Full wwPDB X-ray Structure Validation Report ⓘ

Oct 19, 2023 – 04:50 AM EDT

PDB ID	:	2QZP
Title	:	Crystal structure of mutation of an acylptide hydrolase/esterase from Aeropyrum pernix K1
Authors	:	Zhang, H.F.; Zheng, B.S.; Rao, Z.
Deposited on	:	2007-08-17
Resolution	:	2.70 Å(reported)

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

|		
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

Full wwPDB X-ray Structure Validation Report

1 Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.70 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	Percentile Ranks	Value
Rfree		0.277
Clashscore		78
Ramachandran outliers		4.8%
Sidechain outliers		6.8%
RSRZ outliers		1.2%

Worse   *Better*

▮ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution
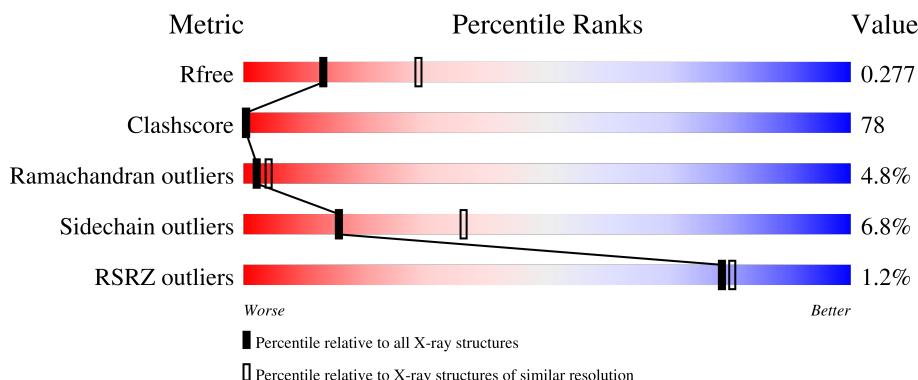
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R$_{free}$	130704	2808 (2.70-2.70)
Clashscore	141614	3122 (2.70-2.70)
Ramachandran outliers	138981	3069 (2.70-2.70)
Sidechain outliers	138945	3069 (2.70-2.70)
RSRZ outliers	127900	2737 (2.70-2.70)

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

Mol	Chain	Length	Quality of chain
1	A	562	22% 70% 7% ·
1	B	562	20% 72% 8%

WORLDWIDE PDB
PROTEIN DATA BANK

2 Entry composition ⓘ

There are 2 unique types of molecules in this entry. The entry contains 8881 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Acylamino-acid-releasing enzyme.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	560	Total	C	N	O	S	0	0	0
			4255	2685	750	808	12			
1	B	561	Total	C	N	O	S	0	0	0
			4260	2688	751	809	12			

- Molecule 2 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	154	Total	O	0	0
			154	154		
2	B	212	Total	O	0	0
			212	212		

3 Residue-property plots ⓘ

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 electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: Acylamino-acid-releasing enzyme
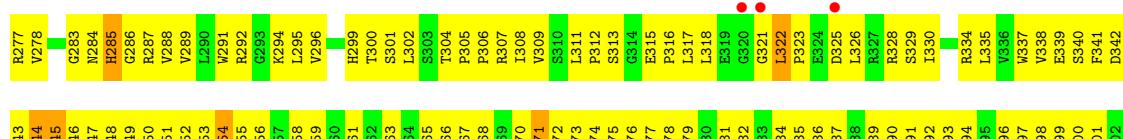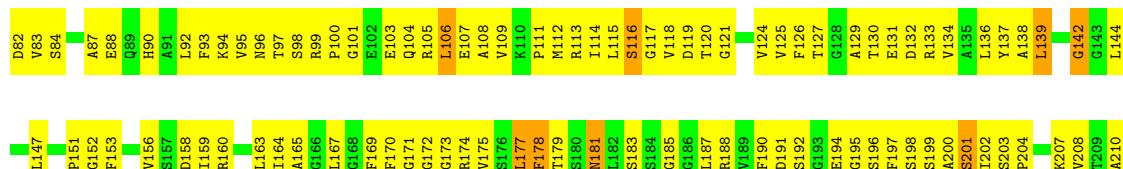
• Molecule 1: Acylamino-acid-releasing enzyme

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	63.12Å 102.18Å 163.59Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	48.11 – 2.70 48.11 – 2.50	Depositor EDS
% Data completeness (in resolution range)	92.0 (48.11-2.70) 90.3 (48.11-2.50)	Depositor EDS
R_{merge}	0.18	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.58 (at 2.51Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.226 , 0.277 0.226 , 0.277	Depositor DCC
R_{free} test set	1393 reflections (3.96%)	wwPDB-VP
Wilson B-factor (Å^2)	32.5	Xtriage
Anisotropy	0.373	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.33 , 81.0	EDS
L-test for twinning[2]	$< |L| > = 0.38$, $< L^2 > = 0.20$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.88	EDS
Total number of atoms	8881	wwPDB-VP
Average B, all atoms (Å^2)	30.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.55% of the height of the origin peak. No significant pseudotranslation is detected.*

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[1]Intensities estimated from amplitudes.

[2]Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

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	A	0.47	0/4346	0.76	0/5892
1	B	0.46	0/4351	0.75	1/5899 (0.0%)
All	All	0.46	0/8697	0.75	1/11791 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	374	ASP	N-CA-C	-5.06	97.33	111.00

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	4255	0	4219	642	0
1	B	4260	0	4224	704	0
2	A	154	0	0	93	0
2	B	212	0	0	137	0
All	All	8881	0	8443	1329	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 78.

