



Full wwPDB EM Validation Report ⓘ

May 13, 2024 – 09:45 pm BST

PDB ID : 6YEY
EMDB ID : EMD-10797
Title : Xenorhabdus nematophila XptA1 in complex with porcine mucosa heparin
Authors : Roderer, D.; Broecker, F.; Sitsel, O.; Kaplonek, P.; Leidreiter, F.; Seeberger, P.H.; Raunser, S.
Deposited on : 2020-03-25
Resolution : 3.70 Å(reported)
Based on initial model : 6RW8

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>.

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

EMDB validation analysis : 0.0.1.dev92
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : **FAILED**
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36.2

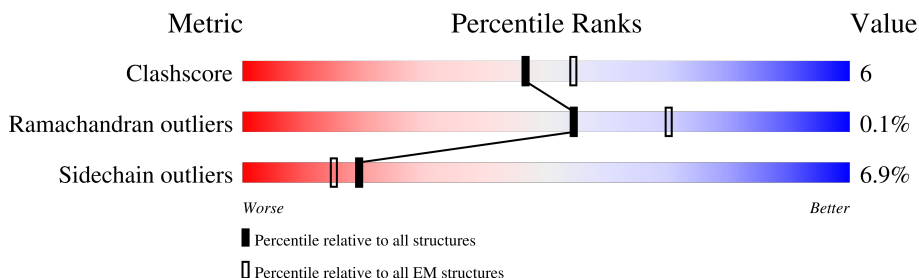
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.70 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	2523	
1	B	2523	
1	C	2523	
1	D	2523	
1	E	2523	

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 93500 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 A component of insecticidal toxin complex (Tc).

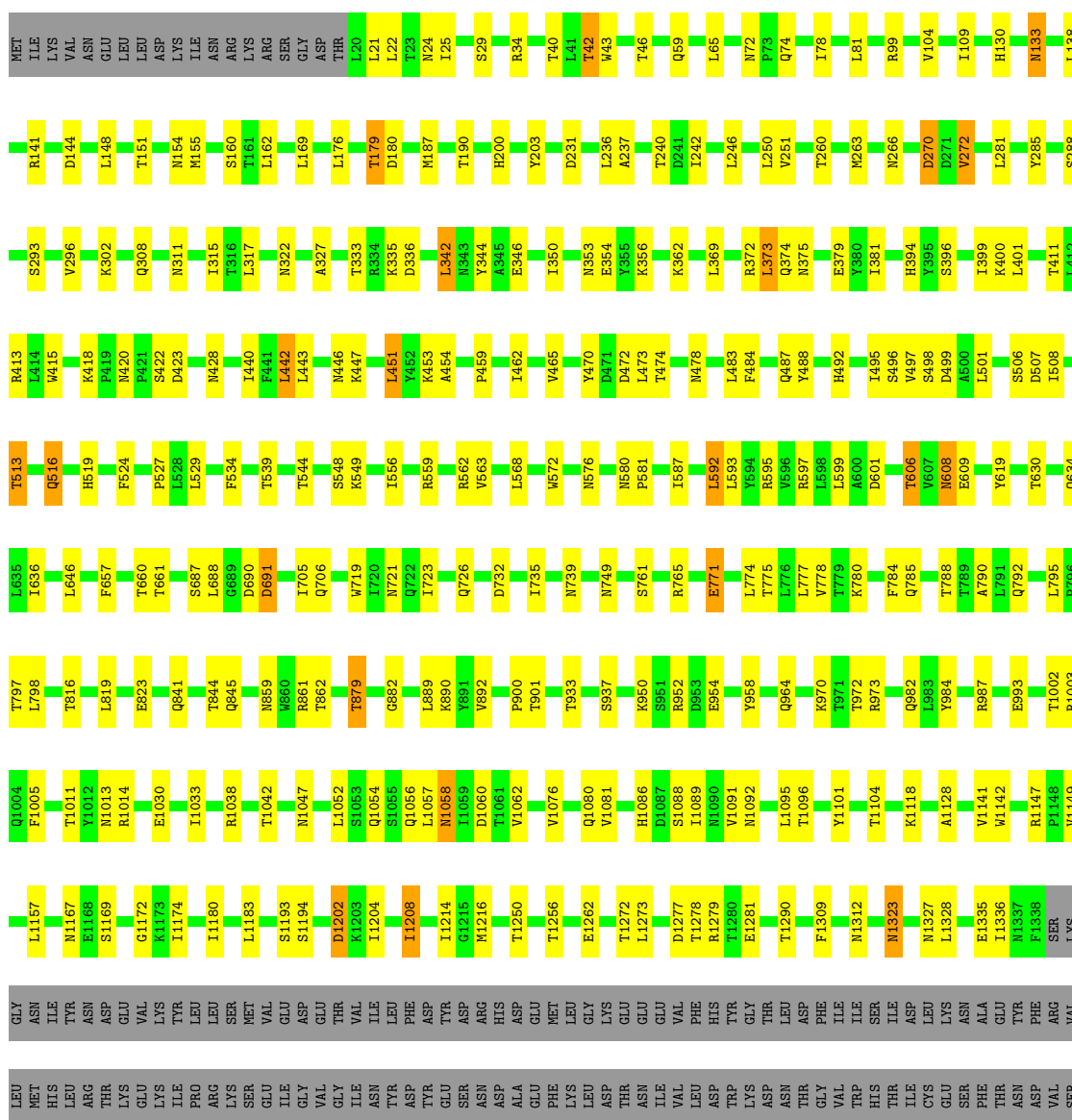
Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	2337	18700	11894	3132	3607	67	0	0
1	B	2337	18700	11894	3132	3607	67	0	0
1	C	2337	18700	11894	3132	3607	67	0	0
1	D	2337	18700	11894	3132	3607	67	0	0
1	E	2337	18700	11894	3132	3607	67	0	0

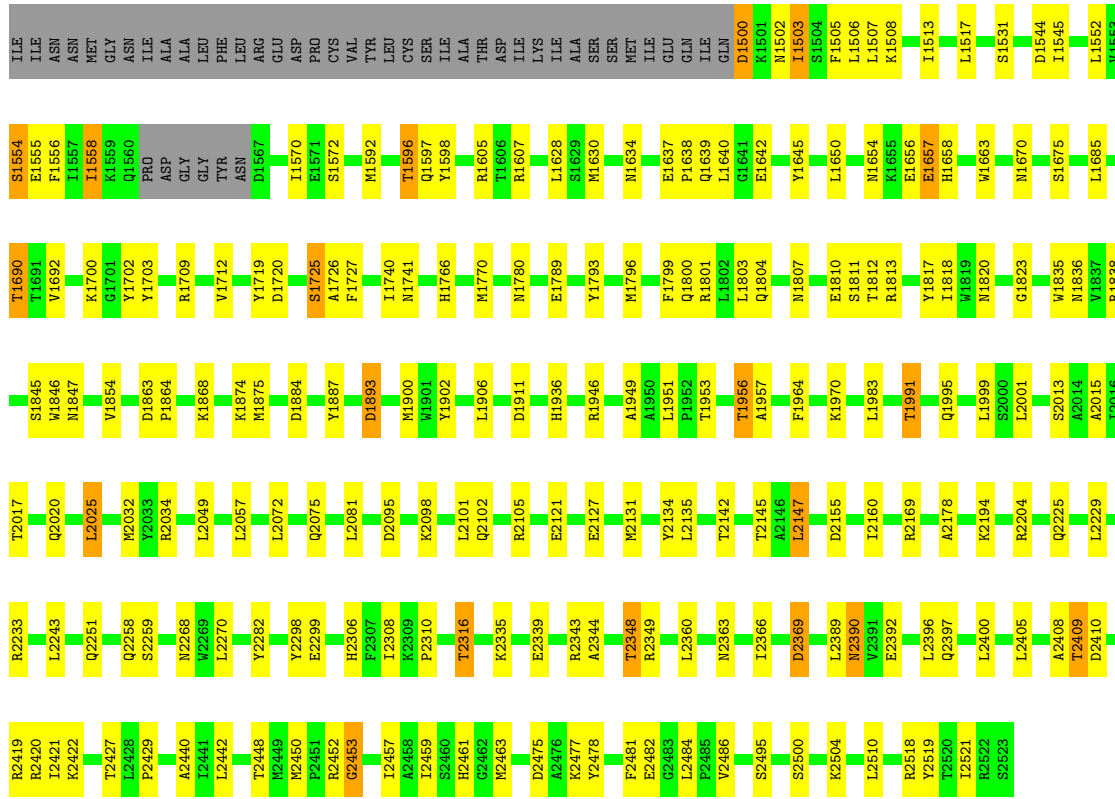
3 Residue-property plots [i](#)

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. 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. 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.

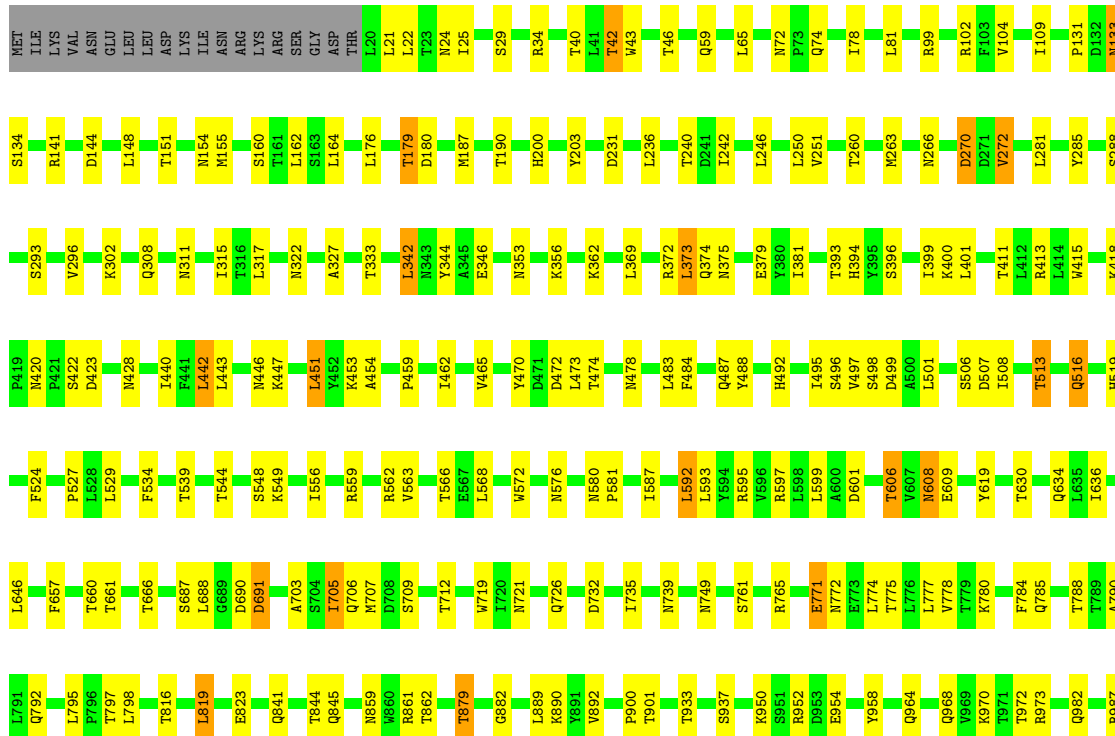
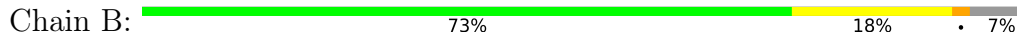
- Molecule 1: A component of insecticidal toxin complex (Tc)

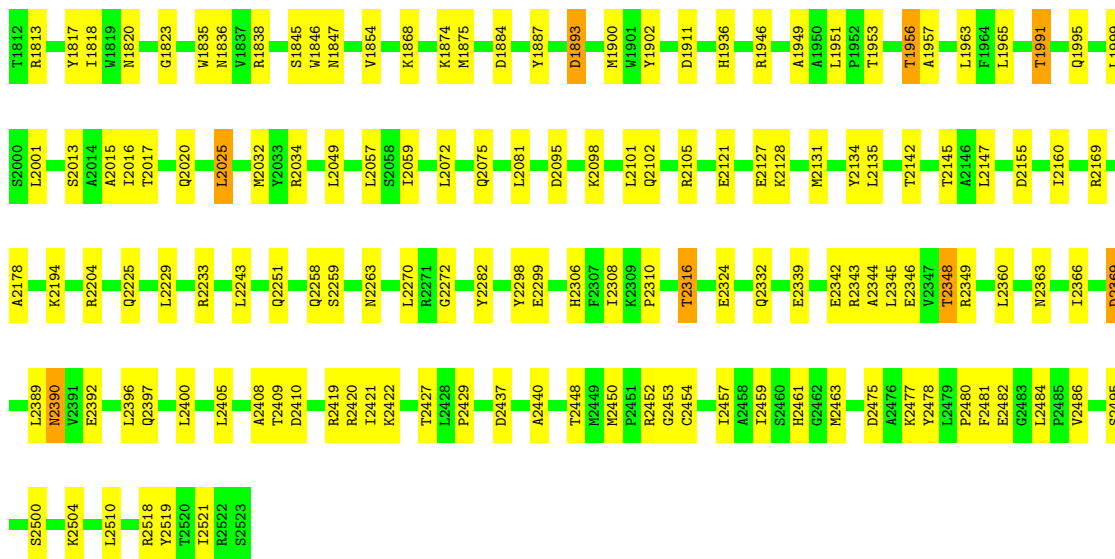
Chain A: 



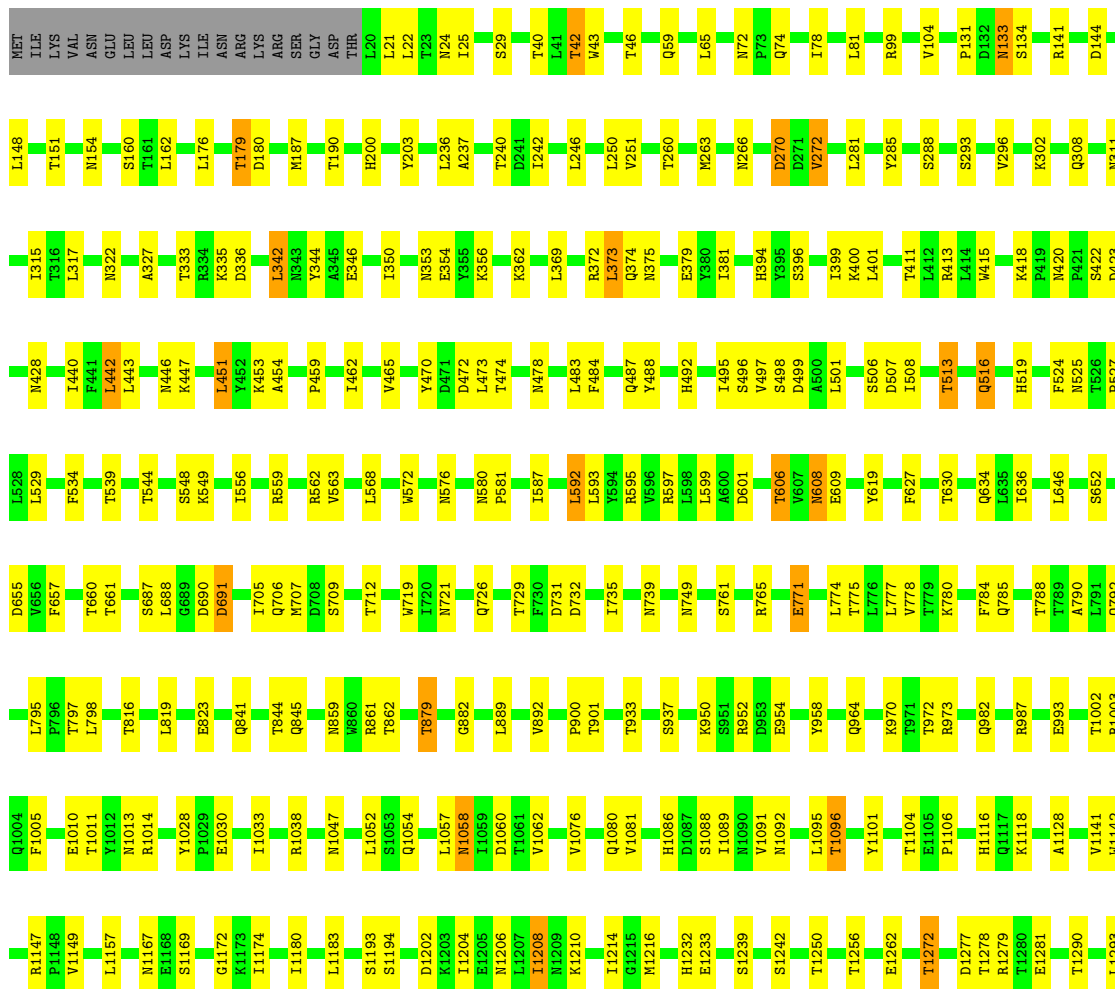


• Molecule 1: A component of insecticidal toxin complex (Tc)





• Molecule 1: A component of insecticidal toxin complex (Tc)



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C5	Depositor
Number of particles used	172596	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TALOS ARCTICA	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	52	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON III (4k x 4k)	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.34	0/19100	0.50	0/25936
1	B	0.34	0/19100	0.50	0/25936
1	C	0.34	0/19100	0.50	0/25936
1	D	0.34	0/19100	0.50	0/25936
1	E	0.34	0/19100	0.50	0/25936
All	All	0.34	0/95500	0.50	0/129680

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2
1	B	0	2
1	C	0	2
1	D	0	2
1	E	0	2
All	All	0	10

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (10) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1558	ILE	Peptide
1	A	2344	ALA	Peptide
1	B	1558	ILE	Peptide
1	B	2344	ALA	Peptide
1	C	1558	ILE	Peptide

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Mol	Chain	Res	Type	Group
1	C	2344	ALA	Peptide
1	D	1558	ILE	Peptide
1	D	2344	ALA	Peptide
1	E	1558	ILE	Peptide
1	E	2344	ALA	Peptide

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

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	18700	0	18400	247	0
1	B	18700	0	18400	247	0
1	C	18700	0	18400	266	0
1	D	18700	0	18400	251	0
1	E	18700	0	18400	250	0
All	All	93500	0	92000	1200	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 6.

