 7:Iu:119:LEU:HB2 | 1.99 | 0.45 |
| 8:Ld:219:ILE:HG23 | 8:Lf:192:LEU:HD12 | 1.99 | 0.45 |
| 8:Lj:219:ILE:HG23 | 8:Ll:192:LEU:HD12 | 1.99 | 0.45 |
| 1:Ac:234:GLN:HA | 1:Ad:198:THR:HB | 1.98 | 0.45 |
| 1:Ah:205:TYR:CZ | 1:Ah:236:SER:HB3 | 2.52 | 0.45 |
| 1:As:124:ASP:HB2 | 1:At:165:ALA:HB3 | 1.98 | 0.45 |
| 1:Aw:206:ILE:HG23 | 1:Aw:235:TYR:HB2 | 1.97 | 0.45 |
| 2:Bc:224:ARG:HH22 | 3:Cf:323:THR:HB | 1.81 | 0.45 |
| 2:Bk:248:ALA:HB1 | 2:Bk:265:VAL:HG22 | 1.98 | 0.45 |
| 3:Cn:182:ILE:HG23 | 3:Cn:194:ILE:HD12 | 1.99 | 0.45 |
| 3:Cv:50:LEU:HD21 | 3:Cv:67:LEU:HD23 | 1.99 | 0.45 |
| 3:Cx:350:TYR:HE2 | 3:Cx:355:GLU:HG3 | 1.82 | 0.45 |
| 3:Cy:306:LEU:HB3 | 3:Cy:312:VAL:HG21 | 1.99 | 0.45 |
| 3:Cz:255:ASP:HB3 | 3:Cz:258:SER:HB3 | 1.99 | 0.45 |
| 4:Dl:249:PHE:HB3 | 4:Dl:254:LEU:HD23 | 1.98 | 0.45 |
| 4:Du:31:PRO:HG3 | 4:Du:95:TRP:HZ2 | 1.82 | 0.45 |
| 5:Eo:147:ARG:HD3 | 5:Eo:170:TRP:HB3 | 1.99 | 0.45 |
| 7:Im:66:ALA:HA | 7:Im:98:ILE:HD11 | 1.99 | 0.45 |
| 8:Iz:84:VAL:HG23 | 8:Iz:86:LEU:H | 1.81 | 0.45 |
| 7:Jc:65:LEU:HD21 | 7:Jc:119:LEU:HB2 | 1.99 | 0.45 |
| 8:Jl:50:PRO:HB2 | 8:Jn:32:ILE:HA | 1.98 | 0.45 |
| 7:Ko:78:ALA:HB3 | 7:Kq:91:ALA:HB3 | 1.99 | 0.45 |
| 8:Ll:161:VAL:HG12 | 8:Ll:188:ILE:HD11 | 1.99 | 0.45 |
| 1:Am:227:ARG:HH22 | 1:An:221:ASN:HB3 | 1.81 | 0.44 |
| 1:Ao:129:ASN:HB2 | 1:Ao:156:ASN:HB3 | 1.98 | 0.44 |
| 2:Bq:85:VAL:HB | 2:Bq:122:LEU:HD21 | 1.98 | 0.44 |
| 2:Bs:27:VAL:HG21 | 2:Bs:233:LEU:HD21 | 1.99 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bw:156:ASN:HD22 | 2:Bx:114:GLY:HA3 | 1.82 | 0.44 |
| 3:Cn:269:MET:HE3 | 3:Cn:269:MET:HB3 | 1.84 | 0.44 |
| 3:Cq:337:VAL:HG22 | 3:Cr:350:TYR:HE1 | 1.81 | 0.44 |
| 3:Cs:292:PRO:HB3 | 3:Cs:306:LEU:HD13 | 1.98 | 0.44 |
| 3:Cw:249:PRO:HG2 | 3:Cw:252:SER:HB3 | 1.98 | 0.44 |
| 4:Di:225:THR:HA | 4:Di:283:ARG:HA | 1.99 | 0.44 |
| 4:Dr:116:TYR:HE2 | 5:Er:198:GLU:HB3 | 1.82 | 0.44 |
| 4:Ds:29:ALA:HB3 | 4:Ds:154:SER:HB2 | 1.98 | 0.44 |
| 5:Es:202:ALA:HA | 5:Es:205:LYS:HZ2 | 1.82 | 0.44 |
| 6:Fu:135:GLN:HG2 | 7:Kg:73:ARG:HH22 | 1.82 | 0.44 |
| 8:Hf:78:ILE:HG12 | 8:Hf:148:TYR:HB2 | 1.99 | 0.44 |
| 7:Hi:78:ALA:HB3 | 7:Hk:91:ALA:HB3 | 1.98 | 0.44 |
| 8:Ht:155:LEU:HD23 | 8:Ht:162:ILE:HD11 | 1.98 | 0.44 |
| 8:If:150:LEU:HB2 | 8:If:167:VAL:HG22 | 1.98 | 0.44 |
| 7:La:29:TRP:HB3 | 7:La:118:ARG:HE | 1.82 | 0.44 |
| 1:Ag:219:PHE:CD1 | 2:Bv:69:LEU:HD13 | 2.52 | 0.44 |
| 2:Be:223:PRO:HB3 | 4:Da:94:VAL:HG12 | 1.99 | 0.44 |
| 2:Bk:141:GLY:CA | 2:Bk:154:GLY:O | 2.65 | 0.44 |
| 2:Bv:251:ILE:HD13 | 2:Bv:359:ILE:HB | 1.99 | 0.44 |
| 3:Cj:195:MET:HE2 | 3:Cj:281:LEU:HD11 | 1.99 | 0.44 |
| 3:Cj:321:TRP:HE1 | 3:Cj:374:HIS:CE1 | 2.36 | 0.44 |
| 3:Cn:321:TRP:HB2 | 3:Cn:372:VAL:HG23 | 2.00 | 0.44 |
| 3:Cy:209:LYS:HD2 | 3:Cy:212:GLN:HB2 | 1.98 | 0.44 |
| 4:Di:29:ALA:HB3 | 4:Di:154:SER:HB2 | 1.99 | 0.44 |
| 4:Dj:104:ILE:HA | 4:Dk:145:ARG:HD3 | 1.99 | 0.44 |
| 4:Dv:25:VAL:HG13 | 4:Dv:149:ILE:HA | 1.99 | 0.44 |
| 5:Eb:82:LEU:HD23 | 5:Eb:88:VAL:HG21 | 1.98 | 0.44 |
| 5:Ew:144:LEU:HA | 5:Ew:147:ARG:HD2 | 1.98 | 0.44 |
| 7:Im:65:LEU:HD21 | 7:Im:119:LEU:HB2 | 1.99 | 0.44 |
| 8:Jf:150:LEU:HB2 | 8:Jf:167:VAL:HG22 | 1.98 | 0.44 |
| 7:Kg:65:LEU:HD21 | 7:Kg:119:LEU:HB2 | 1.99 | 0.44 |
| 7:La:71:GLY:HA2 | 7:Lc:99:ARG:HG2 | 1.99 | 0.44 |
| 8:Lb:173:ARG:HH21 | 8:Ld:144:GLN:HG2 | 1.82 | 0.44 |
| 1:Au:111:LEU:HB3 | 1:Au:172:MET:HG3 | 1.99 | 0.44 |
| 2:Be:252:VAL:HG22 | 2:Be:259:ILE:HG12 | 1.99 | 0.44 |
| 2:Bh:305:GLU:HG2 | 2:Bk:148:ASP:HB3 | 1.99 | 0.44 |
| 2:Bk:27:VAL:HG21 | 2:Bk:233:LEU:HD21 | 1.99 | 0.44 |
| 2:Bk:85:VAL:HB | 2:Bk:122:LEU:HD21 | 1.98 | 0.44 |
| 2:Bs:251:ILE:HD13 | 2:Bs:359:ILE:HB | 1.98 | 0.44 |
| 3:Cf:220:PHE:HE2 | 3:Cf:273:VAL:HG11 | 1.83 | 0.44 |
| 3:Ck:306:LEU:HB3 | 3:Ck:312:VAL:HG21 | 2.00 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 3:Cl:56:PHE:HD1 | 6:Gl:139:LYS:HE2 | 1.81 | 0.44 |
| 3:Cm:111:SER:HB3 | 3:Cm:113:THR:HG22 | 1.97 | 0.44 |
| 4:Df:169:ILE:HG13 | 4:Df:172:LEU:HD12 | 2.00 | 0.44 |
| 5:Ea:116:ARG:HD3 | 5:Ea:149:GLN:HE22 | 1.81 | 0.44 |
| 5:Eu:116:ARG:HD3 | 5:Eu:149:GLN:HE22 | 1.82 | 0.44 |
| 5:Eu:168:TYR:HB2 | 5:Eu:196:MET:HE1 | 1.99 | 0.44 |
| 8:Hj:150:LEU:HB2 | 8:Hj:167:VAL:HG22 | 1.99 | 0.44 |
| 8:Ht:148:TYR:HE1 | 8:Ht:176:VAL:HG21 | 1.83 | 0.44 |
| 7:Hw:108:LYS:HD2 | 8:Hx:204:VAL:HG11 | 1.99 | 0.44 |
| 8:Ib:50:PRO:HB2 | 8:Id:32:ILE:HA | 1.99 | 0.44 |
| 8:Ip:78:ILE:HG12 | 8:Ip:148:TYR:HB2 | 2.00 | 0.44 |
| 8:Ix:78:ILE:HG12 | 8:Ix:148:TYR:HB2 | 2.00 | 0.44 |
| 8:Ix:156:ARG:HD2 | 8:Ix:192:LEU:HD13 | 1.98 | 0.44 |
| 8:Jh:150:LEU:HB2 | 8:Jh:167:VAL:HG22 | 1.99 | 0.44 |
| 8:Jl:150:LEU:HB2 | 8:Jl:167:VAL:HG22 | 1.99 | 0.44 |
| 7:Jm:107:TYR:CZ | 8:Jp:196:ASN:HB3 | 2.53 | 0.44 |
| 8:Kf:148:TYR:HE1 | 8:Kf:176:VAL:HG21 | 1.82 | 0.44 |
| 8:Ld:52:HIS:HD2 | 8:Ld:54:LEU:HB3 | 1.83 | 0.44 |
| 1:Aw:119:LYS:HD2 | 1:Ay:199:LEU:HB2 | 1.99 | 0.44 |
| 1:Az:129:ASN:HB2 | 1:Az:156:ASN:HB3 | 1.98 | 0.44 |
| 2:Bb:290:PRO:HD3 | 2:Bb:299:VAL:HG22 | 1.99 | 0.44 |
| 2:Bc:221:ARG:HH21 | 4:Dy:97:PRO:HD2 | 1.82 | 0.44 |
| 2:Be:268:LYS:HD2 | 2:Be:353:ALA:HA | 1.99 | 0.44 |
| 2:Bh:360:ILE:HD12 | 2:Bj:163:SER:H | 1.82 | 0.44 |
| 2:Bv:274:HIS:HE1 | 2:Bv:343:ALA:HB3 | 1.82 | 0.44 |
| 3:Cc:61:ILE:HD11 | 3:Cc:282:GLU:HG3 | 1.99 | 0.44 |
| 3:Cd:227:PHE:HE1 | 3:Cd:234:GLU:HG2 | 1.81 | 0.44 |
| 3:Cj:34:ILE:HD11 | 3:Cj:100:MET:HB2 | 1.98 | 0.44 |
| 3:Cx:321:TRP:HE1 | 3:Cx:374:HIS:CE1 | 2.36 | 0.44 |
| 4:Dc:175:TYR:HE1 | 4:Dc:209:TYR:HB2 | 1.81 | 0.44 |
| 4:Dz:169:ILE:HG13 | 4:Dz:172:LEU:HD12 | 1.98 | 0.44 |
| 7:Iu:107:TYR:CZ | 8:Ix:196:ASN:HB3 | 2.53 | 0.44 |
| 8:Kz:173:ARG:HH21 | 8:Lb:144:GLN:HG2 | 1.83 | 0.44 |
| 7:Li:106:SER:HA | 7:Li:114:VAL:O | 2.18 | 0.44 |
| 8:Ll:52:HIS:HD2 | 8:Ll:54:LEU:HB3 | 1.82 | 0.44 |
| 1:Aa:249:PHE:HA | 1:Aa:252:ARG:HE | 1.83 | 0.44 |
| 1:Ah:200:ASN:HB3 | 1:Ah:201:THR:H | 1.65 | 0.44 |
| 2:Ba:36:VAL:HG22 | 2:Bb:65:PHE:HZ | 1.83 | 0.44 |
| 2:Bb:98:THR:HB | 2:Bb:164:SER:HA | 2.00 | 0.44 |
| 2:Bb:305:GLU:HG3 | 2:Be:148:ASP:HB2 | 1.99 | 0.44 |
| 2:Bn:36:VAL:HG22 | 2:Bo:65:PHE:HZ | 1.83 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bu:221:ARG:HE | 4:Dq:97:PRO:HD2 | 1.82 | 0.44 |
| 3:Cd:296:ALA:HB3 | 3:Cd:303:THR:HB | 2.00 | 0.44 |
| 3:Cm:50:LEU:HD21 | 3:Cm:67:LEU:HD23 | 1.99 | 0.44 |
| 3:Cn:342:ILE:HG21 | 3:Cn:367:ILE:HD11 | 1.98 | 0.44 |
| 3:Cn:373:MET:HE3 | 3:Cn:373:MET:HB2 | 1.88 | 0.44 |
| 3:Cw:269:MET:HE3 | 3:Cw:269:MET:HB3 | 1.89 | 0.44 |
| 3:Cx:326:PHE:HD1 | 3:Cx:328:ASP:H | 1.66 | 0.44 |
| 4:Do:185:LEU:HD23 | 4:Do:199:SER:HB2 | 1.98 | 0.44 |
| 4:Dx:221:VAL:HB | 4:Dx:261:VAL:HG12 | 1.98 | 0.44 |
| 5:Ef:189:ARG:HH21 | 5:Ef:205:LYS:HZ1 | 1.66 | 0.44 |
| 5:El:154:LEU:HB3 | 5:El:164:TYR:HE1 | 1.82 | 0.44 |
| 8:Hj:219:ILE:HG23 | 8:Hl:192:LEU:HD12 | 2.00 | 0.44 |
| 7:Ie:65:LEU:HD21 | 7:Ie:119:LEU:HB2 | 1.99 | 0.44 |
| 7:Iw:108:LYS:HD2 | 8:Ix:204:VAL:HG11 | 1.98 | 0.44 |
| 7:Ja:65:LEU:HD21 | 7:Ja:119:LEU:HB2 | 1.99 | 0.44 |
| 8:Jd:155:LEU:HD23 | 8:Jd:162:ILE:HD11 | 1.99 | 0.44 |
| 7:La:79:GLU:H | 7:La:86:GLY:HA3 | 1.83 | 0.44 |
| 8:Ld:50:PRO:HB2 | 8:Lf:32:ILE:HA | 1.99 | 0.44 |
| 7:Lg:30:LEU:HD11 | 7:Li:127:MET:HE3 | 1.99 | 0.44 |
| 1:Ae:107:ILE:HA | 1:Ae:221:ASN:HD21 | 1.82 | 0.44 |
| 1:Ao:119:LYS:HD2 | 1:Aq:199:LEU:HB2 | 1.99 | 0.44 |
| 1:Ax:205:TYR:CZ | 1:Ax:236:SER:HB3 | 2.53 | 0.44 |
| 2:Bq:49:GLU:HG3 | 2:Bq:54:THR:HG21 | 1.99 | 0.44 |
| 2:Br:182:ILE:HD12 | 2:Br:233:LEU:HD12 | 1.99 | 0.44 |
| 3:Cb:209:LYS:HD2 | 3:Cb:212:GLN:HB2 | 2.00 | 0.44 |
| 3:Ce:61:ILE:HD11 | 3:Ce:282:GLU:HG3 | 1.98 | 0.44 |
| 3:Ce:96:ILE:HB | 3:Ce:101:TYR:HE2 | 1.81 | 0.44 |
| 3:Cu:201:ASP:HB3 | 3:Cu:221:ALA:HB3 | 1.99 | 0.44 |
| 4:Dd:219:VAL:HG21 | 4:Dd:254:LEU:HD21 | 2.00 | 0.44 |
| 4:Df:31:PRO:HA | 4:Df:156:VAL:HG21 | 1.99 | 0.44 |
| 4:Dp:86:VAL:HG13 | 4:Dp:139:TYR:HB3 | 1.98 | 0.44 |
| 7:Is:65:LEU:HD21 | 7:Is:119:LEU:HB2 | 2.00 | 0.44 |
| 7:Is:107:TYR:CZ | 8:Iv:196:ASN:HB3 | 2.53 | 0.44 |
| 8:Jl:137:TRP:HB3 | 8:Jn:125:VAL:HB | 2.00 | 0.44 |
| 7:Jo:83:GLN:HE22 | 7:Ju:55:ARG:HH22 | 1.65 | 0.44 |
| 7:Jw:80:LEU:HD13 | 7:Jw:85:LEU:HD12 | 1.99 | 0.44 |
| 8:Kz:52:HIS:HD2 | 8:Kz:54:LEU:HB3 | 1.83 | 0.44 |
| 7:Lg:107:TYR:CZ | 8:Lj:196:ASN:HB3 | 2.53 | 0.44 |
| 7:Li:107:TYR:CZ | 8:Ll:196:ASN:HB3 | 2.53 | 0.44 |
| 1:Ab:136:LEU:HD13 | 1:Ac:154:LEU:HD13 | 2.00 | 0.44 |
| 1:Af:219:PHE:CD1 | 2:Bu:69:LEU:HD13 | 2.52 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:As:178:VAL:HG21 | 1:As:191:ILE:HD12 | 1.99 | 0.44 |
| 2:Ba:253:ASN:HB3 | 2:Ba:258:THR:HG23 | 1.98 | 0.44 |
| 2:Bf:42:THR:HG22 | 2:Bf:80:VAL:HG22 | 1.99 | 0.44 |
| 2:Bi:250:ILE:HG21 | 2:Bi:345:LEU:HD13 | 1.99 | 0.44 |
| 2:Bl:84:ILE:HG13 | 2:Bl:106:ILE:HD13 | 1.98 | 0.44 |
| 2:Bn:182:ILE:HG12 | 2:Bn:222:ALA:HB2 | 1.99 | 0.44 |
| 3:Ce:306:LEU:HB3 | 3:Ce:312:VAL:HG21 | 2.00 | 0.44 |
| 4:Dy:106:ASN:HD22 | 4:Dy:107:LEU:N | 2.16 | 0.44 |
| 5:Em:152:GLU:HG3 | 5:Em:188:LEU:HD21 | 2.00 | 0.44 |
| 8:Hj:159:GLY:HA3 | 8:Hn:36:LYS:HA | 2.00 | 0.44 |
| 8:Il:148:TYR:HE1 | 8:Il:176:VAL:HG21 | 1.82 | 0.44 |
| 8:Ip:52:HIS:HD2 | 8:Ip:54:LEU:HB3 | 1.82 | 0.44 |
| 8:Ix:137:TRP:HB3 | 8:Iz:125:VAL:HB | 1.99 | 0.44 |
| 7:Jo:30:LEU:HD11 | 7:Jq:127:MET:HE3 | 2.00 | 0.44 |
| 8:Kt:148:TYR:HE1 | 8:Kt:176:VAL:HG21 | 1.83 | 0.44 |
| 8:Kv:219:ILE:HG23 | 8:Kx:192:LEU:HD12 | 2.00 | 0.44 |
| 1:Ai:249:PHE:HA | 1:Ai:252:ARG:HE | 1.83 | 0.44 |
| 1:As:111:LEU:HB3 | 1:As:172:MET:HG3 | 2.00 | 0.44 |
| 2:Be:156:ASN:HD22 | 2:Bf:114:GLY:HA3 | 1.82 | 0.44 |
| 2:Bv:233:LEU:O | 2:Bv:237:GLU:HB2 | 2.18 | 0.44 |
| 3:Cd:92:GLU:HB2 | 3:Cd:103:ARG:HB2 | 1.99 | 0.44 |
| 3:Cs:228:ASP:HB2 | 3:Cs:235:VAL:HG11 | 2.00 | 0.44 |
| 3:Ct:262:TRP:HA | 3:Ct:267:GLY:HA3 | 1.99 | 0.44 |
| 4:Dl:223:THR:HG22 | 4:Dl:285:VAL:HG22 | 1.99 | 0.44 |
| 4:Dm:138:SER:HB3 | 4:Dm:150:GLU:HG2 | 2.00 | 0.44 |
| 4:Dp:34:SER:HB3 | 4:Dp:156:VAL:HB | 2.00 | 0.44 |
| 4:Dz:36:TRP:HB3 | 4:Dz:48:LEU:HD11 | 2.00 | 0.44 |
| 8:Hh:155:LEU:HD23 | 8:Hh:162:ILE:HD11 | 2.00 | 0.44 |
| 7:Ja:107:TYR:CZ | 8:Jd:196:ASN:HB3 | 2.52 | 0.44 |
| 8:Jx:214:GLN:HG3 | 8:Jz:195:LEU:HD21 | 1.99 | 0.44 |
| 8:Kd:155:LEU:HD23 | 8:Kd:162:ILE:HD11 | 1.99 | 0.44 |
| 8:Kf:219:ILE:HG23 | 8:Kh:192:LEU:HD12 | 2.00 | 0.44 |
| 8:Lf:148:TYR:HE1 | 8:Lf:176:VAL:HG21 | 1.82 | 0.44 |
| 1:Ab:51:ASP:HA | 1:Ab:54:ARG:HE | 1.83 | 0.44 |
| 1:Ah:219:PHE:HA | 2:Bw:69:LEU:HD13 | 1.99 | 0.44 |
| 1:Ar:184:LEU:HD12 | 1:Ar:188:ASN:HB2 | 1.99 | 0.44 |
| 2:Bn:257:GLY:HA2 | 2:Bn:342:MET:HE1 | 2.00 | 0.44 |
| 3:Cb:226:VAL:HB | 3:Cb:236:MET:HB3 | 2.00 | 0.44 |
| 3:Cn:262:TRP:HA | 3:Cn:267:GLY:HA3 | 1.99 | 0.44 |
| 3:Cy:320:LEU:HD22 | 3:Cy:342:ILE:HD12 | 2.00 | 0.44 |
| 4:De:83:THR:HG22 | 4:De:111:LYS:HA | 1.99 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 4:Df:65:GLY:HA2 | 4:Df:176:SER:HB2 | 1.99 | 0.44 |
| 4:Dr:56:GLY:HA2 | 4:Dr:77:ARG:HG3 | 1.99 | 0.44 |
| 4:Du:31:PRO:HB3 | 4:Du:156:VAL:HG21 | 2.00 | 0.44 |
| 4:Dx:34:SER:HB3 | 4:Dx:156:VAL:HB | 2.00 | 0.44 |
| 8:Hz:150:LEU:HB2 | 8:Hz:167:VAL:HG22 | 2.00 | 0.44 |
| 8:Id:150:LEU:HB2 | 8:Id:167:VAL:HG22 | 2.00 | 0.44 |
| 7:Iu:30:LEU:HD11 | 7:Iw:127:MET:HE3 | 2.00 | 0.44 |
| 7:Ju:72:MET:H | 7:Jw:97:VAL:HG23 | 1.82 | 0.44 |
| 8:Jv:214:GLN:HG3 | 8:Jx:195:LEU:HD21 | 2.00 | 0.44 |
| 8:Lh:154:MET:HB3 | 8:Lh:156:ARG:HH12 | 1.82 | 0.44 |
| 8:Lh:161:VAL:HG12 | 8:Lh:188:ILE:HD11 | 2.00 | 0.44 |
| 8:Lj:214:GLN:HG3 | 8:Ll:195:LEU:HD21 | 2.00 | 0.44 |
| 1:Aa:231:ALA:HB3 | 1:Ab:195:LYS:HG3 | 1.99 | 0.43 |
| 1:Ag:205:TYR:CZ | 1:Ag:236:SER:HB3 | 2.53 | 0.43 |
| 1:Ar:36:ASP:HB2 | 3:Ch:260:ARG:CZ | 2.48 | 0.43 |
| 1:Av:249:PHE:HA | 1:Av:252:ARG:HE | 1.82 | 0.43 |
| 1:Az:184:LEU:HD12 | 1:Az:188:ASN:HB2 | 1.99 | 0.43 |
| 2:Bd:84:ILE:HG13 | 2:Bd:106:ILE:HD13 | 1.99 | 0.43 |
| 2:Bd:156:ASN:HD22 | 2:Be:114:GLY:HA3 | 1.82 | 0.43 |
| 2:By:111:SER:HA | 2:By:157:PRO:HB2 | 2.00 | 0.43 |
| 3:Cb:363:LEU:HD13 | 4:Du:101:ALA:HB3 | 1.99 | 0.43 |
| 3:Cc:373:MET:HE3 | 3:Cc:373:MET:HB2 | 1.86 | 0.43 |
| 3:Cu:269:MET:HE3 | 3:Cu:269:MET:HB3 | 1.75 | 0.43 |
| 4:Di:126:LEU:HD13 | 4:Di:162:TYR:HE1 | 1.83 | 0.43 |
| 4:Dp:250:LYS:HE3 | 4:Dp:255:PRO:HA | 1.99 | 0.43 |
| 4:Dq:237:LEU:HB3 | 4:Dq:241:ARG:HH21 | 1.82 | 0.43 |
| 5:Eg:192:LEU:HD12 | 5:Eg:196:MET:HE2 | 2.00 | 0.43 |
| 8:Hb:137:TRP:HB3 | 8:Hd:125:VAL:HB | 1.99 | 0.43 |
| 8:Hh:137:TRP:HB3 | 8:Hj:125:VAL:HB | 1.99 | 0.43 |
| 7:Ia:72:MET:HE3 | 7:Ia:91:ALA:HB1 | 2.01 | 0.43 |
| 8:In:159:GLY:HA3 | 8:Ir:36:LYS:HA | 2.00 | 0.43 |
| 7:Io:107:TYR:CZ | 8:Ir:196:ASN:HB3 | 2.53 | 0.43 |
| 8:It:93:ASN:HB2 | 8:It:156:ARG:HH22 | 1.83 | 0.43 |
| 1:Ac:200:ASN:HB3 | 1:Ac:201:THR:H | 1.66 | 0.43 |
| 1:Aq:113:GLU:HB2 | 1:Aq:172:MET:HB3 | 2.00 | 0.43 |
| 1:Au:232:ARG:HH22 | 1:Av:194:GLU:HG3 | 1.82 | 0.43 |
| 1:Ay:245:GLN:HG3 | 1:Az:200:ASN:HD21 | 1.83 | 0.43 |
| 2:Bl:36:VAL:HG22 | 2:Bm:65:PHE:HZ | 1.83 | 0.43 |
| 2:Bl:268:LYS:HD2 | 2:Bl:353:ALA:HA | 2.00 | 0.43 |
| 2:Bo:223:PRO:HB3 | 4:Dk:94:VAL:HG12 | 2.00 | 0.43 |
| 3:Ca:241:ARG:HB3 | 6:Gb:143:THR:HG21 | 1.99 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 3:Cb:76:ARG:HD2 | 3:Cb:90:ILE:HD13 | 1.98 | 0.43 |
| 3:Ci:262:TRP:HA | 3:Ci:267:GLY:HA3 | 2.00 | 0.43 |
| 3:Cs:137:ALA:HB1 | 3:Cs:142:ILE:HG13 | 2.00 | 0.43 |
| 3:Ct:195:MET:HG3 | 3:Ct:226:VAL:HG22 | 1.99 | 0.43 |
| 3:Cz:92:GLU:HB2 | 3:Cz:103:ARG:HB2 | 2.01 | 0.43 |
| 4:Db:117:ILE:HD12 | 4:Db:117:ILE:HA | 1.91 | 0.43 |
| 4:Dc:103:ARG:HD3 | 4:Dc:106:ASN:HB2 | 2.00 | 0.43 |
| 4:Di:106:ASN:HD22 | 4:Di:107:LEU:N | 2.16 | 0.43 |
| 4:Du:140:GLN:HE21 | 4:Du:148:ARG:HH21 | 1.66 | 0.43 |
| 5:Ec:116:ARG:HD3 | 5:Ec:149:GLN:HE22 | 1.82 | 0.43 |
| 7:Hs:29:TRP:HB3 | 7:Hs:118:ARG:HE | 1.83 | 0.43 |
| 8:Jf:159:GLY:HA3 | 8:Jj:36:LYS:HA | 1.99 | 0.43 |
| 8:Jl:159:GLY:HA3 | 8:Jp:36:LYS:HA | 1.99 | 0.43 |
| 8:Kf:159:GLY:HA3 | 8:Kj:36:LYS:HA | 1.99 | 0.43 |
| 8:Lb:214:GLN:HG3 | 8:Ld:195:LEU:HD21 | 2.00 | 0.43 |
| 8:Lf:173:ARG:HH21 | 8:Lh:144:GLN:HG2 | 1.83 | 0.43 |
| 1:Ak:205:TYR:CZ | 1:Ak:236:SER:HB3 | 2.52 | 0.43 |
| 1:Av:124:ASP:HB2 | 1:Aw:165:ALA:HB3 | 1.99 | 0.43 |
| 2:Bg:360:ILE:HD12 | 2:Bi:163:SER:H | 1.83 | 0.43 |
| 2:Bi:181:TYR:HE1 | 2:Bi:221:ARG:HG2 | 1.82 | 0.43 |
| 2:Bq:41:VAL:HG23 | 2:Bq:83:VAL:HG21 | 1.99 | 0.43 |
| 2:Bs:103:VAL:HB | 2:Bs:137:LEU:HD21 | 2.00 | 0.43 |
| 2:Bx:192:THR:HA | 2:By:234:SER:HB2 | 2.00 | 0.43 |
| 3:Cd:27:GLU:HB2 | 6:Gd:136:VAL:HG22 | 2.01 | 0.43 |
| 3:Cf:249:PRO:HG2 | 3:Cf:252:SER:HB3 | 1.99 | 0.43 |
| 3:Ch:201:ASP:HB3 | 3:Ch:221:ALA:HB3 | 2.00 | 0.43 |
| 3:Cp:361:PRO:HB2 | 4:Di:148:ARG:HD2 | 1.99 | 0.43 |
| 3:Cy:358:VAL:HG12 | 3:Cy:360:GLN:H | 1.84 | 0.43 |
| 4:Dj:56:GLY:HA2 | 4:Dj:77:ARG:HG3 | 1.99 | 0.43 |
| 4:Dj:183:THR:HG21 | 4:Dj:206:ILE:HD11 | 1.99 | 0.43 |
| 4:Dq:112:GLN:HE21 | 4:Dq:112:GLN:HB3 | 1.61 | 0.43 |
| 4:Dv:86:VAL:HG21 | 4:Dv:110:PHE:CG | 2.54 | 0.43 |
| 4:Dy:183:THR:HG21 | 4:Dy:206:ILE:HD11 | 2.00 | 0.43 |
| 8:Hb:125:VAL:HB | 8:Ll:137:TRP:HB3 | 1.99 | 0.43 |
| 8:Hd:159:GLY:HA3 | 8:Hh:36:LYS:HA | 2.01 | 0.43 |
| 7:Hm:78:ALA:HB3 | 7:Ho:91:ALA:HB3 | 2.01 | 0.43 |
| 7:Hw:78:ALA:HB3 | 7:Hy:91:ALA:HB3 | 2.00 | 0.43 |
| 7:Iw:80:LEU:HD13 | 7:Iw:85:LEU:HD12 | 2.00 | 0.43 |
| 7:Iw:107:TYR:CZ | 8:Iz:196:ASN:HB3 | 2.53 | 0.43 |
| 8:Jf:89:MET:HG3 | 8:Jh:135:ARG:HG3 | 2.00 | 0.43 |
| 8:Jz:137:TRP:HB3 | 8:Kb:125:VAL:HB | 1.99 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Kv:168:VAL:HG12 | 8:Kv:175:VAL:HA | 1.99 | 0.43 |
| 1:Aq:234:GLN:HA | 1:Ar:198:THR:HB | 1.99 | 0.43 |
| 1:Ar:231:ALA:HB3 | 1:As:195:LYS:HG3 | 1.98 | 0.43 |
| 2:Bk:251:ILE:HD13 | 2:Bk:359:ILE:HB | 2.00 | 0.43 |
| 2:Bn:336:ALA:HB1 | 2:Bn:340:ASP:HB2 | 2.01 | 0.43 |
| 2:Bs:105:SER:HB3 | 2:Bs:158:THR:HB | 2.00 | 0.43 |
| 2:Bu:84:ILE:HG13 | 2:Bu:106:ILE:HD13 | 2.00 | 0.43 |
| 2:Bv:254:SER:HB2 | 2:Bx:138:VAL:HG22 | 1.99 | 0.43 |
| 2:Bw:267:LEU:HB2 | 2:Bw:320:PRO:HG2 | 1.99 | 0.43 |
| 3:Ca:271:LEU:HD11 | 6:Ga:145:PHE:HE2 | 1.84 | 0.43 |
| 3:Ce:373:MET:HE3 | 3:Ce:373:MET:HB2 | 1.84 | 0.43 |
| 3:Cl:350:TYR:HE2 | 3:Cl:355:GLU:HG3 | 1.83 | 0.43 |
| 3:Cy:126:ILE:O | 3:Cy:169:THR:HA | 2.18 | 0.43 |
| 4:Df:183:THR:HG21 | 4:Df:206:ILE:HD11 | 2.01 | 0.43 |
| 4:Di:141:ASP:HB2 | 4:Di:149:ILE:HG12 | 1.99 | 0.43 |
| 4:Dq:216:ILE:HD12 | 4:Dq:289:LEU:HB3 | 2.01 | 0.43 |
| 5:Ez:108:PRO:HB2 | 5:Ez:143:ASN:ND2 | 2.34 | 0.43 |
| 7:Km:107:TYR:CZ | 8:Kp:196:ASN:HB3 | 2.53 | 0.43 |
| 8:Kr:156:ARG:HE | 8:Kr:192:LEU:HD13 | 1.84 | 0.43 |
| 2:Bj:118:MET:HE3 | 2:Bj:118:MET:HB2 | 1.89 | 0.43 |
| 2:Bn:83:VAL:HG12 | 2:Bn:105:SER:HA | 2.01 | 0.43 |
| 2:Br:233:LEU:O | 2:Br:237:GLU:HB2 | 2.18 | 0.43 |
| 3:Ca:358:VAL:HG12 | 3:Ca:360:GLN:H | 1.84 | 0.43 |
| 3:Cm:204:ALA:HA | 3:Cm:218:ARG:HA | 2.01 | 0.43 |
| 3:Cs:373:MET:HB2 | 3:Cs:373:MET:HE3 | 1.78 | 0.43 |
| 3:Ct:153:ILE:HG21 | 3:Ct:195:MET:HE1 | 2.00 | 0.43 |
| 3:Cu:61:ILE:HD11 | 3:Cu:282:GLU:HG3 | 2.01 | 0.43 |
| 3:Cy:241:ARG:NH1 | 3:Cz:259:ALA:HB2 | 2.33 | 0.43 |
| 4:Dc:216:ILE:HD12 | 4:Dc:289:LEU:HB3 | 2.01 | 0.43 |
| 4:Dg:183:THR:HG21 | 4:Dg:206:ILE:HD11 | 2.00 | 0.43 |
| 4:Dk:58:ALA:HB1 | 4:Dk:72:PHE:HE1 | 1.84 | 0.43 |
| 4:Ds:72:PHE:HD2 | 4:Ds:117:ILE:HG23 | 1.84 | 0.43 |
| 5:Ea:41:LEU:HA | 5:Ea:44:GLU:HG2 | 2.00 | 0.43 |
| 5:Eu:144:LEU:HA | 5:Eu:147:ARG:HD2 | 1.99 | 0.43 |
| 8:Hv:148:TYR:HE1 | 8:Hv:176:VAL:HG21 | 1.82 | 0.43 |
| 7:Ia:65:LEU:HD21 | 7:Ia:119:LEU:HB2 | 1.99 | 0.43 |
| 7:Is:104:VAL:HG12 | 8:It:212:ILE:HG13 | 2.00 | 0.43 |
| 8:Jp:150:LEU:HB2 | 8:Jp:167:VAL:HG22 | 1.99 | 0.43 |
| 8:Jr:161:VAL:HG12 | 8:Jr:188:ILE:HD11 | 2.00 | 0.43 |
| 7:Jw:78:ALA:HB3 | 7:Jy:91:ALA:HB3 | 2.00 | 0.43 |
| 7:Ks:65:LEU:HD21 | 7:Ks:119:LEU:HB2 | 1.99 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Lf:159:GLY:HA3 | 8:Lj:36:LYS:HA | 2.01 | 0.43 |
| 1:Aa:88:LEU:HB3 | 2:Bo:170:ARG:HH12 | 1.84 | 0.43 |
| 1:Ai:231:ALA:HB3 | 1:Aj:195:LYS:HG3 | 2.01 | 0.43 |
| 1:Ak:134:ASP:HB2 | 1:Al:155:LYS:HB2 | 2.00 | 0.43 |
| 1:Am:134:ASP:HB2 | 1:An:155:LYS:HB2 | 2.00 | 0.43 |
| 1:An:178:VAL:HG21 | 1:An:191:ILE:HD12 | 2.01 | 0.43 |
| 1:Ao:231:ALA:HB3 | 1:Ap:195:LYS:HG3 | 2.00 | 0.43 |
| 1:Ar:119:LYS:HD2 | 1:At:199:LEU:HB2 | 2.01 | 0.43 |
| 1:Ar:205:TYR:CZ | 1:Ar:236:SER:HB3 | 2.53 | 0.43 |
| 1:Ax:206:ILE:HG12 | 1:Ax:235:TYR:HD1 | 1.83 | 0.43 |
| 2:Ba:178:ARG:HB2 | 3:Cd:184:MET:HE2 | 2.01 | 0.43 |
| 2:Bb:36:VAL:HG22 | 2:Bc:65:PHE:HZ | 1.84 | 0.43 |
| 2:Bb:350:GLN:HG3 | 2:Bc:361:ILE:HD13 | 2.00 | 0.43 |
| 2:Bj:223:PRO:HD2 | 2:Bj:229:ARG:HA | 2.00 | 0.43 |
| 2:Bl:27:VAL:HG21 | 2:Bl:233:LEU:HD21 | 2.01 | 0.43 |
| 2:Bo:311:LYS:HE3 | 2:Bp:337:ALA:HB1 | 2.00 | 0.43 |
| 2:Br:248:ALA:HB1 | 2:Br:265:VAL:HG22 | 2.01 | 0.43 |
| 2:Bw:36:VAL:HG22 | 2:Bx:65:PHE:HZ | 1.83 | 0.43 |
| 2:Bx:91:ALA:HB1 | 2:Bx:174:ASN:HD21 | 1.84 | 0.43 |
| 3:Cd:205:THR:HG22 | 3:Ce:260:ARG:HD3 | 2.00 | 0.43 |
| 3:Ch:195:MET:HE2 | 3:Ch:281:LEU:HD11 | 2.00 | 0.43 |
| 3:Ck:358:VAL:HG12 | 3:Ck:360:GLN:H | 1.82 | 0.43 |
| 3:Cq:27:GLU:HB2 | 6:Gq:136:VAL:HG22 | 2.01 | 0.43 |
| 3:Cq:271:LEU:HD21 | 6:Gq:145:PHE:HD2 | 1.83 | 0.43 |
| 8:Hb:46:LEU:HD13 | 8:Ll:53:THR:HG22 | 2.01 | 0.43 |
| 8:Hd:156:ARG:HD2 | 8:Hd:192:LEU:HD13 | 1.99 | 0.43 |
| 8:Hl:148:TYR:HE1 | 8:Hl:176:VAL:HG21 | 1.83 | 0.43 |
| 8:Ib:173:ARG:HH21 | 8:Id:144:GLN:HG2 | 1.84 | 0.43 |
| 7:Iq:72:MET:H | 7:Is:97:VAL:HG23 | 1.83 | 0.43 |
| 7:Iw:104:VAL:HG12 | 8:Ix:212:ILE:HG13 | 1.99 | 0.43 |
| 7:Jk:107:TYR:CZ | 8:Jn:196:ASN:HB3 | 2.53 | 0.43 |
| 8:Kz:148:TYR:HE1 | 8:Kz:176:VAL:HG21 | 1.83 | 0.43 |
| 8:Ld:137:TRP:HB3 | 8:Lf:125:VAL:HB | 1.99 | 0.43 |
| 1:Af:137:ALA:HA | 1:Af:142:ASP:HA | 2.00 | 0.43 |
| 2:Be:186:LEU:HD21 | 2:Be:197:LEU:HD13 | 2.01 | 0.43 |
| 2:Bf:336:ALA:HB1 | 2:Bf:340:ASP:HB2 | 2.01 | 0.43 |
| 2:Br:318:LEU:HD11 | 2:Br:330:ALA:HB1 | 2.00 | 0.43 |
| 2:Bs:118:MET:HE3 | 2:Bs:118:MET:HB3 | 1.80 | 0.43 |
| 2:Bs:336:ALA:HB1 | 2:Bs:340:ASP:HB2 | 2.00 | 0.43 |
| 3:Cm:295:VAL:HA | 3:Cm:369:ILE:HG23 | 2.00 | 0.43 |
| 3:Cr:167:VAL:HG21 | 3:Cr:191:ALA:HB2 | 2.01 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 3:Cz:50:LEU:HD21 | 3:Cz:67:LEU:HD23 | 1.99 | 0.43 |
| 5:El:108:PRO:HB2 | 5:El:143:ASN:ND2 | 2.33 | 0.43 |
| 5:Eq:100:GLU:HG3 | 5:Er:211:TRP:HB3 | 2.01 | 0.43 |
| 8:It:92:THR:HG21 | 8:Iv:129:GLY:HA3 | 2.01 | 0.43 |
| 7:Iu:106:SER:HA | 7:Iu:114:VAL:O | 2.18 | 0.43 |
| 7:Ja:120:ASP:HB3 | 7:Ja:123:LYS:HB2 | 2.01 | 0.43 |
| 8:Jb:156:ARG:HE | 8:Jb:192:LEU:HD13 | 1.82 | 0.43 |
| 8:Jj:214:GLN:HG3 | 8:Jl:195:LEU:HD21 | 1.99 | 0.43 |
| 7:Ks:71:GLY:HA2 | 7:Ku:99:ARG:HG2 | 1.99 | 0.43 |
| 1:Am:34:THR:HG21 | 3:Cc:247:PRO:HB2 | 2.01 | 0.43 |
| 1:Ao:200:ASN:HB3 | 1:Ao:201:THR:H | 1.66 | 0.43 |
| 2:Bb:163:SER:H | 2:Bz:360:ILE:HD12 | 1.83 | 0.43 |
| 2:Bl:118:MET:HE3 | 2:Bl:118:MET:HB3 | 1.74 | 0.43 |
| 2:Bs:122:LEU:HB2 | 2:Bs:131:ALA:HB3 | 2.01 | 0.43 |
| 2:Bw:141:GLY:CA | 2:Bw:154:GLY:O | 2.67 | 0.43 |
| 3:Cb:136:GLN:HE22 | 3:Cc:257:ARG:HB2 | 1.84 | 0.43 |
| 3:Cg:167:VAL:HG21 | 3:Cg:191:ALA:HB2 | 2.00 | 0.43 |
| 3:Ch:157:LEU:HA | 3:Ch:161:SER:HB2 | 2.00 | 0.43 |
| 3:Cr:205:THR:HG22 | 3:Cs:260:ARG:HD3 | 2.01 | 0.43 |
| 3:Cu:262:TRP:HA | 3:Cu:267:GLY:HA3 | 2.01 | 0.43 |
| 3:Cu:289:ILE:HG12 | 6:Fu:142:MET:HE2 | 2.01 | 0.43 |
| 4:Dg:237:LEU:HB3 | 4:Dg:241:ARG:HH21 | 1.83 | 0.43 |
| 4:Dj:65:GLY:HA2 | 4:Dj:176:SER:HB2 | 2.00 | 0.43 |
| 5:Ee:144:LEU:HA | 5:Ee:147:ARG:HD2 | 2.00 | 0.43 |
| 5:Ee:192:LEU:HD12 | 5:Ee:196:MET:HE2 | 2.01 | 0.43 |
| 5:Em:41:LEU:HA | 5:Em:44:GLU:HG2 | 2.01 | 0.43 |
| 7:Hg:107:TYR:CZ | 8:Hj:196:ASN:HB3 | 2.53 | 0.43 |
| 7:Io:65:LEU:HD21 | 7:Io:119:LEU:HB2 | 2.00 | 0.43 |
| 8:Ir:78:ILE:HG12 | 8:Ir:148:TYR:HB2 | 2.01 | 0.43 |
| 8:Jh:50:PRO:HB2 | 8:Jj:32:ILE:HA | 2.01 | 0.43 |
| 8:Jn:84:VAL:HG23 | 8:Jn:86:LEU:H | 1.83 | 0.43 |
| 8:Jz:159:GLY:HA3 | 8:Kd:36:LYS:HA | 2.01 | 0.43 |
| 8:Kj:148:TYR:HE1 | 8:Kj:176:VAL:HG21 | 1.83 | 0.43 |
| 7:Kq:107:TYR:CZ | 8:Kt:196:ASN:HB3 | 2.54 | 0.43 |
| 1:Ab:33:THR:HG23 | 1:Ab:35:VAL:H | 1.84 | 0.43 |
| 1:Ad:200:ASN:HB3 | 1:Ad:201:THR:H | 1.66 | 0.43 |
| 1:Ad:249:PHE:HA | 1:Ad:252:ARG:HE | 1.83 | 0.43 |
| 1:Ae:66:TRP:CE2 | 1:Ae:207:ARG:HD3 | 2.54 | 0.43 |
| 1:Al:129:ASN:HB2 | 1:Al:156:ASN:HB3 | 2.01 | 0.43 |
| 1:Al:227:ARG:HH22 | 1:Am:221:ASN:HB3 | 1.83 | 0.43 |
| 1:Ao:136:LEU:HD13 | 1:Ap:154:LEU:HD13 | 1.99 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:Ax:113:GLU:HB2 | 1:Ax:172:MET:HB3 | 2.01 | 0.43 |
| 1:Ax:134:ASP:HB2 | 1:Ay:155:LYS:HB2 | 2.00 | 0.43 |
| 2:Bc:311:LYS:HE3 | 2:Bd:337:ALA:HB1 | 2.01 | 0.43 |
| 2:Be:272:VAL:HG22 | 2:Bf:260:VAL:HG22 | 1.99 | 0.43 |
| 2:Bh:259:ILE:HD11 | 2:Bh:342:MET:HG3 | 2.00 | 0.43 |
| 2:Bj:42:THR:HG22 | 2:Bj:80:VAL:HG22 | 2.01 | 0.43 |
| 2:Bj:267:LEU:HB2 | 2:Bj:320:PRO:HG2 | 2.00 | 0.43 |
| 2:Bk:118:MET:HE2 | 2:Bk:118:MET:HB3 | 1.88 | 0.43 |
| 2:Bm:49:GLU:HG3 | 2:Bm:54:THR:HG21 | 2.00 | 0.43 |
| 2:Bm:284:ASN:HB2 | 2:Bm:304:THR:HG23 | 2.00 | 0.43 |
| 2:Bm:311:LYS:HE3 | 2:Bn:337:ALA:HB1 | 2.00 | 0.43 |
| 2:Bt:290:PRO:HD3 | 2:Bt:299:VAL:HG22 | 2.00 | 0.43 |
| 2:Bt:302:PRO:HG2 | 2:Bu:287:VAL:HG22 | 2.01 | 0.43 |
| 2:Bz:84:ILE:HG13 | 2:Bz:106:ILE:HD13 | 2.01 | 0.43 |
| 3:Cg:262:TRP:HA | 3:Cg:267:GLY:HA3 | 2.00 | 0.43 |
| 3:Co:111:SER:HB3 | 3:Co:113:THR:HG22 | 2.00 | 0.43 |
| 3:Cp:34:ILE:HD11 | 3:Cp:100:MET:HB2 | 2.00 | 0.43 |
| 3:Cs:222:MET:HE2 | 3:Cs:222:MET:HB3 | 1.79 | 0.43 |
| 3:Cv:269:MET:HE3 | 3:Cv:269:MET:HB3 | 1.87 | 0.43 |
| 4:Db:183:THR:HG21 | 4:Db:206:ILE:HD11 | 2.01 | 0.43 |
| 4:Dl:183:THR:HG21 | 4:Dl:206:ILE:HD11 | 2.01 | 0.43 |
| 4:Dy:31:PRO:HB3 | 4:Dy:156:VAL:HG21 | 2.01 | 0.43 |
| 5:El:198:GLU:HA | 5:El:201:ILE:HG12 | 2.01 | 0.43 |
| 7:Hg:70:TYR:HD2 | 7:Hg:96:GLY:HA3 | 1.83 | 0.43 |
| 8:Hh:78:ILE:HG12 | 8:Hh:148:TYR:HB2 | 2.01 | 0.43 |
| 8:Id:52:HIS:HD2 | 8:Id:54:LEU:HB3 | 1.84 | 0.43 |
| 7:Ii:107:TYR:CZ | 8:Il:196:ASN:HB3 | 2.54 | 0.43 |
| 8:Ir:52:HIS:HD2 | 8:Ir:54:LEU:HB3 | 1.84 | 0.43 |
| 7:Is:66:ALA:HA | 7:Is:98:ILE:HD11 | 2.01 | 0.43 |
| 8:Kv:78:ILE:HG12 | 8:Kv:148:TYR:HB2 | 2.01 | 0.43 |
| 1:Ak:33:THR:HG23 | 1:Ak:35:VAL:H | 1.84 | 0.43 |
| 1:Ao:134:ASP:HB2 | 1:Ap:155:LYS:HB2 | 2.00 | 0.43 |
| 1:Av:219:PHE:HD1 | 2:Bk:69:LEU:HD13 | 1.83 | 0.43 |
| 1:Ay:205:TYR:CZ | 1:Ay:236:SER:HB3 | 2.54 | 0.43 |
| 2:Bi:267:LEU:HG | 2:Bi:354:ILE:HG12 | 2.01 | 0.43 |
| 2:Bl:322:VAL:HG12 | 2:Bl:323:THR:HG23 | 2.01 | 0.43 |
| 2:Bm:250:ILE:HG23 | 2:Bm:261:VAL:HG22 | 2.00 | 0.43 |
| 2:Bt:233:LEU:O | 2:Bt:237:GLU:HB2 | 2.19 | 0.43 |
| 3:Cf:70:LEU:HG | 6:Ff:136:VAL:HG12 | 2.00 | 0.43 |
| 3:Cq:278:MET:HE2 | 3:Cq:278:MET:HB3 | 1.93 | 0.43 |
| 3:Cw:373:MET:HE3 | 3:Cw:373:MET:HB2 | 1.87 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 4:Dh:169:ILE:HG13 | 4:Dh:172:LEU:HD12 | 2.00 | 0.43 |
| 5:Ei:144:LEU:HA | 5:Ei:147:ARG:HD2 | 2.01 | 0.43 |
| 5:Eq:116:ARG:HD3 | 5:Eq:149:GLN:HE22 | 1.83 | 0.43 |
| 5:Er:108:PRO:HB2 | 5:Er:143:ASN:ND2 | 2.34 | 0.43 |
| 5:Es:100:GLU:HG3 | 5:Et:211:TRP:HB3 | 2.01 | 0.43 |
| 8:Hz:52:HIS:HD2 | 8:Hz:54:LEU:HB3 | 1.82 | 0.43 |
| 8:Ij:155:LEU:HD23 | 8:Ij:162:ILE:HD11 | 2.01 | 0.43 |
| 8:Jb:137:TRP:HB3 | 8:Jd:125:VAL:HB | 2.01 | 0.43 |
| 8:Jr:157:GLN:HA | 8:Jt:190:ARG:HD3 | 2.01 | 0.43 |
| 8:Kp:137:TRP:HB3 | 8:Kr:125:VAL:HB | 2.01 | 0.43 |
| 7:Kq:77:ARG:HH12 | 7:Ks:73:ARG:HH21 | 1.66 | 0.43 |
| 8:Lb:219:ILE:HG23 | 8:Ld:192:LEU:HD12 | 2.01 | 0.43 |
| 1:Ad:124:ASP:HB2 | 1:Ae:165:ALA:HB3 | 2.01 | 0.42 |
| 1:As:107:ILE:HA | 1:As:221:ASN:HD21 | 1.83 | 0.42 |
| 1:As:219:PHE:HA | 2:Bh:69:LEU:HD22 | 2.01 | 0.42 |
| 1:Aw:129:ASN:HB2 | 1:Aw:156:ASN:HB3 | 2.00 | 0.42 |
| 2:Ba:137:LEU:HD22 | 2:Ba:160:GLY:HA3 | 2.00 | 0.42 |
| 2:Bb:138:VAL:HG22 | 2:Bz:254:SER:HB2 | 2.01 | 0.42 |
| 2:Bj:84:ILE:HG13 | 2:Bj:106:ILE:HD13 | 2.00 | 0.42 |
| 2:By:84:ILE:HG13 | 2:By:106:ILE:HD13 | 2.01 | 0.42 |
| 3:Cm:297:LYS:HD3 | 3:Cm:367:ILE:HB | 2.01 | 0.42 |
| 3:Cr:269:MET:HE3 | 3:Cr:269:MET:HB3 | 1.82 | 0.42 |
| 4:Dl:184:ILE:HG12 | 4:Dl:286:VAL:HG22 | 2.01 | 0.42 |
| 5:Ew:192:LEU:HD12 | 5:Ew:196:MET:HE2 | 2.01 | 0.42 |
| 7:Ig:83:GLN:HE22 | 7:Im:55:ARG:HH22 | 1.67 | 0.42 |
| 8:Ih:155:LEU:HD23 | 8:Ih:162:ILE:HD11 | 2.01 | 0.42 |
| 7:Jy:71:GLY:HA2 | 7:Ka:99:ARG:HG2 | 2.00 | 0.42 |
| 7:Ko:107:TYR:CZ | 8:Kr:196:ASN:HB3 | 2.54 | 0.42 |
| 7:Ky:104:VAL:HG12 | 8:Kz:212:ILE:HG13 | 2.00 | 0.42 |
| 8:Lj:137:TRP:HB3 | 8:Ll:125:VAL:HB | 2.00 | 0.42 |
| 1:Ac:178:VAL:HG21 | 1:Ac:191:ILE:HD12 | 2.01 | 0.42 |
| 1:Ag:200:ASN:HB3 | 1:Ag:201:THR:H | 1.67 | 0.42 |
| 1:At:245:GLN:HG3 | 1:Au:200:ASN:HD21 | 1.83 | 0.42 |
| 2:Ba:85:VAL:HG22 | 2:Ba:103:VAL:HG13 | 2.00 | 0.42 |
| 2:Bb:118:MET:HE2 | 2:Bb:118:MET:HB3 | 1.88 | 0.42 |
| 2:Bd:42:THR:HG22 | 2:Bd:80:VAL:HG22 | 2.01 | 0.42 |
| 2:Be:336:ALA:HB1 | 2:Be:340:ASP:HB2 | 1.99 | 0.42 |
| 2:Bn:250:ILE:HG21 | 2:Bn:345:LEU:HD13 | 2.00 | 0.42 |
| 2:Bs:223:PRO:HB3 | 4:Do:94:VAL:HG12 | 2.01 | 0.42 |
| 2:Bv:118:MET:HE2 | 2:Bv:118:MET:HB3 | 1.88 | 0.42 |
| 2:Bw:277:MET:HE2 | 2:Bw:311:LYS:HD2 | 2.00 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:By:336:ALA:HB1 | 2:By:340:ASP:HB2 | 2.01 | 0.42 |
| 3:Cb:219:GLN:HG3 | 3:Cc:259:ALA:HB3 | 2.01 | 0.42 |
| 3:Cn:220:PHE:HE2 | 3:Cn:273:VAL:HG11 | 1.83 | 0.42 |
| 3:Cp:167:VAL:HG21 | 3:Cp:191:ALA:HB2 | 2.01 | 0.42 |
| 3:Cu:71:LEU:HD12 | 3:Cu:71:LEU:HA | 1.93 | 0.42 |
| 4:Dh:36:TRP:HB3 | 4:Dh:48:LEU:HD11 | 2.02 | 0.42 |
| 4:Dk:140:GLN:HA | 4:Dk:148:ARG:HA | 2.01 | 0.42 |
| 8:Hx:155:LEU:HD23 | 8:Hx:162:ILE:HD11 | 2.01 | 0.42 |
| 7:Ig:29:TRP:HB3 | 7:Ig:118:ARG:HE | 1.84 | 0.42 |
| 8:Jv:161:VAL:HG12 | 8:Jv:188:ILE:HD11 | 2.01 | 0.42 |
| 7:Ke:65:LEU:HD21 | 7:Ke:119:LEU:HB2 | 2.01 | 0.42 |
| 1:Aa:221:ASN:HB3 | 1:Az:227:ARG:HH22 | 1.84 | 0.42 |
| 1:Ar:113:GLU:HB2 | 1:Ar:172:MET:HB3 | 2.02 | 0.42 |
| 1:Ax:64:PRO:HB2 | 1:Ay:38:VAL:HG13 | 2.01 | 0.42 |
| 2:Ba:85:VAL:HG13 | 2:Ba:103:VAL:HG22 | 2.00 | 0.42 |
| 2:Bk:224:ARG:HH22 | 3:Cn:323:THR:HB | 1.84 | 0.42 |
| 2:Bx:277:MET:HE2 | 2:Bx:311:LYS:HD2 | 2.00 | 0.42 |
| 3:Ca:157:LEU:HA | 3:Ca:161:SER:HB2 | 2.02 | 0.42 |
| 3:Cf:365:TYR:HE2 | 4:Dy:94:VAL:HG22 | 1.84 | 0.42 |
| 3:Cg:118:GLU:H | 3:Cg:118:GLU:HG3 | 1.73 | 0.42 |
| 3:Cp:56:PHE:CG | 6:Gp:137:PRO:HB3 | 2.55 | 0.42 |
| 3:Cs:269:MET:HE3 | 3:Cs:269:MET:HB3 | 1.82 | 0.42 |
| 4:Df:90:SER:HB2 | 4:Df:104:ILE:HD11 | 2.01 | 0.42 |
| 4:Dn:26:ARG:HA | 4:Dn:150:GLU:O | 2.20 | 0.42 |
| 4:Dq:175:TYR:HE1 | 4:Dq:209:TYR:HB2 | 1.83 | 0.42 |
| 5:Eh:82:LEU:HD23 | 5:Eh:88:VAL:HG21 | 2.02 | 0.42 |
| 5:Ez:189:ARG:HH21 | 5:Ez:205:LYS:HZ1 | 1.67 | 0.42 |
| 8:Hd:150:LEU:HB2 | 8:Hd:167:VAL:HG22 | 2.01 | 0.42 |
| 8:Hn:137:TRP:HB3 | 8:Hp:125:VAL:HB | 1.99 | 0.42 |
| 7:Ho:107:TYR:CZ | 8:Hr:196:ASN:HB3 | 2.54 | 0.42 |
| 7:Jc:108:LYS:HD2 | 8:Jd:204:VAL:HG11 | 2.01 | 0.42 |
| 7:Jc:120:ASP:HB3 | 7:Jc:123:LYS:HB2 | 2.01 | 0.42 |
