



Full wwPDB X-ray Structure Validation Report ⓘ

Apr 25, 2026 – 11:03 AM EDT

PDB ID : 4ANI / pdb_00004ani
Title : Structural basis for the intermolecular communication between DnaK and GrpE in the DnaK chaperone system from *Geobacillus kaustophilus* HTA426
Authors : Wu, C.-C.; Naveen, V.; Chien, C.-H.; Chang, Y.-W.; Hsiao, C.-D.
Deposited on : 2012-03-19
Resolution : 4.09 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The 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:

MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

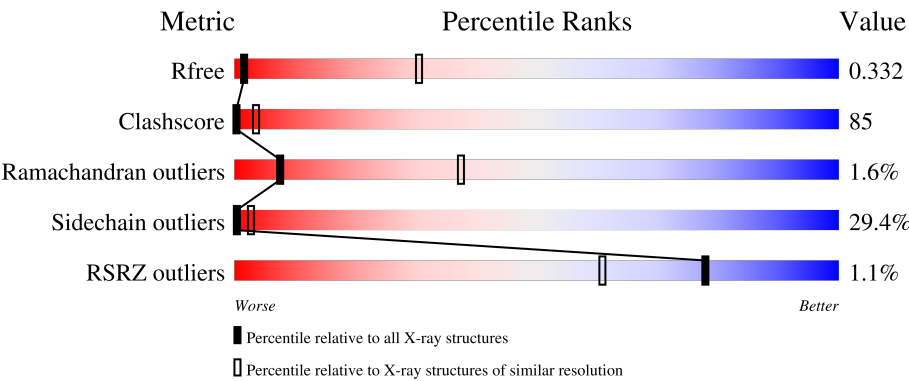
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 4.09 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1243 (4.40-3.80)
Clashscore	190562	1293 (4.40-3.80)
Ramachandran outliers	187476	1206 (4.40-3.80)
Sidechain outliers	187428	1193 (4.40-3.80)
RSRZ outliers	180081	1240 (4.40-3.80)

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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	213	8%40%21%•27%
1	B	213	14%37%19%•28%
1	E	213	31%25%7%37%
1	F	213	31%23%7%39%
2	C	509	20%54%24%•

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Mol	Chain	Length	Quality of chain
2	D	509	 17% 55% 25% .
2	G	509	 3% 30% 51% 16% ..
2	H	509	 3% 32% 43% 20% ..

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 18889 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 PROTEIN GRPE.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	156	Total	C	N	O	S	0	0	0
			1242	778	215	243	6			
1	B	154	Total	C	N	O	S	0	0	0
			1240	779	216	239	6			
1	E	135	Total	C	N	O	S	0	0	0
			820	498	160	160	2			
1	F	130	Total	C	N	O	S	0	0	0
			815	496	159	158	2			

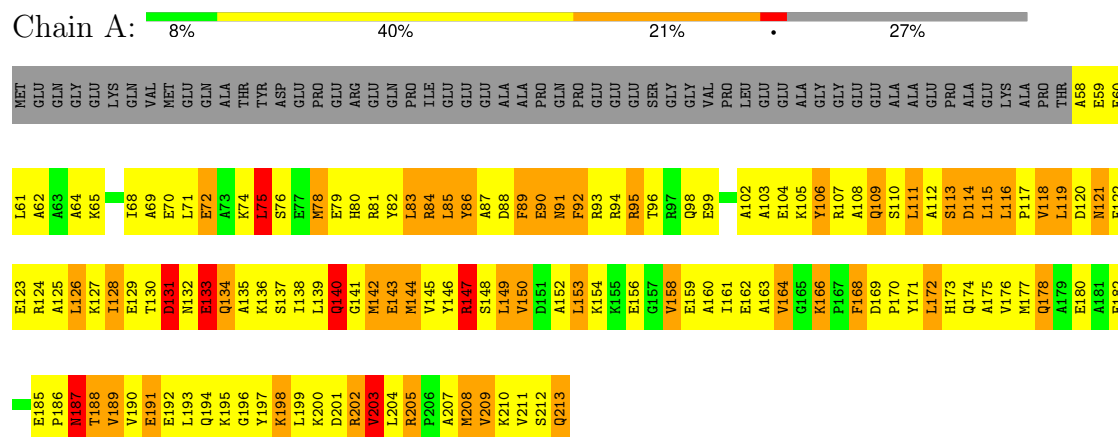
- Molecule 2 is a protein called CHAPERONE PROTEIN DNAK.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	C	509	Total	C	N	O	S	0	0	0
			3862	2410	670	773	9			
2	D	509	Total	C	N	O	S	0	0	0
			3864	2413	671	771	9			
2	G	502	Total	C	N	O	S	0	0	0
			3527	2178	627	716	6			
2	H	501	Total	C	N	O	S	0	0	0
			3519	2176	624	712	7			

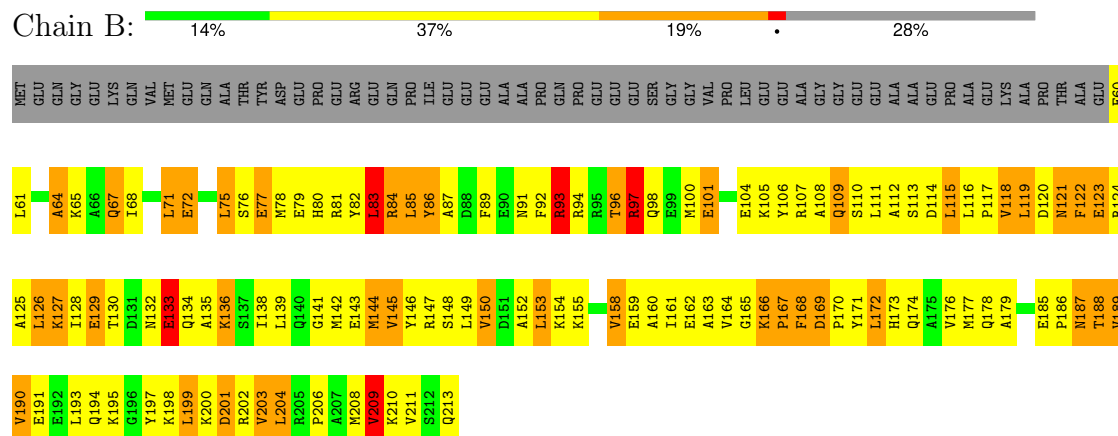
3 Residue-property plots

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.

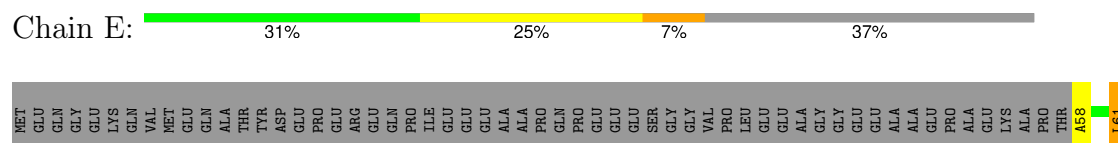
• Molecule 1: PROTEIN GRPE

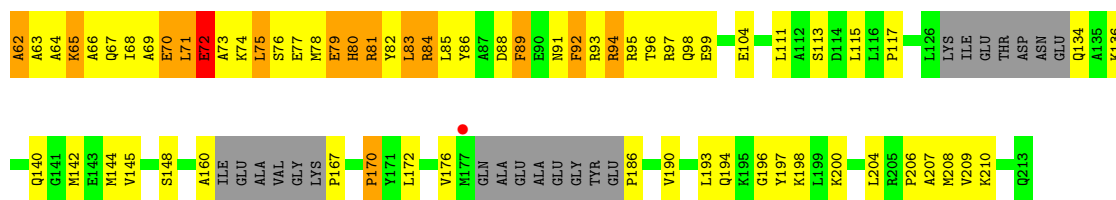


• Molecule 1: PROTEIN GRPE

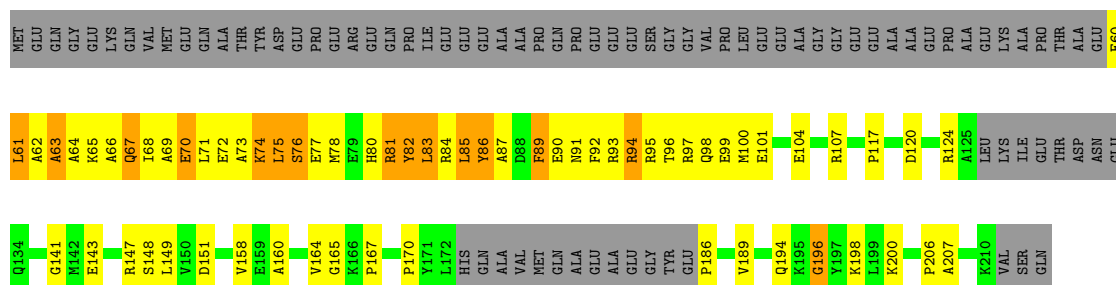
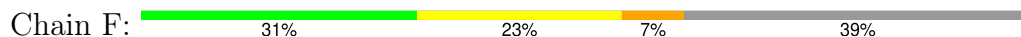


• Molecule 1: PROTEIN GRPE

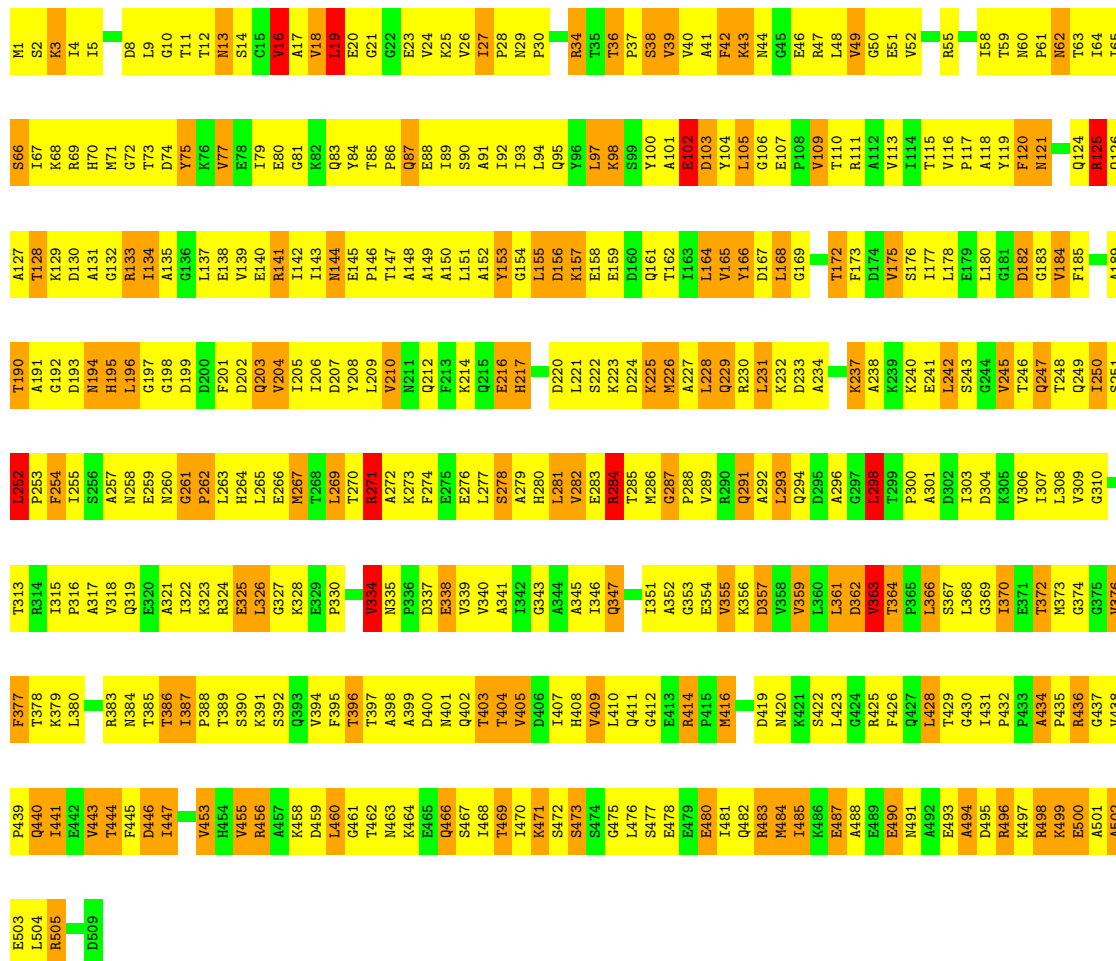




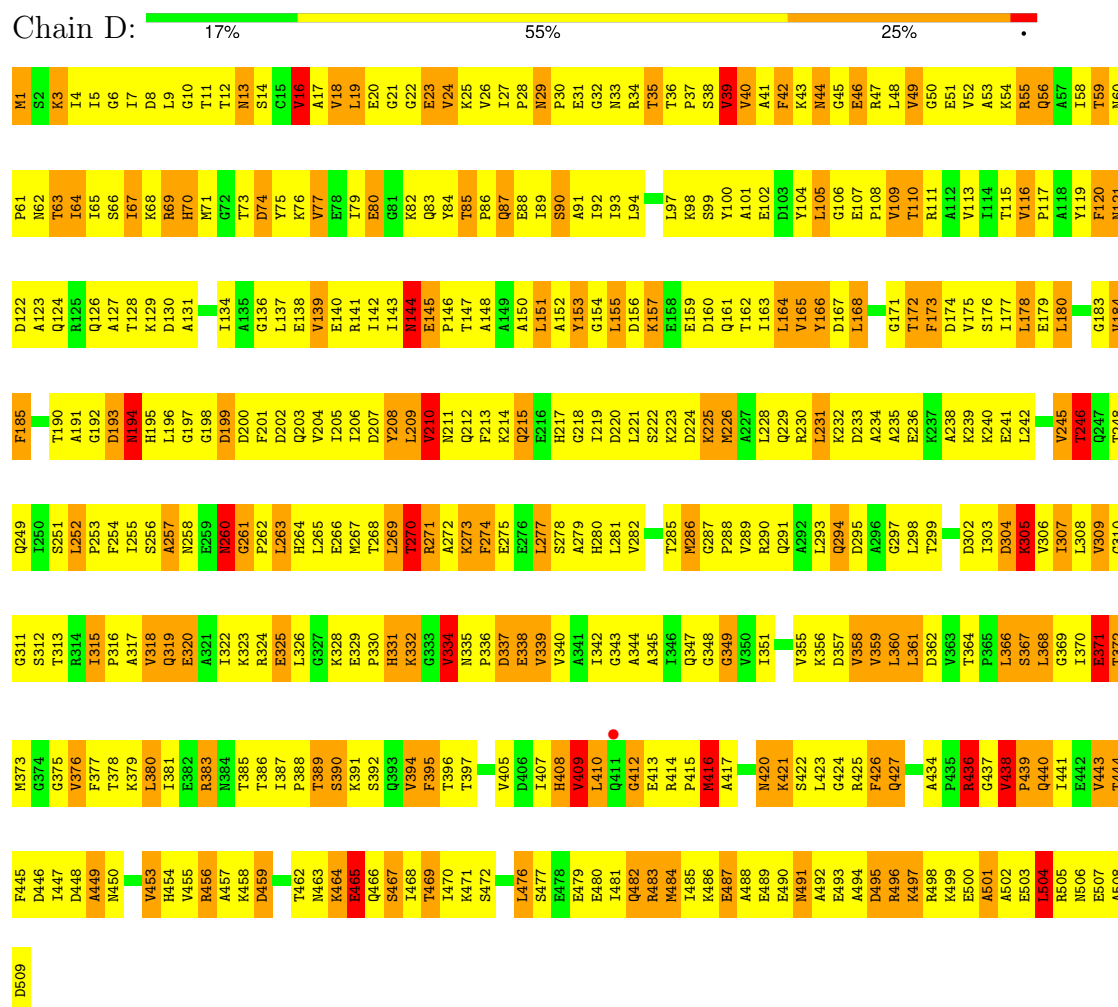
• Molecule 1: PROTEIN GRPE



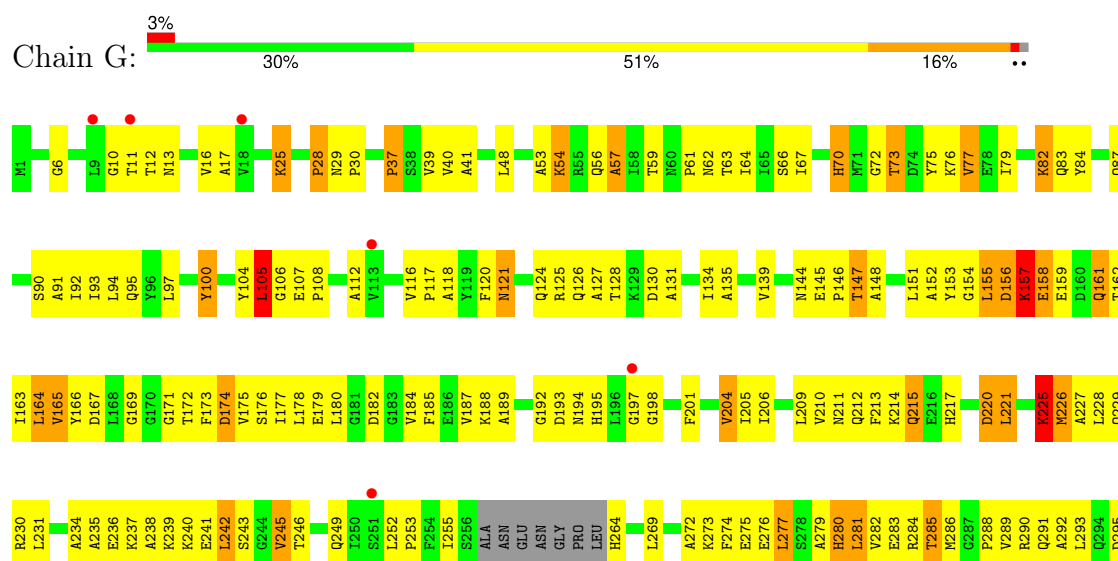
• Molecule 2: CHAPERONE PROTEIN DNAK

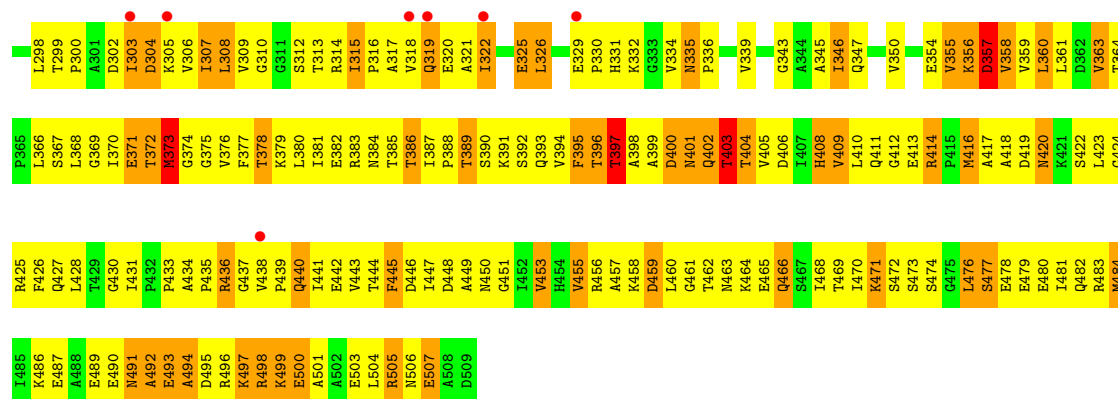


• Molecule 2: CHAPERONE PROTEIN DNAK

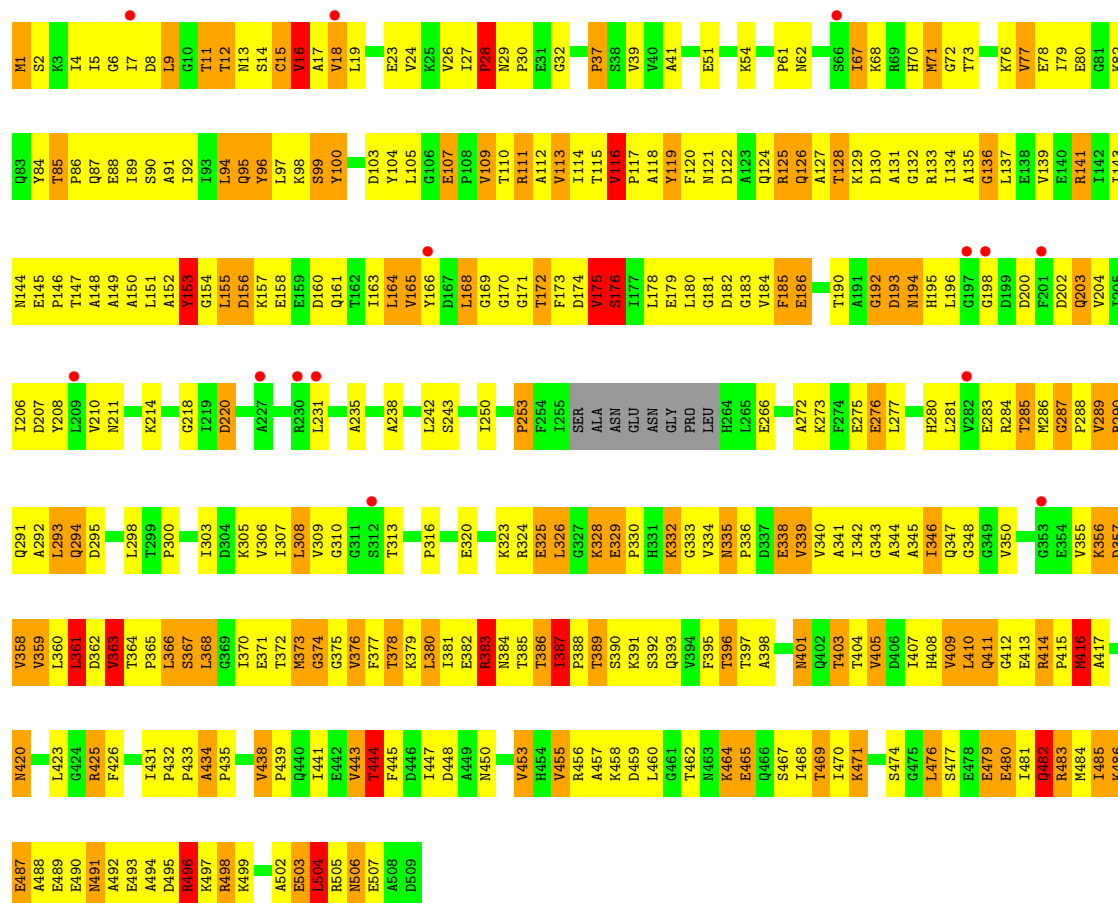


• Molecule 2: CHAPERONE PROTEIN DNAK





• Molecule 2: CHAPERONE PROTEIN DNAK



4 Data and refinement statistics

Property	Value	Source
Space group	I 41 2 2	Depositor
Cell constants a, b, c, α , β , γ	279.98Å 279.98Å 278.82Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	26.22 – 4.09 26.22 – 4.09	Depositor EDS
% Data completeness (in resolution range)	94.8 (26.22-4.09) 94.3 (26.22-4.09)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	4.25 (at 4.10Å)	Xtriage
Refinement program	PHENIX (PHENIX.REFINE: 1.7_650)	Depositor
R, R_{free}	0.274 , 0.347 0.254 , 0.332	Depositor DCC
R_{free} test set	2083 reflections (5.05%)	wwPDB-VP
Wilson B-factor (Å ²)	143.4	Xtriage
Anisotropy	0.406	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.29 , 168.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.29$	Xtriage
Estimated twinning fraction	0.027 for l,-k,h 0.016 for -h,-l,-k	Xtriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	18889	wwPDB-VP
Average B, all atoms (Å ²)	207.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.31% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality

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	0.93	0/1258	1.32	20/1691 (1.2%)
1	B	0.94	0/1257	1.34	14/1688 (0.8%)
1	E	0.90	0/821	1.32	12/1117 (1.1%)
1	F	0.90	0/818	1.31	11/1110 (1.0%)
2	C	0.98	5/3912 (0.1%)	1.32	50/5296 (0.9%)
2	D	1.00	4/3914 (0.1%)	1.31	52/5299 (1.0%)
2	G	0.95	2/3564 (0.1%)	1.35	52/4834 (1.1%)
2	H	0.97	2/3556 (0.1%)	1.38	60/4832 (1.2%)
All	All	0.96	13/19100 (0.1%)	1.33	271/25867 (1.0%)

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	B	0	1
2	D	0	2
2	H	0	2
All	All	0	5

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	252	LEU	C-O	-8.56	1.14	1.24
2	D	67	ILE	CG1-CD1	-7.46	1.22	1.51
2	G	358	VAL	CA-CB	6.58	1.61	1.54
2	G	346	ILE	CG1-CD1	-6.58	1.26	1.51
2	C	447	ILE	C-O	6.39	1.31	1.24
2	H	141	ARG	CZ-NH1	-5.96	1.24	1.32
2	C	370	ILE	CA-CB	-5.65	1.46	1.54
2	D	64	ILE	CA-CB	-5.51	1.47	1.54
2	H	67	ILE	CG1-CD1	-5.41	1.30	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	441	ILE	CA-CB	-5.33	1.47	1.54
2	C	455	VAL	CA-CB	-5.22	1.48	1.54
2	C	139	VAL	CA-CB	-5.20	1.47	1.53
2	D	331	HIS	ND1-CE1	5.18	1.37	1.32