All (1329) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

WORLDWIDE
wwPDB
PROTEIN DATA BANK

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:497:ARG:HH11	1:B:497:ARG:HB2	0.94	1.11
1:A:552:PRO:HD3	1:B:547:GLU:HB2	1.30	1.11
1:A:346:VAL:HG21	1:A:422:ASP:HB3	1.32	1.09
1:B:334:ARG:HH21	1:B:350:VAL:HG11	1.03	1.09
1:A:547:GLU:HB3	1:B:552:PRO:HD3	1.18	1.07
1:B:92:LEU:HD12	1:B:109:VAL:HG21	1.34	1.03
1:B:90:HIS:HB2	1:B:114:ILE:HD13	1.42	1.00
1:A:530:LYS:HB3	1:A:531:PRO:HD3	1.41	1.00
1:B:376:ASP:HA	2:B:791:HOH:O	1.60	1.00
1:B:323:PRO:HB2	1:B:326:LEU:HB2	1.42	0.99
1:B:497:ARG:HB2	1:B:497:ARG:NH1	1.79	0.98
1:B:347:PRO:O	1:B:396:ASN:HB2	1.63	0.98
1:B:212:LEU:HD23	1:B:219:ARG:HH12	1.26	0.96
1:B:201:SER:HB3	2:B:767:HOH:O	1.65	0.96
1:A:558:ILE:HD12	1:A:563:ASP:HB3	1.45	0.95
1:B:322:LEU:HD12	1:B:323:PRO:HD2	1.49	0.94
1:B:567:ILE:HD12	1:B:568:LEU:N	1.82	0.94
1:B:497:ARG:HH11	1:B:497:ARG:CB	1.81	0.93
1:A:522:GLN:HA	1:A:529:LEU:HD22	1.45	0.93
1:A:471:VAL:HG12	2:A:657:HOH:O	1.68	0.92
1:A:558:ILE:HG23	1:A:563:ASP:HB2	1.51	0.92
1:B:212:LEU:HD23	1:B:219:ARG:NH1	1.85	0.91
1:A:529:LEU:HD11	1:A:550:ILE:HD12	1.51	0.90
1:B:530:LYS:HB3	1:B:531:PRO:HD3	1.51	0.90
1:B:42:SER:HA	1:B:561:MET:SD	2.12	0.90
1:B:88:GLU:HG2	1:B:113:ARG:NH1	1.85	0.90
1:B:363:VAL:HG22	1:B:440:TYR:HB2	1.52	0.89
1:A:449:TYR:HA	2:A:709:HOH:O	1.71	0.88
1:A:69:ASP:HB2	1:A:118:VAL:HG22	1.56	0.88
1:A:68:LEU:HD12	1:A:78:ILE:HG21	1.52	0.88
1:B:325:ASP:HA	1:B:328:ARG:HB2	1.56	0.88
1:A:65:ASN:HD21	1:A:82:ASP:HB2	1.37	0.88
1:A:547:GLU:CB	1:B:552:PRO:HD3	2.03	0.88
1:B:334:ARG:NH2	1:B:350:VAL:HG11	1.87	0.88
1:B:509:VAL:HA	1:B:512:ILE:HD13	1.56	0.87
1:A:574:PHE:HA	2:A:602:HOH:O	1.74	0.87
1:A:127:THR:HB	2:A:677:HOH:O	1.73	0.87
1:B:208:VAL:HB	1:B:223:VAL:HB	1.56	0.87
1:B:528:PRO:HG3	2:B:756:HOH:O	1.75	0.86
1:A:545:THR:HB	2:A:613:HOH:O	1.73	0.86
1:A:457:MET:HB2	2:A:696:HOH:O	1.75	0.86
1:B:49:TYR:HA	1:B:57:VAL:O	1.74	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:505:PRO:HG2	2:B:731:HOH:O	1.76	0.86
1:B:520:HIS:HD2	1:B:521:PRO:HD2	1.40	0.86
1:B:539:LEU:HB2	2:B:678:HOH:O	1.75	0.86
1:A:515:PRO:HA	2:A:613:HOH:O	1.76	0.85
1:B:303:SER:O	1:B:304:THR:HG23	1.74	0.85
1:B:26:SER:HB3	1:B:39:VAL:HB	1.58	0.85
1:A:569:LEU:HB3	1:A:570:PRO:HD3	1.57	0.85
1:A:412:ILE:HB	2:A:721:HOH:O	1.77	0.84
1:B:127:THR:HG23	1:B:156:VAL:HG23	1.59	0.84
1:B:278:VAL:HG11	1:B:295:LEU:HD12	1.56	0.84
1:A:215:ALA:HB1	1:A:406:GLU:HB2	1.57	0.84
1:A:558:ILE:HG22	1:A:560:THR:O	1.78	0.84
1:A:547:GLU:HB3	1:B:552:PRO:CD	2.07	0.84
1:A:273:ILE:O	1:A:276:GLU:HB2	1.77	0.83
1:B:561:MET:HA	2:B:589:HOH:O	1.76	0.83
1:B:338:VAL:HG11	1:B:425:ALA:O	1.78	0.83
1:B:484:ALA:HB3	2:B:604:HOH:O	1.79	0.83
1:A:194:GLU:HB2	1:A:212:LEU:HD21	1.60	0.83
1:A:548:ALA:HB3	1:B:550:ILE:HD13	1.58	0.83
1:B:463:LYS:HB2	2:B:658:HOH:O	1.77	0.82
1:B:458:LYS:HE3	2:B:778:HOH:O	1.79	0.82
1:A:116:SER:N	2:A:677:HOH:O	2.13	0.82
1:A:452:LEU:HD22	2:A:709:HOH:O	1.78	0.82
1:A:532:LEU:HD13	1:A:532:LEU:O	1.79	0.82
1:B:70:PRO:HB2	1:B:74:VAL:HG21	1.61	0.82
1:A:94:LYS:O	1:A:94:LYS:HG3	1.79	0.82
1:B:420:LEU:HD21	1:B:458:LYS:HD3	1.59	0.82
1:B:284:ASN:HD22	1:B:376:ASP:C	1.83	0.81
1:B:302:LEU:HG	2:B:600:HOH:O	1.79	0.81
1:A:177:LEU:HD21	1:A:208:VAL:HG11	1.62	0.81
1:A:138:ALA:HB2	1:A:147:LEU:HD21	1.63	0.81
1:A:458:LYS:HD3	1:A:461:LEU:HD13	1.63	0.80
1:B:102:GLU:HA	2:B:621:HOH:O	1.79	0.80
1:A:322:LEU:HD23	1:A:323:PRO:HD2	1.63	0.80
1:A:23:GLU:HA	2:A:730:HOH:O	1.80	0.80
1:B:158:ASP:O	1:B:159:ILE:HD13	1.80	0.80
1:B:374:ASP:CG	1:B:394:MET:HB3	2.01	0.80
1:B:406:GLU:HG2	1:B:410:LYS:HE2	1.64	0.80
1:A:545:THR:HG23	1:B:553:ASP:OD1	1.80	0.80
1:B:570:PRO:HD2	2:B:594:HOH:O	1.82	0.79
1:B:44:GLY:O	1:B:560:THR:HG22	1.83	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:78:ILE:HD13	1:B:124:VAL:HG13	1.63	0.79
1:A:38:VAL:HG12	1:A:39:VAL:N	1.97	0.79
1:B:281:PRO:O	1:B:285:HIS:HE1	1.66	0.78
1:A:238:LYS:HG2	2:A:614:HOH:O	1.84	0.78
1:B:376:ASP:HB2	2:B:616:HOH:O	1.82	0.78
1:A:558:ILE:HG23	1:A:563:ASP:CB	2.14	0.78
1:A:32:ASP:HB2	1:A:35:LYS:HB2	1.64	0.78
1:A:44:GLY:HA2	1:A:561:MET:H	1.49	0.78
1:B:353:SER:HB3	1:B:356:ALA:HB3	1.66	0.78
1:A:406:GLU:O	1:A:410:LYS:HG3	1.85	0.77
1:A:469:ALA:O	1:A:527:THR:HG21	1.84	0.77
1:B:522:GLN:HA	1:B:529:LEU:HD22	1.64	0.77
1:B:569:LEU:HB3	1:B:570:PRO:HD3	1.66	0.77
1:B:574:PHE:HA	2:B:784:HOH:O	1.84	0.77
1:A:83:VAL:HA	2:A:717:HOH:O	1.84	0.77
1:B:406:GLU:O	1:B:410:LYS:HG3	1.85	0.77
1:A:138:ALA:CB	1:A:147:LEU:HD21	2.13	0.77
1:A:562:GLU:O	1:A:564:ALA:N	2.17	0.77
1:B:268:ARG:HA	2:B:614:HOH:O	1.83	0.77
1:A:61:ARG:NH1	1:A:101:GLY:HA3	1.99	0.77
1:A:519:ILE:HA	1:A:549:HIS:HB2	1.66	0.77
1:A:523:ASN:ND2	1:A:553:ASP:HA	1.99	0.77
1:A:417:GLY:N	1:A:419:GLU:OE2	2.18	0.77
1:B:323:PRO:HG2	1:B:326:LEU:HD12	1.67	0.77
1:B:387:ALA:HB2	2:B:643:HOH:O	1.83	0.77
1:A:334:ARG:HH21	1:A:350:VAL:HG11	1.50	0.76
1:A:90:HIS:HD2	1:A:114:ILE:H	1.32	0.76
1:A:215:ALA:N	1:A:405:GLU:HB3	2.01	0.75
1:A:420:LEU:HD21	2:A:696:HOH:O	1.84	0.75
1:B:567:ILE:HD11	1:B:568:LEU:HD22	1.69	0.75
1:B:520:HIS:ND1	1:B:532:LEU:HG	2.01	0.75
1:A:552:PRO:CD	1:B:547:GLU:HB2	2.14	0.75
1:A:411:ILE:HD11	1:A:446:TYR:OH	1.87	0.74
1:A:194:GLU:HB3	1:A:214:THR:CG2	2.16	0.74
1:B:139:LEU:HD13	1:B:144:LEU:HB2	1.69	0.74
1:B:542:ARG:HG3	1:B:542:ARG:HH11	1.49	0.74
1:A:428:ARG:HG3	2:A:622:HOH:O	1.87	0.74
1:B:480:LEU:HB2	2:B:756:HOH:O	1.88	0.74
1:A:534:ARG:O	1:A:538:GLU:HG2	1.88	0.74
1:A:309:VAL:HA	1:A:316:PRO:HA	1.68	0.73
1:B:59:LEU:O	1:B:95:VAL:HG11	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:311:LEU:HG	2:A:670:HOH:O	1.87	0.73
1:B:239:ASP:HB2	1:B:275:GLY:O	1.87	0.73
1:B:579:ARG:C	1:B:581:ARG:H	1.91	0.73
1:A:136:LEU:HD21	1:A:164:ILE:HG21	1.70	0.73
1:A:526:ARG:HH11	1:A:556:HIS:HD2	1.34	0.73
1:B:265:ARG:HB3	2:B:696:HOH:O	1.87	0.73
1:A:194:GLU:HB3	1:A:214:THR:HG21	1.70	0.73
1:B:428:ARG:HG2	2:B:592:HOH:O	1.88	0.73
1:B:445:SER:H	1:B:469:ALA:HB3	1.54	0.73
1:A:529:LEU:HD23	1:B:540:LEU:HD13	1.70	0.72
1:A:65:ASN:ND2	1:A:82:ASP:HB2	2.04	0.72
1:B:90:HIS:CB	1:B:114:ILE:HD13	2.20	0.72
1:B:477:MET:HG3	1:B:528:PRO:HD2	1.72	0.72
1:B:485:PHE:HA	1:B:488:PHE:HB3	1.72	0.72
1:B:503:ARG:O	1:B:505:PRO:HD3	1.89	0.72
1:B:133:ARG:HD3	1:B:149:ARG:HE	1.54	0.72
1:B:177:LEU:CD2	1:B:223:VAL:HG21	2.19	0.72
1:B:496:SER:HB3	2:B:619:HOH:O	1.89	0.72
1:A:251:LEU:HD13	1:A:259:LEU:HD11	1.71	0.71
1:B:71:HIS:O	1:B:74:VAL:HG13	1.89	0.71
1:B:519:ILE:HD13	2:B:594:HOH:O	1.90	0.71
1:A:271:VAL:HB	1:A:278:VAL:HB	1.71	0.71
1:A:419:GLU:HG3	2:A:643:HOH:O	1.90	0.71
1:B:95:VAL:HA	2:B:742:HOH:O	1.90	0.71
1:B:347:PRO:O	1:B:396:ASN:CB	2.38	0.71
1:B:573:PHE:HB2	2:B:653:HOH:O	1.90	0.71
1:A:549:HIS:CE1	1:A:570:PRO:HB3	2.26	0.71
1:A:361:PRO:HA	1:A:438:GLU:CG	2.21	0.71
1:B:374:ASP:OD2	1:B:394:MET:HB3	1.90	0.71
1:B:381:PHE:CZ	1:B:567:ILE:HD13	2.25	0.71
1:B:417:GLY:O	1:B:421:GLU:HG2	1.89	0.71
1:A:350:VAL:O	1:A:351:LEU:HD23	1.89	0.71
1:B:364:VAL:HG22	2:B:775:HOH:O	1.91	0.71
1:B:472:VAL:HG12	1:B:506:ILE:HB	1.71	0.71
1:B:475:GLU:O	1:B:479:GLU:HG3	1.88	0.71
1:B:451:THR:CG2	1:B:467:ALA:HB2	2.21	0.71
1:B:577:THR:HB	2:B:784:HOH:O	1.89	0.71
1:B:160:ARG:HB3	1:B:202:ILE:HG21	1.74	0.70
1:A:338:VAL:O	1:A:345:ARG:HA	1.91	0.70
1:A:308:ILE:HB	1:A:318:LEU:HB2	1.73	0.70
1:B:45:SER:HA	1:B:560:THR:HA	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:71:HIS:O	1:A:74:VAL:HG23	1.91	0.70
1:A:363:VAL:HG12	2:A:693:HOH:O	1.92	0.70
1:A:284:ASN:ND2	1:A:377:SER:OG	2.25	0.70
1:A:309:VAL:HG12	1:A:316:PRO:HA	1.73	0.70
1:B:30:VAL:HG23	1:B:289:VAL:CG1	2.21	0.70
1:B:356:ALA:HB2	1:B:389:GLY:O	1.92	0.70
1:B:362:THR:HG22	1:B:363:VAL:N	2.06	0.70
1:B:564:ALA:O	1:B:567:ILE:HD11	1.92	0.70
1:A:129:ALA:CB	1:A:134:VAL:HG22	2.21	0.70
1:B:164:ILE:HB	1:B:180:SER:HB3	1.74	0.70
1:B:373:GLU:OE2	1:B:396:ASN:HB3	1.91	0.70
1:B:331:ALA:HB3	1:B:352:GLU:HB3	1.73	0.69
1:A:335:LEU:HD12	1:A:348:THR:O	1.93	0.69
1:B:51:TYR:HE2	1:B:317:LEU:HB3	1.58	0.69
1:B:79:LEU:HD11	1:B:95:VAL:HG21	1.74	0.69
1:A:346:VAL:HG13	1:A:407:TRP:HZ2	1.58	0.69
1:A:90:HIS:HB2	1:A:114:ILE:HD13	1.75	0.69
1:B:565:VAL:C	1:B:567:ILE:H	1.93	0.69
1:A:441:ILE:HD13	1:A:442:MET:N	2.06	0.69
1:A:439:LEU:N	2:A:729:HOH:O	2.24	0.69
1:A:511:ARG:O	2:A:630:HOH:O	2.10	0.69
1:B:178:PHE:HB3	2:B:706:HOH:O	1.93	0.69
1:B:208:VAL:HG23	1:B:223:VAL:O	1.93	0.69
1:A:528:PRO:HD3	2:A:644:HOH:O	1.91	0.69
1:B:245:PRO:HA	2:B:696:HOH:O	1.93	0.69
1:B:324:GLU:O	1:B:327:ARG:HB3	1.92	0.69
1:A:130:THR:OG1	1:A:132:ASP:OD1	2.10	0.68
1:B:327:ARG:O	2:B:720:HOH:O	2.11	0.68
1:A:174:ARG:HE	1:A:409:LEU:HD11	1.59	0.68
1:B:35:LYS:HG2	1:B:52:ASP:OD1	1.93	0.68
1:A:200:ALA:HB3	2:A:639:HOH:O	1.92	0.68
1:A:405:GLU:OE1	1:A:409:LEU:HG	1.93	0.68
1:A:163:LEU:C	1:A:164:ILE:HD12	2.13	0.68
1:A:474:TRP:HB2	1:A:500:MET:HB3	1.75	0.68
1:A:175:VAL:HG23	1:A:196:SER:HB3	1.76	0.68
1:B:169:PHE:CZ	1:B:175:VAL:HG22	2.28	0.68
1:B:329:SER:HB2	1:B:387:ALA:HA	1.76	0.68
1:A:352:GLU:HA	1:A:391:HIS:ND1	2.09	0.68
1:A:361:PRO:HA	1:A:438:GLU:HG2	1.76	0.68
1:A:27:LEU:HD21	1:A:289:VAL:HG22	1.76	0.68
1:B:92:LEU:O	1:B:106:LEU:HD12	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:477:MET:HA	2:B:756:HOH:O	1.93	0.68
1:B:526:ARG:NH2	1:B:557:ALA:HB2	2.08	0.68
1:B:218:ALA:HB1	1:B:248:ILE:HD11	1.76	0.67
1:B:526:ARG:HA	2:B:680:HOH:O	1.94	0.67
1:A:42:SER:HB2	2:A:649:HOH:O	1.94	0.67
1:B:222:THR:O	1:B:230:VAL:HG13	1.95	0.67
1:B:59:LEU:HD13	1:B:77:VAL:HG21	1.76	0.67
1:B:218:ALA:HB1	1:B:248:ILE:CD1	2.25	0.67
1:A:27:LEU:HD23	1:A:287:ARG:O	1.93	0.67
1:A:368:GLY:HA2	2:A:686:HOH:O	1.95	0.67
1:B:295:LEU:O	1:B:311:LEU:HG	1.95	0.67