All (1200) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:236:LEU:HB2	1:B:484:PHE:HB2	1.74	0.70
1:A:236:LEU:HB2	1:A:484:PHE:HB2	1.74	0.70
1:C:236:LEU:HB2	1:C:484:PHE:HB2	1.74	0.70
1:D:236:LEU:HB2	1:D:484:PHE:HB2	1.74	0.69
1:E:236:LEU:HB2	1:E:484:PHE:HB2	1.74	0.69
1:C:2258:GLN:HB3	1:D:2015:ALA:HB2	1.76	0.67
1:C:2194:LYS:HD2	1:E:1054:GLN:HE21	1.60	0.67
1:D:1663:TRP:HA	1:D:1685:LEU:H	1.62	0.65
1:E:1663:TRP:HA	1:E:1685:LEU:H	1.62	0.65
1:C:1607:ARG:HE	1:C:1640:LEU:HD21	1.63	0.64
1:E:1607:ARG:HE	1:E:1640:LEU:HD21	1.63	0.64
1:A:1663:TRP:HA	1:A:1685:LEU:H	1.62	0.64
1:B:1663:TRP:HA	1:B:1685:LEU:H	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1663:TRP:HA	1:C:1685:LEU:H	1.62	0.63
1:D:1607:ARG:HE	1:D:1640:LEU:HD21	1.63	0.63
1:B:1607:ARG:HE	1:B:1640:LEU:HD21	1.63	0.63
1:E:534:PHE:HB2	1:E:556:ILE:HD13	1.81	0.62
1:A:1607:ARG:HE	1:A:1640:LEU:HD21	1.63	0.62
1:D:534:PHE:HB2	1:D:556:ILE:HD13	1.81	0.62
1:A:1500:ASP:OD1	1:A:1500:ASP:N	2.33	0.62
1:A:534:PHE:HB2	1:A:556:ILE:HD13	1.81	0.62
1:B:1500:ASP:OD1	1:B:1500:ASP:N	2.33	0.61
1:E:1598:TYR:HB3	1:E:1640:LEU:HD22	1.82	0.61
1:A:151:THR:HG23	1:A:154:ASN:H	1.66	0.61
1:B:534:PHE:HB2	1:B:556:ILE:HD13	1.81	0.61
1:B:1500:ASP:HB2	1:B:1502:ASN:H	1.66	0.61
1:C:1598:TYR:HB3	1:C:1640:LEU:HD22	1.82	0.61
1:A:1598:TYR:HB3	1:A:1640:LEU:HD22	1.83	0.61
1:D:151:THR:HG23	1:D:154:ASN:H	1.66	0.61
1:C:374:GLN:HE21	1:C:413:ARG:HD2	1.66	0.61
1:C:1052:LEU:HD11	1:C:1062:VAL:HG23	1.83	0.61
1:C:1500:ASP:HB2	1:C:1502:ASN:H	1.66	0.61
1:C:534:PHE:HB2	1:C:556:ILE:HD13	1.81	0.61
1:D:242:ILE:HA	1:D:246:LEU:HD23	1.83	0.61
1:E:1500:ASP:HB2	1:E:1502:ASN:H	1.66	0.61
1:C:1500:ASP:N	1:C:1500:ASP:OD1	2.33	0.61
1:C:242:ILE:HA	1:C:246:LEU:HD23	1.83	0.60
1:D:1500:ASP:OD1	1:D:1500:ASP:N	2.33	0.60
1:A:374:GLN:HE21	1:A:413:ARG:HD2	1.66	0.60
1:C:151:THR:HG23	1:C:154:ASN:H	1.65	0.60
1:D:1052:LEU:HD11	1:D:1062:VAL:HG23	1.83	0.60
1:A:771:GLU:HA	1:A:774:LEU:HB3	1.84	0.60
1:B:374:GLN:HE21	1:B:413:ARG:HD2	1.66	0.60
1:B:1598:TYR:HB3	1:B:1640:LEU:HD22	1.82	0.60
1:D:1500:ASP:HB2	1:D:1502:ASN:H	1.66	0.60
1:B:1052:LEU:HD11	1:B:1062:VAL:HG23	1.83	0.60
1:E:242:ILE:HA	1:E:246:LEU:HD23	1.83	0.60
1:B:242:ILE:HA	1:B:246:LEU:HD23	1.83	0.60
1:E:151:THR:HG23	1:E:154:ASN:H	1.66	0.60
1:E:374:GLN:HE21	1:E:413:ARG:HD2	1.66	0.60
1:B:151:THR:HG23	1:B:154:ASN:H	1.66	0.60
1:D:374:GLN:HE21	1:D:413:ARG:HD2	1.66	0.60
1:D:1598:TYR:HB3	1:D:1640:LEU:HD22	1.82	0.60
1:B:1005:PHE:O	1:B:1013:ASN:ND2	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:889:LEU:HD22	1:D:900:PRO:HB3	1.84	0.60
1:E:1500:ASP:N	1:E:1500:ASP:OD1	2.33	0.60
1:A:242:ILE:HA	1:A:246:LEU:HD23	1.83	0.60
1:A:1500:ASP:HB2	1:A:1502:ASN:H	1.66	0.59
1:B:1505:PHE:HB3	1:B:1517:LEU:HB2	1.84	0.59
1:A:889:LEU:HD22	1:A:900:PRO:HB3	1.84	0.59
1:C:2284:LEU:HD11	1:D:2332:GLN:HG3	1.84	0.59
1:E:1005:PHE:O	1:E:1013:ASN:ND2	2.35	0.59
1:A:1766:HIS:HE2	1:E:1531:SER:HG	1.50	0.59
1:B:777:LEU:HD22	1:B:784:PHE:HB2	1.85	0.59
1:C:889:LEU:HD22	1:C:900:PRO:HB3	1.84	0.59
1:E:1052:LEU:HD11	1:E:1062:VAL:HG23	1.83	0.59
1:A:1505:PHE:HB3	1:A:1517:LEU:HB2	1.84	0.59
1:C:771:GLU:HA	1:C:774:LEU:HB3	1.84	0.59
1:C:1654:ASN:OD1	1:C:1658:HIS:NE2	2.36	0.59
1:D:1820:ASN:ND2	1:D:1823:GLY:O	2.36	0.59
1:E:777:LEU:HD22	1:E:784:PHE:HB2	1.85	0.59
1:A:1052:LEU:HD11	1:A:1062:VAL:HG23	1.83	0.59
1:D:771:GLU:HA	1:D:774:LEU:HB3	1.84	0.59
1:E:889:LEU:HD22	1:E:900:PRO:HB3	1.84	0.59
1:C:657:PHE:O	1:C:661:THR:HB	2.03	0.59
1:E:1820:ASN:ND2	1:E:1823:GLY:O	2.36	0.59
1:A:1005:PHE:O	1:A:1013:ASN:ND2	2.35	0.59
1:A:1820:ASN:ND2	1:A:1823:GLY:O	2.36	0.59
1:A:657:PHE:O	1:A:661:THR:HB	2.03	0.58
1:B:937:SER:OG	1:B:952:ARG:NH1	2.36	0.58
1:C:1505:PHE:HB3	1:C:1517:LEU:HB2	1.84	0.58
1:B:771:GLU:HA	1:B:774:LEU:HB3	1.84	0.58
1:B:1820:ASN:ND2	1:B:1823:GLY:O	2.36	0.58
1:E:771:GLU:HA	1:E:774:LEU:HB3	1.84	0.58
1:E:1505:PHE:HB3	1:E:1517:LEU:HB2	1.84	0.58
1:C:1820:ASN:ND2	1:C:1823:GLY:O	2.36	0.58
1:E:657:PHE:O	1:E:661:THR:HB	2.03	0.58
1:A:937:SER:OG	1:A:952:ARG:NH1	2.36	0.58
1:A:1650:LEU:HB2	1:A:1690:THR:HG23	1.86	0.58
1:A:1654:ASN:OD1	1:A:1658:HIS:NE2	2.35	0.58
1:A:2194:LYS:HD2	1:C:1054:GLN:HE21	1.68	0.58
1:B:599:LEU:HD21	1:B:636:ILE:HG12	1.86	0.58
1:D:1650:LEU:HB2	1:D:1690:THR:HG23	1.86	0.58
1:D:1654:ASN:OD1	1:D:1658:HIS:NE2	2.36	0.58
1:C:599:LEU:HD21	1:C:636:ILE:HG12	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1005:PHE:O	1:C:1013:ASN:ND2	2.35	0.58
1:D:657:PHE:O	1:D:661:THR:HB	2.03	0.58
1:D:777:LEU:HD22	1:D:784:PHE:HB2	1.85	0.58
1:A:599:LEU:HD21	1:A:636:ILE:HG12	1.86	0.58
1:E:1654:ASN:OD1	1:E:1658:HIS:NE2	2.35	0.58
1:A:2348:THR:HB	1:A:2518:ARG:HG2	1.86	0.58
1:D:1505:PHE:HB3	1:D:1517:LEU:HB2	1.84	0.58
1:E:2348:THR:HB	1:E:2518:ARG:HG2	1.86	0.58
1:A:777:LEU:HD22	1:A:784:PHE:HB2	1.85	0.57
1:B:889:LEU:HD22	1:B:900:PRO:HB3	1.84	0.57
1:B:2348:THR:HB	1:B:2518:ARG:HG2	1.86	0.57
1:C:2348:THR:HB	1:C:2518:ARG:HG2	1.86	0.57
1:D:1556:PHE:HB2	1:D:1570:ILE:HB	1.86	0.57
1:B:657:PHE:O	1:B:661:THR:HB	2.03	0.57
1:D:599:LEU:HD21	1:D:636:ILE:HG12	1.86	0.57
1:D:1323:ASN:OD1	1:D:1323:ASN:N	2.38	0.57
1:D:1725:SER:OG	1:D:1726:ALA:N	2.38	0.57
1:E:302:LYS:HG3	1:E:308:GLN:HE21	1.70	0.57
1:E:1645:TYR:HB2	1:E:1770:MET:HB2	1.87	0.57
1:A:1531:SER:HG	1:B:1766:HIS:HE2	1.51	0.57
1:C:777:LEU:HD22	1:C:784:PHE:HB2	1.85	0.57
1:C:937:SER:OG	1:C:952:ARG:NH1	2.37	0.57
1:D:1005:PHE:O	1:D:1013:ASN:ND2	2.35	0.57
1:A:59:GLN:OE1	1:A:1946:ARG:NH2	2.38	0.57
1:D:2348:THR:HB	1:D:2518:ARG:HG2	1.86	0.57
1:E:353:ASN:O	1:E:400:LYS:NZ	2.38	0.57
1:A:1323:ASN:OD1	1:A:1323:ASN:N	2.38	0.57
1:B:1645:TYR:HB2	1:B:1770:MET:HB2	1.87	0.57
1:C:302:LYS:HG3	1:C:308:GLN:HE21	1.70	0.57
1:E:937:SER:OG	1:E:952:ARG:NH1	2.37	0.57
1:A:353:ASN:O	1:A:400:LYS:NZ	2.38	0.57
1:B:353:ASN:O	1:B:400:LYS:NZ	2.38	0.57
1:C:1323:ASN:OD1	1:C:1323:ASN:N	2.38	0.57
1:C:1810:GLU:OE1	1:C:1813:ARG:NH1	2.38	0.57
1:D:353:ASN:O	1:D:400:LYS:NZ	2.38	0.57
1:D:937:SER:OG	1:D:952:ARG:NH1	2.36	0.57
1:E:1556:PHE:HB2	1:E:1570:ILE:HB	1.86	0.57
1:B:1810:GLU:OE1	1:B:1813:ARG:NH1	2.38	0.57
1:C:1650:LEU:HB2	1:C:1690:THR:HG23	1.86	0.57
1:D:1810:GLU:OE1	1:D:1813:ARG:NH1	2.38	0.57
1:C:1556:PHE:HB2	1:C:1570:ILE:HB	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1650:LEU:HB2	1:E:1690:THR:HG23	1.86	0.57
1:B:1650:LEU:HB2	1:B:1690:THR:HG23	1.86	0.57
1:E:1810:GLU:OE1	1:E:1813:ARG:NH1	2.38	0.57
1:A:1810:GLU:OE1	1:A:1813:ARG:NH1	2.38	0.56
1:B:59:GLN:OE1	1:B:1946:ARG:NH2	2.38	0.56
1:B:1556:PHE:HB2	1:B:1570:ILE:HB	1.86	0.56
1:B:1654:ASN:OD1	1:B:1658:HIS:NE2	2.36	0.56
1:D:22:LEU:HD23	1:D:25:ILE:HD12	1.87	0.56
1:A:1556:PHE:HB2	1:A:1570:ILE:HB	1.86	0.56
1:A:1725:SER:OG	1:A:1726:ALA:N	2.38	0.56
1:C:22:LEU:HD23	1:C:25:ILE:HD12	1.87	0.56
1:C:1645:TYR:HB2	1:C:1770:MET:HB2	1.87	0.56
1:E:599:LEU:HD21	1:E:636:ILE:HG12	1.86	0.56
1:B:608:ASN:OD1	1:B:608:ASN:N	2.39	0.56
1:C:726:GLN:OE1	1:C:749:ASN:ND2	2.37	0.56
1:D:719:TRP:HD1	1:D:778:VAL:HG22	1.70	0.56
1:E:1725:SER:OG	1:E:1726:ALA:N	2.38	0.56
1:A:302:LYS:HG3	1:A:308:GLN:HE21	1.69	0.56
1:B:302:LYS:HG3	1:B:308:GLN:HE21	1.69	0.56
1:A:719:TRP:HD1	1:A:778:VAL:HG22	1.70	0.56
1:A:1645:TYR:HB2	1:A:1770:MET:HB2	1.87	0.56
1:B:719:TRP:HD1	1:B:778:VAL:HG22	1.70	0.56
1:B:1323:ASN:N	1:B:1323:ASN:OD1	2.38	0.56
1:D:726:GLN:OE1	1:D:749:ASN:ND2	2.37	0.56
1:A:133:ASN:OD1	1:A:133:ASN:N	2.39	0.56
1:A:2390:ASN:ND2	1:A:2392:GLU:OE2	2.39	0.56
1:E:1323:ASN:N	1:E:1323:ASN:OD1	2.38	0.56
1:D:302:LYS:HG3	1:D:308:GLN:HE21	1.70	0.56
1:E:608:ASN:N	1:E:608:ASN:OD1	2.39	0.56
1:C:353:ASN:O	1:C:400:LYS:NZ	2.38	0.56
1:C:719:TRP:HD1	1:C:778:VAL:HG22	1.70	0.56
1:C:2390:ASN:ND2	1:C:2392:GLU:OE2	2.39	0.56
1:D:133:ASN:OD1	1:D:133:ASN:N	2.39	0.56
1:D:1645:TYR:HB2	1:D:1770:MET:HB2	1.87	0.56
1:D:496:SER:OG	1:D:497:VAL:N	2.39	0.56
1:A:496:SER:OG	1:A:497:VAL:N	2.39	0.55
1:C:59:GLN:OE1	1:C:1946:ARG:NH2	2.38	0.55
1:E:719:TRP:HD1	1:E:778:VAL:HG22	1.70	0.55
1:A:22:LEU:HD23	1:A:25:ILE:HD12	1.87	0.55
1:A:1057:LEU:O	1:A:1807:ASN:ND2	2.40	0.55
1:B:22:LEU:HD23	1:B:25:ILE:HD12	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:133:ASN:N	1:B:133:ASN:OD1	2.39	0.55
1:B:1327:ASN:ND2	1:B:1544:ASP:OD1	2.39	0.55
1:D:1057:LEU:O	1:D:1807:ASN:ND2	2.40	0.55
1:D:2478:TYR:O	1:E:2343:ARG:NH2	2.39	0.55
1:B:1057:LEU:O	1:B:1807:ASN:ND2	2.40	0.55
1:B:1607:ARG:NH2	1:B:1638:PRO:O	2.40	0.55
1:B:2390:ASN:ND2	1:B:2392:GLU:OE2	2.39	0.55
1:C:879:THR:HG23	1:C:882:GLY:H	1.72	0.55
1:D:735:ILE:O	1:D:739:ASN:ND2	2.39	0.55
1:D:879:THR:HG23	1:D:882:GLY:H	1.72	0.55
1:A:1607:ARG:NH2	1:A:1638:PRO:O	2.40	0.55
1:B:566:THR:HG21	1:C:842:VAL:HG23	1.88	0.55
1:C:1607:ARG:NH2	1:C:1638:PRO:O	2.40	0.55
1:D:608:ASN:OD1	1:D:608:ASN:N	2.39	0.55
1:E:22:LEU:HD23	1:E:25:ILE:HD12	1.87	0.55
1:B:703:ALA:HB2	1:C:2272:GLY:HA3	1.88	0.55
1:C:608:ASN:N	1:C:608:ASN:OD1	2.39	0.55
1:E:2390:ASN:ND2	1:E:2392:GLU:OE2	2.39	0.55
1:C:133:ASN:OD1	1:C:133:ASN:N	2.39	0.55
1:D:1607:ARG:NH2	1:D:1638:PRO:O	2.40	0.55
1:D:2390:ASN:ND2	1:D:2392:GLU:OE2	2.39	0.55
1:E:133:ASN:N	1:E:133:ASN:OD1	2.39	0.55
1:A:508:ILE:HG23	1:A:519:HIS:HD2	1.72	0.55
1:B:726:GLN:OE1	1:B:749:ASN:ND2	2.37	0.55
1:E:496:SER:OG	1:E:497:VAL:N	2.39	0.55
1:A:2408:ALA:O	1:A:2419:ARG:NH1	2.40	0.55
1:B:879:THR:HG23	1:B:882:GLY:H	1.72	0.55
1:B:2408:ALA:O	1:B:2419:ARG:NH1	2.40	0.54
1:C:1057:LEU:O	1:C:1807:ASN:ND2	2.40	0.54
1:E:1607:ARG:NH2	1:E:1638:PRO:O	2.40	0.54
1:E:2095:ASP:OD1	1:E:2233:ARG:NH1	2.41	0.54
1:A:726:GLN:OE1	1:A:749:ASN:ND2	2.37	0.54
1:A:1312:ASN:ND2	1:A:1335:GLU:OE2	2.39	0.54
1:A:2095:ASP:OD1	1:A:2233:ARG:NH1	2.41	0.54
1:C:496:SER:OG	1:C:497:VAL:N	2.39	0.54
1:D:2408:ALA:O	1:D:2419:ARG:NH1	2.40	0.54
1:C:2408:ALA:O	1:C:2419:ARG:NH1	2.40	0.54
1:D:59:GLN:OE1	1:D:1946:ARG:NH2	2.38	0.54
1:D:2400:LEU:HD11	1:D:2405:LEU:HD21	1.90	0.54
1:E:1327:ASN:ND2	1:E:1544:ASP:OD1	2.39	0.54
1:E:1813:ARG:NH2	1:E:1817:TYR:OH	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:496:SER:OG	1:B:497:VAL:N	2.39	0.54
1:E:879:THR:HG23	1:E:882:GLY:H	1.72	0.54
1:A:608:ASN:OD1	1:A:608:ASN:N	2.39	0.54
1:A:879:THR:HG23	1:A:882:GLY:H	1.72	0.54
1:D:1813:ARG:NH2	1:D:1817:TYR:OH	2.41	0.54
1:D:2095:ASP:OD1	1:D:2233:ARG:NH1	2.41	0.54
1:E:508:ILE:HG23	1:E:519:HIS:HD2	1.73	0.54
1:A:1607:ARG:NH1	1:A:1637:GLU:OE1	2.41	0.54
1:A:2034:ARG:NH1	1:A:2475:ASP:O	2.41	0.54
1:B:1607:ARG:NH1	1:B:1637:GLU:OE1	2.41	0.54
1:D:1607:ARG:NH1	1:D:1637:GLU:OE1	2.41	0.54
1:E:1057:LEU:O	1:E:1807:ASN:ND2	2.40	0.54
1:A:1327:ASN:ND2	1:A:1544:ASP:OD1	2.39	0.54
1:A:1813:ARG:NH2	1:A:1817:TYR:OH	2.41	0.54
1:B:1725:SER:OG	1:B:1726:ALA:N	2.38	0.54
1:C:270:ASP:N	1:C:270:ASP:OD1	2.41	0.54
1:C:2400:LEU:HD11	1:C:2405:LEU:HD21	1.90	0.54
1:E:270:ASP:N	1:E:270:ASP:OD1	2.41	0.54
1:E:706:GLN:O	1:E:765:ARG:NH2	2.41	0.54
1:E:735:ILE:O	1:E:739:ASN:ND2	2.39	0.54
1:E:2400:LEU:HD11	1:E:2405:LEU:HD21	1.90	0.54
1:C:2452:ARG:NH1	1:D:2339:GLU:O	2.32	0.54
1:D:572:TRP:O	1:D:576:ASN:ND2	2.41	0.54
1:E:2408:ALA:O	1:E:2419:ARG:NH1	2.40	0.54
1:B:706:GLN:O	1:B:765:ARG:NH2	2.41	0.54
1:C:1081:VAL:O	1:C:1597:GLN:NE2	2.41	0.54
1:C:2095:ASP:OD1	1:C:2233:ARG:NH1	2.41	0.54
1:D:687:SER:OG	1:D:688:LEU:N	2.41	0.54
1:D:706:GLN:O	1:D:765:ARG:NH2	2.41	0.54
1:E:726:GLN:OE1	1:E:749:ASN:ND2	2.37	0.54
1:A:488:TYR:O	1:A:492:HIS:HB2	2.09	0.53
1:A:2400:LEU:HD11	1:A:2405:LEU:HD21	1.90	0.53
1:A:2478:TYR:O	1:B:2343:ARG:NH2	2.41	0.53
1:B:508:ILE:HG23	1:B:519:HIS:HD2	1.72	0.53
1:B:2095:ASP:OD1	1:B:2233:ARG:NH1	2.41	0.53
1:C:1725:SER:OG	1:C:1726:ALA:N	2.38	0.53
1:D:488:TYR:O	1:D:492:HIS:HB2	2.09	0.53
1:E:572:TRP:O	1:E:576:ASN:ND2	2.41	0.53
1:A:735:ILE:O	1:A:739:ASN:ND2	2.39	0.53
1:C:1607:ARG:NH1	1:C:1637:GLU:OE1	2.41	0.53
1:D:2427:THR:HG22	1:D:2429:PRO:HD3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:59:GLN:OE1	1:E:1946:ARG:NH2	2.38	0.53
1:E:2034:ARG:NH1	1:E:2475:ASP:O	2.41	0.53
1:E:2427:THR:HG22	1:E:2429:PRO:HD3	1.91	0.53
1:A:1081:VAL:O	1:A:1597:GLN:NE2	2.41	0.53
1:C:508:ILE:HG23	1:C:519:HIS:HD2	1.72	0.53
1:C:1813:ARG:NH2	1:C:1817:TYR:OH	2.41	0.53
1:C:2251:GLN:NE2	1:D:2013:SER:OG	2.33	0.53
1:D:508:ILE:HG23	1:D:519:HIS:HD2	1.73	0.53
1:D:2034:ARG:NH1	1:D:2475:ASP:O	2.41	0.53
1:E:1607:ARG:NH1	1:E:1637:GLU:OE1	2.41	0.53
1:A:1639:GLN:NE2	1:A:1642:GLU:O	2.42	0.53
1:B:2034:ARG:NH1	1:B:2475:ASP:O	2.41	0.53
1:B:2400:LEU:HD11	1:B:2405:LEU:HD21	1.90	0.53
1:C:2034:ARG:NH1	1:C:2475:ASP:O	2.41	0.53
1:A:687:SER:OG	1:A:688:LEU:N	2.41	0.53
1:C:488:TYR:O	1:C:492:HIS:HB2	2.09	0.53
1:C:1725:SER:O	1:C:1741:ASN:ND2	2.42	0.53
1:B:1508:LYS:HG2	1:B:1513:ILE:HA	1.91	0.53
1:C:572:TRP:O	1:C:576:ASN:ND2	2.41	0.53
1:C:1639:GLN:NE2	1:C:1642:GLU:O	2.42	0.53
1:E:687:SER:OG	1:E:688:LEU:N	2.41	0.53
1:A:572:TRP:O	1:A:576:ASN:ND2	2.41	0.53
1:B:488:TYR:O	1:B:492:HIS:HB2	2.09	0.53
1:B:524:PHE:O	1:B:559:ARG:NH2	2.41	0.53
1:D:1725:SER:O	1:D:1741:ASN:ND2	2.42	0.53
1:C:687:SER:OG	1:C:688:LEU:N	2.41	0.53
1:E:524:PHE:O	1:E:559:ARG:NH2	2.42	0.53
1:E:1725:SER:O	1:E:1741:ASN:ND2	2.42	0.53
1:A:1725:SER:O	1:A:1741:ASN:ND2	2.42	0.53
1:B:1639:GLN:NE2	1:B:1642:GLU:O	2.42	0.53
1:B:1813:ARG:NH2	1:B:1817:TYR:OH	2.41	0.53
1:C:1327:ASN:ND2	1:C:1544:ASP:OD1	2.39	0.53
1:D:1327:ASN:ND2	1:D:1544:ASP:OD1	2.39	0.53
1:E:1639:GLN:NE2	1:E:1642:GLU:O	2.42	0.53
1:A:293:SER:O	1:A:311:ASN:ND2	2.43	0.52
1:A:524:PHE:O	1:A:559:ARG:NH2	2.41	0.52
1:B:580:ASN:OD1	1:B:580:ASN:N	2.42	0.52
1:B:2427:THR:HG22	1:B:2429:PRO:HD3	1.91	0.52
1:C:342:LEU:HA	1:C:362:LYS:H	1.75	0.52
1:D:270:ASP:OD1	1:D:270:ASP:N	2.41	0.52
1:D:524:PHE:O	1:D:559:ARG:NH2	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1639:GLN:NE2	1:D:1642:GLU:O	2.42	0.52