| 8:Jt:159:GLY:HA3 | 8:Jx:36:LYS:HA | 2.01 | 0.42 |
| 7:Jw:107:TYR:CZ | 8:Jz:196:ASN:HB3 | 2.55 | 0.42 |
| 7:Km:72:MET:H | 7:Ko:97:VAL:HG23 | 1.83 | 0.42 |
| 7:Ko:71:GLY:HA2 | 7:Kq:99:ARG:HG2 | 2.00 | 0.42 |
| 7:Ku:29:TRP:HB3 | 7:Ku:118:ARG:HE | 1.84 | 0.42 |
| 1:Ai:88:LEU:HB3 | 2:Bw:170:ARG:HH12 | 1.84 | 0.42 |
| 2:Bb:22:LYS:HB3 | 2:Bb:237:GLU:HG2 | 2.01 | 0.42 |
| 2:Bb:192:THR:HA | 2:Bc:234:SER:HB2 | 2.00 | 0.42 |
| 2:Be:105:SER:HB3 | 2:Be:158:THR:HB | 2.01 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bf:84:ILE:HG13 | 2:Bf:106:ILE:HD13 | 2.00 | 0.42 |
| 2:Bk:49:GLU:HG3 | 2:Bk:54:THR:HG21 | 2.01 | 0.42 |
| 3:Cc:246:TRP:HZ2 | 3:Cc:254:ILE:HD13 | 1.85 | 0.42 |
| 3:Ce:350:TYR:HE2 | 3:Ce:355:GLU:HG3 | 1.83 | 0.42 |
| 3:Cj:56:PHE:HD1 | 6:Gj:139:LYS:HE2 | 1.84 | 0.42 |
| 3:Cm:88:ILE:HG12 | 3:Cm:106:ILE:HG12 | 2.01 | 0.42 |
| 3:Cw:362:GLU:HG3 | 4:Dp:103:ARG:HH12 | 1.85 | 0.42 |
| 3:Cz:35:VAL:HG11 | 3:Cz:244:ALA:HA | 2.00 | 0.42 |
| 4:Dc:185:LEU:HD23 | 4:Dc:199:SER:HB2 | 2.02 | 0.42 |
| 4:Di:31:PRO:HG3 | 4:Di:95:TRP:HZ2 | 1.84 | 0.42 |
| 4:Dt:86:VAL:HG21 | 4:Dt:110:PHE:CG | 2.55 | 0.42 |
| 8:Hx:173:ARG:HH21 | 8:Hz:144:GLN:HG2 | 1.84 | 0.42 |
| 7:Ia:83:GLN:HE22 | 7:Ig:55:ARG:HH22 | 1.66 | 0.42 |
| 8:Ip:150:LEU:HB2 | 8:Ip:167:VAL:HG22 | 2.00 | 0.42 |
| 8:Jb:159:GLY:HA3 | 8:Jf:36:LYS:HA | 2.01 | 0.42 |
| 7:Js:107:TYR:CZ | 8:Jv:196:ASN:HB3 | 2.55 | 0.42 |
| 8:Lh:148:TYR:HE1 | 8:Lh:176:VAL:HG21 | 1.84 | 0.42 |
| 1:Ah:178:VAL:HG21 | 1:Ah:191:ILE:HD12 | 2.01 | 0.42 |
| 1:Ak:113:GLU:HB2 | 1:Ak:172:MET:HB3 | 2.02 | 0.42 |
| 1:Ar:66:TRP:CE2 | 1:Ar:207:ARG:HD3 | 2.54 | 0.42 |
| 2:Bd:49:GLU:HG3 | 2:Bd:54:THR:HG21 | 2.02 | 0.42 |
| 2:Bj:36:VAL:HG22 | 2:Bk:65:PHE:HZ | 1.84 | 0.42 |
| 2:Bj:254:SER:HB2 | 2:Bl:138:VAL:HG22 | 2.01 | 0.42 |
| 2:Bm:305:GLU:HG3 | 2:Bp:148:ASP:HB2 | 2.01 | 0.42 |
| 2:Bq:122:LEU:HB2 | 2:Bq:131:ALA:HB3 | 2.00 | 0.42 |
| 2:Br:350:GLN:HG3 | 2:Bs:361:ILE:HG21 | 2.02 | 0.42 |
| 3:Ca:259:ALA:HB2 | 3:Cz:241:ARG:NH1 | 2.34 | 0.42 |
| 3:Cf:28:VAL:HG13 | 3:Cf:49:ALA:HB1 | 2.01 | 0.42 |
| 3:Cf:228:ASP:HB2 | 3:Cf:235:VAL:HG11 | 2.00 | 0.42 |
| 3:Ck:373:MET:HE3 | 3:Ck:373:MET:HB2 | 1.93 | 0.42 |
| 3:Cm:50:LEU:HD11 | 3:Cm:85:VAL:HG21 | 2.02 | 0.42 |
| 3:Cm:350:TYR:HE2 | 3:Cm:355:GLU:HG3 | 1.85 | 0.42 |
| 3:Cn:226:VAL:HB | 3:Cn:236:MET:HB3 | 2.01 | 0.42 |
| 3:Ct:269:MET:HE3 | 3:Ct:269:MET:HB3 | 1.78 | 0.42 |
| 4:Da:216:ILE:HG21 | 4:Da:289:LEU:HD22 | 2.01 | 0.42 |
| 4:De:72:PHE:HD2 | 4:De:117:ILE:HG23 | 1.85 | 0.42 |
| 4:Dq:183:THR:HG21 | 4:Dq:206:ILE:HD11 | 2.01 | 0.42 |
| 4:Dt:104:ILE:HA | 4:Du:145:ARG:HD3 | 2.02 | 0.42 |
| 7:Hs:108:LYS:HD2 | 8:Ht:204:VAL:HG11 | 2.02 | 0.42 |
| 8:Ih:148:TYR:HE1 | 8:Ih:176:VAL:HG21 | 1.84 | 0.42 |
| 8:In:137:TRP:HB3 | 8:Ip:125:VAL:HB | 2.00 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Iz:89:MET:HG3 | 8:Jb:135:ARG:HG3 | 2.01 | 0.42 |
| 7:Je:29:TRP:HB3 | 7:Je:118:ARG:HE | 1.84 | 0.42 |
| 7:Ji:107:TYR:CZ | 8:Jl:196:ASN:HB3 | 2.55 | 0.42 |
| 8:Kx:173:ARG:HH21 | 8:Kz:144:GLN:HG2 | 1.85 | 0.42 |
| 7:Ky:107:TYR:CZ | 8:Lb:196:ASN:HB3 | 2.54 | 0.42 |
| 7:Lc:83:GLN:HE22 | 7:Li:55:ARG:HH22 | 1.66 | 0.42 |
| 7:Li:65:LEU:HD21 | 7:Li:119:LEU:HB2 | 2.01 | 0.42 |
| 1:An:51:ASP:HA | 1:An:54:ARG:HE | 1.84 | 0.42 |
| 1:Aq:249:PHE:HA | 1:Aq:252:ARG:HE | 1.85 | 0.42 |
| 1:Ax:249:PHE:HA | 1:Ax:252:ARG:HE | 1.83 | 0.42 |
| 2:Bg:98:THR:HB | 2:Bg:164:SER:HA | 2.01 | 0.42 |
| 2:Bh:38:TYR:HE1 | 2:Bh:106:ILE:HD11 | 1.85 | 0.42 |
| 2:Bj:182:ILE:HG12 | 2:Bj:222:ALA:HB2 | 2.02 | 0.42 |
| 2:Bj:274:HIS:HE1 | 2:Bj:343:ALA:HB3 | 1.83 | 0.42 |
| 2:Bk:315:MET:HG3 | 2:Bl:328:VAL:HG13 | 2.02 | 0.42 |
| 2:Bo:122:LEU:HB2 | 2:Bo:131:ALA:HB3 | 2.00 | 0.42 |
| 2:Bv:56:GLN:HE22 | 2:Bw:69:LEU:H | 1.67 | 0.42 |
| 2:Bw:250:ILE:HG21 | 2:Bw:345:LEU:HD13 | 2.01 | 0.42 |
| 3:Cd:365:TYR:HE2 | 4:Dw:94:VAL:HG22 | 1.85 | 0.42 |
| 3:Cf:111:SER:HB3 | 3:Cf:113:THR:HG22 | 2.01 | 0.42 |
| 3:Ck:326:PHE:HD1 | 3:Ck:328:ASP:H | 1.68 | 0.42 |
| 3:Cm:182:ILE:HG23 | 3:Cm:194:ILE:HD12 | 2.02 | 0.42 |
| 3:Cq:111:SER:HB3 | 3:Cq:113:THR:HG22 | 2.01 | 0.42 |
| 3:Cs:167:VAL:HG21 | 3:Cs:191:ALA:HB2 | 2.02 | 0.42 |
| 3:Cw:262:TRP:HA | 3:Cw:267:GLY:HA3 | 2.01 | 0.42 |
| 3:Cw:358:VAL:HG12 | 3:Cw:360:GLN:H | 1.85 | 0.42 |
| 4:Dv:183:THR:HG21 | 4:Dv:206:ILE:HD11 | 2.01 | 0.42 |
| 4:Dx:36:TRP:HB3 | 4:Dx:48:LEU:HD11 | 2.02 | 0.42 |
| 5:Ee:168:TYR:HB2 | 5:Ee:196:MET:HE1 | 2.01 | 0.42 |
| 5:Eo:41:LEU:HA | 5:Eo:44:GLU:HG2 | 2.02 | 0.42 |
| 8:Hb:155:LEU:HD23 | 8:Hb:162:ILE:HD11 | 2.01 | 0.42 |
| 8:Ht:159:GLY:HA3 | 8:Hx:36:LYS:HA | 2.01 | 0.42 |
| 7:Hw:65:LEU:HD21 | 7:Hw:119:LEU:HB2 | 2.00 | 0.42 |
| 7:Io:106:SER:HA | 7:Io:114:VAL:O | 2.20 | 0.42 |
| 8:It:159:GLY:HA3 | 8:Ix:36:LYS:HA | 2.02 | 0.42 |
| 7:Iw:78:ALA:HB3 | 7:Iy:91:ALA:HB3 | 2.02 | 0.42 |
| 8:Iz:78:ILE:HG12 | 8:Iz:148:TYR:HB2 | 2.02 | 0.42 |
| 7:Jy:66:ALA:HA | 7:Jy:98:ILE:HD11 | 2.01 | 0.42 |
| 8:Jz:78:ILE:HG12 | 8:Jz:148:TYR:HB2 | 2.01 | 0.42 |
| 7:Ke:29:TRP:HB3 | 7:Ke:118:ARG:HE | 1.85 | 0.42 |
| 1:Af:119:LYS:HD2 | 1:Ah:199:LEU:HB2 | 2.01 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:Ap:111:LEU:HA | 1:Ap:225:SER:HB3 | 2.01 | 0.42 |
| 2:Bi:259:ILE:HD11 | 2:Bi:342:MET:HG3 | 2.02 | 0.42 |
| 2:Bu:105:SER:HB2 | 2:Bu:112:LEU:HD11 | 2.02 | 0.42 |
| 3:Ca:327:ILE:HG13 | 3:Ca:331:GLY:HA2 | 2.02 | 0.42 |
| 3:Cc:278:MET:HE2 | 3:Cc:278:MET:HB3 | 1.97 | 0.42 |
| 3:Cl:321:TRP:HE1 | 3:Cl:374:HIS:CE1 | 2.37 | 0.42 |
| 3:Cn:365:TYR:HE2 | 4:Dg:94:VAL:HG22 | 1.85 | 0.42 |
| 3:Ct:70:LEU:HD22 | 6:Ft:136:VAL:HG13 | 2.02 | 0.42 |
| 4:Ds:56:GLY:HA2 | 4:Ds:77:ARG:HE | 1.84 | 0.42 |
| 4:Dw:184:ILE:HG12 | 4:Dw:286:VAL:HG22 | 2.01 | 0.42 |
| 4:Dx:183:THR:HG21 | 4:Dx:206:ILE:HD11 | 2.01 | 0.42 |
| 5:Eo:116:ARG:HD3 | 5:Eo:149:GLN:HE22 | 1.85 | 0.42 |
| 5:Ex:108:PRO:HB2 | 5:Ex:143:ASN:ND2 | 2.35 | 0.42 |
| 8:Hp:219:ILE:HG23 | 8:Hr:192:LEU:HD12 | 2.02 | 0.42 |
| 8:Ht:150:LEU:HB2 | 8:Ht:167:VAL:HG22 | 2.02 | 0.42 |
| 8:Hz:159:GLY:HA3 | 8:Id:36:LYS:HA | 2.01 | 0.42 |
| 8:Jn:219:ILE:HG23 | 8:Jp:192:LEU:HD12 | 2.02 | 0.42 |
| 8:Kt:84:VAL:HG23 | 8:Kt:86:LEU:H | 1.85 | 0.42 |
| 8:Kv:150:LEU:HB2 | 8:Kv:167:VAL:HG22 | 2.01 | 0.42 |
| 1:Ag:125:LEU:HD22 | 1:Aj:244:MET:HG3 | 2.00 | 0.42 |
| 1:Ah:131:ALA:HB1 | 1:Ah:152:TYR:HE1 | 1.84 | 0.42 |
| 2:Ba:137:LEU:HA | 2:Ba:162:ILE:HG12 | 2.02 | 0.42 |
| 2:Bb:139:VAL:HG12 | 2:Bb:141:GLY:H | 1.84 | 0.42 |
| 2:Bs:252:VAL:HG22 | 2:Bs:259:ILE:HG12 | 2.02 | 0.42 |
| 3:Cd:195:MET:HE2 | 3:Cd:281:LEU:HD11 | 2.01 | 0.42 |
| 3:Ce:249:PRO:HG2 | 3:Ce:252:SER:HB3 | 2.02 | 0.42 |
| 3:Cm:61:ILE:HD11 | 3:Cm:282:GLU:HG3 | 2.02 | 0.42 |
| 3:Ct:167:VAL:HG21 | 3:Ct:191:ALA:HB2 | 2.01 | 0.42 |
| 3:Cy:219:GLN:HG3 | 3:Cz:259:ALA:HB3 | 2.02 | 0.42 |
| 4:Dv:219:VAL:HG21 | 4:Dv:254:LEU:HD21 | 2.01 | 0.42 |
| 4:Dw:106:ASN:HD22 | 4:Dw:107:LEU:N | 2.17 | 0.42 |
| 7:Hc:108:LYS:HD2 | 8:Hd:204:VAL:HG11 | 2.02 | 0.42 |
| 8:Hl:219:ILE:HG23 | 8:Hn:192:LEU:HD12 | 2.02 | 0.42 |
| 8:Jr:78:ILE:HG12 | 8:Jr:148:TYR:HB2 | 2.01 | 0.42 |
| 1:Af:115:THR:HB | 1:Af:170:ASN:HD21 | 1.84 | 0.42 |
| 1:Ag:124:ASP:HB2 | 1:Ah:165:ALA:HB3 | 2.01 | 0.42 |
| 1:Ao:205:TYR:CZ | 1:Ao:236:SER:HB3 | 2.55 | 0.42 |
| 1:As:119:LYS:HB3 | 1:Au:199:LEU:HD12 | 2.01 | 0.42 |
| 1:At:139:GLY:HA3 | 1:Au:148:TYR:HD1 | 1.84 | 0.42 |
| 1:Aw:200:ASN:HB3 | 1:Aw:201:THR:H | 1.69 | 0.42 |
| 2:Bm:251:ILE:HD13 | 2:Bm:359:ILE:HB | 2.02 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bm:318:LEU:HG | 2:Bm:320:PRO:HG3 | 2.02 | 0.42 |
| 2:Bu:118:MET:H | 2:Bu:118:MET:HG2 | 1.62 | 0.42 |
| 2:Bu:143:SER:HB2 | 2:Bu:157:PRO:HG3 | 2.02 | 0.42 |
| 2:Bu:254:SER:HB2 | 2:Bw:138:VAL:HG22 | 2.02 | 0.42 |
| 2:Bx:197:LEU:HD22 | 2:Bx:218:ILE:HD13 | 2.01 | 0.42 |
| 2:By:139:VAL:HG12 | 2:By:141:GLY:H | 1.85 | 0.42 |
| 2:Bz:257:GLY:HA2 | 2:Bz:342:MET:HE1 | 2.01 | 0.42 |
| 3:Cj:111:SER:HB3 | 3:Cj:113:THR:HG22 | 2.02 | 0.42 |
| 3:Co:278:MET:HE2 | 3:Co:278:MET:HB3 | 1.99 | 0.42 |
| 3:Cp:219:GLN:HG3 | 3:Cq:259:ALA:HB3 | 2.01 | 0.42 |
| 4:De:183:THR:HG21 | 4:De:206:ILE:HD11 | 2.02 | 0.42 |
| 4:Dg:225:THR:HA | 4:Dg:283:ARG:HA | 2.02 | 0.42 |
| 4:Du:58:ALA:HB1 | 4:Du:72:PHE:HE1 | 1.85 | 0.42 |
| 4:Du:106:ASN:HD22 | 4:Du:107:LEU:N | 2.17 | 0.42 |
| 5:Em:82:LEU:HD21 | 5:Em:91:ASP:HB2 | 2.02 | 0.42 |
| 5:Eq:152:GLU:HG3 | 5:Eq:188:LEU:HD21 | 2.01 | 0.42 |
| 8:Hf:219:ILE:HG23 | 8:Hh:192:LEU:HD12 | 2.02 | 0.42 |
| 8:Hh:84:VAL:HG23 | 8:Hh:86:LEU:H | 1.85 | 0.42 |
| 8:Iv:52:HIS:HD2 | 8:Iv:54:LEU:HB3 | 1.85 | 0.42 |
| 8:Kd:166:ARG:HH22 | 8:Kf:101:GLU:HG2 | 1.84 | 0.42 |
| 7:Ky:66:ALA:HA | 7:Ky:98:ILE:HD11 | 2.02 | 0.42 |
| 1:Ab:111:LEU:HA | 1:Ab:225:SER:HB3 | 2.02 | 0.42 |
| 1:Aq:124:ASP:HB2 | 1:Ar:165:ALA:HB3 | 2.01 | 0.42 |
| 1:Av:113:GLU:HB2 | 1:Av:172:MET:HB3 | 2.00 | 0.42 |
| 2:Bc:21:ILE:HG23 | 2:Bc:197:LEU:HD11 | 2.02 | 0.42 |
| 2:Bc:137:LEU:HA | 2:Bc:162:ILE:HG12 | 2.01 | 0.42 |
| 2:Bc:223:PRO:HB3 | 4:Dy:94:VAL:HG12 | 2.01 | 0.42 |
| 2:Bg:56:GLN:HE22 | 2:Bh:69:LEU:H | 1.68 | 0.42 |
| 2:Bl:318:LEU:HD12 | 2:Bl:318:LEU:HA | 1.91 | 0.42 |
| 2:Bm:317:LYS:HB2 | 2:Bn:328:VAL:HG21 | 2.02 | 0.42 |
| 2:Bq:118:MET:HE2 | 2:Bq:118:MET:HB3 | 1.79 | 0.42 |
| 3:Cd:88:ILE:HG12 | 3:Cd:106:ILE:HG12 | 2.02 | 0.42 |
| 3:Cq:269:MET:HE3 | 3:Cq:269:MET:HB3 | 1.83 | 0.42 |
| 3:Cx:34:ILE:HD11 | 3:Cx:100:MET:HB2 | 2.01 | 0.42 |
| 3:Cy:241:ARG:HB3 | 6:Gz:143:THR:HG21 | 2.02 | 0.42 |
| 4:De:173:LEU:HD13 | 4:De:173:LEU:HA | 1.93 | 0.42 |
| 4:Dx:169:ILE:HG13 | 4:Dx:172:LEU:HD12 | 2.01 | 0.42 |
| 5:Ec:192:LEU:HD12 | 5:Ec:196:MET:HE2 | 2.02 | 0.42 |
| 5:Er:65:ARG:HD3 | 5:Er:69:ILE:HD13 | 2.02 | 0.42 |
| 6:Fz:135:GLN:HE21 | 6:Fz:135:GLN:HB2 | 1.61 | 0.42 |
| 8:Hd:52:HIS:HD2 | 8:Hd:54:LEU:HB3 | 1.84 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 7:Hi:108:LYS:HE3 | 7:Hi:108:LYS:HB3 | 1.90 | 0.42 |
| 8:Hv:166:ARG:HH22 | 8:Hx:101:GLU:HG2 | 1.85 | 0.42 |
| 8:Jb:214:GLN:HG3 | 8:Jd:195:LEU:HD21 | 2.01 | 0.42 |
| 7:Jq:65:LEU:HD21 | 7:Jq:119:LEU:HB2 | 2.02 | 0.42 |
| 8:Jt:50:PRO:HB2 | 8:Jv:32:ILE:HA | 2.02 | 0.42 |
| 7:Jw:65:LEU:HD21 | 7:Jw:119:LEU:HB2 | 2.02 | 0.42 |
| 8:Kh:173:ARG:HH21 | 8:Kj:144:GLN:HG2 | 1.84 | 0.42 |
| 7:Ki:29:TRP:HB3 | 7:Ki:118:ARG:HE | 1.84 | 0.42 |
| 7:Km:65:LEU:HD21 | 7:Km:119:LEU:HB2 | 2.01 | 0.42 |
| 8:Ld:62:THR:HG21 | 8:Ld:106:GLN:HB3 | 2.02 | 0.42 |
| 8:Lh:159:GLY:HA3 | 8:Ll:36:LYS:HA | 2.00 | 0.42 |
| 1:An:205:TYR:CZ | 1:An:236:SER:HB3 | 2.55 | 0.41 |
| 2:Bf:251:ILE:HD13 | 2:Bf:359:ILE:HB | 2.02 | 0.41 |
| 2:Bl:98:THR:HB | 2:Bl:164:SER:HA | 2.01 | 0.41 |
| 3:Cb:326:PHE:HD1 | 3:Cb:328:ASP:H | 1.68 | 0.41 |
| 3:Cj:304:MET:HE2 | 3:Cj:356:LEU:HD21 | 2.02 | 0.41 |
| 3:Cq:373:MET:HE3 | 3:Cq:373:MET:HB2 | 1.94 | 0.41 |
| 3:Cw:34:ILE:HD11 | 3:Cw:100:MET:HB2 | 2.00 | 0.41 |
| 4:Di:66:LYS:HA | 5:Ej:162:LEU:HD22 | 2.01 | 0.41 |
| 5:Ec:41:LEU:HA | 5:Ec:44:GLU:HG2 | 2.02 | 0.41 |
| 5:Ej:108:PRO:HB2 | 5:Ej:143:ASN:ND2 | 2.35 | 0.41 |
| 5:En:108:PRO:HB2 | 5:En:143:ASN:ND2 | 2.35 | 0.41 |
| 5:Er:58:ILE:HD12 | 5:Er:58:ILE:HA | 1.96 | 0.41 |
| 5:Ez:198:GLU:HA | 5:Ez:201:ILE:HG12 | 2.01 | 0.41 |
| 7:Ha:55:ARG:HH22 | 7:Lg:83:GLN:HE22 | 1.68 | 0.41 |
| 7:Iq:108:LYS:HD2 | 8:Ir:204:VAL:HG11 | 2.02 | 0.41 |
| 8:Iz:62:THR:HG21 | 8:Iz:106:GLN:HB3 | 2.01 | 0.41 |
| 8:Jx:159:GLY:HA3 | 8:Kb:36:LYS:HA | 2.02 | 0.41 |
| 8:Kp:62:THR:HG21 | 8:Kp:106:GLN:HB3 | 2.02 | 0.41 |
| 8:Kp:78:ILE:HG12 | 8:Kp:148:TYR:HB2 | 2.02 | 0.41 |
| 8:Kr:214:GLN:HG3 | 8:Kt:195:LEU:HD21 | 2.02 | 0.41 |
| 8:Lb:159:GLY:HA3 | 8:Lf:36:LYS:HA | 2.01 | 0.41 |
| 1:Af:111:LEU:HB3 | 1:Af:172:MET:HG3 | 2.00 | 0.41 |
| 1:Al:205:TYR:CZ | 1:Al:236:SER:HB3 | 2.55 | 0.41 |
| 1:An:249:PHE:HA | 1:An:252:ARG:HE | 1.85 | 0.41 |
| 1:Ap:184:LEU:HD12 | 1:Ap:188:ASN:HB2 | 2.02 | 0.41 |
| 1:At:115:THR:HB | 1:At:170:ASN:HD21 | 1.85 | 0.41 |
| 1:Au:134:ASP:HB2 | 1:Av:155:LYS:HB2 | 2.02 | 0.41 |
| 1:Ay:191:ILE:HD13 | 1:Ay:212:ILE:HD13 | 2.01 | 0.41 |
| 2:Bh:320:PRO:HB2 | 2:Bh:327:LEU:HD12 | 2.02 | 0.41 |
| 2:Bl:178:ARG:HB2 | 3:Co:184:MET:HE2 | 2.02 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bm:85:VAL:HG13 | 2:Bm:103:VAL:HG22 | 2.02 | 0.41 |
| 2:Bs:42:THR:HG22 | 2:Bs:80:VAL:HG22 | 2.02 | 0.41 |
| 3:Cb:269:MET:HE3 | 3:Cb:269:MET:HB3 | 1.79 | 0.41 |
| 3:Ce:246:TRP:HZ2 | 3:Ce:254:ILE:HD13 | 1.84 | 0.41 |
| 3:Ct:111:SER:HB3 | 3:Ct:113:THR:HG22 | 2.01 | 0.41 |
| 3:Cy:350:TYR:HE2 | 3:Cy:355:GLU:HG3 | 1.85 | 0.41 |
| 4:Da:112:GLN:HE21 | 4:Da:112:GLN:HB3 | 1.60 | 0.41 |
| 4:Da:216:ILE:HD12 | 4:Da:289:LEU:HB3 | 2.02 | 0.41 |
| 4:Ds:116:TYR:CG | 5:Eq:199:ASN:HB2 | 2.55 | 0.41 |
| 5:Eb:108:PRO:HB2 | 5:Eb:143:ASN:ND2 | 2.35 | 0.41 |
| 5:Eo:71:LEU:HD22 | 5:Eo:71:LEU:HA | 1.96 | 0.41 |
| 5:Eq:111:LEU:HB3 | 5:Eq:138:ALA:HB2 | 2.01 | 0.41 |
| 5:Es:41:LEU:HA | 5:Es:44:GLU:HG2 | 2.02 | 0.41 |
| 5:Eu:100:GLU:HG3 | 5:Ev:211:TRP:HB3 | 2.02 | 0.41 |
| 5:Eu:202:ALA:HA | 5:Eu:205:LYS:HZ2 | 1.85 | 0.41 |
| 7:Ha:107:TYR:CZ | 8:Hd:196:ASN:HB3 | 2.54 | 0.41 |
| 8:Hb:94:TRP:HB3 | 8:Ll:87:GLN:HE21 | 1.85 | 0.41 |
| 8:Hd:219:ILE:HG23 | 8:Hf:192:LEU:HD12 | 2.03 | 0.41 |
| 7:He:55:ARG:HH22 | 7:Lk:83:GLN:HE22 | 1.66 | 0.41 |
| 7:Hq:107:TYR:CZ | 8:Ht:196:ASN:HB3 | 2.55 | 0.41 |
| 8:Hr:52:HIS:HD2 | 8:Hr:54:LEU:HB3 | 1.84 | 0.41 |
| 7:Ik:107:TYR:CZ | 8:In:196:ASN:HB3 | 2.55 | 0.41 |
| 8:Il:85:ASP:HB2 | 8:Il:88:ASN:HB2 | 2.01 | 0.41 |
| 7:Jk:29:TRP:HB3 | 7:Jk:118:ARG:HE | 1.86 | 0.41 |
| 7:Le:107:TYR:CZ | 8:Lh:196:ASN:HB3 | 2.55 | 0.41 |
| 8:Lf:62:THR:HG21 | 8:Lf:106:GLN:HB3 | 2.02 | 0.41 |
| 8:Lh:50:PRO:HB2 | 8:Lj:32:ILE:HA | 2.02 | 0.41 |
| 1:Af:154:LEU:HD21 | 1:Ah:258:LEU:HD11 | 2.02 | 0.41 |
| 1:Aj:138:VAL:HB | 1:Aj:143:LEU:HD21 | 2.02 | 0.41 |
| 1:Ak:191:ILE:HD13 | 1:Ak:212:ILE:HD13 | 2.02 | 0.41 |
| 2:Bc:85:VAL:HG13 | 2:Bc:103:VAL:HG22 | 2.01 | 0.41 |
| 2:Bg:49:GLU:HG3 | 2:Bg:54:THR:HG21 | 2.02 | 0.41 |
| 2:Bl:311:LYS:HE3 | 2:Bm:337:ALA:HB1 | 2.02 | 0.41 |
| 2:Bp:317:LYS:HE3 | 2:Bq:324:LEU:HD23 | 2.01 | 0.41 |
| 2:Bx:259:ILE:HD11 | 2:Bx:342:MET:HG3 | 2.01 | 0.41 |
| 2:By:253:ASN:HB3 | 2:By:258:THR:HG23 | 2.01 | 0.41 |
| 2:Bz:251:ILE:HD13 | 2:Bz:359:ILE:HB | 2.02 | 0.41 |
| 3:Cc:80:PHE:HA | 6:Fc:136:VAL:HG21 | 2.01 | 0.41 |
| 3:Ch:167:VAL:HG21 | 3:Ch:191:ALA:HB2 | 2.02 | 0.41 |
| 3:Ch:255:ASP:HB3 | 3:Ch:258:SER:HB3 | 2.02 | 0.41 |
| 3:Ck:122:LYS:HD2 | 3:Ck:193:TYR:HE2 | 1.86 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 3:Cs:326:PHE:HD1 | 3:Cs:328:ASP:H | 1.67 | 0.41 |
| 3:Ct:85:VAL:HG22 | 3:Ct:108:ILE:HG12 | 2.02 | 0.41 |
| 3:Cy:362:GLU:HG3 | 4:Dr:103:ARG:HH12 | 1.85 | 0.41 |
| 4:Dc:116:TYR:CG | 5:Ea:199:ASN:HB2 | 2.55 | 0.41 |
| 4:Dp:42:THR:HA | 4:Dp:43:PRO:HD3 | 1.93 | 0.41 |
| 4:Dr:116:TYR:CZ | 5:Er:199:ASN:HB2 | 2.55 | 0.41 |
| 5:Ev:108:PRO:HB2 | 5:Ev:143:ASN:ND2 | 2.36 | 0.41 |
| 8:Hh:219:ILE:HG23 | 8:Hj:192:LEU:HD12 | 2.03 | 0.41 |
| 7:Hu:107:TYR:CZ | 8:Hx:196:ASN:HB3 | 2.56 | 0.41 |
| 8:Iv:214:GLN:HG3 | 8:Ix:195:LEU:HD21 | 2.01 | 0.41 |
| 8:Iz:214:GLN:HG3 | 8:Jb:195:LEU:HD21 | 2.02 | 0.41 |
| 7:Ja:71:GLY:HA2 | 7:Jc:99:ARG:HG2 | 2.02 | 0.41 |
| 7:Je:107:TYR:CZ | 8:Jh:196:ASN:HB3 | 2.55 | 0.41 |
| 8:Jv:78:ILE:HG12 | 8:Jv:148:TYR:HB2 | 2.02 | 0.41 |
| 8:Kx:195:LEU:HD12 | 8:Kx:195:LEU:HA | 1.94 | 0.41 |
| 1:Ac:139:GLY:HA3 | 1:Ad:148:TYR:HD1 | 1.85 | 0.41 |
| 1:An:191:ILE:HD13 | 1:An:212:ILE:HD13 | 2.02 | 0.41 |
| 1:Aq:205:TYR:CZ | 1:Aq:236:SER:HB3 | 2.55 | 0.41 |
| 2:Bc:290:PRO:HD3 | 2:Bc:299:VAL:HG22 | 2.02 | 0.41 |
| 2:Be:251:ILE:HD13 | 2:Be:359:ILE:HB | 2.02 | 0.41 |
| 2:Bm:36:VAL:HG22 | 2:Bn:65:PHE:HZ | 1.85 | 0.41 |
| 2:Bs:259:ILE:HD11 | 2:Bs:342:MET:HG3 | 2.02 | 0.41 |
| 2:Bw:256:THR:HB | 2:Bw:258:THR:HG22 | 2.03 | 0.41 |
| 2:Bw:259:ILE:HD11 | 2:Bw:342:MET:HG3 | 2.02 | 0.41 |
| 2:By:118:MET:HE3 | 2:By:118:MET:HB3 | 1.77 | 0.41 |
| 3:Cg:248:PHE:HE1 | 3:Cg:260:ARG:HG2 | 1.86 | 0.41 |
| 3:Cj:342:ILE:HG21 | 3:Cj:367:ILE:HD11 | 2.03 | 0.41 |
| 3:Cn:358:VAL:HG12 | 3:Cn:360:GLN:H | 1.85 | 0.41 |
| 3:Cp:262:TRP:HA | 3:Cp:267:GLY:HA3 | 2.02 | 0.41 |
| 3:Cv:222:MET:HE3 | 3:Cv:222:MET:HB2 | 1.90 | 0.41 |
| 4:Dd:104:ILE:HA | 4:De:145:ARG:HD3 | 2.01 | 0.41 |
| 4:Ds:184:ILE:HG12 | 4:Ds:286:VAL:HG22 | 2.03 | 0.41 |
| 4:Dw:56:GLY:HA2 | 4:Dw:77:ARG:HE | 1.84 | 0.41 |
| 5:Ew:100:GLU:HG3 | 5:Ex:211:TRP:HB3 | 2.02 | 0.41 |
| 7:Ju:65:LEU:HD21 | 7:Ju:119:LEU:HB2 | 2.01 | 0.41 |
| 8:Jz:219:ILE:HG23 | 8:Kb:192:LEU:HD12 | 2.01 | 0.41 |
| 7:Le:72:MET:H | 7:Lg:97:VAL:HG23 | 1.85 | 0.41 |
| 1:Ab:258:LEU:HD21 | 1:Az:154:LEU:HD11 | 2.02 | 0.41 |
| 1:Ag:115:THR:HB | 1:Ag:170:ASN:HD21 | 1.86 | 0.41 |
| 1:Ak:231:ALA:HB3 | 1:Al:195:LYS:HG3 | 2.02 | 0.41 |
| 1:Am:245:GLN:HG3 | 1:An:200:ASN:HD21 | 1.86 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:Ar:111:LEU:HB3 | 1:Ar:172:MET:HG3 | 2.02 | 0.41 |
| 1:Av:138:VAL:HB | 1:Av:143:LEU:HD21 | 2.02 | 0.41 |
| 2:Ba:136:ASN:HD21 | 2:Bz:102:THR:HG21 | 1.84 | 0.41 |
| 2:Bg:42:THR:HG22 | 2:Bg:80:VAL:HG22 | 2.02 | 0.41 |
| 2:Bj:251:ILE:HD13 | 2:Bj:359:ILE:HB | 2.02 | 0.41 |
| 2:Bl:49:GLU:HG3 | 2:Bl:54:THR:HG21 | 2.03 | 0.41 |
| 2:Bo:283:GLU:HG2 | 2:Bo:305:GLU:HB3 | 2.01 | 0.41 |
| 2:Bq:221:ARG:HH21 | 4:Dm:97:PRO:HD2 | 1.86 | 0.41 |
| 2:Bq:251:ILE:HD13 | 2:Bq:359:ILE:HB | 2.01 | 0.41 |
| 2:By:178:ARG:HB2 | 3:Cb:184:MET:HE2 | 2.03 | 0.41 |
| 3:Cg:220:PHE:HE2 | 3:Cg:273:VAL:HG11 | 1.85 | 0.41 |
| 3:Cg:269:MET:HB3 | 3:Cg:269:MET:HE3 | 1.75 | 0.41 |
| 3:Ci:89:LEU:HG | 3:Ci:105:ARG:HB3 | 2.02 | 0.41 |
| 3:Ck:89:LEU:HG | 3:Ck:105:ARG:HB3 | 2.03 | 0.41 |
| 3:Cn:153:ILE:HG21 | 3:Cn:195:MET:HE1 | 2.02 | 0.41 |
| 3:Cq:195:MET:HE2 | 3:Cq:281:LEU:HD11 | 2.01 | 0.41 |
| 3:Ct:164:PHE:HZ | 3:Ct:285:ILE:HB | 1.84 | 0.41 |
| 3:Cy:222:MET:HE3 | 3:Cy:222:MET:HB2 | 1.95 | 0.41 |
| 4:Db:26:ARG:HA | 4:Db:150:GLU:O | 2.21 | 0.41 |
| 4:Dl:65:GLY:HA2 | 4:Dl:176:SER:HB2 | 2.01 | 0.41 |
| 4:Dr:25:VAL:HG13 | 4:Dr:149:ILE:HA | 2.00 | 0.41 |
| 4:Ds:106:ASN:HD22 | 4:Ds:107:LEU:N | 2.18 | 0.41 |
| 5:Ee:116:ARG:HD3 | 5:Ee:149:GLN:HE22 | 1.85 | 0.41 |
| 5:Et:108:PRO:HB2 | 5:Et:143:ASN:ND2 | 2.36 | 0.41 |
| 5:Eu:41:LEU:HA | 5:Eu:44:GLU:HG2 | 2.02 | 0.41 |
| 5:Ez:154:LEU:HB3 | 5:Ez:164:TYR:HE1 | 1.86 | 0.41 |
| 8:Hb:135:ARG:HG3 | 8:Ll:89:MET:HG3 | 2.02 | 0.41 |
| 7:Hc:65:LEU:HD21 | 7:Hc:119:LEU:HB2 | 2.00 | 0.41 |
| 7:Hc:72:MET:H | 7:He:97:VAL:HG23 | 1.85 | 0.41 |
| 7:Hs:65:LEU:HD21 | 7:Hs:119:LEU:HB2 | 2.01 | 0.41 |
| 8:Iv:137:TRP:HB3 | 8:Ix:125:VAL:HB | 2.03 | 0.41 |
| 7:Jc:78:ALA:HB3 | 7:Je:91:ALA:HB3 | 2.02 | 0.41 |
| 8:Jn:86:LEU:HD13 | 8:Jn:153:THR:HG23 | 2.01 | 0.41 |
| 7:Ju:107:TYR:CZ | 8:Jx:196:ASN:HB3 | 2.55 | 0.41 |
| 8:Kb:166:ARG:HH22 | 8:Kd:101:GLU:HG2 | 1.85 | 0.41 |
| 7:Ku:107:TYR:CZ | 8:Kx:196:ASN:HB3 | 2.55 | 0.41 |
| 8:Lb:137:TRP:HB3 | 8:Ld:125:VAL:HB | 2.02 | 0.41 |
| 1:Ab:200:ASN:HB3 | 1:Ab:201:THR:H | 1.65 | 0.41 |
| 1:Ae:78:TYR:CZ | 1:Ae:80:ALA:HB3 | 2.56 | 0.41 |
| 1:Aw:231:ALA:HB3 | 1:Ax:195:LYS:HG3 | 2.02 | 0.41 |
| 1:Ax:78:TYR:HD2 | 1:Ax:81:GLU:HB2 | 1.86 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 2:Bc:84:ILE:HG13 | 2:Bc:106:ILE:HD13 | 2.02 | 0.41 |
| 2:Bc:274:HIS:HE1 | 2:Bc:343:ALA:HB3 | 1.86 | 0.41 |
| 2:Bd:105:SER:HB2 | 2:Bd:112:LEU:HD11 | 2.02 | 0.41 |
| 2:Bh:133:ALA:HA | 2:Bh:166:ALA:HA | 2.01 | 0.41 |
| 2:Bp:269:PRO:HB2 | 2:Bq:263:GLN:HE21 | 1.85 | 0.41 |
| 2:Bp:336:ALA:HB1 | 2:Bp:340:ASP:HB2 | 2.01 | 0.41 |
| 2:Br:277:MET:HE2 | 2:Br:311:LYS:HD2 | 2.03 | 0.41 |
| 2:Bs:161:MET:HE2 | 2:Bs:161:MET:HB3 | 1.99 | 0.41 |
| 2:By:251:ILE:HD13 | 2:By:359:ILE:HB | 2.03 | 0.41 |
| 2:By:350:GLN:HG3 | 2:Bz:361:ILE:HD13 | 2.02 | 0.41 |
| 3:Ca:222:MET:HE3 | 3:Ca:222:MET:HB2 | 1.93 | 0.41 |
| 3:Cd:226:VAL:HB | 3:Cd:236:MET:HB3 | 2.03 | 0.41 |
| 3:Ci:137:ALA:HB1 | 3:Ci:142:ILE:HG13 | 2.03 | 0.41 |
| 3:Cj:201:ASP:HB3 | 3:Cj:221:ALA:HB3 | 2.03 | 0.41 |
| 3:Ck:235:VAL:HG12 | 3:Cl:351:GLU:HG2 | 2.02 | 0.41 |
| 3:Cr:46:LEU:HD11 | 3:Cr:88:ILE:HG21 | 2.03 | 0.41 |
| 3:Cu:157:LEU:HA | 3:Cu:161:SER:HB2 | 2.02 | 0.41 |
| 3:Cw:81:ALA:H | 6:Fw:136:VAL:HG21 | 1.86 | 0.41 |
| 3:Cw:157:LEU:HA | 3:Cw:161:SER:HB2 | 2.03 | 0.41 |
| 4:De:225:THR:HA | 4:De:283:ARG:HA | 2.03 | 0.41 |
| 4:Df:111:LYS:H | 4:Df:115:GLY:HA2 | 1.85 | 0.41 |
| 4:Di:72:PHE:HD2 | 4:Di:117:ILE:HG23 | 1.86 | 0.41 |
| 4:Dl:221:VAL:HB | 4:Dl:261:VAL:HG12 | 2.03 | 0.41 |
| 4:Dm:216:ILE:HG21 | 4:Dm:289:LEU:HD22 | 2.03 | 0.41 |
| 4:Dp:183:THR:HG21 | 4:Dp:206:ILE:HD11 | 2.02 | 0.41 |
| 4:Dr:42:THR:HA | 4:Dr:43:PRO:HD3 | 1.92 | 0.41 |
| 4:Du:56:GLY:HA2 | 4:Du:77:ARG:HG3 | 2.01 | 0.41 |
| 5:Ec:82:LEU:HD21 | 5:Ec:91:ASP:HB2 | 2.02 | 0.41 |
| 5:Ec:144:LEU:HA | 5:Ec:147:ARG:HD2 | 2.02 | 0.41 |
| 5:Em:116:ARG:HD3 | 5:Em:149:GLN:HE22 | 1.86 | 0.41 |
| 8:Hb:150:LEU:HB2 | 8:Hb:167:VAL:HG22 | 2.03 | 0.41 |
| 8:Hd:137:TRP:HB3 | 8:Hf:125:VAL:HB | 2.02 | 0.41 |
| 8:Hr:219:ILE:HG23 | 8:Ht:192:LEU:HD12 | 2.03 | 0.41 |
| 8:Jp:52:HIS:HD2 | 8:Jp:54:LEU:HB3 | 1.84 | 0.41 |
| 7:Js:70:TYR:HD2 | 7:Js:96:GLY:HA3 | 1.85 | 0.41 |
| 8:Jt:154:MET:HE2 | 8:Jt:154:MET:HB3 | 1.90 | 0.41 |
| 8:Kb:148:TYR:HE1 | 8:Kb:176:VAL:HG21 | 1.85 | 0.41 |
| 8:Lb:166:ARG:HH22 | 8:Ld:101:GLU:HG2 | 1.84 | 0.41 |
| 8:Ld:148:TYR:HE1 | 8:Ld:176:VAL:HG21 | 1.84 | 0.41 |
| 8:Lh:219:ILE:HG23 | 8:Lj:192:LEU:HD12 | 2.02 | 0.41 |
| 1:Ae:36:ASP:HB2 | 3:Cu:260:ARG:CZ | 2.51 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 1:Az:224:ALA:HB3 | 1:Az:227:ARG:HG2 | 2.03 | 0.41 |
| 2:Bd:35:LEU:HB3 | 2:Bd:122:LEU:HB3 | 2.02 | 0.41 |
| 2:Bd:41:VAL:HG21 | 2:Bd:137:LEU:HD11 | 2.03 | 0.41 |
| 2:Bm:290:PRO:HD3 | 2:Bm:299:VAL:HG22 | 2.03 | 0.41 |
| 2:Bn:259:ILE:HD13 | 2:Bn:345:LEU:HD12 | 2.03 | 0.41 |
| 2:Bu:305:GLU:HG3 | 2:Bx:148:ASP:HB2 | 2.03 | 0.41 |
| 2:Bw:272:VAL:HG22 | 2:Bx:260:VAL:HG22 | 2.02 | 0.41 |
| 3:Cg:350:TYR:HE2 | 3:Cg:355:GLU:HG3 | 1.86 | 0.41 |
| 3:Co:271:LEU:HD11 | 6:Go:145:PHE:HE2 | 1.85 | 0.41 |
| 3:Cq:271:LEU:HD11 | 6:Gq:145:PHE:HE2 | 1.85 | 0.41 |
| 3:Cs:80:PHE:HA | 6:Fs:136:VAL:HG21 | 2.02 | 0.41 |
| 3:Ct:350:TYR:HE2 | 3:Ct:355:GLU:HG3 | 1.85 | 0.41 |
| 3:Cv:29:THR:HB | 3:Cv:103:ARG:HG2 | 2.01 | 0.41 |
| 3:Cv:34:ILE:HD11 | 3:Cv:100:MET:HB2 | 2.03 | 0.41 |
| 3:Cv:373:MET:HE3 | 3:Cv:373:MET:HB2 | 1.86 | 0.41 |
| 4:Dj:31:PRO:HA | 4:Dj:156:VAL:HG21 | 2.03 | 0.41 |
| 4:Du:72:PHE:HD2 | 4:Du:117:ILE:HG23 | 1.85 | 0.41 |
| 5:Eh:108:PRO:HB2 | 5:Eh:143:ASN:ND2 | 2.35 | 0.41 |
| 8:Hd:36:LYS:HA | 8:Ll:159:GLY:HA3 | 2.02 | 0.41 |
| 8:Hx:78:ILE:HG12 | 8:Hx:148:TYR:HB2 | 2.03 | 0.41 |
| 8:Ib:155:LEU:HD23 | 8:Ib:162:ILE:HD11 | 2.03 | 0.41 |
| 7:Ik:66:ALA:HA | 7:Ik:98:ILE:HD11 | 2.02 | 0.41 |
| 8:In:52:HIS:HD2 | 8:In:54:LEU:HB3 | 1.85 | 0.41 |
| 8:Ix:159:GLY:HA3 | 8:Jb:36:LYS:HA | 2.03 | 0.41 |
| 7:Ja:77:ARG:HH12 | 7:Jc:73:ARG:NH2 | 2.18 | 0.41 |
| 8:Jn:85:ASP:HB2 | 8:Jn:88:ASN:HB2 | 2.01 | 0.41 |
| 7:Km:78:ALA:HB3 | 7:Ko:91:ALA:HB3 | 2.02 | 0.41 |
| 1:Aw:134:ASP:HB2 | 1:Ax:155:LYS:HB2 | 2.02 | 0.41 |
| 1:Az:33:THR:HG23 | 1:Az:35:VAL:H | 1.85 | 0.41 |
| 2:Bc:143:SER:HB2 | 2:Bc:157:PRO:HG3 | 2.03 | 0.41 |
| 2:Be:42:THR:HG22 | 2:Be:80:VAL:HG22 | 2.03 | 0.41 |
| 2:Bl:137:LEU:HA | 2:Bl:162:ILE:HG12 | 2.02 | 0.41 |
| 2:Bn:290:PRO:HD3 | 2:Bn:299:VAL:HG22 | 2.02 | 0.41 |
| 2:Bu:259:ILE:HD11 | 2:Bu:342:MET:HG3 | 2.02 | 0.41 |
| 2:Bw:181:TYR:HE1 | 2:Bw:221:ARG:HG2 | 1.85 | 0.41 |
| 2:Bx:85:VAL:HB | 2:Bx:122:LEU:HD21 | 2.03 | 0.41 |
| 3:Ci:249:PRO:HG2 | 3:Ci:252:SER:HB3 | 2.03 | 0.41 |
| 3:Cx:88:ILE:HG12 | 3:Cx:106:ILE:HG12 | 2.03 | 0.41 |
| 4:Dj:169:ILE:HG13 | 4:Dj:172:LEU:HD12 | 2.02 | 0.41 |
| 4:Dn:131:LYS:HE3 | 4:Do:23:LEU:HB3 | 2.03 | 0.41 |
| 4:Dr:110:PHE:HA | 4:Dr:115:GLY:HA2 | 2.03 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 4:Du:183:THR:HG21 | 4:Du:206:ILE:HD11 | 2.02 | 0.41 |
| 5:Ed:65:ARG:HD3 | 5:Ed:69:ILE:HD13 | 2.03 | 0.41 |
| 5:Ey:41:LEU:HA | 5:Ey:44:GLU:HG2 | 2.02 | 0.41 |
| 8:Hp:154:MET:HE2 | 8:Hp:154:MET:HB3 | 1.98 | 0.41 |
| 8:Ht:89:MET:HG3 | 8:Hv:135:ARG:HG3 | 2.02 | 0.41 |
| 8:Hz:137:TRP:HB3 | 8:Ib:125:VAL:HB | 2.02 | 0.41 |
| 7:Ig:107:TYR:CZ | 8:Ij:196:ASN:HB3 | 2.56 | 0.41 |
| 7:Jg:72:MET:H | 7:Ji:97:VAL:HG23 | 1.86 | 0.41 |
| 8:Jh:137:TRP:HB3 | 8:Jj:125:VAL:HB | 2.03 | 0.41 |
| 1:Aa:51:ASP:HA | 1:Aa:54:ARG:HE | 1.86 | 0.41 |
| 1:Aa:199:LEU:HB2 | 1:Ay:119:LYS:HD2 | 2.02 | 0.41 |
| 1:Ad:134:ASP:HB2 | 1:Ae:155:LYS:HB2 | 2.02 | 0.41 |
| 1:Ae:107:ILE:HA | 1:Ae:221:ASN:ND2 | 2.35 | 0.41 |
| 1:Af:107:ILE:HA | 1:Af:221:ASN:HD21 | 1.85 | 0.41 |
| 1:Aj:134:ASP:HB2 | 1:Ak:155:LYS:HB2 | 2.03 | 0.41 |
| 1:Al:86:PHE:HB2 | 2:By:125:LEU:HD12 | 2.02 | 0.41 |
| 1:At:131:ALA:HB3 | 1:At:154:LEU:HB3 | 2.03 | 0.41 |
| 1:Ay:234:GLN:HA | 1:Az:198:THR:HB | 2.03 | 0.41 |
| 1:Az:205:TYR:CZ | 1:Az:236:SER:HB3 | 2.56 | 0.41 |
| 2:Ba:251:ILE:HD13 | 2:Ba:359:ILE:HB | 2.03 | 0.41 |
| 2:Bc:156:ASN:HD22 | 2:Bd:114:GLY:HA3 | 1.86 | 0.41 |
| 2:Bi:223:PRO:HD2 | 2:Bi:229:ARG:HA | 2.03 | 0.41 |
| 2:Bm:122:LEU:HB2 | 2:Bm:131:ALA:HB3 | 2.01 | 0.41 |
| 2:Bp:61:MET:HE2 | 2:Bp:61:MET:HB3 | 1.93 | 0.41 |
| 2:Bp:277:MET:HE2 | 2:Bp:311:LYS:HD2 | 2.01 | 0.41 |
| 2:Br:251:ILE:HD13 | 2:Br:359:ILE:HB | 2.02 | 0.41 |
| 2:Bt:251:ILE:HD13 | 2:Bt:359:ILE:HB | 2.02 | 0.41 |
| 2:Bu:33:ASN:HD21 | 2:Bu:172:VAL:HG11 | 1.85 | 0.41 |
| 2:Bw:251:ILE:HD13 | 2:Bw:359:ILE:HB | 2.02 | 0.41 |
| 2:Bx:84:ILE:HG13 | 2:Bx:106:ILE:HD13 | 2.02 | 0.41 |
| 2:By:49:GLU:HG3 | 2:By:54:THR:HG21 | 2.03 | 0.41 |
| 3:Cb:241:ARG:NH1 | 3:Cc:259:ALA:HB2 | 2.36 | 0.41 |
| 3:Ce:88:ILE:HG12 | 3:Ce:106:ILE:HG12 | 2.03 | 0.41 |
| 3:Ce:209:LYS:HD2 | 3:Ce:212:GLN:HB2 | 2.01 | 0.41 |
| 3:Cj:365:TYR:HE2 | 4:Dc:94:VAL:HG22 | 1.86 | 0.41 |
| 3:Cl:89:LEU:HG | 3:Cl:105:ARG:HB3 | 2.03 | 0.41 |
| 3:Cn:239:THR:HG21 | 3:Co:155:ARG:HD3 | 2.03 | 0.41 |
| 3:Cr:223:GLU:HG2 | 3:Cr:239:THR:HG22 | 2.01 | 0.41 |
| 3:Ct:249:PRO:HG2 | 3:Ct:252:SER:HB3 | 2.03 | 0.41 |
| 4:Da:103:ARG:HD3 | 4:Da:106:ASN:HB2 | 2.02 | 0.41 |
| 4:Db:25:VAL:HG13 | 4:Db:149:ILE:HA | 2.02 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 4:Dc:197:LYS:HB3 | 4:Dd:292:THR:HG21 | 2.02 | 0.41 |
| 4:De:197:LYS:HA | 4:De:200:GLN:HB2 | 2.03 | 0.41 |
| 4:Df:34:SER:HB3 | 4:Df:156:VAL:HB | 2.03 | 0.41 |
| 4:Dg:264:TYR:HB3 | 4:Dg:266:LYS:HD2 | 2.03 | 0.41 |
| 4:Dg:266:LYS:HE3 | 4:Dg:266:LYS:HB3 | 1.96 | 0.41 |
| 4:Di:113:PHE:HE2 | 5:Eg:196:MET:HG2 | 1.85 | 0.41 |
| 4:Dt:36:TRP:CD2 | 4:Dt:50:HIS:HB2 | 2.56 | 0.41 |
| 4:Dx:223:THR:HG22 | 4:Dx:285:VAL:HG22 | 2.01 | 0.41 |
| 5:Ep:108:PRO:HB2 | 5:Ep:143:ASN:ND2 | 2.36 | 0.41 |
| 5:Er:90:GLN:HE21 | 5:Er:90:GLN:HB2 | 1.71 | 0.41 |
| 8:Hd:95:LEU:HG | 8:Hd:154:MET:HE1 | 2.01 | 0.41 |
| 8:Hr:155:LEU:HD23 | 8:Hr:162:ILE:HD11 | 2.03 | 0.41 |
| 7:Hs:107:TYR:CZ | 8:Hv:196:ASN:HB3 | 2.56 | 0.41 |
| 8:Ht:52:HIS:HD2 | 8:Ht:54:LEU:HB3 | 1.85 | 0.41 |
| 8:Ib:137:TRP:HB3 | 8:Id:125:VAL:HB | 2.03 | 0.41 |
| 7:Ig:108:LYS:HD2 | 8:Ih:204:VAL:HG11 | 2.03 | 0.41 |
| 7:Jc:107:TYR:CZ | 8:Jf:196:ASN:HB3 | 2.55 | 0.41 |
| 7:Ju:29:TRP:HB3 | 7:Ju:118:ARG:HE | 1.85 | 0.41 |
| 8:Kd:92:THR:HG21 | 8:Kf:129:GLY:HA3 | 2.02 | 0.41 |
| 7:Kk:65:LEU:HD21 | 7:Kk:119:LEU:HB2 | 2.02 | 0.41 |
| 8:Kl:219:ILE:HG23 | 8:Kn:192:LEU:HD12 | 2.02 | 0.41 |
| 8:Kp:219:ILE:HG23 | 8:Kr:192:LEU:HD12 | 2.02 | 0.41 |
| 8:Kr:173:ARG:HH21 | 8:Kt:144:GLN:HG2 | 1.85 | 0.41 |
| 8:Lh:137:TRP:HB3 | 8:Lj:125:VAL:HB | 2.02 | 0.41 |
| 8:Lh:145:GLU:H | 8:Lh:145:GLU:HG3 | 1.77 | 0.41 |
| 8:Ll:94:TRP:CG | 8:Ll:190:ARG:HH21 | 2.38 | 0.41 |
| 1:Ab:208:LEU:HD21 | 1:Ab:228:ILE:HD13 | 2.03 | 0.41 |
| 1:Af:119:LYS:HB3 | 1:Ah:199:LEU:HD12 | 2.02 | 0.41 |
| 1:Aj:200:ASN:HB3 | 1:Aj:201:THR:H | 1.69 | 0.41 |
| 1:An:134:ASP:HB2 | 1:Ao:155:LYS:HB2 | 2.03 | 0.41 |
| 2:Be:350:GLN:HG3 | 2:Bf:361:ILE:HG21 | 2.03 | 0.41 |
| 2:Bn:317:LYS:HB2 | 2:Bo:328:VAL:HG21 | 2.03 | 0.41 |
| 2:Bv:40:LEU:HD23 | 2:Bv:82:ALA:HA | 2.03 | 0.41 |
| 2:Bx:223:PRO:HD2 | 2:Bx:229:ARG:HA | 2.03 | 0.41 |
| 3:Cm:322:HIS:HB3 | 4:Df:98:GLY:HA2 | 2.01 | 0.41 |
| 3:Cs:319:SER:HB2 | 3:Cs:374:HIS:CE1 | 2.56 | 0.41 |
| 3:Cu:35:VAL:HA | 3:Cu:245:ARG:HH21 | 1.85 | 0.41 |
| 4:Df:219:VAL:HG21 | 4:Df:254:LEU:HD21 | 2.03 | 0.41 |
| 5:Ee:111:LEU:HB3 | 5:Ee:138:ALA:HB2 | 2.03 | 0.41 |
| 5:Eg:82:LEU:HD21 | 5:Eg:91:ASP:HB2 | 2.03 | 0.41 |
| 5:Ei:41:LEU:HA | 5:Ei:44:GLU:HG2 | 2.01 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 5:Ek:41:LEU:HA | 5:Ek:44:GLU:HG2 | 2.02 | 0.41 |
| 5:Em:111:LEU:HB3 | 5:Em:138:ALA:HB2 | 2.03 | 0.41 |
| 5:En:65:ARG:HD3 | 5:En:69:ILE:HD13 | 2.03 | 0.41 |
| 5:Ey:143:ASN:HD22 | 5:Ey:143:ASN:HA | 1.72 | 0.41 |
| 7:Ic:107:TYR:CZ | 8:If:196:ASN:HB3 | 2.56 | 0.41 |
| 7:Im:83:GLN:HE22 | 7:Is:55:ARG:HH22 | 1.67 | 0.41 |
| 7:Io:72:MET:H | 7:Iq:97:VAL:HG23 | 1.86 | 0.41 |
| 8:Jb:92:THR:HG21 | 8:Jd:129:GLY:HA3 | 2.03 | 0.41 |
| 7:Ke:107:TYR:CZ | 8:Kh:196:ASN:HB3 | 2.55 | 0.41 |