All (271) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	45	GLY	N-CA-C	-10.57	100.73	115.32
2	G	322	ILE	N-CA-C	10.52	121.02	110.82
1	B	129	GLU	N-CA-C	-10.26	100.77	113.28
2	G	108	PRO	N-CA-CB	9.40	111.53	103.35
1	A	140	GLN	N-CA-C	-9.13	102.15	113.20
2	C	387	ILE	N-CA-C	9.05	123.21	112.35
2	G	117	PRO	N-CA-CB	8.94	111.82	103.15
2	C	498	ARG	N-CA-C	-8.23	103.00	112.87
2	H	363	VAL	N-CA-C	8.11	122.27	113.43
1	B	202	ARG	N-CA-C	-8.05	97.66	110.14
1	E	145	VAL	N-CA-C	7.98	118.08	110.42
2	C	134	ILE	N-CA-C	-7.93	102.53	110.62
1	B	209	VAL	N-CA-C	7.83	120.90	108.85
2	H	414	ARG	CA-C-N	7.79	127.34	118.85
2	H	414	ARG	C-N-CA	7.79	127.34	118.85
2	C	16	VAL	N-CA-C	7.74	119.22	107.77
1	A	131	ASP	N-CA-C	7.73	121.02	110.35
2	C	353	GLY	N-CA-C	7.72	127.14	115.63
2	H	61	PRO	N-CA-CB	7.63	110.84	103.51
2	C	107	GLU	N-CA-C	-7.61	100.49	109.93
2	H	41	ALA	N-CA-C	7.61	118.61	107.88
2	C	414	ARG	CA-C-N	7.61	127.28	119.82
2	C	414	ARG	C-N-CA	7.61	127.28	119.82
2	D	449	ALA	N-CA-C	7.57	120.19	111.11
2	H	300	PRO	N-CA-CB	7.54	111.17	103.25
2	C	485	ILE	N-CA-C	-7.50	102.48	110.36
2	D	16	VAL	N-CA-C	7.50	119.84	107.24
1	A	202	ARG	N-CA-C	-7.48	100.46	110.55
2	G	419	ASP	N-CA-C	-7.47	104.30	113.19
2	G	315	ILE	CA-C-N	7.46	127.14	119.82
2	G	315	ILE	C-N-CA	7.46	127.14	119.82
1	E	167	PRO	N-CA-CB	7.42	111.16	103.00
2	C	195	HIS	N-CA-C	7.40	123.34	113.72
2	C	192	GLY	N-CA-C	7.33	121.14	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	H	30	PRO	N-CA-CB	7.31	111.27	103.52
1	A	209	VAL	N-CA-C	7.27	118.62	108.23
1	E	206	PRO	N-CA-CB	7.27	110.88	103.25
1	F	206	PRO	N-CA-CB	7.24	110.98	103.38
2	H	141	ARG	NE-CZ-NH2	7.20	125.68	119.20
2	D	334	VAL	N-CA-C	-7.20	100.30	109.30
2	C	364	THR	N-CA-C	-7.19	100.70	109.83
2	C	24	VAL	N-CA-C	7.18	118.00	107.37
1	E	186	PRO	N-CA-CB	7.15	110.87	103.00
1	E	117	PRO	N-CA-CB	7.02	110.62	103.25
2	H	28	PRO	N-CA-CB	7.00	110.61	103.25
2	D	106	GLY	N-CA-C	-6.97	106.38	115.59
1	F	186	PRO	N-CA-CB	6.97	110.67	103.00
2	D	145	GLU	CA-C-N	-6.96	111.73	118.97
2	D	145	GLU	C-N-CA	-6.96	111.73	118.97
2	G	307	ILE	N-CA-C	6.92	120.37	108.95
2	C	298	LEU	N-CA-C	6.91	119.64	109.69
2	H	383	ARG	CA-C-N	-6.88	111.73	121.99
2	H	383	ARG	C-N-CA	-6.88	111.73	121.99
2	D	16	VAL	CB-CA-C	-6.88	102.55	110.73
1	E	170	PRO	N-CA-CB	6.88	110.47	103.25
2	G	225	LYS	N-CA-C	6.87	121.66	113.28
1	F	196	GLY	N-CA-C	6.84	119.36	111.36
2	H	37	PRO	N-CA-CB	6.83	109.68	103.19
2	H	335	ASN	CA-C-N	6.83	126.51	119.82
2	H	335	ASN	C-N-CA	6.83	126.51	119.82
2	D	39	VAL	CB-CA-C	-6.82	105.33	111.74
1	B	203	VAL	N-CA-C	6.80	118.67	107.24
2	G	61	PRO	N-CA-CB	6.80	111.01	103.26
2	D	315	ILE	CA-C-N	-6.79	111.35	119.84
2	D	315	ILE	C-N-CA	-6.79	111.35	119.84
2	C	228	LEU	N-CA-C	-6.78	102.97	111.11
2	H	276	GLU	N-CA-C	6.77	118.46	111.14
1	F	117	PRO	N-CA-CB	6.76	110.35	103.25
2	G	253	PRO	N-CA-CB	6.75	110.34	103.25
2	H	194	ASN	N-CA-C	6.75	119.65	111.82
2	D	270	THR	CB-CA-C	-6.74	98.11	111.60
1	B	206	PRO	N-CA-C	-6.71	101.37	111.57
2	C	113	VAL	N-CA-C	-6.68	98.86	108.42
1	F	170	PRO	N-CA-CB	6.68	109.93	103.51
2	D	371	GLU	N-CA-C	-6.65	100.46	110.24
1	B	123	GLU	N-CA-C	-6.64	104.28	112.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	G	335	ASN	CA-C-N	6.58	126.82	119.32
2	G	335	ASN	C-N-CA	6.58	126.82	119.32
2	H	126	GLN	N-CA-C	-6.54	104.07	111.14
2	D	116	VAL	CA-C-N	6.52	126.49	120.03
2	D	116	VAL	C-N-CA	6.52	126.49	120.03
2	G	445	PHE	N-CA-C	-6.50	99.31	109.25
2	G	397	THR	CB-CA-C	-6.50	99.50	109.89
2	G	70	HIS	N-CA-C	6.47	120.88	112.92
2	C	271	ARG	N-CA-C	-6.47	103.51	111.40
2	G	25	LYS	N-CA-C	6.45	119.42	108.90
2	G	28	PRO	N-CA-CB	6.44	110.02	103.25
2	C	473	SER	N-CA-C	-6.44	104.00	112.24
2	H	289	VAL	N-CA-C	6.43	116.47	110.42
1	B	104	GLU	N-CA-C	6.42	119.23	111.40
1	A	116	LEU	CA-C-N	-6.42	112.30	118.97
1	A	116	LEU	C-N-CA	-6.42	112.30	118.97
2	C	250	ILE	N-CA-C	-6.40	99.25	108.53
2	H	175	VAL	N-CA-C	6.38	117.06	107.75
2	G	54	LYS	N-CA-C	6.35	120.29	112.54
2	G	30	PRO	N-CA-CB	6.34	110.24	103.52
2	G	155	LEU	N-CA-C	6.33	121.79	113.30
2	H	71	MET	N-CA-C	6.33	118.94	109.25
2	C	261	GLY	CA-C-N	6.32	126.70	119.93
2	C	261	GLY	C-N-CA	6.32	126.70	119.93
2	C	81	GLY	N-CA-C	-6.29	107.43	115.42
2	D	434	ALA	CA-C-N	6.27	126.18	119.85
2	D	434	ALA	C-N-CA	6.27	126.18	119.85
2	H	387	ILE	CA-C-N	-6.26	113.50	119.89
2	H	387	ILE	C-N-CA	-6.26	113.50	119.89
2	D	59	THR	CB-CA-C	-6.26	101.44	111.39
1	A	121	ASN	N-CA-C	-6.23	103.79	111.33
2	C	24	VAL	CB-CA-C	-6.23	102.53	111.19
2	H	416	MET	N-CA-C	6.23	118.87	111.71
2	G	105	LEU	N-CA-C	6.21	118.98	111.40
2	G	197	GLY	N-CA-C	6.21	118.97	110.58
1	F	167	PRO	N-CA-CB	6.21	110.34	103.26
2	C	434	ALA	CA-C-N	6.20	127.58	119.84
2	C	434	ALA	C-N-CA	6.20	127.58	119.84
2	H	339	VAL	N-CA-C	6.19	120.62	112.76
2	D	22	GLY	N-CA-C	-6.17	105.60	115.66
2	H	253	PRO	N-CA-CB	6.17	109.73	103.25
1	B	166	LYS	CA-C-N	-6.15	112.15	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	166	LYS	C-N-CA	-6.15	112.15	119.84
2	H	356	LYS	N-CA-C	6.14	123.88	110.80
2	D	349	GLY	N-CA-C	-6.14	105.21	112.64
2	H	16	VAL	N-CA-C	6.14	116.45	107.37
2	C	334	VAL	CB-CA-C	-6.12	102.44	111.19
2	H	434	ALA	CA-C-N	6.11	126.12	119.89
2	H	434	ALA	C-N-CA	6.11	126.12	119.89
2	H	192	GLY	N-CA-C	6.10	119.10	110.74
2	H	116	VAL	CA-C-N	6.08	126.43	119.92
2	H	116	VAL	C-N-CA	6.08	126.43	119.92
2	G	37	PRO	N-CA-CB	6.06	109.61	103.25
1	B	133	GLU	N-CA-C	6.05	116.95	108.00
1	A	150	VAL	CB-CA-C	-6.05	104.23	111.97
2	D	138	GLU	N-CA-C	-6.02	101.50	110.23
2	G	451	GLY	N-CA-C	6.01	123.05	114.64
1	A	147	ARG	N-CA-C	-6.00	106.00	113.38
2	H	357	ASP	N-CA-C	6.00	118.45	110.53
1	A	130	THR	N-CA-C	-5.99	105.27	113.30
2	C	502	ALA	N-CA-C	-5.99	104.66	111.07
2	G	304	ASP	N-CA-C	5.99	119.06	111.69
2	H	139	VAL	CB-CA-C	-5.97	104.09	111.08
1	A	203	VAL	N-CA-C	5.96	116.59	107.77
2	H	285	THR	N-CA-C	5.95	118.56	111.71
2	H	453	VAL	N-CA-C	5.95	116.20	108.35
1	B	127	LYS	N-CA-C	-5.94	105.99	113.18
2	G	303	ILE	N-CA-C	5.92	117.54	108.71
2	D	185	PHE	N-CA-C	5.92	118.47	107.99
2	G	329	GLU	CA-C-N	5.92	126.11	120.31
2	G	329	GLU	C-N-CA	5.92	126.11	120.31
1	E	172	LEU	N-CA-C	5.89	118.46	111.33
2	G	280	HIS	N-CA-C	5.86	118.90	111.69
2	D	261	GLY	CA-C-N	5.86	125.87	119.90
2	D	261	GLY	C-N-CA	5.86	125.87	119.90
2	H	482	GLN	N-CA-C	-5.85	105.85	112.87
2	H	107	GLU	CA-C-N	-5.84	114.25	120.03
2	H	107	GLU	C-N-CA	-5.84	114.25	120.03
1	F	149	LEU	N-CA-C	5.84	120.56	113.38
2	C	252	LEU	CA-C-N	5.83	125.59	119.76
2	C	252	LEU	C-N-CA	5.83	125.59	119.76
2	D	70	HIS	N-CA-C	5.82	120.08	112.92
1	E	72	GLU	N-CA-C	-5.82	105.02	111.71
2	D	24	VAL	CB-CA-C	-5.80	102.58	110.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	G	356	LYS	N-CA-C	5.80	118.77	110.24
2	G	157	LYS	N-CA-C	-5.79	104.89	111.14
2	H	218	GLY	N-CA-C	5.78	121.65	114.37
2	D	139	VAL	CB-CA-C	-5.76	103.32	111.21
2	G	57	ALA	N-CA-C	5.75	118.77	111.69
2	G	397	THR	N-CA-C	5.73	118.56	109.96
1	F	76	SER	N-CA-C	-5.70	104.07	111.02
2	H	329	GLU	CA-C-N	5.69	125.98	119.83
2	H	329	GLU	C-N-CA	5.69	125.98	119.83
2	C	153	TYR	N-CA-C	-5.68	106.39	113.38
2	D	427	GLN	N-CA-C	5.68	117.61	109.14
2	C	175	VAL	CB-CA-C	-5.67	101.63	110.69
1	A	149	LEU	N-CA-C	-5.66	104.51	111.75
2	G	420	ASN	N-CA-C	5.65	118.00	109.41
2	H	172	THR	N-CA-C	5.64	116.81	108.86
2	H	136	GLY	N-CA-C	-5.64	99.82	113.18
2	D	271	ARG	N-CA-C	-5.63	103.97	111.24
1	A	133	GLU	N-CA-C	5.63	122.79	110.80
2	H	70	HIS	N-CA-C	5.63	119.84	112.92
1	B	97	ARG	N-CA-C	-5.62	104.17	111.02
2	C	102	GLU	N-CA-C	-5.61	104.17	111.02
2	D	90	SER	N-CA-C	-5.61	104.58	111.75
1	F	200	LYS	N-CA-C	5.61	122.74	110.80
2	D	257	ALA	N-CA-C	5.60	117.61	108.76
2	D	144	ASN	N-CA-C	5.59	117.85	108.96
2	H	85	THR	CA-C-N	5.59	125.95	119.47
2	H	85	THR	C-N-CA	5.59	125.95	119.47
1	A	178	GLN	N-CA-C	-5.57	100.21	109.46
2	H	333	GLY	N-CA-C	-5.56	108.36	115.42
2	D	409	VAL	N-CA-C	5.55	114.73	106.85
2	G	59	THR	N-CA-C	5.55	120.17	113.17
2	G	84	TYR	N-CA-C	5.55	118.12	109.52
2	D	465	GLU	N-CA-C	5.52	119.71	112.92
2	D	501	ALA	N-CA-C	-5.52	104.48	111.11
2	G	416	MET	N-CA-C	5.51	117.64	108.99
2	D	412	GLY	N-CA-C	5.50	118.27	110.74
2	D	438	VAL	CA-C-N	5.49	126.70	119.84
2	D	438	VAL	C-N-CA	5.49	126.70	119.84
2	G	386	THR	CA-C-N	5.48	123.69	120.24
2	G	386	THR	C-N-CA	5.48	123.69	120.24
2	D	416	MET	N-CA-C	5.47	117.65	108.73
2	C	284	ARG	N-CA-C	-5.45	105.37	112.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	252	LEU	O-C-N	-5.43	117.23	121.19
2	C	189	ALA	N-CA-C	5.40	117.47	108.99
2	C	287	GLY	CA-C-N	-5.40	113.34	119.28
2	C	287	GLY	C-N-CA	-5.40	113.34	119.28
2	H	374	GLY	N-CA-C	5.40	123.68	115.63
2	H	220	ASP	N-CA-C	5.39	118.16	110.24
2	H	491	ASN	N-CA-C	5.36	118.94	112.93
1	B	162	GLU	N-CA-C	5.35	117.35	108.20
2	D	194	ASN	N-CA-C	5.33	119.42	113.02
1	A	180	GLU	N-CA-C	-5.32	99.85	108.41
1	E	81	ARG	N-CA-C	-5.32	104.90	111.33
2	H	474	SER	N-CA-C	5.32	117.95	110.14
2	G	56	GLN	N-CA-C	-5.31	106.64	113.02
2	D	210	VAL	CB-CA-C	-5.31	105.08	112.04
2	G	427	GLN	N-CA-C	5.31	117.93	109.81
2	G	455	VAL	N-CA-C	5.30	115.69	107.78
2	G	357	ASP	N-CA-C	5.30	117.30	108.02
2	C	501	ALA	N-CA-C	-5.30	105.67	111.82
1	E	71	LEU	N-CA-C	5.29	116.91	111.03
2	D	325	GLU	N-CA-C	-5.29	106.67	113.02
2	D	496	ARG	N-CA-C	-5.29	105.46	112.34
2	C	357	ASP	N-CA-C	-5.29	101.08	109.96
2	H	361	LEU	CD1-CG-CD2	5.28	122.42	110.80
2	C	125	ARG	N-CA-C	-5.28	104.77	111.11
2	D	61	PRO	N-CA-C	-5.27	107.18	113.98
2	H	287	GLY	N-CA-C	5.26	123.07	112.34
1	B	83	LEU	N-CA-C	-5.26	104.99	111.40
1	A	85	LEU	N-CA-C	-5.25	104.98	111.33
2	H	153	TYR	N-CA-C	5.25	119.78	112.90
2	D	305	LYS	N-CA-C	5.25	116.26	108.86
2	G	494	ALA	N-CA-C	-5.25	106.72	113.02
1	A	158	VAL	CB-CA-C	-5.24	104.59	111.25
2	D	408	HIS	N-CA-C	-5.22	100.01	108.52
2	G	450	ASN	N-CA-C	5.21	119.49	113.18
1	F	104	GLU	N-CA-C	5.21	119.73	113.17
2	D	383	ARG	CA-C-N	-5.19	115.51	122.42
2	D	383	ARG	C-N-CA	-5.19	115.51	122.42
2	C	363	VAL	CB-CA-C	-5.19	102.79	111.29
1	F	63	ALA	N-CA-C	-5.17	106.23	112.54
2	H	200	ASP	N-CA-C	5.16	117.81	111.82
2	C	278	SER	N-CA-C	5.16	119.84	113.50
2	G	245	VAL	N-CA-C	5.14	116.64	109.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	94	ARG	N-CA-C	-5.12	105.78	112.23
1	A	128	ILE	CA-C-N	-5.11	114.90	122.41
1	A	128	ILE	C-N-CA	-5.11	114.90	122.41
2	G	453	VAL	N-CA-C	5.11	115.67	108.36
2	C	387	ILE	CB-CA-C	-5.10	107.31	114.00
2	H	176	SER	N-CA-C	5.10	116.94	108.02
1	E	62	ALA	N-CA-C	5.09	116.91	111.36
2	H	444	THR	N-CA-C	5.09	116.98	108.99
2	C	494	ALA	N-CA-C	-5.08	106.77	112.87
2	D	440	GLN	N-CA-C	5.08	118.00	110.48
2	C	19	LEU	N-CA-C	5.08	116.91	108.02
2	G	403	THR	N-CA-C	-5.07	106.60	112.89
2	G	372	THR	N-CA-C	-5.07	103.24	110.59
2	G	285	THR	N-CA-C	-5.07	105.19	112.13
2	D	246	THR	N-CA-C	5.06	119.43	113.16
2	G	477	SER	N-CA-C	5.05	117.80	110.17
2	C	386	THR	CA-C-N	5.04	124.36	120.33
2	C	386	THR	C-N-CA	5.04	124.36	120.33
2	H	77	VAL	N-CA-C	5.04	115.38	108.12
2	C	27	ILE	CA-C-N	5.04	124.80	119.76
2	C	27	ILE	C-N-CA	5.04	124.80	119.76
2	C	353	GLY	CA-C-N	-5.03	115.86	122.85
2	C	353	GLY	C-N-CA	-5.03	115.86	122.85
2	G	459	ASP	N-CA-C	-5.02	104.23	110.41
2	D	260	ASN	N-CA-CB	5.01	118.18	110.46
2	H	373	MET	N-CA-C	5.00	117.81	110.30
1	A	189	VAL	CB-CA-C	-5.00	103.81	111.71

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	167	PRO	Peptide
2	D	394	VAL	Peptide
2	D	436	ARG	Peptide
2	H	477	SER	Peptide
2	H	496	ARG	Peptide

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	1242	0	1239	287	0
1	B	1240	0	1246	255	0
1	E	820	0	567	91	0
1	F	815	0	588	85	0
2	C	3862	0	3901	673	0
2	D	3864	0	3909	807	0
2	G	3527	0	3217	540	0
2	H	3519	0	3231	558	0
All	All	18889	0	17898	3120	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 85.