1:D:1801:ARG:NH1	1:D:1804:GLN:OE1	2.42	0.52
1:E:488:TYR:O	1:E:492:HIS:HB2	2.09	0.52
1:A:270:ASP:OD1	1:A:270:ASP:N	2.41	0.52
1:A:342:LEU:HA	1:A:362:LYS:H	1.74	0.52
1:A:1508:LYS:HG2	1:A:1513:ILE:HA	1.91	0.52
1:C:524:PHE:O	1:C:559:ARG:NH2	2.41	0.52
1:C:1508:LYS:HG2	1:C:1513:ILE:HA	1.91	0.52
1:E:1801:ARG:NH1	1:E:1804:GLN:OE1	2.42	0.52
1:A:2427:THR:HG22	1:A:2429:PRO:HD3	1.91	0.52
1:C:2453:GLY:H	1:D:2342:GLU:HB2	1.74	0.52
1:B:293:SER:O	1:B:311:ASN:ND2	2.43	0.52
1:B:687:SER:OG	1:B:688:LEU:N	2.41	0.52
1:C:706:GLN:O	1:C:765:ARG:NH2	2.41	0.52
1:D:580:ASN:OD1	1:D:580:ASN:N	2.43	0.52
1:D:1508:LYS:HG2	1:D:1513:ILE:HA	1.91	0.52
1:E:1312:ASN:ND2	1:E:1335:GLU:OE2	2.39	0.52
1:B:572:TRP:O	1:B:576:ASN:ND2	2.41	0.52
1:B:1801:ARG:NH1	1:B:1804:GLN:OE1	2.42	0.52
1:C:293:SER:O	1:C:311:ASN:ND2	2.43	0.52
1:E:2500:SER:HA	1:E:2504:LYS:HD2	1.92	0.52
1:A:372:ARG:HB2	1:A:415:TRP:HB2	1.92	0.52
1:A:780:LYS:NZ	1:A:823:GLU:OE1	2.43	0.52
1:A:1605:ARG:NH1	1:A:1640:LEU:O	2.43	0.52
1:B:707:MET:O	1:C:2268:ASN:ND2	2.42	0.52
1:C:792:GLN:HB2	1:C:797:THR:HG21	1.92	0.52
1:D:792:GLN:HB2	1:D:797:THR:HG21	1.92	0.52
1:E:179:THR:OG1	1:E:180:ASP:N	2.43	0.52
1:A:580:ASN:OD1	1:A:580:ASN:N	2.42	0.52
1:B:1605:ARG:NH1	1:B:1640:LEU:O	2.43	0.52
1:E:1508:LYS:HG2	1:E:1513:ILE:HA	1.91	0.52
1:B:1725:SER:O	1:B:1741:ASN:ND2	2.42	0.52
1:C:1592:MET:HB2	1:C:1596:THR:HG23	1.92	0.52
1:C:1801:ARG:NH1	1:C:1804:GLN:OE1	2.42	0.52
1:A:250:LEU:HD23	1:A:447:LYS:HB2	1.92	0.52
1:A:1801:ARG:NH1	1:A:1804:GLN:OE1	2.42	0.52
1:B:735:ILE:O	1:B:739:ASN:ND2	2.39	0.52
1:D:1278:THR:OG1	1:D:1279:ARG:N	2.43	0.52
1:E:293:SER:O	1:E:311:ASN:ND2	2.43	0.52
1:E:1605:ARG:NH1	1:E:1640:LEU:O	2.43	0.52
1:A:1167:ASN:ND2	1:A:1169:SER:OG	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1670:ASN:ND2	1:A:1675:SER:OG	2.43	0.52
1:B:792:GLN:HB2	1:B:797:THR:HG21	1.92	0.52
1:C:580:ASN:N	1:C:580:ASN:OD1	2.42	0.52
1:C:2427:THR:HG22	1:C:2429:PRO:HD3	1.91	0.52
1:E:250:LEU:HD23	1:E:447:LYS:HB2	1.92	0.52
1:E:527:PRO:O	1:E:559:ARG:NH1	2.43	0.52
1:E:1780:ASN:ND2	1:E:1845:SER:O	2.43	0.52
1:B:179:THR:OG1	1:B:180:ASP:N	2.43	0.51
1:C:1780:ASN:ND2	1:C:1845:SER:O	2.43	0.51
1:D:293:SER:O	1:D:311:ASN:ND2	2.43	0.51
1:D:690:ASP:OD1	1:D:721:ASN:ND2	2.44	0.51
1:D:780:LYS:NZ	1:D:823:GLU:OE1	2.43	0.51
1:E:580:ASN:N	1:E:580:ASN:OD1	2.43	0.51
1:A:690:ASP:OD1	1:A:721:ASN:ND2	2.44	0.51
1:A:2020:GLN:H	1:A:2316:THR:HG22	1.76	0.51
1:B:1278:THR:OG1	1:B:1279:ARG:N	2.43	0.51
1:C:1167:ASN:ND2	1:C:1169:SER:OG	2.43	0.51
1:D:179:THR:OG1	1:D:180:ASP:N	2.43	0.51
1:D:1670:ASN:ND2	1:D:1675:SER:OG	2.43	0.51
1:D:2500:SER:HA	1:D:2504:LYS:HD2	1.92	0.51
1:E:792:GLN:HB2	1:E:797:THR:HG21	1.92	0.51
1:B:1670:ASN:ND2	1:B:1675:SER:OG	2.43	0.51
1:C:2468:GLN:NE2	1:D:2346:GLU:OE1	2.43	0.51
1:D:1592:MET:HB2	1:D:1596:THR:HG23	1.92	0.51
1:D:1605:ARG:NH1	1:D:1640:LEU:O	2.43	0.51
1:D:1846:TRP:HE3	1:D:1847:ASN:HB2	1.75	0.51
1:A:179:THR:OG1	1:A:180:ASP:N	2.43	0.51
1:B:160:SER:HA	1:B:970:LYS:HA	1.92	0.51
1:C:1670:ASN:ND2	1:C:1675:SER:OG	2.43	0.51
1:D:1167:ASN:ND2	1:D:1169:SER:OG	2.43	0.51
1:B:342:LEU:HA	1:B:362:LYS:H	1.74	0.51
1:B:372:ARG:HB2	1:B:415:TRP:HB2	1.92	0.51
1:B:780:LYS:NZ	1:B:823:GLU:OE1	2.43	0.51
1:B:1167:ASN:ND2	1:B:1169:SER:OG	2.43	0.51
1:C:1278:THR:OG1	1:C:1279:ARG:N	2.43	0.51
1:C:1628:LEU:O	1:C:1836:ASN:ND2	2.44	0.51
1:D:1081:VAL:O	1:D:1597:GLN:NE2	2.41	0.51
1:E:372:ARG:HB2	1:E:415:TRP:HB2	1.92	0.51
1:E:1278:THR:OG1	1:E:1279:ARG:N	2.43	0.51
1:B:250:LEU:HD23	1:B:447:LYS:HB2	1.92	0.51
1:B:1081:VAL:O	1:B:1597:GLN:NE2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1628:LEU:O	1:E:1836:ASN:ND2	2.44	0.51
1:E:1670:ASN:ND2	1:E:1675:SER:OG	2.43	0.51
1:A:527:PRO:O	1:A:559:ARG:NH1	2.43	0.51
1:A:792:GLN:HB2	1:A:797:THR:HG21	1.92	0.51
1:A:1628:LEU:O	1:A:1836:ASN:ND2	2.44	0.51
1:A:2155:ASP:OD2	1:A:2169:ARG:NH2	2.44	0.51
1:B:1592:MET:HB2	1:B:1596:THR:HG23	1.92	0.51
1:C:179:THR:OG1	1:C:180:ASP:N	2.43	0.51
1:C:250:LEU:HD23	1:C:447:LYS:HB2	1.92	0.51
1:C:1605:ARG:NH1	1:C:1640:LEU:O	2.43	0.51
1:C:1800:GLN:HE21	1:C:1804:GLN:HE21	1.59	0.51
1:D:342:LEU:HA	1:D:362:LYS:H	1.74	0.51
1:D:372:ARG:HB2	1:D:415:TRP:HB2	1.92	0.51
1:D:1780:ASN:ND2	1:D:1845:SER:O	2.43	0.51
1:E:160:SER:HA	1:E:970:LYS:HA	1.92	0.51
1:E:342:LEU:HA	1:E:362:LYS:H	1.74	0.51
1:E:2020:GLN:H	1:E:2316:THR:HG22	1.76	0.51
1:B:270:ASP:OD1	1:B:270:ASP:N	2.41	0.51
1:B:1628:LEU:O	1:B:1836:ASN:ND2	2.44	0.51
1:B:1846:TRP:HE3	1:B:1847:ASN:HB2	1.75	0.51
1:C:735:ILE:O	1:C:739:ASN:ND2	2.39	0.51
1:D:160:SER:HA	1:D:970:LYS:HA	1.92	0.51
1:B:1780:ASN:ND2	1:B:1845:SER:O	2.43	0.51
1:C:527:PRO:O	1:C:559:ARG:NH1	2.43	0.51
1:D:2020:GLN:H	1:D:2316:THR:HG22	1.75	0.51
1:E:780:LYS:NZ	1:E:823:GLU:OE1	2.43	0.51
1:E:2155:ASP:OD2	1:E:2169:ARG:NH2	2.44	0.51
1:A:160:SER:HA	1:A:970:LYS:HA	1.92	0.51
1:A:706:GLN:O	1:A:765:ARG:NH2	2.41	0.51
1:A:1780:ASN:ND2	1:A:1845:SER:O	2.43	0.51
1:B:690:ASP:OD1	1:B:721:ASN:ND2	2.44	0.51
1:B:1086:HIS:NE2	1:B:1091:VAL:O	2.44	0.51
1:C:372:ARG:HB2	1:C:415:TRP:HB2	1.92	0.51
1:D:1800:GLN:HE21	1:D:1804:GLN:HE21	1.59	0.51
1:A:2500:SER:HA	1:A:2504:LYS:HD2	1.92	0.50
1:B:527:PRO:O	1:B:559:ARG:NH1	2.43	0.50
1:B:2020:GLN:H	1:B:2316:THR:HG22	1.75	0.50
1:C:1846:TRP:HE3	1:C:1847:ASN:HB2	1.75	0.50
1:E:1167:ASN:ND2	1:E:1169:SER:OG	2.43	0.50
1:A:1088:SER:OG	1:A:1089:ILE:N	2.45	0.50
1:B:1800:GLN:HE21	1:B:1804:GLN:HE21	1.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2155:ASP:OD2	1:B:2169:ARG:NH2	2.44	0.50
1:C:690:ASP:OD1	1:C:721:ASN:ND2	2.44	0.50
1:C:2020:GLN:H	1:C:2316:THR:HG22	1.76	0.50
1:D:250:LEU:HD23	1:D:447:LYS:HB2	1.92	0.50
1:D:527:PRO:O	1:D:559:ARG:NH1	2.43	0.50
1:D:1086:HIS:NE2	1:D:1091:VAL:O	2.44	0.50
1:E:1592:MET:HB2	1:E:1596:THR:HG23	1.92	0.50
1:A:1086:HIS:NE2	1:A:1091:VAL:O	2.44	0.50
1:B:2500:SER:HA	1:B:2504:LYS:HD2	1.92	0.50
1:C:160:SER:HA	1:C:970:LYS:HA	1.92	0.50
1:C:619:TYR:OH	1:C:634:GLN:NE2	2.45	0.50
1:C:2500:SER:HA	1:C:2504:LYS:HD2	1.92	0.50
1:D:2389:LEU:HD23	1:D:2396:LEU:HD11	1.94	0.50
1:A:1592:MET:HB2	1:A:1596:THR:HG23	1.92	0.50
1:E:690:ASP:OD1	1:E:721:ASN:ND2	2.44	0.50
1:A:1846:TRP:HE3	1:A:1847:ASN:HB2	1.75	0.50
1:D:1628:LEU:O	1:D:1836:ASN:ND2	2.44	0.50
1:C:1088:SER:OG	1:C:1089:ILE:N	2.45	0.50
1:A:1278:THR:OG1	1:A:1279:ARG:N	2.43	0.50
1:E:1086:HIS:NE2	1:E:1091:VAL:O	2.44	0.50
1:E:1846:TRP:HE3	1:E:1847:ASN:HB2	1.75	0.50
1:B:1088:SER:OG	1:B:1089:ILE:N	2.45	0.50
1:B:2422:LYS:H	1:B:2519:TYR:HA	1.77	0.50
1:C:1086:HIS:NE2	1:C:1091:VAL:O	2.44	0.50
1:C:2422:LYS:H	1:C:2519:TYR:HA	1.77	0.50
1:E:859:ASN:HB3	1:E:862:THR:HG22	1.94	0.50
1:A:506:SER:O	1:A:595:ARG:NH1	2.45	0.50
1:A:859:ASN:HB3	1:A:862:THR:HG22	1.94	0.50
1:A:2032:MET:HG2	1:A:2452:ARG:HG3	1.94	0.50
1:B:43:TRP:HA	1:B:46:THR:HB	1.94	0.50
1:D:1088:SER:OG	1:D:1089:ILE:N	2.45	0.50
1:E:2389:LEU:HD23	1:E:2396:LEU:HD11	1.94	0.50
1:A:2422:LYS:H	1:A:2519:TYR:HA	1.77	0.49
1:D:2032:MET:HG2	1:D:2452:ARG:HG3	1.94	0.49
1:E:1088:SER:OG	1:E:1089:ILE:N	2.45	0.49
1:B:859:ASN:HB3	1:B:862:THR:HG22	1.94	0.49
1:D:43:TRP:HA	1:D:46:THR:HB	1.95	0.49
1:C:43:TRP:HA	1:C:46:THR:HB	1.94	0.49
1:C:2149:MET:HB3	1:E:1106:PRO:HG2	1.95	0.49
1:D:859:ASN:HB3	1:D:862:THR:HG22	1.94	0.49
1:D:2155:ASP:OD2	1:D:2169:ARG:NH2	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:43:TRP:HA	1:E:46:THR:HB	1.94	0.49
1:A:43:TRP:HA	1:A:46:THR:HB	1.94	0.49
1:A:1630:MET:O	1:A:1634:ASN:ND2	2.45	0.49
1:B:21:LEU:H	1:B:24:ASN:HD22	1.61	0.49
1:B:1630:MET:O	1:B:1634:ASN:ND2	2.45	0.49
1:C:845:GLN:OE1	1:C:879:THR:OG1	2.31	0.49
1:C:1167:ASN:ND2	1:C:1172:GLY:O	2.46	0.49
1:C:1503:ILE:HG22	1:C:1558:ILE:HG12	1.95	0.49
1:D:619:TYR:OH	1:D:634:GLN:NE2	2.45	0.49
1:E:1800:GLN:HE21	1:E:1804:GLN:HE21	1.59	0.49
1:B:1167:ASN:ND2	1:B:1172:GLY:O	2.46	0.49
1:B:2349:ARG:NH1	1:B:2410:ASP:OD2	2.46	0.49
1:D:2422:LYS:H	1:D:2519:TYR:HA	1.77	0.49
1:E:1081:VAL:O	1:E:1597:GLN:NE2	2.41	0.49
1:A:1800:GLN:HE21	1:A:1804:GLN:HE21	1.59	0.49
1:A:2349:ARG:NH1	1:A:2410:ASP:OD2	2.46	0.49
1:B:1503:ILE:HG22	1:B:1558:ILE:HG12	1.95	0.49
1:D:482:LYS:NZ	1:D:504:CYS:O	2.40	0.49
1:D:1503:ILE:HG22	1:D:1558:ILE:HG12	1.95	0.49
1:D:2349:ARG:NH1	1:D:2410:ASP:OD2	2.46	0.49
1:E:1503:ILE:HG22	1:E:1558:ILE:HG12	1.95	0.49
1:A:21:LEU:H	1:A:24:ASN:HD22	1.61	0.49
1:A:317:LEU:HA	1:A:327:ALA:HA	1.95	0.49
1:B:459:PRO:HA	1:B:462:ILE:HG22	1.95	0.49
1:B:2032:MET:HG2	1:B:2452:ARG:HG3	1.94	0.49
1:C:1506:LEU:HB3	1:C:1555:GLU:HB2	1.95	0.49
1:C:2155:ASP:OD2	1:C:2169:ARG:NH2	2.44	0.49
1:D:1167:ASN:ND2	1:D:1172:GLY:O	2.46	0.49
1:E:21:LEU:H	1:E:24:ASN:HD22	1.61	0.49
1:E:72:ASN:ND2	1:E:74:GLN:OE1	2.43	0.49
1:E:1167:ASN:ND2	1:E:1172:GLY:O	2.46	0.49
1:E:2422:LYS:H	1:E:2519:TYR:HA	1.77	0.49
1:A:459:PRO:HA	1:A:462:ILE:HG22	1.95	0.49
1:C:506:SER:O	1:C:595:ARG:NH1	2.45	0.49
1:B:2469:PHE:CZ	1:C:2346:GLU:HB3	2.47	0.49
1:C:780:LYS:NZ	1:C:823:GLU:OE1	2.43	0.49
1:C:859:ASN:HB3	1:C:862:THR:HG22	1.94	0.49
1:C:1312:ASN:ND2	1:C:1335:GLU:OE2	2.39	0.49
1:C:2032:MET:HG2	1:C:2452:ARG:HG3	1.94	0.49
1:E:506:SER:O	1:E:595:ARG:NH1	2.45	0.49
1:B:845:GLN:OE1	1:B:879:THR:OG1	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2389:LEU:HD23	1:B:2396:LEU:HD11	1.94	0.48
1:D:2421:ILE:HD12	1:D:2484:LEU:HB3	1.95	0.48
1:A:1503:ILE:HG22	1:A:1558:ILE:HG12	1.95	0.48
1:A:2421:ILE:HD12	1:A:2484:LEU:HB3	1.95	0.48
1:B:1506:LEU:HB3	1:B:1555:GLU:HB2	1.95	0.48
1:C:21:LEU:H	1:C:24:ASN:HD22	1.61	0.48
1:D:506:SER:O	1:D:595:ARG:NH1	2.45	0.48
1:E:506:SER:OG	1:E:507:ASP:N	2.47	0.48
1:E:619:TYR:OH	1:E:634:GLN:NE2	2.45	0.48
1:E:1506:LEU:HB3	1:E:1555:GLU:HB2	1.95	0.48
1:A:1167:ASN:ND2	1:A:1172:GLY:O	2.46	0.48
1:B:2421:ILE:HD12	1:B:2484:LEU:HB3	1.95	0.48
1:C:1202:ASP:OD1	1:C:1202:ASP:N	2.37	0.48
1:C:2389:LEU:HD23	1:C:2396:LEU:HD11	1.94	0.48
1:D:375:ASN:OD1	1:D:375:ASN:N	2.47	0.48
1:D:422:SER:OG	1:D:423:ASP:N	2.46	0.48
1:E:1147:ARG:NH1	1:E:1216:MET:O	2.46	0.48
1:A:619:TYR:OH	1:A:634:GLN:NE2	2.45	0.48
1:A:2389:LEU:HD23	1:A:2396:LEU:HD11	1.94	0.48
1:D:21:LEU:H	1:D:24:ASN:HD22	1.61	0.48
1:E:317:LEU:HA	1:E:327:ALA:HA	1.95	0.48
1:B:506:SER:O	1:B:595:ARG:NH1	2.45	0.48
1:D:506:SER:OG	1:D:507:ASP:N	2.47	0.48
1:D:1147:ARG:NH1	1:D:1216:MET:O	2.46	0.48
1:A:952:ARG:HH21	1:A:964:GLN:HG2	1.79	0.48
1:A:1147:ARG:NH1	1:A:1216:MET:O	2.47	0.48
1:A:2343:ARG:NH2	1:E:2478:TYR:O	2.46	0.48
1:B:506:SER:OG	1:B:507:ASP:N	2.47	0.48
1:B:952:ARG:HH21	1:B:964:GLN:HG2	1.79	0.48
1:C:506:SER:OG	1:C:507:ASP:N	2.47	0.48
1:E:2349:ARG:NH1	1:E:2410:ASP:OD2	2.46	0.48
1:A:950:LYS:N	1:A:954:GLU:OE1	2.42	0.48
1:B:317:LEU:HA	1:B:327:ALA:HA	1.95	0.48
1:B:1147:ARG:NH1	1:B:1216:MET:O	2.47	0.48
1:C:1272:THR:O	1:C:1272:THR:OG1	2.30	0.48
1:C:459:PRO:HA	1:C:462:ILE:HG22	1.95	0.48
1:C:1630:MET:O	1:C:1634:ASN:ND2	2.45	0.48
1:E:2032:MET:HG2	1:E:2452:ARG:HG3	1.94	0.48
1:C:1147:ARG:NH1	1:C:1216:MET:O	2.47	0.48
1:D:72:ASN:ND2	1:D:74:GLN:OE1	2.43	0.48
1:E:2421:ILE:HD12	1:E:2484:LEU:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:375:ASN:OD1	1:A:375:ASN:N	2.47	0.48
1:A:1167:ASN:HB3	1:A:1174:ILE:H	1.78	0.48
1:B:72:ASN:ND2	1:B:74:GLN:OE1	2.43	0.48
1:C:952:ARG:HH21	1:C:964:GLN:HG2	1.79	0.48
1:D:459:PRO:HA	1:D:462:ILE:HG22	1.95	0.48
1:D:845:GLN:OE1	1:D:879:THR:OG1	2.30	0.48
1:E:1167:ASN:HB3	1:E:1174:ILE:H	1.78	0.48
1:E:459:PRO:HA	1:E:462:ILE:HG22	1.95	0.47
1:A:987:ARG:NH1	1:A:993:GLU:OE2	2.47	0.47
1:B:1278:THR:HG23	1:B:1281:GLU:H	1.80	0.47
1:C:2421:ILE:HD12	1:C:2484:LEU:HB3	1.95	0.47
1:E:2072:LEU:HA	1:E:2075:GLN:HE21	1.79	0.47
1:A:1709:ARG:NE	1:A:1720:ASP:OD2	2.40	0.47
1:B:987:ARG:NH1	1:B:993:GLU:OE2	2.48	0.47
1:C:2202:ARG:NH2	1:E:1805:GLU:OE1	2.47	0.47
1:C:2349:ARG:NH1	1:C:2410:ASP:OD2	2.46	0.47
1:D:495:ILE:HB	1:D:499:ASP:HB3	1.97	0.47
1:A:1278:THR:HG23	1:A:1281:GLU:H	1.80	0.47
1:A:1506:LEU:HB3	1:A:1555:GLU:HB2	1.95	0.47
1:C:1167:ASN:HB3	1:C:1174:ILE:H	1.78	0.47
1:D:952:ARG:HH21	1:D:964:GLN:HG2	1.79	0.47
1:E:987:ARG:NH1	1:E:993:GLU:OE2	2.47	0.47
1:E:1206:ASN:O	1:E:1210:LYS:NZ	2.37	0.47
1:B:495:ILE:HB	1:B:499:ASP:HB3	1.97	0.47
1:C:495:ILE:HB	1:C:499:ASP:HB3	1.97	0.47
1:C:606:THR:OG1	1:C:609:GLU:OE2	2.31	0.47
1:C:1278:THR:HG23	1:C:1281:GLU:H	1.80	0.47
1:D:317:LEU:HA	1:D:327:ALA:HA	1.95	0.47
1:D:1312:ASN:ND2	1:D:1335:GLU:OE2	2.39	0.47
1:E:952:ARG:HH21	1:E:964:GLN:HG2	1.79	0.47
1:A:373:LEU:O	1:A:381:ILE:N	2.47	0.47
1:B:422:SER:OG	1:B:423:ASP:N	2.47	0.47
1:B:619:TYR:OH	1:B:634:GLN:NE2	2.45	0.47
1:B:1727:PHE:H	1:B:1741:ASN:HD22	1.63	0.47
1:C:2072:LEU:HA	1:C:2075:GLN:HE21	1.80	0.47
1:D:987:ARG:NH1	1:D:993:GLU:OE2	2.47	0.47
1:A:130:HIS:HD1	1:A:984:TYR:HH	1.60	0.47
1:A:506:SER:OG	1:A:507:ASP:N	2.47	0.47
1:B:42:THR:O	1:B:42:THR:OG1	2.33	0.47
1:B:2072:LEU:HA	1:B:2075:GLN:HE21	1.79	0.47
1:B:2127:GLU:OE1	1:B:2204:ARG:NH2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:317:LEU:HA	1:C:327:ALA:HA	1.95	0.47
1:C:2127:GLU:OE1	1:C:2204:ARG:NH2	2.48	0.47
1:C:2298:TYR:OH	1:C:2482:GLU:O	2.33	0.47
1:D:1272:THR:O	1:D:1272:THR:OG1	2.30	0.47
1:D:1506:LEU:HB3	1:D:1555:GLU:HB2	1.95	0.47
1:E:495:ILE:HB	1:E:499:ASP:HB3	1.97	0.47
1:E:562:ARG:NH1	1:E:601:ASP:OD2	2.48	0.47
1:A:42:THR:O	1:A:42:THR:OG1	2.33	0.47
1:C:375:ASN:OD1	1:C:375:ASN:N	2.47	0.47
1:A:462:ILE:HA	1:A:465:VAL:HG22	1.97	0.47
1:A:495:ILE:HB	1:A:499:ASP:HB3	1.97	0.47
1:A:1727:PHE:H	1:A:1741:ASN:HD22	1.63	0.47
1:A:2127:GLU:OE1	1:A:2204:ARG:NH2	2.48	0.47
1:B:373:LEU:O	1:B:381:ILE:N	2.47	0.47
1:C:1727:PHE:H	1:C:1741:ASN:HD22	1.63	0.47
1:E:1596:THR:OG1	1:E:1597:GLN:N	2.48	0.47
1:A:99:ARG:NH1	1:A:1964:PHE:O	2.47	0.47
1:A:562:ARG:NH1	1:A:601:ASP:OD2	2.48	0.47
1:A:1596:THR:OG1	1:A:1597:GLN:N	2.48	0.47