1:B:485:PHE:O	1:B:489:ILE:HG12	1.95	0.67
1:B:91:ALA:HB3	1:B:93:PHE:CZ	2.30	0.66
1:B:440:TYR:OH	1:B:463:LYS:HD3	1.94	0.66
1:B:221:VAL:HB	1:B:230:VAL:HG12	1.77	0.66
1:A:90:HIS:O	1:A:111:PRO:HA	1.96	0.66
1:A:386:ALA:HA	1:A:390:PHE:O	1.95	0.66
1:B:438:GLU:HA	2:B:714:HOH:O	1.95	0.66
1:B:449:TYR:HB2	2:B:685:HOH:O	1.94	0.66
1:A:498:GLU:HA	1:A:501:ARG:HD2	1.77	0.66
1:B:559:ASN:O	1:B:560:THR:HG23	1.95	0.66
1:A:58:LYS:O	1:A:100:PRO:HB3	1.96	0.66
1:A:81:ARG:HB2	1:A:81:ARG:HH11	1.61	0.66
1:A:423:VAL:HA	2:A:651:HOH:O	1.95	0.66
1:A:353:SER:O	1:A:356:ALA:N	2.29	0.66
1:A:529:LEU:HD11	1:A:550:ILE:CD1	2.25	0.66
1:B:159:ILE:HD12	1:B:164:ILE:HG23	1.78	0.66
1:A:322:LEU:HD23	1:A:323:PRO:CD	2.25	0.66
1:A:548:ALA:O	1:B:549:HIS:HA	1.95	0.66
1:A:551:ILE:HG23	1:A:552:PRO:HD2	1.77	0.66
1:B:421:GLU:OE2	1:B:421:GLU:HA	1.96	0.66
1:B:574:PHE:O	1:B:577:THR:HB	1.96	0.66
1:A:480:LEU:HD21	1:A:530:LYS:HD2	1.78	0.66
1:A:567:ILE:HG13	1:A:567:ILE:O	1.95	0.66
1:B:424:SER:HB3	1:B:428:ARG:NH1	2.11	0.66
1:A:45:SER:HB2	1:A:63:PRO:HB3	1.76	0.65
1:A:125:VAL:HA	1:A:137:TYR:O	1.96	0.65
1:A:392:VAL:HG22	2:A:720:HOH:O	1.95	0.65
1:B:153:PHE:HE1	1:B:488:PHE:HB2	1.61	0.65
1:A:308:ILE:O	1:A:318:LEU:N	2.23	0.65
1:B:171:GLY:O	1:B:173:GLY:N	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:90:HIS:N	1:A:112:MET:O	2.21	0.65
1:A:555:GLY:HA3	2:A:663:HOH:O	1.96	0.65
1:B:99:ARG:HB2	1:B:102:GLU:OE2	1.96	0.65
1:B:410:LYS:HG2	2:B:695:HOH:O	1.95	0.65
1:A:302:LEU:HD13	1:A:351:LEU:HD21	1.78	0.65
1:B:523:ASN:ND2	1:B:553:ASP:HA	2.11	0.65
1:A:579:ARG:NH1	1:A:579:ARG:HB2	2.12	0.65
1:B:103:GLU:HB2	2:B:687:HOH:O	1.97	0.65
1:B:458:LYS:HB3	1:B:461:LEU:HD22	1.79	0.65
1:B:532:LEU:O	1:B:536:MET:HG3	1.97	0.65
1:B:469:ALA:HB1	1:B:556:HIS:CE1	2.31	0.65
1:A:563:ASP:HA	1:A:566:LYS:CG	2.27	0.65
1:A:63:PRO:HA	2:A:595:HOH:O	1.97	0.65
1:B:278:VAL:HG11	1:B:295:LEU:CD1	2.27	0.64
1:B:29:GLY:CA	1:B:289:VAL:HG21	2.28	0.64
1:B:136:LEU:O	1:B:147:LEU:N	2.31	0.64
1:A:353:SER:O	1:A:355:ARG:N	2.30	0.64
1:B:100:PRO:O	1:B:102:GLU:HG3	1.96	0.64
1:B:133:ARG:HA	1:B:483:ALA:CB	2.27	0.64
1:B:137:TYR:HA	1:B:146:GLU:HA	1.80	0.64
1:B:362:THR:CG2	1:B:363:VAL:N	2.60	0.64
1:A:88:GLU:HG3	1:A:113:ARG:HH12	1.61	0.64
1:A:223:VAL:HA	1:A:229:SER:O	1.98	0.64
1:A:263:ALA:O	1:A:269:SER:HB2	1.97	0.64
1:A:325:ASP:HA	1:A:328:ARG:HB3	1.79	0.64
1:A:337:TRP:CZ3	1:A:347:PRO:HB3	2.33	0.64
1:B:69:ASP:O	1:B:118:VAL:HG13	1.97	0.64
1:B:201:SER:N	2:B:652:HOH:O	2.30	0.64
1:A:61:ARG:HH12	1:A:101:GLY:HA3	1.62	0.64
1:A:438:GLU:HB2	2:A:729:HOH:O	1.96	0.64
1:A:525:SER:C	2:A:644:HOH:O	2.35	0.64
1:A:526:ARG:HD2	1:A:556:HIS:CD2	2.32	0.64
1:B:181:ASN:HB2	1:B:185:GLY:O	1.97	0.64
1:A:38:VAL:CG1	1:A:39:VAL:N	2.61	0.64
1:A:272:PHE:CE2	1:A:277:ARG:HD3	2.33	0.64
1:A:415:PRO:O	1:A:503:ARG:HD2	1.98	0.64
1:B:46:VAL:HG23	2:B:764:HOH:O	1.98	0.64
1:A:172:GLY:O	1:A:409:LEU:HD22	1.98	0.64
1:B:90:HIS:HB2	1:B:114:ILE:CD1	2.23	0.64
1:B:201:SER:CB	1:B:252:GLY:HA2	2.28	0.64
1:B:251:LEU:HG	2:B:652:HOH:O	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:411:ILE:CD1	1:B:419:GLU:HG2	2.27	0.64
1:A:129:ALA:HB2	1:A:134:VAL:HG22	1.80	0.64
1:A:200:ALA:CB	2:A:639:HOH:O	2.46	0.64
1:A:214:THR:C	1:A:405:GLU:HB3	2.18	0.64
1:B:361:PRO:HA	1:B:438:GLU:HG2	1.80	0.64
1:B:373:GLU:OE1	1:B:396:ASN:ND2	2.31	0.64
1:A:164:ILE:HD13	1:A:181:ASN:C	2.18	0.63
1:A:370:PRO:O	1:A:372:ALA:N	2.29	0.63
1:A:511:ARG:HG2	2:A:630:HOH:O	1.98	0.63
1:B:137:TYR:CD2	1:B:146:GLU:HG3	2.32	0.63
1:A:493:THR:O	1:A:499:ILE:HD12	1.97	0.63
1:B:90:HIS:HD2	1:B:114:ILE:H	1.47	0.63
1:B:92:LEU:HD12	1:B:109:VAL:CG2	2.22	0.63
1:B:180:SER:HA	2:B:750:HOH:O	1.98	0.63
1:B:104:GLN:HG2	2:B:620:HOH:O	1.98	0.63
1:B:428:ARG:O	1:B:431:ARG:HB2	1.98	0.63
1:B:471:VAL:HG11	1:B:474:TRP:CH2	2.33	0.63
1:A:93:PHE:C	2:A:589:HOH:O	2.36	0.63
1:A:133:ARG:HA	1:A:483:ALA:CB	2.28	0.63
1:B:411:ILE:HD11	1:B:446:TYR:OH	1.99	0.63
1:B:441:ILE:HG21	2:B:615:HOH:O	1.96	0.63
1:A:62:GLU:HB2	1:A:81:ARG:HH21	1.64	0.63
1:B:186:GLY:O	1:B:187:LEU:HB2	1.98	0.63
1:B:171:GLY:C	1:B:173:GLY:H	2.00	0.63
1:B:472:VAL:CG1	1:B:506:ILE:HB	2.29	0.63
1:B:542:ARG:HG3	1:B:542:ARG:NH1	2.14	0.63
1:B:61:ARG:HB2	1:B:103:GLU:OE1	1.99	0.62
1:B:278:VAL:HG13	1:B:312:PRO:HB3	1.80	0.62
1:B:340:SER:HB3	2:B:722:HOH:O	1.98	0.62
1:A:109:VAL:HG12	2:A:594:HOH:O	1.99	0.62
1:A:475:GLU:HB3	2:A:627:HOH:O	2.00	0.62
1:B:99:ARG:NH2	1:B:102:GLU:HB3	2.13	0.62
1:B:264:ARG:O	1:B:264:ARG:HG3	1.97	0.62
1:B:78:ILE:HD13	1:B:124:VAL:CG1	2.30	0.62
1:A:523:ASN:HD21	1:A:553:ASP:HA	1.61	0.62
1:B:91:ALA:HB1	1:B:105:ARG:HE	1.65	0.62
1:B:116:SER:C	2:B:596:HOH:O	2.38	0.62
1:A:45:SER:OG	1:A:47:ASN:ND2	2.30	0.62
1:B:523:ASN:HB2	1:B:554:ALA:O	1.99	0.62
1:A:58:LYS:HE2	1:A:60:ASN:O	1.99	0.62
1:B:68:LEU:O	1:B:70:PRO:HD3	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:345:ARG:HD2	2:B:684:HOH:O	2.00	0.62
1:B:539:LEU:HD13	1:B:546:PHE:CG	2.34	0.62
1:A:328:ARG:HG2	1:A:328:ARG:HH11	1.64	0.62
1:B:29:GLY:HA2	1:B:289:VAL:HG21	1.82	0.62
1:B:420:LEU:CD2	1:B:458:LYS:HD3	2.29	0.62
1:A:90:HIS:HB2	1:A:114:ILE:CD1	2.30	0.62
1:B:133:ARG:NH1	1:B:146:GLU:OE2	2.32	0.62
1:A:45:SER:HB2	2:A:595:HOH:O	1.99	0.61
1:A:251:LEU:HD12	1:A:252:GLY:N	2.13	0.61
1:A:283:GLY:HA2	1:A:376:ASP:OD2	2.00	0.61
1:A:470:SER:O	1:A:527:THR:HB	2.00	0.61
1:B:115:LEU:HB2	1:B:127:THR:OG1	2.00	0.61
1:A:341:PHE:CD2	1:A:421:GLU:HB3	2.35	0.61
1:A:346:VAL:HG22	1:A:407:TRP:CH2	2.36	0.61
1:B:373:GLU:OE1	1:B:373:GLU:HA	1.99	0.61
1:A:273:ILE:HG13	1:A:295:LEU:HD11	1.82	0.61
1:A:499:ILE:HD11	2:A:732:HOH:O	2.01	0.61
1:B:160:ARG:NH2	2:B:715:HOH:O	2.33	0.61
1:A:419:GLU:CD	1:A:420:LEU:H	2.03	0.61
1:B:370:PRO:O	1:B:372:ALA:N	2.33	0.61
1:A:340:SER:HB2	1:A:344:SER:O	1.99	0.61
1:B:31:VAL:HG12	1:B:32:ASP:N	2.15	0.61
1:B:559:ASN:HB2	2:B:762:HOH:O	2.00	0.61
1:A:547:GLU:OE2	1:A:574:PHE:HB2	2.00	0.61
1:A:558:ILE:HG12	2:A:583:HOH:O	2.01	0.61
1:A:533:LEU:CD1	1:B:536:MET:HB3	2.30	0.61
1:B:323:PRO:CG	1:B:326:LEU:HD12	2.31	0.61
1:A:497:ARG:O	1:A:499:ILE:N	2.34	0.61
1:B:55:GLU:C	2:B:735:HOH:O	2.38	0.61
1:B:399:GLY:HA2	1:B:408:ARG:O	2.01	0.61
1:A:533:LEU:HD11	1:B:536:MET:HB3	1.81	0.61
1:B:45:SER:HB2	1:B:63:PRO:HB3	1.83	0.60
1:B:127:THR:HG23	1:B:156:VAL:CG2	2.29	0.60
1:B:347:PRO:HG2	1:B:396:ASN:HB2	1.83	0.60
1:B:282:GLN:HB3	2:B:700:HOH:O	1.99	0.60
1:B:567:ILE:CD1	1:B:568:LEU:HD22	2.32	0.60
1:A:264:ARG:NH2	1:A:373:GLU:OE2	2.33	0.60
1:A:562:GLU:C	1:A:564:ALA:H	2.05	0.60
1:B:26:SER:O	1:B:308:ILE:HD11	2.01	0.60
1:B:30:VAL:H	1:B:289:VAL:HG11	1.64	0.60
1:A:296:VAL:HG13	1:A:309:VAL:O	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:41:PHE:CE2	1:A:561:MET:HA	2.37	0.60
1:A:160:ARG:N	1:A:202:ILE:HD12	2.16	0.60
1:B:90:HIS:CD2	1:B:114:ILE:HD13	2.35	0.60
1:A:533:LEU:HD21	1:B:536:MET:SD	2.42	0.60
1:A:41:PHE:CZ	1:A:561:MET:HA	2.35	0.60
1:A:309:VAL:HG12	1:A:316:PRO:CA	2.32	0.60
1:A:468:GLY:HA2	1:A:519:ILE:O	2.02	0.60
1:B:135:ALA:HB3	1:B:137:TYR:CZ	2.37	0.60
1:B:517:ALA:HB2	1:B:574:PHE:CD1	2.37	0.60
1:B:530:LYS:HB3	1:B:531:PRO:CD	2.27	0.60
1:A:334:ARG:HG3	2:A:694:HOH:O	2.01	0.60
1:B:330:ILE:HD12	2:B:720:HOH:O	2.02	0.60
1:A:385:LEU:HD13	2:A:720:HOH:O	2.00	0.60
1:B:361:PRO:O	1:B:390:PHE:HA	2.02	0.59
1:B:325:ASP:CA	1:B:328:ARG:HB2	2.30	0.59
1:B:410:LYS:HE3	2:B:786:HOH:O	2.02	0.59
1:A:171:GLY:O	1:A:174:ARG:HB2	2.02	0.59
1:B:175:VAL:HB	1:B:196:SER:HB3	1.84	0.59
1:A:55:GLU:HA	2:A:604:HOH:O	2.03	0.59
1:A:267:GLY:HA2	1:A:375:SER:HB2	1.83	0.59
1:A:356:ALA:HB2	1:A:389:GLY:O	2.01	0.59
1:B:451:THR:HG21	1:B:467:ALA:HB2	1.85	0.59
1:A:558:ILE:CG2	1:A:560:THR:O	2.51	0.59
1:B:361:PRO:HG3	1:B:438:GLU:CD	2.23	0.59
1:B:471:VAL:HG11	1:B:474:TRP:CZ3	2.37	0.59
1:A:37:LEU:HD23	1:A:70:PRO:HG3	1.85	0.59
1:A:480:LEU:HD21	1:A:530:LYS:CD	2.32	0.59
1:A:530:LYS:CB	1:A:531:PRO:HD3	2.24	0.59
1:A:109:VAL:HG12	1:A:109:VAL:O	2.02	0.59
1:A:306:PRO:HD3	1:A:378:TRP:HB3	1.83	0.59
1:B:565:VAL:C	1:B:567:ILE:N	2.56	0.59
1:A:526:ARG:HH11	1:A:556:HIS:CD2	2.18	0.59
1:B:145:ARG:HG3	2:B:748:HOH:O	2.01	0.58
1:B:302:LEU:HD13	1:B:351:LEU:CD1	2.33	0.58
1:B:46:VAL:HB	1:B:64:ILE:O	2.03	0.58
1:B:246:THR:HG22	1:B:264:ARG:O	2.03	0.58
1:B:251:LEU:CD1	1:B:259:LEU:HD11	2.33	0.58
1:B:456:THR:CG2	1:B:512:ILE:HD11	2.32	0.58
1:A:475:GLU:HA	1:A:500:MET:HE2	1.85	0.58
1:B:414:ASP:HA	1:B:503:ARG:HH12	1.66	0.58
1:B:210:ALA:HA	1:B:251:LEU:HD23	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:307:ARG:NH2	2:B:595:HOH:O	2.33	0.58
1:A:165:ALA:CB	2:A:653:HOH:O	2.51	0.58
1:A:455:LEU:HD23	2:A:682:HOH:O	2.03	0.58
1:A:465:GLY:O	1:A:516:LEU:HA	2.04	0.58
1:B:28:GLN:HG3	1:B:67:VAL:CG2	2.33	0.58
1:B:61:ARG:HB2	1:B:103:GLU:CD	2.24	0.58
1:B:250:TRP:HZ3	1:B:260:ALA:HB3	1.67	0.58
1:B:324:GLU:OE2	1:B:327:ARG:NH1	2.33	0.58
1:B:390:PHE:CE1	1:B:579:ARG:NH2	2.72	0.58
1:A:177:LEU:HB3	1:A:190:PHE:HB2	1.86	0.58
1:B:248:ILE:HD12	1:B:248:ILE:H	1.69	0.58
1:A:40:GLY:C	1:A:42:SER:H	2.07	0.58
1:B:27:LEU:CD1	1:B:38:VAL:HG12	2.33	0.58
1:B:284:ASN:ND2	1:B:376:ASP:C	2.54	0.58
1:B:528:PRO:O	1:B:532:LEU:HD23	2.03	0.58
1:A:159:ILE:HG23	1:A:163:LEU:O	2.03	0.58
1:A:38:VAL:CG1	1:A:39:VAL:H	2.17	0.58
1:A:160:ARG:HD3	1:A:202:ILE:HG22	1.85	0.58
1:B:133:ARG:HA	1:B:483:ALA:HB2	1.85	0.58
1:B:497:ARG:O	1:B:500:MET:N	2.37	0.58
1:A:120:THR:HB	2:A:617:HOH:O	2.04	0.57
1:A:403:TYR:HD1	2:A:618:HOH:O	1.87	0.57
1:B:60:ASN:O	1:B:101:GLY:HA2	2.05	0.57
1:B:201:SER:HB2	1:B:252:GLY:HA2	1.86	0.57
1:A:217:GLU:HG2	1:A:245:PRO:O	2.05	0.57
1:B:295:LEU:HB2	1:B:311:LEU:HB2	1.85	0.57
1:B:343:GLY:N	2:B:722:HOH:O	2.37	0.57
1:A:44:GLY:HA2	1:A:561:MET:CB	2.34	0.57
1:A:51:TYR:CZ	1:A:53:GLY:HA2	2.39	0.57
1:B:266:GLU:HG2	1:B:337:TRP:HZ2	1.69	0.57