All (3120) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:67:ILE:CD1	2:C:89:ILE:HG21	1.51	1.40
2:G:152:ALA:HA	2:G:346:ILE:CD1	1.51	1.39
2:H:141:ARG:NH1	2:H:143:ILE:HD11	1.40	1.36
2:H:67:ILE:CD1	2:H:89:ILE:HG21	1.57	1.31
2:D:426:PHE:HB3	2:D:468:ILE:CD1	1.61	1.30
2:C:129:LYS:HG3	2:C:142:ILE:CD1	1.60	1.30
2:H:387:ILE:HG22	2:H:388:PRO:CD	1.60	1.30
2:D:67:ILE:CD1	2:D:89:ILE:HG21	1.62	1.30
2:D:252:LEU:CD1	2:D:255:ILE:HG12	1.63	1.29
2:D:252:LEU:O	2:D:255:ILE:HG13	1.28	1.27
2:G:442:GLU:O	2:G:457:ALA:HA	1.35	1.26
2:H:141:ARG:NH1	2:H:143:ILE:CD1	1.99	1.24
2:C:255:ILE:CD1	2:C:265:LEU:HB2	1.68	1.23
2:H:339:VAL:HG23	2:H:342:ILE:CD1	1.70	1.22
2:H:339:VAL:CG2	2:H:342:ILE:HD12	1.71	1.20
1:B:84:ARG:HD3	2:C:388:PRO:O	1.42	1.20
2:H:141:ARG:HH11	2:H:143:ILE:CD1	1.54	1.19
2:D:426:PHE:CB	2:D:468:ILE:HD11	1.70	1.19
2:C:4:ILE:HD12	2:C:352:ALA:HB2	1.20	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:319:GLN:NE2	2:G:330:PRO:HG3	1.58	1.18
2:C:67:ILE:HD13	2:C:89:ILE:HG21	1.25	1.17
1:B:91:ASN:ND2	2:C:386:THR:HB	1.57	1.17
2:C:64:ILE:CG2	2:C:67:ILE:HD11	1.73	1.17
2:G:243:SER:OG	2:G:315:ILE:HG12	1.46	1.16
2:D:98:LYS:HD2	2:D:137:LEU:HD21	1.21	1.15
2:C:13:ASN:HB3	2:C:37:PRO:HA	1.17	1.15
2:H:483:ARG:HG2	2:H:483:ARG:HH11	1.12	1.15
2:G:443:VAL:HA	2:G:456:ARG:O	1.42	1.14
2:C:255:ILE:HD11	2:C:265:LEU:CB	1.78	1.14
1:B:122:PHE:HA	1:B:146:TYR:CE2	1.83	1.14
1:A:106:TYR:CD2	1:A:202:ARG:HD2	1.83	1.13
2:D:252:LEU:HD12	2:D:255:ILE:CG1	1.78	1.12
2:D:361:LEU:CD2	2:D:387:ILE:HD11	1.79	1.12
2:D:387:ILE:CG2	2:D:388:PRO:HD2	1.80	1.12
2:D:387:ILE:HG23	2:D:388:PRO:HD2	1.29	1.12
2:G:166:TYR:O	2:G:309:VAL:HB	1.49	1.12
2:G:371:GLU:HG3	2:G:408:HIS:HB3	1.30	1.12
2:G:426:PHE:HE2	2:G:466:GLN:HB3	1.15	1.12
2:G:372:THR:HB	2:G:376:VAL:HG13	1.32	1.11
2:D:255:ILE:HD12	2:D:265:LEU:CB	1.78	1.11
2:D:255:ILE:HD12	2:D:265:LEU:HB2	1.22	1.11
2:C:129:LYS:HG3	2:C:142:ILE:HD11	1.12	1.10
2:G:416:MET:HE3	2:G:417:ALA:H	1.03	1.10
1:B:123:GLU:O	1:B:127:LYS:HB2	1.52	1.09
2:H:67:ILE:CD1	2:H:89:ILE:HD13	1.81	1.09
1:E:96:THR:HA	1:E:99:GLU:HG3	1.29	1.09
2:G:370:ILE:HG22	2:G:371:GLU:H	1.17	1.09
2:D:19:LEU:HB2	2:D:24:VAL:HG22	1.25	1.09
2:D:359:VAL:HG22	2:D:360:LEU:H	1.08	1.09
2:D:361:LEU:HD21	2:D:387:ILE:HD11	1.14	1.09
1:F:91:ASN:HD21	2:G:385:THR:HG23	1.12	1.09
2:G:319:GLN:HE22	2:G:330:PRO:CG	1.66	1.09
2:D:366:LEU:HD13	2:D:481:ILE:HG23	1.22	1.08
1:B:122:PHE:CE1	1:B:146:TYR:HB3	1.89	1.08
2:D:5:ILE:HD12	2:D:109:VAL:HG21	1.13	1.08
2:G:334:VAL:HG21	2:G:339:VAL:HG23	1.30	1.08
2:H:361:LEU:HD13	2:H:387:ILE:HG13	1.31	1.08
1:B:91:ASN:HD21	2:C:386:THR:HB	0.93	1.08
2:C:64:ILE:HG21	2:C:67:ILE:HD11	1.11	1.08
2:D:5:ILE:CD1	2:D:109:VAL:HG21	1.82	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:173:PHE:HD1	2:D:174:ASP:N	1.51	1.08
2:D:121:ASN:OD1	2:D:124:GLN:HG3	1.52	1.07
2:D:65:ILE:HG22	2:D:66:SER:H	1.11	1.07
2:D:173:PHE:HD2	2:D:196:LEU:HD23	1.15	1.07
2:D:37:PRO:HG3	2:D:51:GLU:HG2	1.35	1.07
2:G:152:ALA:HA	2:G:346:ILE:HD11	1.07	1.07
2:H:339:VAL:HG23	2:H:342:ILE:HD12	1.08	1.07
2:G:381:ILE:HD13	2:G:447:ILE:HD11	1.34	1.06
2:C:98:LYS:HD2	2:C:137:LEU:HD21	1.33	1.06
2:D:372:THR:HG23	2:D:376:VAL:HG13	1.34	1.05
2:D:13:ASN:HB3	2:D:37:PRO:HA	1.07	1.05
2:H:387:ILE:HG22	2:H:388:PRO:HD3	1.07	1.05
1:A:199:LEU:HB2	1:A:204:LEU:HD11	1.38	1.05
2:C:409:VAL:HG11	2:C:470:ILE:CD1	1.87	1.05
2:D:273:LYS:O	2:D:277:LEU:HB2	1.56	1.05
2:D:64:ILE:HG21	2:D:67:ILE:HD11	1.07	1.05
2:C:370:ILE:HG21	2:C:407:ILE:HG23	1.35	1.05
2:D:1:MET:HA	2:D:111:ARG:HH21	1.15	1.05
2:D:251:SER:OG	2:D:253:PRO:HD3	1.56	1.04
2:D:252:LEU:O	2:D:255:ILE:CG1	2.05	1.04
2:D:252:LEU:HB3	2:D:255:ILE:HD11	1.07	1.04
2:H:361:LEU:CD1	2:H:387:ILE:HG13	1.87	1.04
2:C:110:THR:HG23	2:C:111:ARG:HG3	1.34	1.04
2:H:377:PHE:N	2:H:417:ALA:HB2	1.72	1.04
2:H:334:VAL:C	2:H:336:PRO:HD3	1.83	1.03
2:C:409:VAL:HG11	2:C:470:ILE:HD11	1.09	1.03
2:H:376:VAL:C	2:H:417:ALA:HB2	1.84	1.03
1:B:121:ASN:HA	1:B:124:ARG:HB2	1.41	1.02
2:C:396:THR:OG1	2:C:437:GLY:HA2	1.59	1.02
1:A:138:ILE:HG21	1:B:139:LEU:HD21	1.40	1.02
2:G:383:ARG:HD2	2:G:384:ASN:N	1.75	1.02
1:A:58:ALA:HA	1:A:61:LEU:HB2	1.38	1.02
2:D:173:PHE:HE2	2:D:285:THR:HG23	1.20	1.02
2:H:98:LYS:HD2	2:H:137:LEU:HD21	1.40	1.02
1:B:165:GLY:H	1:B:189:VAL:HG12	1.24	1.01
2:D:366:LEU:CD1	2:D:481:ILE:HG23	1.90	1.01
1:A:126:LEU:HD13	1:A:127:LYS:HG3	1.42	1.01
2:D:67:ILE:HD11	2:D:89:ILE:HG21	1.42	1.01
2:C:4:ILE:CD1	2:C:352:ALA:HB2	1.91	1.01
2:C:64:ILE:HD13	2:C:89:ILE:CD1	1.90	1.01
2:D:319:GLN:HE21	2:D:330:PRO:HG2	1.18	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:255:ILE:HD11	2:C:265:LEU:HB2	1.31	1.00
2:H:67:ILE:HD12	2:H:89:ILE:HG21	1.37	1.00
2:D:252:LEU:HB3	2:D:255:ILE:CD1	1.91	1.00
2:D:386:THR:HG23	2:D:387:ILE:O	1.59	1.00
1:A:89:PHE:HD2	1:B:89:PHE:HD1	1.05	1.00
1:A:89:PHE:CD2	1:B:89:PHE:HD1	1.77	1.00
2:C:64:ILE:HG21	2:C:67:ILE:CD1	1.90	1.00
2:G:380:LEU:HD12	2:G:445:PHE:CE2	1.98	0.99
1:A:119:LEU:HD11	1:A:197:TYR:OH	1.63	0.99
2:D:12:THR:HG21	2:D:171:GLY:H	1.25	0.99
1:A:89:PHE:HD2	1:B:89:PHE:CD1	1.80	0.99
1:B:144:MET:HA	1:B:144:MET:HE3	1.43	0.99
2:G:390:SER:HB3	2:G:446:ASP:HA	1.42	0.99
2:D:426:PHE:HB3	2:D:468:ILE:HD11	1.03	0.98
2:D:64:ILE:CG2	2:D:67:ILE:HD11	1.92	0.98
2:C:73:THR:HG23	2:C:75:TYR:H	1.28	0.98
2:H:127:ALA:O	2:H:130:ASP:HB2	1.62	0.98
2:H:202:ASP:O	2:H:206:ILE:HG13	1.60	0.98
2:C:180:LEU:HB2	2:C:185:PHE:HE1	1.29	0.98
2:G:152:ALA:CA	2:G:346:ILE:CD1	2.42	0.97
2:H:9:LEU:HD11	2:H:94:LEU:HD21	1.45	0.97
1:B:116:LEU:HD13	1:B:197:TYR:HD2	1.30	0.97
2:C:426:PHE:HD2	2:C:468:ILE:HD12	1.30	0.97
2:D:117:PRO:HG2	2:D:120:PHE:CD1	1.99	0.97
1:B:126:LEU:HD23	1:B:126:LEU:H	1.29	0.97
1:B:177:MET:HB3	1:B:210:LYS:HG3	1.44	0.96
2:C:166:TYR:CE1	2:C:173:PHE:HE1	1.81	0.96
2:G:381:ILE:CD1	2:G:447:ILE:HD11	1.95	0.96
2:D:64:ILE:HG21	2:D:67:ILE:CD1	1.94	0.96
2:D:141:ARG:CZ	2:D:143:ILE:HD11	1.94	0.96
2:H:166:TYR:HA	2:H:175:VAL:HG12	1.48	0.96
2:C:395:PHE:HA	2:H:360:LEU:HA	1.44	0.96
2:D:157:LYS:HA	2:D:157:LYS:HE3	1.44	0.96
2:G:249:GLN:HA	2:G:269:LEU:H	1.30	0.96
2:G:396:THR:OG1	2:G:437:GLY:HA2	1.65	0.96
2:D:209:LEU:HD11	2:D:265:LEU:HD11	1.45	0.96
2:C:62:ASN:HB3	2:C:79:ILE:HD13	1.49	0.95
2:D:252:LEU:CB	2:D:255:ILE:HD11	1.96	0.95
2:D:307:ILE:HG22	2:D:308:LEU:H	1.28	0.95
2:C:387:ILE:HG23	2:C:447:ILE:CG2	1.97	0.95
1:F:65:LYS:HA	1:F:68:ILE:HD12	1.48	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:196:LEU:HD12	2:C:197:GLY:N	1.82	0.95
2:D:323:LYS:HD2	2:D:329:GLU:HA	1.48	0.95
2:G:145:GLU:HB2	2:G:146:PRO:HD3	1.46	0.95
1:A:78:MET:HB3	1:A:82:TYR:CZ	2.01	0.95
1:E:84:ARG:HH21	2:G:354:GLU:H	1.09	0.94
1:B:128:ILE:HD13	2:D:262:PRO:HG3	1.49	0.94
2:G:165:VAL:HG22	2:G:176:SER:H	1.32	0.94
2:D:67:ILE:CD1	2:D:89:ILE:CG2	2.45	0.94
2:C:67:ILE:CD1	2:C:89:ILE:CG2	2.44	0.94
2:G:498:ARG:NH1	2:G:498:ARG:HB2	1.82	0.94
2:G:370:ILE:CG2	2:G:371:GLU:H	1.79	0.94
2:D:153:TYR:HB3	2:D:155:LEU:HD11	1.48	0.93
1:A:75:LEU:HD13	1:A:79:GLU:OE2	1.66	0.93
2:D:255:ILE:CD1	2:D:265:LEU:CB	2.46	0.93
2:G:73:THR:HG22	2:G:75:TYR:H	1.32	0.93
2:D:173:PHE:CD2	2:D:196:LEU:HD23	2.03	0.93
2:D:309:VAL:HG12	2:D:310:GLY:H	1.34	0.93
1:A:95:ARG:HD3	2:C:104:TYR:CE1	2.04	0.93
2:H:148:ALA:HB1	2:H:340:VAL:HG13	1.51	0.93
2:H:387:ILE:CG2	2:H:388:PRO:HD3	1.99	0.93
2:C:462:THR:HG21	2:C:464:LYS:HB2	1.49	0.92
2:D:257:ALA:HB2	2:D:262:PRO:HA	1.50	0.92
2:G:361:LEU:HB3	2:G:387:ILE:HD12	1.51	0.92
1:A:106:TYR:HD2	1:A:202:ARG:HD2	1.29	0.92
2:D:1:MET:HA	2:D:111:ARG:NH2	1.84	0.92
1:A:71:LEU:HB3	1:B:71:LEU:HD12	1.49	0.92
1:A:89:PHE:CD2	1:B:89:PHE:CD1	2.57	0.92
2:H:483:ARG:HG2	2:H:483:ARG:NH1	1.73	0.92
2:H:372:THR:HG23	2:H:376:VAL:HG13	1.49	0.92
2:H:386:THR:HG23	2:H:387:ILE:O	1.68	0.92
2:D:64:ILE:HD13	2:D:89:ILE:CD1	2.00	0.92
2:D:323:LYS:HB2	2:D:330:PRO:HD3	1.52	0.92
1:B:122:PHE:HE1	1:B:146:TYR:HB3	1.34	0.92
2:G:308:LEU:HD11	2:G:319:GLN:NE2	1.85	0.92
1:B:122:PHE:HD1	1:B:146:TYR:CG	1.88	0.91
2:D:307:ILE:HG22	2:D:308:LEU:N	1.84	0.91
2:C:129:LYS:CG	2:C:142:ILE:HD11	1.99	0.91
2:G:426:PHE:CE2	2:G:466:GLN:HB3	2.04	0.91
2:G:416:MET:HE3	2:G:417:ALA:N	1.85	0.91
2:C:4:ILE:HA	2:C:111:ARG:O	1.70	0.91
2:G:280:HIS:CE1	2:G:281:LEU:HG	2.05	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:67:ILE:HD13	2:H:89:ILE:HD13	1.53	0.91
1:B:91:ASN:HD21	2:C:386:THR:CB	1.81	0.90
2:C:97:LEU:HD12	2:C:100:TYR:HE1	1.37	0.90
2:D:468:ILE:HG22	2:D:469:THR:N	1.83	0.90
2:H:27:ILE:HG22	2:H:28:PRO:N	1.86	0.90
2:D:257:ALA:HB1	2:D:261:GLY:O	1.72	0.90
2:D:322:ILE:HG22	2:D:326:LEU:HD22	1.51	0.90
2:H:496:ARG:C	2:H:496:ARG:HE	1.79	0.90
1:A:106:TYR:HD2	1:A:202:ARG:HH11	1.10	0.90
2:G:370:ILE:HG22	2:G:371:GLU:N	1.85	0.90
2:G:381:ILE:HD13	2:G:447:ILE:CD1	2.00	0.90
2:H:67:ILE:HD13	2:H:89:ILE:HG21	1.51	0.90
2:G:205:ILE:HG21	2:G:235:ALA:HB1	1.52	0.90
2:C:18:VAL:HG11	2:C:27:ILE:HD11	1.54	0.90
2:G:334:VAL:HG21	2:G:339:VAL:CG2	2.01	0.90
2:D:126:GLN:O	2:D:130:ASP:HB2	1.73	0.89
2:C:423:LEU:HD13	2:C:470:ILE:HG21	1.54	0.89
2:H:381:ILE:HD13	2:H:447:ILE:HD12	1.55	0.89
2:C:34:ARG:HH11	2:C:34:ARG:H	1.17	0.89
2:C:26:VAL:O	2:C:28:PRO:HD3	1.71	0.89
1:B:125:ALA:HA	2:D:254:PHE:CE2	2.07	0.89
2:H:366:LEU:HD22	2:H:481:ILE:HG12	1.52	0.89
2:H:308:LEU:HD13	2:H:330:PRO:HG3	1.54	0.89
2:G:414:ARG:NH2	2:G:494:ALA:H	1.69	0.89
2:C:462:THR:HB	2:C:464:LYS:H	1.36	0.89
2:G:281:LEU:HA	2:G:284:ARG:HG3	1.52	0.89
2:C:85:THR:OG1	2:C:88:GLU:HG3	1.71	0.88
2:D:407:ILE:HD12	2:D:426:PHE:CE2	2.08	0.88
2:H:141:ARG:HH11	2:H:143:ILE:HD12	1.38	0.88
2:H:468:ILE:HG22	2:H:469:THR:N	1.88	0.88
2:G:151:LEU:HD12	2:G:154:GLY:HA2	1.55	0.88
2:C:129:LYS:HG3	2:C:142:ILE:HD12	1.55	0.88
2:H:67:ILE:CD1	2:H:89:ILE:CG2	2.50	0.88
2:H:153:TYR:HB3	2:H:155:LEU:HD11	1.55	0.88
2:D:155:LEU:H	2:D:155:LEU:HD22	1.36	0.88
2:G:205:ILE:O	2:G:209:LEU:HG	1.73	0.88
2:H:76:LYS:HB3	2:H:84:TYR:O	1.72	0.88
2:H:152:ALA:HB2	2:H:342:ILE:HG21	1.54	0.88
2:D:62:ASN:HD21	2:D:80:GLU:CD	1.82	0.88
2:D:255:ILE:CD1	2:D:265:LEU:HB3	2.04	0.88
2:D:370:ILE:HG13	2:D:445:PHE:HZ	1.39	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:67:ILE:HD13	2:C:89:ILE:CG2	2.02	0.87
2:H:387:ILE:CG2	2:H:388:PRO:CD	2.51	0.87
1:A:92:PHE:O	1:A:92:PHE:HD1	1.57	0.87
1:A:116:LEU:HD13	1:A:197:TYR:HD2	1.37	0.87
2:G:152:ALA:CA	2:G:346:ILE:HD11	1.99	0.87
2:H:334:VAL:O	2:H:336:PRO:HD3	1.74	0.87
2:D:359:VAL:HG22	2:D:360:LEU:N	1.89	0.87
1:E:89:PHE:HD1	1:E:89:PHE:C	1.81	0.87
2:H:15:CYS:O	2:H:341:ALA:HB2	1.74	0.87
1:B:122:PHE:HD1	1:B:146:TYR:CD2	1.93	0.87
2:D:173:PHE:CE2	2:D:285:THR:HG23	2.09	0.87
2:H:67:ILE:HD13	2:H:89:ILE:CD1	2.04	0.87
2:C:65:ILE:HG22	2:C:66:SER:OG	1.73	0.87
2:C:152:ALA:HA	2:C:346:ILE:HD12	1.56	0.87
1:F:158:VAL:HA	1:F:198:LYS:O	1.72	0.87
2:C:255:ILE:HD12	2:C:265:LEU:HB2	1.55	0.87
1:F:91:ASN:ND2	2:G:385:THR:HG23	1.88	0.87
2:G:426:PHE:CG	2:G:468:ILE:HD11	2.10	0.87
2:C:255:ILE:HD11	2:C:265:LEU:HB3	1.56	0.87
1:B:65:LYS:HA	1:B:68:ILE:HD12	1.57	0.86
1:F:86:TYR:HE2	2:G:359:VAL:HG22	1.40	0.86
2:D:255:ILE:CD1	2:D:265:LEU:HB2	2.03	0.86
2:D:173:PHE:CD1	2:D:174:ASP:N	2.41	0.86
2:H:141:ARG:NH1	2:H:143:ILE:HD12	1.88	0.86
2:H:414:ARG:HG2	2:H:488:ALA:HB2	1.57	0.86
2:C:129:LYS:CG	2:C:142:ILE:CD1	2.52	0.86
2:D:298:LEU:HD12	2:D:302:ASP:HB3	1.57	0.86
2:H:132:GLY:O	2:H:135:ALA:HB3	1.74	0.86
2:G:361:LEU:HD22	2:G:387:ILE:CD1	2.05	0.86
2:H:119:TYR:HB3	2:H:190:THR:HG21	1.55	0.86
2:C:366:LEU:HD23	2:C:383:ARG:HG3	1.55	0.86
2:D:322:ILE:CG2	2:D:326:LEU:HD22	2.06	0.86
2:G:162:THR:OG1	2:G:303:ILE:HA	1.76	0.86
2:G:281:LEU:HB3	2:G:284:ARG:HD3	1.56	0.86
2:C:180:LEU:HB2	2:C:185:PHE:CE1	2.10	0.86
2:D:257:ALA:HA	2:D:263:LEU:HB2	1.55	0.86
2:H:210:VAL:O	2:H:214:LYS:HG3	1.76	0.86
1:B:119:LEU:HD12	1:B:197:TYR:OH	1.76	0.86
1:B:161:ILE:HD11	1:B:198:LYS:HB3	1.58	0.86
2:D:98:LYS:HB2	2:D:137:LEU:HD11	1.58	0.85
2:H:306:VAL:HG21	2:H:326:LEU:HD23	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:64:ILE:CG2	2:C:67:ILE:CD1	2.53	0.85
1:B:189:VAL:HA	1:B:211:VAL:HG23	1.58	0.85
2:H:381:ILE:HD13	2:H:447:ILE:CD1	2.06	0.85
1:A:70:GLU:HB3	1:A:74:LYS:HE3	1.57	0.85
2:C:62:ASN:HB3	2:C:79:ILE:CD1	2.07	0.85
2:G:210:VAL:HG12	2:G:221:LEU:HD12	1.59	0.85
2:G:409:VAL:HG22	2:G:423:LEU:HD12	1.55	0.85
2:H:426:PHE:HB3	2:H:468:ILE:CD1	2.06	0.85
2:G:152:ALA:HA	2:G:346:ILE:HD12	1.55	0.85
2:D:102:GLU:HG2	2:D:108:PRO:HA	1.59	0.85
2:D:67:ILE:HD12	2:D:89:ILE:HG21	1.57	0.85
2:D:416:MET:HE3	2:D:417:ALA:H	1.40	0.85
2:C:77:VAL:O	2:C:83:GLN:HA	1.75	0.84
2:C:366:LEU:HD13	2:C:412:GLY:HA2	1.58	0.84
2:D:98:LYS:CD	2:D:137:LEU:HD21	2.07	0.84
2:D:208:TYR:CE1	2:D:212:GLN:HG3	2.12	0.84
1:A:78:MET:O	1:A:82:TYR:CG	2.29	0.84
2:C:13:ASN:HB3	2:C:37:PRO:CA	2.05	0.84
1:B:149:LEU:HD23	1:B:149:LEU:C	2.03	0.84
2:C:426:PHE:HB3	2:C:468:ILE:HD11	1.57	0.84
2:D:65:ILE:CG2	2:D:66:SER:H	1.90	0.84
2:H:496:ARG:HA	2:H:498:ARG:HG2	1.57	0.84
2:D:200:ASP:O	2:D:281:LEU:HD21	1.78	0.84
2:G:205:ILE:CG2	2:G:235:ALA:HB1	2.08	0.84
2:D:79:ILE:HD12	2:D:84:TYR:CD2	2.13	0.84
2:C:150:ALA:HA	2:C:307:ILE:HD13	1.56	0.84
2:G:366:LEU:HB2	2:G:411:GLN:HE21	1.42	0.84
1:B:204:LEU:H	1:B:204:LEU:HD12	1.41	0.83
2:C:47:ARG:HH11	2:C:92:ILE:HG12	1.42	0.83
2:D:117:PRO:HG2	2:D:120:PHE:HD1	1.41	0.83
2:D:307:ILE:CG2	2:D:308:LEU:H	1.91	0.83
1:B:144:MET:SD	2:C:266:GLU:OE2	2.36	0.83
1:E:62:ALA:HA	1:E:65:LYS:HE3	1.61	0.83
1:F:91:ASN:HD21	2:G:385:THR:CG2	1.90	0.83
2:D:319:GLN:NE2	2:D:330:PRO:HG2	1.93	0.83
2:G:426:PHE:CD1	2:G:468:ILE:HD11	2.13	0.83
2:H:361:LEU:CD1	2:H:387:ILE:CG1	2.57	0.83
2:D:5:ILE:HD12	2:D:109:VAL:CG2	2.05	0.83
2:D:370:ILE:CG1	2:D:445:PHE:HZ	1.91	0.83
2:G:177:ILE:HD12	2:G:292:ALA:HB1	1.60	0.83
2:H:67:ILE:HD11	2:H:89:ILE:HD13	1.59	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:493:GLU:O	2:H:496:ARG:HD3	1.79	0.83
2:C:496:ARG:O	2:C:499:LYS:HB3	1.79	0.83
2:D:13:ASN:CB	2:D:37:PRO:HA	2.02	0.83
2:D:64:ILE:HD13	2:D:89:ILE:HD13	1.59	0.83
1:A:89:PHE:HB2	1:B:89:PHE:CD1	2.13	0.83
2:D:335:ASN:HB3	2:D:338:GLU:OE2	1.77	0.83
2:G:166:TYR:HA	2:G:175:VAL:HG12	1.61	0.83
2:D:208:TYR:O	2:D:212:GLN:HG2	1.78	0.82
1:E:89:PHE:C	1:E:89:PHE:CD1	2.53	0.82
2:C:387:ILE:HG23	2:C:447:ILE:HG21	1.59	0.82
2:G:377:PHE:HB2	2:G:410:LEU:HD12	1.62	0.82
2:H:377:PHE:HB2	2:H:417:ALA:HA	1.60	0.82
2:C:198:GLY:O	2:C:201:PHE:HB2	1.79	0.82
2:D:161:GLN:HE21	2:D:163:ILE:HD11	1.43	0.82
2:H:135:ALA:HB3	2:H:137:LEU:HB2	1.61	0.82
2:H:165:VAL:HG13	2:H:176:SER:O	1.79	0.82
1:A:58:ALA:N	1:A:61:LEU:HD12	1.93	0.82
2:G:462:THR:CG2	2:G:464:LYS:HB2	2.08	0.82
2:H:476:LEU:HD23	2:H:476:LEU:H	1.43	0.82
2:H:496:ARG:HE	2:H:496:ARG:CA	1.90	0.82
2:C:29:ASN:ND2	2:C:36:THR:HG23	1.94	0.82
2:D:361:LEU:CD2	2:D:387:ILE:CD1	2.57	0.82
2:D:482:GLN:OE1	2:G:391:LYS:HA	1.79	0.82
2:C:205:ILE:HD11	2:C:274:PHE:CE2	2.15	0.82
1:F:62:ALA:HB1	1:F:65:LYS:HD2	1.62	0.82
2:C:13:ASN:CB	2:C:37:PRO:HA	2.06	0.82
2:G:164:LEU:O	2:G:306:VAL:HG13	1.79	0.82
2:G:173:PHE:CZ	2:G:175:VAL:HG13	2.15	0.82
2:G:300:PRO:HB3	2:G:326:LEU:HD12	1.62	0.82
2:G:390:SER:CB	2:G:446:ASP:HA	2.09	0.82
1:A:191:GLU:HG2	1:A:210:LYS:HD2	1.59	0.82
2:H:502:ALA:C	2:H:504:LEU:H	1.88	0.82
2:H:135:ALA:HB1	2:H:137:LEU:HD12	1.62	0.81