1:A:2049:LEU:HD11	1:A:2282:TYR:HA	1.97	0.47
1:B:462:ILE:HA	1:B:465:VAL:HG22	1.97	0.47
1:B:1956:THR:OG1	1:B:1957:ALA:N	2.48	0.47
1:C:987:ARG:NH1	1:C:993:GLU:OE2	2.47	0.47
1:C:2299:GLU:O	1:C:2420:ARG:NH1	2.48	0.47
1:D:606:THR:OG1	1:D:609:GLU:OE2	2.31	0.47
1:D:2072:LEU:HA	1:D:2075:GLN:HE21	1.79	0.47
1:E:1956:THR:OG1	1:E:1957:ALA:N	2.48	0.47
1:A:2409:THR:O	1:A:2409:THR:OG1	2.33	0.46
1:B:1167:ASN:HB3	1:B:1174:ILE:H	1.78	0.46
1:C:770:SER:HB3	1:D:2016:ILE:HG13	1.97	0.46
1:D:1167:ASN:HB3	1:D:1174:ILE:H	1.79	0.46
1:D:2049:LEU:HD11	1:D:2282:TYR:HA	1.97	0.46
1:D:2299:GLU:O	1:D:2420:ARG:NH1	2.48	0.46
1:A:2072:LEU:HA	1:A:2075:GLN:HE21	1.79	0.46
1:B:968:GLN:HB3	1:C:1989:ASN:HD22	1.80	0.46
1:B:1312:ASN:ND2	1:B:1335:GLU:OE2	2.39	0.46
1:C:562:ARG:NH1	1:C:601:ASP:OD2	2.48	0.46
1:E:1278:THR:HG23	1:E:1281:GLU:H	1.80	0.46
1:A:2251:GLN:NE2	1:B:2013:SER:OG	2.41	0.46
1:C:373:LEU:O	1:C:381:ILE:N	2.47	0.46
1:C:703:ALA:HB2	1:D:2272:GLY:HA3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1038:ARG:NH2	1:D:1789:GLU:OE2	2.49	0.46
1:D:2025:LEU:HD13	1:D:2310:PRO:HA	1.97	0.46
1:E:296:VAL:HG13	1:E:315:ILE:HD11	1.98	0.46
1:E:375:ASN:OD1	1:E:375:ASN:N	2.47	0.46
1:E:1038:ARG:NH2	1:E:1789:GLU:OE2	2.49	0.46
1:A:2025:LEU:HD13	1:A:2310:PRO:HA	1.97	0.46
1:B:562:ARG:NH1	1:B:601:ASP:OD2	2.48	0.46
1:D:950:LYS:N	1:D:954:GLU:OE1	2.42	0.46
1:D:1956:THR:OG1	1:D:1957:ALA:N	2.48	0.46
1:B:1058:ASN:OD1	1:B:1058:ASN:N	2.49	0.46
1:B:1789:GLU:HA	1:B:1793:TYR:HB2	1.98	0.46
1:B:2049:LEU:HD11	1:B:2282:TYR:HA	1.97	0.46
1:C:470:TYR:OH	1:C:478:ASN:ND2	2.49	0.46
1:C:1596:THR:OG1	1:C:1597:GLN:N	2.48	0.46
1:E:422:SER:OG	1:E:423:ASP:N	2.46	0.46
1:E:845:GLN:OE1	1:E:879:THR:OG1	2.30	0.46
1:E:2299:GLU:O	1:E:2420:ARG:NH1	2.48	0.46
1:A:296:VAL:HG13	1:A:315:ILE:HD11	1.98	0.46
1:B:296:VAL:HG13	1:B:315:ILE:HD11	1.98	0.46
1:C:1239:SER:OG	1:C:1242:SER:OG	2.33	0.46
1:D:1596:THR:OG1	1:D:1597:GLN:N	2.48	0.46
1:D:1630:MET:O	1:D:1634:ASN:ND2	2.45	0.46
1:A:470:TYR:OH	1:A:478:ASN:ND2	2.49	0.46
1:B:1142:TRP:HH2	1:B:1214:ILE:HD12	1.81	0.46
1:B:2025:LEU:HD13	1:B:2310:PRO:HA	1.97	0.46
1:D:296:VAL:HG13	1:D:315:ILE:HD11	1.98	0.46
1:D:1278:THR:HG23	1:D:1281:GLU:H	1.79	0.46
1:E:1554:SER:OG	1:E:1572:SER:O	2.32	0.46
1:B:950:LYS:N	1:B:954:GLU:OE1	2.42	0.46
1:B:1554:SER:OG	1:B:1572:SER:O	2.32	0.46
1:C:841:GLN:HA	1:C:844:THR:HG22	1.98	0.46
1:D:562:ARG:NH1	1:D:601:ASP:OD2	2.48	0.46
1:D:2127:GLU:OE1	1:D:2204:ARG:NH2	2.48	0.46
1:D:2298:TYR:OH	1:D:2482:GLU:O	2.33	0.46
1:A:2299:GLU:O	1:A:2420:ARG:NH1	2.48	0.46
1:C:462:ILE:HA	1:C:465:VAL:HG22	1.97	0.46
1:D:42:THR:O	1:D:42:THR:OG1	2.33	0.46
1:E:42:THR:O	1:E:42:THR:OG1	2.33	0.46
1:E:462:ILE:HA	1:E:465:VAL:HG22	1.97	0.46
1:E:950:LYS:N	1:E:954:GLU:OE1	2.42	0.46
1:A:1789:GLU:HA	1:A:1793:TYR:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:841:GLN:HA	1:B:844:THR:HG22	1.98	0.46
1:B:1596:THR:OG1	1:B:1597:GLN:N	2.48	0.46
1:B:2299:GLU:O	1:B:2420:ARG:NH1	2.48	0.46
1:C:487:GLN:HE21	1:C:487:GLN:HB3	1.55	0.46
1:C:1038:ARG:NH2	1:C:1789:GLU:OE2	2.49	0.46
1:C:1789:GLU:HA	1:C:1793:TYR:HB2	1.97	0.46
1:D:462:ILE:HA	1:D:465:VAL:HG22	1.97	0.46
1:D:470:TYR:OH	1:D:478:ASN:ND2	2.49	0.46
1:D:841:GLN:HA	1:D:844:THR:HG22	1.98	0.46
1:D:1142:TRP:HH2	1:D:1214:ILE:HD12	1.81	0.46
1:A:1142:TRP:HH2	1:A:1214:ILE:HD12	1.81	0.45
1:B:2298:TYR:OH	1:B:2482:GLU:O	2.33	0.45
1:B:2369:ASP:OD1	1:B:2369:ASP:N	2.50	0.45
1:A:1956:THR:OG1	1:A:1957:ALA:N	2.48	0.45
1:B:375:ASN:OD1	1:B:375:ASN:N	2.47	0.45
1:B:2174:PHE:HB2	1:C:2151:ALA:HB2	1.97	0.45
1:C:422:SER:OG	1:C:423:ASP:N	2.46	0.45
1:C:788:THR:HG22	1:C:790:ALA:H	1.81	0.45
1:C:2049:LEU:HD11	1:C:2282:TYR:HA	1.97	0.45
1:C:2052:PHE:CE1	1:D:2324:GLU:HG3	2.51	0.45
1:D:1080:GLN:NE2	1:D:1101:TYR:OH	2.50	0.45
1:A:788:THR:HG22	1:A:790:ALA:H	1.82	0.45
1:B:568:LEU:HD11	1:B:593:LEU:HD21	1.98	0.45
1:C:1956:THR:OG1	1:C:1957:ALA:N	2.48	0.45
1:A:29:SER:HB3	1:A:1003:ARG:HG2	1.99	0.45
1:A:568:LEU:HD11	1:A:593:LEU:HD21	1.98	0.45
1:B:29:SER:HB3	1:B:1003:ARG:HG2	1.99	0.45
1:B:1080:GLN:NE2	1:B:1101:TYR:OH	2.50	0.45
1:B:1118:LYS:HB2	1:B:1128:ALA:HB2	1.98	0.45
1:D:1058:ASN:OD1	1:D:1058:ASN:N	2.49	0.45
1:E:470:TYR:OH	1:E:478:ASN:ND2	2.49	0.45
1:E:841:GLN:HA	1:E:844:THR:HG22	1.98	0.45
1:A:418:LYS:HE2	1:A:420:ASN:HB3	1.98	0.45
1:A:2298:TYR:OH	1:A:2482:GLU:O	2.33	0.45
1:A:2397:GLN:HA	1:A:2495:SER:HA	1.99	0.45
1:C:418:LYS:HE2	1:C:420:ASN:HB3	1.98	0.45
1:C:1142:TRP:HH2	1:C:1214:ILE:HD12	1.81	0.45
1:C:2025:LEU:HD13	1:C:2310:PRO:HA	1.97	0.45
1:E:29:SER:HB3	1:E:1003:ARG:HG2	1.99	0.45
1:A:841:GLN:HA	1:A:844:THR:HG22	1.98	0.45
1:A:1038:ARG:NH2	1:A:1789:GLU:OE2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1232:HIS:ND1	1:B:1233:GLU:O	2.41	0.45
1:C:296:VAL:HG13	1:C:315:ILE:HD11	1.98	0.45
1:D:2369:ASP:OD1	1:D:2369:ASP:N	2.50	0.45
1:D:2437:ASP:OD2	1:E:2350:THR:N	2.45	0.45
1:E:513:THR:OG1	1:E:516:GLN:NE2	2.50	0.45
1:E:1727:PHE:H	1:E:1741:ASN:HD22	1.63	0.45
1:A:513:THR:OG1	1:A:516:GLN:NE2	2.50	0.45
1:A:2034:ARG:NH1	1:A:2477:LYS:O	2.50	0.45
1:B:788:THR:HG22	1:B:790:ALA:H	1.81	0.45
1:C:568:LEU:HD11	1:C:593:LEU:HD21	1.98	0.45
1:C:1801:ARG:HD2	1:C:1801:ARG:HA	1.73	0.45
1:D:418:LYS:HE2	1:D:420:ASN:HB3	1.98	0.45
1:D:788:THR:HG22	1:D:790:ALA:H	1.81	0.45
1:D:1118:LYS:HB2	1:D:1128:ALA:HB2	1.98	0.45
1:D:2034:ARG:NH1	1:D:2477:LYS:O	2.50	0.45
1:E:1657:GLU:OE2	1:E:1719:TYR:OH	2.35	0.45
1:E:2049:LEU:HD11	1:E:2282:TYR:HA	1.97	0.45
1:E:2127:GLU:OE1	1:E:2204:ARG:NH2	2.48	0.45
1:E:2397:GLN:HA	1:E:2495:SER:HA	1.99	0.45
1:B:99:ARG:NH1	1:B:1964:PHE:O	2.48	0.45
1:B:470:TYR:OH	1:B:478:ASN:ND2	2.49	0.45
1:B:513:THR:OG1	1:B:516:GLN:NE2	2.50	0.45
1:B:1038:ARG:NH2	1:B:1789:GLU:OE2	2.49	0.45
1:B:1657:GLU:OE2	1:B:1719:TYR:OH	2.35	0.45
1:C:42:THR:O	1:C:42:THR:OG1	2.33	0.45
1:D:263:MET:HA	1:D:443:LEU:HD21	1.99	0.45
1:D:513:THR:OG1	1:D:516:GLN:NE2	2.50	0.45
1:D:1727:PHE:H	1:D:1741:ASN:HD22	1.63	0.45
1:E:1058:ASN:OD1	1:E:1058:ASN:N	2.49	0.45
1:E:1142:TRP:HH2	1:E:1214:ILE:HD12	1.81	0.45
1:E:1893:ASP:OD1	1:E:1893:ASP:N	2.50	0.45
1:E:2025:LEU:HD13	1:E:2310:PRO:HA	1.97	0.45
1:E:2298:TYR:OH	1:E:2482:GLU:O	2.33	0.45
1:E:2369:ASP:OD1	1:E:2369:ASP:N	2.50	0.45
1:A:498:SER:HA	1:A:501:LEU:HD12	1.99	0.45
1:A:1042:THR:OG1	1:A:1789:GLU:OE1	2.31	0.45
1:A:1054:GLN:HE21	1:D:2194:LYS:HD2	1.82	0.45
1:B:1700:LYS:HE3	1:B:1700:LYS:HB3	1.90	0.45
1:B:2034:ARG:NH1	1:B:2477:LYS:O	2.50	0.45
1:B:2397:GLN:HA	1:B:2495:SER:HA	1.99	0.45
1:C:29:SER:HB3	1:C:1003:ARG:HG2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:498:SER:HA	1:C:501:LEU:HD12	1.99	0.45
1:D:568:LEU:HD11	1:D:593:LEU:HD21	1.98	0.45
1:C:513:THR:OG1	1:C:516:GLN:NE2	2.50	0.45
1:C:1118:LYS:HB2	1:C:1128:ALA:HB2	1.98	0.45
1:D:1010:GLU:OE2	1:E:1812:THR:OG1	2.30	0.45
1:D:1789:GLU:HA	1:D:1793:TYR:HB2	1.98	0.45
1:E:263:MET:HA	1:E:443:LEU:HD21	1.99	0.45
1:E:1118:LYS:HB2	1:E:1128:ALA:HB2	1.98	0.45
1:A:413:ARG:HG3	1:A:428:ASN:HB3	1.99	0.44
1:B:606:THR:OG1	1:B:609:GLU:OE2	2.31	0.44
1:B:772:ASN:ND2	1:C:2017:THR:O	2.50	0.44
1:C:1080:GLN:NE2	1:C:1101:TYR:OH	2.50	0.44
1:D:373:LEU:O	1:D:381:ILE:N	2.47	0.44
1:E:568:LEU:HD11	1:E:593:LEU:HD21	1.98	0.44
1:E:1080:GLN:NE2	1:E:1101:TYR:OH	2.50	0.44
1:E:1630:MET:O	1:E:1634:ASN:ND2	2.45	0.44
1:A:1202:ASP:OD1	1:A:1202:ASP:N	2.37	0.44
1:C:1893:ASP:OD1	1:C:1893:ASP:N	2.50	0.44
1:D:29:SER:HB3	1:D:1003:ARG:HG2	1.99	0.44
1:D:1893:ASP:N	1:D:1893:ASP:OD1	2.50	0.44
1:E:78:ILE:HD13	1:E:81:LEU:HD22	2.00	0.44
1:E:418:LYS:HE2	1:E:420:ASN:HB3	1.98	0.44
1:E:2134:TYR:HB3	1:E:2194:LYS:HB2	1.99	0.44
1:A:845:GLN:OE1	1:A:879:THR:OG1	2.31	0.44
1:A:1554:SER:OG	1:A:1572:SER:O	2.32	0.44
1:B:413:ARG:HG3	1:B:428:ASN:HB3	1.99	0.44
1:B:1239:SER:OG	1:B:1242:SER:OG	2.33	0.44
1:D:413:ARG:HG3	1:D:428:ASN:HB3	1.99	0.44
1:D:2397:GLN:HA	1:D:2495:SER:HA	1.99	0.44
1:E:413:ARG:HG3	1:E:428:ASN:HB3	2.00	0.44
1:E:788:THR:HG22	1:E:790:ALA:H	1.82	0.44
1:E:1789:GLU:HA	1:E:1793:TYR:HB2	1.97	0.44
1:A:1080:GLN:NE2	1:A:1101:TYR:OH	2.50	0.44
1:A:1893:ASP:N	1:A:1893:ASP:OD1	2.50	0.44
1:B:418:LYS:HE2	1:B:420:ASN:HB3	1.98	0.44
1:B:2171:GLY:N	1:C:2155:ASP:OD1	2.43	0.44
1:C:2059:ILE:HD13	1:C:2059:ILE:HA	1.84	0.44
1:D:498:SER:HA	1:D:501:LEU:HD12	1.99	0.44
1:E:1709:ARG:NE	1:E:1720:ASP:OD2	2.40	0.44
1:E:2034:ARG:NH1	1:E:2477:LYS:O	2.50	0.44
1:A:78:ILE:HD13	1:A:81:LEU:HD22	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1058:ASN:N	1:A:1058:ASN:OD1	2.49	0.44
1:A:1118:LYS:HB2	1:A:1128:ALA:HB2	1.98	0.44
1:A:2369:ASP:N	1:A:2369:ASP:OD1	2.50	0.44
1:C:78:ILE:HD13	1:C:81:LEU:HD22	2.00	0.44
1:D:1801:ARG:HD2	1:D:1801:ARG:HA	1.73	0.44
1:A:200:HIS:HB3	1:A:203:TYR:HB3	1.99	0.44
1:A:1799:PHE:HE2	1:A:1874:LYS:HB3	1.83	0.44
1:C:2369:ASP:N	1:C:2369:ASP:OD1	2.50	0.44
1:E:1336:ILE:HD11	1:E:1503:ILE:HG21	2.00	0.44
1:E:1799:PHE:HE2	1:E:1874:LYS:HB3	1.83	0.44
1:A:451:LEU:HD22	1:A:462:ILE:HD12	2.00	0.44
1:C:72:ASN:ND2	1:C:74:GLN:OE1	2.43	0.44
1:C:263:MET:HA	1:C:443:LEU:HD21	1.99	0.44
1:A:1906:LEU:HD23	1:A:1906:LEU:HA	1.86	0.44
1:C:1058:ASN:OD1	1:C:1058:ASN:N	2.49	0.44
1:C:1293:LEU:HD23	1:C:1293:LEU:HA	1.88	0.44
1:C:2397:GLN:HA	1:C:2495:SER:HA	1.99	0.44
1:D:1799:PHE:HE2	1:D:1874:LYS:HB3	1.83	0.44
1:E:1293:LEU:HD23	1:E:1293:LEU:HA	1.87	0.44
1:A:263:MET:HA	1:A:443:LEU:HD21	1.99	0.44
1:A:606:THR:OG1	1:A:609:GLU:OE2	2.31	0.44
1:A:1002:THR:O	1:A:1002:THR:OG1	2.31	0.44
1:A:1531:SER:OG	1:B:1766:HIS:NE2	2.40	0.44
1:B:78:ILE:HD13	1:B:81:LEU:HD22	2.00	0.44
1:B:200:HIS:HB3	1:B:203:TYR:HB3	2.00	0.44
1:C:950:LYS:N	1:C:954:GLU:OE1	2.42	0.44
1:D:200:HIS:HB3	1:D:203:TYR:HB3	1.99	0.44
1:A:422:SER:OG	1:A:423:ASP:N	2.46	0.43
1:A:1657:GLU:OE2	1:A:1719:TYR:OH	2.35	0.43
1:B:2134:TYR:HB3	1:B:2194:LYS:HB2	1.99	0.43
1:B:2194:LYS:HD2	1:D:1054:GLN:HE21	1.83	0.43
1:C:2034:ARG:NH1	1:C:2477:LYS:O	2.50	0.43
1:A:597:ARG:NE	1:A:601:ASP:OD2	2.51	0.43
1:B:263:MET:HA	1:B:443:LEU:HD21	1.99	0.43
1:C:141:ARG:NH1	1:C:958:TYR:O	2.51	0.43
1:C:2478:TYR:O	1:D:2343:ARG:NH2	2.50	0.43
1:D:597:ARG:NE	1:D:601:ASP:OD2	2.51	0.43
1:E:729:THR:OG1	1:E:731:ASP:O	2.35	0.43
1:A:401:LEU:HD23	1:A:401:LEU:HA	1.84	0.43
1:B:498:SER:HA	1:B:501:LEU:HD12	1.99	0.43
1:C:413:ARG:HG3	1:C:428:ASN:HB3	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1709:ARG:NE	1:C:1720:ASP:OD2	2.40	0.43
1:C:2348:THR:HA	1:C:2518:ARG:HA	2.01	0.43
1:D:1709:ARG:NE	1:D:1720:ASP:OD2	2.40	0.43
1:D:2059:ILE:HD13	1:D:2059:ILE:HA	1.84	0.43
1:D:2345:LEU:HD23	1:D:2345:LEU:HA	1.84	0.43
1:E:141:ARG:NH1	1:E:958:TYR:O	2.51	0.43
1:E:498:SER:HA	1:E:501:LEU:HD12	1.99	0.43
1:A:2013:SER:OG	1:E:2251:GLN:NE2	2.43	0.43
1:B:1336:ILE:HD11	1:B:1503:ILE:HG21	2.00	0.43
1:B:1893:ASP:OD1	1:B:1893:ASP:N	2.50	0.43
1:D:1336:ILE:HD11	1:D:1503:ILE:HG21	2.00	0.43
1:D:2251:GLN:NE2	1:E:2013:SER:OG	2.40	0.43
1:E:451:LEU:HD22	1:E:462:ILE:HD12	2.00	0.43
1:A:2134:TYR:HB3	1:A:2194:LYS:HB2	1.99	0.43
1:B:1799:PHE:HE2	1:B:1874:LYS:HB3	1.83	0.43
1:C:200:HIS:HB3	1:C:203:TYR:HB3	2.00	0.43
1:C:597:ARG:NE	1:C:601:ASP:OD2	2.51	0.43
1:C:1336:ILE:HD11	1:C:1503:ILE:HG21	2.00	0.43
1:C:1531:SER:OG	1:D:1766:HIS:NE2	2.48	0.43
1:C:2134:TYR:HB3	1:C:2194:LYS:HB2	1.99	0.43
1:E:99:ARG:NH1	1:E:1964:PHE:O	2.48	0.43
1:E:285:TYR:OH	1:E:446:ASN:OD1	2.37	0.43
1:A:1336:ILE:HD11	1:A:1503:ILE:HG21	2.00	0.43
1:A:1863:ASP:HA	1:A:1864:PRO:HD3	1.83	0.43
1:B:141:ARG:NH1	1:B:958:TYR:O	2.51	0.43
1:B:597:ARG:NE	1:B:601:ASP:OD2	2.51	0.43
1:B:2348:THR:HA	1:B:2518:ARG:HA	2.01	0.43
1:C:138:LEU:HD23	1:C:138:LEU:HA	1.90	0.43
1:D:78:ILE:HD13	1:D:81:LEU:HD22	2.00	0.43
1:D:141:ARG:NH1	1:D:958:TYR:O	2.51	0.43
1:E:203:TYR:OH	1:E:237:ALA:O	2.30	0.43
1:E:1002:THR:O	1:E:1002:THR:OG1	2.31	0.43
1:E:1923:GLU:H	1:E:1923:GLU:HG3	1.65	0.43
1:E:2059:ILE:HD13	1:E:2059:ILE:HA	1.84	0.43
1:E:2348:THR:HA	1:E:2518:ARG:HA	2.01	0.43
1:B:1056:GLN:HB3	1:E:2128:LYS:HE3	2.00	0.43
1:B:2128:LYS:HE3	1:D:1056:GLN:HB3	2.01	0.43
1:B:2345:LEU:HD23	1:B:2345:LEU:HA	1.84	0.43
1:C:1799:PHE:HE2	1:C:1874:LYS:HB3	1.83	0.43
1:D:1657:GLU:OE2	1:D:1719:TYR:OH	2.35	0.43
1:E:597:ARG:NE	1:E:601:ASP:OD2	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:72:ASN:ND2	1:A:74:GLN:OE1	2.43	0.43
1:A:1991:THR:OG1	1:A:1995:GLN:O	2.34	0.43
1:B:1801:ARG:HD2	1:B:1801:ARG:HA	1.73	0.43
1:C:272:VAL:HG12	1:C:442:LEU:HD12	2.01	0.43
1:C:1326:ILE:HD12	1:C:1326:ILE:HA	1.88	0.43
1:D:723:ILE:HD13	1:D:723:ILE:HA	1.87	0.43
1:D:2134:TYR:HB3	1:D:2194:LYS:HB2	1.99	0.43
1:E:1654:ASN:H	1:E:1658:HIS:CD2	2.37	0.43
1:A:335:LYS:HB3	1:A:336:ASP:H	1.74	0.43
1:A:1056:GLN:HB3	1:D:2128:LYS:HE3	2.00	0.43
1:A:2034:ARG:NH2	1:A:2482:GLU:OE2	2.52	0.43
1:A:2258:GLN:HB3	1:B:2015:ALA:HB2	2.00	0.43
1:B:982:GLN:NE2	1:B:1014:ARG:O	2.52	0.43
1:B:1204:ILE:O	1:B:1208:ILE:HB	2.19	0.43
1:C:99:ARG:NH1	1:C:1964:PHE:O	2.47	0.43
1:E:2101:LEU:HD12	1:E:2101:LEU:HA	1.92	0.43
1:A:1884:ASP:OD1	1:A:1902:TYR:OH	2.37	0.43
1:B:691:ASP:OD1	1:B:691:ASP:N	2.52	0.43
1:B:2101:LEU:HD21	1:B:2225:GLN:HB3	2.01	0.43
1:C:401:LEU:HD23	1:C:401:LEU:HA	1.84	0.43
1:C:2101:LEU:HD21	1:C:2225:GLN:HB3	2.01	0.43
1:C:2270:LEU:HD12	1:C:2270:LEU:HA	1.90	0.43
1:D:203:TYR:OH	1:D:237:ALA:O	2.30	0.43
1:D:982:GLN:NE2	1:D:1014:ARG:O	2.52	0.43
1:E:200:HIS:HB3	1:E:203:TYR:HB3	2.00	0.43
1:E:1204:ILE:O	1:E:1208:ILE:HB	2.19	0.43
1:E:1232:HIS:ND1	1:E:1233:GLU:O	2.41	0.43
1:A:141:ARG:NH1	1:A:958:TYR:O	2.51	0.42
1:B:451:LEU:HD22	1:B:462:ILE:HD12	2.00	0.42
1:B:1054:GLN:HE21	1:E:2194:LYS:HD2	1.84	0.42
1:C:982:GLN:NE2	1:C:1014:ARG:O	2.52	0.42
1:C:1204:ILE:O	1:C:1208:ILE:HB	2.19	0.42
1:E:606:THR:OG1	1:E:609:GLU:OE2	2.31	0.42
1:E:2034:ARG:NH2	1:E:2482:GLU:OE2	2.52	0.42