1:B:477:MET:HB3	2:B:642:HOH:O	2.05	0.57
1:B:477:MET:CE	1:B:489:ILE:HD11	2.34	0.57
1:B:326:LEU:HA	1:B:355:ARG:HH11	1.67	0.57
1:A:187:LEU:HD12	1:A:188:ARG:H	1.68	0.57
1:A:412:ILE:HD13	1:A:492:LEU:HD12	1.86	0.57
1:B:233:LEU:HD23	1:B:234:GLU:N	2.20	0.57
1:A:38:VAL:HG12	1:A:39:VAL:H	1.65	0.57
1:A:187:LEU:HD12	1:A:188:ARG:N	2.20	0.57
1:A:267:GLY:HA2	1:A:375:SER:CB	2.34	0.57
1:A:372:ALA:O	1:A:401:THR:N	2.34	0.57
1:B:271:VAL:O	1:B:277:ARG:HA	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:47:ASN:HA	2:B:679:HOH:O	2.04	0.57
1:B:198:SER:HB3	1:B:213:GLU:OE2	2.04	0.57
1:B:551:ILE:HB	1:B:554:ALA:HB2	1.87	0.57
1:A:251:LEU:HD12	1:A:251:LEU:C	2.24	0.57
1:A:323:PRO:HD2	1:A:326:LEU:HD12	1.86	0.57
1:A:569:LEU:HG	1:A:573:PHE:HE2	1.70	0.57
1:B:329:SER:HB3	1:B:355:ARG:HE	1.69	0.57
1:B:464:ALA:CB	1:B:578:GLN:HG3	2.35	0.57
1:A:169:PHE:HE2	1:A:371:PHE:CD1	2.22	0.57
1:A:449:TYR:HB2	1:A:471:VAL:HG23	1.86	0.57
1:A:113:ARG:NH2	1:A:525:SER:OG	2.38	0.56
1:A:446:TYR:HB3	2:A:686:HOH:O	2.05	0.56
1:B:68:LEU:HG	1:B:78:ILE:HB	1.87	0.56
1:A:174:ARG:HH21	1:A:405:GLU:CD	2.08	0.56
1:A:342:ASP:CG	1:A:398:ARG:HH22	2.08	0.56
1:A:419:GLU:O	1:A:423:VAL:HG23	2.06	0.56
1:A:473:ASP:N	2:A:657:HOH:O	2.38	0.56
1:A:526:ARG:HD2	1:A:556:HIS:CG	2.40	0.56
1:B:127:THR:HA	1:B:135:ALA:O	2.06	0.56
1:B:304:THR:O	1:B:378:TRP:HB2	2.06	0.56
1:A:363:VAL:HA	1:A:440:TYR:O	2.05	0.56
1:B:420:LEU:HD22	1:B:453:CYS:SG	2.46	0.56
1:A:305:PRO:HA	1:A:378:TRP:CG	2.41	0.56
1:A:429:TRP:CD1	1:A:433:SER:HB2	2.40	0.56
1:B:240:PHE:HE1	1:B:263:ALA:HB2	1.70	0.56
1:B:361:PRO:HA	1:B:438:GLU:CG	2.34	0.56
1:B:516:LEU:HD12	1:B:517:ALA:H	1.70	0.56
1:A:519:ILE:HG12	1:A:549:HIS:CD2	2.40	0.56
1:B:99:ARG:CZ	1:B:102:GLU:HB3	2.36	0.56
1:B:198:SER:HB3	1:B:213:GLU:CD	2.26	0.56
1:B:455:LEU:HD22	1:B:514:GLU:HB2	1.88	0.56
1:A:393:VAL:HG11	1:A:426:ALA:HB1	1.88	0.56
1:A:441:ILE:HB	1:A:462:PHE:CD1	2.41	0.56
1:A:486:ARG:HH11	1:A:486:ARG:HG3	1.71	0.56
1:B:90:HIS:O	1:B:111:PRO:HA	2.05	0.56
1:B:517:ALA:HB2	1:B:574:PHE:CE1	2.41	0.56
1:A:305:PRO:HD3	1:A:322:LEU:HD12	1.88	0.56
1:B:456:THR:HG23	1:B:512:ILE:HD11	1.87	0.56
1:A:46:VAL:N	2:A:595:HOH:O	2.38	0.56
1:A:106:LEU:HA	2:A:698:HOH:O	2.04	0.56
1:A:164:ILE:O	1:A:179:THR:HA	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:347:PRO:HG3	1:A:403:TYR:CD2	2.41	0.56
1:A:458:LYS:O	1:A:460:GLY:N	2.39	0.56
1:B:271:VAL:O	1:B:277:ARG:HD2	2.06	0.56
1:B:331:ALA:HB3	1:B:352:GLU:CB	2.36	0.56
1:A:550:ILE:O	1:B:547:GLU:HA	2.06	0.55
1:A:219:ARG:HG3	1:A:219:ARG:HH11	1.71	0.55
1:A:445:SER:HA	1:A:469:ALA:O	2.06	0.55
1:A:520:HIS:O	1:A:550:ILE:HA	2.06	0.55
1:B:350:VAL:HG21	1:B:429:TRP:CH2	2.41	0.55
1:B:453:CYS:HB2	2:B:731:HOH:O	2.07	0.55
1:A:92:LEU:O	1:A:106:LEU:HG	2.04	0.55
1:A:178:PHE:CD1	1:A:178:PHE:C	2.80	0.55
1:A:563:ASP:OD2	2:A:585:HOH:O	2.18	0.55
1:B:471:VAL:HG23	2:B:685:HOH:O	2.05	0.55
1:A:25:TYR:HB3	1:A:38:VAL:HG11	1.88	0.55
1:A:426:ALA:HB2	2:A:651:HOH:O	2.06	0.55
1:B:123:ALA:HA	1:B:139:LEU:O	2.06	0.55
1:B:268:ARG:NH1	1:B:282:GLN:CD	2.60	0.55
1:B:326:LEU:HB3	2:B:794:HOH:O	2.05	0.55
1:B:455:LEU:CD2	1:B:514:GLU:HB2	2.37	0.55
1:A:399:GLY:O	1:A:408:ARG:HG3	2.06	0.55
1:A:478:TYR:HE1	1:A:486:ARG:O	1.90	0.55
1:A:499:ILE:HG23	1:A:503:ARG:HG3	1.89	0.55
1:A:532:LEU:HD13	1:A:532:LEU:C	2.26	0.55
1:A:541:ALA:C	1:A:543:GLY:H	2.09	0.55
1:B:51:TYR:CZ	1:B:53:GLY:HA2	2.42	0.55
1:A:379:ASP:OD1	1:A:381:PHE:N	2.38	0.55
1:A:474:TRP:CD1	1:A:500:MET:HA	2.42	0.55
1:B:59:LEU:HD22	2:B:727:HOH:O	2.07	0.55
1:B:255:PRO:O	1:B:257:GLY:N	2.39	0.55
1:B:496:SER:CB	2:B:619:HOH:O	2.52	0.55
1:A:579:ARG:HG2	1:A:580:GLU:HG3	1.88	0.55
1:B:169:PHE:CE2	1:B:175:VAL:HG22	2.40	0.55
1:B:246:THR:CG2	1:B:402:GLY:O	2.55	0.55
1:B:259:LEU:HD11	2:B:767:HOH:O	2.06	0.55
1:A:169:PHE:HE2	1:A:371:PHE:HD1	1.54	0.55
1:A:215:ALA:CB	1:A:406:GLU:HB2	2.35	0.55
1:A:418:GLY:O	1:A:421:GLU:HB2	2.07	0.55
1:A:550:ILE:HB	1:B:548:ALA:H	1.71	0.55
1:B:219:ARG:HG3	1:B:220:LEU:N	2.22	0.55
1:A:237:SER:HB3	1:A:276:GLU:N	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:510:ASP:CG	1:A:542:ARG:HE	2.10	0.55
1:B:373:GLU:HB3	2:B:739:HOH:O	2.05	0.55
1:B:451:THR:HG21	1:B:466:VAL:C	2.27	0.55
1:A:173:GLY:O	1:A:408:ARG:NH1	2.38	0.55
1:A:449:TYR:HB2	1:A:471:VAL:CG2	2.36	0.55
1:A:472:VAL:HG21	1:A:535:LEU:HD13	1.88	0.55
1:A:159:ILE:HD12	1:A:164:ILE:HG13	1.89	0.54
1:A:269:SER:OG	1:A:285:HIS:CD2	2.60	0.54
1:A:563:ASP:HA	1:A:566:LYS:HB2	1.88	0.54
1:B:220:LEU:HG	1:B:240:PHE:CE2	2.43	0.54
1:B:250:TRP:CD2	1:B:287:ARG:HA	2.42	0.54
1:B:355:ARG:HG3	1:B:387:ALA:HA	1.88	0.54
1:B:406:GLU:HA	2:B:763:HOH:O	2.07	0.54
1:A:284:ASN:HB2	1:A:300:THR:HG23	1.89	0.54
1:A:519:ILE:HG22	1:A:567:ILE:HG22	1.89	0.54
1:B:90:HIS:CD2	1:B:114:ILE:H	2.25	0.54
1:B:300:THR:O	1:B:301:SER:HB2	2.06	0.54
1:B:357:PRO:O	1:B:360:GLY:HA3	2.07	0.54
1:B:359:PRO:HB3	1:B:434:GLY:O	2.07	0.54
1:B:458:LYS:O	1:B:461:LEU:HB2	2.07	0.54
1:A:322:LEU:HD22	1:A:323:PRO:O	2.07	0.54
1:B:35:LYS:HE2	1:B:52:ASP:OD2	2.07	0.54
1:B:52:ASP:C	1:B:54:GLY:H	2.11	0.54
1:B:411:ILE:HD12	1:B:419:GLU:HG2	1.87	0.54
1:A:307:ARG:HB2	1:A:318:LEU:O	2.08	0.54
1:A:346:VAL:HG13	1:A:407:TRP:CZ2	2.40	0.54
1:A:353:SER:O	1:A:354:GLY:C	2.45	0.54
1:A:220:LEU:HB3	1:A:233:LEU:HD12	1.89	0.54
1:A:549:HIS:HD1	1:B:549:HIS:CE1	2.25	0.54
1:B:91:ALA:HB1	1:B:105:ARG:NE	2.22	0.54
1:B:562:GLU:HG3	2:B:724:HOH:O	2.07	0.54
1:A:24:LYS:O	1:A:40:GLY:HA2	2.08	0.54
1:A:59:LEU:O	1:A:101:GLY:N	2.41	0.54
1:A:249:THR:HG22	1:A:250:TRP:HB3	1.88	0.54
1:A:175:VAL:HB	1:A:197:PHE:H	1.73	0.54
1:A:309:VAL:HG12	1:A:316:PRO:HB3	1.90	0.54
1:A:379:ASP:OD1	1:A:381:PHE:CD1	2.61	0.54
1:B:60:ASN:CG	2:B:679:HOH:O	2.46	0.54
1:B:171:GLY:C	1:B:173:GLY:N	2.61	0.54
1:B:376:ASP:CB	2:B:616:HOH:O	2.46	0.54
1:B:397:TYR:HD1	1:B:419:GLU:HB3	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:105:ARG:O	1:A:107:GLU:N	2.40	0.54
1:B:245:PRO:HB2	1:B:263:ALA:HB1	1.90	0.54
1:B:323:PRO:CB	1:B:326:LEU:HD12	2.37	0.54
1:A:308:ILE:N	1:A:318:LEU:O	2.33	0.54
1:B:408:ARG:O	1:B:411:ILE:HG22	2.08	0.54
1:B:421:GLU:O	1:B:425:ALA:N	2.39	0.54
1:B:570:PRO:HA	2:B:653:HOH:O	2.07	0.54
1:B:164:ILE:HD11	1:B:182:LEU:HA	1.89	0.54
1:B:565:VAL:O	1:B:568:LEU:N	2.40	0.54
1:A:23:GLU:HG2	2:A:600:HOH:O	2.08	0.53
1:A:536:MET:HE1	1:A:550:ILE:HD11	1.89	0.53
1:A:578:GLN:O	1:A:579:ARG:C	2.46	0.53
1:B:30:VAL:N	1:B:289:VAL:HG11	2.23	0.53
1:B:205:GLY:O	1:B:206:MET:HB2	2.08	0.53
1:A:258:ARG:HD2	1:A:273:ILE:CG2	2.38	0.53
1:B:177:LEU:HD22	1:B:223:VAL:HG21	1.89	0.53
1:B:178:PHE:C	1:B:178:PHE:CD1	2.81	0.53
1:B:490:GLU:O	1:B:495:GLY:N	2.27	0.53
1:B:522:GLN:HB3	1:B:551:ILE:O	2.07	0.53
1:A:96:ASN:HD21	1:A:98:SER:HB2	1.73	0.53
1:A:175:VAL:CG2	1:A:196:SER:HB3	2.38	0.53
1:B:114:ILE:N	1:B:114:ILE:HD12	2.23	0.53
1:B:249:THR:N	1:B:262:VAL:O	2.42	0.53
1:A:37:LEU:HD12	1:A:49:TYR:O	2.08	0.53
1:A:292:ARG:O	1:A:294:LYS:HD2	2.08	0.53
1:A:334:ARG:NH2	1:A:350:VAL:HG11	2.22	0.53
1:A:579:ARG:HG2	1:A:580:GLU:N	2.22	0.53
1:A:46:VAL:O	1:A:64:ILE:HG12	2.09	0.53
1:A:115:LEU:O	1:A:116:SER:HB3	2.07	0.53
1:A:174:ARG:NH2	1:A:405:GLU:OE2	2.41	0.53
1:A:351:LEU:CD1	1:A:382:ALA:HB1	2.38	0.53
1:A:469:ALA:HA	1:A:520:HIS:CE1	2.44	0.53
1:B:92:LEU:C	1:B:106:LEU:HD12	2.29	0.53
1:B:195:GLY:HA3	1:B:213:GLU:O	2.08	0.53
1:A:22:VAL:HG21	1:A:323:PRO:HD3	1.90	0.53
1:A:442:MET:HG3	1:A:466:VAL:HB	1.89	0.53
1:A:456:THR:HG22	1:A:512:ILE:HG12	1.90	0.53
1:A:524:ASP:OD1	1:A:556:HIS:HB2	2.09	0.53
1:B:509:VAL:HA	1:B:512:ILE:CD1	2.35	0.53
1:A:58:LYS:HD3	2:A:736:HOH:O	2.08	0.53
1:A:62:GLU:HB2	1:A:81:ARG:NH2	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:115:LEU:HB2	2:A:677:HOH:O	2.08	0.53
1:A:379:ASP:OD1	1:A:381:PHE:HD1	1.92	0.53
1:B:423:VAL:HG21	1:B:450:MET:HG2	1.90	0.53
1:A:194:GLU:HB3	1:A:214:THR:HG22	1.91	0.53
1:A:348:THR:HG21	1:A:393:VAL:HG13	1.90	0.53
1:B:31:VAL:CG1	1:B:32:ASP:N	2.71	0.53
1:B:42:SER:OG	1:B:43:GLU:N	2.42	0.53
1:A:151:PRO:HB2	1:A:170:PHE:CD2	2.44	0.53
1:A:169:PHE:CE2	1:A:371:PHE:HD1	2.27	0.53
1:A:497:ARG:C	1:A:499:ILE:H	2.13	0.53
1:A:328:ARG:HG2	1:A:328:ARG:NH1	2.23	0.52
1:A:350:VAL:HA	2:A:652:HOH:O	2.09	0.52
1:A:84:SER:OG	1:A:87:ALA:HB3	2.10	0.52
1:A:125:VAL:HG13	1:A:137:TYR:O	2.09	0.52
1:B:493:THR:O	1:B:494:GLY:C	2.47	0.52
1:B:133:ARG:HD2	1:B:146:GLU:OE2	2.09	0.52
1:B:539:LEU:HD13	1:B:546:PHE:CD1	2.44	0.52
1:A:106:LEU:HD11	2:A:589:HOH:O	2.09	0.52
1:A:551:ILE:N	1:A:551:ILE:HD12	2.25	0.52
1:B:209:THR:O	1:B:210:ALA:HB2	2.09	0.52
1:B:366:VAL:HG12	2:B:588:HOH:O	2.07	0.52
1:A:198:SER:HB3	1:A:213:GLU:OE2	2.09	0.52
1:A:392:VAL:HG12	1:A:393:VAL:N	2.25	0.52
1:A:441:ILE:HB	1:A:462:PHE:CE1	2.45	0.52
1:A:442:MET:HE2	1:A:444:TYR:HE1	1.74	0.52
1:A:463:LYS:HB2	2:A:729:HOH:O	2.09	0.52
1:B:59:LEU:HA	1:B:100:PRO:HB3	1.90	0.52
1:B:325:ASP:HA	1:B:328:ARG:NE	2.24	0.52
1:B:579:ARG:C	1:B:581:ARG:N	2.59	0.52
1:A:132:ASP:O	1:A:133:ARG:HB3	2.09	0.52
1:A:415:PRO:HD3	1:A:492:LEU:O	2.08	0.52
1:B:246:THR:HG21	1:B:402:GLY:O	2.10	0.52
1:A:309:VAL:HG12	1:A:316:PRO:CB	2.39	0.52
1:A:353:SER:HB2	1:A:386:ALA:HA	1.92	0.52
1:B:501:ARG:O	1:B:507:ASN:OD1	2.27	0.52
1:A:304:THR:HG23	2:A:654:HOH:O	2.10	0.52
1:A:339:GLU:OE2	1:A:343:GLY:HA2	2.09	0.52
1:A:463:LYS:O	1:A:514:GLU:HB3	2.09	0.52
1:A:530:LYS:HB3	1:A:531:PRO:CD	2.28	0.52
1:B:159:ILE:CD1	1:B:164:ILE:HG23	2.39	0.52
1:B:472:VAL:HG23	1:B:532:LEU:HD22	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:564:ALA:HB2	2:B:729:HOH:O	2.10	0.52
1:B:246:THR:HG22	1:B:265:ARG:HA	1.91	0.52
1:A:202:ILE:HG13	2:A:653:HOH:O	2.09	0.51
1:B:37:LEU:HD23	1:B:70:PRO:HG3	1.91	0.51
1:B:145:ARG:HD3	2:B:664:HOH:O	2.09	0.51
1:B:281:PRO:HG3	2:B:595:HOH:O	2.09	0.51