| 7:Lc:71:GLY:HA2 | 7:Le:99:ARG:HG2 | 2.02 | 0.41 |
| 1:Ac:202:GLY:HA3 | 1:Ac:241:ASN:ND2 | 2.37 | 0.40 |
| 1:Am:113:GLU:HB2 | 1:Am:172:MET:HB3 | 2.01 | 0.40 |
| 1:An:200:ASN:HB3 | 1:An:201:THR:H | 1.68 | 0.40 |
| 1:Aw:124:ASP:HB2 | 1:Ax:165:ALA:HB3 | 2.02 | 0.40 |
| 2:Ba:317:LYS:HB2 | 2:Bb:328:VAL:HG21 | 2.02 | 0.40 |
| 2:Bb:33:ASN:HD21 | 2:Bb:172:VAL:HG11 | 1.86 | 0.40 |
| 2:Bk:336:ALA:HB1 | 2:Bk:340:ASP:HB2 | 2.03 | 0.40 |
| 2:Bl:182:ILE:HD12 | 2:Bl:233:LEU:HD13 | 2.03 | 0.40 |
| 2:Bo:224:ARG:HH22 | 3:Cr:323:THR:HB | 1.86 | 0.40 |
| 2:Bq:27:VAL:HG21 | 2:Bq:233:LEU:HD21 | 2.03 | 0.40 |
| 2:Bq:223:PRO:HB3 | 4:Dm:94:VAL:HG12 | 2.03 | 0.40 |
| 2:Bt:305:GLU:OE1 | 2:Bw:146:GLY:HA3 | 2.21 | 0.40 |
| 2:Bz:182:ILE:HG12 | 2:Bz:222:ALA:HB2 | 2.03 | 0.40 |
| 3:Cg:61:ILE:HD11 | 3:Cg:282:GLU:HG3 | 2.01 | 0.40 |
| 3:Cg:235:VAL:HG12 | 3:Ch:351:GLU:HG2 | 2.03 | 0.40 |
| 3:Ch:82:ASN:N | 3:Ch:86:ARG:HH12 | 2.19 | 0.40 |
| 3:Ck:28:VAL:HG13 | 3:Ck:49:ALA:HB1 | 2.04 | 0.40 |
| 3:Ck:35:VAL:HG21 | 3:Ck:243:VAL:HG22 | 2.02 | 0.40 |
| 3:Cm:164:PHE:CE2 | 3:Cm:286:SER:HB3 | 2.56 | 0.40 |
| 3:Cm:220:PHE:HE2 | 3:Cm:273:VAL:HG11 | 1.86 | 0.40 |
| 3:Cr:350:TYR:HE2 | 3:Cr:355:GLU:HG3 | 1.86 | 0.40 |
| 3:Ct:322:HIS:HB3 | 4:Dm:98:GLY:HA2 | 2.02 | 0.40 |
| 3:Cu:326:PHE:HD1 | 3:Cu:328:ASP:H | 1.68 | 0.40 |
| 3:Cv:221:ALA:HB2 | 3:Cv:241:ARG:HG3 | 2.03 | 0.40 |
| 4:Df:25:VAL:HG13 | 4:Df:149:ILE:HA | 2.02 | 0.40 |
| 4:Dg:72:PHE:HD2 | 4:Dg:117:ILE:HG23 | 1.86 | 0.40 |
| 4:Dg:113:PHE:CD2 | 5:Ee:200:ILE:HG13 | 2.57 | 0.40 |
| 4:Dr:185:LEU:HD22 | 4:Dr:199:SER:HB3 | 2.02 | 0.40 |
| 5:Eg:41:LEU:HA | 5:Eg:44:GLU:HG2 | 2.02 | 0.40 |
| 5:Eh:107:LEU:HD22 | 5:Eh:107:LEU:HA | 1.93 | 0.40 |
| 5:Ep:58:ILE:HD12 | 5:Ep:58:ILE:HA | 1.98 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 5:Ep:98:TYR:HD1 | 5:Ep:98:TYR:HA | 1.76 | 0.40 |
| 7:Ic:65:LEU:HD21 | 7:Ic:119:LEU:HB2 | 2.03 | 0.40 |
| 8:Jn:78:ILE:HG12 | 8:Jn:148:TYR:HB2 | 2.03 | 0.40 |
| 8:Jp:154:MET:HE2 | 8:Jp:154:MET:HB3 | 1.99 | 0.40 |
| 7:Lg:78:ALA:HB3 | 7:Li:91:ALA:HB3 | 2.03 | 0.40 |
| 1:Au:205:TYR:CZ | 1:Au:236:SER:HB3 | 2.56 | 0.40 |
| 1:Ax:111:LEU:HA | 1:Ax:225:SER:HB3 | 2.02 | 0.40 |
| 2:Bf:186:LEU:HD21 | 2:Bf:197:LEU:HD13 | 2.04 | 0.40 |
| 2:Bi:44:LEU:HA | 2:Bi:45:PRO:HD3 | 1.95 | 0.40 |
| 2:Bj:224:ARG:HD2 | 3:Cm:368:GLN:HB2 | 2.03 | 0.40 |
| 2:Bn:33:ASN:HD21 | 2:Bn:172:VAL:HG11 | 1.86 | 0.40 |
| 2:Bs:317:LYS:HB2 | 2:Bt:328:VAL:HG21 | 2.02 | 0.40 |
| 2:Bz:250:ILE:HG21 | 2:Bz:345:LEU:HD13 | 2.03 | 0.40 |
| 3:Co:241:ARG:NH1 | 3:Cp:259:ALA:HB2 | 2.36 | 0.40 |
| 3:Cq:152:VAL:HG22 | 6:Gq:145:PHE:HA | 2.03 | 0.40 |
| 3:Cq:246:TRP:NE1 | 3:Cq:248:PHE:HB2 | 2.36 | 0.40 |
| 3:Cw:344:LEU:HB3 | 3:Cw:356:LEU:HB3 | 2.02 | 0.40 |
| 4:Da:50:HIS:HA | 4:Da:51:PRO:HD3 | 1.97 | 0.40 |
| 4:Dd:249:PHE:HB3 | 4:Dd:254:LEU:HD23 | 2.02 | 0.40 |
| 4:Di:184:ILE:HG12 | 4:Di:286:VAL:HG22 | 2.03 | 0.40 |
| 4:Dm:29:ALA:HB3 | 4:Dm:154:SER:HB2 | 2.03 | 0.40 |
| 4:Dt:31:PRO:HA | 4:Dt:156:VAL:HG21 | 2.03 | 0.40 |
| 5:Ed:94:LEU:HD22 | 5:Ed:94:LEU:HA | 1.97 | 0.40 |
| 5:Ef:108:PRO:HB2 | 5:Ef:143:ASN:ND2 | 2.36 | 0.40 |
| 5:Er:71:LEU:HB3 | 5:Er:74:TYR:HB2 | 2.03 | 0.40 |
| 5:Es:71:LEU:HD22 | 5:Es:71:LEU:HA | 1.97 | 0.40 |
| 6:Gc:139:LYS:HA | 6:Gc:139:LYS:HD2 | 1.89 | 0.40 |
| 8:Hr:53:THR:HG22 | 8:Ht:46:LEU:HD13 | 2.03 | 0.40 |
| 7:Ji:72:MET:H | 7:Jk:97:VAL:HG23 | 1.86 | 0.40 |
| 8:Kb:52:HIS:HD2 | 8:Kb:54:LEU:HB3 | 1.85 | 0.40 |
| 8:Kb:173:ARG:HH21 | 8:Kd:144:GLN:HG2 | 1.86 | 0.40 |
| 8:Lf:84:VAL:HG23 | 8:Lf:86:LEU:H | 1.87 | 0.40 |
| 1:Aa:113:GLU:HB2 | 1:Aa:172:MET:HB3 | 2.03 | 0.40 |
| 1:Ar:115:THR:HB | 1:Ar:170:ASN:HD21 | 1.87 | 0.40 |
| 1:Az:200:ASN:HB3 | 1:Az:201:THR:H | 1.64 | 0.40 |
| 2:Bt:350:GLN:HG3 | 2:Bu:361:ILE:HG21 | 2.03 | 0.40 |
| 2:Bu:250:ILE:HG21 | 2:Bu:345:LEU:HD13 | 2.03 | 0.40 |
| 2:Bw:303:ASN:HB2 | 2:Bz:148:ASP:HB2 | 2.03 | 0.40 |
| 3:Ca:109:TYR:HB3 | 7:Le:73:ARG:NH1 | 2.36 | 0.40 |
| 3:Ce:111:SER:HB3 | 3:Ce:113:THR:HG22 | 2.01 | 0.40 |
| 3:Cj:164:PHE:HZ | 3:Cj:285:ILE:HB | 1.86 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 3:Cm:70:LEU:HB3 | 3:Cm:80:PHE:HE1 | 1.86 | 0.40 |
| 3:Co:246:TRP:HZ2 | 3:Co:254:ILE:HD13 | 1.86 | 0.40 |
| 4:Dc:75:LYS:HE3 | 4:Dc:75:LYS:HB3 | 1.97 | 0.40 |
| 4:Dg:31:PRO:HG3 | 4:Dg:95:TRP:HZ2 | 1.86 | 0.40 |
| 4:Dg:197:LYS:HB3 | 4:Dh:292:THR:HG21 | 2.03 | 0.40 |
| 4:Dk:93:PRO:HD3 | 4:Dk:133:ARG:HA | 2.03 | 0.40 |
| 4:Dr:183:THR:HG21 | 4:Dr:206:ILE:HD11 | 2.04 | 0.40 |
| 4:Du:50:HIS:HA | 4:Du:51:PRO:HD3 | 1.97 | 0.40 |
| 4:Dw:116:TYR:CG | 5:Eu:199:ASN:HB2 | 2.55 | 0.40 |
| 5:Ec:111:LEU:HB3 | 5:Ec:138:ALA:HB2 | 2.02 | 0.40 |
| 5:En:82:LEU:HD23 | 5:En:88:VAL:HG21 | 2.03 | 0.40 |
| 5:Ev:94:LEU:HD22 | 5:Ev:94:LEU:HA | 1.96 | 0.40 |
| 8:Ij:52:HIS:HD2 | 8:Ij:54:LEU:HB3 | 1.85 | 0.40 |
| 8:It:154:MET:HE2 | 8:It:154:MET:HB3 | 1.88 | 0.40 |
| 8:Kt:53:THR:HG22 | 8:Kv:46:LEU:HD13 | 2.03 | 0.40 |
| 7:Ku:77:ARG:HH12 | 7:Kw:73:ARG:HH21 | 1.69 | 0.40 |
| 1:Ab:231:ALA:HB3 | 1:Ac:195:LYS:HG3 | 2.04 | 0.40 |
| 1:Ar:124:ASP:HB2 | 1:As:165:ALA:HB3 | 2.03 | 0.40 |
| 2:Be:105:SER:HB2 | 2:Be:112:LEU:HD11 | 2.03 | 0.40 |
| 2:Be:250:ILE:HG21 | 2:Be:345:LEU:HD13 | 2.02 | 0.40 |
| 2:Bh:40:LEU:HD23 | 2:Bh:82:ALA:HA | 2.03 | 0.40 |
| 2:Bj:320:PRO:HB2 | 2:Bj:327:LEU:HD12 | 2.03 | 0.40 |
| 2:Bm:257:GLY:HA2 | 2:Bm:342:MET:HE1 | 2.03 | 0.40 |
| 2:Bn:305:GLU:HG2 | 2:Bq:148:ASP:HB3 | 2.04 | 0.40 |
| 2:Br:318:LEU:HD12 | 2:Br:318:LEU:HA | 1.89 | 0.40 |
| 2:Bt:350:GLN:HG3 | 2:Bu:361:ILE:HD13 | 2.03 | 0.40 |
| 3:Cb:205:THR:HG22 | 3:Cc:260:ARG:HD3 | 2.04 | 0.40 |
| 3:Ck:81:ALA:HA | 7:Im:73:ARG:HH11 | 1.87 | 0.40 |
| 3:Cp:269:MET:HB3 | 3:Cp:269:MET:HE3 | 1.80 | 0.40 |
| 3:Cu:288:LYS:HG2 | 6:Fu:143:THR:HG21 | 2.03 | 0.40 |
| 4:Da:183:THR:HG21 | 4:Da:206:ILE:HD11 | 2.03 | 0.40 |
| 4:Di:116:TYR:CG | 5:Eg:199:ASN:HB2 | 2.57 | 0.40 |
| 4:Do:106:ASN:HD22 | 4:Do:107:LEU:N | 2.19 | 0.40 |
| 5:Ee:82:LEU:HD21 | 5:Ee:91:ASP:HB2 | 2.03 | 0.40 |
| 8:Hn:62:THR:HG21 | 8:Hn:106:GLN:HB3 | 2.03 | 0.40 |
| 7:Hq:65:LEU:HD21 | 7:Hq:119:LEU:HB2 | 2.03 | 0.40 |
| 8:Hx:137:TRP:HB3 | 8:Hz:125:VAL:HB | 2.04 | 0.40 |
| 8:Hz:155:LEU:HD23 | 8:Hz:162:ILE:HD11 | 2.03 | 0.40 |
| 7:Ia:107:TYR:CZ | 8:Id:196:ASN:HB3 | 2.57 | 0.40 |
| 7:Iy:35:TYR:HB3 | 7:Iy:114:VAL:HG22 | 2.03 | 0.40 |
| 7:Iy:83:GLN:HE22 | 7:Je:55:ARG:HH22 | 1.69 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Jv:62:THR:HG21 | 8:Jv:106:GLN:HB3 | 2.03 | 0.40 |
| 8:Kf:53:THR:HG22 | 8:Kh:46:LEU:HD13 | 2.02 | 0.40 |
| 8:Lh:52:HIS:HD2 | 8:Lh:54:LEU:HB3 | 1.86 | 0.40 |
| 8:Lh:155:LEU:HD23 | 8:Lh:162:ILE:HD11 | 2.04 | 0.40 |
| 8:Lj:62:THR:HG21 | 8:Lj:106:GLN:HB3 | 2.03 | 0.40 |
| 1:Ab:88:LEU:HB3 | 2:Bp:170:ARG:HH12 | 1.87 | 0.40 |
| 1:Ah:138:VAL:HB | 1:Ah:143:LEU:HD21 | 2.02 | 0.40 |
| 1:Ah:245:GLN:HG3 | 1:Ai:200:ASN:HD21 | 1.87 | 0.40 |
| 1:At:124:ASP:HB2 | 1:Au:165:ALA:HB3 | 2.03 | 0.40 |
| 1:Au:78:TYR:CZ | 1:Au:80:ALA:HB3 | 2.56 | 0.40 |
| 1:Au:107:ILE:HA | 1:Au:221:ASN:HD21 | 1.86 | 0.40 |
| 1:Av:111:LEU:HB3 | 1:Av:172:MET:HG3 | 2.04 | 0.40 |
| 1:Av:200:ASN:HB3 | 1:Av:201:THR:H | 1.69 | 0.40 |
| 1:Az:249:PHE:HA | 1:Az:252:ARG:HE | 1.86 | 0.40 |
| 2:Bb:253:ASN:HB3 | 2:Bb:258:THR:HG23 | 2.02 | 0.40 |
| 2:Be:141:GLY:HA3 | 2:Be:154:GLY:O | 2.21 | 0.40 |
| 2:Bk:111:SER:HA | 2:Bk:157:PRO:HB2 | 2.03 | 0.40 |
| 2:Bl:269:PRO:HB3 | 2:Bl:319:GLU:HG2 | 2.04 | 0.40 |
| 2:Bx:290:PRO:HD3 | 2:Bx:299:VAL:HG22 | 2.04 | 0.40 |
| 3:Ci:201:ASP:HB3 | 3:Ci:221:ALA:HB3 | 2.03 | 0.40 |
| 3:Cj:121:LYS:HD3 | 3:Cj:310:HIS:HA | 2.02 | 0.40 |
| 3:Cp:228:ASP:HB2 | 3:Cp:235:VAL:HG11 | 2.04 | 0.40 |
| 3:Cp:278:MET:HE2 | 3:Cp:278:MET:HB3 | 1.97 | 0.40 |
| 3:Cu:88:ILE:HG12 | 3:Cu:106:ILE:HG12 | 2.04 | 0.40 |
| 3:Cw:350:TYR:HE2 | 3:Cw:355:GLU:HG3 | 1.86 | 0.40 |
| 3:Cz:282:GLU:HA | 3:Cz:286:SER:HB3 | 2.03 | 0.40 |
| 3:Cz:295:VAL:HA | 3:Cz:369:ILE:HG23 | 2.03 | 0.40 |
| 3:Cz:373:MET:HE3 | 3:Cz:373:MET:HB2 | 1.99 | 0.40 |
| 4:Db:34:SER:HB3 | 4:Db:156:VAL:HB | 2.04 | 0.40 |
| 4:Di:216:ILE:HD12 | 4:Di:289:LEU:HB3 | 2.03 | 0.40 |
| 4:Dj:60:PHE:HZ | 4:Dj:125:LEU:HD23 | 1.87 | 0.40 |
| 4:Dw:225:THR:HA | 4:Dw:283:ARG:HA | 2.02 | 0.40 |
| 5:Ed:189:ARG:HH21 | 5:Ed:205:LYS:HZ1 | 1.70 | 0.40 |
| 5:Eh:128:LYS:HD3 | 5:Eh:153:LEU:HG | 2.03 | 0.40 |
| 5:El:189:ARG:HH21 | 5:El:205:LYS:HZ1 | 1.69 | 0.40 |
| 5:Eo:100:GLU:HG3 | 5:Ep:211:TRP:HB3 | 2.04 | 0.40 |
| 5:Eo:111:LEU:HB3 | 5:Eo:138:ALA:HB2 | 2.04 | 0.40 |
| 5:Er:94:LEU:HD22 | 5:Er:94:LEU:HA | 1.98 | 0.40 |
| 8:Hj:92:THR:HG21 | 8:Hl:129:GLY:HA3 | 2.03 | 0.40 |
| 8:Hp:159:GLY:HA3 | 8:Ht:36:LYS:HA | 2.03 | 0.40 |
| 8:Hp:173:ARG:HH21 | 8:Hr:144:GLN:HG2 | 1.87 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---|---|---|---|
| 8:Iv:148:TYR:HE1 | 8:Iv:176:VAL:HG21 | 1.87 | 0.40 |
| 7:Jg:71:GLY:HA2 | 7:Ji:99:ARG:HG2 | 2.03 | 0.40 |
| 7:Jq:107:TYR:CZ | 8:Jt:196:ASN:HB3 | 2.57 | 0.40 |
| 7:Jw:71:GLY:HA2 | 7:Jy:99:ARG:HG2 | 2.02 | 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 | Aa | 219/227 (96%) | 213 (97%) | 6 (3%) | 0 | 100 | 100 |
| 1 | Ab | 219/227 (96%) | 213 (97%) | 6 (3%) | 0 | 100 | 100 |
| 1 | Ac | 219/227 (96%) | 212 (97%) | 7 (3%) | 0 | 100 | 100 |
| 1 | Ad | 219/227 (96%) | 211 (96%) | 8 (4%) | 0 | 100 | 100 |
| 1 | Ae | 219/227 (96%) | 213 (97%) | 6 (3%) | 0 | 100 | 100 |
| 1 | Af | 219/227 (96%) | 213 (97%) | 6 (3%) | 0 | 100 | 100 |
| 1 | Ag | 219/227 (96%) | 212 (97%) | 7 (3%) | 0 | 100 | 100 |
| 1 | Ah | 219/227 (96%) | 211 (96%) | 8 (4%) | 0 | 100 | 100 |
| 1 | Ai | 219/227 (96%) | 212 (97%) | 7 (3%) | 0 | 100 | 100 |
| 1 | Aj | 219/227 (96%) | 212 (97%) | 7 (3%) | 0 | 100 | 100 |
| 1 | Ak | 219/227 (96%) | 215 (98%) | 4 (2%) | 0 | 100 | 100 |
| 1 | Al | 219/227 (96%) | 215 (98%) | 4 (2%) | 0 | 100 | 100 |
| 1 | Am | 219/227 (96%) | 214 (98%) | 5 (2%) | 0 | 100 | 100 |
| 1 | An | 219/227 (96%) | 213 (97%) | 6 (3%) | 0 | 100 | 100 |
| 1 | Ao | 219/227 (96%) | 211 (96%) | 8 (4%) | 0 | 100 | 100 |
| 1 | Ap | 219/227 (96%) | 212 (97%) | 7 (3%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|---|---|---|---|---|---|---|---|
| 1 | Aq | 219/227 (96%) | 212 (97%) | 7 (3%) | 0 | 100 | 100 |
| 1 | Ar | 219/227 (96%) | 214 (98%) | 5 (2%) | 0 | 100 | 100 |
| 1 | As | 219/227 (96%) | 211 (96%) | 8 (4%) | 0 | 100 | 100 |
| 1 | At | 219/227 (96%) | 214 (98%) | 5 (2%) | 0 | 100 | 100 |
| 1 | Au | 219/227 (96%) | 213 (97%) | 6 (3%) | 0 | 100 | 100 |
| 1 | Av | 219/227 (96%) | 210 (96%) | 9 (4%) | 0 | 100 | 100 |
| 1 | Aw | 219/227 (96%) | 210 (96%) | 9 (4%) | 0 | 100 | 100 |
| 1 | Ax | 219/227 (96%) | 215 (98%) | 4 (2%) | 0 | 100 | 100 |
| 1 | Ay | 219/227 (96%) | 215 (98%) | 4 (2%) | 0 | 100 | 100 |
| 1 | Az | 219/227 (96%) | 215 (98%) | 4 (2%) | 0 | 100 | 100 |
| 2 | Ba | 341/343 (99%) | 334 (98%) | 7 (2%) | 0 | 100 | 100 |
| 2 | Bb | 341/343 (99%) | 331 (97%) | 10 (3%) | 0 | 100 | 100 |
| 2 | Bc | 341/343 (99%) | 333 (98%) | 8 (2%) | 0 | 100 | 100 |
| 2 | Bd | 341/343 (99%) | 332 (97%) | 9 (3%) | 0 | 100 | 100 |
| 2 | Be | 341/343 (99%) | 331 (97%) | 10 (3%) | 0 | 100 | 100 |
| 2 | Bf | 341/343 (99%) | 333 (98%) | 8 (2%) | 0 | 100 | 100 |
| 2 | Bg | 341/343 (99%) | 331 (97%) | 10 (3%) | 0 | 100 | 100 |
| 2 | Bh | 341/343 (99%) | 328 (96%) | 13 (4%) | 0 | 100 | 100 |
| 2 | Bi | 341/343 (99%) | 332 (97%) | 9 (3%) | 0 | 100 | 100 |
| 2 | Bj | 341/343 (99%) | 334 (98%) | 7 (2%) | 0 | 100 | 100 |
| 2 | Bk | 341/343 (99%) | 330 (97%) | 11 (3%) | 0 | 100 | 100 |
| 2 | Bl | 341/343 (99%) | 332 (97%) | 9 (3%) | 0 | 100 | 100 |
| 2 | Bm | 341/343 (99%) | 330 (97%) | 11 (3%) | 0 | 100 | 100 |
| 2 | Bn | 341/343 (99%) | 328 (96%) | 13 (4%) | 0 | 100 | 100 |
| 2 | Bo | 341/343 (99%) | 329 (96%) | 12 (4%) | 0 | 100 | 100 |
| 2 | Bp | 341/343 (99%) | 331 (97%) | 10 (3%) | 0 | 100 | 100 |
| 2 | Bq | 341/343 (99%) | 332 (97%) | 9 (3%) | 0 | 100 | 100 |
| 2 | Br | 341/343 (99%) | 332 (97%) | 9 (3%) | 0 | 100 | 100 |
| 2 | Bs | 341/343 (99%) | 328 (96%) | 13 (4%) | 0 | 100 | 100 |
| 2 | Bt | 341/343 (99%) | 328 (96%) | 13 (4%) | 0 | 100 | 100 |
| 2 | Bu | 341/343 (99%) | 330 (97%) | 11 (3%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|---|---|---|---|---|---|---|---|
| 2 | Bv | 341/343 (99%) | 327 (96%) | 14 (4%) | 0 | 100 | 100 |
| 2 | Bw | 341/343 (99%) | 330 (97%) | 11 (3%) | 0 | 100 | 100 |
| 2 | Bx | 341/343 (99%) | 329 (96%) | 12 (4%) | 0 | 100 | 100 |
| 2 | By | 341/343 (99%) | 332 (97%) | 9 (3%) | 0 | 100 | 100 |
| 2 | Bz | 341/343 (99%) | 330 (97%) | 11 (3%) | 0 | 100 | 100 |
| 3 | Ca | 350/352 (99%) | 341 (97%) | 9 (3%) | 0 | 100 | 100 |
| 3 | Cb | 350/352 (99%) | 333 (95%) | 17 (5%) | 0 | 100 | 100 |
| 3 | Cc | 350/352 (99%) | 339 (97%) | 11 (3%) | 0 | 100 | 100 |
| 3 | Cd | 350/352 (99%) | 337 (96%) | 13 (4%) | 0 | 100 | 100 |
| 3 | Ce | 350/352 (99%) | 339 (97%) | 11 (3%) | 0 | 100 | 100 |
| 3 | Cf | 350/352 (99%) | 340 (97%) | 10 (3%) | 0 | 100 | 100 |
| 3 | Cg | 350/352 (99%) | 333 (95%) | 17 (5%) | 0 | 100 | 100 |
| 3 | Ch | 350/352 (99%) | 339 (97%) | 11 (3%) | 0 | 100 | 100 |
| 3 | Ci | 350/352 (99%) | 340 (97%) | 10 (3%) | 0 | 100 | 100 |
| 3 | Cj | 350/352 (99%) | 340 (97%) | 10 (3%) | 0 | 100 | 100 |
| 3 | Ck | 350/352 (99%) | 341 (97%) | 9 (3%) | 0 | 100 | 100 |
| 3 | Cl | 350/352 (99%) | 333 (95%) | 17 (5%) | 0 | 100 | 100 |
| 3 | Cm | 350/352 (99%) | 342 (98%) | 8 (2%) | 0 | 100 | 100 |
| 3 | Cn | 350/352 (99%) | 341 (97%) | 9 (3%) | 0 | 100 | 100 |
| 3 | Co | 350/352 (99%) | 341 (97%) | 9 (3%) | 0 | 100 | 100 |
| 3 | Cp | 350/352 (99%) | 341 (97%) | 9 (3%) | 0 | 100 | 100 |
| 3 | Cq | 350/352 (99%) | 337 (96%) | 13 (4%) | 0 | 100 | 100 |
| 3 | Cr | 350/352 (99%) | 340 (97%) | 10 (3%) | 0 | 100 | 100 |
| 3 | Cs | 350/352 (99%) | 339 (97%) | 11 (3%) | 0 | 100 | 100 |
| 3 | Ct | 350/352 (99%) | 338 (97%) | 12 (3%) | 0 | 100 | 100 |
| 3 | Cu | 350/352 (99%) | 337 (96%) | 13 (4%) | 0 | 100 | 100 |
| 3 | Cv | 350/352 (99%) | 341 (97%) | 9 (3%) | 0 | 100 | 100 |
| 3 | Cw | 350/352 (99%) | 340 (97%) | 10 (3%) | 0 | 100 | 100 |
| 3 | Cx | 350/352 (99%) | 341 (97%) | 9 (3%) | 0 | 100 | 100 |
| 3 | Cy | 350/352 (99%) | 341 (97%) | 9 (3%) | 0 | 100 | 100 |
| 3 | Cz | 350/352 (99%) | 341 (97%) | 9 (3%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|---|---|---|---|---|---|---|---|
| 4 | Da | 253/271 (93%) | 233 (92%) | 20 (8%) | 0 | 100 | 100 |
| 4 | Db | 254/271 (94%) | 231 (91%) | 21 (8%) | 2 (1%) | 16 | 49 |
| 4 | Dc | 253/271 (93%) | 231 (91%) | 22 (9%) | 0 | 100 | 100 |
| 4 | Dd | 254/271 (94%) | 233 (92%) | 20 (8%) | 1 (0%) | 30 | 61 |
| 4 | De | 253/271 (93%) | 235 (93%) | 18 (7%) | 0 | 100 | 100 |
| 4 | Df | 254/271 (94%) | 229 (90%) | 24 (9%) | 1 (0%) | 30 | 61 |
| 4 | Dg | 253/271 (93%) | 233 (92%) | 20 (8%) | 0 | 100 | 100 |
| 4 | Dh | 254/271 (94%) | 231 (91%) | 22 (9%) | 1 (0%) | 30 | 61 |
| 4 | Di | 253/271 (93%) | 232 (92%) | 21 (8%) | 0 | 100 | 100 |
| 4 | Dj | 254/271 (94%) | 231 (91%) | 21 (8%) | 2 (1%) | 16 | 49 |
| 4 | Dk | 253/271 (93%) | 232 (92%) | 21 (8%) | 0 | 100 | 100 |
| 4 | Dl | 254/271 (94%) | 231 (91%) | 21 (8%) | 2 (1%) | 16 | 49 |
| 4 | Dm | 253/271 (93%) | 234 (92%) | 19 (8%) | 0 | 100 | 100 |
| 4 | Dn | 254/271 (94%) | 234 (92%) | 19 (8%) | 1 (0%) | 30 | 61 |
| 4 | Do | 253/271 (93%) | 233 (92%) | 20 (8%) | 0 | 100 | 100 |
| 4 | Dp | 254/271 (94%) | 229 (90%) | 24 (9%) | 1 (0%) | 30 | 61 |
| 4 | Dq | 253/271 (93%) | 233 (92%) | 20 (8%) | 0 | 100 | 100 |
| 4 | Dr | 254/271 (94%) | 229 (90%) | 24 (9%) | 1 (0%) | 30 | 61 |
| 4 | Ds | 253/271 (93%) | 236 (93%) | 17 (7%) | 0 | 100 | 100 |
| 4 | Dt | 254/271 (94%) | 229 (90%) | 24 (9%) | 1 (0%) | 30 | 61 |
| 4 | Du | 253/271 (93%) | 233 (92%) | 20 (8%) | 0 | 100 | 100 |
| 4 | Dv | 254/271 (94%) | 231 (91%) | 22 (9%) | 1 (0%) | 30 | 61 |
| 4 | Dw | 253/271 (93%) | 236 (93%) | 17 (7%) | 0 | 100 | 100 |
| 4 | Dx | 254/271 (94%) | 232 (91%) | 21 (8%) | 1 (0%) | 30 | 61 |
| 4 | Dy | 253/271 (93%) | 230 (91%) | 23 (9%) | 0 | 100 | 100 |
| 4 | Dz | 254/271 (94%) | 232 (91%) | 20 (8%) | 2 (1%) | 16 | 49 |
| 5 | Ea | 181/183 (99%) | 172 (95%) | 9 (5%) | 0 | 100 | 100 |
| 5 | Eb | 181/183 (99%) | 178 (98%) | 3 (2%) | 0 | 100 | 100 |
| 5 | Ec | 181/183 (99%) | 172 (95%) | 8 (4%) | 1 (1%) | 21 | 54 |
| 5 | Ed | 181/183 (99%) | 178 (98%) | 3 (2%) | 0 | 100 | 100 |
| 5 | Ee | 181/183 (99%) | 171 (94%) | 10 (6%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|---|---|---|---|---|---|---|---|
| 5 | Ef | 181/183 (99%) | 177 (98%) | 4 (2%) | 0 | 100 | 100 |
| 5 | Eg | 181/183 (99%) | 170 (94%) | 10 (6%) | 1 (1%) | 21 | 54 |
| 5 | Eh | 181/183 (99%) | 178 (98%) | 3 (2%) | 0 | 100 | 100 |
| 5 | Ei | 181/183 (99%) | 172 (95%) | 9 (5%) | 0 | 100 | 100 |
| 5 | Ej | 181/183 (99%) | 178 (98%) | 3 (2%) | 0 | 100 | 100 |
| 5 | Ek | 181/183 (99%) | 170 (94%) | 11 (6%) | 0 | 100 | 100 |
| 5 | El | 181/183 (99%) | 178 (98%) | 3 (2%) | 0 | 100 | 100 |
| 5 | Em | 181/183 (99%) | 172 (95%) | 8 (4%) | 1 (1%) | 21 | 54 |
| 5 | En | 181/183 (99%) | 178 (98%) | 3 (2%) | 0 | 100 | 100 |
| 5 | Eo | 181/183 (99%) | 171 (94%) | 10 (6%) | 0 | 100 | 100 |
| 5 | Ep | 181/183 (99%) | 178 (98%) | 3 (2%) | 0 | 100 | 100 |
| 5 | Eq | 181/183 (99%) | 171 (94%) | 10 (6%) | 0 | 100 | 100 |
| 5 | Er | 181/183 (99%) | 178 (98%) | 3 (2%) | 0 | 100 | 100 |
| 5 | Es | 181/183 (99%) | 170 (94%) | 11 (6%) | 0 | 100 | 100 |
| 5 | Et | 181/183 (99%) | 178 (98%) | 3 (2%) | 0 | 100 | 100 |
| 5 | Eu | 181/183 (99%) | 171 (94%) | 10 (6%) | 0 | 100 | 100 |
| 5 | Ev | 181/183 (99%) | 178 (98%) | 3 (2%) | 0 | 100 | 100 |
| 5 | Ew | 181/183 (99%) | 171 (94%) | 9 (5%) | 1 (1%) | 21 | 54 |
| 5 | Ex | 181/183 (99%) | 178 (98%) | 3 (2%) | 0 | 100 | 100 |
| 5 | Ey | 181/183 (99%) | 171 (94%) | 10 (6%) | 0 | 100 | 100 |
| 5 | Ez | 181/183 (99%) | 178 (98%) | 3 (2%) | 0 | 100 | 100 |
| 6 | Fa | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fb | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fc | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fd | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fe | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Ff | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fg | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fh | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fi | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fj | 10/12 (83%) | 8 (80%) | 2 (20%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|---|---|---|---|---|---|---|---|
| 6 | Fk | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fl | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fm | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fn | 10/12 (83%) | 8 (80%) | 2 (20%) | 0 | 100 | 100 |
| 6 | Fo | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fp | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fq | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fr | 10/12 (83%) | 8 (80%) | 2 (20%) | 0 | 100 | 100 |
| 6 | Fs | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Ft | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fu | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fv | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fw | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fx | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fy | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Fz | 10/12 (83%) | 9 (90%) | 1 (10%) | 0 | 100 | 100 |
| 6 | Ga | 10/12 (83%) | 8 (80%) | 2 (20%) | 0 | 100 | 100 |
| 6 | Gb | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gc | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gd | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Ge | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gf | 10/12 (83%) | 8 (80%) | 2 (20%) | 0 | 100 | 100 |
| 6 | Gg | 10/12 (83%) | 8 (80%) | 2 (20%) | 0 | 100 | 100 |
| 6 | Gh | 10/12 (83%) | 8 (80%) | 2 (20%) | 0 | 100 | 100 |
| 6 | Gi | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gj | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gk | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gl | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gm | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gn | 10/12 (83%) | 8 (80%) | 2 (20%) | 0 | 100 | 100 |
| 6 | Go | 10/12 (83%) | 8 (80%) | 2 (20%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|---|---|---|---|---|---|---|---|
| 6 | Gp | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gq | 10/12 (83%) | 8 (80%) | 2 (20%) | 0 | 100 | 100 |
| 6 | Gr | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gs | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gt | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gu | 10/12 (83%) | 8 (80%) | 2 (20%) | 0 | 100 | 100 |
| 6 | Gv | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gw | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gx | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gy | 10/12 (83%) | 7 (70%) | 3 (30%) | 0 | 100 | 100 |
| 6 | Gz | 10/12 (83%) | 8 (80%) | 2 (20%) | 0 | 100 | 100 |
| 7 | Ha | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Hc | 102/105 (97%) | 96 (94%) | 6 (6%) | 0 | 100 | 100 |
| 7 | He | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Hg | 102/105 (97%) | 96 (94%) | 6 (6%) | 0 | 100 | 100 |
| 7 | Hi | 102/105 (97%) | 96 (94%) | 6 (6%) | 0 | 100 | 100 |
| 7 | Hk | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Hm | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Ho | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Hq | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Hs | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Hu | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Hw | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Hy | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Ia | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Ic | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Ie | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Ig | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Ii | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Ik | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Im | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|---|---|---|---|---|---|---|---|
| 7 | Io | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Iq | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Is | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Iu | 102/105 (97%) | 96 (94%) | 6 (6%) | 0 | 100 | 100 |
| 7 | Iw | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Iy | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Ja | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Jc | 102/105 (97%) | 96 (94%) | 6 (6%) | 0 | 100 | 100 |
| 7 | Je | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Jg | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Ji | 102/105 (97%) | 96 (94%) | 6 (6%) | 0 | 100 | 100 |
| 7 | Jk | 102/105 (97%) | 95 (93%) | 7 (7%) | 0 | 100 | 100 |
| 7 | Jm | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Jo | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Jq | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Js | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Ju | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Jw | 102/105 (97%) | 96 (94%) | 6 (6%) | 0 | 100 | 100 |
| 7 | Jy | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Ka | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Kc | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Ke | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Kg | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Ki | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Kk | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Km | 102/105 (97%) | 96 (94%) | 6 (6%) | 0 | 100 | 100 |
| 7 | Ko | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Kq | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Ks | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Ku | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Kw | 102/105 (97%) | 96 (94%) | 6 (6%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|---|---|---|---|---|---|---|---|
| 7 | Ky | 102/105 (97%) | 96 (94%) | 6 (6%) | 0 | 100 | 100 |
| 7 | La | 102/105 (97%) | 96 (94%) | 6 (6%) | 0 | 100 | 100 |
| 7 | Lc | 102/105 (97%) | 96 (94%) | 6 (6%) | 0 | 100 | 100 |
| 7 | Le | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Lg | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Li | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 7 | Lk | 102/105 (97%) | 97 (95%) | 5 (5%) | 0 | 100 | 100 |
| 8 | Hb | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Hd | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Hf | 188/190 (99%) | 180 (96%) | 7 (4%) | 1 (0%) | 24 | 57 |
| 8 | Hh | 188/190 (99%) | 178 (95%) | 10 (5%) | 0 | 100 | 100 |
| 8 | Hj | 188/190 (99%) | 179 (95%) | 8 (4%) | 1 (0%) | 24 | 57 |
| 8 | Hl | 188/190 (99%) | 178 (95%) | 10 (5%) | 0 | 100 | 100 |
| 8 | Hn | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Hp | 188/190 (99%) | 180 (96%) | 8 (4%) | 0 | 100 | 100 |
| 8 | Hr | 188/190 (99%) | 180 (96%) | 8 (4%) | 0 | 100 | 100 |
| 8 | Ht | 188/190 (99%) | 178 (95%) | 10 (5%) | 0 | 100 | 100 |
| 8 | Hv | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Hx | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Hz | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Ib | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Id | 188/190 (99%) | 180 (96%) | 8 (4%) | 0 | 100 | 100 |
| 8 | If | 188/190 (99%) | 178 (95%) | 9 (5%) | 1 (0%) | 24 | 57 |
| 8 | Ih | 188/190 (99%) | 179 (95%) | 8 (4%) | 1 (0%) | 24 | 57 |
| 8 | Ij | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Il | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | In | 188/190 (99%) | 180 (96%) | 8 (4%) | 0 | 100 | 100 |
| 8 | Ip | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Ir | 188/190 (99%) | 177 (94%) | 11 (6%) | 0 | 100 | 100 |
| 8 | It | 188/190 (99%) | 179 (95%) | 8 (4%) | 1 (0%) | 24 | 57 |
| 8 | Iv | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|---|---|---|---|---|---|---|---|
| 8 | Ix | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Iz | 188/190 (99%) | 179 (95%) | 8 (4%) | 1 (0%) | 24 | 57 |
| 8 | Jb | 188/190 (99%) | 178 (95%) | 9 (5%) | 1 (0%) | 24 | 57 |
| 8 | Jd | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Jf | 188/190 (99%) | 178 (95%) | 9 (5%) | 1 (0%) | 24 | 57 |
| 8 | Jh | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Jj | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Jl | 188/190 (99%) | 179 (95%) | 8 (4%) | 1 (0%) | 24 | 57 |
| 8 | Jn | 188/190 (99%) | 181 (96%) | 7 (4%) | 0 | 100 | 100 |
| 8 | Jp | 188/190 (99%) | 178 (95%) | 10 (5%) | 0 | 100 | 100 |
| 8 | Jr | 188/190 (99%) | 177 (94%) | 10 (5%) | 1 (0%) | 24 | 57 |
| 8 | Jt | 188/190 (99%) | 177 (94%) | 10 (5%) | 1 (0%) | 24 | 57 |
| 8 | Jv | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Jx | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Jz | 188/190 (99%) | 180 (96%) | 8 (4%) | 0 | 100 | 100 |
| 8 | Kb | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Kd | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Kf | 188/190 (99%) | 178 (95%) | 10 (5%) | 0 | 100 | 100 |
| 8 | Kh | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Kj | 188/190 (99%) | 181 (96%) | 7 (4%) | 0 | 100 | 100 |
| 8 | Kl | 188/190 (99%) | 180 (96%) | 7 (4%) | 1 (0%) | 24 | 57 |
| 8 | Kn | 188/190 (99%) | 180 (96%) | 8 (4%) | 0 | 100 | 100 |
| 8 | Kp | 188/190 (99%) | 177 (94%) | 10 (5%) | 1 (0%) | 24 | 57 |
| 8 | Kr | 188/190 (99%) | 177 (94%) | 11 (6%) | 0 | 100 | 100 |
| 8 | Kt | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Kv | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Kx | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Kz | 188/190 (99%) | 178 (95%) | 10 (5%) | 0 | 100 | 100 |
| 8 | Lb | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 | 100 |
| 8 | Ld | 188/190 (99%) | 180 (96%) | 8 (4%) | 0 | 100 | 100 |
| 8 | Lf | 188/190 (99%) | 177 (94%) | 11 (6%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles |
|---|---|---|---|---|---|---|
| 8 | Lh | 188/190 (99%) | 180 (96%) | 7 (4%) | 1 (0%) | 24 57 |
| 8 | Lj | 188/190 (99%) | 179 (95%) | 9 (5%) | 0 | 100 100 |
| 8 | Ll | 188/190 (99%) | 180 (96%) | 8 (4%) | 0 | 100 100 |
| All | All | 52297/53510 (98%) | 49923 (96%) | 2339 (4%) | 35 (0%) | 49 79 |