1:A:140:GLN:HA	1:A:143:GLU:OE2	1.80	0.81
1:B:198:LYS:HB2	1:B:203:VAL:HG22	1.60	0.81
2:D:164:LEU:HD22	2:D:176:SER:O	1.79	0.81
2:H:116:VAL:HG12	2:H:117:PRO:CD	2.11	0.81
2:C:4:ILE:HD12	2:C:352:ALA:CB	2.07	0.81
2:D:13:ASN:HB3	2:D:37:PRO:CA	2.02	0.81
2:G:370:ILE:HG23	2:G:408:HIS:O	1.79	0.81
2:H:97:LEU:HG	2:H:100:TYR:HE1	1.46	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:309:VAL:HG12	2:D:310:GLY:N	1.94	0.81
2:D:121:ASN:HD21	2:D:123:ALA:H	1.28	0.81
2:G:131:ALA:HA	2:G:134:ILE:CG1	2.11	0.81
2:G:293:LEU:HD13	2:G:300:PRO:HG3	1.61	0.81
2:H:12:THR:HG23	2:H:13:ASN:H	1.45	0.81
2:G:319:GLN:HE22	2:G:330:PRO:HG3	0.72	0.81
2:D:291:GLN:O	2:D:295:ASP:HB2	1.79	0.81
2:D:387:ILE:CG2	2:D:388:PRO:CD	2.59	0.81
2:D:426:PHE:HB3	2:D:468:ILE:HD12	1.63	0.81
2:G:165:VAL:HG13	2:G:176:SER:O	1.80	0.81
2:G:445:PHE:HA	2:G:455:VAL:HG22	1.63	0.81
2:H:483:ARG:HH11	2:H:483:ARG:CG	1.92	0.81
1:E:75:LEU:HA	1:E:78:MET:HG3	1.63	0.80
2:C:462:THR:CG2	2:C:464:LYS:HB2	2.11	0.80
2:H:202:ASP:O	2:H:206:ILE:CG1	2.27	0.80
2:C:66:SER:O	2:C:69:ARG:HG3	1.82	0.80
2:C:145:GLU:HB2	2:C:146:PRO:HD3	1.62	0.80
2:D:397:THR:HG21	2:D:436:ARG:HA	1.63	0.80
2:C:229:GLN:HA	2:C:229:GLN:HE21	1.45	0.80
1:A:116:LEU:HD22	1:A:197:TYR:CE2	2.16	0.80
2:C:447:ILE:HG12	2:C:453:VAL:HB	1.62	0.80
2:H:2:SER:HA	2:H:107:GLU:OE2	1.79	0.80
2:H:84:TYR:HD1	2:H:88:GLU:OE2	1.65	0.80
1:A:138:ILE:CG2	1:B:139:LEU:HD21	2.11	0.80
2:C:326:LEU:HD13	2:C:326:LEU:N	1.97	0.80
2:D:375:GLY:O	2:D:416:MET:HE1	1.81	0.80
1:F:72:GLU:O	1:F:75:LEU:HB3	1.83	0.80
1:B:165:GLY:H	1:B:189:VAL:CG1	1.95	0.79
2:C:387:ILE:CG2	2:C:447:ILE:HG22	2.11	0.79
2:G:470:ILE:HG22	2:G:471:LYS:N	1.97	0.79
2:H:280:HIS:O	2:H:284:ARG:HG3	1.80	0.79
2:H:426:PHE:HB3	2:H:468:ILE:HD11	1.61	0.79
2:C:426:PHE:CD2	2:C:468:ILE:HD12	2.15	0.79
2:D:266:GLU:O	2:D:267:MET:HB3	1.81	0.79
2:G:177:ILE:CD1	2:G:292:ALA:HB1	2.11	0.79
2:H:435:PRO:O	2:H:438:VAL:HG22	1.81	0.79
2:H:17:ALA:HB3	2:H:341:ALA:O	1.82	0.79
2:C:68:LYS:NZ	2:C:117:PRO:HG3	1.97	0.79
2:D:370:ILE:HG13	2:D:445:PHE:CZ	2.17	0.79
2:D:370:ILE:HG22	2:D:371:GLU:O	1.82	0.79
2:D:388:PRO:HB3	2:D:448:ASP:HA	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:480:GLU:OE1	1:E:93:ARG:HD2	1.82	0.79
1:F:143:GLU:O	1:F:147:ARG:CB	2.30	0.79
1:B:125:ALA:HA	2:D:254:PHE:HE2	1.47	0.79
2:D:121:ASN:ND2	2:D:123:ALA:H	1.81	0.79
2:D:464:LYS:HE3	2:D:466:GLN:HE21	1.48	0.79
2:D:503:GLU:HA	2:D:505:ARG:HG2	1.65	0.79
2:C:67:ILE:HD11	2:C:89:ILE:HG21	1.62	0.79
2:D:361:LEU:HD22	2:D:387:ILE:CG1	2.13	0.79
2:G:370:ILE:HD11	2:G:445:PHE:CE1	2.17	0.79
1:A:171:TYR:CD1	2:C:52:VAL:HG21	2.18	0.79
2:G:500:GLU:HA	2:G:503:GLU:HG3	1.65	0.79
1:A:193:LEU:HG	1:A:209:VAL:HA	1.65	0.79
2:D:65:ILE:HG22	2:D:66:SER:N	1.85	0.79
2:D:70:HIS:CE1	2:D:75:TYR:CE2	2.70	0.79
2:C:150:ALA:HA	2:C:307:ILE:CD1	2.13	0.78
2:C:325:GLU:C	2:C:326:LEU:HD13	2.07	0.78
2:D:152:ALA:HB1	2:D:334:VAL:HG11	1.62	0.78
2:H:503:GLU:C	2:H:505:ARG:N	2.34	0.78
1:A:135:ALA:HB1	1:B:135:ALA:HB3	1.65	0.78
2:C:387:ILE:HG23	2:C:447:ILE:HG22	1.65	0.78
2:G:383:ARG:HD2	2:G:384:ASN:H	1.48	0.78
2:H:370:ILE:HD13	2:H:407:ILE:HG23	1.66	0.78
1:B:153:LEU:HD12	1:B:158:VAL:HG11	1.64	0.78
2:D:325:GLU:C	2:D:326:LEU:HD12	2.09	0.78
1:B:122:PHE:CD1	1:B:146:TYR:HB3	2.19	0.78
2:C:164:LEU:HB3	2:C:306:VAL:HG22	1.66	0.78
2:C:296:ALA:HB1	2:C:298:LEU:HD22	1.65	0.78
1:F:98:GLN:O	1:F:101:GLU:HB2	1.83	0.78
2:G:484:MET:HE3	2:G:487:GLU:HB2	1.63	0.78
2:H:67:ILE:CG2	2:H:86:PRO:HB3	2.14	0.78
2:C:414:ARG:HD3	2:C:419:ASP:HB3	1.65	0.78
2:D:416:MET:HE3	2:D:417:ALA:N	1.98	0.78
2:H:376:VAL:HA	2:H:416:MET:O	1.83	0.78
2:H:496:ARG:CD	2:H:496:ARG:H	1.96	0.78
2:D:468:ILE:CG2	2:D:469:THR:N	2.46	0.78
2:H:494:ALA:HA	2:H:496:ARG:NH1	1.99	0.78
2:H:409:VAL:HG21	2:H:470:ILE:HD11	1.65	0.78
1:B:143:GLU:HG3	1:B:143:GLU:O	1.82	0.77
1:B:177:MET:O	1:B:210:LYS:HA	1.84	0.77
2:C:168:LEU:HB2	2:C:173:PHE:HD1	1.48	0.77
2:C:226:MET:O	2:C:229:GLN:HB3	1.83	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:204:VAL:HG22	2:D:277:LEU:HD13	1.64	0.77
2:H:486:LYS:HZ2	2:H:486:LYS:C	1.91	0.77
2:C:64:ILE:HD13	2:C:89:ILE:HD13	1.65	0.77
2:C:477:SER:O	2:C:480:GLU:HG3	1.83	0.77
2:G:206:ILE:HG23	2:G:231:LEU:HD23	1.65	0.77
2:G:462:THR:HG21	2:G:464:LYS:HB2	1.65	0.77
2:D:208:TYR:HB2	2:D:277:LEU:HD11	1.64	0.77
2:H:5:ILE:HG12	2:H:18:VAL:HB	1.66	0.77
1:B:199:LEU:HB2	1:B:204:LEU:HD11	1.65	0.77
2:C:396:THR:HB	2:C:439:PRO:O	1.83	0.77
2:D:388:PRO:HG3	2:D:449:ALA:HA	1.66	0.77
1:E:83:LEU:HA	1:E:86:TYR:CD1	2.19	0.77
1:F:62:ALA:CB	1:F:65:LYS:HD2	2.13	0.77
2:G:76:LYS:HD2	2:G:83:GLN:HE22	1.48	0.77
2:D:290:ARG:HA	2:D:293:LEU:HG	1.67	0.77
2:D:421:LYS:HG3	2:D:422:SER:N	2.00	0.77
2:D:483:ARG:HG2	2:D:483:ARG:HH11	1.48	0.77
1:B:124:ARG:HH12	2:D:230:ARG:CZ	1.98	0.77
2:C:147:THR:HG23	2:C:185:PHE:HD2	1.49	0.77
1:F:67:GLN:O	1:F:71:LEU:HG	1.84	0.77
1:B:128:ILE:CD1	2:D:262:PRO:HG3	2.15	0.77
2:D:504:LEU:HD13	2:D:507:GLU:HB3	1.66	0.77
2:C:132:GLY:O	2:C:135:ALA:HB3	1.84	0.77
2:D:372:THR:CG2	2:D:376:VAL:HG13	2.12	0.77
1:A:116:LEU:HD13	1:A:197:TYR:CD2	2.20	0.77
2:G:243:SER:OG	2:G:315:ILE:CG1	2.29	0.77
2:G:389:THR:O	2:G:447:ILE:HB	1.85	0.77
2:D:79:ILE:HD12	2:D:84:TYR:HD2	1.47	0.76
2:D:88:GLU:O	2:D:91:ALA:HB3	1.85	0.76
2:D:484:MET:HE2	2:D:484:MET:O	1.85	0.76
2:H:27:ILE:CG2	2:H:28:PRO:N	2.49	0.76
2:H:86:PRO:HA	2:H:89:ILE:HD12	1.67	0.76
2:D:205:ILE:HD11	2:D:274:PHE:CE2	2.20	0.76
2:H:387:ILE:HG22	2:H:388:PRO:N	1.99	0.76
1:B:158:VAL:O	1:B:158:VAL:HG12	1.85	0.76
1:B:160:ALA:HA	1:B:197:TYR:HD1	1.50	0.76
2:C:471:LYS:HD3	2:C:471:LYS:H	1.49	0.76
2:C:102:GLU:HG3	2:C:109:VAL:HG12	1.67	0.76
2:D:285:THR:O	2:D:288:PRO:HD2	1.86	0.76
2:C:68:LYS:HZ3	2:C:117:PRO:HG3	1.51	0.76
2:C:105:LEU:HD13	2:C:105:LEU:N	2.00	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:366:LEU:HD22	2:C:367:SER:H	1.51	0.76
2:C:97:LEU:HD12	2:C:100:TYR:CE1	2.20	0.76
1:A:128:ILE:O	1:A:128:ILE:HG22	1.86	0.75
2:D:206:ILE:O	2:D:210:VAL:HG12	1.85	0.75
2:D:252:LEU:HD12	2:D:255:ILE:HG12	0.82	0.75
2:C:242:LEU:HD21	2:C:269:LEU:HG	1.67	0.75
1:A:89:PHE:CD1	1:A:89:PHE:C	2.64	0.75
2:D:87:GLN:CD	2:D:87:GLN:H	1.92	0.75
2:G:397:THR:CB	2:G:437:GLY:H	1.99	0.75
1:A:135:ALA:HB1	1:B:135:ALA:CB	2.16	0.75
2:C:152:ALA:HA	2:C:346:ILE:CD1	2.17	0.75
2:D:42:PHE:CE1	2:D:79:ILE:HD13	2.21	0.75
1:B:84:ARG:CZ	2:C:389:THR:HA	2.17	0.75
2:C:16:VAL:O	2:C:16:VAL:HG22	1.85	0.75
2:C:414:ARG:HH21	2:C:494:ALA:HB2	1.52	0.75
2:C:151:LEU:CD2	2:C:347:GLN:HG2	2.16	0.75
2:G:151:LEU:O	2:G:346:ILE:HD13	1.86	0.75
2:G:462:THR:HB	2:G:464:LYS:H	1.52	0.75
2:H:147:THR:HG22	2:H:185:PHE:CD2	2.21	0.75
2:D:205:ILE:HD11	2:D:274:PHE:HE2	1.50	0.75
1:A:145:VAL:HG13	1:B:118:VAL:HG22	1.69	0.75
1:E:82:TYR:O	1:E:86:TYR:CE1	2.40	0.75
1:B:172:LEU:N	1:B:172:LEU:HD23	2.02	0.74
1:E:92:PHE:HA	1:E:95:ARG:HB2	1.68	0.74
2:H:7:ILE:HG12	2:H:16:VAL:HB	1.69	0.74
2:H:67:ILE:HG23	2:H:86:PRO:HB3	1.68	0.74
1:A:160:ALA:HA	1:A:197:TYR:HD1	1.53	0.74
2:C:410:LEU:HD23	2:C:422:SER:HA	1.69	0.74
2:D:166:TYR:HD1	2:D:166:TYR:C	1.94	0.74
1:F:86:TYR:CE2	2:G:359:VAL:HG22	2.22	0.74
2:C:42:PHE:N	2:C:42:PHE:CD1	2.54	0.74
2:C:370:ILE:CG2	2:C:407:ILE:HG23	2.16	0.74
2:D:164:LEU:HB3	2:D:306:VAL:HG22	1.67	0.74
2:C:362:ASP:O	2:C:363:VAL:HG13	1.86	0.74
2:G:243:SER:HA	2:G:316:PRO:HD2	1.68	0.74
2:H:148:ALA:CB	2:H:340:VAL:HG13	2.17	0.74
2:H:455:VAL:O	2:H:467:SER:HB2	1.86	0.74
2:C:80:GLU:OE1	2:C:80:GLU:HA	1.87	0.74
1:B:132:ASN:O	1:B:133:GLU:HG3	1.87	0.74
2:C:246:THR:O	2:C:247:GLN:HG3	1.88	0.74
2:C:440:GLN:HB2	2:C:460:LEU:HB2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:19:LEU:HD23	2:D:19:LEU:O	1.87	0.74
2:G:426:PHE:HB3	2:G:468:ILE:HD11	1.68	0.74
2:C:168:LEU:HD12	2:C:169:GLY:O	1.87	0.74
2:C:390:SER:HB3	2:C:446:ASP:OD1	1.88	0.74
2:C:426:PHE:HB3	2:C:468:ILE:CD1	2.16	0.74
2:D:359:VAL:CG2	2:D:360:LEU:H	1.93	0.74
2:H:339:VAL:O	2:H:342:ILE:HB	1.86	0.74
1:A:95:ARG:HD3	2:C:104:TYR:HE1	1.52	0.74
2:D:269:LEU:HD12	2:D:270:THR:N	2.02	0.74
2:H:151:LEU:O	2:H:346:ILE:HD13	1.86	0.74
2:C:403:THR:HG23	2:C:404:THR:HG22	1.68	0.74
2:G:377:PHE:CE1	2:G:410:LEU:HB2	2.22	0.74
2:H:334:VAL:HG23	2:H:336:PRO:HG3	1.69	0.74
2:H:367:SER:C	2:H:368:LEU:HD23	2.13	0.74
1:B:122:PHE:CD1	1:B:146:TYR:CD2	2.76	0.74
2:G:426:PHE:CD1	2:G:468:ILE:CD1	2.70	0.74
2:H:323:LYS:HB2	2:H:329:GLU:HB2	1.69	0.74
2:H:361:LEU:HD13	2:H:387:ILE:CG1	2.14	0.74
2:D:210:VAL:HG23	2:D:221:LEU:CD1	2.19	0.73
2:D:178:LEU:N	2:D:178:LEU:HD12	2.03	0.73
1:B:84:ARG:NH1	2:C:389:THR:HA	2.04	0.73
1:B:126:LEU:HD13	1:B:143:GLU:OE1	1.87	0.73
2:G:281:LEU:HA	2:G:284:ARG:CG	2.18	0.73
2:C:38:SER:HB3	2:C:93:ILE:HD13	1.69	0.73
2:C:487:GLU:HA	2:C:490:GLU:HB2	1.70	0.73
2:C:173:PHE:CZ	2:C:285:THR:HG23	2.24	0.73
2:C:269:LEU:HD12	2:C:270:THR:N	2.03	0.73
2:D:370:ILE:HD11	2:D:445:PHE:CE1	2.23	0.73
2:H:116:VAL:HG12	2:H:117:PRO:HD2	1.70	0.73
2:H:286:MET:HB3	2:H:290:ARG:CZ	2.19	0.73
1:A:78:MET:O	1:A:82:TYR:CD2	2.42	0.73
2:G:409:VAL:HG13	2:G:424:GLY:H	1.54	0.73
2:D:116:VAL:HG11	2:D:128:THR:HG21	1.70	0.73
1:E:84:ARG:NH2	2:G:354:GLU:H	1.87	0.73
2:C:196:LEU:HD21	2:C:285:THR:OG1	1.89	0.73
2:D:213:PHE:HD2	2:D:221:LEU:HD21	1.54	0.73
2:G:505:ARG:O	2:G:505:ARG:HG2	1.87	0.73
2:H:67:ILE:HD13	2:H:89:ILE:CG2	2.18	0.73
2:G:286:MET:SD	2:G:325:GLU:HG3	2.28	0.73
2:H:292:ALA:HA	2:H:295:ASP:OD2	1.87	0.73
1:A:177:MET:HG2	2:C:225:LYS:NZ	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:153:TYR:HE1	2:C:334:VAL:CG1	2.02	0.72
2:H:166:TYR:HA	2:H:175:VAL:CG1	2.19	0.72
2:H:468:ILE:CG2	2:H:469:THR:N	2.52	0.72
2:H:155:LEU:HD22	2:H:155:LEU:H	1.54	0.72
2:H:468:ILE:HG22	2:H:469:THR:H	1.50	0.72
1:A:131:ASP:HB3	1:A:136:LYS:HE3	1.70	0.72
2:D:500:GLU:HA	2:D:503:GLU:HB2	1.69	0.72
2:G:381:ILE:CD1	2:G:447:ILE:CD1	2.63	0.72
2:H:281:LEU:HA	2:H:284:ARG:HD3	1.70	0.72
2:H:361:LEU:HD11	2:H:387:ILE:CG1	2.17	0.72
2:C:67:ILE:HD12	2:C:89:ILE:HG21	1.62	0.72
2:C:70:HIS:CD2	2:C:75:TYR:CE2	2.78	0.72
2:D:325:GLU:O	2:D:326:LEU:HD12	1.89	0.72
2:G:77:VAL:HG11	2:G:79:ILE:HD12	1.70	0.72
2:G:239:LYS:CG	2:G:315:ILE:HD11	2.18	0.72
1:A:172:LEU:N	1:A:172:LEU:HD23	2.04	0.72
2:D:366:LEU:HD13	2:D:481:ILE:CG2	2.13	0.72
2:D:498:ARG:O	2:D:501:ALA:HB3	1.89	0.72
2:H:468:ILE:CG2	2:H:469:THR:H	2.02	0.72
2:H:364:THR:O	2:H:366:LEU:N	2.23	0.72
1:E:77:GLU:OE2	1:E:81:ARG:HD2	1.89	0.72
2:G:77:VAL:HG11	2:G:79:ILE:CD1	2.20	0.72
1:A:79:GLU:HA	1:A:82:TYR:CD2	2.24	0.72
1:A:126:LEU:CD1	1:A:127:LYS:HG3	2.19	0.72
2:C:43:LYS:HZ3	2:C:60:ASN:HA	1.54	0.72
2:C:254:PHE:CE1	2:C:264:HIS:HE1	2.08	0.72
2:D:117:PRO:CG	2:D:120:PHE:CD1	2.73	0.72
2:G:382:GLU:CD	2:G:383:ARG:H	1.97	0.72
2:H:309:VAL:HA	2:H:336:PRO:HB3	1.70	0.72
2:C:159:GLU:H	2:C:159:GLU:CD	1.97	0.72
2:H:146:PRO:HB3	2:H:165:VAL:HG11	1.71	0.72
2:D:322:ILE:O	2:D:326:LEU:HD13	1.89	0.72
2:H:13:ASN:OD1	2:H:37:PRO:HA	1.90	0.72
2:D:305:LYS:HD3	2:D:331:HIS:NE2	2.04	0.71
2:G:121:ASN:HA	2:G:125:ARG:HH21	1.53	0.71
1:A:177:MET:HG2	2:C:225:LYS:HZ3	1.55	0.71
2:D:102:GLU:HG3	2:D:109:VAL:HG13	1.72	0.71
2:C:257:ALA:CA	2:C:263:LEU:HD12	2.20	0.71
1:E:85:LEU:HG	1:F:82:TYR:CZ	2.26	0.71
2:G:169:GLY:HA3	2:G:172:THR:HG23	1.72	0.71
2:H:365:PRO:HB2	2:H:481:ILE:CD1	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:161:GLN:HB2	2:G:304:ASP:HB2	1.73	0.71
2:H:339:VAL:CB	2:H:342:ILE:HD12	2.19	0.71
2:D:319:GLN:HE21	2:D:330:PRO:CG	1.98	0.71
2:D:328:LYS:HG2	2:D:329:GLU:H	1.55	0.71
2:D:409:VAL:HG21	2:D:470:ILE:HD11	1.71	0.71
2:H:387:ILE:O	2:H:388:PRO:C	2.30	0.71
2:C:87:GLN:O	2:C:91:ALA:HB2	1.91	0.71
2:G:293:LEU:CD1	2:G:300:PRO:HG3	2.20	0.71
2:G:442:GLU:O	2:G:457:ALA:CA	2.29	0.71
2:H:151:LEU:O	2:H:346:ILE:CD1	2.39	0.71
2:D:173:PHE:HD1	2:D:174:ASP:H	1.37	0.71
2:G:459:ASP:OD1	2:G:460:LEU:N	2.24	0.71
2:C:18:VAL:CG1	2:C:27:ILE:HD11	2.21	0.71
2:D:105:LEU:C	2:D:107:GLU:H	1.96	0.71
2:D:173:PHE:CD1	2:D:173:PHE:C	2.68	0.71
1:F:82:TYR:O	1:F:85:LEU:HB2	1.91	0.71
2:H:84:TYR:CD1	2:H:88:GLU:OE2	2.44	0.71
2:H:141:ARG:HH12	2:H:143:ILE:CD1	2.03	0.71
2:C:115:THR:HA	2:C:143:ILE:O	1.90	0.71
2:C:151:LEU:HD21	2:C:347:GLN:HG2	1.72	0.71
1:F:84:ARG:HD2	2:G:388:PRO:O	1.91	0.71
2:G:238:ALA:O	2:G:242:LEU:HD22	1.91	0.71
2:G:470:ILE:HG22	2:G:471:LYS:H	1.53	0.71
1:A:105:LYS:HD3	1:A:200:LYS:HZ3	1.56	0.71
2:C:475:GLY:O	2:C:476:LEU:HD22	1.91	0.71
2:D:166:TYR:C	2:D:166:TYR:CD1	2.68	0.71
2:G:400:ASP:C	2:G:401:ASN:HD22	1.99	0.71
2:C:27:ILE:HG12	2:C:104:TYR:HD2	1.55	0.70
2:D:11:THR:N	2:D:68:LYS:HZ2	1.89	0.70
2:G:397:THR:OG1	2:G:437:GLY:N	2.24	0.70
2:H:464:LYS:HB2	2:H:464:LYS:NZ	2.06	0.70
1:B:67:GLN:CA	1:B:67:GLN:HE21	2.04	0.70
2:C:280:HIS:NE2	2:C:281:LEU:HD13	2.06	0.70
2:C:416:MET:HE2	2:C:497:LYS:HB3	1.73	0.70
2:D:58:ILE:HG22	2:D:58:ILE:O	1.90	0.70
1:A:115:LEU:HD23	1:A:153:LEU:HD21	1.74	0.70
1:B:116:LEU:CD1	1:B:197:TYR:HD2	2.03	0.70
2:D:208:TYR:HE1	2:D:212:GLN:HG3	1.54	0.70
2:D:225:LYS:H	2:D:225:LYS:CD	2.03	0.70
2:D:225:LYS:H	2:D:225:LYS:HD2	1.56	0.70
1:E:82:TYR:O	1:E:86:TYR:HE1	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:114:ILE:HG22	2:H:115:THR:N	2.04	0.70
2:H:153:TYR:O	2:H:155:LEU:HD13	1.90	0.70
1:A:144:MET:SD	2:D:253:PRO:HB3	2.32	0.70
2:C:10:GLY:HA3	2:C:13:ASN:O	1.91	0.70
2:C:377:PHE:O	2:C:377:PHE:CD1	2.45	0.70
1:E:78:MET:O	1:E:82:TYR:CG	2.44	0.70
1:B:100:MET:O	1:B:101:GLU:C	2.35	0.70
2:C:396:THR:OG1	2:C:437:GLY:CA	2.39	0.70
2:D:47:ARG:O	2:D:48:LEU:HD23	1.92	0.70
2:D:267:MET:SD	2:D:268:THR:C	2.74	0.70
2:D:414:ARG:CZ	2:D:491:ASN:HD21	2.03	0.70
2:G:377:PHE:CD1	2:G:410:LEU:HB2	2.25	0.70
2:G:500:GLU:HA	2:G:503:GLU:CG	2.21	0.70
1:A:78:MET:HB3	1:A:82:TYR:CE2	2.25	0.70
2:C:100:TYR:O	2:C:103:ASP:HB2	1.91	0.70
2:D:388:PRO:HB3	2:D:448:ASP:CA	2.20	0.70
2:H:503:GLU:C	2:H:505:ARG:H	1.97	0.70
1:F:74:LYS:O	1:F:78:MET:HB2	1.89	0.70
2:G:443:VAL:CA	2:G:456:ARG:O	2.33	0.70
2:D:409:VAL:CG2	2:D:470:ILE:HD11	2.20	0.70
2:D:426:PHE:HB2	2:D:468:ILE:HD11	1.72	0.70
2:C:8:ASP:HA	2:C:115:THR:HG22	1.73	0.70
2:C:225:LYS:O	2:C:228:LEU:HB3	1.91	0.70
2:D:409:VAL:HG23	2:D:409:VAL:O	1.92	0.70
2:D:437:GLY:C	2:D:439:PRO:HD3	2.17	0.70
2:D:503:GLU:C	2:D:505:ARG:N	2.44	0.70
2:H:115:THR:HG21	2:H:340:VAL:HG11	1.73	0.70
2:H:149:ALA:CB	2:H:339:VAL:HG13	2.22	0.70
1:B:142:MET:HE2	1:B:142:MET:N	2.07	0.70
1:B:190:VAL:HG12	1:B:191:GLU:N	2.06	0.70
2:D:387:ILE:HG22	2:D:388:PRO:CD	2.22	0.70
1:A:139:LEU:HD21	1:B:138:ILE:HG21	1.71	0.69
2:C:153:TYR:CE1	2:C:334:VAL:CG1	2.75	0.69
2:C:394:VAL:HG21	2:H:363:VAL:HG11	1.74	0.69
1:E:65:LYS:HA	1:E:68:ILE:HB	1.74	0.69
1:A:192:GLU:HA	1:A:209:VAL:HG12	1.72	0.69
2:C:224:ASP:OD2	2:C:227:ALA:HB2	1.92	0.69
1:A:171:TYR:CE1	2:C:52:VAL:HG21	2.27	0.69
2:D:497:LYS:O	2:D:499:LYS:N	2.25	0.69
1:A:58:ALA:CA	1:A:61:LEU:HB2	2.20	0.69
1:A:168:PHE:CB	1:A:189:VAL:HG22	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:166:TYR:OH	2:C:285:THR:HG21	1.93	0.69
2:C:266:GLU:O	2:C:267:MET:HB3	1.90	0.69
2:C:408:HIS:CE1	2:C:425:ARG:NH2	2.60	0.69
2:D:414:ARG:HB3	2:D:415:PRO:HD2	1.74	0.69
2:H:12:THR:HB	2:H:171:GLY:H	1.58	0.69
1:A:106:TYR:HD2	1:A:202:ARG:NH1	1.86	0.69
2:C:34:ARG:H	2:C:34:ARG:NH1	1.90	0.69
2:C:64:ILE:CG2	2:C:67:ILE:CG1	2.70	0.69