1:A:129:ALA:HB1	1:A:134:VAL:HG22	1.91	0.51
1:A:133:ARG:HD2	2:A:609:HOH:O	2.10	0.51
1:A:341:PHE:C	1:A:343:GLY:H	2.13	0.51
1:A:497:ARG:O	1:A:500:MET:N	2.43	0.51
1:A:471:VAL:HG11	1:A:474:TRP:CZ3	2.46	0.51
1:B:397:TYR:CD1	1:B:419:GLU:HB3	2.45	0.51
1:B:497:ARG:N	2:B:648:HOH:O	2.42	0.51
1:A:482:ASP:OD1	1:A:485:PHE:HD1	1.93	0.51
1:A:172:GLY:C	1:A:174:ARG:N	2.63	0.51
1:A:181:ASN:HB3	1:A:185:GLY:H	1.75	0.51
1:A:299:HIS:CG	1:A:300:THR:N	2.77	0.51
1:B:72:TYR:CE2	1:B:289:VAL:HG13	2.46	0.51
1:B:136:LEU:O	1:B:147:LEU:HB2	2.10	0.51
1:B:463:LYS:O	2:B:689:HOH:O	2.19	0.51
1:B:579:ARG:O	1:B:581:ARG:N	2.43	0.51
1:A:87:ALA:HA	1:A:523:ASN:O	2.11	0.51
1:A:202:ILE:HG22	1:A:203:SER:N	2.26	0.51
1:A:284:ASN:ND2	1:A:376:ASP:O	2.43	0.51
1:B:78:ILE:HD11	1:B:124:VAL:HG22	1.93	0.51
1:B:139:LEU:HD12	1:B:143:GLY:C	2.31	0.51
1:B:411:ILE:HD12	1:B:419:GLU:CG	2.41	0.51
1:B:487:ASN:O	1:B:491:GLN:HG3	2.10	0.51
1:A:27:LEU:HB3	2:A:605:HOH:O	2.10	0.51
1:A:286:GLY:O	1:A:287:ARG:C	2.48	0.51
1:B:225:PRO:HB2	2:B:738:HOH:O	2.11	0.51
1:A:399:GLY:HA2	1:A:408:ARG:O	2.10	0.51
1:A:350:VAL:HG12	1:A:351:LEU:N	2.26	0.51
1:B:344:SER:N	2:B:722:HOH:O	2.43	0.51
1:A:63:PRO:HB3	2:A:595:HOH:O	2.11	0.51
1:A:81:ARG:O	1:A:90:HIS:HA	2.11	0.51
1:A:174:ARG:HH21	1:A:405:GLU:CG	2.23	0.51
1:A:385:LEU:HB3	2:A:720:HOH:O	2.11	0.51
1:A:474:TRP:CB	1:A:500:MET:HB3	2.40	0.51
1:B:362:THR:CG2	1:B:363:VAL:H	2.23	0.51
1:B:401:THR:HG22	1:B:408:ARG:CD	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:477:MET:HE1	1:B:489:ILE:HD11	1.91	0.51
1:B:82:ASP:OD1	1:B:84:SER:OG	2.22	0.50
1:A:371:PHE:N	1:A:371:PHE:CD2	2.78	0.50
1:B:139:LEU:HD12	1:B:143:GLY:O	2.11	0.50
1:B:430:ALA:O	1:B:436:ALA:N	2.38	0.50
1:A:202:ILE:CG1	2:A:653:HOH:O	2.58	0.50
1:A:415:PRO:O	1:A:416:CYS:HB3	2.11	0.50
1:A:472:VAL:HG21	1:A:535:LEU:HD22	1.93	0.50
1:A:551:ILE:CG2	1:A:552:PRO:HD2	2.41	0.50
1:B:451:THR:O	2:B:615:HOH:O	2.18	0.50
1:B:476:GLU:HA	1:B:479:GLU:CD	2.31	0.50
1:B:482:ASP:HB2	2:B:604:HOH:O	2.12	0.50
1:A:29:GLY:O	1:A:37:LEU:HB3	2.11	0.50
1:A:207:LYS:HE2	1:A:224:ASP:HB2	1.93	0.50
1:A:569:LEU:O	1:A:573:PHE:CD2	2.65	0.50
1:B:109:VAL:CG2	1:B:139:LEU:HD22	2.41	0.50
1:B:314:GLY:HA3	2:B:595:HOH:O	2.09	0.50
1:B:353:SER:HB3	1:B:356:ALA:CB	2.38	0.50
1:A:160:ARG:NH1	1:A:203:SER:HA	2.27	0.50
1:A:268:ARG:HA	1:A:283:GLY:O	2.11	0.50
1:B:76:ARG:NH2	2:B:725:HOH:O	2.32	0.50
1:B:362:THR:OG1	1:B:391:HIS:HB2	2.11	0.50
1:B:35:LYS:HB2	1:B:50:LEU:HD22	1.93	0.50
1:B:56:THR:N	2:B:735:HOH:O	2.43	0.50
1:B:81:ARG:HB3	1:B:93:PHE:CE1	2.47	0.50
1:B:393:VAL:HB	2:B:775:HOH:O	2.11	0.50
1:B:476:GLU:O	1:B:480:LEU:HG	2.12	0.50
1:A:365:LEU:HB2	2:A:693:HOH:O	2.12	0.50
1:A:399:GLY:N	1:A:407:TRP:O	2.45	0.50
1:B:35:LYS:CG	1:B:52:ASP:OD1	2.60	0.50
1:B:250:TRP:CZ3	1:B:260:ALA:HB3	2.46	0.50
1:B:371:PHE:CE2	1:B:408:ARG:NH1	2.79	0.50
1:A:249:THR:HG22	1:A:250:TRP:N	2.25	0.50
1:A:294:LYS:O	1:A:296:VAL:HG23	2.12	0.50
1:A:366:VAL:HG12	1:A:367:HIS:O	2.12	0.50
1:B:34:ASP:O	1:B:35:LYS:HG2	2.10	0.50
1:B:455:LEU:CD1	1:B:516:LEU:HD13	2.42	0.50
1:A:94:LYS:HB3	1:A:106:LEU:HD21	1.94	0.50
1:A:413:GLY:HA2	1:A:493:THR:HA	1.93	0.50
1:A:308:ILE:O	1:A:317:LEU:N	2.44	0.49
1:A:536:MET:CE	1:A:550:ILE:HD11	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:508:HIS:C	1:B:510:ASP:N	2.64	0.49
1:A:441:ILE:HD13	1:A:441:ILE:C	2.31	0.49
1:A:529:LEU:CD1	1:A:550:ILE:HD12	2.33	0.49
1:B:268:ARG:HH12	1:B:282:GLN:CD	2.15	0.49
1:B:431:ARG:HG3	1:B:431:ARG:HH11	1.77	0.49
1:A:60:ASN:ND2	1:A:62:GLU:O	2.37	0.49
1:A:240:PHE:HD1	1:A:272:PHE:CD1	2.31	0.49
1:B:251:LEU:HD11	1:B:259:LEU:HD11	1.93	0.49
1:B:543:GLY:O	1:B:544:LYS:C	2.50	0.49
1:A:71:HIS:HB2	1:A:119:ASP:O	2.11	0.49
1:A:468:GLY:C	1:A:470:SER:N	2.61	0.49
1:A:522:GLN:HG2	1:A:552:PRO:HA	1.94	0.49
1:B:49:TYR:CA	1:B:57:VAL:O	2.54	0.49
1:B:405:GLU:HG3	1:B:409:LEU:HG	1.95	0.49
1:B:451:THR:HG21	1:B:466:VAL:O	2.12	0.49
1:A:68:LEU:HB2	1:A:78:ILE:HB	1.94	0.49
1:A:408:ARG:O	1:A:411:ILE:HG22	2.13	0.49
1:A:416:CYS:SG	1:A:416:CYS:O	2.70	0.49
1:B:153:PHE:CE1	1:B:488:PHE:HB2	2.45	0.49
1:B:311:LEU:HB3	1:B:312:PRO:HA	1.95	0.49
1:B:486:ARG:O	1:B:490:GLU:HG3	2.12	0.49
1:A:44:GLY:HA2	1:A:561:MET:N	2.22	0.49
1:B:243:TYR:CZ	1:B:270:ALA:HB2	2.47	0.49
1:B:431:ARG:HG3	1:B:431:ARG:NH1	2.28	0.49
1:A:87:ALA:O	1:A:525:SER:OG	2.24	0.49
1:A:160:ARG:HH22	1:A:204:PRO:HG3	1.78	0.49
1:A:309:VAL:HA	1:A:317:LEU:H	1.77	0.49
1:B:242:SER:C	1:B:244:ARG:H	2.15	0.49
1:B:365:LEU:HD23	1:B:394:MET:HG2	1.94	0.49
1:A:142:GLY:HA3	2:A:636:HOH:O	2.11	0.49
1:B:90:HIS:CG	1:B:114:ILE:HD13	2.46	0.49
1:A:174:ARG:NE	1:A:409:LEU:HD11	2.25	0.49
1:A:489:ILE:O	1:A:490:GLU:C	2.50	0.49
1:B:36:LEU:HD11	1:B:296:VAL:HG11	1.94	0.49
1:B:209:THR:HG23	1:B:233:LEU:HD12	1.95	0.49
1:A:124:VAL:N	1:A:139:LEU:O	2.38	0.49
1:A:224:ASP:OD1	1:A:225:PRO:HD2	2.12	0.49
1:A:475:GLU:OE1	1:A:497:ARG:HG3	2.13	0.49
1:B:65:ASN:HD21	1:B:82:ASP:HB2	1.77	0.49
1:B:280:ALA:CB	1:B:285:HIS:CE1	2.96	0.49
1:B:506:ILE:CD1	1:B:535:LEU:HA	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:522:GLN:HG3	1:B:523:ASN:N	2.27	0.49
1:A:74:VAL:HG11	1:A:121:GLY:CA	2.43	0.48
1:A:240:PHE:CE1	1:A:245:PRO:HG3	2.47	0.48
1:A:305:PRO:HD2	2:A:654:HOH:O	2.11	0.48
1:B:71:HIS:HA	2:B:666:HOH:O	2.13	0.48
1:B:411:ILE:HD13	1:B:419:GLU:HG2	1.94	0.48
1:A:194:GLU:CB	1:A:212:LEU:HD21	2.38	0.48
1:A:277:ARG:HD2	1:A:278:VAL:H	1.77	0.48
1:B:239:ASP:HA	1:B:242:SER:OG	2.13	0.48
1:A:341:PHE:CG	1:A:342:ASP:N	2.82	0.48
1:A:579:ARG:NH1	1:A:579:ARG:CB	2.75	0.48
1:B:379:ASP:HB3	1:B:382:ALA:CB	2.43	0.48
1:B:459:PRO:HG3	2:B:605:HOH:O	2.13	0.48
1:B:516:LEU:HD21	1:B:518:LEU:HD21	1.94	0.48
1:A:136:LEU:HD11	1:A:156:VAL:HG22	1.96	0.48
1:A:194:GLU:OE2	1:A:219:ARG:NH2	2.47	0.48
1:A:274:ASP:C	1:A:276:GLU:H	2.17	0.48
1:B:68:LEU:HD12	1:B:78:ILE:CD1	2.43	0.48
1:B:453:CYS:N	2:B:731:HOH:O	2.46	0.48
1:A:563:ASP:HA	1:A:566:LYS:CB	2.43	0.48
1:B:40:GLY:HA3	1:B:49:TYR:HE1	1.79	0.48
1:B:272:PHE:CE2	1:B:277:ARG:HB2	2.48	0.48
1:B:445:SER:C	1:B:447:GLY:N	2.66	0.48
1:A:361:PRO:HB3	1:A:438:GLU:OE2	2.14	0.48
1:A:384:SER:O	1:A:387:ALA:HB3	2.13	0.48
1:B:68:LEU:HD12	1:B:124:VAL:HG13	1.95	0.48
1:A:26:SER:OG	1:A:28:GLN:NE2	2.46	0.48
1:A:192:SER:HB3	1:A:195:GLY:O	2.13	0.48
1:A:258:ARG:HB3	1:A:273:ILE:HG23	1.96	0.48
1:A:264:ARG:NE	1:A:373:GLU:OE2	2.45	0.48
1:A:374:ASP:N	1:A:396:ASN:OD1	2.35	0.48
1:B:376:ASP:HA	2:B:600:HOH:O	2.12	0.48
1:A:129:ALA:CB	1:A:484:ALA:HB2	2.43	0.48
1:A:330:ILE:HD12	1:A:330:ILE:N	2.29	0.48
1:A:452:LEU:HB3	1:A:505:PRO:HG2	1.95	0.48
1:A:549:HIS:ND1	1:A:570:PRO:HB3	2.29	0.48
1:B:28:GLN:HG3	1:B:67:VAL:HG21	1.96	0.48
1:B:449:TYR:N	2:B:685:HOH:O	2.47	0.48
1:B:519:ILE:HD13	1:B:567:ILE:O	2.13	0.48
1:A:173:GLY:O	1:A:408:ARG:NH2	2.47	0.48
1:A:174:ARG:NH2	1:A:195:GLY:HA2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:222:THR:HB	1:A:231:GLU:CG	2.43	0.48
1:A:414:ASP:CG	1:A:414:ASP:O	2.51	0.48
1:A:553:ASP:OD1	1:B:545:THR:CG2	2.61	0.48
1:B:365:LEU:HD11	1:B:381:PHE:HB3	1.96	0.48
1:B:367:HIS:CE1	1:B:400:SER:OG	2.67	0.48
1:B:442:MET:HG3	1:B:466:VAL:CG1	2.44	0.48
1:B:457:MET:C	1:B:459:PRO:HD2	2.34	0.48
1:B:468:GLY:HA2	1:B:519:ILE:O	2.13	0.48
1:A:497:ARG:C	1:A:499:ILE:N	2.67	0.48
1:B:38:VAL:CG1	1:B:308:ILE:HD13	2.44	0.48
1:B:282:GLN:NE2	2:B:660:HOH:O	2.46	0.48
1:B:294:LYS:HG2	2:B:705:HOH:O	2.13	0.48
1:B:411:ILE:HG12	1:B:492:LEU:HD11	1.95	0.48
1:B:458:LYS:N	1:B:459:PRO:CD	2.77	0.48
1:B:568:LEU:O	1:B:572:VAL:HG23	2.14	0.48
1:A:90:HIS:HD2	1:A:114:ILE:N	2.08	0.47
1:A:415:PRO:HG3	1:A:493:THR:HG22	1.95	0.47
1:A:474:TRP:HD1	1:A:500:MET:HA	1.79	0.47
1:A:569:LEU:HB3	1:A:570:PRO:CD	2.36	0.47
1:B:325:ASP:C	1:B:328:ARG:H	2.17	0.47
1:B:333:SER:HA	1:B:350:VAL:O	2.14	0.47
1:B:520:HIS:CB	2:B:744:HOH:O	2.62	0.47
1:A:372:ALA:O	1:A:373:GLU:HB3	2.14	0.47
1:A:521:PRO:CB	1:A:555:GLY:O	2.62	0.47
1:A:532:LEU:HD12	1:A:536:MET:HE3	1.96	0.47
1:B:406:GLU:HG2	1:B:410:LYS:CE	2.41	0.47
1:B:451:THR:HA	2:B:615:HOH:O	2.14	0.47
1:B:27:LEU:HD12	1:B:38:VAL:HG12	1.94	0.47
1:B:158:ASP:C	1:B:159:ILE:HD13	2.34	0.47
1:B:322:LEU:O	1:B:323:PRO:O	2.33	0.47
1:B:475:GLU:O	1:B:478:TYR:HB3	2.14	0.47
1:A:224:ASP:O	1:A:228:GLY:HA2	2.14	0.47
1:A:515:PRO:CA	2:A:613:HOH:O	2.47	0.47
1:B:212:LEU:CD2	1:B:219:ARG:HH12	2.12	0.47
1:B:550:ILE:N	1:B:550:ILE:HD12	2.29	0.47
1:A:309:VAL:CA	1:A:316:PRO:HA	2.41	0.47
1:B:70:PRO:HA	1:B:119:ASP:HB3	1.97	0.47
1:B:248:ILE:HD12	1:B:248:ILE:N	2.28	0.47
1:B:504:SER:O	1:B:506:ILE:N	2.48	0.47
1:B:520:HIS:CE1	2:B:618:HOH:O	2.67	0.47
1:B:551:ILE:HB	1:B:554:ALA:CB	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:385:LEU:O	1:B:390:PHE:N	2.45	0.47
1:B:477:MET:HA	1:B:528:PRO:HG3	1.96	0.47
1:A:104:GLN:NE2	2:A:699:HOH:O	2.47	0.47
1:A:219:ARG:HH12	1:A:221:VAL:CG1	2.27	0.47
1:A:254:LEU:HD11	1:A:295:LEU:HD21	1.96	0.47
1:A:430:ALA:HB1	1:A:436:ALA:HB2	1.97	0.47
1:A:468:GLY:O	1:A:469:ALA:C	2.53	0.47
1:B:112:MET:HB2	1:B:130:THR:HG22	1.97	0.47
1:B:250:TRP:CE3	1:B:287:ARG:HA	2.50	0.47
1:B:309:VAL:HG12	1:B:316:PRO:CA	2.45	0.47
1:B:477:MET:CA	2:B:756:HOH:O	2.58	0.47
1:B:480:LEU:CB	2:B:756:HOH:O	2.52	0.47
1:A:258:ARG:HD2	1:A:273:ILE:HG21	1.97	0.47
1:A:346:VAL:HG22	1:A:407:TRP:CZ2	2.50	0.47
1:A:367:HIS:HE1	1:A:396:ASN:HA	1.80	0.47
1:B:476:GLU:CG	1:B:531:PRO:HG3	2.45	0.47
1:B:495:GLY:O	1:B:496:SER:O	2.33	0.47
1:A:237:SER:O	1:A:275:GLY:HA3	2.14	0.47
1:A:267:GLY:CA	1:A:375:SER:HB2	2.45	0.47
1:A:452:LEU:HB2	2:A:709:HOH:O	2.14	0.47
1:B:445:SER:HA	1:B:469:ALA:O	2.15	0.47
1:B:472:VAL:HG23	2:B:683:HOH:O	2.14	0.47
1:A:62:GLU:HB2	1:A:81:ARG:HE	1.80	0.47
1:A:519:ILE:CG2	1:A:567:ILE:HG22	2.44	0.47
1:B:47:ASN:HB2	2:B:656:HOH:O	2.15	0.47