All (35) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 4 | Db | 193 | VAL |
| 4 | Dh | 193 | VAL |
| 4 | Dl | 193 | VAL |
| 4 | Df | 193 | VAL |
| 4 | Dn | 193 | VAL |
| 4 | Dr | 193 | VAL |
| 4 | Dt | 193 | VAL |
| 4 | Dx | 193 | VAL |
| 4 | Dj | 193 | VAL |
| 4 | Db | 116 | TYR |
| 4 | Dj | 116 | TYR |
| 4 | Dl | 116 | TYR |
| 4 | Dz | 116 | TYR |
| 5 | Ec | 87 | CYS |
| 5 | Eg | 87 | CYS |
| 5 | Em | 87 | CYS |
| 5 | Ew | 87 | CYS |
| 8 | Hf | 86 | LEU |
| 8 | Hj | 86 | LEU |
| 8 | If | 86 | LEU |
| 8 | Ih | 86 | LEU |
| 8 | It | 86 | LEU |
| 8 | Iz | 86 | LEU |
| 8 | Jb | 86 | LEU |
| 8 | Jf | 86 | LEU |
| 8 | Jl | 86 | LEU |
| 8 | Jr | 86 | LEU |
| 8 | Jt | 86 | LEU |
| 8 | Kl | 86 | LEU |
| 8 | Kp | 86 | LEU |
| 8 | Lh | 86 | LEU |
| 4 | Dp | 193 | VAL |
| 4 | Dz | 193 | VAL |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 4 | Dd | 193 | VAL |
| 4 | Dv | 193 | VAL |