2:D:480:GLU:O	2:D:484:MET:HG3	1.92	0.69
2:D:503:GLU:C	2:D:505:ARG:H	1.98	0.69
2:G:387:ILE:HG22	2:G:448:ASP:O	1.93	0.69
2:G:462:THR:O	2:G:463:ASN:HB2	1.91	0.69
2:H:149:ALA:HB1	2:H:339:VAL:HG13	1.73	0.69
2:H:496:ARG:HA	2:H:498:ARG:CG	2.22	0.69
2:D:231:LEU:O	2:D:232:LYS:C	2.35	0.69
2:D:251:SER:HB2	2:D:266:GLU:OE2	1.91	0.69
2:H:496:ARG:CA	2:H:496:ARG:NE	2.54	0.69
1:B:122:PHE:CD1	1:B:146:TYR:CG	2.76	0.69
2:C:64:ILE:HG21	2:C:89:ILE:HD13	1.74	0.69
2:C:246:THR:C	2:C:247:GLN:HG3	2.18	0.69
2:D:161:GLN:NE2	2:D:163:ILE:HD11	2.07	0.69
2:H:109:VAL:HG23	2:H:111:ARG:O	1.91	0.69
2:C:392:SER:OG	2:C:444:THR:HB	1.93	0.69
2:D:408:HIS:CD2	2:D:425:ARG:HH11	2.11	0.69
1:E:84:ARG:HH21	2:G:354:GLU:N	1.86	0.69
2:G:164:LEU:H	2:G:306:VAL:HG22	1.57	0.69
2:G:283:GLU:OE1	2:G:286:MET:HG3	1.93	0.69
2:H:100:TYR:HA	2:H:103:ASP:OD2	1.93	0.69
2:H:376:VAL:C	2:H:417:ALA:CB	2.65	0.69
2:C:166:TYR:CE1	2:C:173:PHE:CE1	2.74	0.69
2:D:116:VAL:HB	2:D:117:PRO:HD2	1.74	0.69
2:D:242:LEU:HD12	2:D:271:ARG:HD3	1.74	0.69
2:D:279:ALA:O	2:D:282:VAL:HB	1.92	0.69
2:D:483:ARG:HG2	2:D:483:ARG:NH1	2.05	0.69
2:D:269:LEU:HD12	2:D:270:THR:H	1.58	0.69
2:G:398:ALA:CB	2:G:402:GLN:HE22	2.06	0.69
2:H:87:GLN:CG	2:H:127:ALA:HB1	2.23	0.69
2:C:273:LYS:O	2:C:276:GLU:HB2	1.92	0.68
2:H:281:LEU:O	2:H:284:ARG:HB2	1.93	0.68
1:A:135:ALA:CB	1:B:135:ALA:HB3	2.23	0.68
1:B:179:ALA:HB2	1:B:210:LYS:HG2	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:175:VAL:HG11	2:D:289:VAL:HG22	1.75	0.68
2:H:92:ILE:HG23	2:H:95:GLN:HE22	1.59	0.68
2:C:144:ASN:O	2:C:145:GLU:C	2.34	0.68
1:A:160:ALA:HB2	1:A:197:TYR:HE1	1.58	0.68
2:D:87:GLN:O	2:D:91:ALA:HB2	1.93	0.68
2:D:414:ARG:NE	2:D:491:ASN:HD21	1.91	0.68
1:E:194:GLN:H	1:E:208:MET:CB	2.06	0.68
2:H:100:TYR:HA	2:H:103:ASP:CG	2.19	0.68
1:B:119:LEU:O	1:B:122:PHE:HB3	1.93	0.68
2:D:164:LEU:HD13	2:D:164:LEU:C	2.18	0.68
2:D:379:LYS:H	2:D:379:LYS:HD3	1.57	0.68
1:E:78:MET:O	1:E:82:TYR:HB2	1.92	0.68
1:A:141:GLY:HA2	2:D:264:HIS:CE1	2.28	0.68
2:G:157:LYS:HD2	2:G:158:GLU:HG2	1.73	0.68
2:G:370:ILE:HG12	2:G:409:VAL:HB	1.75	0.68
2:H:377:PHE:HB2	2:H:417:ALA:CA	2.24	0.68
1:B:160:ALA:HB2	1:B:197:TYR:HE1	1.59	0.68
2:G:76:LYS:HD2	2:G:83:GLN:NE2	2.07	0.68
2:G:300:PRO:HB3	2:G:326:LEU:CD1	2.23	0.68
2:H:448:ASP:OD1	2:H:448:ASP:C	2.37	0.68
2:H:502:ALA:C	2:H:504:LEU:N	2.50	0.68
1:A:142:MET:N	1:A:142:MET:SD	2.67	0.68
2:C:387:ILE:O	2:C:389:THR:N	2.27	0.68
2:D:151:LEU:HA	2:D:154:GLY:HA2	1.75	0.68
1:A:109:GLN:HG3	1:A:199:LEU:CD1	2.24	0.68
2:G:334:VAL:HG22	2:G:335:ASN:H	1.59	0.68
2:G:483:ARG:NH1	2:G:486:LYS:NZ	2.42	0.68
2:C:398:ALA:HB2	2:H:357:ASP:O	1.93	0.67
2:G:315:ILE:HG22	2:G:317:ALA:H	1.58	0.67
2:H:51:GLU:HA	2:H:54:LYS:CB	2.23	0.67
1:A:92:PHE:HD1	1:A:92:PHE:C	2.01	0.67
2:D:257:ALA:CB	2:D:262:PRO:HA	2.21	0.67
2:G:364:THR:HB	2:G:385:THR:H	1.59	0.67
2:H:306:VAL:HG12	2:H:307:ILE:N	2.08	0.67
1:A:166:LYS:O	1:A:189:VAL:HG23	1.94	0.67
1:A:168:PHE:HB2	1:A:189:VAL:HG22	1.76	0.67
1:A:170:PRO:HA	1:A:173:HIS:O	1.94	0.67
2:D:116:VAL:O	2:D:144:ASN:HA	1.94	0.67
2:D:277:LEU:O	2:D:277:LEU:HD22	1.95	0.67
2:D:444:THR:C	2:D:445:PHE:HD1	2.01	0.67
1:E:82:TYR:CE2	1:F:78:MET:HB3	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:144:MET:HA	1:B:144:MET:CE	2.21	0.67
2:C:159:GLU:O	2:C:161:GLN:HG2	1.95	0.67
2:C:359:VAL:HG12	2:C:362:ASP:OD2	1.94	0.67
1:A:115:LEU:CD2	1:A:153:LEU:HD21	2.25	0.67
1:A:122:PHE:CB	1:A:146:TYR:CD2	2.78	0.67
2:D:426:PHE:CB	2:D:468:ILE:CD1	2.45	0.67
2:H:460:LEU:HD22	2:H:460:LEU:N	2.09	0.67
2:H:329:GLU:OE2	2:H:330:PRO:HG2	1.94	0.67
2:D:213:PHE:CD2	2:D:221:LEU:HD21	2.29	0.67
1:F:68:ILE:O	1:F:72:GLU:HG3	1.94	0.67
2:G:255:ILE:CB	2:G:264:HIS:HA	2.24	0.67
1:E:75:LEU:O	1:E:78:MET:HB2	1.94	0.67
2:G:73:THR:HG22	2:G:75:TYR:N	2.08	0.67
2:G:273:LYS:HD2	2:G:276:GLU:OE2	1.95	0.67
2:G:426:PHE:CB	2:G:468:ILE:HD11	2.24	0.67
2:H:204:VAL:O	2:H:208:TYR:HB2	1.95	0.67
2:D:359:VAL:O	2:G:395:PHE:HB3	1.95	0.67
1:F:61:LEU:N	1:F:61:LEU:HD23	2.08	0.67
2:G:369:GLY:HA3	2:G:378:THR:O	1.95	0.67
2:G:369:GLY:O	2:G:409:VAL:HG23	1.93	0.67
2:H:88:GLU:HA	2:H:91:ALA:HB3	1.76	0.67
1:A:87:ALA:O	1:A:91:ASN:HB2	1.95	0.67
2:D:16:VAL:O	2:D:16:VAL:HG22	1.92	0.67
2:D:315:ILE:HG23	2:D:316:PRO:HD2	1.76	0.67
2:D:387:ILE:HG22	2:D:388:PRO:HD2	1.74	0.67
2:D:426:PHE:CD1	2:D:427:GLN:N	2.63	0.67
2:D:507:GLU:OE1	2:D:507:GLU:HA	1.93	0.67
2:G:206:ILE:O	2:G:210:VAL:HG13	1.94	0.67
2:G:210:VAL:HB	2:G:214:LYS:NZ	2.09	0.67
2:G:414:ARG:CZ	2:G:494:ALA:HB3	2.24	0.67
1:A:116:LEU:HD22	1:A:197:TYR:CD2	2.31	0.66
2:G:497:LYS:O	2:G:500:GLU:HG2	1.95	0.66
2:H:334:VAL:HG23	2:H:336:PRO:CG	2.24	0.66
1:B:193:LEU:HD21	2:D:226:MET:HG2	1.77	0.66
2:C:153:TYR:OH	2:C:334:VAL:HG12	1.95	0.66
2:C:205:ILE:HD11	2:C:274:PHE:HE2	1.58	0.66
2:D:12:THR:HG21	2:D:171:GLY:N	2.05	0.66
2:G:162:THR:O	2:G:303:ILE:HG23	1.95	0.66
2:C:265:LEU:HD23	2:C:266:GLU:N	2.09	0.66
2:C:368:LEU:HD21	2:C:411:GLN:HB2	1.78	0.66
2:D:129:LYS:HB2	2:D:142:ILE:CD1	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:4:ILE:HG22	2:H:348:GLY:O	1.95	0.66
2:H:116:VAL:HG12	2:H:117:PRO:HD3	1.76	0.66
2:C:471:LYS:HZ3	2:C:471:LYS:HB2	1.59	0.66
2:D:193:ASP:OD1	2:D:193:ASP:C	2.38	0.66
2:D:257:ALA:HB1	2:D:261:GLY:C	2.20	0.66
2:G:205:ILE:HG21	2:G:235:ALA:CB	2.25	0.66
2:H:365:PRO:HB2	2:H:481:ILE:HD13	1.75	0.66
1:A:192:GLU:OE2	1:A:195:LYS:HA	1.95	0.66
2:D:252:LEU:O	2:D:255:ILE:CD1	2.44	0.66
2:G:153:TYR:CZ	2:G:334:VAL:HB	2.30	0.66
2:G:462:THR:HG22	2:G:464:LYS:HB2	1.78	0.66
2:H:156:ASP:HA	2:H:180:LEU:HD11	1.77	0.66
2:C:364:THR:HG23	2:C:385:THR:O	1.95	0.66
2:H:115:THR:HG21	2:H:340:VAL:CG1	2.26	0.66
2:C:101:ALA:O	2:C:105:LEU:HD22	1.96	0.66
2:C:497:LYS:C	2:C:499:LYS:N	2.53	0.66
2:D:208:TYR:CD1	2:D:208:TYR:C	2.74	0.66
1:B:86:TYR:HE2	2:C:359:VAL:HG21	1.61	0.66
2:C:133:ARG:HB3	2:C:133:ARG:NH1	2.10	0.66
2:D:280:HIS:NE2	2:D:281:LEU:HD13	2.10	0.66
2:D:493:GLU:HA	2:D:495:ASP:OD1	1.96	0.66
2:H:361:LEU:HD22	2:H:387:ILE:HD11	1.77	0.66
2:C:254:PHE:N	2:C:254:PHE:CD1	2.63	0.66
2:G:166:TYR:OH	2:G:318:VAL:HG21	1.96	0.66
2:G:498:ARG:HB2	2:G:498:ARG:HH11	1.58	0.66
1:A:121:ASN:HD22	1:B:145:VAL:HG23	1.61	0.65
2:D:162:THR:OG1	2:D:179:GLU:HG2	1.95	0.65
2:D:444:THR:O	2:D:445:PHE:HD1	1.78	0.65
2:H:29:ASN:HA	2:H:100:TYR:CD2	2.31	0.65
2:D:355:VAL:HG21	2:G:399:ALA:HB3	1.79	0.65
1:B:112:ALA:O	1:B:115:LEU:N	2.28	0.65
2:C:216:GLU:HB3	2:C:217:HIS:ND1	2.10	0.65
2:C:367:SER:HB2	2:C:412:GLY:O	1.96	0.65
2:D:193:ASP:OD1	2:D:194:ASN:N	2.29	0.65
2:D:453:VAL:HG22	2:D:453:VAL:O	1.96	0.65
2:G:145:GLU:O	2:G:148:ALA:HB3	1.96	0.65
2:G:164:LEU:HD21	2:G:175:VAL:HB	1.78	0.65
2:H:2:SER:OG	2:H:110:THR:HB	1.96	0.65
1:B:121:ASN:CA	1:B:124:ARG:HB2	2.23	0.65
2:D:153:TYR:O	2:D:155:LEU:HD13	1.95	0.65
2:D:218:GLY:O	2:D:219:ILE:HG13	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:366:LEU:O	2:D:368:LEU:HD23	1.96	0.65
2:H:364:THR:HG22	2:H:366:LEU:O	1.96	0.65
2:H:414:ARG:HG2	2:H:488:ALA:CB	2.27	0.65
1:A:119:LEU:HD13	1:A:119:LEU:C	2.21	0.65
2:D:64:ILE:CG2	2:D:67:ILE:CG1	2.74	0.65
2:D:210:VAL:HG23	2:D:221:LEU:HD12	1.77	0.65
2:H:339:VAL:CA	2:H:342:ILE:HD12	2.26	0.65
2:C:140:GLU:O	2:C:141:ARG:HB2	1.97	0.65
2:D:323:LYS:HG3	2:D:328:LYS:O	1.96	0.65
2:G:281:LEU:HA	2:G:284:ARG:CD	2.26	0.65
2:H:96:TYR:HA	2:H:99:SER:HB2	1.79	0.65
1:B:185:GLU:O	1:B:188:THR:HB	1.97	0.65
2:C:431:ILE:HG23	2:C:432:PRO:HD2	1.78	0.65
2:G:225:LYS:HB3	2:G:225:LYS:NZ	2.12	0.65
2:C:64:ILE:HG22	2:C:67:ILE:HD11	1.75	0.65
2:G:408:HIS:CE1	2:G:425:ARG:HB2	2.31	0.65
2:G:462:THR:HG21	2:G:464:LYS:CB	2.26	0.65
2:C:63:THR:HG22	2:C:63:THR:O	1.95	0.65
2:C:145:GLU:O	2:C:148:ALA:HB3	1.97	0.65
2:C:471:LYS:H	2:C:471:LYS:HZ2	1.45	0.65
2:G:507:GLU:O	2:G:507:GLU:HG3	1.95	0.65
2:H:147:THR:CG2	2:H:185:PHE:HD2	2.09	0.65
2:C:164:LEU:HD22	2:C:165:VAL:N	2.11	0.65
2:C:357:ASP:HB3	2:C:359:VAL:HG23	1.78	0.65
2:D:508:ALA:O	2:D:509:ASP:HB2	1.97	0.65
1:B:189:VAL:CA	1:B:211:VAL:HG23	2.26	0.64
2:D:4:ILE:HG12	2:D:111:ARG:HB3	1.79	0.64
1:F:82:TYR:O	1:F:85:LEU:N	2.30	0.64
2:G:116:VAL:O	2:G:145:GLU:N	2.22	0.64
2:H:128:THR:O	2:H:129:LYS:C	2.39	0.64
2:H:235:ALA:O	2:H:238:ALA:HB3	1.96	0.64
2:H:361:LEU:CD2	2:H:387:ILE:CD1	2.74	0.64
2:C:152:ALA:HB2	2:C:343:GLY:CA	2.26	0.64
2:D:55:ARG:HH11	2:D:55:ARG:HG3	1.61	0.64
2:D:214:LYS:HG3	2:D:215:GLN:N	2.12	0.64
1:E:58:ALA:O	1:E:61:LEU:HG	1.98	0.64
2:G:366:LEU:HD13	2:G:412:GLY:HA2	1.78	0.64
2:D:173:PHE:HD2	2:D:196:LEU:CD2	2.02	0.64
2:D:339:VAL:O	2:D:342:ILE:HB	1.97	0.64
2:D:483:ARG:O	2:D:486:LYS:HG3	1.96	0.64
2:G:272:ALA:HA	2:G:275:GLU:HB2	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:308:LEU:CD1	2:G:319:GLN:NE2	2.59	0.64
1:A:177:MET:HE3	2:C:225:LYS:CE	2.28	0.64
2:D:388:PRO:CB	2:D:448:ASP:HA	2.28	0.64
1:E:91:ASN:O	1:E:94:ARG:HB3	1.97	0.64
1:E:99:GLU:HB2	1:F:100:MET:HE1	1.79	0.64
2:G:144:ASN:ND2	2:G:147:THR:H	1.95	0.64
2:H:72:GLY:HA3	2:H:124:GLN:HA	1.78	0.64
1:A:89:PHE:HB2	1:B:89:PHE:HD1	1.60	0.64
2:C:5:ILE:HG12	2:C:18:VAL:HB	1.79	0.64
2:D:476:LEU:HB2	2:D:480:GLU:CD	2.23	0.64
2:G:144:ASN:OD1	2:G:147:THR:HB	1.97	0.64
2:G:146:PRO:HB3	2:G:165:VAL:HG11	1.79	0.64
2:H:401:ASN:HA	2:H:434:ALA:O	1.98	0.64
1:A:82:TYR:O	1:B:82:TYR:CE2	2.51	0.64
1:B:165:GLY:N	1:B:189:VAL:HG12	2.05	0.64
2:D:444:THR:HG23	2:D:456:ARG:HB3	1.79	0.64
1:E:96:THR:CA	1:E:99:GLU:HG3	2.16	0.64
2:G:396:THR:OG1	2:G:437:GLY:CA	2.43	0.64
2:H:87:GLN:HG2	2:H:127:ALA:HB1	1.79	0.64
2:H:374:GLY:N	2:H:375:GLY:HA2	2.13	0.64
2:H:416:MET:O	2:H:417:ALA:HB3	1.97	0.64
2:C:68:LYS:O	2:C:68:LYS:HG2	1.97	0.64
2:D:249:GLN:HG2	2:D:267:MET:O	1.98	0.64
2:G:484:MET:HE3	2:G:484:MET:HA	1.79	0.64
2:C:396:THR:HG1	2:C:437:GLY:HA2	1.60	0.64
2:D:361:LEU:HD13	2:D:387:ILE:HG13	1.78	0.64
2:D:494:ALA:C	2:D:496:ARG:HG2	2.23	0.64
2:H:8:ASP:HB3	2:H:340:VAL:CG1	2.28	0.64
1:A:107:ARG:CB	1:B:107:ARG:HG2	2.28	0.64
2:G:166:TYR:O	2:G:309:VAL:CB	2.38	0.64
1:A:89:PHE:HD1	1:A:90:GLU:N	1.95	0.64
2:C:47:ARG:NH1	2:C:92:ILE:HG12	2.13	0.64
2:C:64:ILE:HD13	2:C:89:ILE:HD11	1.78	0.64
2:C:158:GLU:HG2	2:C:159:GLU:OE1	1.99	0.64
2:C:483:ARG:C	2:C:484:MET:HE3	2.22	0.64
2:D:166:TYR:CE2	2:D:322:ILE:HD11	2.33	0.64
2:G:67:ILE:O	2:G:67:ILE:HG22	1.97	0.64
2:C:17:ALA:HB3	2:C:341:ALA:O	1.98	0.63
2:D:198:GLY:O	2:D:201:PHE:N	2.22	0.63
2:D:203:GLN:O	2:D:206:ILE:N	2.31	0.63
2:G:325:GLU:HB3	2:G:326:LEU:HD22	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:409:VAL:O	2:H:409:VAL:CG2	2.46	0.63
1:B:65:LYS:O	1:B:68:ILE:HB	1.99	0.63
1:B:84:ARG:CD	2:C:388:PRO:O	2.34	0.63
2:C:180:LEU:HD13	2:C:185:PHE:CE1	2.34	0.63
2:D:370:ILE:CG1	2:D:445:PHE:CZ	2.79	0.63
2:H:9:LEU:CD1	2:H:94:LEU:HD21	2.25	0.63
1:A:199:LEU:O	1:A:200:LYS:C	2.42	0.63
2:C:238:ALA:O	2:C:242:LEU:HB2	1.98	0.63
2:C:502:ALA:O	2:C:505:ARG:HB3	1.98	0.63
2:D:322:ILE:CG2	2:D:326:LEU:CD2	2.77	0.63
2:H:377:PHE:CA	2:H:417:ALA:HB2	2.28	0.63
1:B:123:GLU:O	1:B:127:LYS:CB	2.39	0.63
2:D:369:GLY:HA3	2:D:377:PHE:HE1	1.64	0.63
2:D:385:THR:HG22	2:D:386:THR:HG22	1.80	0.63
2:D:388:PRO:CG	2:D:449:ALA:HA	2.28	0.63
2:D:454:HIS:O	2:D:455:VAL:HG23	1.98	0.63
2:G:162:THR:HG22	2:G:179:GLU:HG2	1.80	0.63
2:G:398:ALA:HB3	2:G:402:GLN:NE2	2.12	0.63
2:H:243:SER:CB	2:H:316:PRO:HD3	2.28	0.63
1:A:122:PHE:CB	1:A:146:TYR:CG	2.82	0.63
1:A:162:GLU:OE1	1:A:162:GLU:N	2.31	0.63
2:C:257:ALA:N	2:C:263:LEU:HD12	2.13	0.63
2:G:498:ARG:HB2	2:G:498:ARG:CZ	2.28	0.63
2:H:67:ILE:HD13	2:H:89:ILE:CB	2.27	0.63
2:H:126:GLN:O	2:H:127:ALA:C	2.42	0.63
2:H:346:ILE:O	2:H:350:VAL:HG23	1.97	0.63
1:A:105:LYS:HD3	1:A:200:LYS:NZ	2.13	0.63
2:C:1:MET:HG3	2:C:2:SER:H	1.63	0.63
2:D:3:LYS:HD2	2:D:107:GLU:OE2	1.98	0.63
2:D:361:LEU:O	2:D:362:ASP:CG	2.41	0.63
2:G:309:VAL:HG12	2:G:310:GLY:N	2.12	0.63
2:C:73:THR:HG23	2:C:75:TYR:N	2.09	0.63
2:C:97:LEU:CD1	2:C:100:TYR:HE1	2.09	0.63
2:C:164:LEU:O	2:C:164:LEU:HD13	1.98	0.63
2:C:180:LEU:CB	2:C:185:PHE:HE1	2.07	0.63
2:C:414:ARG:NH2	2:C:494:ALA:HB2	2.12	0.63
2:D:224:ASP:OD2	2:D:226:MET:HB2	1.99	0.63
2:G:164:LEU:HB2	2:G:177:ILE:HG12	1.81	0.63
2:G:363:VAL:HG12	2:G:384:ASN:O	1.99	0.63
2:H:8:ASP:HB3	2:H:340:VAL:HG12	1.81	0.63
2:C:18:VAL:CG2	2:C:19:LEU:N	2.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:208:TYR:C	2:D:208:TYR:HD1	2.05	0.63
2:G:361:LEU:HD22	2:G:387:ILE:HD11	1.80	0.63
2:G:465:GLU:HG3	2:G:465:GLU:O	1.97	0.63
2:H:24:VAL:HG11	2:H:345:ALA:CB	2.29	0.63
1:A:109:GLN:HG3	1:A:199:LEU:HD13	1.80	0.63
1:A:112:ALA:O	1:A:116:LEU:HG	1.99	0.63
1:A:119:LEU:HD11	1:A:197:TYR:CZ	2.33	0.63
2:C:159:GLU:CD	2:C:159:GLU:N	2.56	0.63
2:D:119:TYR:HB3	2:D:190:THR:HG21	1.80	0.63
2:D:414:ARG:CZ	2:D:491:ASN:ND2	2.61	0.63
2:G:470:ILE:CG2	2:G:471:LYS:H	2.11	0.63
2:H:392:SER:HB2	2:H:444:THR:HB	1.79	0.63
2:H:408:HIS:CE1	2:H:425:ARG:NH2	2.66	0.63
2:H:426:PHE:HB3	2:H:468:ILE:HD12	1.81	0.63
2:H:426:PHE:CB	2:H:468:ILE:HD11	2.28	0.63
1:A:84:ARG:NH2	2:C:354:GLU:HB2	2.13	0.62
1:B:178:GLN:HG3	1:B:213:GLN:HB3	1.80	0.62
1:B:198:LYS:CB	1:B:203:VAL:HG22	2.28	0.62
2:D:391:LYS:HG3	2:D:392:SER:N	2.14	0.62
2:G:458:LYS:HB2	2:G:465:GLU:CB	2.29	0.62
2:H:151:LEU:HB3	2:H:343:GLY:HA2	1.81	0.62
2:D:155:LEU:HD22	2:D:155:LEU:N	2.13	0.62
2:G:280:HIS:CE1	2:G:281:LEU:CG	2.82	0.62
2:G:397:THR:OG1	2:G:439:PRO:HD2	1.98	0.62
2:H:308:LEU:HB2	2:H:330:PRO:HB2	1.81	0.62
2:H:361:LEU:CD1	2:H:387:ILE:CD1	2.77	0.62
1:A:99:GLU:O	1:A:102:ALA:HB3	1.99	0.62
1:A:141:GLY:CA	2:D:264:HIS:CE1	2.82	0.62
2:C:85:THR:HG1	2:C:88:GLU:HG3	1.62	0.62
2:C:370:ILE:HG23	2:C:408:HIS:O	1.99	0.62
2:D:230:ARG:NH2	2:D:252:LEU:HD13	2.14	0.62
2:H:308:LEU:HD22	2:H:330:PRO:HG2	1.80	0.62
2:H:361:LEU:HD21	2:H:387:ILE:HD12	1.80	0.62
2:H:383:ARG:HG2	2:H:384:ASN:ND2	2.14	0.62
2:C:129:LYS:CG	2:C:142:ILE:HD12	2.27	0.62
2:D:65:ILE:O	2:D:66:SER:C	2.42	0.62
2:D:388:PRO:CD	2:D:449:ALA:HA	2.29	0.62
1:F:87:ALA:HA	2:G:386:THR:HB	1.81	0.62
2:G:29:ASN:HA	2:G:100:TYR:CD2	2.35	0.62
2:G:151:LEU:HD12	2:G:154:GLY:CA	2.27	0.62
2:G:157:LYS:CD	2:G:158:GLU:HG2	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:153:TYR:HE1	2:C:334:VAL:HG11	1.64	0.62
2:C:313:THR:O	2:C:319:GLN:NE2	2.32	0.62
2:C:334:VAL:HG11	2:C:339:VAL:HG23	1.81	0.62
2:D:468:ILE:CG2	2:D:469:THR:H	2.12	0.62
1:E:96:THR:HG23	1:F:100:MET:HE3	1.82	0.62
2:H:385:THR:HG21	2:H:389:THR:HG21	1.81	0.62
2:D:26:VAL:HG23	2:D:26:VAL:O	1.97	0.62
2:D:152:ALA:CB	2:D:334:VAL:HG11	2.28	0.62
1:E:74:LYS:O	1:E:78:MET:HG2	1.99	0.62
2:G:470:ILE:CG2	2:G:471:LYS:N	2.62	0.62
2:H:71:MET:CE	2:H:128:THR:HG23	2.30	0.62
2:H:92:ILE:HG23	2:H:95:GLN:NE2	2.15	0.62
2:H:308:LEU:HD13	2:H:330:PRO:CG	2.28	0.62
2:H:420:ASN:ND2	2:H:420:ASN:H	1.96	0.62
2:C:251:SER:O	2:C:252:LEU:HD13	1.99	0.62
2:C:270:THR:HB	2:C:273:LYS:H	1.64	0.62
2:D:140:GLU:HB3	2:D:351:ILE:HG21	1.82	0.62
2:C:459:ASP:OD1	2:C:460:LEU:N	2.33	0.62
2:D:63:THR:O	2:D:63:THR:HG22	2.00	0.62
1:E:89:PHE:HD1	1:E:89:PHE:O	1.83	0.62
1:F:61:LEU:HD23	1:F:61:LEU:H	1.65	0.62
2:G:409:VAL:HG13	2:G:423:LEU:HB2	1.81	0.62
2:H:207:ASP:HA	2:H:210:VAL:HG22	1.82	0.62
2:H:281:LEU:HD12	2:H:284:ARG:NH1	2.14	0.62
1:A:92:PHE:O	1:A:92:PHE:CD1	2.46	0.62
2:C:154:GLY:O	2:C:156:ASP:N	2.33	0.62
2:C:355:VAL:HG23	2:C:356:LYS:N	2.14	0.62