1:B:89:GLN:HA	1:B:112:MET:O	2.15	0.47
1:B:280:ALA:HB3	1:B:285:HIS:CE1	2.50	0.47
1:B:367:HIS:HD2	1:B:368:GLY:O	1.98	0.47
1:B:441:ILE:HD13	2:B:615:HOH:O	2.15	0.47
1:B:495:GLY:O	1:B:496:SER:C	2.54	0.47
1:A:151:PRO:HD2	1:A:170:PHE:CZ	2.49	0.46
1:A:366:VAL:HG13	1:A:397:TYR:CE2	2.50	0.46
1:B:141:GLY:C	1:B:143:GLY:H	2.18	0.46
1:B:431:ARG:HA	1:B:436:ALA:HB3	1.98	0.46
1:A:45:SER:CB	2:A:595:HOH:O	2.59	0.46
1:A:160:ARG:NH2	1:A:204:PRO:HG3	2.30	0.46
1:B:133:ARG:HD2	2:B:608:HOH:O	2.16	0.46
1:B:567:ILE:HD12	1:B:567:ILE:C	2.32	0.46
1:A:302:LEU:HG	1:A:376:ASP:OD1	2.15	0.46
1:A:305:PRO:O	1:A:306:PRO:C	2.52	0.46
1:A:532:LEU:O	1:A:536:MET:HG3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:332:GLY:H	1:B:352:GLU:HB2	1.80	0.46
1:B:520:HIS:CD2	1:B:521:PRO:HD2	2.32	0.46
1:A:88:GLU:HG3	1:A:113:ARG:NH1	2.29	0.46
1:A:270:ALA:HB3	2:A:588:HOH:O	2.15	0.46
1:A:399:GLY:CA	1:A:408:ARG:HA	2.46	0.46
1:B:41:PHE:HZ	1:B:558:ILE:HG22	1.80	0.46
1:B:134:VAL:HB	1:B:150:LEU:HB2	1.97	0.46
1:B:178:PHE:HB2	1:B:187:LEU:HD11	1.96	0.46
1:B:251:LEU:HD12	1:B:259:LEU:HD11	1.97	0.46
1:B:458:LYS:O	1:B:461:LEU:CB	2.63	0.46
1:A:172:GLY:C	1:A:174:ARG:H	2.18	0.46
1:A:486:ARG:HG3	1:A:486:ARG:NH1	2.29	0.46
1:A:510:ASP:HB2	2:A:607:HOH:O	2.16	0.46
1:B:160:ARG:HD2	1:B:202:ILE:CG2	2.46	0.46
1:A:93:PHE:HA	1:A:104:GLN:O	2.16	0.46
1:A:272:PHE:HD2	1:A:277:ARG:HA	1.80	0.46
1:A:398:ARG:HD3	1:A:410:LYS:HB3	1.97	0.46
1:B:51:TYR:CE2	1:B:53:GLY:HA2	2.51	0.46
1:B:88:GLU:HG2	1:B:113:ARG:HH12	1.74	0.46
1:B:323:PRO:HG2	1:B:326:LEU:CD1	2.43	0.46
1:A:138:ALA:HB2	1:A:147:LEU:CD2	2.38	0.46
1:A:222:THR:HG22	1:A:222:THR:O	2.16	0.46
1:A:240:PHE:CZ	1:A:245:PRO:HG3	2.51	0.46
1:A:265:ARG:HD3	2:A:598:HOH:O	2.15	0.46
1:A:579:ARG:CB	1:A:579:ARG:HH11	2.28	0.46
1:B:125:VAL:HA	1:B:138:ALA:HA	1.96	0.46
1:B:379:ASP:O	1:B:380:THR:C	2.53	0.46
1:A:277:ARG:HD2	1:A:278:VAL:N	2.31	0.46
1:A:444:TYR:O	1:A:445:SER:HB3	2.16	0.46
1:A:474:TRP:HZ3	1:A:477:MET:HE1	1.80	0.46
1:B:51:TYR:CE2	1:B:317:LEU:HB3	2.43	0.46
1:B:448:GLY:HA3	1:B:470:SER:HB3	1.97	0.46
1:B:464:ALA:HB2	1:B:578:GLN:HG3	1.98	0.46
1:B:577:THR:CB	2:B:784:HOH:O	2.57	0.46
1:A:354:GLY:C	1:A:356:ALA:H	2.18	0.46
1:A:574:PHE:O	1:A:578:GLN:HG2	2.15	0.46
1:B:30:VAL:CG2	1:B:290:LEU:O	2.64	0.46
1:B:75:GLY:O	1:B:96:ASN:OD1	2.34	0.46
1:B:347:PRO:HG2	1:B:396:ASN:CB	2.45	0.46
1:B:458:LYS:HB3	1:B:461:LEU:CD2	2.45	0.46
1:A:95:VAL:CG2	1:A:103:GLU:HG2	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:400:SER:C	2:A:618:HOH:O	2.53	0.45
1:B:48:ALA:O	1:B:58:LYS:HA	2.17	0.45
1:B:235:LEU:HD13	1:B:274:ASP:C	2.37	0.45
1:B:251:LEU:HD11	1:B:259:LEU:HD21	1.98	0.45
1:B:279:GLU:HB2	1:B:312:PRO:O	2.15	0.45
1:B:334:ARG:NH2	1:B:429:TRP:HH2	2.14	0.45
1:A:47:ASN:HB3	1:A:60:ASN:OD1	2.17	0.45
1:A:178:PHE:CD1	1:A:178:PHE:O	2.70	0.45
1:A:420:LEU:HD11	1:A:454:ALA:HA	1.97	0.45
1:A:558:ILE:HD12	1:A:563:ASP:CB	2.31	0.45
1:B:178:PHE:HD2	2:B:706:HOH:O	1.99	0.45
1:B:307:ARG:HB2	1:B:319:GLU:CB	2.46	0.45
1:A:446:TYR:O	1:A:449:TYR:HB3	2.15	0.45
1:B:255:PRO:C	1:B:257:GLY:H	2.19	0.45
1:B:326:LEU:HD23	1:B:355:ARG:NH1	2.31	0.45
1:A:129:ALA:HA	1:A:134:VAL:HA	1.99	0.45
1:B:327:ARG:NH2	2:B:651:HOH:O	2.48	0.45
1:B:445:SER:C	1:B:447:GLY:H	2.19	0.45
1:B:482:ASP:O	1:B:486:ARG:HG3	2.17	0.45
1:A:475:GLU:HG2	1:A:500:MET:HB2	1.98	0.45
1:B:27:LEU:HD13	1:B:38:VAL:HG12	1.98	0.45
1:B:61:ARG:N	1:B:103:GLU:OE2	2.50	0.45
1:B:91:ALA:CB	1:B:105:ARG:NE	2.79	0.45
1:B:92:LEU:CD1	1:B:109:VAL:HG11	2.46	0.45
1:B:95:VAL:HG13	2:B:742:HOH:O	2.15	0.45
1:B:551:ILE:HD11	1:B:567:ILE:HG22	1.98	0.45
1:A:44:GLY:CA	1:A:561:MET:H	2.24	0.45
1:A:160:ARG:HD3	1:A:202:ILE:CG2	2.46	0.45
1:A:346:VAL:HG22	1:A:407:TRP:HH2	1.81	0.45
1:A:463:LYS:CB	2:A:729:HOH:O	2.63	0.45
1:A:579:ARG:HB2	1:A:579:ARG:CZ	2.46	0.45
1:B:164:ILE:O	1:B:179:THR:HA	2.16	0.45
1:B:233:LEU:HD22	1:B:235:LEU:HG	1.99	0.45
1:B:444:TYR:HA	1:B:468:GLY:O	2.17	0.45
1:A:34:ASP:O	1:A:291:TRP:NE1	2.50	0.45
1:A:251:LEU:HA	1:A:260:ALA:O	2.17	0.45
1:A:440:TYR:HE2	1:A:578:GLN:HB3	1.82	0.45
1:B:219:ARG:HD2	1:B:232:ASP:OD1	2.16	0.45
1:B:376:ASP:C	2:B:600:HOH:O	2.55	0.45
1:B:424:SER:CB	2:B:778:HOH:O	2.65	0.45
1:B:522:GLN:HE21	1:B:523:ASN:CG	2.19	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:22:VAL:HG12	1:A:23:GLU:N	2.32	0.45
1:A:68:LEU:HD12	1:A:78:ILE:CG2	2.35	0.45
1:A:239:ASP:O	1:A:243:TYR:N	2.48	0.45
1:A:370:PRO:HG3	1:A:411:ILE:HD13	1.99	0.45
1:A:421:GLU:OE2	1:A:458:LYS:CE	2.65	0.45
1:A:475:GLU:HA	1:A:500:MET:CE	2.47	0.45
1:A:547:GLU:HB2	1:B:550:ILE:O	2.17	0.45
1:B:29:GLY:HA3	1:B:289:VAL:HG21	1.99	0.45
1:B:398:ARG:NH2	1:B:407:TRP:HZ3	2.13	0.45
1:B:411:ILE:CG1	1:B:492:LEU:HD11	2.46	0.45
1:B:479:GLU:HG2	2:B:617:HOH:O	2.16	0.45
1:B:520:HIS:HD2	1:B:521:PRO:CD	2.21	0.45
1:B:520:HIS:HB2	2:B:744:HOH:O	2.17	0.45
1:A:125:VAL:O	1:A:126:PHE:HB3	2.16	0.45
1:A:262:VAL:O	1:A:262:VAL:HG12	2.17	0.45
1:A:263:ALA:O	1:A:269:SER:CB	2.65	0.45
1:A:335:LEU:HD13	1:A:349:TYR:CE1	2.51	0.45
1:B:226:ARG:NE	2:B:769:HOH:O	2.49	0.45
1:B:476:GLU:HA	1:B:479:GLU:CG	2.47	0.45
1:B:476:GLU:HA	1:B:479:GLU:HG3	1.99	0.45
1:B:565:VAL:O	1:B:567:ILE:N	2.50	0.45
1:B:569:LEU:CB	1:B:570:PRO:HD3	2.42	0.45
1:A:179:THR:H	1:A:187:LEU:CD1	2.30	0.45
1:B:415:PRO:O	1:B:503:ARG:HG3	2.17	0.45
1:B:448:GLY:HA3	1:B:470:SER:HA	1.99	0.45
1:A:163:LEU:HB3	1:A:202:ILE:HD13	1.98	0.44
1:A:417:GLY:H	1:A:419:GLU:CD	2.19	0.44
1:B:38:VAL:HG11	1:B:308:ILE:HD13	1.99	0.44
1:B:156:VAL:HG23	2:B:596:HOH:O	2.16	0.44
1:A:25:TYR:HB3	1:A:38:VAL:CG1	2.46	0.44
1:B:330:ILE:HG23	1:B:351:LEU:HD21	1.99	0.44
1:B:364:VAL:HA	1:B:393:VAL:O	2.17	0.44
1:A:224:ASP:HA	1:A:225:PRO:HD3	1.83	0.44
1:A:520:HIS:N	1:A:549:HIS:O	2.35	0.44
1:B:340:SER:CA	2:B:722:HOH:O	2.65	0.44
1:B:551:ILE:HG23	1:B:566:LYS:HD3	1.98	0.44
1:A:109:VAL:HA	2:A:728:HOH:O	2.17	0.44
1:A:217:GLU:HG2	1:A:218:ALA:H	1.82	0.44
1:A:393:VAL:HG22	2:A:652:HOH:O	2.16	0.44
1:A:424:SER:HB3	1:A:461:LEU:HD21	1.99	0.44
1:B:40:GLY:N	1:B:47:ASN:O	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:221:VAL:HG12	1:B:232:ASP:HA	2.00	0.44
1:B:401:THR:HG22	1:B:408:ARG:HD3	1.97	0.44
1:B:571:ALA:HA	2:B:723:HOH:O	2.16	0.44
1:A:304:THR:HA	1:A:305:PRO:HD3	1.82	0.44
1:A:488:PHE:HZ	2:A:672:HOH:O	2.00	0.44
1:A:509:VAL:O	1:A:509:VAL:HG12	2.17	0.44
1:B:226:ARG:HG3	1:B:226:ARG:HH11	1.82	0.44
1:B:240:PHE:CE1	1:B:263:ALA:HB2	2.52	0.44
1:B:340:SER:N	2:B:722:HOH:O	2.43	0.44
1:A:31:VAL:HB	1:A:74:VAL:O	2.16	0.44
1:A:219:ARG:NH1	1:A:221:VAL:HG12	2.33	0.44
1:A:367:HIS:HD2	1:A:372:ALA:HB3	1.81	0.44
1:A:499:ILE:O	1:A:503:ARG:HB2	2.17	0.44
1:A:576:ALA:O	1:A:579:ARG:HB3	2.18	0.44
1:B:135:ALA:HB2	2:B:608:HOH:O	2.17	0.44
1:B:239:ASP:HA	1:B:242:SER:HG	1.82	0.44
1:B:243:TYR:O	1:B:244:ARG:C	2.56	0.44
1:B:456:THR:HG22	1:B:512:ILE:CD1	2.47	0.44
1:A:379:ASP:OD1	1:A:379:ASP:C	2.56	0.44
1:A:451:THR:O	1:A:455:LEU:HG	2.18	0.44
1:B:59:LEU:HB3	2:B:727:HOH:O	2.17	0.44
1:B:301:SER:HA	1:B:376:ASP:O	2.18	0.44
1:B:371:PHE:HD2	1:B:408:ARG:HH11	1.61	0.44
1:A:51:TYR:CE2	1:A:53:GLY:HA2	2.53	0.44
1:A:374:ASP:CG	1:A:394:MET:HB3	2.39	0.44
1:A:442:MET:CE	1:A:444:TYR:HE1	2.31	0.44
1:B:465:GLY:O	1:B:516:LEU:HD12	2.18	0.44
1:B:549:HIS:CE1	2:B:686:HOH:O	2.70	0.44
1:A:72:TYR:OH	1:A:289:VAL:HG12	2.18	0.44
1:A:117:GLY:HA2	1:A:126:PHE:HA	2.00	0.44
1:A:430:ALA:HB3	1:A:439:LEU:HD11	2.00	0.44
1:A:440:TYR:HD2	1:A:464:ALA:HB3	1.82	0.44
1:A:475:GLU:CA	1:A:500:MET:HE2	2.48	0.44
1:B:523:ASN:ND2	1:B:553:ASP:CA	2.81	0.44
1:A:61:ARG:NH1	1:A:101:GLY:CA	2.74	0.43
1:A:174:ARG:NH2	1:A:405:GLU:HG2	2.33	0.43
1:A:195:GLY:HA3	1:A:213:GLU:O	2.18	0.43
1:A:309:VAL:HB	1:A:315:GLU:O	2.18	0.43
1:A:499:ILE:CD1	2:A:732:HOH:O	2.63	0.43
1:A:503:ARG:HA	2:A:601:HOH:O	2.17	0.43
1:B:48:ALA:N	2:B:679:HOH:O	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:118:VAL:HG21	1:B:159:ILE:HG12	1.99	0.43
1:B:264:ARG:HA	1:B:269:SER:HA	2.00	0.43
1:A:62:GLU:CB	1:A:81:ARG:HH21	2.31	0.43
1:B:86:GLY:CA	1:B:555:GLY:HA3	2.48	0.43
1:B:169:PHE:CZ	1:B:175:VAL:CG2	2.99	0.43
1:B:170:PHE:HD1	1:B:189:VAL:HG11	1.83	0.43
1:B:251:LEU:CD2	2:B:652:HOH:O	2.66	0.43
1:B:477:MET:HE2	1:B:489:ILE:HD11	2.00	0.43
1:A:79:LEU:HD11	1:A:95:VAL:HG21	1.99	0.43
1:A:165:ALA:HB2	2:A:653:HOH:O	2.16	0.43
1:A:438:GLU:HG3	1:A:440:TYR:HE1	1.83	0.43
1:A:565:VAL:O	1:A:569:LEU:HB2	2.18	0.43
1:B:198:SER:HB2	1:B:248:ILE:O	2.18	0.43
1:B:209:THR:CA	1:B:222:THR:HG22	2.48	0.43
1:B:210:ALA:O	1:B:211:GLY:C	2.55	0.43
1:B:270:ALA:HB1	1:B:277:ARG:CZ	2.48	0.43
1:B:431:ARG:NH2	2:B:714:HOH:O	2.47	0.43
1:B:472:VAL:CG2	1:B:532:LEU:HD22	2.48	0.43
1:B:487:ASN:HA	1:B:490:GLU:OE1	2.17	0.43
1:B:580:GLU:O	1:B:581:ARG:HB2	2.18	0.43
1:A:40:GLY:C	1:A:42:SER:N	2.72	0.43
1:A:130:THR:O	1:A:131:GLU:C	2.56	0.43
1:A:164:ILE:HD13	1:A:181:ASN:CA	2.47	0.43
1:A:248:ILE:N	1:A:248:ILE:HD12	2.33	0.43
1:A:469:ALA:HB1	1:A:556:HIS:CE1	2.54	0.43
1:A:469:ALA:HB1	1:A:556:HIS:ND1	2.32	0.43
1:B:224:ASP:HB3	1:B:227:ASP:OD1	2.18	0.43
1:B:487:ASN:O	1:B:487:ASN:OD1	2.37	0.43
1:A:277:ARG:NH1	1:A:277:ARG:HG2	2.33	0.43
1:A:366:VAL:HG11	1:A:450:MET:HG3	2.00	0.43
1:A:578:GLN:O	1:A:581:ARG:N	2.52	0.43
1:B:42:SER:HA	1:B:561:MET:CE	2.48	0.43
1:B:79:LEU:HD11	1:B:95:VAL:CG2	2.45	0.43
1:B:207:LYS:HG2	1:B:222:THR:HB	1.99	0.43
1:B:371:PHE:HA	1:B:399:GLY:O	2.19	0.43
1:B:414:ASP:OD2	1:B:418:GLY:N	2.30	0.43
1:B:493:THR:HA	2:B:629:HOH:O	2.18	0.43
1:A:33:GLY:H	1:A:73:GLY:HA2	1.83	0.43
1:A:74:VAL:HG11	1:A:121:GLY:HA3	2.00	0.43
1:A:421:GLU:O	1:A:424:SER:HB2	2.19	0.43
1:A:509:VAL:O	1:A:509:VAL:CG1	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:331:ALA:HB3	1:B:352:GLU:C	2.38	0.43