### 5.3.2 Protein sidechains (i)

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

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

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|---|---|---|---|---|---|---|
| 1 | Aa | 182/186 (98%) | 179 (98%) | 3 (2%) | 55 | 69 |
| 1 | Ab | 182/186 (98%) | 180 (99%) | 2 (1%) | 65 | 74 |
| 1 | Ac | 182/186 (98%) | 180 (99%) | 2 (1%) | 65 | 74 |
| 1 | Ad | 182/186 (98%) | 178 (98%) | 4 (2%) | 45 | 65 |
| 1 | Ae | 182/186 (98%) | 178 (98%) | 4 (2%) | 45 | 65 |
| 1 | Af | 182/186 (98%) | 177 (97%) | 5 (3%) | 39 | 61 |
| 1 | Ag | 182/186 (98%) | 178 (98%) | 4 (2%) | 45 | 65 |
| 1 | Ah | 182/186 (98%) | 177 (97%) | 5 (3%) | 39 | 61 |
| 1 | Ai | 182/186 (98%) | 179 (98%) | 3 (2%) | 55 | 69 |
| 1 | Aj | 182/186 (98%) | 179 (98%) | 3 (2%) | 55 | 69 |
| 1 | Ak | 182/186 (98%) | 178 (98%) | 4 (2%) | 45 | 65 |
| 1 | Al | 182/186 (98%) | 179 (98%) | 3 (2%) | 55 | 69 |
| 1 | Am | 182/186 (98%) | 178 (98%) | 4 (2%) | 45 | 65 |
| 1 | An | 182/186 (98%) | 178 (98%) | 4 (2%) | 45 | 65 |
| 1 | Ao | 182/186 (98%) | 180 (99%) | 2 (1%) | 65 | 74 |
| 1 | Ap | 182/186 (98%) | 180 (99%) | 2 (1%) | 65 | 74 |
| 1 | Aq | 182/186 (98%) | 179 (98%) | 3 (2%) | 55 | 69 |
| 1 | Ar | 182/186 (98%) | 179 (98%) | 3 (2%) | 55 | 69 |
| 1 | As | 182/186 (98%) | 179 (98%) | 3 (2%) | 55 | 69 |
| 1 | At | 182/186 (98%) | 178 (98%) | 4 (2%) | 45 | 65 |
| 1 | Au | 182/186 (98%) | 178 (98%) | 4 (2%) | 45 | 65 |
| 1 | Av | 182/186 (98%) | 179 (98%) | 3 (2%) | 55 | 69 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|---|---|---|---|---|---|---|
| 1 | Aw | 182/186 (98%) | 179 (98%) | 3 (2%) | 55 | 69 |
| 1 | Ax | 182/186 (98%) | 178 (98%) | 4 (2%) | 45 | 65 |
| 1 | Ay | 182/186 (98%) | 179 (98%) | 3 (2%) | 55 | 69 |
| 1 | Az | 182/186 (98%) | 178 (98%) | 4 (2%) | 45 | 65 |
| 2 | Ba | 267/269 (99%) | 263 (98%) | 4 (2%) | 57 | 70 |
| 2 | Bb | 267/269 (99%) | 262 (98%) | 5 (2%) | 50 | 67 |
| 2 | Bc | 267/269 (99%) | 263 (98%) | 4 (2%) | 57 | 70 |
| 2 | Bd | 267/269 (99%) | 264 (99%) | 3 (1%) | 65 | 74 |
| 2 | Be | 267/269 (99%) | 262 (98%) | 5 (2%) | 50 | 67 |
| 2 | Bf | 267/269 (99%) | 264 (99%) | 3 (1%) | 65 | 74 |
| 2 | Bg | 267/269 (99%) | 265 (99%) | 2 (1%) | 76 | 78 |
| 2 | Bh | 267/269 (99%) | 264 (99%) | 3 (1%) | 65 | 74 |
| 2 | Bi | 267/269 (99%) | 264 (99%) | 3 (1%) | 65 | 74 |
| 2 | Bj | 267/269 (99%) | 262 (98%) | 5 (2%) | 50 | 67 |
| 2 | Bk | 267/269 (99%) | 259 (97%) | 8 (3%) | 36 | 59 |
| 2 | Bl | 267/269 (99%) | 262 (98%) | 5 (2%) | 50 | 67 |
| 2 | Bm | 267/269 (99%) | 262 (98%) | 5 (2%) | 50 | 67 |
| 2 | Bn | 267/269 (99%) | 262 (98%) | 5 (2%) | 50 | 67 |
| 2 | Bo | 267/269 (99%) | 261 (98%) | 6 (2%) | 45 | 65 |
| 2 | Bp | 267/269 (99%) | 262 (98%) | 5 (2%) | 50 | 67 |
| 2 | Bq | 267/269 (99%) | 260 (97%) | 7 (3%) | 40 | 62 |
| 2 | Br | 267/269 (99%) | 262 (98%) | 5 (2%) | 50 | 67 |
| 2 | Bs | 267/269 (99%) | 261 (98%) | 6 (2%) | 45 | 65 |
| 2 | Bt | 267/269 (99%) | 264 (99%) | 3 (1%) | 65 | 74 |
| 2 | Bu | 267/269 (99%) | 259 (97%) | 8 (3%) | 36 | 59 |
| 2 | Bv | 267/269 (99%) | 261 (98%) | 6 (2%) | 45 | 65 |
| 2 | Bw | 267/269 (99%) | 265 (99%) | 2 (1%) | 76 | 78 |
| 2 | Bx | 267/269 (99%) | 263 (98%) | 4 (2%) | 57 | 70 |
| 2 | By | 267/269 (99%) | 263 (98%) | 4 (2%) | 57 | 70 |
| 2 | Bz | 267/269 (99%) | 263 (98%) | 4 (2%) | 57 | 70 |
| 3 | Ca | 299/303 (99%) | 297 (99%) | 2 (1%) | 76 | 78 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|---|---|---|---|---|---|---|
| 3 | Cb | 299/303 (99%) | 293 (98%) | 6 (2%) | 48 | 66 |
| 3 | Cc | 299/303 (99%) | 297 (99%) | 2 (1%) | 76 | 78 |
| 3 | Cd | 299/303 (99%) | 294 (98%) | 5 (2%) | 53 | 69 |
| 3 | Ce | 299/303 (99%) | 295 (99%) | 4 (1%) | 61 | 72 |
| 3 | Cf | 299/303 (99%) | 296 (99%) | 3 (1%) | 68 | 75 |
| 3 | Cg | 299/303 (99%) | 294 (98%) | 5 (2%) | 53 | 69 |
| 3 | Ch | 299/303 (99%) | 296 (99%) | 3 (1%) | 68 | 75 |
| 3 | Ci | 299/303 (99%) | 294 (98%) | 5 (2%) | 53 | 69 |
| 3 | Cj | 299/303 (99%) | 297 (99%) | 2 (1%) | 76 | 78 |
| 3 | Ck | 299/303 (99%) | 294 (98%) | 5 (2%) | 53 | 69 |
| 3 | Cl | 299/303 (99%) | 296 (99%) | 3 (1%) | 68 | 75 |
| 3 | Cm | 299/303 (99%) | 294 (98%) | 5 (2%) | 53 | 69 |
| 3 | Cn | 299/303 (99%) | 295 (99%) | 4 (1%) | 61 | 72 |
| 3 | Co | 299/303 (99%) | 295 (99%) | 4 (1%) | 61 | 72 |
| 3 | Cp | 299/303 (99%) | 298 (100%) | 1 (0%) | 86 | 82 |
| 3 | Cq | 299/303 (99%) | 296 (99%) | 3 (1%) | 68 | 75 |
| 3 | Cr | 299/303 (99%) | 295 (99%) | 4 (1%) | 61 | 72 |
| 3 | Cs | 299/303 (99%) | 295 (99%) | 4 (1%) | 61 | 72 |
| 3 | Ct | 299/303 (99%) | 295 (99%) | 4 (1%) | 61 | 72 |
| 3 | Cu | 299/303 (99%) | 295 (99%) | 4 (1%) | 61 | 72 |
| 3 | Cv | 299/303 (99%) | 297 (99%) | 2 (1%) | 76 | 78 |
| 3 | Cw | 299/303 (99%) | 295 (99%) | 4 (1%) | 61 | 72 |
| 3 | Cx | 299/303 (99%) | 295 (99%) | 4 (1%) | 61 | 72 |
| 3 | Cy | 299/303 (99%) | 297 (99%) | 2 (1%) | 76 | 78 |
| 3 | Cz | 299/303 (99%) | 296 (99%) | 3 (1%) | 68 | 75 |
| 4 | Da | 231/243 (95%) | 224 (97%) | 7 (3%) | 36 | 59 |
| 4 | Db | 229/243 (94%) | 227 (99%) | 2 (1%) | 70 | 76 |
| 4 | Dc | 231/243 (95%) | 222 (96%) | 9 (4%) | 28 | 54 |
| 4 | Dd | 229/243 (94%) | 225 (98%) | 4 (2%) | 53 | 69 |
| 4 | De | 231/243 (95%) | 221 (96%) | 10 (4%) | 26 | 51 |
| 4 | Df | 229/243 (94%) | 225 (98%) | 4 (2%) | 53 | 69 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|---|---|---|---|---|---|---|
| 4 | Dg | 231/243 (95%) | 223 (96%) | 8 (4%) | 32 | 56 |
| 4 | Dh | 229/243 (94%) | 227 (99%) | 2 (1%) | 70 | 76 |
| 4 | Di | 231/243 (95%) | 223 (96%) | 8 (4%) | 32 | 56 |
| 4 | Dj | 229/243 (94%) | 227 (99%) | 2 (1%) | 70 | 76 |
| 4 | Dk | 231/243 (95%) | 223 (96%) | 8 (4%) | 32 | 56 |
| 4 | Dl | 229/243 (94%) | 226 (99%) | 3 (1%) | 61 | 72 |
| 4 | Dm | 231/243 (95%) | 222 (96%) | 9 (4%) | 28 | 54 |
| 4 | Dn | 229/243 (94%) | 226 (99%) | 3 (1%) | 61 | 72 |
| 4 | Do | 231/243 (95%) | 223 (96%) | 8 (4%) | 32 | 56 |
| 4 | Dp | 229/243 (94%) | 227 (99%) | 2 (1%) | 70 | 76 |
| 4 | Dq | 231/243 (95%) | 222 (96%) | 9 (4%) | 28 | 54 |
| 4 | Dr | 229/243 (94%) | 226 (99%) | 3 (1%) | 61 | 72 |
| 4 | Ds | 231/243 (95%) | 223 (96%) | 8 (4%) | 32 | 56 |
| 4 | Dt | 229/243 (94%) | 227 (99%) | 2 (1%) | 70 | 76 |
| 4 | Du | 231/243 (95%) | 225 (97%) | 6 (3%) | 40 | 62 |
| 4 | Dv | 229/243 (94%) | 226 (99%) | 3 (1%) | 61 | 72 |
| 4 | Dw | 231/243 (95%) | 222 (96%) | 9 (4%) | 28 | 54 |
| 4 | Dx | 229/243 (94%) | 227 (99%) | 2 (1%) | 70 | 76 |
| 4 | Dy | 231/243 (95%) | 225 (97%) | 6 (3%) | 40 | 62 |
| 4 | Dz | 229/243 (94%) | 227 (99%) | 2 (1%) | 70 | 76 |
| 5 | Ea | 149/154 (97%) | 142 (95%) | 7 (5%) | 23 | 50 |
| 5 | Eb | 154/154 (100%) | 147 (96%) | 7 (4%) | 24 | 51 |
| 5 | Ec | 149/154 (97%) | 142 (95%) | 7 (5%) | 23 | 50 |
| 5 | Ed | 154/154 (100%) | 149 (97%) | 5 (3%) | 34 | 58 |
| 5 | Ee | 149/154 (97%) | 144 (97%) | 5 (3%) | 32 | 57 |
| 5 | Ef | 154/154 (100%) | 149 (97%) | 5 (3%) | 34 | 58 |
| 5 | Eg | 149/154 (97%) | 142 (95%) | 7 (5%) | 23 | 50 |
| 5 | Eh | 154/154 (100%) | 146 (95%) | 8 (5%) | 21 | 48 |
| 5 | Ei | 149/154 (97%) | 142 (95%) | 7 (5%) | 23 | 50 |
| 5 | Ej | 154/154 (100%) | 148 (96%) | 6 (4%) | 28 | 54 |
| 5 | Ek | 149/154 (97%) | 142 (95%) | 7 (5%) | 23 | 50 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|---|---|---|---|---|---|---|
| 5 | El | 154/154 (100%) | 148 (96%) | 6 (4%) | 28 | 54 |
| 5 | Em | 149/154 (97%) | 143 (96%) | 6 (4%) | 28 | 53 |
| 5 | En | 154/154 (100%) | 150 (97%) | 4 (3%) | 40 | 62 |
| 5 | Eo | 149/154 (97%) | 142 (95%) | 7 (5%) | 23 | 50 |
| 5 | Ep | 154/154 (100%) | 149 (97%) | 5 (3%) | 34 | 58 |
| 5 | Eq | 149/154 (97%) | 142 (95%) | 7 (5%) | 23 | 50 |
| 5 | Er | 154/154 (100%) | 149 (97%) | 5 (3%) | 34 | 58 |
| 5 | Es | 149/154 (97%) | 142 (95%) | 7 (5%) | 23 | 50 |
| 5 | Et | 154/154 (100%) | 147 (96%) | 7 (4%) | 24 | 51 |
| 5 | Eu | 149/154 (97%) | 142 (95%) | 7 (5%) | 23 | 50 |
| 5 | Ev | 154/154 (100%) | 148 (96%) | 6 (4%) | 28 | 54 |
| 5 | Ew | 149/154 (97%) | 143 (96%) | 6 (4%) | 28 | 53 |
| 5 | Ex | 154/154 (100%) | 149 (97%) | 5 (3%) | 34 | 58 |
| 5 | Ey | 149/154 (97%) | 142 (95%) | 7 (5%) | 23 | 50 |
| 5 | Ez | 154/154 (100%) | 148 (96%) | 6 (4%) | 28 | 54 |
| 6 | Fa | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fb | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fc | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fd | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fe | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Ff | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fg | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fh | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fi | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fj | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fk | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fl | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fm | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fn | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fo | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fp | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|---|---|---|---|---|---|---|
| 6 | Fq | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fr | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fs | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Ft | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fu | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fv | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fw | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fx | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fy | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Fz | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Ga | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Gb | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Gc | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Gd | 12/12 (100%) | 11 (92%) | 1 (8%) | 10 | 35 |
| 6 | Ge | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Gf | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Gg | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Gh | 12/12 (100%) | 11 (92%) | 1 (8%) | 10 | 35 |
| 6 | Gi | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Gj | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Gk | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Gl | 12/12 (100%) | 11 (92%) | 1 (8%) | 10 | 35 |
| 6 | Gm | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Gn | 12/12 (100%) | 11 (92%) | 1 (8%) | 10 | 35 |
| 6 | Go | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Gp | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Gq | 12/12 (100%) | 11 (92%) | 1 (8%) | 10 | 35 |
| 6 | Gr | 12/12 (100%) | 11 (92%) | 1 (8%) | 10 | 35 |
| 6 | Gs | 12/12 (100%) | 12 (100%) | 0 | 100 | 100 |
| 6 | Gt | 12/12 (100%) | 11 (92%) | 1 (8%) | 10 | 35 |
| 6 | Gu | 12/12 (100%) | 11 (92%) | 1 (8%) | 10 | 35 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles |
|---|---|---|---|---|---|
| 6 | Gv | 12/12 (100%) | 11 (92%) | 1 (8%) | 10 35 |
| 6 | Gw | 12/12 (100%) | 12 (100%) | 0 | 100 100 |
| 6 | Gx | 12/12 (100%) | 12 (100%) | 0 | 100 100 |
| 6 | Gy | 12/12 (100%) | 11 (92%) | 1 (8%) | 10 35 |
| 6 | Gz | 12/12 (100%) | 12 (100%) | 0 | 100 100 |
| 7 | Ha | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 45 |
| 7 | Hc | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | He | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | Hg | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 45 |
| 7 | Hi | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | Hk | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 45 |
| 7 | Hm | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | Ho | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | Hq | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | Hs | 84/85 (99%) | 81 (96%) | 3 (4%) | 31 56 |
| 7 | Hu | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | Hw | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 45 |
| 7 | Hy | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | Ia | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | Ic | 84/85 (99%) | 81 (96%) | 3 (4%) | 31 56 |
| 7 | Ie | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 45 |
| 7 | Ig | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | Ii | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | Ik | 84/85 (99%) | 81 (96%) | 3 (4%) | 31 56 |
| 7 | Im | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | Io | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | Iq | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | Is | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 45 |
| 7 | Iu | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | Iw | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 50 |
| 7 | Iy | 84/85 (99%) | 81 (96%) | 3 (4%) | 31 56 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|---|---|---|---|---|---|---|
| 7 | Ja | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 | 45 |
| 7 | Jc | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 | 45 |
| 7 | Je | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 | 45 |
| 7 | Jg | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | Ji | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | Jk | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 | 45 |
| 7 | Jm | 84/85 (99%) | 78 (93%) | 6 (7%) | 13 | 40 |
| 7 | Jo | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 | 45 |
| 7 | Jq | 84/85 (99%) | 78 (93%) | 6 (7%) | 13 | 40 |
| 7 | Js | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 | 45 |
| 7 | Ju | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | Jw | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | Jy | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | Ka | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 | 45 |
| 7 | Kc | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | Ke | 84/85 (99%) | 78 (93%) | 6 (7%) | 13 | 40 |
| 7 | Kg | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | Ki | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 | 45 |
| 7 | Kk | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | Km | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | Ko | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | Kq | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | Ks | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | Ku | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 | 45 |
| 7 | Kw | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | Ky | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | La | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 | 45 |
| 7 | Lc | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | Le | 84/85 (99%) | 78 (93%) | 6 (7%) | 13 | 40 |
| 7 | Lg | 84/85 (99%) | 80 (95%) | 4 (5%) | 23 | 50 |
| 7 | Li | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 | 45 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|---|---|---|---|---|---|---|
| 7 | Lk | 84/85 (99%) | 79 (94%) | 5 (6%) | 17 | 45 |
| 8 | Hb | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Hd | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Hf | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Hh | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Hj | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |
| 8 | Hl | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |
| 8 | Hn | 165/169 (98%) | 162 (98%) | 3 (2%) | 51 | 68 |
| 8 | Hp | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |
| 8 | Hr | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Ht | 165/169 (98%) | 162 (98%) | 3 (2%) | 51 | 68 |
| 8 | Hv | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Hx | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Hz | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Ib | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Id | 165/169 (98%) | 162 (98%) | 3 (2%) | 51 | 68 |
| 8 | If | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Ih | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |
| 8 | Ij | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Il | 165/169 (98%) | 162 (98%) | 3 (2%) | 51 | 68 |
| 8 | In | 165/169 (98%) | 163 (99%) | 2 (1%) | 63 | 73 |
| 8 | Ip | 165/169 (98%) | 162 (98%) | 3 (2%) | 51 | 68 |
| 8 | Ir | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | It | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |
| 8 | Iv | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Ix | 165/169 (98%) | 162 (98%) | 3 (2%) | 51 | 68 |
| 8 | Iz | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Jb | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |
| 8 | Jd | 165/169 (98%) | 159 (96%) | 6 (4%) | 31 | 56 |
| 8 | Jf | 165/169 (98%) | 159 (96%) | 6 (4%) | 31 | 56 |
| 8 | Jh | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|---|---|---|---|---|---|---|
| 8 | Jj | 165/169 (98%) | 159 (96%) | 6 (4%) | 31 | 56 |
| 8 | Jl | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |
| 8 | Jn | 165/169 (98%) | 162 (98%) | 3 (2%) | 51 | 68 |
| 8 | Jp | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Jr | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |
| 8 | Jt | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Jv | 165/169 (98%) | 159 (96%) | 6 (4%) | 31 | 56 |
| 8 | Jx | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |
| 8 | Jz | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Kb | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |
| 8 | Kd | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Kf | 165/169 (98%) | 162 (98%) | 3 (2%) | 51 | 68 |
| 8 | Kh | 165/169 (98%) | 162 (98%) | 3 (2%) | 51 | 68 |
| 8 | Kj | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Kl | 165/169 (98%) | 162 (98%) | 3 (2%) | 51 | 68 |
| 8 | Kn | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |
| 8 | Kp | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |
| 8 | Kr | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Kt | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Kv | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |
| 8 | Kx | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Kz | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Lb | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |
| 8 | Ld | 165/169 (98%) | 162 (98%) | 3 (2%) | 51 | 68 |
| 8 | Lf | 165/169 (98%) | 161 (98%) | 4 (2%) | 43 | 63 |
| 8 | Lh | 165/169 (98%) | 162 (98%) | 3 (2%) | 51 | 68 |
| 8 | Lj | 165/169 (98%) | 159 (96%) | 6 (4%) | 31 | 56 |
| 8 | Ll | 165/169 (98%) | 160 (97%) | 5 (3%) | 36 | 59 |
| All | All | 44433/45386 (98%) | 43323 (98%) | 1110 (2%) | 42 | 63 |