2:C:500:GLU:HA	2:C:503:GLU:HG2	1.80	0.62
2:D:131:ALA:HA	2:D:134:ILE:HD12	1.82	0.62
2:D:337:ASP:OD1	2:D:337:ASP:N	2.31	0.62
2:C:499:LYS:HG2	2:C:500:GLU:OE1	2.00	0.62
1:A:109:GLN:O	1:A:110:SER:C	2.43	0.61
1:B:86:TYR:CE2	2:C:359:VAL:HG21	2.35	0.61
2:G:372:THR:HG22	2:G:373:MET:N	2.14	0.61
1:B:169:ASP:C	1:B:171:TYR:N	2.55	0.61
2:C:172:THR:O	2:C:172:THR:OG1	2.16	0.61
2:G:145:GLU:CB	2:G:146:PRO:HD3	2.25	0.61
2:G:192:GLY:N	2:G:288:PRO:HB3	2.16	0.61
2:H:114:ILE:CG2	2:H:115:THR:N	2.62	0.61
1:B:132:ASN:C	1:B:133:GLU:HG3	2.25	0.61
1:E:78:MET:O	1:E:82:TYR:CB	2.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:98:LYS:CD	2:H:137:LEU:HD21	2.25	0.61
1:A:62:ALA:HA	1:A:65:LYS:HE2	1.81	0.61
1:A:88:ASP:OD2	2:C:20:GLU:HA	1.99	0.61
2:D:64:ILE:HG21	2:D:67:ILE:CG1	2.30	0.61
2:C:426:PHE:HD2	2:C:468:ILE:CD1	2.09	0.61
2:D:298:LEU:HD12	2:D:302:ASP:CB	2.30	0.61
2:H:495:ASP:C	2:H:497:LYS:H	2.06	0.61
1:A:133:GLU:CD	1:B:133:GLU:OE1	2.44	0.61
1:A:160:ALA:HB2	1:A:197:TYR:CE1	2.36	0.61
2:D:199:ASP:OD1	2:D:199:ASP:N	2.27	0.61
2:D:252:LEU:CD1	2:D:255:ILE:CG1	2.56	0.61
1:E:96:THR:HA	1:E:99:GLU:CG	2.19	0.61
2:G:372:THR:CB	2:G:376:VAL:HG13	2.21	0.61
2:G:461:GLY:O	2:H:391:LYS:HD3	1.99	0.61
1:A:89:PHE:O	1:A:92:PHE:N	2.33	0.61
2:C:151:LEU:O	2:C:154:GLY:N	2.33	0.61
1:A:168:PHE:HD2	1:A:173:HIS:HB2	1.65	0.61
1:B:67:GLN:HE21	1:B:67:GLN:HA	1.65	0.61
2:D:230:ARG:NE	2:D:252:LEU:HD11	2.16	0.61
2:G:239:LYS:HA	2:G:242:LEU:HD22	1.82	0.61
2:H:100:TYR:O	2:H:103:ASP:HB2	2.00	0.61
1:F:73:ALA:O	1:F:77:GLU:HB2	2.00	0.61
2:G:243:SER:HA	2:G:316:PRO:CD	2.30	0.61
2:G:371:GLU:HB2	2:G:408:HIS:O	2.00	0.61
2:H:208:TYR:OH	2:H:273:LYS:HD2	2.01	0.61
2:C:64:ILE:HD13	2:C:89:ILE:CG1	2.31	0.61
2:C:372:THR:CG2	2:C:378:THR:OG1	2.48	0.61
2:D:7:ILE:O	2:D:115:THR:HG22	2.00	0.61
2:D:102:GLU:HG3	2:D:109:VAL:CG1	2.30	0.61
2:D:105:LEU:HB3	2:D:107:GLU:HB3	1.83	0.61
2:D:364:THR:HG22	2:D:364:THR:O	2.01	0.61
2:G:205:ILE:O	2:G:209:LEU:CG	2.47	0.61
1:A:168:PHE:CZ	1:A:175:ALA:HB2	2.35	0.60
2:D:370:ILE:HD11	2:D:445:PHE:HE1	1.64	0.60
1:E:75:LEU:HA	1:E:78:MET:CG	2.31	0.60
1:F:98:GLN:HA	1:F:101:GLU:CD	2.25	0.60
2:G:307:ILE:HG22	2:G:308:LEU:N	2.16	0.60
2:H:4:ILE:HD11	2:H:111:ARG:HH11	1.66	0.60
2:H:72:GLY:H	2:H:87:GLN:NE2	1.98	0.60
2:H:306:VAL:HG12	2:H:307:ILE:H	1.63	0.60
2:D:224:ASP:OD1	2:D:226:MET:HB2	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:81:ARG:HG3	1:E:82:TYR:N	2.15	0.60
2:H:125:ARG:HA	2:H:128:THR:OG1	2.00	0.60
2:H:273:LYS:HD3	2:H:276:GLU:CD	2.26	0.60
1:B:126:LEU:H	1:B:126:LEU:CD2	2.06	0.60
2:D:338:GLU:O	2:D:339:VAL:C	2.44	0.60
2:G:477:SER:O	2:G:480:GLU:HG3	2.01	0.60
2:D:224:ASP:CG	2:D:226:MET:HB2	2.26	0.60
2:G:163:ILE:HG12	2:G:305:LYS:O	2.02	0.60
2:G:458:LYS:HG2	2:G:459:ASP:O	2.00	0.60
2:H:184:VAL:HG12	2:H:185:PHE:N	2.16	0.60
1:A:71:LEU:CB	1:B:71:LEU:HD12	2.29	0.60
2:C:164:LEU:HD22	2:C:164:LEU:C	2.26	0.60
2:C:321:ALA:O	2:C:325:GLU:HB2	2.01	0.60
2:D:483:ARG:NH1	2:D:486:LYS:HD3	2.17	0.60
1:E:190:VAL:CB	1:E:210:LYS:O	2.49	0.60
2:G:162:THR:O	2:G:163:ILE:HG13	2.00	0.60
2:C:471:LYS:HZ2	2:C:471:LYS:N	1.99	0.60
2:D:391:LYS:HG3	2:D:392:SER:H	1.66	0.60
2:D:497:LYS:HD3	2:D:498:ARG:N	2.16	0.60
2:C:497:LYS:C	2:C:499:LYS:H	2.07	0.60
2:D:67:ILE:O	2:D:69:ARG:N	2.34	0.60
2:D:255:ILE:HD11	2:D:265:LEU:HB3	1.81	0.60
2:D:455:VAL:CG1	2:D:456:ARG:N	2.65	0.60
2:H:505:ARG:O	2:H:507:GLU:N	2.34	0.60
2:C:64:ILE:HG22	2:C:67:ILE:CG1	2.32	0.60
2:D:164:LEU:HD13	2:D:165:VAL:C	2.27	0.60
2:H:335:ASN:O	2:H:339:VAL:HB	2.01	0.60
2:C:154:GLY:C	2:C:156:ASP:H	2.08	0.60
2:C:199:ASP:O	2:C:202:ASP:HB2	2.02	0.60
2:H:367:SER:HB3	2:H:383:ARG:HA	1.83	0.60
2:C:334:VAL:HG11	2:C:339:VAL:CG2	2.32	0.60
2:D:70:HIS:ND1	2:D:75:TYR:CE2	2.70	0.60
1:A:177:MET:SD	1:A:210:LYS:HE3	2.41	0.59
2:D:21:GLY:C	2:D:23:GLU:H	2.09	0.59
2:D:193:ASP:OD1	2:D:195:HIS:N	2.32	0.59
2:D:361:LEU:CD2	2:D:387:ILE:CG1	2.80	0.59
2:G:370:ILE:HD11	2:G:445:PHE:HE1	1.63	0.59
1:B:122:PHE:CD1	1:B:146:TYR:CB	2.84	0.59
1:B:199:LEU:N	1:B:204:LEU:HD11	2.17	0.59
2:C:380:LEU:HD12	2:C:445:PHE:CE1	2.36	0.59
2:D:280:HIS:CD2	2:D:281:LEU:HD13	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:471:LYS:H	2:D:471:LYS:HD2	1.66	0.59
1:F:89:PHE:O	1:F:92:PHE:HD1	1.85	0.59
2:H:16:VAL:CG2	2:H:27:ILE:HD12	2.32	0.59
2:H:153:TYR:O	2:H:154:GLY:C	2.44	0.59
2:H:376:VAL:CG2	2:H:377:PHE:N	2.65	0.59
2:H:496:ARG:NE	2:H:496:ARG:N	2.49	0.59
1:A:89:PHE:C	1:A:89:PHE:HD1	2.10	0.59
2:C:151:LEU:C	2:C:154:GLY:H	2.10	0.59
2:C:497:LYS:HA	2:C:500:GLU:OE2	2.02	0.59
2:D:167:ASP:C	2:D:167:ASP:OD1	2.44	0.59
2:G:205:ILE:HG22	2:G:209:LEU:HD11	1.84	0.59
2:H:496:ARG:C	2:H:498:ARG:N	2.54	0.59
2:C:254:PHE:N	2:C:254:PHE:HD1	1.99	0.59
2:C:255:ILE:CD1	2:C:265:LEU:CB	2.47	0.59
1:E:63:ALA:HA	1:E:66:ALA:HB3	1.84	0.59
2:G:239:LYS:NZ	2:G:312:SER:OG	2.35	0.59
2:H:141:ARG:NH1	2:H:347:GLN:HE21	1.99	0.59
2:H:143:ILE:HG22	2:H:144:ASN:N	2.17	0.59
2:H:339:VAL:HA	2:H:342:ILE:HD12	1.83	0.59
1:A:153:LEU:HB3	1:A:158:VAL:HB	1.85	0.59
2:C:397:THR:CG2	2:C:436:ARG:HA	2.32	0.59
2:C:471:LYS:H	2:C:471:LYS:CD	2.15	0.59
2:D:495:ASP:C	2:D:497:LYS:H	2.09	0.59
1:A:92:PHE:CZ	1:B:92:PHE:CE1	2.90	0.59
1:A:128:ILE:O	1:A:128:ILE:CG2	2.49	0.59
2:D:104:TYR:C	2:D:105:LEU:HD13	2.28	0.59
2:D:153:TYR:HB3	2:D:155:LEU:CD1	2.27	0.59
2:D:299:THR:HG23	2:D:302:ASP:OD2	2.02	0.59
2:D:323:LYS:HG3	2:D:328:LYS:C	2.27	0.59
2:G:112:ALA:O	2:G:139:VAL:HA	2.03	0.59
2:G:162:THR:C	2:G:163:ILE:HG13	2.28	0.59
2:G:249:GLN:HA	2:G:269:LEU:N	2.11	0.59
2:G:392:SER:OG	2:G:444:THR:HG22	2.01	0.59
2:H:152:ALA:CB	2:H:342:ILE:HG21	2.31	0.59
2:H:202:ASP:O	2:H:206:ILE:CD1	2.51	0.59
2:H:324:ARG:HG3	2:H:325:GLU:H	1.68	0.59
2:H:361:LEU:CD2	2:H:387:ILE:HD12	2.32	0.59
2:H:496:ARG:C	2:H:496:ARG:NE	2.58	0.59
2:C:357:ASP:HB3	2:C:359:VAL:CG2	2.33	0.59
2:C:462:THR:O	2:C:463:ASN:HB2	2.02	0.59
2:D:67:ILE:HD12	2:D:89:ILE:CG2	2.24	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:387:ILE:O	2:D:389:THR:HG22	2.02	0.59
2:G:211:ASN:HA	2:G:214:LYS:HD2	1.83	0.59
2:H:250:ILE:O	2:H:266:GLU:HA	2.02	0.59
2:H:370:ILE:HG22	2:H:371:GLU:N	2.17	0.59
2:H:494:ALA:O	2:H:496:ARG:CZ	2.51	0.59
1:B:110:SER:OG	1:B:111:LEU:N	2.35	0.59
2:C:20:GLU:O	2:C:21:GLY:C	2.43	0.59
2:C:27:ILE:HD13	2:C:101:ALA:HA	1.85	0.59
2:D:209:LEU:CD1	2:D:265:LEU:HD11	2.27	0.59
2:G:239:LYS:HG2	2:G:315:ILE:HD11	1.83	0.59
2:G:434:ALA:HB1	2:G:435:PRO:HD2	1.85	0.59
2:H:180:LEU:HB2	2:H:185:PHE:HE1	1.68	0.59
2:H:443:VAL:HA	2:H:456:ARG:O	2.03	0.59
1:A:114:ASP:OD2	1:B:155:LYS:CE	2.50	0.59
2:C:194:ASN:C	2:C:194:ASN:OD1	2.45	0.59
2:C:414:ARG:CZ	2:C:419:ASP:OD2	2.51	0.59
2:D:495:ASP:C	2:D:497:LYS:N	2.56	0.59
2:H:481:ILE:C	2:H:483:ARG:N	2.60	0.59
1:A:199:LEU:HB2	1:A:204:LEU:CD1	2.23	0.59
2:D:312:SER:O	2:D:315:ILE:CD1	2.51	0.59
2:G:307:ILE:CG2	2:G:308:LEU:N	2.65	0.59
2:H:243:SER:O	2:H:316:PRO:HG3	2.02	0.59
1:A:134:GLN:HG2	2:D:260:ASN:O	2.03	0.58
2:D:312:SER:O	2:D:315:ILE:HG13	2.02	0.58
2:D:492:ALA:C	2:D:494:ALA:H	2.08	0.58
2:G:377:PHE:CD1	2:G:410:LEU:HD12	2.38	0.58
2:H:373:MET:HG2	2:H:398:ALA:HB2	1.85	0.58
2:D:497:LYS:HD3	2:D:498:ARG:CA	2.33	0.58
2:G:151:LEU:O	2:G:346:ILE:CD1	2.49	0.58
2:G:151:LEU:HA	2:G:154:GLY:HA2	1.84	0.58
2:H:16:VAL:HG22	2:H:27:ILE:HD12	1.83	0.58
2:H:147:THR:HG22	2:H:185:PHE:HD2	1.66	0.58
2:C:359:VAL:CG1	2:C:362:ASP:OD2	2.51	0.58
2:C:414:ARG:NH1	2:C:419:ASP:CG	2.61	0.58
2:C:493:GLU:C	2:C:495:ASP:N	2.61	0.58
2:D:455:VAL:HG12	2:D:456:ARG:N	2.17	0.58
1:E:67:GLN:OE1	1:F:68:ILE:HD13	2.03	0.58
2:G:77:VAL:CG1	2:G:79:ILE:HD12	2.32	0.58
2:H:156:ASP:HA	2:H:180:LEU:HD21	1.84	0.58
1:A:89:PHE:HA	1:B:89:PHE:HE1	1.69	0.58
1:A:92:PHE:HE1	1:A:96:THR:OG1	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:229:GLN:HE21	2:C:229:GLN:CA	2.15	0.58
2:C:322:ILE:O	2:C:326:LEU:HD22	2.02	0.58
2:C:347:GLN:O	2:C:351:ILE:HG13	2.03	0.58
2:C:372:THR:HG21	2:C:378:THR:OG1	2.03	0.58
2:D:98:LYS:HD2	2:D:137:LEU:CD2	2.14	0.58
1:E:95:ARG:HD2	2:G:104:TYR:CE1	2.38	0.58
2:H:361:LEU:CD2	2:H:387:ILE:HD11	2.32	0.58
2:C:191:ALA:HB1	2:C:288:PRO:HB3	1.84	0.58
2:G:491:ASN:ND2	2:G:494:ALA:HB2	2.19	0.58
2:H:119:TYR:CB	2:H:190:THR:HG21	2.31	0.58
2:H:339:VAL:HA	2:H:342:ILE:CD1	2.32	0.58
2:H:361:LEU:HD11	2:H:387:ILE:CD1	2.33	0.58
1:A:196:GLY:HA3	1:A:207:ALA:HB2	1.86	0.58
2:C:18:VAL:HG23	2:C:19:LEU:N	2.19	0.58
2:C:152:ALA:HB2	2:C:343:GLY:N	2.18	0.58
2:C:484:MET:HE3	2:C:484:MET:N	2.18	0.58
2:D:29:ASN:HD22	2:D:29:ASN:H	1.50	0.58
2:D:359:VAL:H	2:G:395:PHE:HB3	1.69	0.58
2:H:479:GLU:HG3	2:H:480:GLU:N	2.18	0.58
2:H:495:ASP:C	2:H:497:LYS:N	2.61	0.58
1:A:89:PHE:HB2	1:B:89:PHE:CE1	2.39	0.58
1:B:123:GLU:OE2	1:B:195:LYS:HD2	2.03	0.58
2:C:205:ILE:CD1	2:C:274:PHE:HE2	2.17	0.58
2:D:385:THR:O	2:D:386:THR:HB	2.02	0.58
2:G:212:GLN:O	2:G:215:GLN:HB3	2.04	0.58
2:H:67:ILE:CD1	2:H:89:ILE:CD1	2.62	0.58
1:A:158:VAL:HG22	1:A:199:LEU:HG	1.84	0.58
1:B:86:TYR:CE2	2:C:359:VAL:HG11	2.38	0.58
2:D:139:VAL:HG12	2:D:141:ARG:N	2.19	0.58
2:G:303:ILE:HG21	2:G:306:VAL:HG23	1.86	0.58
2:H:286:MET:O	2:H:290:ARG:HD2	2.02	0.58
1:A:198:LYS:O	1:A:198:LYS:HG2	2.02	0.58
2:C:462:THR:HG21	2:C:464:LYS:CB	2.31	0.58
2:C:493:GLU:C	2:C:495:ASP:H	2.10	0.58
2:D:389:THR:OG1	2:D:390:SER:N	2.34	0.58
2:G:394:VAL:HG13	2:G:441:ILE:O	2.03	0.58
2:G:414:ARG:O	2:G:420:ASN:ND2	2.37	0.58
2:H:144:ASN:HB3	2:H:146:PRO:HD2	1.86	0.58
2:H:396:THR:OG1	2:H:397:THR:N	2.30	0.58
2:D:44:ASN:C	2:D:46:GLU:H	2.11	0.58
2:D:105:LEU:HD13	2:D:105:LEU:N	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:201:PHE:O	2:D:202:ASP:C	2.46	0.58
2:H:16:VAL:HG22	2:H:16:VAL:O	2.03	0.58
2:H:153:TYR:HB3	2:H:155:LEU:CD1	2.31	0.58
2:H:361:LEU:HD11	2:H:387:ILE:HD12	1.85	0.58
1:A:131:ASP:CB	1:A:136:LYS:HE3	2.32	0.57
1:A:178:GLN:NE2	1:A:213:GLN:HA	2.18	0.57
2:C:73:THR:CG2	2:C:75:TYR:HB3	2.34	0.57
2:C:198:GLY:O	2:C:201:PHE:N	2.37	0.57
2:C:396:THR:CG2	2:H:361:LEU:HB2	2.34	0.57
2:C:499:LYS:O	2:C:502:ALA:HB3	2.03	0.57
2:D:148:ALA:O	2:D:343:GLY:HA3	2.03	0.57
2:D:206:ILE:HD11	2:D:232:LYS:HA	1.85	0.57
1:E:81:ARG:NH1	2:G:355:VAL:HG23	2.19	0.57
2:G:370:ILE:CD1	2:G:445:PHE:CZ	2.86	0.57
1:B:144:MET:SD	2:C:266:GLU:CD	2.86	0.57
2:D:73:THR:HG22	2:D:74:ASP:N	2.19	0.57
2:G:29:ASN:HA	2:G:100:TYR:CE2	2.39	0.57
1:A:149:LEU:O	1:A:152:ALA:HB3	2.04	0.57
1:B:116:LEU:HD13	1:B:197:TYR:CD2	2.23	0.57
2:C:29:ASN:HB2	2:C:30:PRO:CD	2.35	0.57
2:C:414:ARG:HH21	2:C:494:ALA:CB	2.17	0.57
2:D:422:SER:O	2:D:423:LEU:HG	2.05	0.57
2:G:322:ILE:HA	2:G:325:GLU:HB2	1.85	0.57
2:H:124:GLN:O	2:H:127:ALA:HB3	2.05	0.57
1:A:185:GLU:HB3	1:A:186:PRO:HD2	1.86	0.57
1:B:81:ARG:C	1:B:82:TYR:HD1	2.12	0.57
1:B:96:THR:O	1:B:97:ARG:C	2.47	0.57
2:C:193:ASP:OD2	2:C:196:LEU:N	2.36	0.57
2:C:269:LEU:HD11	2:C:274:PHE:HB2	1.86	0.57
2:G:177:ILE:HB	2:G:189:ALA:HB3	1.86	0.57
2:H:147:THR:CG2	2:H:185:PHE:CD2	2.86	0.57
2:H:289:VAL:O	2:H:293:LEU:HG	2.04	0.57
2:C:1:MET:HE3	2:C:110:THR:HG21	1.85	0.57
2:C:43:LYS:NZ	2:C:61:PRO:HD2	2.20	0.57
1:F:84:ARG:O	1:F:87:ALA:HB3	2.05	0.57
1:A:86:TYR:O	1:A:87:ALA:C	2.48	0.57
1:A:120:ASP:O	1:A:123:GLU:N	2.37	0.57
1:A:208:MET:HE1	2:C:229:GLN:OE1	2.05	0.57
2:C:70:HIS:O	2:C:73:THR:HG22	2.03	0.57
2:D:38:SER:O	2:D:39:VAL:CG1	2.53	0.57
2:D:421:LYS:HZ1	2:D:480:GLU:CD	2.13	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:242:LEU:HD23	2:G:274:PHE:CD2	2.40	0.57
1:A:105:LYS:C	1:A:106:TYR:HD1	2.11	0.57
2:C:426:PHE:CD2	2:C:468:ILE:CD1	2.87	0.57
2:C:505:ARG:HG2	2:C:505:ARG:NH1	2.19	0.57
2:D:256:SER:O	2:D:263:LEU:HB2	2.04	0.57
2:G:124:GLN:O	2:G:127:ALA:HB3	2.05	0.57
2:G:151:LEU:O	2:G:151:LEU:HG	2.03	0.57
2:G:483:ARG:NH1	2:G:486:LYS:HZ3	2.02	0.57
2:H:71:MET:O	2:H:124:GLN:HB2	2.05	0.57
2:H:397:THR:HG22	2:H:439:PRO:HD2	1.87	0.57
1:A:114:ASP:OD2	1:B:155:LYS:HE3	2.04	0.57
1:B:141:GLY:C	1:B:142:MET:HE2	2.29	0.57
2:D:213:PHE:O	2:D:214:LYS:C	2.45	0.57
2:D:230:ARG:CZ	2:D:252:LEU:CD1	2.83	0.57
2:D:388:PRO:HG3	2:D:449:ALA:CA	2.34	0.57
2:D:504:LEU:HD13	2:D:507:GLU:CB	2.33	0.57
2:G:398:ALA:HB2	2:G:402:GLN:HE22	1.69	0.57
2:H:166:TYR:CE1	2:H:168:LEU:HD23	2.40	0.57
1:A:92:PHE:C	1:A:92:PHE:CD1	2.74	0.57
1:A:125:ALA:O	1:A:128:ILE:HG13	2.04	0.57
1:A:174:GLN:HB2	2:C:55:ARG:HD2	1.85	0.57
2:C:18:VAL:CG1	2:C:27:ILE:CD1	2.83	0.57
2:C:175:VAL:HG12	2:C:176:SER:N	2.19	0.57
2:C:241:GLU:O	2:C:245:VAL:HG13	2.05	0.57
2:C:307:ILE:C	2:C:308:LEU:HD12	2.30	0.57
2:C:370:ILE:HD13	2:C:407:ILE:CG2	2.34	0.57
2:D:151:LEU:N	2:D:151:LEU:CD1	2.66	0.57
2:D:210:VAL:HG23	2:D:221:LEU:HD13	1.85	0.57
2:G:241:GLU:O	2:G:245:VAL:N	2.37	0.57
1:A:78:MET:SD	1:A:82:TYR:OH	2.62	0.57
1:B:92:PHE:CG	1:B:93:ARG:N	2.73	0.57
2:C:243:SER:O	2:C:271:ARG:NH1	2.38	0.57
2:D:416:MET:O	2:D:417:ALA:C	2.46	0.57
1:F:120:ASP:O	1:F:124:ARG:CB	2.53	0.57
2:G:400:ASP:N	2:G:436:ARG:HB3	2.19	0.57
2:G:430:GLY:O	2:G:431:ILE:C	2.48	0.57
2:H:96:TYR:O	2:H:99:SER:N	2.38	0.57
1:A:68:ILE:O	1:A:72:GLU:HG3	2.05	0.56
2:C:8:ASP:O	2:C:14:SER:HB3	2.04	0.56
2:C:87:GLN:HB3	2:C:134:ILE:HD12	1.87	0.56
2:C:116:VAL:O	2:C:144:ASN:HA	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:405:VAL:HG11	2:C:441:ILE:HD13	1.86	0.56
2:D:13:ASN:HA	2:D:38:SER:H	1.70	0.56
2:D:64:ILE:CG2	2:D:67:ILE:CD1	2.69	0.56
2:D:137:LEU:N	2:D:137:LEU:HD23	2.19	0.56
2:D:166:TYR:CE2	2:D:322:ILE:CD1	2.88	0.56
2:D:229:GLN:O	2:D:230:ARG:C	2.46	0.56
2:D:379:LYS:O	2:D:380:LEU:HD23	2.05	0.56
2:G:387:ILE:HG21	2:G:449:ALA:O	2.05	0.56
2:C:29:ASN:HA	2:C:100:TYR:CD2	2.39	0.56
2:D:58:ILE:O	2:D:58:ILE:CG2	2.53	0.56
2:D:285:THR:HB	2:D:286:MET:SD	2.44	0.56
2:G:164:LEU:HD22	2:G:165:VAL:N	2.21	0.56
2:H:8:ASP:O	2:H:14:SER:HB3	2.04	0.56
2:H:420:ASN:H	2:H:420:ASN:HD22	1.52	0.56
1:A:106:TYR:N	1:A:106:TYR:CD1	2.71	0.56
1:A:120:ASP:O	1:A:121:ASN:C	2.46	0.56
2:C:133:ARG:HB3	2:C:133:ARG:HH11	1.68	0.56
2:C:152:ALA:HB2	2:C:343:GLY:HA2	1.86	0.56
2:C:253:PRO:C	2:C:254:PHE:HD1	2.12	0.56
2:C:370:ILE:HD13	2:C:407:ILE:HG21	1.87	0.56
2:C:416:MET:HE2	2:C:497:LYS:CB	2.34	0.56
2:D:38:SER:O	2:D:39:VAL:HG12	2.05	0.56
2:D:67:ILE:HD13	2:D:89:ILE:CB	2.35	0.56
2:D:70:HIS:O	2:D:86:PRO:HG2	2.05	0.56
2:D:318:VAL:HG12	2:D:322:ILE:HD11	1.87	0.56
2:G:91:ALA:O	2:G:135:ALA:HB2	2.05	0.56
2:G:125:ARG:HA	2:G:128:THR:HG23	1.86	0.56
2:D:42:PHE:CE1	2:D:79:ILE:CD1	2.89	0.56
2:D:372:THR:OG1	2:D:373:MET:N	2.36	0.56
2:G:470:ILE:C	2:G:471:LYS:HD3	2.30	0.56
2:G:492:ALA:O	2:G:493:GLU:HG2	2.06	0.56
2:H:114:ILE:CG2	2:H:115:THR:H	2.19	0.56
2:H:368:LEU:HD23	2:H:368:LEU:N	2.20	0.56
1:A:203:VAL:O	1:A:203:VAL:HG12	2.05	0.56
1:B:94:ARG:NH1	1:B:98:GLN:NE2	2.54	0.56
2:C:203:GLN:O	2:C:204:VAL:C	2.45	0.56
2:C:366:LEU:HA	2:C:383:ARG:CG	2.35	0.56
2:D:339:VAL:HG12	2:D:340:VAL:N	2.19	0.56
2:G:120:PHE:HA	2:G:124:GLN:NE2	2.20	0.56
2:G:279:ALA:O	2:G:282:VAL:HG12	2.05	0.56
2:G:371:GLU:CG	2:G:408:HIS:HB3	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:367:SER:HB3	2:H:383:ARG:CA	2.35	0.56
2:C:232:LYS:O	2:C:233:ASP:C	2.48	0.56
2:C:362:ASP:C	2:C:363:VAL:HG22	2.30	0.56
2:C:471:LYS:HB2	2:C:471:LYS:NZ	2.20	0.56
2:C:505:ARG:HG2	2:C:505:ARG:HH11	1.71	0.56
2:D:161:GLN:N	2:D:180:LEU:HD23	2.20	0.56
2:D:173:PHE:C	2:D:174:ASP:OD1	2.48	0.56