1:B:472:VAL:HG21	1:B:532:LEU:HA	2.01	0.43
1:B:472:VAL:O	1:B:505:PRO:HD2	2.18	0.43
1:B:473:ASP:OD1	1:B:475:GLU:N	2.49	0.43
1:B:494:GLY:O	1:B:496:SER:N	2.51	0.43
1:B:522:GLN:HB3	1:B:550:ILE:HG22	1.99	0.43
1:B:523:ASN:HD21	1:B:553:ASP:HA	1.82	0.43
1:A:106:LEU:CD2	2:A:698:HOH:O	2.66	0.43
1:A:178:PHE:HB2	1:A:187:LEU:HD11	2.01	0.43
1:B:240:PHE:O	1:B:245:PRO:CD	2.67	0.43
1:B:419:GLU:O	1:B:423:VAL:HG23	2.19	0.43
1:A:77:VAL:HG23	1:A:97:THR:CG2	2.49	0.43
1:A:197:PHE:HD2	1:A:210:ALA:HB1	1.84	0.43
1:A:214:THR:C	1:A:216:ARG:N	2.70	0.43
1:A:381:PHE:O	1:A:385:LEU:HB2	2.18	0.43
1:A:460:GLY:O	1:A:461:LEU:C	2.57	0.43
1:B:137:TYR:CD1	1:B:137:TYR:N	2.86	0.43
1:B:209:THR:OG1	1:B:253:TYR:OH	2.32	0.43
1:B:246:THR:CG2	1:B:265:ARG:HA	2.49	0.43
1:B:299:HIS:CG	1:B:300:THR:N	2.86	0.43
1:B:300:THR:O	1:B:301:SER:CB	2.67	0.43
1:B:377:SER:N	2:B:600:HOH:O	2.51	0.43
1:B:520:HIS:CE1	1:B:529:LEU:HA	2.54	0.43
1:B:30:VAL:HG23	1:B:289:VAL:HG12	1.99	0.43
1:A:71:HIS:HB2	1:A:120:THR:HA	2.01	0.43
1:A:78:ILE:HG23	2:A:589:HOH:O	2.19	0.43
1:A:167:LEU:CD2	1:A:197:PHE:HB2	2.49	0.43
1:B:59:LEU:CD1	1:B:77:VAL:HG21	2.46	0.43
1:B:73:GLY:O	1:B:74:VAL:C	2.57	0.43
1:B:205:GLY:O	1:B:206:MET:CB	2.67	0.43
1:B:334:ARG:NH2	1:B:429:TRP:CH2	2.87	0.43
1:B:489:ILE:HG13	2:B:642:HOH:O	2.18	0.43
1:A:138:ALA:HB3	1:A:147:LEU:HD21	1.98	0.42
1:A:167:LEU:HD11	1:A:199:SER:HA	2.01	0.42
1:A:188:ARG:HG3	1:A:188:ARG:HH11	1.84	0.42
1:A:350:VAL:HG22	2:A:652:HOH:O	2.19	0.42
1:B:31:VAL:HG21	1:B:37:LEU:HD22	2.00	0.42
1:B:203:SER:O	1:B:206:MET:N	2.46	0.42
1:B:324:GLU:HA	1:B:324:GLU:OE1	2.19	0.42
1:A:32:ASP:CB	1:A:35:LYS:HD2	2.49	0.42
1:A:120:THR:HG22	1:A:120:THR:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:26:SER:OG	1:B:28:GLN:NE2	2.51	0.42
1:B:50:LEU:CD1	1:B:59:LEU:HD21	2.48	0.42
1:B:218:ALA:HB1	1:B:248:ILE:HD12	1.97	0.42
1:B:401:THR:HG22	1:B:408:ARG:HD2	2.01	0.42
1:B:526:ARG:HH21	1:B:557:ALA:HB2	1.81	0.42
1:A:203:SER:CB	1:A:204:PRO:CD	2.97	0.42
1:A:288:VAL:CG1	1:A:295:LEU:HD22	2.49	0.42
1:A:351:LEU:HD12	1:A:382:ALA:HB1	2.00	0.42
1:B:84:SER:HB3	1:B:89:GLN:HB2	2.01	0.42
1:B:428:ARG:O	1:B:431:ARG:N	2.49	0.42
1:B:450:MET:HA	1:B:453:CYS:HB3	2.01	0.42
1:A:203:SER:HB2	1:A:204:PRO:CD	2.49	0.42
1:A:312:PRO:O	1:A:313:SER:C	2.58	0.42
1:A:342:ASP:N	1:A:342:ASP:OD1	2.50	0.42
1:A:440:TYR:HE2	1:A:578:GLN:CB	2.32	0.42
1:B:330:ILE:HB	2:B:720:HOH:O	2.19	0.42
1:B:536:MET:HA	2:B:678:HOH:O	2.19	0.42
1:A:35:LYS:HG2	1:A:52:ASP:OD2	2.20	0.42
1:A:96:ASN:HD22	1:A:99:ARG:HG3	1.84	0.42
1:A:196:SER:OG	1:A:405:GLU:OE2	2.36	0.42
1:B:123:ALA:CB	1:B:182:LEU:HD11	2.50	0.42
1:B:359:PRO:O	1:B:437:SER:HB3	2.19	0.42
1:B:574:PHE:CB	2:B:723:HOH:O	2.67	0.42
1:A:158:ASP:HB2	1:A:201:SER:HA	2.02	0.42
1:A:170:PHE:HB2	2:A:662:HOH:O	2.20	0.42
1:B:70:PRO:HB2	1:B:74:VAL:CG2	2.41	0.42
1:B:501:ARG:NH1	2:B:749:HOH:O	2.52	0.42
1:A:29:GLY:HA2	1:A:289:VAL:HG11	2.02	0.42
1:A:48:ALA:HB2	1:A:67:VAL:HG21	2.01	0.42
1:A:98:SER:C	1:A:100:PRO:HD3	2.39	0.42
1:A:152:GLY:O	1:A:153:PHE:C	2.57	0.42
1:A:359:PRO:HA	1:A:435:LEU:HA	2.02	0.42
1:A:393:VAL:CG1	1:A:426:ALA:HB1	2.49	0.42
1:A:532:LEU:CD1	1:A:536:MET:CE	2.98	0.42
1:A:579:ARG:CG	1:A:580:GLU:N	2.82	0.42
1:B:476:GLU:OE1	1:B:531:PRO:HA	2.20	0.42
1:A:371:PHE:CE1	1:A:408:ARG:NH1	2.88	0.42
1:B:392:VAL:HG12	1:B:394:MET:HG3	2.02	0.42
1:B:418:GLY:O	1:B:421:GLU:HB2	2.19	0.42
1:A:44:GLY:HA2	1:A:561:MET:HB3	2.01	0.42
1:A:84:SER:CB	1:A:87:ALA:HB3	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:315:GLU:OE1	1:A:315:GLU:HA	2.18	0.42
1:A:469:ALA:HB1	1:A:556:HIS:HD1	1.85	0.42
1:B:79:LEU:N	1:B:93:PHE:O	2.43	0.42
1:B:209:THR:HA	1:B:222:THR:HG22	2.02	0.42
1:B:305:PRO:HA	1:B:306:PRO:HD3	1.92	0.42
1:B:428:ARG:O	1:B:429:TRP:C	2.58	0.42
1:B:443:GLY:HA2	2:B:601:HOH:O	2.19	0.42
1:A:212:LEU:HG	1:A:214:THR:HG23	2.01	0.42
1:A:367:HIS:N	2:A:584:HOH:O	2.53	0.42
1:B:76:ARG:HA	1:B:96:ASN:HA	2.01	0.42
1:B:133:ARG:NE	1:B:149:ARG:HH21	2.18	0.42
1:B:322:LEU:O	1:B:323:PRO:C	2.59	0.42
1:A:92:LEU:HB3	1:A:106:LEU:HD12	2.02	0.41
1:B:168:GLY:HA3	2:B:706:HOH:O	2.20	0.41
1:B:240:PHE:HD1	1:B:272:PHE:CD1	2.37	0.41
1:B:569:LEU:HD12	1:B:569:LEU:HA	1.83	0.41
1:A:264:ARG:HA	1:A:269:SER:HA	2.02	0.41
1:B:71:HIS:O	1:B:72:TYR:C	2.58	0.41
1:B:176:SER:HA	2:B:746:HOH:O	2.19	0.41
1:B:300:THR:OG1	1:B:301:SER:N	2.53	0.41
1:B:302:LEU:HD13	1:B:351:LEU:HD13	2.02	0.41
1:B:315:GLU:HA	1:B:316:PRO:HD2	1.75	0.41
1:B:520:HIS:HA	1:B:521:PRO:HD3	1.81	0.41
1:A:296:VAL:HA	2:A:670:HOH:O	2.20	0.41
1:A:532:LEU:CD1	1:A:536:MET:HE3	2.50	0.41
1:B:201:SER:HB3	2:B:652:HOH:O	2.20	0.41
1:B:227:ASP:OD1	1:B:227:ASP:N	2.42	0.41
1:B:264:ARG:HH11	1:B:264:ARG:HG2	1.85	0.41
1:B:419:GLU:OE2	1:B:420:LEU:N	2.45	0.41
1:A:373:GLU:HB2	1:A:396:ASN:OD1	2.20	0.41
1:B:457:MET:O	1:B:459:PRO:HD2	2.20	0.41
1:A:169:PHE:CE2	1:A:371:PHE:CD1	3.04	0.41
1:A:219:ARG:NH1	1:A:221:VAL:CG1	2.84	0.41
1:B:86:GLY:O	1:B:555:GLY:HA3	2.21	0.41
1:B:133:ARG:HE	1:B:133:ARG:HB3	1.50	0.41
1:B:291:TRP:O	1:B:292:ARG:HB2	2.19	0.41
1:B:309:VAL:HA	1:B:316:PRO:HA	2.02	0.41
1:B:397:TYR:CB	1:B:422:ASP:HB2	2.49	0.41
1:B:567:ILE:HD12	1:B:568:LEU:CA	2.47	0.41
1:B:569:LEU:HB3	1:B:570:PRO:CD	2.43	0.41
1:A:108:ALA:O	1:A:144:LEU:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:198:SER:CB	1:A:213:GLU:OE2	2.68	0.41
1:A:421:GLU:O	1:A:425:ALA:N	2.53	0.41
1:B:30:VAL:H	1:B:289:VAL:CG1	2.33	0.41
1:B:31:VAL:HG22	1:B:74:VAL:CG2	2.51	0.41
1:B:325:ASP:O	1:B:328:ARG:HB2	2.21	0.41
1:B:411:ILE:O	1:B:411:ILE:HG13	2.21	0.41
1:B:456:THR:HG22	1:B:512:ILE:HD11	2.00	0.41
1:A:25:TYR:HA	1:A:39:VAL:O	2.20	0.41
1:A:226:ARG:HA	1:A:226:ARG:HD3	1.93	0.41
1:A:569:LEU:H	1:A:570:PRO:CD	2.33	0.41
1:B:78:ILE:CD1	1:B:124:VAL:HG22	2.50	0.41
1:B:328:ARG:NH1	2:B:682:HOH:O	2.54	0.41
1:B:444:TYR:OH	1:B:521:PRO:HG2	2.21	0.41
1:A:26:SER:HA	2:A:725:HOH:O	2.21	0.41
1:A:367:HIS:CE1	1:A:396:ASN:HA	2.56	0.41
1:A:393:VAL:HA	2:A:652:HOH:O	2.21	0.41
1:A:551:ILE:HD13	1:A:567:ILE:HG22	2.03	0.41
1:B:125:VAL:HG13	1:B:137:TYR:O	2.20	0.41
1:B:263:ALA:O	1:B:269:SER:HA	2.21	0.41
1:B:476:GLU:CD	1:B:531:PRO:HG3	2.41	0.41
1:B:514:GLU:HA	1:B:515:PRO:HD3	1.90	0.41
1:A:158:ASP:CB	1:A:201:SER:HA	2.50	0.41
1:A:190:PHE:CD1	1:A:190:PHE:N	2.88	0.41
1:A:194:GLU:CB	1:A:214:THR:HG22	2.51	0.41
1:A:224:ASP:O	1:A:228:GLY:N	2.53	0.41
1:A:322:LEU:HB2	2:A:697:HOH:O	2.21	0.41
1:A:329:SER:HB2	1:A:387:ALA:HA	2.02	0.41
1:A:358:THR:HA	1:A:359:PRO:C	2.39	0.41
1:A:398:ARG:HB2	1:A:410:LYS:HB2	2.03	0.41
1:A:451:THR:HG21	1:A:466:VAL:C	2.42	0.41
1:A:562:GLU:O	1:A:565:VAL:N	2.52	0.41
1:B:29:GLY:HA2	1:B:289:VAL:HG11	2.03	0.41
1:B:31:VAL:CG1	1:B:32:ASP:H	2.34	0.41
1:B:145:ARG:NH1	2:B:624:HOH:O	2.53	0.41
1:B:272:PHE:HA	1:B:276:GLU:O	2.21	0.41
1:B:491:GLN:NE2	2:B:747:HOH:O	2.53	0.41
1:B:504:SER:C	1:B:506:ILE:H	2.24	0.41
1:B:522:GLN:NE2	2:B:663:HOH:O	2.53	0.41
1:B:522:GLN:OE1	1:B:552:PRO:HA	2.21	0.41
1:A:59:LEU:O	1:A:101:GLY:HA2	2.20	0.41
1:A:119:ASP:OD1	1:A:120:THR:N	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:270:ALA:HB1	1:A:277:ARG:NE	2.36	0.41
1:A:309:VAL:CG1	1:A:316:PRO:HA	2.46	0.41
1:A:476:GLU:C	1:A:478:TYR:N	2.74	0.41
1:B:77:VAL:O	1:B:94:LYS:HA	2.20	0.41
1:B:156:VAL:CG1	1:B:159:ILE:HD11	2.51	0.41
1:B:280:ALA:HB1	1:B:285:HIS:CE1	2.56	0.41
1:B:357:PRO:O	1:B:360:GLY:CA	2.69	0.41
1:B:511:ARG:NH1	2:B:605:HOH:O	2.37	0.41
1:B:520:HIS:O	1:B:550:ILE:HA	2.21	0.41
1:B:534:ARG:HD3	1:B:534:ARG:HA	1.80	0.41
1:B:538:GLU:O	1:B:541:ALA:N	2.54	0.41
1:A:136:LEU:CD1	1:A:156:VAL:HG22	2.51	0.40
1:A:413:GLY:H	1:A:492:LEU:C	2.24	0.40
1:A:474:TRP:CZ3	1:A:477:MET:HE1	2.56	0.40
1:A:520:HIS:HA	1:A:521:PRO:HD3	1.80	0.40
1:A:521:PRO:HG2	1:A:555:GLY:O	2.21	0.40
1:B:93:PHE:CD1	1:B:93:PHE:N	2.89	0.40
1:B:364:VAL:CG1	1:B:395:PRO:HD3	2.51	0.40
1:B:453:CYS:CB	2:B:731:HOH:O	2.66	0.40
1:A:95:VAL:O	1:A:95:VAL:HG12	2.22	0.40
1:A:163:LEU:HD23	1:A:202:ILE:HD13	2.03	0.40
1:A:249:THR:HB	1:A:262:VAL:O	2.21	0.40
1:A:284:ASN:ND2	1:A:376:ASP:C	2.75	0.40
1:B:95:VAL:HB	2:B:727:HOH:O	2.20	0.40
1:B:199:SER:OG	1:B:251:LEU:HB3	2.22	0.40
1:B:210:ALA:HA	1:B:251:LEU:CD2	2.51	0.40
1:B:278:VAL:CG1	1:B:312:PRO:HB3	2.49	0.40
1:B:397:TYR:HB2	1:B:422:ASP:HB2	2.03	0.40
1:B:440:TYR:CZ	1:B:463:LYS:HD3	2.56	0.40
1:B:567:ILE:HA	2:B:594:HOH:O	2.21	0.40
1:A:117:GLY:HA3	1:A:126:PHE:CB	2.51	0.40
1:A:147:LEU:HD22	2:A:695:HOH:O	2.21	0.40
1:A:219:ARG:HG3	1:A:219:ARG:NH1	2.36	0.40
1:A:428:ARG:CG	2:A:622:HOH:O	2.58	0.40
1:A:497:ARG:HD3	1:A:501:ARG:HE	1.85	0.40
1:B:371:PHE:CD2	1:B:408:ARG:NH1	2.79	0.40
1:B:379:ASP:HB3	1:B:382:ALA:HB3	2.03	0.40
1:B:398:ARG:HG2	1:B:419:GLU:HA	2.02	0.40
1:B:429:TRP:O	1:B:431:ARG:N	2.54	0.40
1:A:23:GLU:H	1:A:23:GLU:HG3	1.69	0.40
1:A:188:ARG:HH11	1:A:188:ARG:CG	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:420:LEU:O	1:A:424:SER:N	2.54	0.40
1:B:60:ASN:O	1:B:61:ARG:HG2	2.21	0.40
1:B:432:GLU:HG3	2:B:759:HOH:O	2.21	0.40
1:B:444:TYR:O	1:B:447:GLY:N	2.50	0.40
1:A:98:SER:O	1:A:100:PRO:HD3	2.21	0.40
1:A:305:PRO:CD	1:A:322:LEU:HD12	2.50	0.40
1:A:444:TYR:CD1	1:A:444:TYR:N	2.90	0.40
1:A:575:LEU:HD23	1:A:575:LEU:HA	1.93	0.40
1:B:131:GLU:OE2	1:B:131:GLU:O	2.40	0.40
1:B:133:ARG:CD	2:B:608:HOH:O	2.70	0.40
1:B:266:GLU:HA	1:B:403:TYR:CE2	2.57	0.40
1:B:281:PRO:HB2	1:B:299:HIS:CE1	2.57	0.40
1:B:334:ARG:HD2	2:B:661:HOH:O	2.22	0.40
1:B:385:LEU:HD11	1:B:442:MET:CE	2.51	0.40
1:B:520:HIS:O	1:B:550:ILE:HG23	2.21	0.40
1:B:521:PRO:HA	1:B:554:ALA:HB3	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	558/562 (99%)	445 (80%)	90 (16%)	23 (4%)	3	6
1	B	559/562 (100%)	432 (77%)	96 (17%)	31 (6%)	2	3
All	All	1117/1124 (99%)	877 (78%)	186 (17%)	54 (5%)	2	4