All (1110) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | Aa | 107 | ILE |
| 1 | Aa | 176 | ILE |
| 1 | Aa | 200 | ASN |
| 1 | Ab | 176 | ILE |
| 1 | Ab | 200 | ASN |
| 1 | Ac | 176 | ILE |
| 1 | Ac | 200 | ASN |
| 1 | Ad | 107 | ILE |
| 1 | Ad | 145 | ILE |
| 1 | Ad | 176 | ILE |
| 1 | Ad | 200 | ASN |
| 1 | Ae | 60 | VAL |
| 1 | Ae | 145 | ILE |
| 1 | Ae | 176 | ILE |
| 1 | Ae | 200 | ASN |
| 1 | Af | 60 | VAL |
| 1 | Af | 145 | ILE |
| 1 | Af | 176 | ILE |
| 1 | Af | 200 | ASN |
| 1 | Af | 206 | ILE |
| 1 | Ag | 145 | ILE |
| 1 | Ag | 176 | ILE |
| 1 | Ag | 200 | ASN |
| 1 | Ag | 206 | ILE |
| 1 | Ah | 145 | ILE |
| 1 | Ah | 176 | ILE |
| 1 | Ah | 179 | GLU |
| 1 | Ah | 200 | ASN |
| 1 | Ah | 206 | ILE |
| 1 | Ai | 145 | ILE |
| 1 | Ai | 200 | ASN |
| 1 | Ai | 206 | ILE |
| 1 | Aj | 145 | ILE |
| 1 | Aj | 176 | ILE |
| 1 | Aj | 200 | ASN |
| 1 | Ak | 106 | ILE |
| 1 | Ak | 145 | ILE |
| 1 | Ak | 176 | ILE |
| 1 | Ak | 200 | ASN |
| 1 | Al | 106 | ILE |
| 1 | Al | 176 | ILE |
| 1 | Al | 200 | ASN |
| 1 | Am | 106 | ILE |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | Am | 107 | ILE |
| 1 | Am | 176 | ILE |
| 1 | Am | 200 | ASN |
| 1 | An | 60 | VAL |
| 1 | An | 145 | ILE |
| 1 | An | 176 | ILE |
| 1 | An | 200 | ASN |
| 1 | Ao | 176 | ILE |
| 1 | Ao | 200 | ASN |
| 1 | Ap | 176 | ILE |
| 1 | Ap | 200 | ASN |
| 1 | Aq | 107 | ILE |
| 1 | Aq | 176 | ILE |
| 1 | Aq | 200 | ASN |
| 1 | Ar | 145 | ILE |
| 1 | Ar | 176 | ILE |
| 1 | Ar | 200 | ASN |
| 1 | As | 145 | ILE |
| 1 | As | 176 | ILE |
| 1 | As | 200 | ASN |
| 1 | At | 107 | ILE |
| 1 | At | 145 | ILE |
| 1 | At | 176 | ILE |
| 1 | At | 200 | ASN |
| 1 | Au | 145 | ILE |
| 1 | Au | 176 | ILE |
| 1 | Au | 179 | GLU |
| 1 | Au | 200 | ASN |
| 1 | Av | 106 | ILE |
| 1 | Av | 145 | ILE |
| 1 | Av | 200 | ASN |
| 1 | Aw | 145 | ILE |
| 1 | Aw | 176 | ILE |
| 1 | Aw | 200 | ASN |
| 1 | Ax | 106 | ILE |
| 1 | Ax | 145 | ILE |
| 1 | Ax | 176 | ILE |
| 1 | Ax | 200 | ASN |
| 1 | Ay | 106 | ILE |
| 1 | Ay | 176 | ILE |
| 1 | Ay | 200 | ASN |
| 1 | Az | 106 | ILE |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | Az | 145 | ILE |
| 1 | Az | 176 | ILE |
| 1 | Az | 200 | ASN |
| 2 | Ba | 68 | GLN |
| 2 | Ba | 258 | THR |
| 2 | Ba | 303 | ASN |
| 2 | Ba | 304 | THR |
| 2 | Bb | 68 | GLN |
| 2 | Bb | 168 | VAL |
| 2 | Bb | 258 | THR |
| 2 | Bb | 287 | VAL |
| 2 | Bb | 304 | THR |
| 2 | Bc | 36 | VAL |
| 2 | Bc | 68 | GLN |
| 2 | Bc | 258 | THR |
| 2 | Bc | 287 | VAL |
| 2 | Bd | 36 | VAL |
| 2 | Bd | 54 | THR |
| 2 | Bd | 258 | THR |
| 2 | Be | 36 | VAL |
| 2 | Be | 54 | THR |
| 2 | Be | 303 | ASN |
| 2 | Be | 322 | VAL |
| 2 | Be | 323 | THR |
| 2 | Bf | 36 | VAL |
| 2 | Bf | 256 | THR |
| 2 | Bf | 258 | THR |
| 2 | Bg | 94 | LYS |
| 2 | Bg | 258 | THR |
| 2 | Bh | 36 | VAL |
| 2 | Bh | 148 | ASP |
| 2 | Bh | 258 | THR |
| 2 | Bi | 145 | THR |
| 2 | Bi | 258 | THR |
| 2 | Bi | 322 | VAL |
| 2 | Bj | 94 | LYS |
| 2 | Bj | 148 | ASP |
| 2 | Bj | 258 | THR |
| 2 | Bj | 287 | VAL |
| 2 | Bj | 322 | VAL |
| 2 | Bk | 36 | VAL |
| 2 | Bk | 148 | ASP |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 2 | Bk | 174 | ASN |
| 2 | Bk | 256 | THR |
| 2 | Bk | 258 | THR |
| 2 | Bk | 287 | VAL |
| 2 | Bk | 308 | VAL |
| 2 | Bk | 322 | VAL |
| 2 | Bl | 159 | VAL |
| 2 | Bl | 256 | THR |
| 2 | Bl | 258 | THR |
| 2 | Bl | 304 | THR |
| 2 | Bl | 316 | PHE |
| 2 | Bm | 94 | LYS |
| 2 | Bm | 159 | VAL |
| 2 | Bm | 256 | THR |
| 2 | Bm | 258 | THR |
| 2 | Bm | 304 | THR |
| 2 | Bn | 68 | GLN |
| 2 | Bn | 258 | THR |
| 2 | Bn | 303 | ASN |
| 2 | Bn | 304 | THR |
| 2 | Bn | 322 | VAL |
| 2 | Bo | 36 | VAL |
| 2 | Bo | 94 | LYS |
| 2 | Bo | 258 | THR |
| 2 | Bo | 287 | VAL |
| 2 | Bo | 304 | THR |
| 2 | Bo | 308 | VAL |
| 2 | Bp | 36 | VAL |
| 2 | Bp | 256 | THR |
| 2 | Bp | 258 | THR |
| 2 | Bp | 304 | THR |
| 2 | Bp | 322 | VAL |
| 2 | Bq | 36 | VAL |
| 2 | Bq | 54 | THR |
| 2 | Bq | 68 | GLN |
| 2 | Bq | 159 | VAL |
| 2 | Bq | 258 | THR |
| 2 | Bq | 304 | THR |
| 2 | Bq | 322 | VAL |
| 2 | Br | 36 | VAL |
| 2 | Br | 54 | THR |
| 2 | Br | 258 | THR |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 2 | Br | 287 | VAL |
| 2 | Br | 322 | VAL |
| 2 | Bs | 36 | VAL |
| 2 | Bs | 68 | GLN |
| 2 | Bs | 148 | ASP |
| 2 | Bs | 256 | THR |
| 2 | Bs | 304 | THR |
| 2 | Bs | 322 | VAL |
| 2 | Bt | 94 | LYS |
| 2 | Bt | 258 | THR |
| 2 | Bt | 322 | VAL |
| 2 | Bu | 36 | VAL |
| 2 | Bu | 118 | MET |
| 2 | Bu | 148 | ASP |
| 2 | Bu | 182 | ILE |
| 2 | Bu | 256 | THR |
| 2 | Bu | 258 | THR |
| 2 | Bu | 287 | VAL |
| 2 | Bu | 304 | THR |
| 2 | Bv | 145 | THR |
| 2 | Bv | 258 | THR |
| 2 | Bv | 287 | VAL |
| 2 | Bv | 303 | ASN |
| 2 | Bv | 304 | THR |
| 2 | Bv | 308 | VAL |
| 2 | Bw | 256 | THR |
| 2 | Bw | 258 | THR |
| 2 | Bx | 258 | THR |
| 2 | Bx | 287 | VAL |
| 2 | Bx | 322 | VAL |
| 2 | Bx | 323 | THR |
| 2 | By | 174 | ASN |
| 2 | By | 258 | THR |
| 2 | By | 304 | THR |
| 2 | By | 322 | VAL |
| 2 | Bz | 68 | GLN |
| 2 | Bz | 148 | ASP |
| 2 | Bz | 258 | THR |
| 2 | Bz | 322 | VAL |
| 3 | Ca | 353 | GLU |
| 3 | Ca | 374 | HIS |
| 3 | Cb | 102 | VAL |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 3 | Cb | 195 | MET |
| 3 | Cb | 254 | ILE |
| 3 | Cb | 286 | SER |
| 3 | Cb | 327 | ILE |
| 3 | Cb | 345 | THR |
| 3 | Cc | 195 | MET |
| 3 | Cc | 327 | ILE |
| 3 | Cd | 87 | TYR |
| 3 | Cd | 195 | MET |
| 3 | Cd | 243 | VAL |
| 3 | Cd | 327 | ILE |
| 3 | Cd | 353 | GLU |
| 3 | Ce | 35 | VAL |
| 3 | Ce | 102 | VAL |
| 3 | Ce | 123 | THR |
| 3 | Ce | 327 | ILE |
| 3 | Cf | 195 | MET |
| 3 | Cf | 243 | VAL |
| 3 | Cf | 374 | HIS |
| 3 | Cg | 87 | TYR |
| 3 | Cg | 154 | ASN |
| 3 | Cg | 243 | VAL |
| 3 | Cg | 327 | ILE |
| 3 | Cg | 374 | HIS |
| 3 | Ch | 154 | ASN |
| 3 | Ch | 243 | VAL |
| 3 | Ch | 327 | ILE |
| 3 | Ci | 89 | LEU |
| 3 | Ci | 237 | THR |
| 3 | Ci | 286 | SER |
| 3 | Ci | 306 | LEU |
| 3 | Ci | 327 | ILE |
| 3 | Cj | 154 | ASN |
| 3 | Cj | 243 | VAL |
| 3 | Ck | 35 | VAL |
| 3 | Ck | 89 | LEU |
| 3 | Ck | 237 | THR |
| 3 | Ck | 243 | VAL |
| 3 | Ck | 327 | ILE |
| 3 | Cl | 89 | LEU |
| 3 | Cl | 195 | MET |
| 3 | Cl | 327 | ILE |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 3 | Cm | 35 | VAL |
| 3 | Cm | 87 | TYR |
| 3 | Cm | 243 | VAL |
| 3 | Cm | 353 | GLU |
| 3 | Cm | 374 | HIS |
| 3 | Cn | 87 | TYR |
| 3 | Cn | 243 | VAL |
| 3 | Cn | 327 | ILE |
| 3 | Cn | 374 | HIS |
| 3 | Co | 154 | ASN |
| 3 | Co | 237 | THR |
| 3 | Co | 243 | VAL |
| 3 | Co | 327 | ILE |
| 3 | Cp | 327 | ILE |
| 3 | Cq | 123 | THR |
| 3 | Cq | 195 | MET |
| 3 | Cq | 243 | VAL |
| 3 | Cr | 237 | THR |
| 3 | Cr | 243 | VAL |
| 3 | Cr | 327 | ILE |
| 3 | Cr | 374 | HIS |
| 3 | Cs | 35 | VAL |
| 3 | Cs | 237 | THR |
| 3 | Cs | 243 | VAL |
| 3 | Cs | 327 | ILE |
| 3 | Ct | 35 | VAL |
| 3 | Ct | 243 | VAL |
| 3 | Ct | 286 | SER |
| 3 | Ct | 353 | GLU |
| 3 | Cu | 237 | THR |
| 3 | Cu | 243 | VAL |
| 3 | Cu | 327 | ILE |
| 3 | Cu | 345 | THR |
| 3 | Cv | 243 | VAL |
| 3 | Cv | 327 | ILE |
| 3 | Cw | 237 | THR |
| 3 | Cw | 243 | VAL |
| 3 | Cw | 286 | SER |
| 3 | Cw | 327 | ILE |
| 3 | Cx | 234 | GLU |
| 3 | Cx | 243 | VAL |
| 3 | Cx | 327 | ILE |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 3 | Cx | 363 | LEU |
| 3 | Cy | 237 | THR |
| 3 | Cy | 327 | ILE |
| 3 | Cz | 87 | TYR |
| 3 | Cz | 286 | SER |
| 3 | Cz | 327 | ILE |
| 4 | Da | 25 | VAL |
| 4 | Da | 89 | VAL |
| 4 | Da | 94 | VAL |
| 4 | Da | 106 | ASN |
| 4 | Da | 112 | GLN |
| 4 | Da | 252 | ILE |
| 4 | Da | 266 | LYS |
| 4 | Db | 25 | VAL |
| 4 | Db | 193 | VAL |
| 4 | Dc | 25 | VAL |
| 4 | Dc | 89 | VAL |
| 4 | Dc | 94 | VAL |
| 4 | Dc | 106 | ASN |
| 4 | Dc | 110 | PHE |
| 4 | Dc | 112 | GLN |
| 4 | Dc | 117 | ILE |
| 4 | Dc | 250 | LYS |
| 4 | Dc | 266 | LYS |
| 4 | Dd | 25 | VAL |
| 4 | Dd | 68 | ILE |
| 4 | Dd | 94 | VAL |
| 4 | Dd | 193 | VAL |
| 4 | De | 25 | VAL |
| 4 | De | 89 | VAL |
| 4 | De | 94 | VAL |
| 4 | De | 106 | ASN |
| 4 | De | 112 | GLN |
| 4 | De | 117 | ILE |
| 4 | De | 173 | LEU |
| 4 | De | 250 | LYS |
| 4 | De | 252 | ILE |
| 4 | De | 266 | LYS |
| 4 | Df | 25 | VAL |
| 4 | Df | 68 | ILE |
| 4 | Df | 162 | TYR |
| 4 | Df | 193 | VAL |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 4 | Dg | 25 | VAL |
| 4 | Dg | 89 | VAL |
| 4 | Dg | 94 | VAL |
| 4 | Dg | 106 | ASN |
| 4 | Dg | 112 | GLN |
| 4 | Dg | 250 | LYS |
| 4 | Dg | 252 | ILE |
| 4 | Dg | 266 | LYS |
| 4 | Dh | 25 | VAL |
| 4 | Dh | 193 | VAL |
| 4 | Di | 25 | VAL |
| 4 | Di | 89 | VAL |
| 4 | Di | 94 | VAL |
| 4 | Di | 106 | ASN |
| 4 | Di | 112 | GLN |
| 4 | Di | 180 | ILE |
| 4 | Di | 250 | LYS |
| 4 | Di | 266 | LYS |
| 4 | Dj | 25 | VAL |
| 4 | Dj | 193 | VAL |
| 4 | Dk | 25 | VAL |
| 4 | Dk | 89 | VAL |
| 4 | Dk | 94 | VAL |
| 4 | Dk | 106 | ASN |
| 4 | Dk | 112 | GLN |
| 4 | Dk | 149 | ILE |
| 4 | Dk | 250 | LYS |
| 4 | Dk | 266 | LYS |
| 4 | Dl | 25 | VAL |
| 4 | Dl | 193 | VAL |
| 4 | Dl | 216 | ILE |
| 4 | Dm | 25 | VAL |
| 4 | Dm | 89 | VAL |
| 4 | Dm | 94 | VAL |
| 4 | Dm | 106 | ASN |
| 4 | Dm | 110 | PHE |
| 4 | Dm | 112 | GLN |
| 4 | Dm | 252 | ILE |
| 4 | Dm | 264 | TYR |
| 4 | Dm | 266 | LYS |
| 4 | Dn | 25 | VAL |
| 4 | Dn | 68 | ILE |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 4 | Dn | 193 | VAL |
| 4 | Do | 25 | VAL |
| 4 | Do | 89 | VAL |
| 4 | Do | 94 | VAL |
| 4 | Do | 106 | ASN |
| 4 | Do | 110 | PHE |
| 4 | Do | 112 | GLN |
| 4 | Do | 117 | ILE |
| 4 | Do | 266 | LYS |
| 4 | Dp | 25 | VAL |
| 4 | Dp | 193 | VAL |
| 4 | Dq | 25 | VAL |
| 4 | Dq | 89 | VAL |
| 4 | Dq | 94 | VAL |
| 4 | Dq | 106 | ASN |
| 4 | Dq | 112 | GLN |
| 4 | Dq | 117 | ILE |
| 4 | Dq | 250 | LYS |
| 4 | Dq | 252 | ILE |
| 4 | Dq | 266 | LYS |
| 4 | Dr | 25 | VAL |
| 4 | Dr | 162 | TYR |
| 4 | Dr | 193 | VAL |
| 4 | Ds | 25 | VAL |
| 4 | Ds | 89 | VAL |
| 4 | Ds | 94 | VAL |
| 4 | Ds | 106 | ASN |
| 4 | Ds | 112 | GLN |
| 4 | Ds | 117 | ILE |
| 4 | Ds | 250 | LYS |
| 4 | Ds | 266 | LYS |
| 4 | Dt | 25 | VAL |
| 4 | Dt | 193 | VAL |
| 4 | Du | 25 | VAL |
| 4 | Du | 94 | VAL |
| 4 | Du | 106 | ASN |
| 4 | Du | 112 | GLN |
| 4 | Du | 250 | LYS |
| 4 | Du | 266 | LYS |
| 4 | Dv | 25 | VAL |
| 4 | Dv | 89 | VAL |
| 4 | Dv | 193 | VAL |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 4 | Dw | 25 | VAL |
| 4 | Dw | 94 | VAL |
| 4 | Dw | 106 | ASN |
| 4 | Dw | 112 | GLN |
| 4 | Dw | 137 | PHE |
| 4 | Dw | 149 | ILE |
| 4 | Dw | 252 | ILE |
| 4 | Dw | 264 | TYR |
| 4 | Dw | 266 | LYS |
| 4 | Dx | 25 | VAL |
| 4 | Dx | 193 | VAL |
| 4 | Dy | 94 | VAL |
| 4 | Dy | 106 | ASN |
| 4 | Dy | 112 | GLN |
| 4 | Dy | 149 | ILE |
| 4 | Dy | 252 | ILE |
| 4 | Dy | 266 | LYS |
| 4 | Dz | 25 | VAL |
| 4 | Dz | 193 | VAL |
| 5 | Ea | 37 | GLU |
| 5 | Ea | 38 | LEU |
| 5 | Ea | 71 | LEU |
| 5 | Ea | 107 | LEU |
| 5 | Ea | 124 | VAL |
| 5 | Ea | 143 | ASN |
| 5 | Ea | 175 | VAL |
| 5 | Eb | 48 | LEU |
| 5 | Eb | 69 | ILE |
| 5 | Eb | 90 | GLN |
| 5 | Eb | 91 | ASP |
| 5 | Eb | 94 | LEU |
| 5 | Eb | 107 | LEU |
| 5 | Eb | 144 | LEU |
| 5 | Ec | 38 | LEU |
| 5 | Ec | 71 | LEU |
| 5 | Ec | 107 | LEU |
| 5 | Ec | 124 | VAL |
| 5 | Ec | 143 | ASN |
| 5 | Ec | 175 | VAL |
| 5 | Ec | 192 | LEU |
| 5 | Ed | 48 | LEU |
| 5 | Ed | 69 | ILE |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 5 | Ed | 90 | GLN |
| 5 | Ed | 94 | LEU |
| 5 | Ed | 107 | LEU |
| 5 | Ee | 38 | LEU |
| 5 | Ee | 71 | LEU |
| 5 | Ee | 107 | LEU |
| 5 | Ee | 124 | VAL |
| 5 | Ee | 175 | VAL |
| 5 | Ef | 48 | LEU |
| 5 | Ef | 69 | ILE |
| 5 | Ef | 94 | LEU |
| 5 | Ef | 98 | TYR |
| 5 | Ef | 107 | LEU |
| 5 | Eg | 37 | GLU |
| 5 | Eg | 38 | LEU |
| 5 | Eg | 71 | LEU |
| 5 | Eg | 107 | LEU |
| 5 | Eg | 124 | VAL |
| 5 | Eg | 143 | ASN |
| 5 | Eg | 175 | VAL |
| 5 | Eh | 48 | LEU |
| 5 | Eh | 69 | ILE |
| 5 | Eh | 90 | GLN |
| 5 | Eh | 91 | ASP |
| 5 | Eh | 94 | LEU |
| 5 | Eh | 107 | LEU |
| 5 | Eh | 144 | LEU |
| 5 | Eh | 150 | LEU |
| 5 | Ei | 38 | LEU |
| 5 | Ei | 71 | LEU |
| 5 | Ei | 107 | LEU |
| 5 | Ei | 124 | VAL |
| 5 | Ei | 143 | ASN |
| 5 | Ei | 175 | VAL |
| 5 | Ei | 192 | LEU |
| 5 | Ej | 48 | LEU |
| 5 | Ej | 69 | ILE |
| 5 | Ej | 90 | GLN |
| 5 | Ej | 94 | LEU |
| 5 | Ej | 107 | LEU |
| 5 | Ej | 150 | LEU |
| 5 | Ek | 38 | LEU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 5 | Ek | 71 | LEU |
| 5 | Ek | 107 | LEU |
| 5 | Ek | 124 | VAL |
| 5 | Ek | 143 | ASN |
| 5 | Ek | 175 | VAL |
| 5 | Ek | 192 | LEU |
| 5 | El | 48 | LEU |
| 5 | El | 69 | ILE |
| 5 | El | 90 | GLN |
| 5 | El | 94 | LEU |
| 5 | El | 107 | LEU |
| 5 | El | 144 | LEU |
| 5 | Em | 38 | LEU |
| 5 | Em | 71 | LEU |
| 5 | Em | 107 | LEU |
| 5 | Em | 124 | VAL |
| 5 | Em | 143 | ASN |
| 5 | Em | 175 | VAL |
| 5 | En | 48 | LEU |
| 5 | En | 90 | GLN |
| 5 | En | 94 | LEU |
| 5 | En | 107 | LEU |
| 5 | Eo | 38 | LEU |
| 5 | Eo | 71 | LEU |
| 5 | Eo | 107 | LEU |
| 5 | Eo | 124 | VAL |
| 5 | Eo | 143 | ASN |
| 5 | Eo | 175 | VAL |
| 5 | Eo | 192 | LEU |
| 5 | Ep | 48 | LEU |
| 5 | Ep | 69 | ILE |
| 5 | Ep | 90 | GLN |
| 5 | Ep | 94 | LEU |
| 5 | Ep | 107 | LEU |
| 5 | Eq | 37 | GLU |
| 5 | Eq | 38 | LEU |
| 5 | Eq | 71 | LEU |
| 5 | Eq | 107 | LEU |
| 5 | Eq | 124 | VAL |
| 5 | Eq | 143 | ASN |
| 5 | Eq | 175 | VAL |
| 5 | Er | 48 | LEU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 5 | Er | 90 | GLN |
| 5 | Er | 94 | LEU |
| 5 | Er | 107 | LEU |
| 5 | Er | 144 | LEU |
| 5 | Es | 38 | LEU |
| 5 | Es | 71 | LEU |
| 5 | Es | 107 | LEU |
| 5 | Es | 124 | VAL |
| 5 | Es | 143 | ASN |
| 5 | Es | 175 | VAL |
| 5 | Es | 192 | LEU |
| 5 | Et | 48 | LEU |
| 5 | Et | 69 | ILE |
| 5 | Et | 90 | GLN |
| 5 | Et | 94 | LEU |
| 5 | Et | 107 | LEU |
| 5 | Et | 144 | LEU |
| 5 | Et | 150 | LEU |
| 5 | Eu | 38 | LEU |
| 5 | Eu | 71 | LEU |
| 5 | Eu | 107 | LEU |
| 5 | Eu | 124 | VAL |
| 5 | Eu | 143 | ASN |
| 5 | Eu | 175 | VAL |
| 5 | Eu | 192 | LEU |
| 5 | Ev | 48 | LEU |
| 5 | Ev | 69 | ILE |
| 5 | Ev | 90 | GLN |
| 5 | Ev | 94 | LEU |
| 5 | Ev | 107 | LEU |
| 5 | Ev | 144 | LEU |
| 5 | Ew | 38 | LEU |
| 5 | Ew | 71 | LEU |
| 5 | Ew | 107 | LEU |
| 5 | Ew | 124 | VAL |
| 5 | Ew | 143 | ASN |
| 5 | Ew | 175 | VAL |
| 5 | Ex | 48 | LEU |
| 5 | Ex | 69 | ILE |
| 5 | Ex | 90 | GLN |
| 5 | Ex | 94 | LEU |
| 5 | Ex | 107 | LEU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 5 | Ey | 38 | LEU |
| 5 | Ey | 71 | LEU |
| 5 | Ey | 107 | LEU |
| 5 | Ey | 124 | VAL |
| 5 | Ey | 143 | ASN |
| 5 | Ey | 175 | VAL |
| 5 | Ey | 192 | LEU |
| 5 | Ez | 48 | LEU |
| 5 | Ez | 69 | ILE |
| 5 | Ez | 90 | GLN |
| 5 | Ez | 94 | LEU |
| 5 | Ez | 107 | LEU |
| 5 | Ez | 144 | LEU |
| 6 | Gd | 138 | GLU |
| 6 | Gh | 138 | GLU |
| 6 | Gl | 138 | GLU |
| 6 | Gn | 138 | GLU |
| 6 | Gq | 138 | GLU |
| 6 | Gr | 138 | GLU |
| 6 | Gt | 138 | GLU |
| 6 | Gu | 138 | GLU |
| 6 | Gv | 138 | GLU |
| 6 | Gy | 138 | GLU |
| 7 | Ha | 74 | ILE |
| 7 | Ha | 87 | THR |
| 7 | Ha | 97 | VAL |
| 7 | Ha | 109 | VAL |
| 7 | Ha | 119 | LEU |
| 8 | Hb | 40 | ASN |
| 8 | Hb | 119 | THR |
| 8 | Hb | 163 | VAL |
| 8 | Hb | 204 | VAL |
| 7 | Hc | 74 | ILE |
| 7 | Hc | 87 | THR |
| 7 | Hc | 97 | VAL |
| 7 | Hc | 119 | LEU |
| 8 | Hd | 40 | ASN |
| 8 | Hd | 161 | VAL |
| 8 | Hd | 163 | VAL |
| 8 | Hd | 204 | VAL |
| 7 | He | 74 | ILE |
| 7 | He | 87 | THR |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 7 | He | 97 | VAL |
| 7 | He | 119 | LEU |
| 8 | Hf | 40 | ASN |
| 8 | Hf | 161 | VAL |
| 8 | Hf | 163 | VAL |
| 8 | Hf | 204 | VAL |
| 7 | Hg | 74 | ILE |
| 7 | Hg | 87 | THR |
| 7 | Hg | 97 | VAL |
| 7 | Hg | 109 | VAL |
| 7 | Hg | 119 | LEU |
| 8 | Hh | 40 | ASN |
| 8 | Hh | 119 | THR |
| 8 | Hh | 163 | VAL |
| 8 | Hh | 204 | VAL |
| 7 | Hi | 74 | ILE |
| 7 | Hi | 97 | VAL |
| 7 | Hi | 109 | VAL |
| 7 | Hi | 119 | LEU |
| 8 | Hj | 40 | ASN |
| 8 | Hj | 119 | THR |
| 8 | Hj | 161 | VAL |
| 8 | Hj | 163 | VAL |
| 8 | Hj | 204 | VAL |
| 7 | Hk | 74 | ILE |
| 7 | Hk | 87 | THR |
| 7 | Hk | 97 | VAL |
| 7 | Hk | 109 | VAL |
| 7 | Hk | 119 | LEU |
| 8 | Hl | 40 | ASN |
| 8 | Hl | 119 | THR |
| 8 | Hl | 161 | VAL |
| 8 | Hl | 163 | VAL |
| 8 | Hl | 204 | VAL |
| 7 | Hm | 87 | THR |
| 7 | Hm | 97 | VAL |
| 7 | Hm | 109 | VAL |
| 7 | Hm | 119 | LEU |
| 8 | Hn | 40 | ASN |
| 8 | Hn | 163 | VAL |
| 8 | Hn | 204 | VAL |
| 7 | Ho | 74 | ILE |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 7 | Ho | 87 | THR |
| 7 | Ho | 97 | VAL |
| 7 | Ho | 119 | LEU |
| 8 | Hp | 40 | ASN |
| 8 | Hp | 119 | THR |
| 8 | Hp | 161 | VAL |
| 8 | Hp | 163 | VAL |
| 8 | Hp | 204 | VAL |
| 7 | Hq | 74 | ILE |
| 7 | Hq | 87 | THR |
| 7 | Hq | 97 | VAL |
| 7 | Hq | 119 | LEU |
| 8 | Hr | 40 | ASN |
| 8 | Hr | 163 | VAL |
| 8 | Hr | 174 | ILE |
| 8 | Hr | 204 | VAL |
| 7 | Hs | 87 | THR |
| 7 | Hs | 97 | VAL |
| 7 | Hs | 119 | LEU |
| 8 | Ht | 40 | ASN |
| 8 | Ht | 163 | VAL |
| 8 | Ht | 204 | VAL |
| 7 | Hu | 74 | ILE |
| 7 | Hu | 87 | THR |
| 7 | Hu | 97 | VAL |
| 7 | Hu | 119 | LEU |
| 8 | Hv | 40 | ASN |
| 8 | Hv | 161 | VAL |
| 8 | Hv | 163 | VAL |
| 8 | Hv | 204 | VAL |
| 7 | Hw | 74 | ILE |
| 7 | Hw | 87 | THR |
| 7 | Hw | 97 | VAL |
| 7 | Hw | 109 | VAL |
| 7 | Hw | 119 | LEU |
| 8 | Hx | 40 | ASN |
| 8 | Hx | 119 | THR |
| 8 | Hx | 163 | VAL |
| 8 | Hx | 204 | VAL |
| 7 | Hy | 74 | ILE |
| 7 | Hy | 87 | THR |
| 7 | Hy | 97 | VAL |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 7 | Hy | 119 | LEU |
| 8 | Hz | 40 | ASN |
| 8 | Hz | 161 | VAL |
| 8 | Hz | 163 | VAL |
| 8 | Hz | 204 | VAL |
| 7 | Ia | 74 | ILE |
| 7 | Ia | 87 | THR |
| 7 | Ia | 97 | VAL |
| 7 | Ia | 119 | LEU |
| 8 | Ib | 40 | ASN |
| 8 | Ib | 119 | THR |
| 8 | Ib | 163 | VAL |
| 8 | Ib | 204 | VAL |
| 7 | Ic | 74 | ILE |
| 7 | Ic | 97 | VAL |
| 7 | Ic | 119 | LEU |
| 8 | Id | 40 | ASN |
| 8 | Id | 163 | VAL |
| 8 | Id | 204 | VAL |
| 7 | Ie | 74 | ILE |
| 7 | Ie | 85 | LEU |
| 7 | Ie | 87 | THR |
| 7 | Ie | 97 | VAL |
| 7 | Ie | 119 | LEU |
| 8 | If | 40 | ASN |
| 8 | If | 119 | THR |
| 8 | If | 163 | VAL |
| 8 | If | 204 | VAL |
| 7 | Ig | 74 | ILE |
| 7 | Ig | 87 | THR |
| 7 | Ig | 97 | VAL |
| 7 | Ig | 119 | LEU |
| 8 | Ih | 40 | ASN |
| 8 | Ih | 119 | THR |
| 8 | Ih | 161 | VAL |
| 8 | Ih | 163 | VAL |
| 8 | Ih | 204 | VAL |
| 7 | Ii | 74 | ILE |
| 7 | Ii | 87 | THR |
| 7 | Ii | 97 | VAL |
| 7 | Ii | 119 | LEU |
| 8 | Ij | 40 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 8 | Ij | 119 | THR |
| 8 | Ij | 163 | VAL |
| 8 | Ij | 204 | VAL |
| 7 | Ik | 74 | ILE |
| 7 | Ik | 97 | VAL |
| 7 | Ik | 119 | LEU |
| 8 | Il | 40 | ASN |
| 8 | Il | 163 | VAL |
| 8 | Il | 204 | VAL |
| 7 | Im | 74 | ILE |
| 7 | Im | 87 | THR |
| 7 | Im | 97 | VAL |
| 7 | Im | 119 | LEU |
| 8 | In | 40 | ASN |
| 8 | In | 163 | VAL |
| 7 | Io | 74 | ILE |
| 7 | Io | 97 | VAL |
| 7 | Io | 109 | VAL |
| 7 | Io | 119 | LEU |
| 8 | Ip | 40 | ASN |
| 8 | Ip | 163 | VAL |
| 8 | Ip | 204 | VAL |
| 7 | Iq | 74 | ILE |
| 7 | Iq | 87 | THR |
| 7 | Iq | 97 | VAL |
| 7 | Iq | 119 | LEU |
| 8 | Ir | 40 | ASN |
| 8 | Ir | 119 | THR |
| 8 | Ir | 163 | VAL |
| 8 | Ir | 204 | VAL |
| 7 | Is | 74 | ILE |
| 7 | Is | 85 | LEU |
| 7 | Is | 87 | THR |
| 7 | Is | 97 | VAL |
| 7 | Is | 119 | LEU |
| 8 | It | 40 | ASN |
| 8 | It | 119 | THR |
| 8 | It | 161 | VAL |
| 8 | It | 163 | VAL |
| 8 | It | 204 | VAL |
| 7 | Iu | 74 | ILE |
| 7 | Iu | 87 | THR |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 7 | Iu | 97 | VAL |
| 7 | Iu | 119 | LEU |
| 8 | Iv | 40 | ASN |
| 8 | Iv | 163 | VAL |
| 8 | Iv | 200 | THR |
| 8 | Iv | 204 | VAL |
| 7 | Iw | 85 | LEU |
| 7 | Iw | 87 | THR |
| 7 | Iw | 97 | VAL |
| 7 | Iw | 119 | LEU |
| 8 | Ix | 40 | ASN |
| 8 | Ix | 163 | VAL |
| 8 | Ix | 200 | THR |
| 7 | Iy | 87 | THR |
| 7 | Iy | 97 | VAL |
| 7 | Iy | 119 | LEU |
| 8 | Iz | 40 | ASN |
| 8 | Iz | 119 | THR |
| 8 | Iz | 163 | VAL |
| 8 | Iz | 204 | VAL |
| 7 | Ja | 74 | ILE |
| 7 | Ja | 87 | THR |
| 7 | Ja | 97 | VAL |
| 7 | Ja | 109 | VAL |
| 7 | Ja | 119 | LEU |
| 8 | Jb | 40 | ASN |
| 8 | Jb | 119 | THR |
| 8 | Jb | 161 | VAL |
| 8 | Jb | 163 | VAL |
| 8 | Jb | 204 | VAL |
| 7 | Jc | 74 | ILE |
| 7 | Jc | 85 | LEU |
| 7 | Jc | 87 | THR |
| 7 | Jc | 97 | VAL |
| 7 | Jc | 119 | LEU |
| 8 | Jd | 40 | ASN |
| 8 | Jd | 119 | THR |
| 8 | Jd | 161 | VAL |
| 8 | Jd | 163 | VAL |
| 8 | Jd | 174 | ILE |
| 8 | Jd | 204 | VAL |
| 7 | Je | 74 | ILE |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 7 | Je | 87 | THR |
| 7 | Je | 97 | VAL |
| 7 | Je | 109 | VAL |
| 7 | Je | 119 | LEU |
| 8 | Jf | 40 | ASN |
| 8 | Jf | 119 | THR |
| 8 | Jf | 161 | VAL |
| 8 | Jf | 163 | VAL |
| 8 | Jf | 200 | THR |
| 8 | Jf | 204 | VAL |
| 7 | Jg | 74 | ILE |
| 7 | Jg | 87 | THR |
| 7 | Jg | 97 | VAL |
| 7 | Jg | 119 | LEU |
| 8 | Jh | 40 | ASN |
| 8 | Jh | 119 | THR |
| 8 | Jh | 161 | VAL |
| 8 | Jh | 163 | VAL |
| 8 | Jh | 204 | VAL |
| 7 | Ji | 74 | ILE |
| 7 | Ji | 87 | THR |
| 7 | Ji | 97 | VAL |
| 7 | Ji | 119 | LEU |
| 8 | Jj | 40 | ASN |
| 8 | Jj | 119 | THR |
| 8 | Jj | 161 | VAL |
| 8 | Jj | 163 | VAL |
| 8 | Jj | 200 | THR |
| 8 | Jj | 204 | VAL |
| 7 | Jk | 74 | ILE |
| 7 | Jk | 87 | THR |
| 7 | Jk | 97 | VAL |
| 7 | Jk | 109 | VAL |
| 7 | Jk | 119 | LEU |
| 8 | Jl | 40 | ASN |
| 8 | Jl | 161 | VAL |
| 8 | Jl | 163 | VAL |
| 8 | Jl | 200 | THR |
| 8 | Jl | 204 | VAL |
| 7 | Jm | 74 | ILE |
| 7 | Jm | 85 | LEU |
| 7 | Jm | 87 | THR |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 7 | Jm | 97 | VAL |
| 7 | Jm | 109 | VAL |
| 7 | Jm | 119 | LEU |
| 8 | Jn | 40 | ASN |
| 8 | Jn | 163 | VAL |
| 8 | Jn | 204 | VAL |
| 7 | Jo | 74 | ILE |
| 7 | Jo | 87 | THR |
| 7 | Jo | 97 | VAL |
| 7 | Jo | 109 | VAL |
| 7 | Jo | 119 | LEU |
| 8 | Jp | 40 | ASN |
| 8 | Jp | 161 | VAL |
| 8 | Jp | 163 | VAL |
| 8 | Jp | 204 | VAL |
| 7 | Jq | 73 | ARG |
| 7 | Jq | 74 | ILE |
| 7 | Jq | 85 | LEU |
| 7 | Jq | 97 | VAL |
| 7 | Jq | 109 | VAL |
| 7 | Jq | 119 | LEU |
| 8 | Jr | 40 | ASN |
| 8 | Jr | 119 | THR |
| 8 | Jr | 163 | VAL |
| 8 | Jr | 200 | THR |
| 8 | Jr | 204 | VAL |
| 7 | Js | 73 | ARG |
| 7 | Js | 74 | ILE |
| 7 | Js | 87 | THR |
| 7 | Js | 109 | VAL |
| 7 | Js | 119 | LEU |
| 8 | Jt | 40 | ASN |
| 8 | Jt | 161 | VAL |
| 8 | Jt | 163 | VAL |
| 8 | Jt | 204 | VAL |
| 7 | Ju | 74 | ILE |
| 7 | Ju | 87 | THR |
| 7 | Ju | 97 | VAL |
| 7 | Ju | 119 | LEU |
| 8 | Jv | 40 | ASN |
| 8 | Jv | 119 | THR |
| 8 | Jv | 161 | VAL |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 8 | Jv | 163 | VAL |
| 8 | Jv | 200 | THR |
| 8 | Jv | 204 | VAL |
| 7 | Jw | 85 | LEU |
| 7 | Jw | 87 | THR |
| 7 | Jw | 97 | VAL |
| 7 | Jw | 119 | LEU |
| 8 | Jx | 40 | ASN |
| 8 | Jx | 119 | THR |
| 8 | Jx | 163 | VAL |
| 8 | Jx | 200 | THR |
| 8 | Jx | 204 | VAL |
| 7 | Jy | 74 | ILE |
| 7 | Jy | 87 | THR |
| 7 | Jy | 97 | VAL |
| 7 | Jy | 119 | LEU |
| 8 | Jz | 40 | ASN |
| 8 | Jz | 161 | VAL |
| 8 | Jz | 163 | VAL |
| 8 | Jz | 204 | VAL |
| 7 | Ka | 74 | ILE |
| 7 | Ka | 87 | THR |
| 7 | Ka | 97 | VAL |
| 7 | Ka | 109 | VAL |
| 7 | Ka | 119 | LEU |
| 8 | Kb | 40 | ASN |
| 8 | Kb | 119 | THR |
| 8 | Kb | 161 | VAL |
| 8 | Kb | 163 | VAL |
| 8 | Kb | 204 | VAL |
| 7 | Kc | 74 | ILE |
| 7 | Kc | 87 | THR |
| 7 | Kc | 97 | VAL |
| 7 | Kc | 119 | LEU |
| 8 | Kd | 40 | ASN |
| 8 | Kd | 163 | VAL |
| 8 | Kd | 200 | THR |
| 8 | Kd | 204 | VAL |
| 7 | Ke | 74 | ILE |
| 7 | Ke | 85 | LEU |
| 7 | Ke | 87 | THR |
| 7 | Ke | 95 | ASP |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 7 | Ke | 97 | VAL |
| 7 | Ke | 119 | LEU |
| 8 | Kf | 40 | ASN |
| 8 | Kf | 163 | VAL |
| 8 | Kf | 204 | VAL |
| 7 | Kg | 74 | ILE |
| 7 | Kg | 87 | THR |
| 7 | Kg | 97 | VAL |
| 7 | Kg | 119 | LEU |
| 8 | Kh | 40 | ASN |
| 8 | Kh | 161 | VAL |
| 8 | Kh | 163 | VAL |
| 7 | Ki | 74 | ILE |
| 7 | Ki | 87 | THR |
| 7 | Ki | 97 | VAL |
| 7 | Ki | 109 | VAL |
| 7 | Ki | 119 | LEU |
| 8 | Kj | 40 | ASN |
| 8 | Kj | 161 | VAL |
| 8 | Kj | 163 | VAL |
| 8 | Kj | 204 | VAL |
| 7 | Kk | 74 | ILE |
| 7 | Kk | 87 | THR |
| 7 | Kk | 97 | VAL |
| 7 | Kk | 119 | LEU |
| 8 | Kl | 40 | ASN |
| 8 | Kl | 161 | VAL |
| 8 | Kl | 163 | VAL |
| 7 | Km | 73 | ARG |
| 7 | Km | 74 | ILE |
| 7 | Km | 97 | VAL |
| 7 | Km | 119 | LEU |
| 8 | Kn | 40 | ASN |
| 8 | Kn | 161 | VAL |
| 8 | Kn | 163 | VAL |
| 8 | Kn | 200 | THR |
| 8 | Kn | 204 | VAL |
| 7 | Ko | 74 | ILE |
| 7 | Ko | 87 | THR |
| 7 | Ko | 97 | VAL |
| 7 | Ko | 119 | LEU |
| 8 | Kp | 40 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 8 | Kp | 119 | THR |
| 8 | Kp | 161 | VAL |
| 8 | Kp | 163 | VAL |
| 8 | Kp | 204 | VAL |
| 7 | Kq | 74 | ILE |
| 7 | Kq | 87 | THR |
| 7 | Kq | 97 | VAL |
| 7 | Kq | 119 | LEU |
| 8 | Kr | 40 | ASN |
| 8 | Kr | 161 | VAL |
| 8 | Kr | 163 | VAL |
| 8 | Kr | 204 | VAL |
| 7 | Ks | 74 | ILE |
| 7 | Ks | 87 | THR |
| 7 | Ks | 97 | VAL |
| 7 | Ks | 119 | LEU |
| 8 | Kt | 40 | ASN |
| 8 | Kt | 161 | VAL |
| 8 | Kt | 163 | VAL |
| 8 | Kt | 204 | VAL |
| 7 | Ku | 74 | ILE |
| 7 | Ku | 87 | THR |
| 7 | Ku | 97 | VAL |
| 7 | Ku | 109 | VAL |
| 7 | Ku | 119 | LEU |
| 8 | Kv | 40 | ASN |
| 8 | Kv | 161 | VAL |
| 8 | Kv | 163 | VAL |
| 8 | Kv | 204 | VAL |
| 8 | Kv | 217 | THR |
| 7 | Kw | 74 | ILE |
| 7 | Kw | 97 | VAL |
| 7 | Kw | 109 | VAL |
| 7 | Kw | 119 | LEU |
| 8 | Kx | 40 | ASN |
| 8 | Kx | 163 | VAL |
| 8 | Kx | 200 | THR |
| 8 | Kx | 204 | VAL |
| 7 | Ky | 74 | ILE |
| 7 | Ky | 85 | LEU |
| 7 | Ky | 97 | VAL |
| 7 | Ky | 119 | LEU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 8 | Kz | 40 | ASN |
| 8 | Kz | 161 | VAL |
| 8 | Kz | 163 | VAL |
| 8 | Kz | 204 | VAL |
| 7 | La | 74 | ILE |
| 7 | La | 87 | THR |
| 7 | La | 97 | VAL |
| 7 | La | 109 | VAL |
| 7 | La | 119 | LEU |
| 8 | Lb | 40 | ASN |
| 8 | Lb | 161 | VAL |
| 8 | Lb | 163 | VAL |
| 8 | Lb | 200 | THR |
| 8 | Lb | 204 | VAL |
| 7 | Lc | 62 | TYR |
| 7 | Lc | 85 | LEU |
| 7 | Lc | 97 | VAL |
| 7 | Lc | 119 | LEU |
| 8 | Ld | 40 | ASN |
| 8 | Ld | 163 | VAL |
| 8 | Ld | 204 | VAL |
| 7 | Le | 73 | ARG |
| 7 | Le | 74 | ILE |
| 7 | Le | 87 | THR |
| 7 | Le | 97 | VAL |
| 7 | Le | 109 | VAL |
| 7 | Le | 119 | LEU |
| 8 | Lf | 40 | ASN |
| 8 | Lf | 163 | VAL |
| 8 | Lf | 200 | THR |
| 8 | Lf | 204 | VAL |
| 7 | Lg | 74 | ILE |
| 7 | Lg | 87 | THR |
| 7 | Lg | 97 | VAL |
| 7 | Lg | 119 | LEU |
| 8 | Lh | 40 | ASN |
| 8 | Lh | 163 | VAL |
| 8 | Lh | 204 | VAL |
| 7 | Li | 74 | ILE |
| 7 | Li | 85 | LEU |
| 7 | Li | 87 | THR |
| 7 | Li | 97 | VAL |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 7 | Li | 119 | LEU |
| 8 | Lj | 40 | ASN |
| 8 | Lj | 161 | VAL |
| 8 | Lj | 163 | VAL |
| 8 | Lj | 200 | THR |
| 8 | Lj | 204 | VAL |
| 8 | Lj | 217 | THR |
| 7 | Lk | 74 | ILE |
| 7 | Lk | 87 | THR |
| 7 | Lk | 97 | VAL |
| 7 | Lk | 109 | VAL |
| 7 | Lk | 119 | LEU |
| 8 | Ll | 40 | ASN |
| 8 | Ll | 119 | THR |
| 8 | Ll | 163 | VAL |
| 8 | Ll | 200 | THR |
| 8 | Ll | 204 | VAL |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1062) such sidechains are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | Aa | 77 | HIS |
| 1 | Aa | 87 | ASN |
| 1 | Aa | 158 | ASN |
| 1 | Aa | 167 | ASN |
| 1 | Aa | 242 | GLN |
| 1 | Ab | 129 | ASN |
| 1 | Ab | 158 | ASN |
| 1 | Ab | 167 | ASN |
| 1 | Ab | 170 | ASN |
| 1 | Ac | 129 | ASN |
| 1 | Ac | 167 | ASN |
| 1 | Ad | 129 | ASN |
| 1 | Ad | 158 | ASN |
| 1 | Ad | 167 | ASN |
| 1 | Ad | 200 | ASN |
| 1 | Ad | 242 | GLN |
| 1 | Ae | 112 | ASN |
| 1 | Ae | 158 | ASN |
| 1 | Ae | 200 | ASN |
| 1 | Ae | 221 | ASN |
| 1 | Ae | 242 | GLN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | Af | 158 | ASN |
| 1 | Af | 167 | ASN |
| 1 | Af | 170 | ASN |
| 1 | Af | 200 | ASN |
| 1 | Af | 221 | ASN |
| 1 | Af | 242 | GLN |
| 1 | Af | 255 | ASN |
| 1 | Ag | 77 | HIS |
| 1 | Ag | 158 | ASN |
| 1 | Ag | 167 | ASN |
| 1 | Ag | 170 | ASN |
| 1 | Ag | 200 | ASN |
| 1 | Ag | 221 | ASN |
| 1 | Ag | 242 | GLN |
| 1 | Ag | 255 | ASN |
| 1 | Ah | 87 | ASN |
| 1 | Ah | 167 | ASN |
| 1 | Ah | 170 | ASN |
| 1 | Ah | 200 | ASN |
| 1 | Ah | 242 | GLN |
| 1 | Ah | 255 | ASN |
| 1 | Ai | 129 | ASN |
| 1 | Ai | 158 | ASN |
| 1 | Ai | 167 | ASN |
| 1 | Ai | 200 | ASN |
| 1 | Ai | 221 | ASN |
| 1 | Ai | 255 | ASN |
| 1 | Aj | 129 | ASN |
| 1 | Aj | 158 | ASN |
| 1 | Aj | 221 | ASN |
| 1 | Aj | 242 | GLN |
| 1 | Ak | 77 | HIS |
| 1 | Ak | 129 | ASN |
| 1 | Ak | 158 | ASN |
| 1 | Ak | 167 | ASN |
| 1 | Ak | 170 | ASN |
| 1 | Ak | 230 | ASN |
| 1 | Ak | 255 | ASN |
| 1 | Al | 77 | HIS |
| 1 | Al | 129 | ASN |
| 1 | Al | 167 | ASN |
| 1 | Al | 200 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | Al | 230 | ASN |
| 1 | Al | 255 | ASN |
| 1 | Am | 77 | HIS |
| 1 | Am | 129 | ASN |
| 1 | Am | 167 | ASN |
| 1 | Am | 200 | ASN |
| 1 | Am | 255 | ASN |
| 1 | An | 77 | HIS |
| 1 | An | 129 | ASN |
| 1 | An | 158 | ASN |
| 1 | An | 167 | ASN |
| 1 | Ao | 77 | HIS |
| 1 | Ao | 129 | ASN |
| 1 | Ao | 167 | ASN |
| 1 | Ao | 241 | ASN |
| 1 | Ap | 129 | ASN |
| 1 | Ap | 158 | ASN |
| 1 | Ap | 167 | ASN |
| 1 | Ap | 200 | ASN |
| 1 | Ap | 255 | ASN |
| 1 | Aq | 156 | ASN |
| 1 | Aq | 158 | ASN |
| 1 | Aq | 167 | ASN |
| 1 | Aq | 170 | ASN |
| 1 | Aq | 200 | ASN |
| 1 | Aq | 242 | GLN |
| 1 | Ar | 158 | ASN |
| 1 | Ar | 167 | ASN |
| 1 | Ar | 170 | ASN |
| 1 | Ar | 200 | ASN |
| 1 | Ar | 221 | ASN |
| 1 | Ar | 241 | ASN |
| 1 | Ar | 242 | GLN |
| 1 | Ar | 255 | ASN |
| 1 | As | 77 | HIS |
| 1 | As | 129 | ASN |
| 1 | As | 149 | ASN |
| 1 | As | 158 | ASN |
| 1 | As | 167 | ASN |
| 1 | As | 170 | ASN |
| 1 | As | 200 | ASN |
| 1 | As | 221 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | As | 242 | GLN |
| 1 | At | 87 | ASN |
| 1 | At | 129 | ASN |
| 1 | At | 158 | ASN |
| 1 | At | 167 | ASN |
| 1 | At | 170 | ASN |
| 1 | At | 200 | ASN |
| 1 | At | 221 | ASN |
| 1 | At | 255 | ASN |
| 1 | Au | 129 | ASN |
| 1 | Au | 158 | ASN |
| 1 | Au | 167 | ASN |
| 1 | Au | 170 | ASN |
| 1 | Au | 200 | ASN |
| 1 | Au | 242 | GLN |
| 1 | Av | 129 | ASN |
| 1 | Av | 158 | ASN |
| 1 | Av | 167 | ASN |
| 1 | Av | 200 | ASN |
| 1 | Av | 221 | ASN |
| 1 | Av | 255 | ASN |
| 1 | Aw | 129 | ASN |
| 1 | Aw | 158 | ASN |
| 1 | Aw | 167 | ASN |
| 1 | Aw | 170 | ASN |
| 1 | Aw | 221 | ASN |
| 1 | Aw | 255 | ASN |
| 1 | Ax | 129 | ASN |
| 1 | Ax | 158 | ASN |
| 1 | Ax | 167 | ASN |
| 1 | Ax | 170 | ASN |
| 1 | Ax | 242 | GLN |
| 1 | Ax | 255 | ASN |
| 1 | Ay | 77 | HIS |
| 1 | Ay | 129 | ASN |
| 1 | Ay | 167 | ASN |
| 1 | Ay | 200 | ASN |
| 1 | Ay | 255 | ASN |
| 1 | Az | 77 | HIS |
| 1 | Az | 129 | ASN |
| 1 | Az | 149 | ASN |
| 1 | Az | 167 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | Az | 170 | ASN |
| 1 | Az | 200 | ASN |
| 1 | Az | 245 | GLN |
| 2 | Ba | 33 | ASN |
| 2 | Ba | 134 | GLN |
| 2 | Ba | 136 | ASN |
| 2 | Ba | 174 | ASN |
| 2 | Ba | 286 | ASN |
| 2 | Ba | 346 | GLN |
| 2 | Bb | 33 | ASN |
| 2 | Bb | 97 | GLN |
| 2 | Bb | 134 | GLN |
| 2 | Bb | 195 | GLN |
| 2 | Bb | 263 | GLN |
| 2 | Bb | 286 | ASN |
| 2 | Bb | 346 | GLN |
| 2 | Bc | 33 | ASN |
| 2 | Bc | 97 | GLN |
| 2 | Bc | 263 | GLN |
| 2 | Bc | 346 | GLN |
| 2 | Bd | 33 | ASN |
| 2 | Bd | 97 | GLN |
| 2 | Bd | 134 | GLN |
| 2 | Bd | 289 | GLN |
| 2 | Bd | 303 | ASN |
| 2 | Bd | 346 | GLN |
| 2 | Be | 97 | GLN |
| 2 | Be | 263 | GLN |
| 2 | Be | 274 | HIS |
| 2 | Be | 346 | GLN |
| 2 | Bf | 97 | GLN |
| 2 | Bf | 274 | HIS |
| 2 | Bf | 346 | GLN |
| 2 | Bg | 33 | ASN |
| 2 | Bg | 97 | GLN |
| 2 | Bg | 128 | GLN |
| 2 | Bg | 253 | ASN |
| 2 | Bg | 284 | ASN |
| 2 | Bg | 286 | ASN |
| 2 | Bg | 346 | GLN |
| 2 | Bh | 33 | ASN |
| 2 | Bh | 128 | GLN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 2 | Bh | 155 | ASN |
| 2 | Bh | 156 | ASN |
| 2 | Bh | 195 | GLN |
| 2 | Bh | 238 | ASN |
| 2 | Bh | 242 | ASN |
| 2 | Bh | 264 | ASN |
| 2 | Bh | 274 | HIS |
| 2 | Bh | 284 | ASN |
| 2 | Bi | 33 | ASN |
| 2 | Bi | 253 | ASN |
| 2 | Bi | 286 | ASN |
| 2 | Bi | 289 | GLN |
| 2 | Bi | 303 | ASN |
| 2 | Bj | 33 | ASN |
| 2 | Bj | 284 | ASN |
| 2 | Bk | 33 | ASN |
| 2 | Bk | 95 | GLN |
| 2 | Bk | 263 | GLN |
| 2 | Bk | 284 | ASN |
| 2 | Bk | 346 | GLN |
| 2 | Bl | 95 | GLN |
| 2 | Bl | 97 | GLN |
| 2 | Bl | 263 | GLN |
| 2 | Bl | 284 | ASN |
| 2 | Bl | 286 | ASN |
| 2 | Bl | 346 | GLN |
| 2 | Bm | 97 | GLN |
| 2 | Bm | 119 | GLN |
| 2 | Bm | 128 | GLN |
| 2 | Bm | 134 | GLN |
| 2 | Bm | 284 | ASN |
| 2 | Bm | 286 | ASN |
| 2 | Bm | 346 | GLN |
| 2 | Bn | 33 | ASN |
| 2 | Bn | 97 | GLN |
| 2 | Bn | 134 | GLN |
| 2 | Bn | 264 | ASN |
| 2 | Bn | 286 | ASN |
| 2 | Bo | 33 | ASN |
| 2 | Bo | 97 | GLN |
| 2 | Bo | 134 | GLN |
| 2 | Bo | 284 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 2 | Bo | 286 | ASN |
| 2 | Bo | 332 | ASN |
| 2 | Bo | 346 | GLN |
| 2 | Bp | 33 | ASN |
| 2 | Bp | 97 | GLN |
| 2 | Bp | 134 | GLN |
| 2 | Bp | 263 | GLN |
| 2 | Bp | 286 | ASN |
| 2 | Bp | 346 | GLN |
| 2 | Bq | 33 | ASN |
| 2 | Bq | 134 | GLN |
| 2 | Bq | 156 | ASN |
| 2 | Bq | 284 | ASN |
| 2 | Bq | 286 | ASN |
| 2 | Bq | 346 | GLN |
| 2 | Br | 33 | ASN |
| 2 | Br | 97 | GLN |
| 2 | Br | 263 | GLN |
| 2 | Br | 289 | GLN |
| 2 | Br | 346 | GLN |
| 2 | Bs | 33 | ASN |
| 2 | Bs | 97 | GLN |
| 2 | Bs | 119 | GLN |
| 2 | Bs | 274 | HIS |
| 2 | Bs | 284 | ASN |
| 2 | Bs | 286 | ASN |
| 2 | Bs | 346 | GLN |
| 2 | Bt | 33 | ASN |
| 2 | Bt | 97 | GLN |
| 2 | Bt | 238 | ASN |
| 2 | Bt | 274 | HIS |
| 2 | Bt | 286 | ASN |
| 2 | Bt | 346 | GLN |
| 2 | Bu | 33 | ASN |
| 2 | Bu | 97 | GLN |
| 2 | Bu | 195 | GLN |
| 2 | Bu | 286 | ASN |
| 2 | Bu | 346 | GLN |
| 2 | Bv | 33 | ASN |
| 2 | Bv | 97 | GLN |
| 2 | Bv | 263 | GLN |
| 2 | Bv | 286 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 2 | Bv | 346 | GLN |
| 2 | Bw | 33 | ASN |
| 2 | Bw | 195 | GLN |
| 2 | Bw | 264 | ASN |
| 2 | Bw | 289 | GLN |
| 2 | Bx | 33 | ASN |
| 2 | Bx | 264 | ASN |
| 2 | Bx | 286 | ASN |
| 2 | Bx | 346 | GLN |
| 2 | By | 33 | ASN |
| 2 | By | 264 | ASN |
| 2 | By | 284 | ASN |
| 2 | By | 286 | ASN |
| 2 | By | 289 | GLN |
| 2 | By | 303 | ASN |
| 2 | By | 346 | GLN |
| 2 | Bz | 33 | ASN |
| 2 | Bz | 134 | GLN |
| 2 | Bz | 253 | ASN |
| 2 | Bz | 263 | GLN |
| 2 | Bz | 286 | ASN |
| 2 | Bz | 346 | GLN |
| 3 | Ca | 217 | ASN |
| 3 | Cb | 82 | ASN |
| 3 | Cb | 154 | ASN |
| 3 | Cb | 187 | GLN |
| 3 | Cb | 217 | ASN |
| 3 | Cb | 374 | HIS |
| 3 | Cc | 208 | GLN |
| 3 | Cc | 253 | GLN |
| 3 | Cc | 276 | ASN |
| 3 | Cd | 329 | GLN |
| 3 | Cd | 376 | GLN |
| 3 | Ce | 329 | GLN |
| 3 | Ce | 339 | GLN |
| 3 | Cf | 66 | ASN |
| 3 | Cf | 135 | GLN |
| 3 | Cf | 159 | GLN |
| 3 | Cf | 253 | GLN |
| 3 | Cf | 322 | HIS |
| 3 | Cf | 368 | GLN |
| 3 | Cg | 314 | GLN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 3 | Ch | 66 | ASN |
| 3 | Ch | 253 | GLN |
| 3 | Ci | 135 | GLN |
| 3 | Ci | 212 | GLN |
| 3 | Ci | 329 | GLN |
| 3 | Ci | 374 | HIS |
| 3 | Cj | 253 | GLN |
| 3 | Cj | 322 | HIS |
| 3 | Cj | 374 | HIS |
| 3 | Ck | 154 | ASN |
| 3 | Ck | 253 | GLN |
| 3 | Cl | 154 | ASN |
| 3 | Cl | 314 | GLN |
| 3 | Cl | 322 | HIS |
| 3 | Cl | 374 | HIS |
| 3 | Cm | 314 | GLN |
| 3 | Cm | 330 | GLN |
| 3 | Cn | 135 | GLN |
| 3 | Cn | 187 | GLN |
| 3 | Cn | 212 | GLN |
| 3 | Cn | 253 | GLN |
| 3 | Co | 82 | ASN |
| 3 | Co | 217 | ASN |
| 3 | Co | 253 | GLN |
| 3 | Co | 374 | HIS |
| 3 | Cp | 253 | GLN |
| 3 | Cq | 66 | ASN |
| 3 | Cq | 217 | ASN |
| 3 | Cq | 330 | GLN |
| 3 | Cr | 116 | HIS |
| 3 | Cr | 135 | GLN |
| 3 | Cr | 141 | GLN |
| 3 | Cr | 154 | ASN |
| 3 | Cr | 159 | GLN |
| 3 | Cr | 187 | GLN |
| 3 | Cs | 82 | ASN |
| 3 | Cs | 116 | HIS |
| 3 | Cs | 135 | GLN |
| 3 | Cs | 154 | ASN |
| 3 | Cs | 187 | GLN |
| 3 | Cs | 329 | GLN |
| 3 | Cs | 374 | HIS |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 3 | Ct | 135 | GLN |
| 3 | Ct | 154 | ASN |
| 3 | Ct | 374 | HIS |
| 3 | Cu | 66 | ASN |
| 3 | Cu | 212 | GLN |
| 3 | Cv | 66 | ASN |
| 3 | Cv | 329 | GLN |
| 3 | Cv | 330 | GLN |
| 3 | Cv | 374 | HIS |
| 3 | Cw | 116 | HIS |
| 3 | Cx | 82 | ASN |
| 3 | Cx | 217 | ASN |
| 3 | Cx | 322 | HIS |
| 3 | Cx | 339 | GLN |
| 3 | Cy | 135 | GLN |
| 3 | Cy | 154 | ASN |
| 3 | Cy | 374 | HIS |
| 3 | Cz | 135 | GLN |
| 3 | Cz | 154 | ASN |
| 3 | Cz | 276 | ASN |
| 4 | Da | 106 | ASN |
| 4 | Da | 108 | GLN |
| 4 | Da | 112 | GLN |
| 4 | Da | 147 | GLN |
| 4 | Da | 282 | ASN |
| 4 | Db | 112 | GLN |
| 4 | Db | 120 | GLN |
| 4 | Db | 143 | GLN |
| 4 | Db | 189 | GLN |
| 4 | Db | 235 | GLN |
| 4 | Db | 293 | GLN |
| 4 | Dc | 106 | ASN |
| 4 | Dc | 108 | GLN |
| 4 | Dc | 112 | GLN |
| 4 | Dc | 143 | GLN |
| 4 | Dc | 147 | GLN |
| 4 | Dc | 282 | ASN |
| 4 | Dd | 32 | GLN |
| 4 | Dd | 112 | GLN |
| 4 | Dd | 120 | GLN |
| 4 | Dd | 143 | GLN |
| 4 | Dd | 235 | GLN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 4 | Dd | 293 | GLN |
| 4 | De | 106 | ASN |
| 4 | De | 112 | GLN |
| 4 | De | 143 | GLN |
| 4 | De | 147 | GLN |
| 4 | De | 282 | ASN |
| 4 | Df | 112 | GLN |
| 4 | Df | 120 | GLN |
| 4 | Df | 189 | GLN |
| 4 | Df | 235 | GLN |
| 4 | Df | 293 | GLN |
| 4 | Dg | 106 | ASN |
| 4 | Dg | 112 | GLN |
| 4 | Dg | 147 | GLN |
| 4 | Dg | 282 | ASN |
| 4 | Dh | 50 | HIS |
| 4 | Dh | 112 | GLN |
| 4 | Dh | 120 | GLN |
| 4 | Dh | 143 | GLN |
| 4 | Dh | 189 | GLN |
| 4 | Dh | 235 | GLN |
| 4 | Dh | 293 | GLN |
| 4 | Di | 106 | ASN |
| 4 | Di | 112 | GLN |
| 4 | Di | 147 | GLN |
| 4 | Di | 282 | ASN |
| 4 | Dj | 50 | HIS |
| 4 | Dj | 112 | GLN |
| 4 | Dj | 120 | GLN |
| 4 | Dj | 143 | GLN |
| 4 | Dj | 235 | GLN |
| 4 | Dj | 293 | GLN |
| 4 | Dk | 106 | ASN |
| 4 | Dk | 108 | GLN |
| 4 | Dk | 112 | GLN |
| 4 | Dk | 147 | GLN |
| 4 | Dk | 282 | ASN |
| 4 | Dl | 50 | HIS |
| 4 | Dl | 85 | ASN |
| 4 | Dl | 112 | GLN |
| 4 | Dl | 120 | GLN |
| 4 | Dl | 189 | GLN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 4 | Dl | 235 | GLN |
| 4 | Dl | 293 | GLN |
| 4 | Dm | 106 | ASN |
| 4 | Dm | 108 | GLN |
| 4 | Dm | 112 | GLN |
| 4 | Dm | 143 | GLN |
| 4 | Dm | 147 | GLN |
| 4 | Dm | 282 | ASN |
| 4 | Dn | 32 | GLN |
| 4 | Dn | 50 | HIS |
| 4 | Dn | 85 | ASN |
| 4 | Dn | 112 | GLN |
| 4 | Dn | 120 | GLN |
| 4 | Dn | 235 | GLN |
| 4 | Dn | 293 | GLN |
| 4 | Do | 106 | ASN |
| 4 | Do | 108 | GLN |
| 4 | Do | 112 | GLN |
| 4 | Do | 143 | GLN |
| 4 | Do | 147 | GLN |
| 4 | Do | 236 | ASN |
| 4 | Do | 282 | ASN |
| 4 | Dp | 32 | GLN |
| 4 | Dp | 112 | GLN |
| 4 | Dp | 120 | GLN |
| 4 | Dp | 143 | GLN |
| 4 | Dp | 235 | GLN |
| 4 | Dp | 293 | GLN |
| 4 | Dq | 106 | ASN |
| 4 | Dq | 108 | GLN |
| 4 | Dq | 112 | GLN |
| 4 | Dq | 143 | GLN |
| 4 | Dq | 147 | GLN |
| 4 | Dq | 282 | ASN |
| 4 | Dr | 50 | HIS |
| 4 | Dr | 112 | GLN |
| 4 | Dr | 120 | GLN |
| 4 | Dr | 235 | GLN |
| 4 | Dr | 293 | GLN |
| 4 | Ds | 106 | ASN |
| 4 | Ds | 112 | GLN |
| 4 | Ds | 143 | GLN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 4 | Ds | 147 | GLN |
| 4 | Ds | 282 | ASN |
| 4 | Dt | 32 | GLN |
| 4 | Dt | 50 | HIS |
| 4 | Dt | 85 | ASN |
| 4 | Dt | 112 | GLN |
| 4 | Dt | 120 | GLN |
| 4 | Dt | 235 | GLN |
| 4 | Dt | 293 | GLN |
| 4 | Du | 106 | ASN |
| 4 | Du | 112 | GLN |
| 4 | Du | 140 | GLN |
| 4 | Du | 143 | GLN |
| 4 | Du | 147 | GLN |
| 4 | Du | 282 | ASN |
| 4 | Dv | 32 | GLN |
| 4 | Dv | 50 | HIS |
| 4 | Dv | 112 | GLN |
| 4 | Dv | 120 | GLN |
| 4 | Dv | 235 | GLN |
| 4 | Dv | 293 | GLN |
| 4 | Dw | 106 | ASN |
| 4 | Dw | 108 | GLN |
| 4 | Dw | 112 | GLN |
| 4 | Dw | 147 | GLN |
| 4 | Dw | 282 | ASN |
| 4 | Dx | 32 | GLN |
| 4 | Dx | 50 | HIS |
| 4 | Dx | 112 | GLN |
| 4 | Dx | 120 | GLN |
| 4 | Dx | 143 | GLN |
| 4 | Dx | 235 | GLN |
| 4 | Dx | 293 | GLN |
| 4 | Dy | 106 | ASN |
| 4 | Dy | 108 | GLN |
| 4 | Dy | 112 | GLN |
| 4 | Dy | 143 | GLN |
| 4 | Dy | 147 | GLN |
| 4 | Dy | 282 | ASN |
| 4 | Dz | 32 | GLN |
| 4 | Dz | 50 | HIS |
| 4 | Dz | 112 | GLN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 4 | Dz | 120 | GLN |
| 4 | Dz | 143 | GLN |
| 4 | Dz | 235 | GLN |
| 4 | Dz | 293 | GLN |
| 5 | Ea | 90 | GLN |
| 5 | Ea | 105 | GLN |
| 5 | Ea | 145 | ASN |
| 5 | Ea | 149 | GLN |
| 5 | Ea | 173 | ASN |
| 5 | Ea | 183 | ASN |
| 5 | Eb | 57 | GLN |
| 5 | Eb | 90 | GLN |
| 5 | Eb | 113 | GLN |
| 5 | Eb | 143 | ASN |
| 5 | Eb | 149 | GLN |
| 5 | Eb | 179 | GLN |
| 5 | Ec | 90 | GLN |
| 5 | Ec | 145 | ASN |
| 5 | Ec | 149 | GLN |
| 5 | Ec | 173 | ASN |
| 5 | Ec | 183 | ASN |
| 5 | Ed | 57 | GLN |
| 5 | Ed | 90 | GLN |
| 5 | Ed | 143 | ASN |
| 5 | Ed | 149 | GLN |
| 5 | Ed | 179 | GLN |
| 5 | Ee | 90 | GLN |
| 5 | Ee | 145 | ASN |
| 5 | Ee | 149 | GLN |
| 5 | Ee | 173 | ASN |
| 5 | Ee | 183 | ASN |
| 5 | Ef | 57 | GLN |
| 5 | Ef | 90 | GLN |
| 5 | Ef | 143 | ASN |
| 5 | Ef | 149 | GLN |
| 5 | Ef | 179 | GLN |
| 5 | Ef | 182 | HIS |
| 5 | Eg | 90 | GLN |
| 5 | Eg | 145 | ASN |
| 5 | Eg | 149 | GLN |
| 5 | Eg | 173 | ASN |
| 5 | Eg | 183 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 5 | Eh | 57 | GLN |
| 5 | Eh | 90 | GLN |
| 5 | Eh | 113 | GLN |
| 5 | Eh | 143 | ASN |
| 5 | Eh | 149 | GLN |
| 5 | Eh | 179 | GLN |
| 5 | Eh | 182 | HIS |
| 5 | Ei | 145 | ASN |
| 5 | Ei | 149 | GLN |
| 5 | Ei | 173 | ASN |
| 5 | Ei | 183 | ASN |
| 5 | Ej | 57 | GLN |
| 5 | Ej | 90 | GLN |
| 5 | Ej | 143 | ASN |
| 5 | Ej | 149 | GLN |
| 5 | Ej | 179 | GLN |
| 5 | Ej | 182 | HIS |
| 5 | Ek | 90 | GLN |
| 5 | Ek | 145 | ASN |
| 5 | Ek | 149 | GLN |
| 5 | Ek | 173 | ASN |
| 5 | Ek | 183 | ASN |
| 5 | El | 57 | GLN |
| 5 | El | 90 | GLN |
| 5 | El | 143 | ASN |
| 5 | El | 149 | GLN |
| 5 | El | 179 | GLN |
| 5 | El | 182 | HIS |
| 5 | Em | 90 | GLN |
| 5 | Em | 105 | GLN |
| 5 | Em | 145 | ASN |
| 5 | Em | 149 | GLN |
| 5 | Em | 173 | ASN |
| 5 | Em | 183 | ASN |
| 5 | En | 57 | GLN |
| 5 | En | 90 | GLN |
| 5 | En | 143 | ASN |
| 5 | En | 149 | GLN |
| 5 | En | 179 | GLN |
| 5 | En | 182 | HIS |
| 5 | Eo | 90 | GLN |
| 5 | Eo | 145 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 5 | Eo | 149 | GLN |
| 5 | Eo | 173 | ASN |
| 5 | Eo | 183 | ASN |
| 5 | Ep | 57 | GLN |
| 5 | Ep | 90 | GLN |
| 5 | Ep | 143 | ASN |
| 5 | Ep | 149 | GLN |
| 5 | Ep | 179 | GLN |
| 5 | Ep | 182 | HIS |
| 5 | Eq | 145 | ASN |
| 5 | Eq | 149 | GLN |
| 5 | Eq | 173 | ASN |
| 5 | Eq | 183 | ASN |
| 5 | Er | 57 | GLN |
| 5 | Er | 90 | GLN |
| 5 | Er | 143 | ASN |
| 5 | Er | 149 | GLN |
| 5 | Er | 179 | GLN |
| 5 | Er | 182 | HIS |
| 5 | Es | 90 | GLN |
| 5 | Es | 145 | ASN |
| 5 | Es | 149 | GLN |
| 5 | Es | 173 | ASN |
| 5 | Es | 183 | ASN |
| 5 | Et | 57 | GLN |
| 5 | Et | 90 | GLN |
| 5 | Et | 143 | ASN |
| 5 | Et | 149 | GLN |
| 5 | Et | 179 | GLN |
| 5 | Eu | 90 | GLN |
| 5 | Eu | 143 | ASN |
| 5 | Eu | 145 | ASN |
| 5 | Eu | 149 | GLN |
| 5 | Eu | 173 | ASN |
| 5 | Eu | 183 | ASN |
| 5 | Ev | 57 | GLN |
| 5 | Ev | 90 | GLN |
| 5 | Ev | 143 | ASN |
| 5 | Ev | 149 | GLN |
| 5 | Ev | 179 | GLN |
| 5 | Ew | 145 | ASN |
| 5 | Ew | 149 | GLN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 5 | Ew | 173 | ASN |
| 5 | Ew | 183 | ASN |
| 5 | Ex | 57 | GLN |
| 5 | Ex | 90 | GLN |
| 5 | Ex | 143 | ASN |
| 5 | Ex | 149 | GLN |
| 5 | Ex | 179 | GLN |
| 5 | Ex | 182 | HIS |
| 5 | Ey | 90 | GLN |
| 5 | Ey | 145 | ASN |
| 5 | Ey | 149 | GLN |
| 5 | Ey | 173 | ASN |
| 5 | Ey | 183 | ASN |
| 5 | Ez | 57 | GLN |
| 5 | Ez | 90 | GLN |
| 5 | Ez | 143 | ASN |
| 5 | Ez | 149 | GLN |
| 5 | Ez | 179 | GLN |
| 5 | Ez | 182 | HIS |
| 6 | Fn | 135 | GLN |
| 6 | Fu | 135 | GLN |
| 6 | Fv | 135 | GLN |
| 6 | Fz | 135 | GLN |
| 6 | Gf | 141 | GLN |
| 6 | Gi | 135 | GLN |
| 6 | Gk | 135 | GLN |
| 6 | Gn | 141 | GLN |
| 6 | Go | 134 | GLN |
| 6 | Gq | 135 | GLN |
| 6 | Gr | 135 | GLN |
| 6 | Gs | 141 | GLN |
| 6 | Gt | 135 | GLN |
| 6 | Gw | 141 | GLN |
| 6 | Gx | 141 | GLN |
| 6 | Gy | 135 | GLN |
| 7 | Ha | 68 | GLN |
| 7 | Ha | 83 | GLN |
| 8 | Hb | 40 | ASN |
| 8 | Hb | 52 | HIS |
| 8 | Hb | 124 | GLN |
| 8 | Hb | 139 | ASN |
| 8 | Hb | 164 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 8 | Hb | 180 | GLN |
| 8 | Hd | 40 | ASN |
| 8 | Hd | 52 | HIS |
| 8 | Hd | 97 | ASN |
| 8 | Hd | 124 | GLN |
| 8 | Hd | 139 | ASN |
| 8 | Hd | 180 | GLN |
| 7 | He | 83 | GLN |
| 8 | Hf | 40 | ASN |
| 8 | Hf | 124 | GLN |
| 8 | Hf | 180 | GLN |
| 7 | Hg | 68 | GLN |
| 8 | Hh | 40 | ASN |
| 8 | Hh | 124 | GLN |
| 8 | Hh | 139 | ASN |
| 8 | Hh | 180 | GLN |
| 7 | Hi | 83 | GLN |
| 8 | Hj | 40 | ASN |
| 8 | Hj | 97 | ASN |
| 8 | Hj | 124 | GLN |
| 8 | Hj | 139 | ASN |
| 8 | Hj | 164 | ASN |
| 8 | Hj | 180 | GLN |
| 7 | Hk | 68 | GLN |
| 8 | Hl | 40 | ASN |
| 8 | Hl | 124 | GLN |
| 8 | Hl | 139 | ASN |
| 8 | Hl | 164 | ASN |
| 8 | Hl | 180 | GLN |
| 7 | Hm | 83 | GLN |
| 8 | Hn | 40 | ASN |
| 8 | Hn | 97 | ASN |
| 8 | Hn | 124 | GLN |
| 8 | Hn | 139 | ASN |
| 8 | Hn | 180 | GLN |
| 7 | Ho | 68 | GLN |
| 7 | Ho | 83 | GLN |
| 8 | Hp | 40 | ASN |
| 8 | Hp | 52 | HIS |
| 8 | Hp | 97 | ASN |
| 8 | Hp | 124 | GLN |
| 8 | Hp | 139 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 8 | Hp | 164 | ASN |
| 8 | Hp | 180 | GLN |
| 7 | Hq | 68 | GLN |
| 7 | Hq | 83 | GLN |
| 8 | Hr | 40 | ASN |
| 8 | Hr | 52 | HIS |
| 8 | Hr | 124 | GLN |
| 8 | Hr | 139 | ASN |
| 8 | Hr | 180 | GLN |
| 7 | Hs | 68 | GLN |
| 7 | Hs | 83 | GLN |
| 8 | Ht | 40 | ASN |
| 8 | Ht | 52 | HIS |
| 8 | Ht | 97 | ASN |
| 8 | Ht | 124 | GLN |
| 8 | Ht | 180 | GLN |
| 7 | Hu | 68 | GLN |
| 7 | Hu | 83 | GLN |
| 8 | Hv | 40 | ASN |
| 8 | Hv | 52 | HIS |
| 8 | Hv | 124 | GLN |
| 8 | Hv | 139 | ASN |
| 8 | Hv | 180 | GLN |
| 7 | Hw | 83 | GLN |
| 8 | Hx | 40 | ASN |
| 8 | Hx | 97 | ASN |
| 8 | Hx | 124 | GLN |
| 8 | Hx | 139 | ASN |
| 8 | Hx | 180 | GLN |
| 7 | Hy | 68 | GLN |
| 7 | Hy | 83 | GLN |
| 8 | Hz | 40 | ASN |
| 8 | Hz | 52 | HIS |
| 8 | Hz | 97 | ASN |
| 8 | Hz | 124 | GLN |
| 8 | Hz | 139 | ASN |
| 8 | Hz | 180 | GLN |
| 7 | Ia | 68 | GLN |
| 7 | Ia | 83 | GLN |
| 8 | Ib | 40 | ASN |
| 8 | Ib | 124 | GLN |
| 8 | Ib | 139 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 8 | Ib | 164 | ASN |
| 8 | Ib | 180 | GLN |
| 8 | Id | 40 | ASN |
| 8 | Id | 52 | HIS |
| 8 | Id | 97 | ASN |
| 8 | Id | 124 | GLN |
| 8 | Id | 139 | ASN |
| 8 | Id | 180 | GLN |
| 7 | Ie | 68 | GLN |
| 7 | Ie | 83 | GLN |
| 8 | If | 40 | ASN |
| 8 | If | 97 | ASN |
| 8 | If | 124 | GLN |
| 8 | If | 180 | GLN |
| 7 | Ig | 68 | GLN |
| 7 | Ig | 83 | GLN |
| 8 | Ih | 40 | ASN |
| 8 | Ih | 52 | HIS |
| 8 | Ih | 97 | ASN |
| 8 | Ih | 124 | GLN |
| 8 | Ih | 139 | ASN |
| 8 | Ih | 180 | GLN |
| 8 | Ij | 40 | ASN |
| 8 | Ij | 52 | HIS |
| 8 | Ij | 124 | GLN |
| 8 | Ij | 180 | GLN |
| 7 | Ik | 68 | GLN |
| 7 | Ik | 83 | GLN |
| 8 | Il | 40 | ASN |
| 8 | Il | 124 | GLN |
| 8 | Il | 164 | ASN |
| 8 | Il | 180 | GLN |
| 7 | Im | 68 | GLN |
| 7 | Im | 83 | GLN |
| 8 | In | 40 | ASN |
| 8 | In | 52 | HIS |
| 8 | In | 97 | ASN |
| 8 | In | 124 | GLN |
| 8 | In | 139 | ASN |
| 8 | In | 180 | GLN |
| 7 | Io | 68 | GLN |
| 7 | Io | 83 | GLN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 8 | Ip | 40 | ASN |
| 8 | Ip | 52 | HIS |
| 8 | Ip | 124 | GLN |
| 8 | Ip | 180 | GLN |
| 7 | Iq | 68 | GLN |
| 8 | Ir | 40 | ASN |
| 8 | Ir | 52 | HIS |
| 8 | Ir | 124 | GLN |
| 8 | Ir | 139 | ASN |
| 8 | Ir | 180 | GLN |
| 7 | Is | 68 | GLN |
| 8 | It | 40 | ASN |
| 8 | It | 52 | HIS |
| 8 | It | 97 | ASN |
| 8 | It | 124 | GLN |
| 8 | It | 139 | ASN |
| 8 | It | 180 | GLN |
| 7 | Iu | 68 | GLN |
| 7 | Iu | 83 | GLN |
| 8 | Iv | 40 | ASN |
| 8 | Iv | 52 | HIS |
| 8 | Iv | 97 | ASN |
| 8 | Iv | 124 | GLN |
| 8 | Iv | 139 | ASN |
| 8 | Iv | 180 | GLN |
| 7 | Iw | 68 | GLN |
| 7 | Iw | 83 | GLN |
| 8 | Ix | 40 | ASN |
| 8 | Ix | 52 | HIS |
| 8 | Ix | 97 | ASN |
| 8 | Ix | 124 | GLN |
| 8 | Ix | 180 | GLN |
| 7 | Iy | 37 | ASN |
| 7 | Iy | 68 | GLN |
| 7 | Iy | 83 | GLN |
| 8 | Iz | 40 | ASN |
| 8 | Iz | 52 | HIS |
| 8 | Iz | 124 | GLN |
| 8 | Iz | 139 | ASN |
| 8 | Iz | 180 | GLN |
| 7 | Ja | 68 | GLN |
| 8 | Jb | 40 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 8 | Jb | 124 | GLN |
| 8 | Jb | 180 | GLN |
| 7 | Jc | 68 | GLN |
| 8 | Jd | 40 | ASN |
| 8 | Jd | 52 | HIS |
| 8 | Jd | 124 | GLN |
| 8 | Jd | 139 | ASN |
| 8 | Jd | 164 | ASN |
| 8 | Jd | 180 | GLN |
| 7 | Je | 68 | GLN |
| 7 | Je | 83 | GLN |
| 8 | Jf | 40 | ASN |
| 8 | Jf | 97 | ASN |
| 8 | Jf | 124 | GLN |
| 8 | Jf | 139 | ASN |
| 8 | Jf | 180 | GLN |
| 7 | Jg | 83 | GLN |
| 8 | Jh | 40 | ASN |
| 8 | Jh | 124 | GLN |
| 8 | Jh | 139 | ASN |
| 8 | Jh | 164 | ASN |
| 8 | Jh | 180 | GLN |
| 7 | Ji | 68 | GLN |
| 7 | Ji | 83 | GLN |
| 8 | Jj | 40 | ASN |
| 8 | Jj | 97 | ASN |
| 8 | Jj | 124 | GLN |
| 8 | Jj | 180 | GLN |
| 7 | Jk | 68 | GLN |
| 8 | Jl | 40 | ASN |
| 8 | Jl | 97 | ASN |
| 8 | Jl | 124 | GLN |
| 8 | Jl | 139 | ASN |
| 8 | Jl | 180 | GLN |
| 7 | Jm | 68 | GLN |
| 7 | Jm | 83 | GLN |
| 8 | Jn | 40 | ASN |
| 8 | Jn | 97 | ASN |
| 8 | Jn | 124 | GLN |
| 8 | Jn | 139 | ASN |
| 8 | Jn | 180 | GLN |
| 7 | Jo | 68 | GLN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 7 | Jo | 83 | GLN |
| 8 | Jp | 40 | ASN |
| 8 | Jp | 52 | HIS |
| 8 | Jp | 97 | ASN |
| 8 | Jp | 124 | GLN |
| 8 | Jp | 139 | ASN |
| 8 | Jp | 164 | ASN |
| 8 | Jp | 180 | GLN |
| 8 | Jr | 40 | ASN |
| 8 | Jr | 52 | HIS |
| 8 | Jr | 124 | GLN |
| 8 | Jr | 139 | ASN |
| 8 | Jr | 180 | GLN |
| 7 | Js | 83 | GLN |
| 8 | Jt | 40 | ASN |
| 8 | Jt | 52 | HIS |
| 8 | Jt | 97 | ASN |
| 8 | Jt | 124 | GLN |
| 8 | Jt | 139 | ASN |
| 8 | Jt | 180 | GLN |
| 7 | Ju | 68 | GLN |
| 7 | Ju | 83 | GLN |
| 8 | Jv | 40 | ASN |
| 8 | Jv | 52 | HIS |
| 8 | Jv | 124 | GLN |
| 8 | Jv | 139 | ASN |
| 8 | Jv | 164 | ASN |
| 8 | Jv | 180 | GLN |
| 7 | Jw | 68 | GLN |
| 7 | Jw | 83 | GLN |
| 8 | Jx | 40 | ASN |
| 8 | Jx | 97 | ASN |
| 8 | Jx | 124 | GLN |
| 8 | Jx | 139 | ASN |
| 8 | Jx | 164 | ASN |
| 8 | Jx | 180 | GLN |
| 7 | Jy | 83 | GLN |
| 8 | Jz | 40 | ASN |
| 8 | Jz | 124 | GLN |
| 8 | Jz | 139 | ASN |
| 8 | Jz | 164 | ASN |
| 8 | Jz | 180 | GLN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 7 | Ka | 68 | GLN |
| 7 | Ka | 83 | GLN |
| 8 | Kb | 40 | ASN |
| 8 | Kb | 52 | HIS |
| 8 | Kb | 97 | ASN |
| 8 | Kb | 124 | GLN |
| 8 | Kb | 180 | GLN |
| 7 | Kc | 68 | GLN |
| 8 | Kd | 40 | ASN |
| 8 | Kd | 124 | GLN |
| 8 | Kd | 139 | ASN |
| 8 | Kd | 180 | GLN |
| 7 | Ke | 83 | GLN |
| 8 | Kf | 40 | ASN |
| 8 | Kf | 97 | ASN |
| 8 | Kf | 124 | GLN |
| 8 | Kf | 180 | GLN |
| 7 | Kg | 68 | GLN |
| 7 | Kg | 83 | GLN |
| 8 | Kh | 40 | ASN |
| 8 | Kh | 124 | GLN |
| 8 | Kh | 164 | ASN |
| 8 | Kh | 180 | GLN |
| 7 | Ki | 68 | GLN |
| 8 | Kj | 40 | ASN |
| 8 | Kj | 52 | HIS |
| 8 | Kj | 124 | GLN |
| 8 | Kj | 180 | GLN |
| 7 | Kk | 68 | GLN |
| 8 | Kl | 40 | ASN |
| 8 | Kl | 52 | HIS |
| 8 | Kl | 97 | ASN |
| 8 | Kl | 124 | GLN |
| 8 | Kl | 180 | GLN |
| 7 | Km | 68 | GLN |
| 7 | Km | 83 | GLN |
| 8 | Kn | 40 | ASN |
| 8 | Kn | 124 | GLN |
| 8 | Kn | 139 | ASN |
| 8 | Kn | 180 | GLN |
| 7 | Ko | 83 | GLN |
| 8 | Kp | 40 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 8 | Kp | 52 | HIS |
| 8 | Kp | 124 | GLN |
| 8 | Kp | 180 | GLN |
| 7 | Kq | 68 | GLN |
| 7 | Kq | 83 | GLN |
| 8 | Kr | 40 | ASN |
| 8 | Kr | 124 | GLN |
| 8 | Kr | 180 | GLN |
| 7 | Ks | 83 | GLN |
| 8 | Kt | 40 | ASN |
| 8 | Kt | 97 | ASN |
| 8 | Kt | 124 | GLN |
| 8 | Kt | 180 | GLN |
| 7 | Ku | 68 | GLN |
| 7 | Ku | 83 | GLN |
| 8 | Kv | 40 | ASN |
| 8 | Kv | 52 | HIS |
| 8 | Kv | 97 | ASN |
| 8 | Kv | 124 | GLN |
| 8 | Kv | 180 | GLN |
| 7 | Kw | 68 | GLN |
| 7 | Kw | 83 | GLN |
| 8 | Kx | 40 | ASN |
| 8 | Kx | 52 | HIS |
| 8 | Kx | 124 | GLN |
| 8 | Kx | 139 | ASN |
| 8 | Kx | 180 | GLN |
| 7 | Ky | 68 | GLN |
| 7 | Ky | 83 | GLN |
| 8 | Kz | 40 | ASN |
| 8 | Kz | 52 | HIS |
| 8 | Kz | 97 | ASN |
| 8 | Kz | 124 | GLN |
| 8 | Kz | 164 | ASN |
| 8 | Kz | 180 | GLN |
| 7 | La | 68 | GLN |
| 8 | Lb | 40 | ASN |
| 8 | Lb | 124 | GLN |
| 8 | Lb | 180 | GLN |
| 7 | Lc | 68 | GLN |
| 7 | Lc | 83 | GLN |
| 8 | Ld | 40 | ASN |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 8 | Ld | 52 | HIS |
| 8 | Ld | 97 | ASN |
| 8 | Ld | 124 | GLN |
| 8 | Ld | 164 | ASN |
| 8 | Ld | 180 | GLN |
| 7 | Le | 83 | GLN |
| 8 | Lf | 40 | ASN |
| 8 | Lf | 124 | GLN |
| 8 | Lf | 139 | ASN |
| 8 | Lf | 164 | ASN |
| 8 | Lf | 180 | GLN |
| 7 | Lg | 68 | GLN |
| 7 | Lg | 83 | GLN |
| 8 | Lh | 40 | ASN |
| 8 | Lh | 52 | HIS |
| 8 | Lh | 97 | ASN |
| 8 | Lh | 124 | GLN |
| 8 | Lh | 139 | ASN |
| 8 | Lh | 164 | ASN |
| 8 | Lh | 180 | GLN |
| 7 | Li | 68 | GLN |
| 7 | Li | 83 | GLN |
| 8 | Lj | 40 | ASN |
| 8 | Lj | 52 | HIS |
| 8 | Lj | 124 | GLN |
| 8 | Lj | 139 | ASN |
| 8 | Lj | 180 | GLN |
| 7 | Lk | 83 | GLN |
| 8 | Ll | 40 | ASN |
| 8 | Ll | 52 | HIS |
| 8 | Ll | 124 | GLN |
| 8 | Ll | 139 | ASN |
| 8 | Ll | 180 | GLN |