2:G:462:THR:CB	2:G:464:LYS:H	2.17	0.56
1:A:71:LEU:HG	1:A:74:LYS:HD2	1.87	0.56
2:C:79:ILE:HG22	2:C:80:GLU:HG2	1.87	0.56
2:C:390:SER:HB3	2:C:446:ASP:CG	2.30	0.56
2:C:397:THR:HG22	2:C:437:GLY:H	1.71	0.56
2:C:408:HIS:NE2	2:C:422:SER:OG	2.33	0.56
2:D:121:ASN:N	2:D:124:GLN:OE1	2.39	0.56
2:D:143:ILE:HG22	2:D:144:ASN:N	2.20	0.56
2:D:201:PHE:CE1	2:D:281:LEU:HD23	2.40	0.56
2:G:501:ALA:O	2:G:504:LEU:HD23	2.04	0.56
2:H:147:THR:HA	2:H:150:ALA:HB3	1.87	0.56
2:D:14:SER:O	2:D:36:THR:CG2	2.53	0.56
2:D:256:SER:O	2:D:263:LEU:CB	2.54	0.56
1:E:66:ALA:O	1:E:69:ALA:HB3	2.06	0.56
2:G:308:LEU:HD13	2:G:330:PRO:CG	2.35	0.56
1:A:88:ASP:OD1	2:C:3:LYS:HE2	2.06	0.56
2:D:220:ASP:O	2:D:223:LYS:HG2	2.06	0.56
1:F:86:TYR:CE2	2:G:359:VAL:HG13	2.40	0.56
2:H:67:ILE:CG1	2:H:89:ILE:HD13	2.35	0.56
1:A:121:ASN:HD22	1:B:145:VAL:CG2	2.19	0.56
1:B:84:ARG:O	1:B:85:LEU:C	2.48	0.56
1:B:112:ALA:O	1:B:113:SER:C	2.49	0.56
2:C:72:GLY:HA3	2:C:124:GLN:HG2	1.88	0.56
2:C:124:GLN:O	2:C:125:ARG:C	2.48	0.56
2:D:65:ILE:CG2	2:D:66:SER:N	2.54	0.56
2:D:334:VAL:HB	2:D:339:VAL:CG2	2.36	0.56
2:D:499:LYS:HG2	2:D:500:GLU:N	2.21	0.56
2:G:10:GLY:N	2:G:13:ASN:O	2.37	0.56
2:G:492:ALA:C	2:G:493:GLU:HG2	2.31	0.56
2:H:1:MET:O	2:H:1:MET:HG2	2.05	0.56
1:A:138:ILE:HD13	1:B:139:LEU:HD11	1.87	0.55
1:B:165:GLY:O	1:B:188:THR:HG23	2.06	0.55
2:C:5:ILE:HD12	2:C:109:VAL:HG21	1.87	0.55
2:D:504:LEU:CD1	2:D:504:LEU:O	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:166:TYR:HE1	2:H:168:LEU:HD23	1.71	0.55
2:C:258:ASN:CG	2:C:260:ASN:HB3	2.30	0.55
2:D:146:PRO:HB3	2:D:165:VAL:HG21	1.87	0.55
1:E:97:ARG:HD2	1:E:97:ARG:O	2.05	0.55
2:G:489:GLU:OE1	2:G:489:GLU:HA	2.06	0.55
2:H:435:PRO:O	2:H:439:PRO:HD3	2.05	0.55
2:C:502:ALA:O	2:C:505:ARG:HD3	2.05	0.55
2:D:43:LYS:HZ1	2:D:59:THR:HG21	1.71	0.55
2:D:130:ASP:O	2:D:134:ILE:HG13	2.05	0.55
2:D:154:GLY:O	2:D:156:ASP:OD1	2.23	0.55
2:D:408:HIS:HB3	2:D:410:LEU:HD21	1.87	0.55
1:F:60:GLU:N	1:F:63:ALA:HB3	2.21	0.55
2:G:347:GLN:HA	2:G:350:VAL:HB	1.87	0.55
2:H:203:GLN:HE22	2:H:206:ILE:HG21	1.72	0.55
2:C:155:LEU:HD13	2:C:155:LEU:N	2.21	0.55
2:D:120:PHE:CE2	2:D:124:GLN:HB3	2.42	0.55
2:D:208:TYR:CE1	2:D:212:GLN:CG	2.88	0.55
2:D:483:ARG:HH21	1:F:85:LEU:CD2	2.19	0.55
2:G:164:LEU:CD2	2:G:175:VAL:HB	2.36	0.55
2:G:165:VAL:HG22	2:G:176:SER:N	2.13	0.55
2:H:94:LEU:HD12	2:H:97:LEU:HB2	1.88	0.55
2:H:146:PRO:CB	2:H:178:LEU:HD11	2.36	0.55
2:H:149:ALA:HA	2:H:339:VAL:O	2.07	0.55
2:H:339:VAL:HG23	2:H:342:ILE:HD13	1.75	0.55
2:H:361:LEU:HD11	2:H:387:ILE:HG13	1.77	0.55
1:A:134:GLN:O	1:A:137:SER:HB3	2.06	0.55
1:B:163:ALA:O	1:B:164:VAL:C	2.48	0.55
2:C:468:ILE:HG22	2:C:469:THR:N	2.21	0.55
2:D:42:PHE:N	2:D:42:PHE:CD1	2.73	0.55
2:D:405:VAL:HG23	2:D:405:VAL:O	2.05	0.55
1:A:113:SER:OG	1:A:114:ASP:N	2.37	0.55
2:C:102:GLU:O	2:C:106:GLY:N	2.39	0.55
2:D:235:ALA:O	2:D:238:ALA:HB3	2.07	0.55
2:D:315:ILE:HD12	2:D:318:VAL:HG21	1.88	0.55
2:D:332:LYS:CD	2:D:332:LYS:H	2.20	0.55
2:D:420:ASN:N	2:D:420:ASN:ND2	2.54	0.55
2:D:500:GLU:CA	2:D:503:GLU:HB2	2.37	0.55
1:E:72:GLU:HA	1:E:75:LEU:HB2	1.89	0.55
1:E:81:ARG:HG3	1:E:82:TYR:CD1	2.41	0.55
2:H:7:ILE:HD13	2:H:97:LEU:HD23	1.89	0.55
2:H:15:CYS:SG	2:H:338:GLU:CB	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:119:LEU:HD13	1:A:119:LEU:O	2.07	0.55
1:B:153:LEU:C	1:B:155:LYS:N	2.61	0.55
2:C:17:ALA:O	2:C:345:ALA:HB2	2.07	0.55
2:C:282:VAL:CG1	2:C:283:GLU:N	2.70	0.55
2:D:322:ILE:HG23	2:D:326:LEU:CD2	2.37	0.55
2:D:421:LYS:HE3	2:D:480:GLU:OE2	2.06	0.55
2:G:210:VAL:HB	2:G:214:LYS:HZ3	1.70	0.55
2:G:366:LEU:HB2	2:G:411:GLN:NE2	2.18	0.55
2:G:411:GLN:HB2	2:G:423:LEU:HD11	1.89	0.55
2:H:192:GLY:O	2:H:288:PRO:HG3	2.07	0.55
2:H:381:ILE:CD1	2:H:447:ILE:CD1	2.82	0.55
1:A:134:GLN:CG	2:D:260:ASN:O	2.54	0.55
1:B:177:MET:HB3	1:B:210:LYS:CG	2.28	0.55
2:C:303:ILE:O	2:C:328:LYS:HE3	2.07	0.55
2:C:368:LEU:CD2	2:C:411:GLN:HB2	2.37	0.55
2:D:25:LYS:HG3	2:D:26:VAL:H	1.71	0.55
2:D:67:ILE:HD13	2:D:89:ILE:CG2	2.34	0.55
2:D:497:LYS:C	2:D:499:LYS:N	2.64	0.55
1:F:64:ALA:O	1:F:68:ILE:HG13	2.07	0.55
2:G:298:LEU:HB3	2:G:302:ASP:CB	2.37	0.55
2:G:398:ALA:N	2:G:402:GLN:OE1	2.39	0.55
2:H:397:THR:CG2	2:H:439:PRO:HG2	2.37	0.55
2:H:484:MET:O	2:H:487:GLU:HB3	2.07	0.55
1:A:111:LEU:O	1:A:112:ALA:C	2.48	0.55
1:A:160:ALA:HA	1:A:197:TYR:CD1	2.40	0.55
1:B:161:ILE:CD1	1:B:198:LYS:HB3	2.35	0.55
2:C:130:ASP:O	2:C:131:ALA:C	2.49	0.55
2:C:168:LEU:HD13	2:C:197:GLY:HA2	1.87	0.55
2:C:370:ILE:HG12	2:C:409:VAL:HA	1.88	0.55
2:D:236:GLU:O	2:D:239:LYS:N	2.40	0.55
2:D:370:ILE:HD11	2:D:445:PHE:CZ	2.41	0.55
2:D:492:ALA:C	2:D:494:ALA:N	2.62	0.55
2:G:370:ILE:HD11	2:G:445:PHE:CZ	2.41	0.55
2:G:440:GLN:HB2	2:G:460:LEU:HG	1.88	0.55
1:A:119:LEU:O	1:A:119:LEU:HD22	2.07	0.55
2:C:19:LEU:O	2:C:19:LEU:HD23	2.06	0.55
2:D:230:ARG:CZ	2:D:252:LEU:HD13	2.37	0.55
1:E:92:PHE:CE1	1:F:92:PHE:CE2	2.95	0.55
2:G:205:ILE:HG22	2:G:209:LEU:CD1	2.37	0.55
2:G:370:ILE:HG13	2:G:445:PHE:HZ	1.71	0.55
2:G:472:SER:O	2:G:473:SER:HB3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:387:ILE:CG2	2:H:388:PRO:N	2.69	0.55
1:A:75:LEU:HG	1:B:75:LEU:CD2	2.37	0.54
1:A:91:ASN:O	1:A:94:ARG:N	2.40	0.54
1:A:201:ASP:C	1:A:201:ASP:OD1	2.50	0.54
2:C:27:ILE:HD13	2:C:101:ALA:CB	2.37	0.54
2:D:241:GLU:O	2:D:245:VAL:HG13	2.07	0.54
1:A:168:PHE:HB3	1:A:189:VAL:HG22	1.89	0.54
2:C:29:ASN:HD21	2:C:36:THR:HG23	1.70	0.54
2:C:203:GLN:OE1	2:C:203:GLN:HA	2.06	0.54
2:C:257:ALA:HB2	2:C:262:PRO:HA	1.90	0.54
2:D:73:THR:HG22	2:D:74:ASP:H	1.71	0.54
2:D:477:SER:HB3	2:D:481:ILE:CD1	2.37	0.54
2:D:505:ARG:HG3	2:D:506:ASN:H	1.71	0.54
2:G:91:ALA:HB2	2:G:134:ILE:CG2	2.37	0.54
2:G:405:VAL:HG21	2:G:441:ILE:HD13	1.90	0.54
2:G:458:LYS:NZ	2:G:465:GLU:HB3	2.22	0.54
1:A:105:LYS:HB3	1:A:106:TYR:CD1	2.43	0.54
1:A:168:PHE:CD2	1:A:173:HIS:HB2	2.42	0.54
1:B:77:GLU:OE1	1:B:81:ARG:HD3	2.08	0.54
1:B:160:ALA:HB2	1:B:197:TYR:CE1	2.40	0.54
2:C:80:GLU:OE1	2:C:80:GLU:CA	2.53	0.54
2:C:245:VAL:HG22	2:C:247:GLN:H	1.72	0.54
2:D:8:ASP:O	2:D:14:SER:HB3	2.08	0.54
2:D:141:ARG:NH2	2:D:143:ILE:HD11	2.22	0.54
2:D:180:LEU:HA	2:D:184:VAL:O	2.06	0.54
2:D:196:LEU:HD12	2:D:197:GLY:H	1.71	0.54
2:D:322:ILE:HG23	2:D:326:LEU:HD22	1.89	0.54
1:E:71:LEU:HB3	1:F:71:LEU:HD12	1.88	0.54
2:G:77:VAL:CG1	2:G:79:ILE:CD1	2.84	0.54
2:G:249:GLN:CA	2:G:269:LEU:H	2.14	0.54
2:G:414:ARG:NE	2:G:494:ALA:HB3	2.23	0.54
2:G:434:ALA:HB1	2:G:435:PRO:CD	2.37	0.54
1:B:186:PRO:O	1:B:187:ASN:C	2.50	0.54
2:C:269:LEU:HD12	2:C:269:LEU:C	2.33	0.54
2:C:357:ASP:CB	2:C:359:VAL:HG23	2.37	0.54
2:C:426:PHE:CD1	2:C:426:PHE:C	2.85	0.54
2:D:289:VAL:O	2:D:293:LEU:HG	2.07	0.54
2:G:428:LEU:HD13	2:G:466:GLN:HB2	1.88	0.54
1:B:94:ARG:O	1:B:98:GLN:HB2	2.07	0.54
1:E:71:LEU:HD23	1:F:71:LEU:HB2	1.87	0.54
2:G:396:THR:HG1	2:G:437:GLY:HA2	1.70	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:472:SER:C	2:G:474:SER:H	2.16	0.54
2:H:29:ASN:HA	2:H:100:TYR:HD2	1.73	0.54
1:A:177:MET:HE3	2:C:225:LYS:HE2	1.88	0.54
1:B:123:GLU:HB3	1:B:127:LYS:CE	2.38	0.54
1:B:126:LEU:HD23	1:B:126:LEU:N	2.11	0.54
1:B:166:LYS:HG2	1:B:167:PRO:HD3	1.89	0.54
2:C:178:LEU:HD12	2:C:178:LEU:N	2.23	0.54
2:C:493:GLU:OE1	2:C:493:GLU:HA	2.07	0.54
2:D:29:ASN:HD22	2:D:29:ASN:N	2.04	0.54
2:D:270:THR:OG1	2:D:271:ARG:C	2.51	0.54
2:H:141:ARG:NH1	2:H:347:GLN:NE2	2.55	0.54
1:A:126:LEU:O	1:A:129:GLU:OE2	2.25	0.54
2:C:90:SER:O	2:C:94:LEU:HD13	2.07	0.54
2:C:270:THR:HG22	2:C:271:ARG:N	2.23	0.54
2:D:51:GLU:C	2:D:53:ALA:N	2.64	0.54
2:D:86:PRO:HD2	2:D:87:GLN:OE1	2.08	0.54
2:D:173:PHE:CE1	2:D:175:VAL:HG13	2.43	0.54
2:D:175:VAL:CG2	2:D:191:ALA:HB3	2.38	0.54
2:G:64:ILE:CB	2:G:67:ILE:HD11	2.37	0.54
2:G:156:ASP:OD1	2:G:156:ASP:N	2.34	0.54
2:G:308:LEU:HD13	2:G:330:PRO:CB	2.38	0.54
2:G:357:ASP:OD2	2:G:359:VAL:CG2	2.56	0.54
2:G:394:VAL:HG13	2:G:441:ILE:C	2.32	0.54
1:A:79:GLU:HA	1:A:82:TYR:HD2	1.71	0.54
1:A:111:LEU:CD1	1:B:111:LEU:HD12	2.37	0.54
2:D:52:VAL:HA	2:D:55:ARG:NH2	2.23	0.54
2:D:477:SER:HB3	2:D:481:ILE:HD12	1.90	0.54
2:G:400:ASP:CB	2:G:401:ASN:HD22	2.19	0.54
2:H:471:LYS:H	2:H:471:LYS:HD2	1.71	0.54
2:H:504:LEU:O	2:H:507:GLU:HB3	2.08	0.54
1:A:111:LEU:HD12	1:B:111:LEU:HD12	1.89	0.54
1:A:178:GLN:HE21	1:A:213:GLN:HA	1.73	0.54
2:C:252:LEU:O	2:C:255:ILE:HG13	2.07	0.54
2:D:436:ARG:CZ	2:D:436:ARG:HB3	2.38	0.54
2:D:468:ILE:HG22	2:D:469:THR:H	1.67	0.54
2:D:504:LEU:O	2:D:507:GLU:HB3	2.07	0.54
2:G:155:LEU:HB2	2:G:185:PHE:HZ	1.71	0.54
2:G:397:THR:HB	2:G:437:GLY:H	1.72	0.54
2:H:464:LYS:HB2	2:H:464:LYS:HZ2	1.72	0.54
1:A:106:TYR:HD1	1:A:106:TYR:N	2.06	0.54
2:C:154:GLY:C	2:C:156:ASP:N	2.61	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:141:ARG:NE	2:D:143:ILE:HD11	2.23	0.54
2:D:209:LEU:HD12	2:D:231:LEU:HD21	1.89	0.54
2:D:381:ILE:HD13	2:D:447:ILE:HD11	1.89	0.54
2:G:163:ILE:HG22	2:G:164:LEU:N	2.23	0.54
2:G:308:LEU:HD13	2:G:330:PRO:HG3	1.89	0.54
2:H:334:VAL:CG2	2:H:336:PRO:HG3	2.37	0.54
1:A:84:ARG:NH2	2:C:354:GLU:CB	2.71	0.53
2:C:243:SER:O	2:C:316:PRO:HG3	2.08	0.53
2:C:265:LEU:C	2:C:265:LEU:CD2	2.82	0.53
2:D:82:LYS:HD2	2:D:83:GLN:H	1.73	0.53
2:D:483:ARG:HH11	2:D:483:ARG:CG	2.20	0.53
2:G:498:ARG:O	2:G:501:ALA:HB3	2.07	0.53
2:H:409:VAL:O	2:H:409:VAL:HG23	2.07	0.53
2:H:496:ARG:H	2:H:496:ARG:NE	2.05	0.53
1:A:164:VAL:O	1:A:164:VAL:HG12	2.07	0.53
2:C:64:ILE:HG22	2:C:67:ILE:HG13	1.90	0.53
2:C:373:MET:HE1	2:C:503:GLU:O	2.08	0.53
2:D:161:GLN:H	2:D:180:LEU:HD23	1.72	0.53
2:G:306:VAL:HG12	2:G:307:ILE:N	2.23	0.53
2:H:12:THR:O	2:H:13:ASN:CG	2.52	0.53
1:A:84:ARG:O	1:A:85:LEU:C	2.50	0.53
2:C:44:ASN:C	2:C:46:GLU:H	2.16	0.53
2:C:128:THR:O	2:C:131:ALA:HB3	2.08	0.53
2:D:67:ILE:CD1	2:D:89:ILE:HD13	2.38	0.53
2:D:105:LEU:C	2:D:107:GLU:N	2.59	0.53
2:D:192:GLY:HA2	2:D:288:PRO:HB3	1.90	0.53
2:G:153:TYR:OH	2:G:334:VAL:HB	2.08	0.53
2:G:308:LEU:HD11	2:G:319:GLN:CD	2.34	0.53
2:G:321:ALA:O	2:G:325:GLU:HB2	2.09	0.53
2:G:369:GLY:C	2:G:377:PHE:CE1	2.86	0.53
2:G:499:LYS:HG2	2:G:500:GLU:OE1	2.08	0.53
2:H:173:PHE:CZ	2:H:175:VAL:HG22	2.43	0.53
2:H:381:ILE:CD1	2:H:447:ILE:HD11	2.39	0.53
1:B:77:GLU:O	1:B:81:ARG:HB2	2.09	0.53
2:C:153:TYR:HB3	2:C:155:LEU:HD11	1.91	0.53
2:C:221:LEU:HD21	2:C:255:ILE:HG22	1.90	0.53
2:D:497:LYS:C	2:D:499:LYS:H	2.17	0.53
2:G:70:HIS:CG	2:G:75:TYR:CG	2.97	0.53
2:G:91:ALA:HB2	2:G:134:ILE:HG22	1.90	0.53
2:H:128:THR:C	2:H:130:ASP:N	2.60	0.53
2:H:396:THR:OG1	2:H:439:PRO:HD2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:86:TYR:CE2	1:A:90:GLU:OE2	2.61	0.53
1:A:162:GLU:HG2	1:A:166:LYS:HZ2	1.73	0.53
1:B:169:ASP:O	1:B:171:TYR:N	2.42	0.53
2:C:84:TYR:HA	2:C:88:GLU:OE1	2.07	0.53
2:C:478:GLU:HA	2:C:481:ILE:HD12	1.90	0.53
2:D:71:MET:SD	2:D:86:PRO:HB2	2.49	0.53
2:D:164:LEU:HD12	2:D:306:VAL:HG13	1.89	0.53
2:G:239:LYS:HG3	2:G:315:ILE:HD11	1.88	0.53
2:G:372:THR:O	2:G:373:MET:C	2.52	0.53
2:G:495:ASP:CG	2:G:498:ARG:HH12	2.16	0.53
2:H:438:VAL:HG22	2:H:439:PRO:HD3	1.89	0.53
1:A:83:LEU:O	1:A:83:LEU:HG	2.08	0.53
1:B:92:PHE:O	1:B:93:ARG:C	2.49	0.53
2:C:458:LYS:HE2	2:C:463:ASN:HD22	1.73	0.53
2:D:172:THR:OG1	2:D:173:PHE:N	2.39	0.53
2:D:483:ARG:NH2	1:F:85:LEU:HD22	2.23	0.53
2:G:236:GLU:O	2:G:239:LYS:HB3	2.08	0.53
2:G:243:SER:HB3	2:G:315:ILE:HA	1.90	0.53
2:G:433:PRO:O	2:G:434:ALA:HB2	2.09	0.53
2:H:204:VAL:HB	2:H:277:LEU:HD22	1.91	0.53
2:H:389:THR:OG1	2:H:390:SER:N	2.39	0.53
2:H:438:VAL:N	2:H:439:PRO:CD	2.71	0.53
1:A:75:LEU:CD1	1:A:79:GLU:OE2	2.49	0.53
2:C:387:ILE:CG2	2:C:447:ILE:CG2	2.72	0.53
2:D:29:ASN:O	2:D:31:GLU:O	2.26	0.53
2:D:323:LYS:HD2	2:D:329:GLU:CA	2.29	0.53
2:D:325:GLU:C	2:D:326:LEU:CD1	2.80	0.53
1:E:94:ARG:HH12	2:G:106:GLY:HA3	1.74	0.53
1:F:93:ARG:O	1:F:94:ARG:C	2.52	0.53
2:G:281:LEU:CB	2:G:284:ARG:HD3	2.33	0.53
2:G:298:LEU:HB3	2:G:302:ASP:OD2	2.07	0.53
2:G:309:VAL:CG1	2:G:310:GLY:N	2.71	0.53
2:G:377:PHE:CB	2:G:410:LEU:HD12	2.36	0.53
2:H:85:THR:OG1	2:H:88:GLU:HG3	2.08	0.53
1:A:196:GLY:O	1:A:197:TYR:CD1	2.61	0.53
2:C:374:GLY:O	2:C:376:VAL:N	2.42	0.53
2:C:396:THR:OG1	2:C:397:THR:N	2.42	0.53
2:D:25:LYS:HG3	2:D:26:VAL:N	2.24	0.53
2:D:500:GLU:O	2:D:503:GLU:HB2	2.09	0.53
2:G:28:PRO:O	2:G:100:TYR:HE2	1.92	0.53
2:G:227:ALA:O	2:G:230:ARG:HB3	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:416:MET:O	2:H:417:ALA:CB	2.56	0.53
2:C:428:LEU:HG	2:C:429:THR:N	2.24	0.53
2:D:325:GLU:HB3	2:D:326:LEU:CD1	2.38	0.53
2:D:493:GLU:C	2:D:495:ASP:N	2.66	0.53
2:G:212:GLN:HA	2:G:215:GLN:HB3	1.90	0.53
2:G:242:LEU:HD13	2:G:242:LEU:N	2.24	0.53
2:H:148:ALA:O	2:H:343:GLY:HA3	2.08	0.53
2:H:155:LEU:HD22	2:H:155:LEU:N	2.21	0.53
1:A:171:TYR:HD1	2:C:52:VAL:HG21	1.70	0.53
1:A:192:GLU:OE2	1:A:195:LYS:CA	2.57	0.53
1:B:160:ALA:HA	1:B:197:TYR:CD1	2.39	0.53
1:E:81:ARG:HD3	1:E:82:TYR:CE1	2.44	0.53
1:E:198:LYS:C	1:E:200:LYS:H	2.16	0.53
2:G:214:LYS:NZ	2:G:221:LEU:H	2.07	0.53
2:G:275:GLU:O	2:G:279:ALA:N	2.43	0.53
2:G:370:ILE:HG12	2:G:409:VAL:CB	2.39	0.53
2:H:365:PRO:O	2:H:366:LEU:HD13	2.09	0.53
1:B:139:LEU:HD23	1:B:139:LEU:N	2.24	0.52
2:C:153:TYR:CE1	2:C:334:VAL:HG12	2.43	0.52
2:C:339:VAL:HG13	2:C:340:VAL:N	2.24	0.52
2:C:471:LYS:HD3	2:C:471:LYS:N	2.21	0.52
2:D:155:LEU:H	2:D:155:LEU:CD2	2.13	0.52
2:D:210:VAL:HA	2:D:221:LEU:HD13	1.91	0.52
1:E:193:LEU:N	1:E:208:MET:O	2.42	0.52
2:G:162:THR:HG22	2:G:179:GLU:CD	2.34	0.52
2:H:132:GLY:O	2:H:135:ALA:CB	2.51	0.52
2:C:153:TYR:CE1	2:C:334:VAL:HB	2.44	0.52
2:D:164:LEU:HD11	2:D:166:TYR:HB2	1.91	0.52
2:D:211:ASN:O	2:D:215:GLN:HB2	2.08	0.52
2:D:377:PHE:HD1	2:D:378:THR:N	2.06	0.52
2:D:502:ALA:C	2:D:504:LEU:H	2.17	0.52
1:F:60:GLU:N	1:F:63:ALA:CB	2.73	0.52
1:A:85:LEU:HB3	1:B:85:LEU:HD12	1.92	0.52
1:A:177:MET:HB2	1:A:210:LYS:HA	1.91	0.52
1:A:186:PRO:O	1:A:188:THR:N	2.42	0.52
1:B:169:ASP:C	1:B:171:TYR:H	2.16	0.52
2:C:207:ASP:O	2:C:208:TYR:C	2.53	0.52
2:D:75:TYR:CD1	2:D:75:TYR:C	2.88	0.52
2:D:98:LYS:O	2:D:99:SER:C	2.52	0.52
2:D:286:MET:SD	2:D:286:MET:N	2.77	0.52
2:D:485:ILE:O	2:D:488:ALA:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:90:SER:HA	2:G:93:ILE:HD12	1.91	0.52
2:H:362:ASP:HB2	2:H:387:ILE:HG12	1.90	0.52
2:H:370:ILE:HG22	2:H:371:GLU:O	2.10	0.52
1:A:178:GLN:HA	1:A:211:VAL:O	2.09	0.52
2:C:29:ASN:C	2:C:29:ASN:OD1	2.50	0.52
2:C:64:ILE:HG21	2:C:67:ILE:CG1	2.38	0.52
2:C:75:TYR:CD1	2:C:75:TYR:C	2.86	0.52
2:C:430:GLY:O	2:C:431:ILE:C	2.51	0.52
2:D:43:LYS:NZ	2:D:59:THR:HG21	2.24	0.52
2:D:121:ASN:ND2	2:D:123:ALA:N	2.55	0.52
2:D:397:THR:HB	2:D:439:PRO:HG2	1.90	0.52
2:H:298:LEU:HD21	2:H:303:ILE:CB	2.40	0.52
2:H:309:VAL:HG22	2:H:339:VAL:HG11	1.92	0.52
2:H:445:PHE:CE1	2:H:455:VAL:HG22	2.44	0.52
1:B:169:ASP:O	1:B:170:PRO:C	2.50	0.52
2:D:136:GLY:C	2:D:137:LEU:HD23	2.34	0.52
2:D:251:SER:CB	2:D:266:GLU:OE2	2.58	0.52
2:D:312:SER:O	2:D:315:ILE:HD11	2.10	0.52
2:G:161:GLN:HA	2:G:304:ASP:OD2	2.10	0.52
2:G:285:THR:C	2:G:288:PRO:HD2	2.34	0.52
2:H:448:ASP:OD1	2:H:448:ASP:O	2.26	0.52
1:A:82:TYR:O	1:B:82:TYR:CD2	2.62	0.52
1:A:115:LEU:C	1:A:117:PRO:HD2	2.35	0.52
2:C:220:ASP:OD2	2:C:223:LYS:HG3	2.10	0.52
2:C:274:PHE:C	2:C:274:PHE:CD1	2.87	0.52
2:C:498:ARG:C	2:C:500:GLU:H	2.17	0.52
2:D:27:ILE:HG12	2:D:104:TYR:CD2	2.45	0.52
2:D:85:THR:O	2:D:86:PRO:C	2.51	0.52
2:D:120:PHE:CD2	2:D:124:GLN:HB2	2.44	0.52