All (54) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	43	GLU
1	A	72	TYR

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Mol	Chain	Res	Type
1	A	563	ASP
1	B	206	MET
1	B	232	ASP
1	B	371	PHE
1	B	496	SER
1	A	106	LEU
1	A	321	GLY
1	A	354	GLY
1	A	371	PHE
1	A	498	GLU
1	A	543	GLY
1	A	568	LEU
1	B	45	SER
1	B	60	ASN
1	B	107	GLU
1	B	172	GLY
1	B	187	LEU
1	B	210	ALA
1	B	211	GLY
1	B	256	ASP
1	B	580	GLU
1	A	42	SER
1	A	216	ARG
1	B	323	PRO
1	B	498	GLU
1	B	505	PRO
1	B	522	GLN
1	B	544	LYS
1	A	116	SER
1	B	61	ARG
1	B	74	VAL
1	B	121	GLY
1	B	122	GLU
1	B	380	THR
1	B	430	ALA
1	B	560	THR
1	B	562	GLU
1	A	31	VAL
1	A	32	ASP
1	A	276	GLU
1	A	579	ARG
1	B	292	ARG

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Mol	Chain	Res	Type
1	A	430	ALA
1	B	301	SER
1	B	417	GLY
1	A	54	GLY
1	A	64	ILE
1	A	142	GLY
1	A	460	GLY
1	A	515	PRO
1	B	306	PRO
1	B	472	VAL

5.3.2   Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	448/449 (100%)	418 (93%)	30 (7%)	16	37
1	B	448/449 (100%)	417 (93%)	31 (7%)	15	35
All	All	896/898 (100%)	835 (93%)	61 (7%)	16	36

All (61) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	43	GLU
1	A	56	THR
1	A	71	HIS
1	A	81	ARG
1	A	139	LEU
1	A	177	LEU
1	A	178	PHE
1	A	181	ASN
1	A	183	SER
1	A	191	ASP
1	A	201	SER
1	A	216	ARG
1	A	233	LEU

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Mol	Chain	Res	Type
1	A	250	TRP
1	A	285	HIS
1	A	301	SER
1	A	322	LEU
1	A	344	SER
1	A	345	ARG
1	A	419	GLU
1	A	435	LEU
1	A	441	ILE
1	A	444	TYR
1	A	453	CYS
1	A	461	LEU
1	A	522	GLN
1	A	552	PRO
1	A	559	ASN
1	A	563	ASP
1	A	579	ARG
1	B	41	PHE
1	B	56	THR
1	B	83	VAL
1	B	99	ARG
1	B	133	ARG
1	B	137	TYR
1	B	162	ASP
1	B	178	PHE
1	B	219	ARG
1	B	222	THR
1	B	236	PRO
1	B	256	ASP
1	B	304	THR
1	B	315	GLU
1	B	322	LEU
1	B	327	ARG
1	B	328	ARG
1	B	336	VAL
1	B	341	PHE
1	B	358	THR
1	B	384	SER
1	B	411	ILE
1	B	419	GLU
1	B	428	ARG
1	B	445	SER

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Mol	Chain	Res	Type
1	B	456	THR
1	B	482	ASP
1	B	497	ARG
1	B	522	GLN
1	B	560	THR
1	B	568	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (20) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	28	GLN
1	A	90	HIS
1	A	96	ASN
1	A	104	GLN
1	A	284	ASN
1	A	285	HIS
1	A	523	ASN
1	B	28	GLN
1	B	65	ASN
1	B	90	HIS
1	B	96	ASN
1	B	104	GLN
1	B	284	ASN
1	B	299	HIS
1	B	367	HIS
1	B	396	ASN
1	B	507	ASN
1	B	520	HIS
1	B	522	GLN
1	B	523	ASN

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 ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	560/562 (99%)	-0.10	4 (0%)	87	89	7, 26, 44, 73	0
1	B	561/562 (99%)	0.13	9 (1%)	72	74	9, 32, 51, 71	0
All	All	1121/1124 (99%)	0.02	13 (1%)	79	80	7, 28, 49, 73	0

All (13) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	295	LEU	3.9
1	A	558	ILE	3.9
1	A	325	ASP	2.9
1	B	261	VAL	2.8
1	B	296	VAL	2.7
1	B	558	ILE	2.7
1	B	579	ARG	2.6
1	A	320	GLY	2.6
1	A	321	GLY	2.1
1	B	262	VAL	2.1
1	B	235	LEU	2.1
1	B	26	SER	2.1
1	B	218	ALA	2.0

6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

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

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

There are no ligands in this entry.

6.5 Other polymers ⓘ

There are no such residues in this entry.