1:B:266:ASN:HD22	1:B:443:LEU:HD22	1.84	0.42
1:C:266:ASN:HD22	1:C:443:LEU:HD22	1.84	0.42
1:C:709:SER:O	1:C:712:THR:OG1	2.31	0.42
1:D:451:LEU:HD22	1:D:462:ILE:HD12	2.00	0.42
1:E:250:LEU:HD22	1:E:451:LEU:HD12	2.02	0.42
1:E:1239:SER:HG	1:E:1242:SER:HG	1.56	0.42
1:A:761:SER:OG	1:A:765:ARG:NH2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1654:ASN:H	1:A:1658:HIS:CD2	2.37	0.42
1:A:2101:LEU:HD21	1:A:2225:GLN:HB3	2.01	0.42
1:A:2178:ALA:HB2	1:B:2147:LEU:HB3	2.02	0.42
1:B:761:SER:OG	1:B:765:ARG:NH2	2.52	0.42
1:B:1272:THR:O	1:B:1272:THR:OG1	2.30	0.42
1:B:2034:ARG:NH2	1:B:2482:GLU:OE2	2.52	0.42
1:B:2059:ILE:HD13	1:B:2059:ILE:HA	1.84	0.42
1:C:2034:ARG:NH2	1:C:2482:GLU:OE2	2.52	0.42
1:D:1507:LEU:HD11	1:D:1552:LEU:HD13	2.01	0.42
1:D:2034:ARG:NH2	1:D:2482:GLU:OE2	2.52	0.42
1:A:34:ARG:HA	1:A:34:ARG:HD2	1.85	0.42
1:A:982:GLN:NE2	1:A:1014:ARG:O	2.52	0.42
1:A:2348:THR:HA	1:A:2518:ARG:HA	2.01	0.42
1:B:344:TYR:HD2	1:B:346:GLU:HG3	1.85	0.42
1:B:1884:ASP:OD1	1:B:1902:TYR:OH	2.37	0.42
1:D:1654:ASN:H	1:D:1658:HIS:CD2	2.37	0.42
1:E:373:LEU:O	1:E:381:ILE:N	2.47	0.42
1:E:982:GLN:NE2	1:E:1014:ARG:O	2.52	0.42
1:E:1635:LEU:HD23	1:E:1635:LEU:HA	1.93	0.42
1:A:169:LEU:HD23	1:A:169:LEU:HA	1.91	0.42
1:A:2306:HIS:NE2	1:A:2308:ILE:O	2.53	0.42
1:B:272:VAL:HG12	1:B:442:LEU:HD12	2.01	0.42
1:B:356:LYS:HE2	1:B:396:SER:HB2	2.01	0.42
1:B:2188:THR:HG23	1:C:2137:SER:HB2	2.01	0.42
1:C:335:LYS:HB3	1:C:336:ASP:H	1.74	0.42
1:C:1096:THR:HG1	1:C:1116:HIS:HE2	1.61	0.42
1:D:2178:ALA:HB2	1:E:2147:LEU:HB3	2.02	0.42
1:E:272:VAL:HG12	1:E:442:LEU:HD12	2.01	0.42
1:E:2306:HIS:NE2	1:E:2308:ILE:O	2.53	0.42
1:A:1309:PHE:HD1	1:A:1336:ILE:HG12	1.85	0.42
1:C:1273:LEU:HD23	1:C:1273:LEU:HA	1.90	0.42
1:C:1884:ASP:OD1	1:C:1902:TYR:OH	2.37	0.42
1:C:1970:LYS:HB3	1:C:1970:LYS:HE3	1.86	0.42
1:D:250:LEU:HD22	1:D:451:LEU:HD12	2.02	0.42
1:D:266:ASN:HD22	1:D:443:LEU:HD22	1.84	0.42
1:D:487:GLN:HE21	1:D:487:GLN:HB3	1.55	0.42
1:D:729:THR:OG1	1:D:731:ASP:O	2.35	0.42
1:D:761:SER:OG	1:D:765:ARG:NH2	2.52	0.42
1:D:1206:ASN:O	1:D:1210:LYS:NZ	2.37	0.42
1:E:401:LEU:HD23	1:E:401:LEU:HA	1.84	0.42
1:B:666:THR:O	1:B:666:THR:OG1	2.36	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2270:LEU:HD12	1:B:2270:LEU:HA	1.91	0.42
1:C:2469:PHE:CZ	1:D:2518:ARG:HB3	2.55	0.42
1:D:1193:SER:OG	1:D:1194:SER:N	2.53	0.42
1:D:2306:HIS:NE2	1:D:2308:ILE:O	2.53	0.42
1:D:2348:THR:HA	1:D:2518:ARG:HA	2.01	0.42
1:E:1625:ASP:OD1	1:E:1817:TYR:OH	2.33	0.42
1:A:162:LEU:HD11	1:A:933:THR:HG21	2.02	0.42
1:B:1507:LEU:HD11	1:B:1552:LEU:HD13	2.01	0.42
1:B:1654:ASN:H	1:B:1658:HIS:CD2	2.37	0.42
1:D:544:THR:HA	1:D:545:PRO:HD3	1.91	0.42
1:D:1204:ILE:O	1:D:1208:ILE:HB	2.19	0.42
1:E:356:LYS:HE2	1:E:396:SER:HB2	2.01	0.42
1:E:1309:PHE:HD1	1:E:1336:ILE:HG12	1.85	0.42
1:A:691:ASP:OD1	1:A:691:ASP:N	2.52	0.42
1:A:1983:LEU:HD23	1:A:1983:LEU:HA	1.87	0.42
1:B:548:SER:OG	1:B:549:LYS:N	2.53	0.42
1:C:344:TYR:HD2	1:C:346:GLU:HG3	1.85	0.42
1:C:451:LEU:HD22	1:C:462:ILE:HD12	2.00	0.42
1:C:1983:LEU:HD23	1:C:1983:LEU:HA	1.87	0.42
1:D:2452:ARG:NH1	1:E:2339:GLU:O	2.49	0.42
1:E:240:THR:OG1	1:E:454:ALA:O	2.38	0.42
1:A:356:LYS:HE2	1:A:396:SER:HB2	2.01	0.42
1:A:723:ILE:HD13	1:A:723:ILE:HA	1.87	0.42
1:A:1204:ILE:O	1:A:1208:ILE:HB	2.19	0.42
1:B:393:THR:OG1	1:C:1925:ARG:NH2	2.52	0.42
1:C:1309:PHE:HD1	1:C:1336:ILE:HG12	1.85	0.42
1:C:1657:GLU:OE2	1:C:1719:TYR:OH	2.35	0.42
1:D:785:GLN:HG2	1:D:861:ARG:HB2	2.02	0.42
1:D:1015:ARG:HH22	1:E:1882:ARG:HH21	1.67	0.42
1:E:162:LEU:HD11	1:E:933:THR:HG21	2.02	0.42
1:E:709:SER:O	1:E:712:THR:OG1	2.31	0.42
1:A:240:THR:OG1	1:A:454:ALA:O	2.38	0.41
1:A:344:TYR:HD2	1:A:346:GLU:HG3	1.85	0.41
1:C:548:SER:OG	1:C:549:LYS:N	2.53	0.41
1:C:691:ASP:OD1	1:C:691:ASP:N	2.52	0.41
1:C:1654:ASN:H	1:C:1658:HIS:CD2	2.37	0.41
1:C:1863:ASP:HA	1:C:1864:PRO:HD3	1.83	0.41
1:D:691:ASP:OD1	1:D:691:ASP:N	2.52	0.41
1:E:266:ASN:HD22	1:E:443:LEU:HD22	1.84	0.41
1:E:1507:LEU:HD11	1:E:1552:LEU:HD13	2.01	0.41
1:A:138:LEU:HD23	1:A:138:LEU:HA	1.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:266:ASN:HD22	1:A:443:LEU:HD22	1.84	0.41
1:B:285:TYR:OH	1:B:446:ASN:OD1	2.37	0.41
1:B:2440:ALA:HB3	1:B:2459:ILE:HB	2.03	0.41
1:C:109:ILE:HD13	1:C:155:MET:HB2	2.02	0.41
1:C:785:GLN:HG2	1:C:861:ARG:HB2	2.02	0.41
1:C:1507:LEU:HD11	1:C:1552:LEU:HD13	2.01	0.41
1:D:1060:ASP:OD1	1:D:1060:ASP:N	2.53	0.41
1:D:1232:HIS:ND1	1:D:1233:GLU:O	2.41	0.41
1:D:1523:VAL:HG22	1:D:1538:PHE:HA	2.02	0.41
1:D:1884:ASP:OD1	1:D:1902:TYR:OH	2.37	0.41
1:D:2457:ILE:HG23	1:D:2481:PHE:HE2	1.85	0.41
1:E:344:TYR:HD2	1:E:346:GLU:HG3	1.85	0.41
1:E:652:SER:N	1:E:655:ASP:OD2	2.50	0.41
1:A:203:TYR:OH	1:A:237:ALA:O	2.30	0.41
1:A:2452:ARG:NH1	1:B:2339:GLU:O	2.47	0.41
1:B:250:LEU:HD22	1:B:451:LEU:HD12	2.02	0.41
1:B:1309:PHE:HD1	1:B:1336:ILE:HG12	1.85	0.41
1:B:2306:HIS:NE2	1:B:2308:ILE:O	2.53	0.41
1:B:2459:ILE:HD13	1:B:2459:ILE:HA	1.90	0.41
1:C:130:HIS:HD1	1:C:984:TYR:HH	1.64	0.41
1:C:356:LYS:HE2	1:C:396:SER:HB2	2.01	0.41
1:C:2345:LEU:HD23	1:C:2345:LEU:HA	1.84	0.41
1:D:272:VAL:HG12	1:D:442:LEU:HD12	2.01	0.41
1:D:599:LEU:HD23	1:D:599:LEU:HA	1.91	0.41
1:D:652:SER:N	1:D:655:ASP:OD2	2.50	0.41
1:D:1239:SER:OG	1:D:1242:SER:OG	2.33	0.41
1:D:2101:LEU:HD21	1:D:2225:GLN:HB3	2.01	0.41
1:E:691:ASP:OD1	1:E:691:ASP:N	2.52	0.41
1:E:1096:THR:HG1	1:E:1116:HIS:HE2	1.62	0.41
1:E:1884:ASP:OD1	1:E:1902:TYR:OH	2.37	0.41
1:E:2101:LEU:HD21	1:E:2225:GLN:HB3	2.01	0.41
1:E:2330:LEU:HD23	1:E:2330:LEU:HA	1.92	0.41
1:E:2457:ILE:HG23	1:E:2481:PHE:HE2	1.85	0.41
1:A:1193:SER:OG	1:A:1194:SER:N	2.53	0.41
1:A:2452:ARG:HB3	1:A:2453:GLY:H	1.69	0.41
1:B:102:ARG:HH22	1:B:1965:LEU:HD11	1.86	0.41
1:B:109:ILE:HD13	1:B:155:MET:HB2	2.02	0.41
1:B:162:LEU:HD11	1:B:933:THR:HG21	2.02	0.41
1:B:240:THR:OG1	1:B:454:ALA:O	2.38	0.41
1:B:2419:ARG:HG2	1:B:2521:ILE:HG23	2.03	0.41
1:C:761:SER:OG	1:C:765:ARG:NH2	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1060:ASP:OD1	1:C:1060:ASP:N	2.53	0.41
1:C:2121:GLU:H	1:C:2121:GLU:HG3	1.74	0.41
1:C:2306:HIS:NE2	1:C:2308:ILE:O	2.53	0.41
1:C:2440:ALA:HB3	1:C:2459:ILE:HB	2.03	0.41
1:D:356:LYS:HE2	1:D:396:SER:HB2	2.01	0.41
1:D:707:MET:O	1:E:2268:ASN:ND2	2.53	0.41
1:D:1700:LYS:HE3	1:D:1700:LYS:HB3	1.90	0.41
1:D:1991:THR:OG1	1:D:1995:GLN:O	2.34	0.41
1:E:1523:VAL:HG22	1:E:1538:PHE:HA	2.02	0.41
1:A:592:LEU:HA	1:A:595:ARG:HB2	2.03	0.41
1:A:2457:ILE:HG23	1:A:2481:PHE:HE2	1.85	0.41
1:B:703:ALA:HB1	1:C:2269:TRP:HA	2.02	0.41
1:B:785:GLN:HG2	1:B:861:ARG:HB2	2.03	0.41
1:B:2121:GLU:H	1:B:2121:GLU:HG3	1.74	0.41
1:C:250:LEU:HD22	1:C:451:LEU:HD12	2.02	0.41
1:C:2419:ARG:HG2	1:C:2521:ILE:HG23	2.03	0.41
1:D:548:SER:OG	1:D:549:LYS:N	2.53	0.41
1:E:548:SER:OG	1:E:549:LYS:N	2.53	0.41
1:E:1193:SER:OG	1:E:1194:SER:N	2.53	0.41
1:E:2098:LYS:HE2	1:E:2102:GLN:HE21	1.86	0.41
1:A:272:VAL:HG12	1:A:442:LEU:HD12	2.01	0.41
1:A:508:ILE:HB	1:A:587:ILE:HD11	2.03	0.41
1:A:972:THR:OG1	1:A:973:ARG:N	2.54	0.41
1:A:1507:LEU:HD11	1:A:1552:LEU:HD13	2.02	0.41
1:B:401:LEU:HD23	1:B:401:LEU:HA	1.84	0.41
1:B:2457:ILE:HG23	1:B:2481:PHE:HE2	1.85	0.41
1:C:544:THR:HA	1:C:545:PRO:HD3	1.91	0.41
1:C:1070:LEU:HD23	1:C:1070:LEU:HA	1.92	0.41
1:C:2098:LYS:HE2	1:C:2102:GLN:HE21	1.86	0.41
1:D:1165:LEU:HD23	1:D:1165:LEU:HA	1.92	0.41
1:D:2098:LYS:HE2	1:D:2102:GLN:HE21	1.86	0.41
1:D:2419:ARG:HG2	1:D:2521:ILE:HG23	2.03	0.41
1:E:131:PRO:HG2	1:E:134:SER:HB2	2.03	0.41
1:E:972:THR:OG1	1:E:973:ARG:N	2.54	0.41
1:E:1028:TYR:OH	1:E:1967:GLN:O	2.28	0.41
1:E:1272:THR:O	1:E:1272:THR:OG1	2.30	0.41
1:A:2419:ARG:HG2	1:A:2521:ILE:HG23	2.03	0.41
1:B:131:PRO:HG2	1:B:134:SER:HB2	2.03	0.41
1:B:231:ASP:HB2	1:B:890:LYS:HE2	2.03	0.41
1:B:819:LEU:HD12	1:C:2016:ILE:HG21	2.03	0.41
1:B:1037:ILE:HA	1:B:1041:GLN:HE22	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1906:LEU:HD23	1:B:1906:LEU:HA	1.86	0.41
1:B:2238:LEU:HD23	1:C:2086:MET:HA	2.02	0.41
1:C:1523:VAL:HG22	1:C:1538:PHE:HA	2.02	0.41
1:D:162:LEU:HD11	1:D:933:THR:HG21	2.02	0.41
1:D:2258:GLN:HB3	1:E:2015:ALA:HB2	2.02	0.41
1:E:472:ASP:OD1	1:E:472:ASP:N	2.54	0.41
1:E:761:SER:OG	1:E:765:ARG:NH2	2.52	0.41
1:A:231:ASP:HB2	1:A:890:LYS:HE2	2.03	0.41
1:A:350:ILE:HB	1:A:354:GLU:HG2	2.03	0.41
1:A:381:ILE:HG21	1:A:399:ILE:HG23	2.03	0.41
1:A:472:ASP:OD1	1:A:472:ASP:N	2.54	0.41
1:A:548:SER:OG	1:A:549:LYS:N	2.53	0.41
1:A:785:GLN:HG2	1:A:861:ARG:HB2	2.02	0.41
1:A:2015:ALA:HB2	1:E:2258:GLN:HB3	2.02	0.41
1:A:2098:LYS:HE2	1:A:2102:GLN:HE21	1.86	0.41
1:A:2440:ALA:HB3	1:A:2459:ILE:HB	2.02	0.41
1:B:972:THR:OG1	1:B:973:ARG:N	2.54	0.41
1:C:231:ASP:HB2	1:C:890:LYS:HE2	2.03	0.41
1:D:344:TYR:HD2	1:D:346:GLU:HG3	1.85	0.41
1:E:335:LYS:HB3	1:E:336:ASP:H	1.74	0.41
1:E:785:GLN:HG2	1:E:861:ARG:HB2	2.03	0.41
1:E:2419:ARG:HG2	1:E:2521:ILE:HG23	2.03	0.41
1:A:1812:THR:OG1	1:E:1010:GLU:OE2	2.32	0.41
1:A:2268:ASN:ND2	1:E:707:MET:O	2.54	0.41
1:A:2339:GLU:O	1:E:2452:ARG:NH1	2.51	0.41
1:B:472:ASP:N	1:B:472:ASP:OD1	2.54	0.41
1:B:599:LEU:HD23	1:B:599:LEU:HA	1.90	0.41
1:B:1060:ASP:OD1	1:B:1060:ASP:N	2.53	0.41
1:B:1507:LEU:HB3	1:B:1515:VAL:HB	2.03	0.41
1:C:169:LEU:HD23	1:C:169:LEU:HA	1.91	0.41
1:C:212:LEU:HD23	1:C:212:LEU:HA	1.95	0.41
1:C:783:LYS:HA	1:C:783:LYS:HD3	1.90	0.41
1:C:2101:LEU:HD12	1:C:2101:LEU:HA	1.92	0.41
1:C:2457:ILE:HG23	1:C:2481:PHE:HE2	1.85	0.41
1:C:2459:ILE:HD13	1:C:2459:ILE:HA	1.90	0.41
1:D:109:ILE:HD13	1:D:155:MET:HB2	2.02	0.41
1:D:373:LEU:HD13	1:D:399:ILE:HD11	2.03	0.41
1:D:1037:ILE:HA	1:D:1041:GLN:HE22	1.86	0.41
1:D:1202:ASP:OD1	1:D:1202:ASP:N	2.37	0.41
1:D:1309:PHE:HD1	1:D:1336:ILE:HG12	1.85	0.41
1:D:1963:LEU:HD23	1:D:1963:LEU:HA	1.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:508:ILE:HB	1:E:587:ILE:HD11	2.03	0.41
1:E:1759:LYS:HA	1:E:1759:LYS:HD3	1.93	0.41
1:A:373:LEU:HD13	1:A:399:ILE:HD11	2.03	0.41
1:A:1273:LEU:HD23	1:A:1273:LEU:HA	1.90	0.41
1:A:1700:LYS:HE3	1:A:1700:LYS:HB3	1.90	0.41
1:A:2147:LEU:HB3	1:E:2178:ALA:HB2	2.03	0.41
1:B:34:ARG:HA	1:B:34:ARG:HD2	1.85	0.41
1:B:373:LEU:HD13	1:B:399:ILE:HD11	2.03	0.41
1:B:785:GLN:HA	1:B:859:ASN:HD21	1.86	0.41
1:C:102:ARG:HH22	1:C:1965:LEU:HD11	1.86	0.41
1:C:131:PRO:HG2	1:C:134:SER:HB2	2.03	0.41
1:C:1863:ASP:OD1	1:C:1863:ASP:N	2.54	0.41
1:C:1923:GLU:H	1:C:1923:GLU:HG3	1.65	0.41
1:C:2118:LEU:HD23	1:C:2118:LEU:HA	1.90	0.41
1:C:2194:LYS:HD2	1:E:1054:GLN:NE2	2.32	0.41
1:D:335:LYS:HB3	1:D:336:ASP:H	1.74	0.41
1:D:381:ILE:HG21	1:D:399:ILE:HG23	2.03	0.41
1:D:679:LEU:HD12	1:D:679:LEU:HA	1.90	0.41
1:E:350:ILE:HB	1:E:354:GLU:HG2	2.03	0.41
1:E:373:LEU:HD13	1:E:399:ILE:HD11	2.03	0.41
1:E:592:LEU:HA	1:E:595:ARG:HB2	2.03	0.41
1:E:1863:ASP:HA	1:E:1864:PRO:HD3	1.83	0.41
1:A:1863:ASP:N	1:A:1863:ASP:OD1	2.54	0.40
1:A:2335:LYS:HE2	1:A:2335:LYS:HB3	1.98	0.40
1:A:2442:LEU:HB3	1:A:2457:ILE:HG12	2.03	0.40
1:B:705:ILE:H	1:B:705:ILE:HG12	1.69	0.40
1:B:1523:VAL:HG22	1:B:1538:PHE:HA	2.02	0.40
1:C:472:ASP:N	1:C:472:ASP:OD1	2.54	0.40
1:C:679:LEU:HD12	1:C:679:LEU:HA	1.91	0.40
1:C:1193:SER:OG	1:C:1194:SER:N	2.53	0.40
1:D:102:ARG:HH22	1:D:1965:LEU:HD11	1.86	0.40
1:D:240:THR:OG1	1:D:454:ALA:O	2.38	0.40
1:D:709:SER:O	1:D:712:THR:OG1	2.31	0.40
1:D:2440:ALA:HB3	1:D:2459:ILE:HB	2.02	0.40
1:E:1946:ARG:H	1:E:1946:ARG:HG2	1.75	0.40
1:A:109:ILE:HD13	1:A:155:MET:HB2	2.02	0.40
1:A:250:LEU:HD22	1:A:451:LEU:HD12	2.02	0.40
1:A:285:TYR:OH	1:A:446:ASN:OD1	2.37	0.40
1:A:1702:TYR:HB3	1:A:1703:TYR:HD1	1.87	0.40
1:A:1970:LYS:HE3	1:A:1970:LYS:HB3	1.86	0.40
1:B:164:LEU:HD23	1:B:164:LEU:HA	1.95	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:592:LEU:HA	1:B:595:ARG:HB2	2.03	0.40
1:B:2461:HIS:CE1	1:B:2463:MET:HB3	2.57	0.40
1:C:42:THR:OG1	1:C:1571:GLU:OE2	2.38	0.40
1:C:240:THR:OG1	1:C:454:ALA:O	2.38	0.40
1:C:373:LEU:HD13	1:C:399:ILE:HD11	2.03	0.40
1:C:972:THR:OG1	1:C:973:ARG:N	2.54	0.40
1:D:1835:TRP:CZ2	1:D:1868:LYS:HG3	2.56	0.40
1:D:2263:ASN:OD1	1:D:2263:ASN:N	2.54	0.40
1:E:1702:TYR:HB3	1:E:1703:TYR:HD1	1.86	0.40
1:B:508:ILE:HB	1:B:587:ILE:HD11	2.03	0.40
1:B:2183:ILE:HD12	1:B:2183:ILE:HA	1.92	0.40
1:C:162:LEU:HD11	1:C:933:THR:HG21	2.02	0.40
1:C:785:GLN:HA	1:C:859:ASN:HD21	1.87	0.40
1:C:1139:ILE:HG23	1:C:1159:TRP:CE2	2.57	0.40
1:C:2452:ARG:HB3	1:C:2453:GLY:H	1.69	0.40
1:D:231:ASP:HB2	1:D:890:LYS:HE2	2.03	0.40
1:D:1002:THR:O	1:D:1002:THR:OG1	2.31	0.40
1:D:2454:CYS:HB3	1:D:2480:PRO:HA	2.04	0.40
1:A:2461:HIS:CE1	1:A:2463:MET:HB3	2.57	0.40
1:C:61:LYS:HE3	1:C:61:LYS:HB3	1.93	0.40
1:C:113:PHE:O	1:C:1016:TYR:OH	2.34	0.40
1:D:972:THR:OG1	1:D:973:ARG:N	2.54	0.40
1:D:1507:LEU:HB3	1:D:1515:VAL:HB	2.03	0.40
1:E:381:ILE:HG21	1:E:399:ILE:HG23	2.03	0.40
1:E:2442:LEU:HB3	1:E:2457:ILE:HG12	2.03	0.40
1:A:236:LEU:HD13	1:A:484:PHE:HA	2.04	0.40
1:A:785:GLN:HA	1:A:859:ASN:HD21	1.87	0.40
1:A:1835:TRP:CZ2	1:A:1868:LYS:HG3	2.56	0.40
1:A:1946:ARG:H	1:A:1946:ARG:HG2	1.74	0.40
1:A:2453:GLY:H	1:B:2342:GLU:HB2	1.87	0.40
1:B:709:SER:O	1:B:712:THR:OG1	2.31	0.40
1:B:1597:GLN:HB3	1:B:1609:ASN:HB2	2.04	0.40
1:C:1635:LEU:HA	1:C:1636:PRO:HD3	1.93	0.40
1:D:1179:TYR:H	1:D:1201:THR:HB	1.87	0.40
1:D:2461:HIS:CE1	1:D:2463:MET:HB3	2.57	0.40
1:E:236:LEU:HD13	1:E:484:PHE:HA	2.04	0.40
1:E:525:ASN:HD22	1:E:525:ASN:HA	1.72	0.40
1:E:627:PHE:HD1	1:E:627:PHE:HA	1.77	0.40
1:E:1979:LEU:HA	1:E:1979:LEU:HD23	1.90	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	2331/2523 (92%)	2158 (93%)	170 (7%)	3 (0%)	51	83
1	B	2331/2523 (92%)	2158 (93%)	170 (7%)	3 (0%)	51	83
1	C	2331/2523 (92%)	2160 (93%)	168 (7%)	3 (0%)	51	83
1	D	2331/2523 (92%)	2159 (93%)	169 (7%)	3 (0%)	51	83
1	E	2331/2523 (92%)	2160 (93%)	168 (7%)	3 (0%)	51	83
All	All	11655/12615 (92%)	10795 (93%)	845 (7%)	15 (0%)	54	83