### 5.3.3 RNA

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry (i)

There are no ligands in this entry.

## 5.7 Other polymers (i)

There are no such residues in this entry.

## 5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

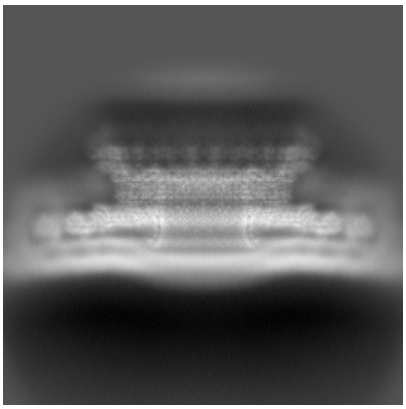
# 6 Map visualisation

This section contains visualisations of the EMDB entry EMD-72891. These allow visual inspection of the internal detail of the map and identification of artifacts.

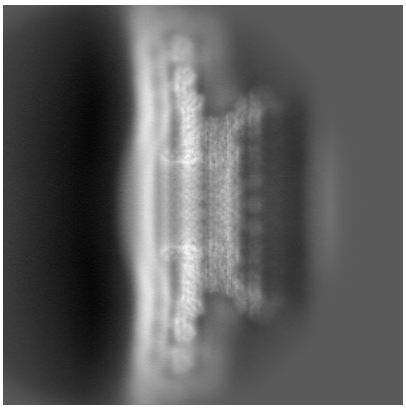
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

## 6.1 Orthogonal projections

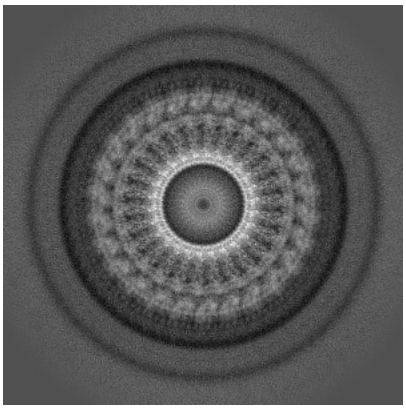
### 6.1.1 Primary map



X

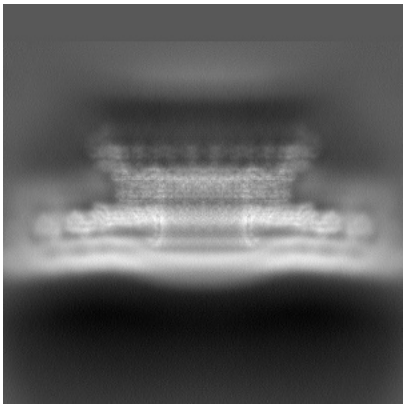


Y

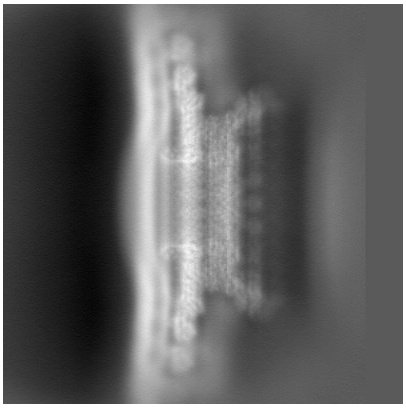


Z

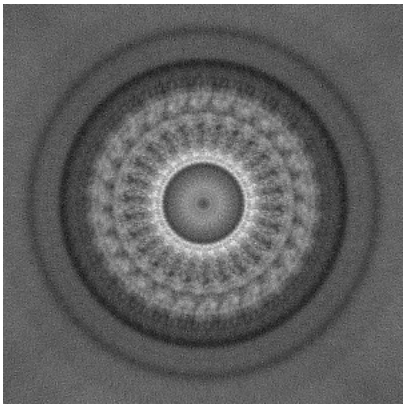
### 6.1.2 Raw map



X



Y

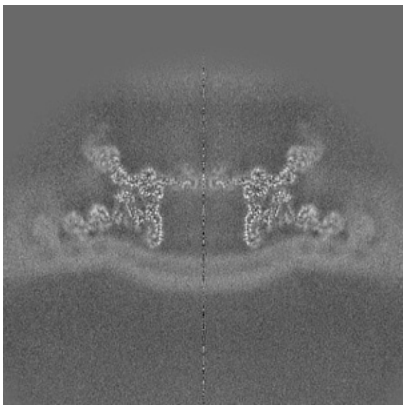


Z

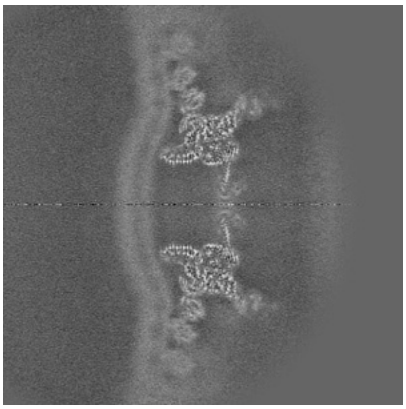
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices (i)

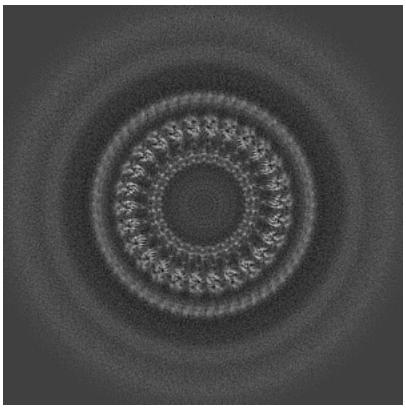
### 6.2.1 Primary map



X Index: 224

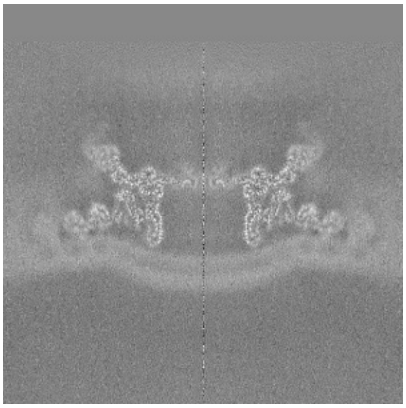


Y Index: 224

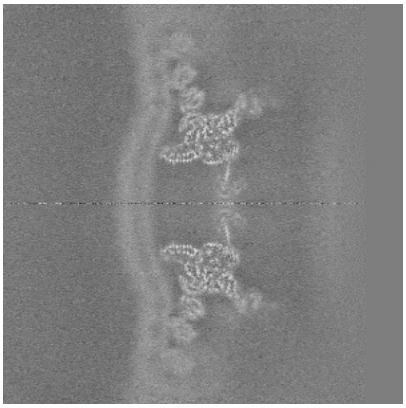


Z Index: 224

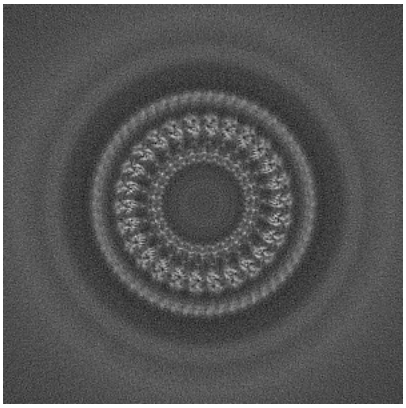
### 6.2.2 Raw map



X Index: 224



Y Index: 224

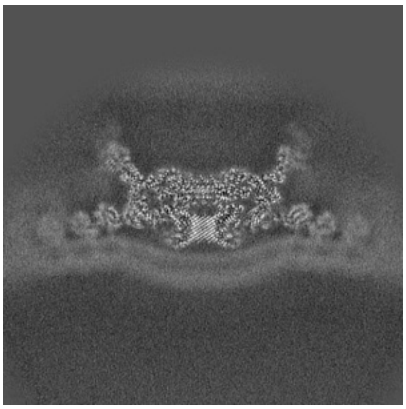


Z Index: 224

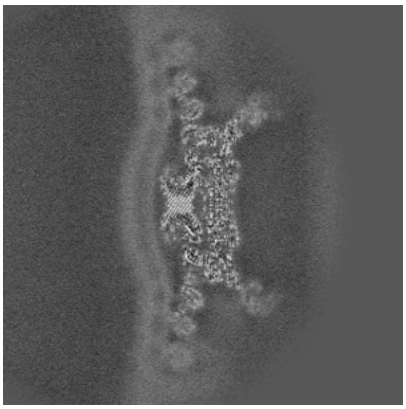
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices (i)

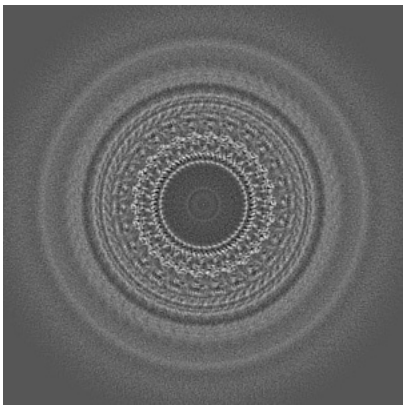
### 6.3.1 Primary map



X Index: 177

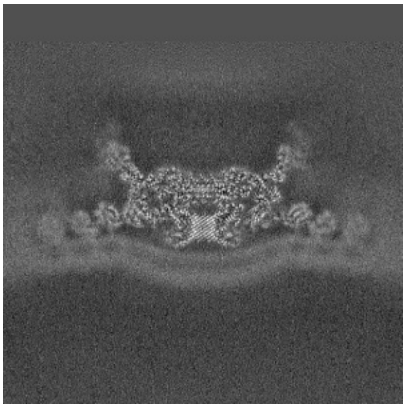


Y Index: 272

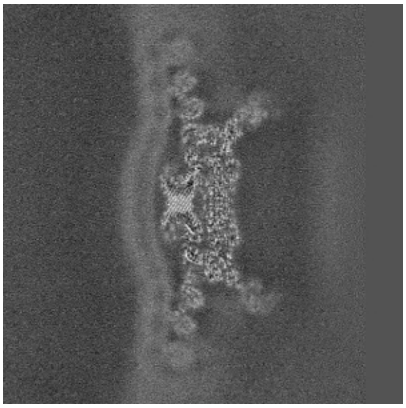


Z Index: 209

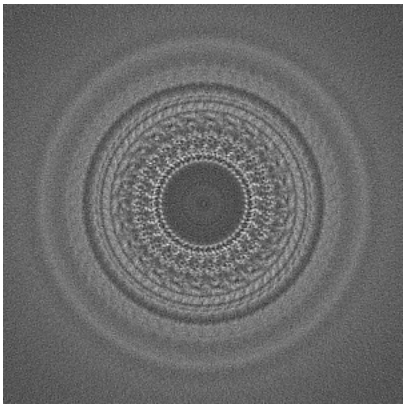
### 6.3.2 Raw map



X Index: 177



Y Index: 272

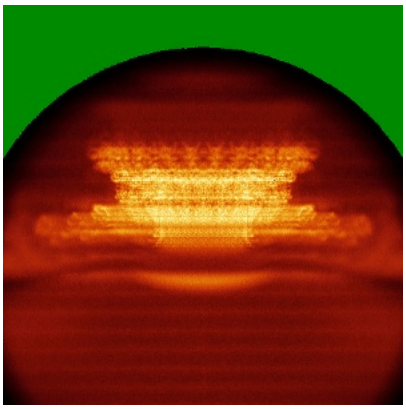


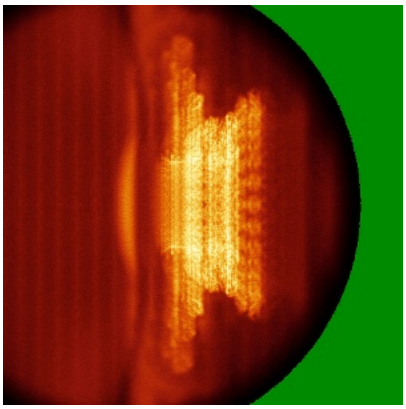
Z Index: 208

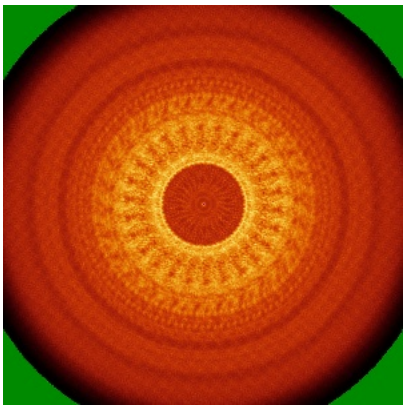
The images above show the largest variance slices of the map in three orthogonal directions.