All (15) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	1949	ALA
1	C	1949	ALA
1	D	1949	ALA
1	A	2453	GLY
1	B	1949	ALA
1	B	2453	GLY
1	C	2453	GLY
1	D	2453	GLY
1	E	1949	ALA
1	E	2453	GLY
1	A	581	PRO
1	B	581	PRO
1	C	581	PRO
1	D	581	PRO
1	E	581	PRO

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	2049/2222 (92%)	1908 (93%)	141 (7%)	15	46
1	B	2049/2222 (92%)	1908 (93%)	141 (7%)	15	46
1	C	2049/2222 (92%)	1908 (93%)	141 (7%)	15	46
1	D	2049/2222 (92%)	1908 (93%)	141 (7%)	15	46
1	E	2049/2222 (92%)	1908 (93%)	141 (7%)	15	46
All	All	10245/11110 (92%)	9540 (93%)	705 (7%)	19	46

All (705) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	40	THR
1	A	42	THR
1	A	65	LEU
1	A	104	VAL
1	A	133	ASN
1	A	144	ASP
1	A	148	LEU
1	A	176	LEU
1	A	179	THR
1	A	187	MET
1	A	190	THR
1	A	251	VAL
1	A	260	THR
1	A	270	ASP
1	A	272	VAL
1	A	281	LEU
1	A	288	SER
1	A	322	ASN
1	A	333	THR
1	A	342	LEU
1	A	369	LEU
1	A	373	LEU
1	A	379	GLU
1	A	394	HIS
1	A	411	THR
1	A	440	ILE
1	A	442	LEU
1	A	451	LEU

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Mol	Chain	Res	Type
1	A	453	LYS
1	A	473	LEU
1	A	474	THR
1	A	483	LEU
1	A	487	GLN
1	A	513	THR
1	A	516	GLN
1	A	529	LEU
1	A	539	THR
1	A	544	THR
1	A	563	VAL
1	A	592	LEU
1	A	606	THR
1	A	608	ASN
1	A	630	THR
1	A	646	LEU
1	A	660	THR
1	A	691	ASP
1	A	705	ILE
1	A	732	ASP
1	A	771	GLU
1	A	775	THR
1	A	795	LEU
1	A	798	LEU
1	A	816	THR
1	A	819	LEU
1	A	879	THR
1	A	892	VAL
1	A	901	THR
1	A	1011	THR
1	A	1030	GLU
1	A	1033	ILE
1	A	1047	ASN
1	A	1058	ASN
1	A	1060	ASP
1	A	1076	VAL
1	A	1092	ASN
1	A	1095	LEU
1	A	1096	THR
1	A	1104	THR
1	A	1141	VAL
1	A	1149	VAL

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Mol	Chain	Res	Type
1	A	1157	LEU
1	A	1180	ILE
1	A	1183	LEU
1	A	1202	ASP
1	A	1208	ILE
1	A	1250	THR
1	A	1256	THR
1	A	1262	GLU
1	A	1272	THR
1	A	1277	ASP
1	A	1290	THR
1	A	1323	ASN
1	A	1328	LEU
1	A	1500	ASP
1	A	1503	ILE
1	A	1545	ILE
1	A	1554	SER
1	A	1596	THR
1	A	1656	GLU
1	A	1657	GLU
1	A	1690	THR
1	A	1692	VAL
1	A	1712	VAL
1	A	1725	SER
1	A	1740	ILE
1	A	1796	MET
1	A	1803	LEU
1	A	1811	SER
1	A	1818	ILE
1	A	1838	ARG
1	A	1854	VAL
1	A	1875	MET
1	A	1887	TYR
1	A	1893	ASP
1	A	1900	MET
1	A	1911	ASP
1	A	1936	HIS
1	A	1951	LEU
1	A	1953	THR
1	A	1956	THR
1	A	1991	THR
1	A	1999	LEU

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Mol	Chain	Res	Type
1	A	2001	LEU
1	A	2017	THR
1	A	2025	LEU
1	A	2057	LEU
1	A	2081	LEU
1	A	2105	ARG
1	A	2121	GLU
1	A	2131	MET
1	A	2135	LEU
1	A	2142	THR
1	A	2145	THR
1	A	2147	LEU
1	A	2160	ILE
1	A	2229	LEU
1	A	2243	LEU
1	A	2259	SER
1	A	2270	LEU
1	A	2316	THR
1	A	2348	THR
1	A	2360	LEU
1	A	2363	ASN
1	A	2366	ILE
1	A	2369	ASP
1	A	2390	ASN
1	A	2409	THR
1	A	2448	THR
1	A	2450	MET
1	A	2486	VAL
1	A	2510	LEU
1	B	40	THR
1	B	42	THR
1	B	65	LEU
1	B	104	VAL
1	B	133	ASN
1	B	144	ASP
1	B	148	LEU
1	B	176	LEU
1	B	179	THR
1	B	187	MET
1	B	190	THR
1	B	251	VAL
1	B	260	THR

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Mol	Chain	Res	Type
1	B	270	ASP
1	B	272	VAL
1	B	281	LEU
1	B	288	SER
1	B	322	ASN
1	B	333	THR
1	B	342	LEU
1	B	369	LEU
1	B	373	LEU
1	B	379	GLU
1	B	394	HIS
1	B	411	THR
1	B	440	ILE
1	B	442	LEU
1	B	451	LEU
1	B	453	LYS
1	B	473	LEU
1	B	474	THR
1	B	483	LEU
1	B	487	GLN
1	B	513	THR
1	B	516	GLN
1	B	529	LEU
1	B	539	THR
1	B	544	THR
1	B	563	VAL
1	B	592	LEU
1	B	606	THR
1	B	608	ASN
1	B	630	THR
1	B	646	LEU
1	B	660	THR
1	B	691	ASP
1	B	705	ILE
1	B	732	ASP
1	B	771	GLU
1	B	775	THR
1	B	795	LEU
1	B	798	LEU
1	B	816	THR
1	B	819	LEU
1	B	879	THR

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Mol	Chain	Res	Type
1	B	892	VAL
1	B	901	THR
1	B	1011	THR
1	B	1030	GLU
1	B	1033	ILE
1	B	1047	ASN
1	B	1058	ASN
1	B	1060	ASP
1	B	1076	VAL
1	B	1092	ASN
1	B	1095	LEU
1	B	1096	THR
1	B	1104	THR
1	B	1141	VAL
1	B	1149	VAL
1	B	1157	LEU
1	B	1180	ILE
1	B	1183	LEU
1	B	1202	ASP
1	B	1208	ILE
1	B	1250	THR
1	B	1256	THR
1	B	1262	GLU
1	B	1272	THR
1	B	1277	ASP
1	B	1290	THR
1	B	1323	ASN
1	B	1328	LEU
1	B	1500	ASP
1	B	1503	ILE
1	B	1545	ILE
1	B	1554	SER
1	B	1596	THR
1	B	1656	GLU
1	B	1657	GLU
1	B	1690	THR
1	B	1692	VAL
1	B	1712	VAL
1	B	1725	SER
1	B	1740	ILE
1	B	1796	MET
1	B	1803	LEU