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

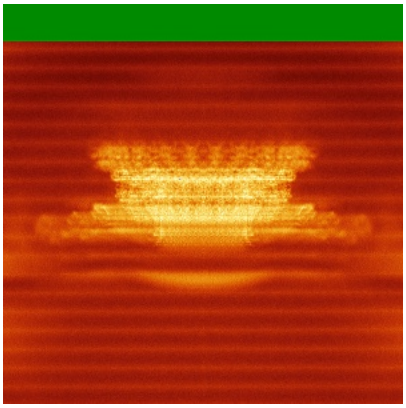
### 6.4.1 Primary map

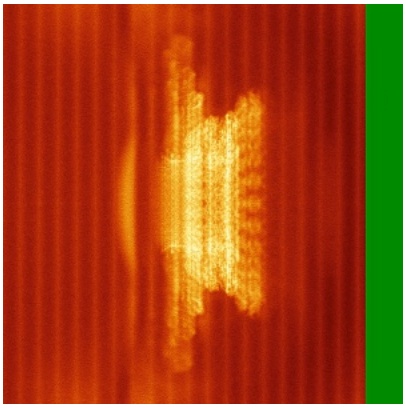

X

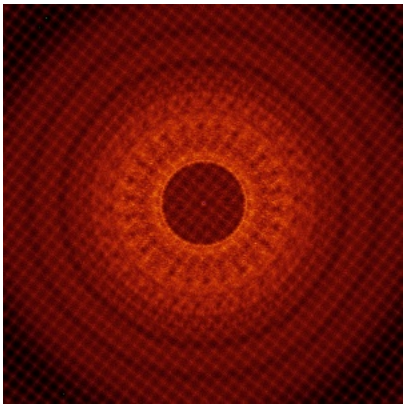

Y


Z

### 6.4.2 Raw map


X

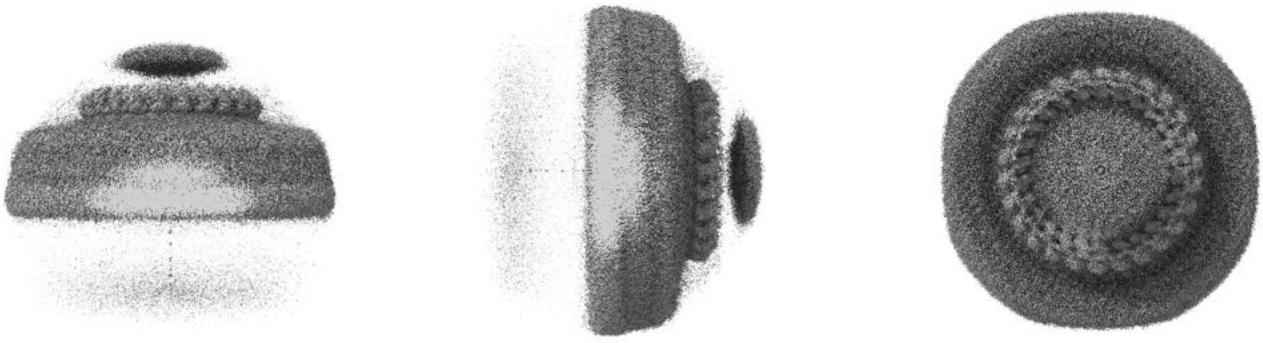

Y


Z

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

## 6.5 Orthogonal surface views (i)

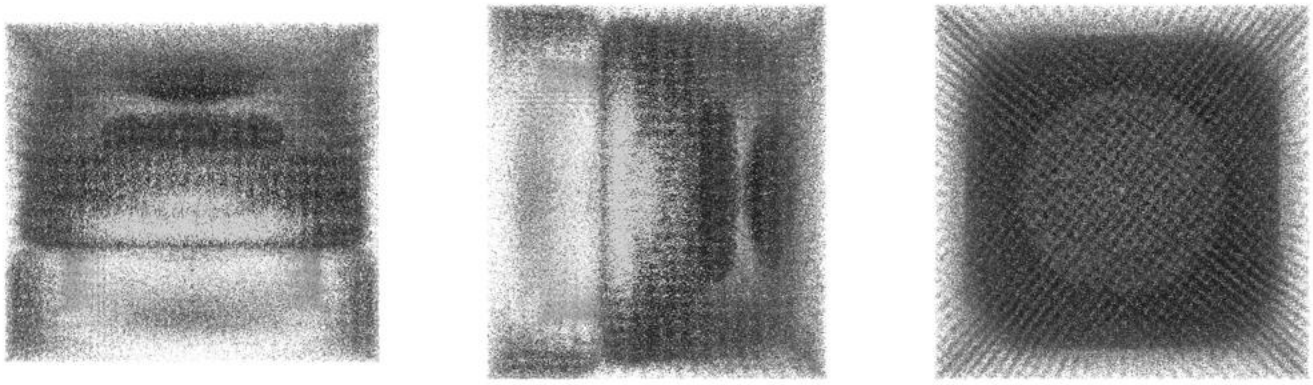
### 6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.05. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

### 6.5.2 Raw map



X Y Z

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

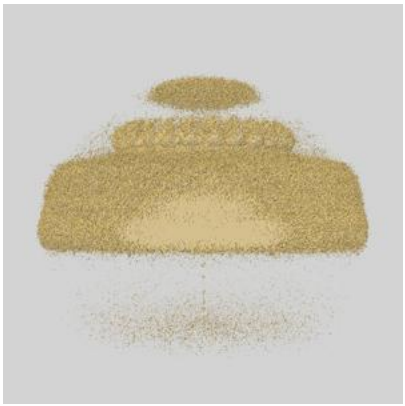
## 6.6 Mask visualisation (i)

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

A mask typically either:

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

### 6.6.1 emd_72891_msk_1.map (i)



X

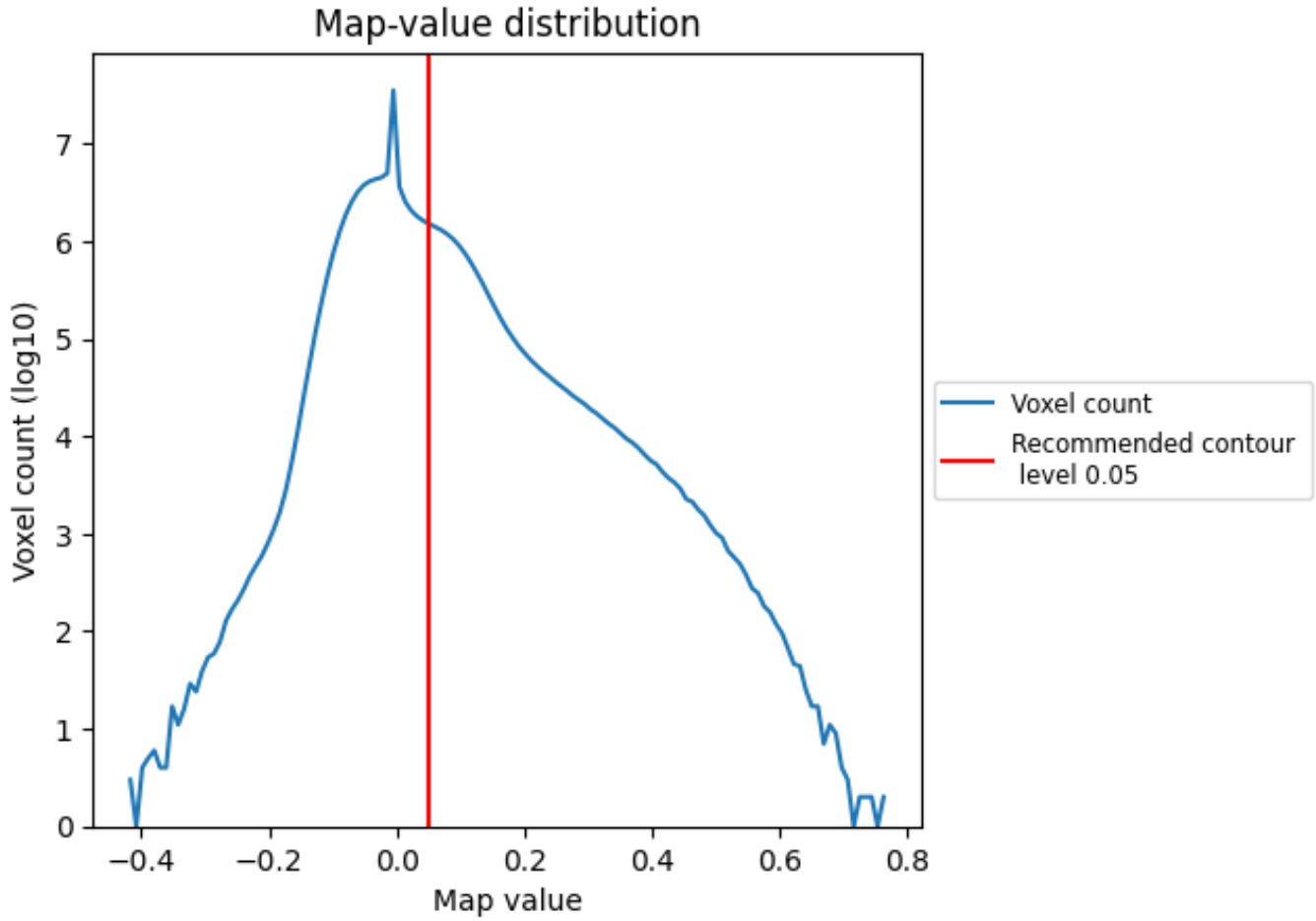
Y

Z

# 7 Map analysis

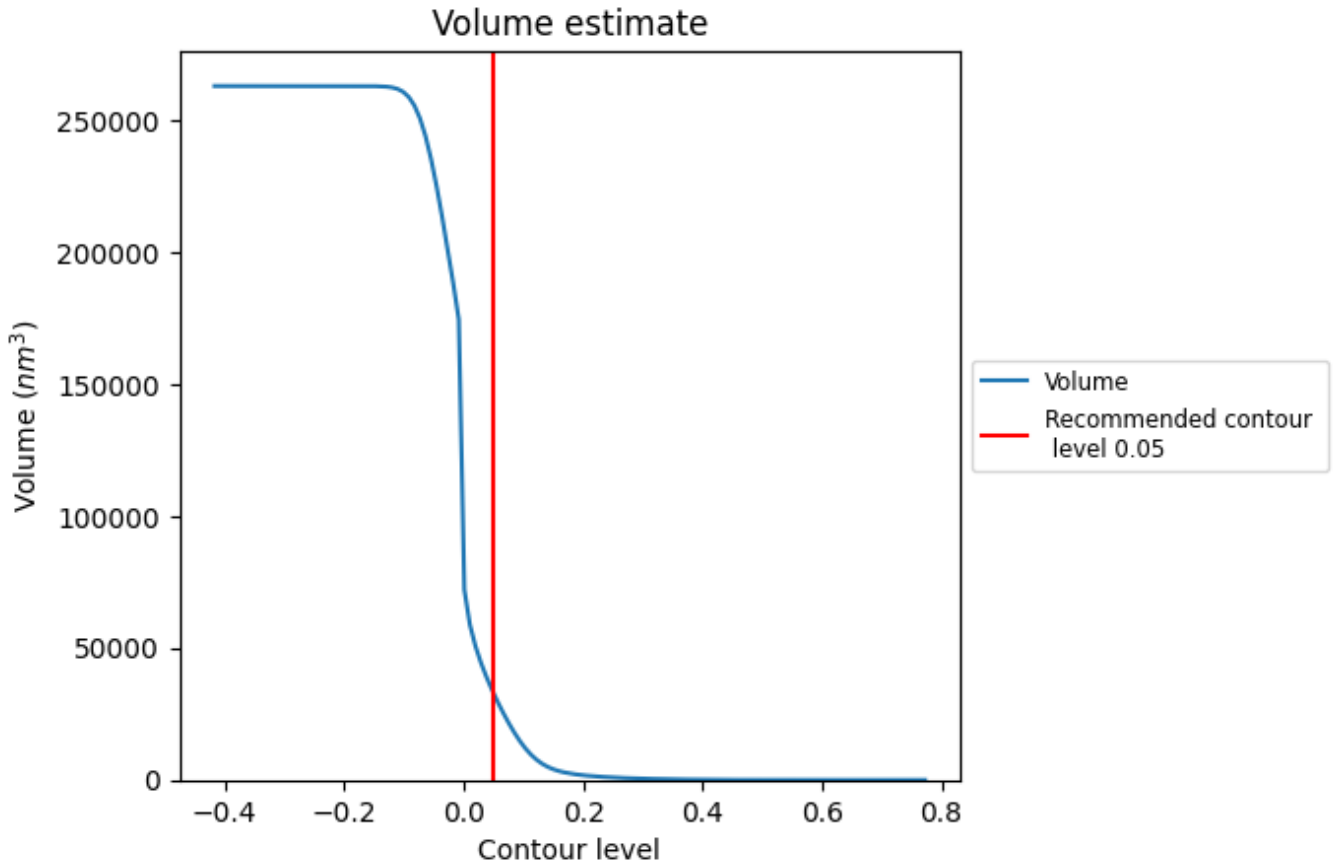
This section contains the results of statistical analysis of the map.

## 7.1 Map-value distribution




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

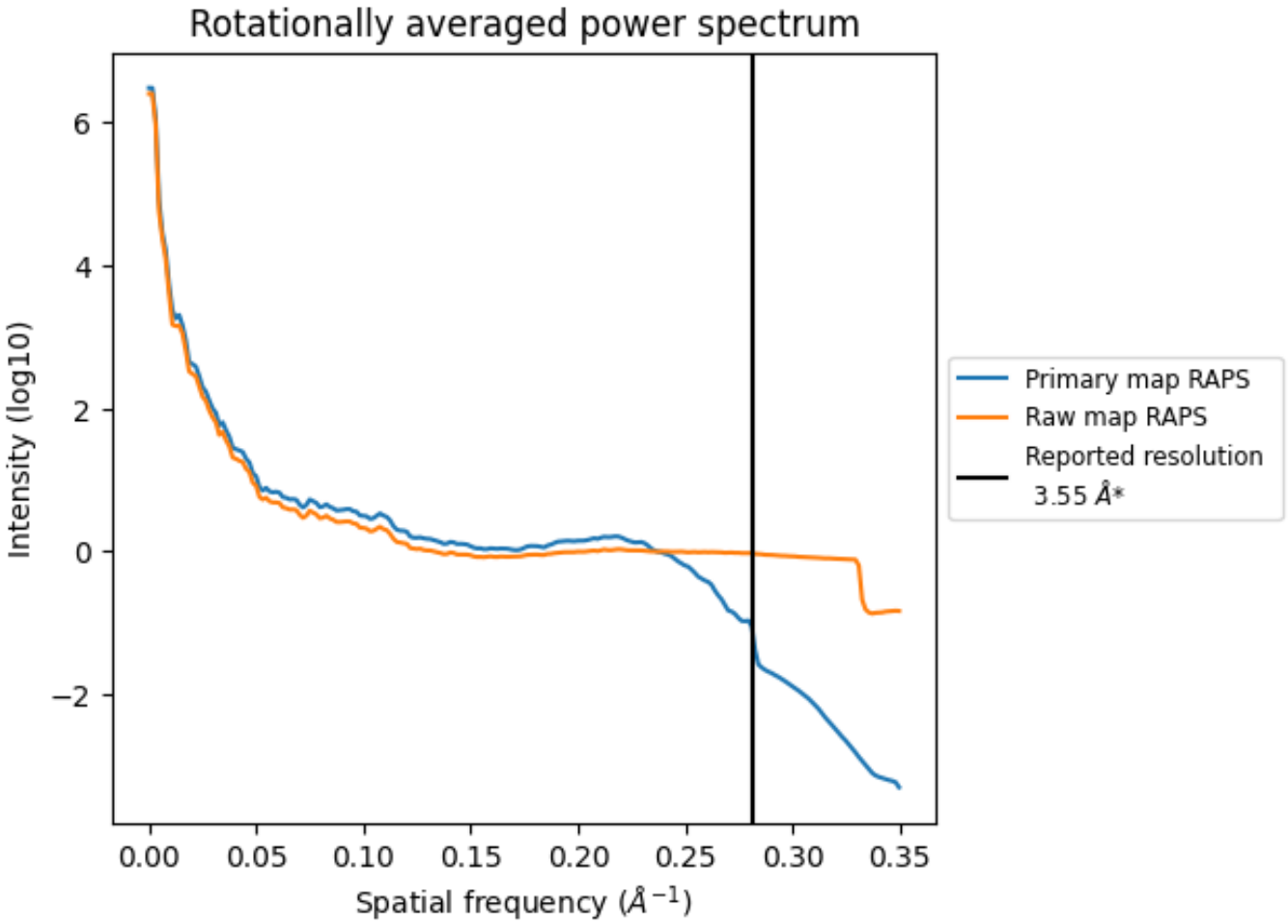
## 7.2 Volume estimate




The volume at the recommended contour level is 32880 $nm^3$; this corresponds to an approximate mass of 29702 kDa.

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

## 7.3 Rotationally averaged power spectrum (i)

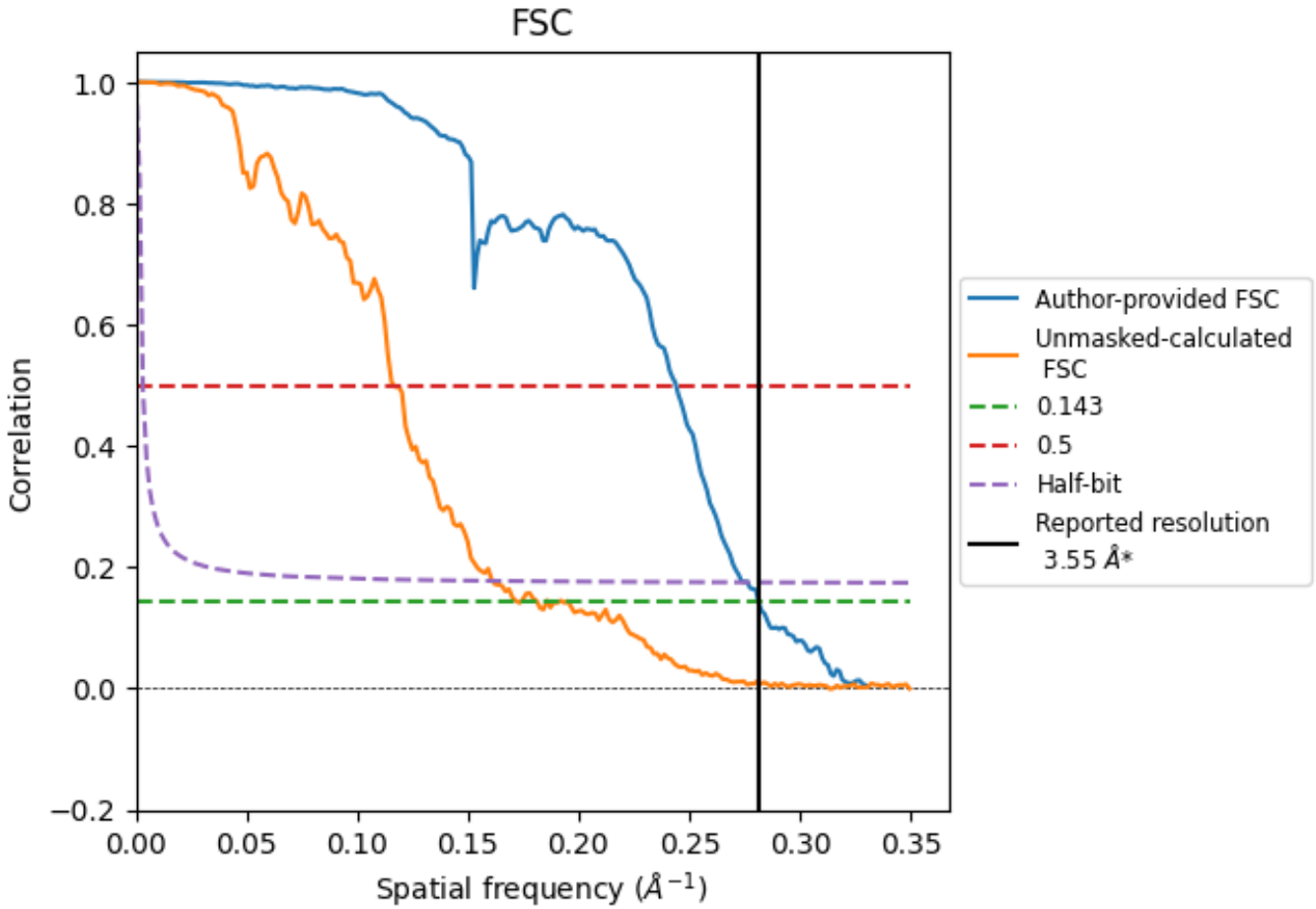



*Reported resolution corresponds to spatial frequency of 0.282 Å$^{-1}$

# 8 Fourier-Shell correlation

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

## 8.1 FSC




*Reported resolution corresponds to spatial frequency of 0.282 Å$^{-1}$

## 8.2 Resolution estimates (i)

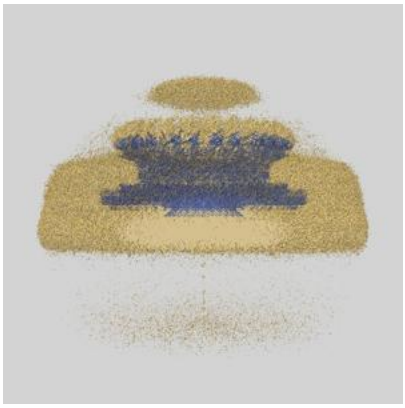
| Resolution estimate (Å) | Estimation criterion (FSC cut-off) | | |
|---|---|---|---|
| | 0.143 | 0.5 | Half-bit |
| Reported by author | 3.55 | - | - |
| Author-provided FSC curve | 3.55 | 4.10 | 3.62 |
| Unmasked-calculated* | 5.80 | 8.58 | 6.21 |

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 5.80 differs from the reported value 3.55 by more than 10 %

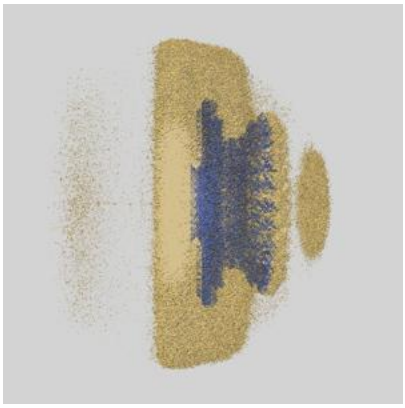
# 9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-72891 and PDB model 9YFG. Per-residue inclusion information can be found in section 3 on page 31.

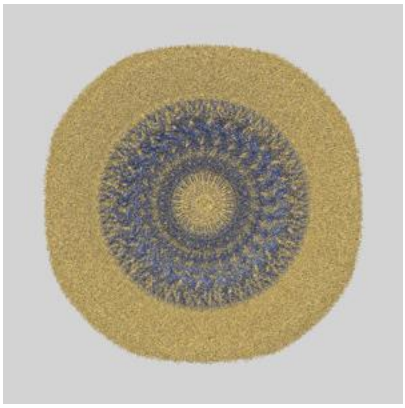
## 9.1 Map-model overlay



X



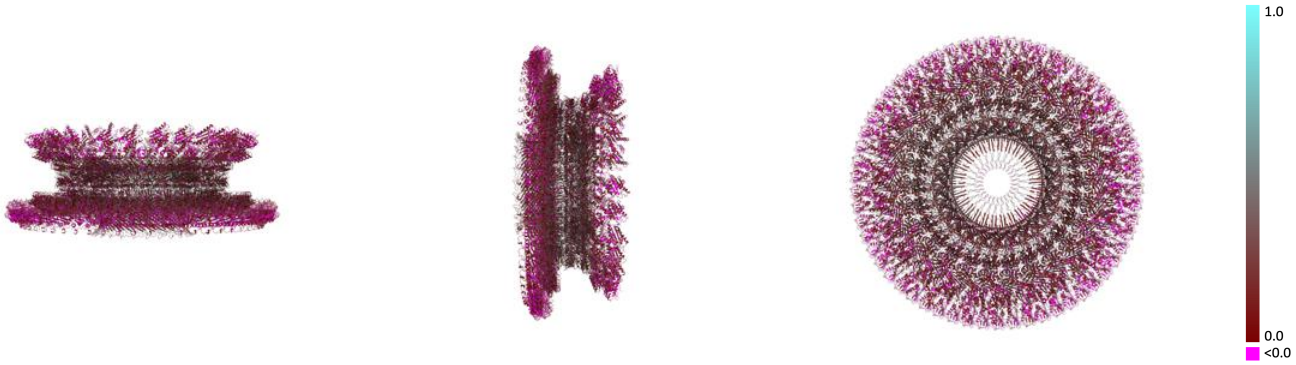
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.05 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

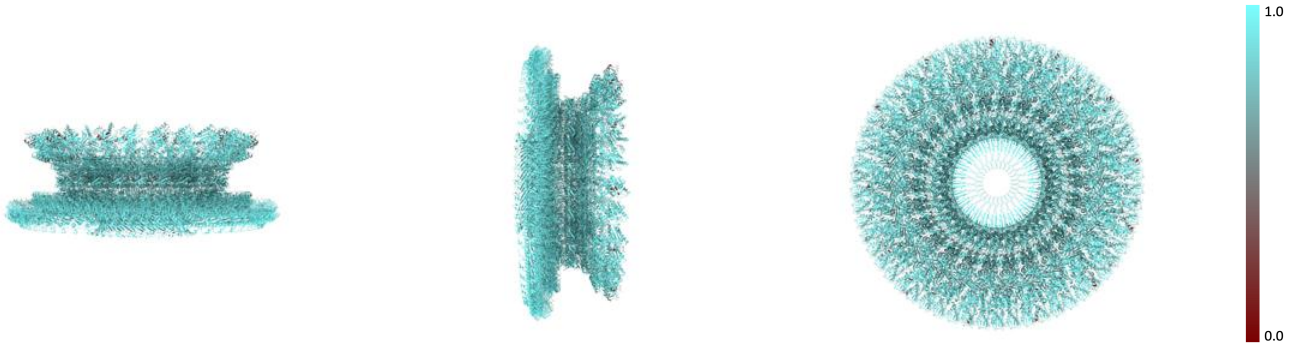
## 9.2 Q-score mapped to coordinate model (i)




X Y Z

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

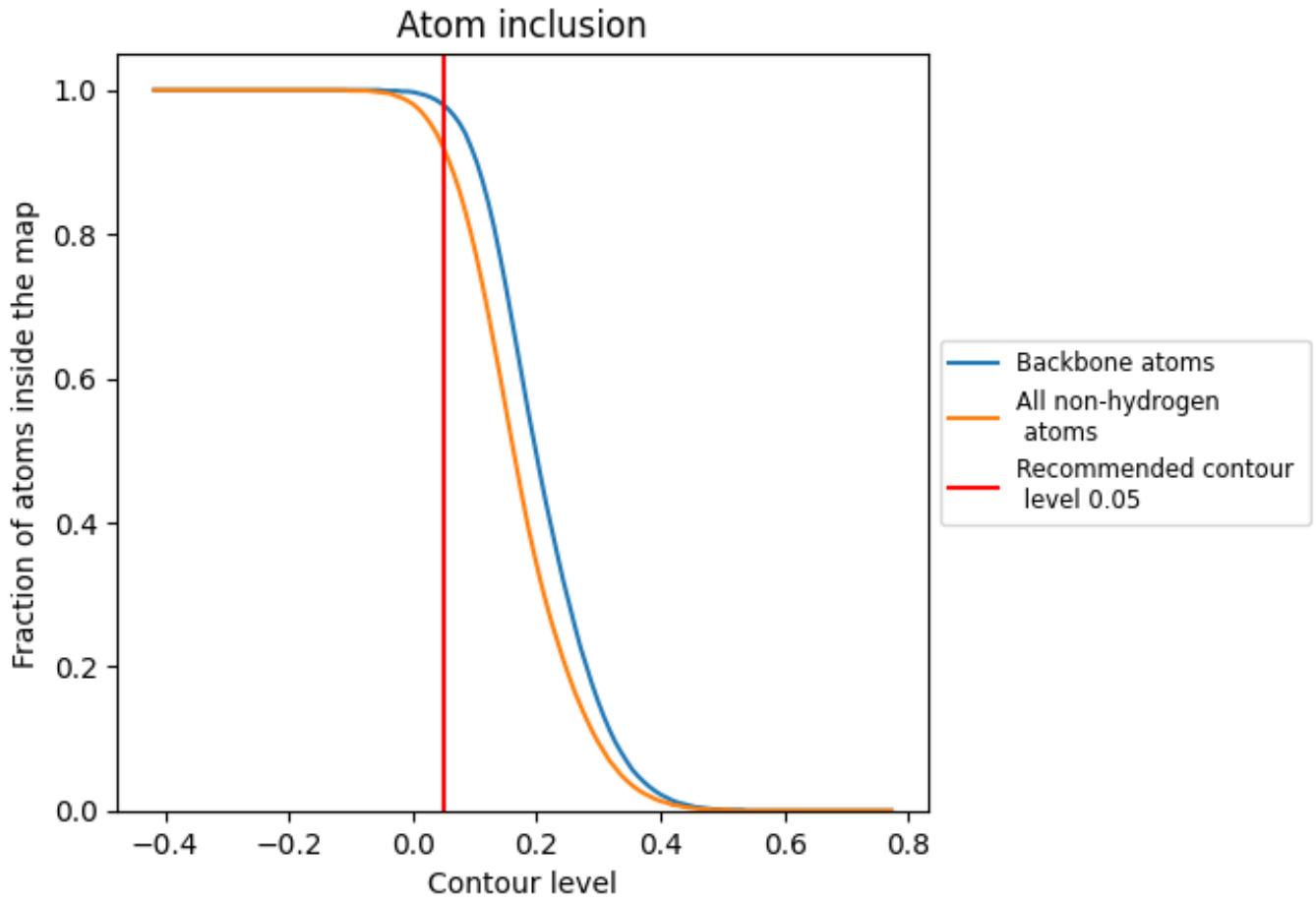
## 9.3 Atom inclusion mapped to coordinate model (i)




X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.05).

## 9.4 Atom inclusion (i)




At the recommended contour level, 98% of all backbone atoms, 92% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.05) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion | Q-score |
|---|---|---|
| All | 0.9190 | 0.1830 |
| Aa | 0.9120 | 0.2900 |
| Ab | 0.9190 | 0.3010 |
| Ac | 0.9250 | 0.3020 |
| Ad | 0.9280 | 0.3020 |
| Ae | 0.9280 | 0.2970 |
| Af | 0.9200 | 0.2900 |
| Ag | 0.9320 | 0.2820 |
| Ah | 0.9220 | 0.2670 |
| Ai | 0.9080 | 0.2450 |
| Aj | 0.9070 | 0.2290 |
| Ak | 0.9030 | 0.2170 |
| Al | 0.8980 | 0.2040 |
| Am | 0.8860 | 0.1980 |
| An | 0.8940 | 0.2010 |
| Ao | 0.8980 | 0.2110 |
| Ap | 0.9000 | 0.2350 |
| Aq | 0.8970 | 0.2290 |
| Ar | 0.9000 | 0.2430 |
| As | 0.9080 | 0.2510 |
| At | 0.9130 | 0.2540 |
| Au | 0.9130 | 0.2600 |
| Av | 0.9200 | 0.2560 |
| Aw | 0.9170 | 0.2570 |
| Ax | 0.9180 | 0.2630 |
| Ay | 0.9160 | 0.2650 |
| Az | 0.9080 | 0.2790 |
| Ba | 0.9080 | 0.2080 |
| Bb | 0.9190 | 0.2230 |
| Bc | 0.9200 | 0.2310 |
| Bd | 0.9090 | 0.2410 |
| Be | 0.9130 | 0.2490 |
| Bf | 0.9140 | 0.2560 |
| Bg | 0.9160 | 0.2620 |
| Bh | 0.9150 | 0.2670 |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| Chain | Atom inclusion | Q-score |
|---|---|---|
| Bi | 0.9200 | 0.2680 |
| Bj | 0.9230 | 0.2690 |
| Bk | 0.9330 | 0.2650 |
| Bl | 0.9270 | 0.2620 |
| Bm | 0.9290 | 0.2620 |
| Bn | 0.9260 | 0.2660 |
| Bo | 0.9300 | 0.2730 |
| Bp | 0.9370 | 0.2790 |
| Bq | 0.9280 | 0.2880 |
| Br | 0.9270 | 0.2930 |
| Bs | 0.9240 | 0.2910 |
| Bt | 0.9260 | 0.2790 |
| Bu | 0.9180 | 0.2650 |
| Bv | 0.9130 | 0.2520 |
| Bw | 0.9100 | 0.2320 |
| Bx | 0.9050 | 0.2240 |
| By | 0.9070 | 0.2120 |
| Bz | 0.9060 | 0.2130 |
| Ca | 0.8760 | 0.1750 |
| Cb | 0.8720 | 0.1510 |
| Cc | 0.8830 | 0.1630 |
| Cd | 0.8840 | 0.1820 |
| Ce | 0.8980 | 0.1920 |
| Cf | 0.8930 | 0.1940 |
| Cg | 0.8980 | 0.2080 |
| Ch | 0.9140 | 0.2340 |
| Ci | 0.9120 | 0.2250 |
| Cj | 0.9130 | 0.2140 |
| Ck | 0.8980 | 0.2080 |
| Cl | 0.9000 | 0.2010 |
| Cm | 0.9060 | 0.2260 |
| Cn | 0.9110 | 0.2410 |
| Co | 0.9110 | 0.2340 |
| Cp | 0.9170 | 0.2280 |
| Cq | 0.9240 | 0.2430 |
| Cr | 0.9250 | 0.2630 |
| Cs | 0.9210 | 0.2600 |
| Ct | 0.9310 | 0.2640 |
| Cu | 0.9260 | 0.2700 |
| Cv | 0.9230 | 0.2770 |
| Cw | 0.9130 | 0.2570 |
| Cx | 0.9020 | 0.2240 |

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| Chain | Atom inclusion | Q-score |
|---|---|---|
| Cy | 0.8900 | 0.1860 |
| Cz | 0.8860 | 0.1900 |
| Da | 0.9060 | 0.1370 |
| Db | 0.9290 | 0.1670 |
| Dc | 0.9050 | 0.1260 |
| Dd | 0.9200 | 0.1700 |
| De | 0.9160 | 0.1480 |
| Df | 0.9180 | 0.1900 |
| Dg | 0.9190 | 0.1600 |
| Dh | 0.9310 | 0.1980 |
| Di | 0.9190 | 0.1770 |
| Dj | 0.9300 | 0.1970 |
| Dk | 0.9190 | 0.1840 |
| Dl | 0.9310 | 0.2100 |
| Dm | 0.9300 | 0.1990 |
| Dn | 0.9280 | 0.2270 |
| Do | 0.9190 | 0.2100 |
| Dp | 0.9160 | 0.2050 |
| Dq | 0.9150 | 0.1950 |
| Dr | 0.9090 | 0.1860 |
| Ds | 0.9130 | 0.1900 |
| Dt | 0.8910 | 0.1590 |
| Du | 0.9030 | 0.1750 |
| Dv | 0.8960 | 0.1720 |
| Dw | 0.8990 | 0.1780 |
| Dx | 0.9000 | 0.1680 |
| Dy | 0.9060 | 0.1680 |
| Dz | 0.9280 | 0.1790 |
| Ea | 0.8730 | 0.0400 |
| Eb | 0.8300 | 0.0680 |
| Ec | 0.8580 | 0.0600 |
| Ed | 0.8460 | 0.0590 |
| Ee | 0.8590 | 0.0930 |
| Ef | 0.8410 | 0.0710 |
| Eg | 0.8940 | 0.1130 |
| Eh | 0.8570 | 0.0930 |
| Ei | 0.8950 | 0.0850 |
| Ej | 0.8550 | 0.0790 |
| Ek | 0.8970 | 0.1070 |
| El | 0.8520 | 0.0810 |
| Em | 0.8840 | 0.0920 |
| En | 0.8850 | 0.0990 |

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| Chain | Atom inclusion | Q-score |
|---|---|---|
| Eo | 0.8810 | 0.1150 |
| Ep | 0.8930 | 0.1100 |
| Eq | 0.8730 | 0.1260 |
| Er | 0.9120 | 0.1120 |
| Es | 0.8890 | 0.1290 |
| Et | 0.8930 | 0.0970 |
| Eu | 0.9040 | 0.1410 |
| Ev | 0.8880 | 0.0930 |
| Ew | 0.9090 | 0.1220 |
| Ex | 0.8460 | 0.0930 |
| Ey | 0.8760 | 0.0570 |
| Ez | 0.8230 | 0.0780 |
| Fa | 0.8060 | 0.1810 |
| Fb | 0.8350 | 0.1120 |
| Fc | 0.8830 | 0.1480 |
| Fd | 0.9030 | 0.1500 |
| Fe | 0.8640 | 0.1470 |
| Ff | 0.8450 | 0.1040 |
| Fg | 0.9130 | 0.1470 |
| Fh | 0.8250 | 0.0740 |
| Fi | 0.8930 | 0.1020 |
| Fj | 0.8350 | 0.0890 |
| Fk | 0.8450 | 0.1000 |
| Fl | 0.8830 | 0.1110 |
| Fm | 0.8640 | 0.1110 |
| Fn | 0.8540 | 0.0790 |
| Fo | 0.7960 | 0.0880 |
| Fp | 0.8740 | 0.0990 |
| Fq | 0.8640 | 0.1760 |
| Fr | 0.8830 | 0.1510 |
| Fs | 0.9130 | 0.1590 |
| Ft | 0.9220 | 0.2040 |
| Fu | 0.9130 | 0.2220 |
| Fv | 0.9220 | 0.2150 |
| Fw | 0.8450 | 0.1400 |
| Fx | 0.8930 | 0.1200 |
| Fy | 0.9420 | 0.2130 |
| Fz | 0.8930 | 0.1950 |
| Ga | 0.8640 | 0.1150 |
| Gb | 0.9320 | 0.1520 |
| Gc | 0.8640 | 0.1470 |
| Gd | 0.8830 | 0.1590 |

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| Chain | Atom inclusion | Q-score |
|---|---|---|
| Ge | 0.9130 | 0.0930 |
| Gf | 0.8160 | 0.0970 |
| Gg | 0.9030 | 0.1670 |
| Gh | 0.8640 | 0.2230 |
| Gi | 0.9030 | 0.1640 |
| Gj | 0.9320 | 0.1390 |
| Gk | 0.9130 | 0.1290 |
| Gl | 0.9320 | 0.1480 |
| Gm | 0.9130 | 0.2080 |
| Gn | 0.9030 | 0.2240 |
| Go | 0.9320 | 0.1400 |
| Gp | 0.9520 | 0.0900 |
| Gq | 0.9320 | 0.1710 |
| Gr | 0.8740 | 0.1280 |
| Gs | 0.8450 | 0.1080 |
| Gt | 0.8740 | 0.1960 |
| Gu | 0.9220 | 0.1500 |
| Gv | 0.9220 | 0.2030 |
| Gw | 0.9320 | 0.1460 |
| Gx | 0.8450 | 0.0880 |
| Gy | 0.8350 | 0.0940 |
| Gz | 0.8350 | 0.1210 |
| Ha | 0.9410 | 0.1530 |
| Hb | 0.9370 | 0.0990 |
| Hc | 0.9400 | 0.1620 |
| Hd | 0.9290 | 0.1060 |
| He | 0.9330 | 0.1810 |
| Hf | 0.9360 | 0.0960 |
| Hg | 0.9420 | 0.1720 |
| Hh | 0.9370 | 0.0960 |
| Hi | 0.9420 | 0.1800 |
| Hj | 0.9470 | 0.1130 |
| Hk | 0.9520 | 0.1850 |
| Hl | 0.9350 | 0.0930 |
| Hm | 0.9610 | 0.1950 |
| Hn | 0.9340 | 0.1020 |
| Ho | 0.9400 | 0.1950 |
| Hp | 0.9360 | 0.0930 |
| Hq | 0.9570 | 0.1870 |
| Hr | 0.9500 | 0.0900 |
| Hs | 0.9480 | 0.2020 |
| Ht | 0.9470 | 0.0880 |

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| Chain | Atom inclusion | Q-score |
|---|---|---|
| Hu | 0.9590 | 0.1960 |
| Hv | 0.9550 | 0.0830 |
| Hw | 0.9510 | 0.1970 |
| Hx | 0.9540 | 0.0890 |
| Hy | 0.9460 | 0.1870 |
| Hz | 0.9510 | 0.0870 |
| Ia | 0.9560 | 0.1830 |
| Ib | 0.9550 | 0.0930 |
| Ic | 0.9430 | 0.1870 |
| Id | 0.9560 | 0.0870 |
| Ie | 0.9480 | 0.1830 |
| If | 0.9500 | 0.0770 |
| Ig | 0.9540 | 0.1910 |
| Ih | 0.9570 | 0.0780 |
| Ii | 0.9460 | 0.1960 |
| Ij | 0.9510 | 0.1060 |
| Ik | 0.9460 | 0.2070 |
| Il | 0.9500 | 0.0910 |
| Im | 0.9510 | 0.1870 |
| In | 0.9560 | 0.0830 |
| Io | 0.9470 | 0.2100 |
| Ip | 0.9460 | 0.0910 |
| Iq | 0.9410 | 0.2020 |
| Ir | 0.9490 | 0.0980 |
| Is | 0.9350 | 0.1810 |
| It | 0.9570 | 0.1030 |
| Iu | 0.9270 | 0.1730 |
| Iv | 0.9570 | 0.1110 |
| Iw | 0.9380 | 0.1870 |
| Ix | 0.9600 | 0.1090 |
| Iy | 0.9300 | 0.1730 |
| Iz | 0.9610 | 0.1170 |
| Ja | 0.9410 | 0.1860 |
| Jb | 0.9570 | 0.1230 |
| Jc | 0.9380 | 0.1980 |
| Jd | 0.9660 | 0.1200 |
| Je | 0.9410 | 0.1920 |
| Jf | 0.9610 | 0.1100 |
| Jg | 0.9360 | 0.1940 |
| Jh | 0.9500 | 0.1080 |
| Ji | 0.9380 | 0.1880 |
| Jj | 0.9660 | 0.1280 |

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| Chain | Atom inclusion | Q-score |
|---|---|---|
| Jk | 0.9350 | 0.1950 |
| Jl | 0.9590 | 0.1320 |
| Jm | 0.9430 | 0.1870 |
| Jn | 0.9580 | 0.1230 |
| Jo | 0.9470 | 0.2150 |
| Jp | 0.9590 | 0.1290 |
| Jq | 0.9360 | 0.2030 |
| Jr | 0.9600 | 0.1190 |
| Js | 0.9420 | 0.2210 |
| Jt | 0.9550 | 0.1340 |
| Ju | 0.9420 | 0.2180 |
| Jv | 0.9560 | 0.1230 |
| Jw | 0.9430 | 0.2060 |
| Jx | 0.9550 | 0.1190 |
| Jy | 0.9450 | 0.2030 |
| Jz | 0.9520 | 0.0980 |
| Ka | 0.9460 | 0.1790 |
| Kb | 0.9610 | 0.1060 |
| Kc | 0.9360 | 0.1950 |
| Kd | 0.9530 | 0.0960 |
| Ke | 0.9510 | 0.1930 |
| Kf | 0.9490 | 0.1070 |
| Kg | 0.9430 | 0.1820 |
| Kh | 0.9500 | 0.0990 |
| Ki | 0.9380 | 0.1570 |
| Kj | 0.9480 | 0.0950 |
| Kk | 0.9420 | 0.1800 |
| Kl | 0.9470 | 0.0950 |
| Km | 0.9460 | 0.1720 |
| Kn | 0.9480 | 0.1150 |
| Ko | 0.9500 | 0.1800 |
| Kp | 0.9420 | 0.1110 |
| Kq | 0.9460 | 0.1760 |
| Kr | 0.9420 | 0.1100 |
| Ks | 0.9280 | 0.1440 |
| Kt | 0.9350 | 0.0940 |
| Ku | 0.9270 | 0.1600 |
| Kv | 0.9300 | 0.0890 |
| Kw | 0.9330 | 0.1600 |
| Kx | 0.9280 | 0.1100 |
| Ky | 0.9310 | 0.1650 |
| Kz | 0.9410 | 0.0920 |

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| Chain | Atom inclusion | Q-score |
|---|---|---|
| La | 0.9310 | 0.1840 |
| Lb | 0.9330 | 0.1020 |
| Lc | 0.9420 | 0.1980 |
| Ld | 0.9390 | 0.1170 |
| Le | 0.9400 | 0.1970 |
| Lf | 0.9300 | 0.1180 |
| Lg | 0.9410 | 0.1950 |
| Lh | 0.9410 | 0.1110 |
| Li | 0.9450 | 0.1780 |
| Lj | 0.9330 | 0.1240 |
| Lk | 0.9470 | 0.1670 |
| Ll | 0.9300 | 0.1040 |