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Mol	Chain	Res	Type
1	B	1811	SER
1	B	1818	ILE
1	B	1838	ARG
1	B	1854	VAL
1	B	1875	MET
1	B	1887	TYR
1	B	1893	ASP
1	B	1900	MET
1	B	1911	ASP
1	B	1936	HIS
1	B	1951	LEU
1	B	1953	THR
1	B	1956	THR
1	B	1991	THR
1	B	1999	LEU
1	B	2001	LEU
1	B	2017	THR
1	B	2025	LEU
1	B	2057	LEU
1	B	2081	LEU
1	B	2105	ARG
1	B	2121	GLU
1	B	2131	MET
1	B	2135	LEU
1	B	2142	THR
1	B	2145	THR
1	B	2147	LEU
1	B	2160	ILE
1	B	2229	LEU
1	B	2243	LEU
1	B	2259	SER
1	B	2270	LEU
1	B	2316	THR
1	B	2348	THR
1	B	2360	LEU
1	B	2363	ASN
1	B	2366	ILE
1	B	2369	ASP
1	B	2390	ASN
1	B	2409	THR
1	B	2448	THR
1	B	2450	MET

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Mol	Chain	Res	Type
1	B	2486	VAL
1	B	2510	LEU
1	C	40	THR
1	C	42	THR
1	C	65	LEU
1	C	104	VAL
1	C	133	ASN
1	C	144	ASP
1	C	148	LEU
1	C	176	LEU
1	C	179	THR
1	C	187	MET
1	C	190	THR
1	C	251	VAL
1	C	260	THR
1	C	270	ASP
1	C	272	VAL
1	C	281	LEU
1	C	288	SER
1	C	322	ASN
1	C	333	THR
1	C	342	LEU
1	C	369	LEU
1	C	373	LEU
1	C	379	GLU
1	C	394	HIS
1	C	411	THR
1	C	440	ILE
1	C	442	LEU
1	C	451	LEU
1	C	453	LYS
1	C	473	LEU
1	C	474	THR
1	C	483	LEU
1	C	487	GLN
1	C	513	THR
1	C	516	GLN
1	C	529	LEU
1	C	539	THR
1	C	544	THR
1	C	563	VAL
1	C	592	LEU

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Mol	Chain	Res	Type
1	C	606	THR
1	C	608	ASN
1	C	630	THR
1	C	646	LEU
1	C	660	THR
1	C	691	ASP
1	C	705	ILE
1	C	732	ASP
1	C	771	GLU
1	C	775	THR
1	C	795	LEU
1	C	798	LEU
1	C	816	THR
1	C	819	LEU
1	C	879	THR
1	C	892	VAL
1	C	901	THR
1	C	1011	THR
1	C	1030	GLU
1	C	1033	ILE
1	C	1047	ASN
1	C	1058	ASN
1	C	1060	ASP
1	C	1076	VAL
1	C	1092	ASN
1	C	1095	LEU
1	C	1096	THR
1	C	1104	THR
1	C	1141	VAL
1	C	1149	VAL
1	C	1157	LEU
1	C	1180	ILE
1	C	1183	LEU
1	C	1202	ASP
1	C	1208	ILE
1	C	1250	THR
1	C	1256	THR
1	C	1262	GLU
1	C	1272	THR
1	C	1277	ASP
1	C	1290	THR
1	C	1323	ASN

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Mol	Chain	Res	Type
1	C	1328	LEU
1	C	1500	ASP
1	C	1503	ILE
1	C	1545	ILE
1	C	1554	SER
1	C	1596	THR
1	C	1656	GLU
1	C	1657	GLU
1	C	1690	THR
1	C	1692	VAL
1	C	1712	VAL
1	C	1725	SER
1	C	1740	ILE
1	C	1796	MET
1	C	1803	LEU
1	C	1811	SER
1	C	1818	ILE
1	C	1838	ARG
1	C	1854	VAL
1	C	1875	MET
1	C	1887	TYR
1	C	1893	ASP
1	C	1900	MET
1	C	1911	ASP
1	C	1936	HIS
1	C	1951	LEU
1	C	1953	THR
1	C	1956	THR
1	C	1991	THR
1	C	1999	LEU
1	C	2001	LEU
1	C	2017	THR
1	C	2025	LEU
1	C	2057	LEU
1	C	2081	LEU
1	C	2105	ARG
1	C	2121	GLU
1	C	2131	MET
1	C	2135	LEU
1	C	2142	THR
1	C	2145	THR
1	C	2147	LEU

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Mol	Chain	Res	Type
1	C	2160	ILE
1	C	2229	LEU
1	C	2243	LEU
1	C	2259	SER
1	C	2270	LEU
1	C	2316	THR
1	C	2348	THR
1	C	2360	LEU
1	C	2363	ASN
1	C	2366	ILE
1	C	2369	ASP
1	C	2390	ASN
1	C	2409	THR
1	C	2448	THR
1	C	2450	MET
1	C	2486	VAL
1	C	2510	LEU
1	D	40	THR
1	D	42	THR
1	D	65	LEU
1	D	104	VAL
1	D	133	ASN
1	D	144	ASP
1	D	148	LEU
1	D	176	LEU
1	D	179	THR
1	D	187	MET
1	D	190	THR
1	D	251	VAL
1	D	260	THR
1	D	270	ASP
1	D	272	VAL
1	D	281	LEU
1	D	288	SER
1	D	322	ASN
1	D	333	THR
1	D	342	LEU
1	D	369	LEU
1	D	373	LEU
1	D	379	GLU
1	D	394	HIS
1	D	411	THR

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Mol	Chain	Res	Type
1	D	440	ILE
1	D	442	LEU
1	D	451	LEU
1	D	453	LYS
1	D	473	LEU
1	D	474	THR
1	D	483	LEU
1	D	487	GLN
1	D	513	THR
1	D	516	GLN
1	D	529	LEU
1	D	539	THR
1	D	544	THR
1	D	563	VAL
1	D	592	LEU
1	D	606	THR
1	D	608	ASN
1	D	630	THR
1	D	646	LEU
1	D	660	THR
1	D	691	ASP
1	D	705	ILE
1	D	732	ASP
1	D	771	GLU
1	D	775	THR
1	D	795	LEU
1	D	798	LEU
1	D	816	THR
1	D	819	LEU
1	D	879	THR
1	D	892	VAL
1	D	901	THR
1	D	1011	THR
1	D	1030	GLU
1	D	1033	ILE
1	D	1047	ASN
1	D	1058	ASN
1	D	1060	ASP
1	D	1076	VAL
1	D	1092	ASN
1	D	1095	LEU
1	D	1096	THR

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Mol	Chain	Res	Type
1	D	1104	THR
1	D	1141	VAL
1	D	1149	VAL
1	D	1157	LEU
1	D	1180	ILE
1	D	1183	LEU
1	D	1202	ASP
1	D	1208	ILE
1	D	1250	THR
1	D	1256	THR
1	D	1262	GLU
1	D	1272	THR
1	D	1277	ASP
1	D	1290	THR
1	D	1323	ASN
1	D	1328	LEU
1	D	1500	ASP
1	D	1503	ILE
1	D	1545	ILE
1	D	1554	SER
1	D	1596	THR
1	D	1656	GLU
1	D	1657	GLU
1	D	1690	THR
1	D	1692	VAL
1	D	1712	VAL
1	D	1725	SER
1	D	1740	ILE
1	D	1796	MET
1	D	1803	LEU
1	D	1811	SER
1	D	1818	ILE
1	D	1838	ARG
1	D	1854	VAL
1	D	1875	MET
1	D	1887	TYR
1	D	1893	ASP
1	D	1900	MET
1	D	1911	ASP
1	D	1936	HIS
1	D	1951	LEU
1	D	1953	THR

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Mol	Chain	Res	Type
1	D	1956	THR
1	D	1991	THR
1	D	1999	LEU
1	D	2001	LEU
1	D	2017	THR
1	D	2025	LEU
1	D	2057	LEU
1	D	2081	LEU
1	D	2105	ARG
1	D	2121	GLU
1	D	2131	MET
1	D	2135	LEU
1	D	2142	THR
1	D	2145	THR
1	D	2147	LEU
1	D	2160	ILE
1	D	2229	LEU
1	D	2243	LEU
1	D	2259	SER
1	D	2270	LEU
1	D	2316	THR
1	D	2348	THR
1	D	2360	LEU
1	D	2363	ASN
1	D	2366	ILE
1	D	2369	ASP
1	D	2390	ASN
1	D	2409	THR
1	D	2448	THR
1	D	2450	MET
1	D	2486	VAL
1	D	2510	LEU
1	E	40	THR
1	E	42	THR
1	E	65	LEU
1	E	104	VAL
1	E	133	ASN
1	E	144	ASP
1	E	148	LEU
1	E	176	LEU
1	E	179	THR
1	E	187	MET

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Mol	Chain	Res	Type
1	E	190	THR
1	E	251	VAL
1	E	260	THR
1	E	270	ASP
1	E	272	VAL
1	E	281	LEU
1	E	288	SER
1	E	322	ASN
1	E	333	THR
1	E	342	LEU
1	E	369	LEU
1	E	373	LEU
1	E	379	GLU
1	E	394	HIS
1	E	411	THR
1	E	440	ILE
1	E	442	LEU
1	E	451	LEU
1	E	453	LYS
1	E	473	LEU
1	E	474	THR
1	E	483	LEU
1	E	487	GLN
1	E	513	THR
1	E	516	GLN
1	E	529	LEU
1	E	539	THR
1	E	544	THR
1	E	563	VAL
1	E	592	LEU
1	E	606	THR
1	E	608	ASN
1	E	630	THR
1	E	646	LEU
1	E	660	THR
1	E	691	ASP
1	E	705	ILE
1	E	732	ASP
1	E	771	GLU
1	E	775	THR
1	E	795	LEU
1	E	798	LEU

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Mol	Chain	Res	Type
1	E	816	THR
1	E	819	LEU
1	E	879	THR
1	E	892	VAL
1	E	901	THR
1	E	1011	THR
1	E	1030	GLU
1	E	1033	ILE
1	E	1047	ASN
1	E	1058	ASN
1	E	1060	ASP
1	E	1076	VAL
1	E	1092	ASN
1	E	1095	LEU
1	E	1096	THR
1	E	1104	THR
1	E	1141	VAL
1	E	1149	VAL
1	E	1157	LEU
1	E	1180	ILE
1	E	1183	LEU
1	E	1202	ASP
1	E	1208	ILE
1	E	1250	THR
1	E	1256	THR
1	E	1262	GLU
1	E	1272	THR
1	E	1277	ASP
1	E	1290	THR
1	E	1323	ASN
1	E	1328	LEU
1	E	1500	ASP
1	E	1503	ILE
1	E	1545	ILE
1	E	1554	SER
1	E	1596	THR
1	E	1656	GLU
1	E	1657	GLU
1	E	1690	THR
1	E	1692	VAL
1	E	1712	VAL
1	E	1725	SER

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Mol	Chain	Res	Type
1	E	1740	ILE
1	E	1796	MET
1	E	1803	LEU
1	E	1811	SER
1	E	1818	ILE
1	E	1838	ARG
1	E	1854	VAL
1	E	1875	MET
1	E	1887	TYR
1	E	1893	ASP
1	E	1900	MET
1	E	1911	ASP
1	E	1936	HIS
1	E	1951	LEU
1	E	1953	THR
1	E	1956	THR
1	E	1991	THR
1	E	1999	LEU
1	E	2001	LEU
1	E	2017	THR
1	E	2025	LEU
1	E	2057	LEU
1	E	2081	LEU
1	E	2105	ARG
1	E	2121	GLU
1	E	2131	MET
1	E	2135	LEU
1	E	2142	THR
1	E	2145	THR
1	E	2147	LEU
1	E	2160	ILE
1	E	2229	LEU
1	E	2243	LEU
1	E	2259	SER
1	E	2270	LEU
1	E	2316	THR
1	E	2348	THR
1	E	2360	LEU
1	E	2363	ASN
1	E	2366	ILE
1	E	2369	ASP
1	E	2390	ASN

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Mol	Chain	Res	Type
1	E	2409	THR
1	E	2448	THR
1	E	2450	MET
1	E	2486	VAL
1	E	2510	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (203) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	24	ASN
1	A	55	GLN
1	A	139	ASN
1	A	171	HIS
1	A	172	ASN
1	A	200	HIS
1	A	213	GLN
1	A	216	ASN
1	A	311	ASN
1	A	341	HIS
1	A	374	GLN
1	A	478	ASN
1	A	516	GLN
1	A	519	HIS
1	A	551	HIS
1	A	634	GLN
1	A	681	ASN
1	A	706	GLN
1	A	722	GLN
1	A	766	ASN
1	A	1041	GLN
1	A	1054	GLN
1	A	1056	GLN
1	A	1080	GLN
1	A	1167	ASN
1	A	1197	ASN
1	A	1206	ASN
1	A	1502	ASN
1	A	1522	HIS
1	A	1670	ASN
1	A	1741	ASN
1	A	1800	GLN
1	A	1807	ASN

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Mol	Chain	Res	Type
1	A	1939	GLN
1	A	2075	GLN
1	A	2159	ASN
1	A	2239	GLN
1	A	2251	GLN
1	A	2314	HIS
1	A	2390	ASN
1	A	2516	HIS
1	B	24	ASN
1	B	55	GLN
1	B	139	ASN
1	B	171	HIS
1	B	172	ASN
1	B	200	HIS
1	B	213	GLN
1	B	216	ASN
1	B	311	ASN
1	B	341	HIS
1	B	374	GLN
1	B	478	ASN
1	B	516	GLN
1	B	519	HIS
1	B	551	HIS
1	B	634	GLN
1	B	681	ASN
1	B	706	GLN
1	B	722	GLN
1	B	766	ASN
1	B	919	GLN
1	B	1041	GLN
1	B	1054	GLN
1	B	1056	GLN
1	B	1080	GLN
1	B	1167	ASN
1	B	1197	ASN
1	B	1206	ASN
1	B	1502	ASN
1	B	1522	HIS
1	B	1670	ASN
1	B	1741	ASN
1	B	1800	GLN
1	B	1939	GLN

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Mol	Chain	Res	Type
1	B	2075	GLN
1	B	2159	ASN
1	B	2239	GLN
1	B	2390	ASN
1	B	2468	GLN
1	B	2516	HIS
1	C	24	ASN
1	C	55	GLN
1	C	139	ASN
1	C	171	HIS
1	C	172	ASN
1	C	200	HIS
1	C	213	GLN
1	C	216	ASN
1	C	311	ASN
1	C	341	HIS
1	C	374	GLN
1	C	478	ASN
1	C	487	GLN
1	C	516	GLN
1	C	519	HIS
1	C	551	HIS
1	C	634	GLN
1	C	681	ASN
1	C	706	GLN
1	C	722	GLN
1	C	766	ASN
1	C	1041	GLN
1	C	1054	GLN
1	C	1056	GLN
1	C	1080	GLN
1	C	1167	ASN
1	C	1197	ASN
1	C	1206	ASN
1	C	1502	ASN
1	C	1522	HIS
1	C	1670	ASN
1	C	1741	ASN
1	C	1800	GLN
1	C	1939	GLN
1	C	2159	ASN
1	C	2239	GLN

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Mol	Chain	Res	Type
1	C	2251	GLN
1	C	2314	HIS
1	C	2390	ASN
1	C	2468	GLN
1	C	2470	GLN
1	C	2516	HIS
1	D	24	ASN
1	D	55	GLN
1	D	139	ASN
1	D	172	ASN
1	D	200	HIS
1	D	213	GLN
1	D	216	ASN
1	D	311	ASN
1	D	341	HIS
1	D	374	GLN
1	D	478	ASN
1	D	516	GLN
1	D	519	HIS
1	D	551	HIS
1	D	634	GLN
1	D	681	ASN
1	D	706	GLN
1	D	722	GLN
1	D	766	ASN
1	D	919	GLN
1	D	1041	GLN
1	D	1054	GLN
1	D	1056	GLN
1	D	1080	GLN
1	D	1167	ASN
1	D	1197	ASN
1	D	1206	ASN
1	D	1502	ASN
1	D	1522	HIS
1	D	1670	ASN
1	D	1741	ASN
1	D	1800	GLN
1	D	1807	ASN
1	D	1939	GLN
1	D	2075	GLN
1	D	2159	ASN

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Mol	Chain	Res	Type
1	D	2239	GLN
1	D	2251	GLN
1	D	2390	ASN
1	D	2516	HIS
1	E	24	ASN
1	E	55	GLN
1	E	139	ASN
1	E	171	HIS
1	E	172	ASN
1	E	200	HIS
1	E	213	GLN
1	E	216	ASN
1	E	311	ASN
1	E	341	HIS
1	E	374	GLN
1	E	478	ASN
1	E	516	GLN
1	E	519	HIS
1	E	551	HIS
1	E	634	GLN
1	E	681	ASN
1	E	706	GLN
1	E	722	GLN
1	E	766	ASN
1	E	1041	GLN
1	E	1054	GLN
1	E	1056	GLN
1	E	1080	GLN
1	E	1167	ASN
1	E	1197	ASN
1	E	1206	ASN
1	E	1502	ASN
1	E	1522	HIS
1	E	1670	ASN
1	E	1741	ASN
1	E	1800	GLN
1	E	1939	GLN
1	E	2075	GLN
1	E	2102	GLN
1	E	2159	ASN
1	E	2239	GLN
1	E	2251	GLN

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Mol	Chain	Res	Type
1	E	2390	ASN
1	E	2516	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Map visualisation

This section contains visualisations of the EMDB entry EMD-10797. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

6.1 Orthogonal projections

This section was not generated.

6.2 Central slices

This section was not generated.

6.3 Largest variance slices

This section was not generated.

6.4 Orthogonal standard-deviation projections (False-color)

This section was not generated.

6.5 Orthogonal surface views

This section was not generated.

6.6 Mask visualisation

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

7 Map analysis

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

7.1 Map-value distribution

This section was not generated.

7.2 Volume estimate versus contour level

This section was not generated.

7.3 Rotationally averaged power spectrum

This section was not generated. The rotationally averaged power spectrum had issues being displayed.

8 Fourier-Shell correlation

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

9 Map-model fit

This section was not generated.