2:D:147:THR:O	2:D:150:ALA:HB3	2.09	0.52
2:D:377:PHE:CD1	2:D:378:THR:N	2.78	0.52
1:E:111:LEU:O	1:E:115:LEU:CB	2.58	0.52
2:G:398:ALA:HB3	2:G:402:GLN:HE22	1.71	0.52
2:H:376:VAL:HG23	2:H:377:PHE:N	2.25	0.52
1:A:194:GLN:HG2	1:A:205:ARG:HH22	1.75	0.52
1:B:198:LYS:HA	1:B:204:LEU:HD12	1.91	0.52
2:C:164:LEU:HD13	2:C:164:LEU:C	2.35	0.52
2:C:177:ILE:C	2:C:178:LEU:HD12	2.34	0.52
2:C:308:LEU:HD11	2:C:330:PRO:CB	2.40	0.52
2:D:206:ILE:CD1	2:D:232:LYS:HA	2.39	0.52
2:D:213:PHE:HB3	2:D:221:LEU:HD11	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:71:LEU:HD22	1:F:68:ILE:HA	1.91	0.52
2:G:193:ASP:OD2	2:G:284:ARG:NH2	2.43	0.52
2:H:4:ILE:HG12	2:H:111:ARG:HD3	1.90	0.52
1:B:122:PHE:CE1	1:B:146:TYR:CB	2.78	0.52
2:C:416:MET:CE	2:C:497:LYS:HB3	2.40	0.52
2:D:164:LEU:HD13	2:D:165:VAL:N	2.24	0.52
2:D:225:LYS:HD2	2:D:225:LYS:N	2.24	0.52
2:D:282:VAL:O	2:D:286:MET:SD	2.68	0.52
1:E:75:LEU:O	1:E:78:MET:N	2.42	0.52
1:E:77:GLU:O	1:E:78:MET:C	2.50	0.52
1:B:108:ALA:O	1:B:109:GLN:C	2.53	0.52
1:B:203:VAL:O	1:B:203:VAL:HG12	2.07	0.52
2:C:279:ALA:O	2:C:282:VAL:HG12	2.10	0.52
2:D:11:THR:HG23	2:D:68:LYS:NZ	2.23	0.52
2:D:162:THR:HA	2:D:179:GLU:HA	1.92	0.52
2:D:299:THR:O	2:D:302:ASP:HB2	2.10	0.52
2:D:426:PHE:HZ	2:D:457:ALA:HB3	1.75	0.52
2:G:176:SER:O	2:G:178:LEU:HD13	2.10	0.52
2:H:4:ILE:CG1	2:H:111:ARG:HD3	2.40	0.52
1:A:169:ASP:O	1:A:171:TYR:N	2.43	0.52
2:C:64:ILE:HD13	2:C:89:ILE:HG12	1.92	0.52
2:C:270:THR:HG22	2:C:271:ARG:H	1.75	0.52
2:C:308:LEU:CD1	2:C:330:PRO:HB2	2.40	0.52
2:D:150:ALA:O	2:D:154:GLY:N	2.43	0.52
2:D:201:PHE:CD1	2:D:281:LEU:HD23	2.45	0.52
2:G:396:THR:OG1	2:G:397:THR:N	2.41	0.52
2:H:409:VAL:HG21	2:H:470:ILE:CD1	2.40	0.52
2:H:438:VAL:N	2:H:439:PRO:HD3	2.23	0.52
2:H:479:GLU:HA	2:H:482:GLN:HG3	1.91	0.52
2:C:97:LEU:O	2:C:98:LYS:C	2.53	0.51
2:C:166:TYR:C	2:C:166:TYR:HD1	2.19	0.51
2:C:401:ASN:ND2	2:H:1:MET:HG3	2.25	0.51
2:D:209:LEU:HD13	2:D:209:LEU:C	2.34	0.51
2:D:498:ARG:HB3	2:D:498:ARG:CZ	2.40	0.51
1:E:75:LEU:O	1:E:79:GLU:HG3	2.10	0.51
2:H:79:ILE:HG22	2:H:80:GLU:CG	2.40	0.51
2:H:143:ILE:CG2	2:H:144:ASN:N	2.73	0.51
2:H:494:ALA:HA	2:H:496:ARG:HH11	1.76	0.51
1:A:75:LEU:HG	1:B:75:LEU:HD21	1.92	0.51
1:B:153:LEU:O	1:B:154:LYS:C	2.52	0.51
2:C:129:LYS:CD	2:C:142:ILE:HD12	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:282:VAL:O	2:C:285:THR:HB	2.09	0.51
2:D:11:THR:H	2:D:68:LYS:HZ2	1.55	0.51
2:D:192:GLY:HA2	2:D:288:PRO:CB	2.40	0.51
2:D:323:LYS:HE3	2:D:329:GLU:N	2.25	0.51
2:G:152:ALA:HB2	2:G:343:GLY:CA	2.41	0.51
2:G:155:LEU:HD22	2:G:155:LEU:N	2.25	0.51
2:G:274:PHE:HA	2:G:277:LEU:HB2	1.92	0.51
2:H:12:THR:CB	2:H:170:GLY:H	2.23	0.51
2:H:193:ASP:OD2	2:H:196:LEU:HD22	2.11	0.51
1:A:163:ALA:O	1:A:166:LYS:HD2	2.09	0.51
2:C:1:MET:HG3	2:C:2:SER:N	2.24	0.51
2:D:116:VAL:CG1	2:D:128:THR:HG21	2.39	0.51
1:E:67:GLN:OE1	1:F:68:ILE:CD1	2.58	0.51
1:E:94:ARG:HA	1:E:97:ARG:HB3	1.92	0.51
2:G:118:ALA:HB1	2:G:187:VAL:HG21	1.92	0.51
2:G:205:ILE:CG2	2:G:235:ALA:CB	2.85	0.51
2:G:306:VAL:CG1	2:G:307:ILE:N	2.72	0.51
2:H:290:ARG:O	2:H:294:GLN:HB2	2.11	0.51
2:H:420:ASN:ND2	2:H:420:ASN:N	2.59	0.51
1:B:93:ARG:O	1:B:94:ARG:C	2.54	0.51
1:B:178:GLN:CG	1:B:213:GLN:HB3	2.41	0.51
2:C:29:ASN:HB3	2:C:100:TYR:CE2	2.45	0.51
2:C:119:TYR:HD2	2:C:190:THR:HG21	1.74	0.51
2:C:396:THR:N	2:H:359:VAL:O	2.42	0.51
2:D:441:ILE:HG23	2:D:458:LYS:O	2.10	0.51
1:E:81:ARG:O	1:E:84:ARG:HB3	2.09	0.51
1:F:147:ARG:O	1:F:151:ASP:CB	2.58	0.51
2:G:458:LYS:HZ3	2:G:465:GLU:HB3	1.75	0.51
2:G:497:LYS:C	2:G:499:LYS:N	2.68	0.51
2:H:135:ALA:CB	2:H:137:LEU:HD12	2.37	0.51
2:H:156:ASP:HA	2:H:180:LEU:CD1	2.41	0.51
2:H:431:ILE:HG23	2:H:432:PRO:HD2	1.92	0.51
2:H:505:ARG:C	2:H:507:GLU:N	2.68	0.51
1:B:171:TYR:CE1	2:D:52:VAL:HG21	2.46	0.51
2:C:273:LYS:HE3	2:C:277:LEU:HD21	1.92	0.51
2:D:82:LYS:HD2	2:D:83:GLN:N	2.26	0.51
2:D:366:LEU:HD21	2:D:484:MET:SD	2.51	0.51
2:G:162:THR:HG22	2:G:179:GLU:CG	2.39	0.51
2:G:367:SER:HB3	2:G:379:LYS:HG2	1.92	0.51
2:H:373:MET:HG2	2:H:398:ALA:CB	2.41	0.51
2:H:412:GLY:HA3	2:H:420:ASN:HB3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:89:PHE:CB	1:B:89:PHE:CD1	2.91	0.51
1:A:117:PRO:O	1:A:120:ASP:HB2	2.11	0.51
2:C:166:TYR:CZ	2:C:173:PHE:HE1	2.27	0.51
2:C:431:ILE:HD13	2:C:441:ILE:HD11	1.92	0.51
2:D:50:GLY:O	2:D:53:ALA:HB3	2.10	0.51
2:D:230:ARG:HD2	2:D:252:LEU:HD21	1.91	0.51
2:G:285:THR:O	2:G:288:PRO:HD2	2.11	0.51
2:G:383:ARG:HD2	2:G:384:ASN:CA	2.38	0.51
2:H:104:TYR:O	2:H:104:TYR:HD1	1.94	0.51
1:A:133:GLU:OE2	1:B:133:GLU:OE1	2.29	0.51
2:C:373:MET:SD	2:C:373:MET:C	2.93	0.51
2:D:143:ILE:CG2	2:D:144:ASN:N	2.73	0.51
1:E:134:GLN:C	1:E:136:LYS:H	2.18	0.51
1:E:140:GLN:C	1:E:142:MET:H	2.18	0.51
2:H:79:ILE:HG22	2:H:80:GLU:HG3	1.92	0.51
1:A:138:ILE:HD13	1:B:139:LEU:CD1	2.41	0.51
1:A:162:GLU:H	1:A:162:GLU:CD	2.18	0.51
2:D:4:ILE:HD13	2:D:351:ILE:HB	1.93	0.51
2:D:214:LYS:HE2	2:D:220:ASP:OD1	2.11	0.51
2:D:376:VAL:CG2	2:D:377:PHE:N	2.74	0.51
2:D:497:LYS:HD3	2:D:498:ARG:HA	1.92	0.51
2:D:502:ALA:C	2:D:504:LEU:N	2.69	0.51
2:G:381:ILE:HG22	2:G:382:GLU:O	2.10	0.51
2:H:364:THR:O	2:H:365:PRO:C	2.50	0.51
1:A:85:LEU:N	1:A:85:LEU:HD23	2.25	0.51
1:A:92:PHE:CE1	1:A:96:THR:OG1	2.63	0.51
2:C:27:ILE:CD1	2:C:101:ALA:HB1	2.40	0.51
2:D:168:LEU:HD11	2:D:197:GLY:HA2	1.93	0.51
2:D:168:LEU:O	2:D:310:GLY:HA3	2.10	0.51
2:D:436:ARG:HB3	2:D:436:ARG:NH1	2.26	0.51
1:E:96:THR:HG23	1:F:100:MET:CE	2.41	0.51
1:E:196:GLY:HA3	1:E:207:ALA:HB2	1.93	0.51
2:G:67:ILE:O	2:G:67:ILE:CG2	2.59	0.51
2:H:134:ILE:C	2:H:136:GLY:H	2.19	0.51
2:H:479:GLU:C	2:H:479:GLU:CD	2.78	0.51
2:H:492:ALA:C	2:H:494:ALA:N	2.67	0.51
1:A:75:LEU:HD21	1:B:75:LEU:HD22	1.93	0.51
1:A:123:GLU:HG2	1:A:195:LYS:HE2	1.94	0.51
1:B:190:VAL:HG12	1:B:191:GLU:HG2	1.92	0.51
2:D:55:ARG:HG3	2:D:55:ARG:NH1	2.26	0.51
2:D:99:SER:O	2:D:102:GLU:HB2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:274:PHE:O	2:D:278:SER:N	2.43	0.51
2:D:494:ALA:HA	2:D:496:ARG:CD	2.41	0.51
2:D:504:LEU:HD13	2:D:504:LEU:O	2.11	0.51
2:G:280:HIS:CE1	2:G:281:LEU:CD1	2.94	0.51
1:A:89:PHE:CD1	1:A:90:GLU:N	2.78	0.50
2:C:162:THR:HB	2:C:304:ASP:OD1	2.10	0.50
2:C:366:LEU:HD23	2:C:383:ARG:CG	2.35	0.50
1:F:98:GLN:HA	1:F:101:GLU:CG	2.42	0.50
2:G:92:ILE:HA	2:G:95:GLN:HB2	1.93	0.50
2:G:126:GLN:HG3	2:G:130:ASP:OD2	2.10	0.50
2:H:202:ASP:OD1	2:H:235:ALA:HB1	2.11	0.50
2:H:381:ILE:HD13	2:H:447:ILE:HD11	1.90	0.50
1:A:149:LEU:HG	1:B:118:VAL:HG21	1.93	0.50
2:C:257:ALA:HA	2:C:263:LEU:HD12	1.90	0.50
2:C:258:ASN:ND2	2:C:260:ASN:HB3	2.27	0.50
2:C:497:LYS:CA	2:C:500:GLU:OE2	2.59	0.50
2:D:49:VAL:CG2	2:D:50:GLY:N	2.74	0.50
2:D:493:GLU:C	2:D:495:ASP:H	2.18	0.50
2:G:403:THR:HG23	2:G:404:THR:HG22	1.94	0.50
2:G:414:ARG:HH21	2:G:491:ASN:HB3	1.76	0.50
2:H:97:LEU:O	2:H:100:TYR:CD1	2.65	0.50
2:H:163:ILE:HG22	2:H:164:LEU:O	2.11	0.50
2:H:166:TYR:HB3	2:H:307:ILE:O	2.11	0.50
1:B:111:LEU:O	1:B:112:ALA:C	2.51	0.50
2:C:409:VAL:CG1	2:C:470:ILE:CD1	2.77	0.50
2:C:431:ILE:CG2	2:C:432:PRO:HD2	2.40	0.50
2:D:27:ILE:HG23	2:D:28:PRO:HD2	1.93	0.50
2:D:38:SER:C	2:D:39:VAL:CG1	2.85	0.50
2:D:52:VAL:O	2:D:52:VAL:HG22	2.11	0.50
2:D:70:HIS:CE1	2:D:75:TYR:HE2	2.28	0.50
2:D:90:SER:HA	2:D:93:ILE:HD12	1.92	0.50
2:D:459:ASP:OD1	2:D:463:ASN:N	2.44	0.50
2:G:28:PRO:O	2:G:100:TYR:CE2	2.65	0.50
2:G:94:LEU:HD13	2:G:97:LEU:HD22	1.92	0.50
2:H:181:GLY:C	2:H:183:GLY:H	2.20	0.50
2:H:310:GLY:O	2:H:313:THR:HG22	2.11	0.50
2:C:29:ASN:HB2	2:C:30:PRO:HD2	1.93	0.50
2:C:59:THR:O	2:C:59:THR:HG22	2.11	0.50
2:C:240:LYS:O	2:C:241:GLU:C	2.54	0.50
2:C:372:THR:HB	2:H:358:VAL:O	2.10	0.50
2:C:484:MET:HA	2:C:487:GLU:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:120:PHE:CD2	2:D:124:GLN:CB	2.95	0.50
2:D:409:VAL:CG2	2:D:409:VAL:O	2.58	0.50
1:E:64:ALA:O	1:E:68:ILE:HG13	2.11	0.50
2:G:387:ILE:O	2:G:447:ILE:HG22	2.11	0.50
2:H:292:ALA:HA	2:H:295:ASP:CG	2.36	0.50
1:B:111:LEU:HD13	1:B:111:LEU:C	2.37	0.50
2:C:37:PRO:O	2:C:50:GLY:HA2	2.10	0.50
2:C:43:LYS:NZ	2:C:60:ASN:HA	2.25	0.50
2:C:288:PRO:HA	2:C:291:GLN:HB2	1.94	0.50
2:C:387:ILE:HB	2:C:388:PRO:HD3	1.94	0.50
2:D:367:SER:OG	2:D:413:GLU:OE1	2.27	0.50
2:G:118:ALA:HB1	2:G:187:VAL:HG11	1.91	0.50
2:H:405:VAL:HG11	2:H:441:ILE:CD1	2.42	0.50
2:H:496:ARG:HD3	2:H:496:ARG:H	1.71	0.50
1:A:78:MET:O	1:A:82:TYR:CD1	2.65	0.50
1:A:82:TYR:HA	1:B:82:TYR:HD2	1.76	0.50
1:A:152:ALA:O	1:A:153:LEU:C	2.51	0.50
2:C:196:LEU:HD12	2:C:197:GLY:H	1.68	0.50
2:D:67:ILE:HD13	2:D:89:ILE:HB	1.93	0.50
2:D:109:VAL:HG23	2:D:110:THR:N	2.25	0.50
2:D:458:LYS:HG2	2:D:465:GLU:HA	1.93	0.50
2:D:494:ALA:O	2:D:496:ARG:HG2	2.11	0.50
1:E:85:LEU:HG	1:F:82:TYR:OH	2.11	0.50
2:H:180:LEU:HB2	2:H:185:PHE:CE1	2.47	0.50
1:A:75:LEU:O	1:A:78:MET:N	2.45	0.50
1:B:174:GLN:HA	2:D:55:ARG:HG2	1.94	0.50
2:C:205:ILE:HD11	2:C:274:PHE:CD2	2.47	0.50
2:D:14:SER:O	2:D:36:THR:HG23	2.12	0.50
2:D:180:LEU:O	2:D:180:LEU:HG	2.08	0.50
2:D:361:LEU:O	2:D:362:ASP:OD1	2.29	0.50
2:G:291:GLN:O	2:G:295:ASP:CG	2.55	0.50
2:H:203:GLN:OE1	2:H:206:ILE:HD12	2.12	0.50
2:H:286:MET:HE1	2:H:289:VAL:HG11	1.93	0.50
2:H:492:ALA:C	2:H:494:ALA:H	2.18	0.50
2:H:502:ALA:O	2:H:504:LEU:N	2.44	0.50
2:C:100:TYR:O	2:C:103:ASP:N	2.45	0.50
2:C:395:PHE:CE2	2:C:443:VAL:HG11	2.47	0.50
2:D:8:ASP:HA	2:D:115:THR:CG2	2.42	0.50
2:D:67:ILE:HD11	2:D:89:ILE:HD13	1.94	0.50
2:D:335:ASN:O	2:D:338:GLU:HG2	2.11	0.50
2:D:347:GLN:O	2:D:351:ILE:HG13	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:426:PHE:CE1	2:D:427:GLN:O	2.63	0.50
1:E:194:GLN:O	1:E:208:MET:N	2.44	0.50
1:F:81:ARG:O	1:F:85:LEU:HD23	2.11	0.50
2:H:17:ALA:N	2:H:341:ALA:HB1	2.27	0.50
2:H:71:MET:HE3	2:H:128:THR:HG23	1.92	0.50
2:H:361:LEU:HD21	2:H:387:ILE:CD1	2.40	0.50
2:H:481:ILE:O	2:H:483:ARG:N	2.45	0.50
1:B:165:GLY:O	1:B:166:LYS:C	2.55	0.50
2:C:155:LEU:HD13	2:C:155:LEU:H	1.75	0.50
2:D:38:SER:C	2:D:39:VAL:HG13	2.37	0.50
2:D:372:THR:HG21	2:D:378:THR:HG23	1.94	0.50
2:D:416:MET:CE	2:D:417:ALA:H	2.17	0.50
2:G:153:TYR:CE1	2:G:334:VAL:HB	2.47	0.50
2:H:370:ILE:CG2	2:H:371:GLU:N	2.74	0.50
1:A:198:LYS:HB2	1:A:203:VAL:HG22	1.94	0.49
1:B:75:LEU:O	1:B:76:SER:C	2.52	0.49
1:B:94:ARG:CZ	1:B:98:GLN:NE2	2.75	0.49
2:D:16:VAL:CG1	2:D:100:TYR:OH	2.60	0.49
2:D:192:GLY:N	2:D:288:PRO:HB3	2.26	0.49
2:D:309:VAL:O	2:D:313:THR:HG21	2.12	0.49
2:D:361:LEU:C	2:D:362:ASP:CG	2.79	0.49
2:D:370:ILE:CD1	2:D:445:PHE:CZ	2.95	0.49
1:E:92:PHE:HE1	1:F:92:PHE:CE2	2.30	0.49
2:G:334:VAL:HG22	2:G:335:ASN:N	2.27	0.49
2:G:414:ARG:HE	2:G:491:ASN:HB3	1.78	0.49
2:H:414:ARG:CZ	2:H:491:ASN:HD21	2.25	0.49
2:C:166:TYR:C	2:C:166:TYR:CD1	2.89	0.49
2:C:258:ASN:OD1	2:C:260:ASN:HB3	2.12	0.49
2:C:484:MET:HE3	2:C:484:MET:CA	2.43	0.49
2:D:145:GLU:HB2	2:D:146:PRO:HD3	1.94	0.49
2:D:476:LEU:CB	2:D:480:GLU:CD	2.84	0.49
1:F:61:LEU:H	1:F:61:LEU:CD2	2.24	0.49
2:G:11:THR:O	2:G:12:THR:CB	2.59	0.49
2:G:308:LEU:CD1	2:G:330:PRO:HG3	2.41	0.49
1:B:93:ARG:O	1:B:96:THR:OG1	2.22	0.49
2:C:366:LEU:HA	2:C:383:ARG:HG2	1.95	0.49
2:C:468:ILE:CG2	2:C:469:THR:N	2.75	0.49
1:B:133:GLU:O	1:B:136:LYS:HD3	2.12	0.49
2:C:286:MET:N	2:C:286:MET:HE2	2.27	0.49
2:D:274:PHE:CD1	2:D:274:PHE:C	2.90	0.49
2:D:294:GLN:O	2:D:297:GLY:N	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:484:MET:HA	2:D:487:GLU:HB2	1.95	0.49
1:E:113:SER:CB	1:E:204:LEU:CB	2.91	0.49
1:F:66:ALA:O	1:F:69:ALA:HB3	2.11	0.49
2:G:495:ASP:OD2	2:G:498:ARG:NH2	2.41	0.49
2:G:503:GLU:C	2:G:505:ARG:N	2.70	0.49
2:H:164:LEU:HB3	2:H:306:VAL:HG13	1.94	0.49
2:H:481:ILE:C	2:H:483:ARG:H	2.20	0.49
2:H:487:GLU:O	2:H:490:GLU:HG2	2.12	0.49
1:A:69:ALA:HA	1:A:72:GLU:OE2	2.12	0.49
1:B:121:ASN:OD1	1:B:121:ASN:N	2.45	0.49
2:D:43:LYS:NZ	2:D:59:THR:CG2	2.76	0.49
2:D:239:LYS:O	2:D:240:LYS:C	2.55	0.49
2:D:251:SER:OG	2:D:253:PRO:CD	2.45	0.49
2:D:407:ILE:HD12	2:D:426:PHE:HE2	1.70	0.49
1:A:103:ALA:O	1:A:107:ARG:CB	2.61	0.49
2:C:208:TYR:CE2	2:C:273:LYS:CE	2.96	0.49
2:C:238:ALA:O	2:C:242:LEU:HD22	2.12	0.49
2:C:277:LEU:N	2:C:277:LEU:HD23	2.27	0.49
2:G:227:ALA:O	2:G:231:LEU:CD1	2.60	0.49
2:G:347:GLN:NE2	2:G:350:VAL:HG11	2.27	0.49
2:G:476:LEU:HB3	2:G:480:GLU:OE2	2.12	0.49
2:H:67:ILE:HG22	2:H:67:ILE:O	2.12	0.49
1:A:64:ALA:HB2	1:B:64:ALA:HB1	1.95	0.49
2:C:13:ASN:HA	2:C:38:SER:H	1.76	0.49
2:D:140:GLU:CB	2:D:351:ILE:HG21	2.41	0.49
2:D:146:PRO:O	2:D:147:THR:C	2.56	0.49
1:E:65:LYS:O	1:E:69:ALA:HB2	2.11	0.49
2:G:70:HIS:CE1	2:G:75:TYR:CE1	3.01	0.49
2:G:347:GLN:HE22	2:G:350:VAL:HG11	1.77	0.49
2:H:385:THR:HG22	2:H:386:THR:HG22	1.95	0.49
1:A:185:GLU:O	1:A:212:SER:HB2	2.12	0.49
2:C:18:VAL:HG23	2:C:19:LEU:H	1.76	0.49
2:C:265:LEU:HD23	2:C:265:LEU:C	2.38	0.49
2:C:390:SER:O	2:H:482:GLN:OE1	2.31	0.49
2:D:339:VAL:HA	2:D:342:ILE:HD12	1.93	0.49
1:F:67:GLN:HA	1:F:70:GLU:HB2	1.93	0.49
2:H:133:ARG:HA	2:H:137:LEU:O	2.13	0.49
1:B:116:LEU:CD1	1:B:197:TYR:CD2	2.92	0.49
2:C:116:VAL:HB	2:C:117:PRO:HD2	1.95	0.49
2:C:167:ASP:HA	2:C:309:VAL:HB	1.94	0.49
2:C:392:SER:HG	2:C:444:THR:HB	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:403:THR:CG2	2:C:404:THR:HG22	2.38	0.49
2:D:110:THR:HG22	2:D:111:ARG:N	2.27	0.49
2:D:221:LEU:C	2:D:223:LYS:H	2.19	0.49
2:G:120:PHE:HB3	2:G:124:GLN:HG3	1.95	0.49
2:G:164:LEU:HD23	2:G:177:ILE:N	2.27	0.49
2:H:207:ASP:O	2:H:211:ASN:HB2	2.12	0.49
2:H:365:PRO:CB	2:H:481:ILE:HD13	2.43	0.49
1:A:70:GLU:HB3	1:A:74:LYS:CE	2.35	0.49
1:B:86:TYR:O	1:B:87:ALA:C	2.52	0.49
1:B:142:MET:HE2	1:B:142:MET:CA	2.42	0.49
2:C:288:PRO:O	2:C:289:VAL:C	2.56	0.49
2:C:315:ILE:O	2:C:318:VAL:HB	2.12	0.49
2:C:325:GLU:OE1	2:C:325:GLU:CA	2.60	0.49
2:D:40:VAL:CG2	2:D:41:ALA:N	2.71	0.49
2:D:164:LEU:C	2:D:164:LEU:CD1	2.84	0.49
2:D:190:THR:HG22	2:D:191:ALA:N	2.28	0.49
2:D:355:VAL:HG23	2:D:355:VAL:O	2.12	0.49
2:D:366:LEU:HD21	2:D:412:GLY:HA2	1.94	0.49
2:D:496:ARG:O	2:D:497:LYS:C	2.54	0.49
1:F:91:ASN:CG	2:G:386:THR:OG1	2.56	0.49
2:G:206:ILE:HG23	2:G:231:LEU:CD2	2.38	0.49
2:H:347:GLN:O	2:H:350:VAL:N	2.45	0.49
2:H:385:THR:O	2:H:386:THR:HB	2.12	0.49
2:C:380:LEU:O	2:C:391:LYS:HD3	2.13	0.48
2:D:19:LEU:HA	2:D:24:VAL:HA	1.95	0.48
2:D:483:ARG:O	2:D:486:LYS:CG	2.61	0.48
1:E:70:GLU:O	1:E:73:ALA:HB3	2.13	0.48
2:G:91:ALA:O	2:G:95:GLN:HG3	2.13	0.48
2:G:399:ALA:O	2:G:400:ASP:C	2.56	0.48
2:G:484:MET:HE3	2:G:487:GLU:CB	2.38	0.48
2:G:498:ARG:CZ	2:G:498:ARG:CB	2.91	0.48
2:H:4:ILE:CG2	2:H:348:GLY:O	2.61	0.48
2:H:127:ALA:C	2:H:130:ASP:HB2	2.35	0.48
2:D:443:VAL:O	2:D:443:VAL:HG22	2.13	0.48
2:G:361:LEU:CB	2:G:387:ILE:HD12	2.34	0.48
2:H:409:VAL:CG2	2:H:470:ILE:HD11	2.40	0.48
1:B:165:GLY:HA2	1:B:189:VAL:O	2.13	0.48
2:C:119:TYR:O	2:C:120:PHE:C	2.56	0.48
2:C:143:ILE:HG22	2:C:144:ASN:N	2.28	0.48
2:C:438:VAL:N	2:C:439:PRO:CD	2.76	0.48
2:D:6:GLY:HA2	2:D:113:VAL:CG1	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:141:ARG:HG3	2:D:142:ILE:H	1.78	0.48
2:D:178:LEU:N	2:D:178:LEU:CD1	2.73	0.48
2:G:409:VAL:CG1	2:G:424:GLY:H	2.23	0.48
2:G:484:MET:O	2:G:487:GLU:N	2.46	0.48
2:C:44:ASN:C	2:C:46:GLU:N	2.71	0.48
2:D:18:VAL:CG2	2:D:19:LEU:N	2.75	0.48
2:D:504:LEU:CD1	2:D:507:GLU:HB3	2.40	0.48
2:G:164:LEU:HA	2:G:177:ILE:HA	1.94	0.48
2:G:210:VAL:HB	2:G:221:LEU:HB2	1.95	0.48
2:G:380:LEU:HD12	2:G:445:PHE:HE2	1.67	0.48
2:G:462:THR:CG2	2:G:464:LYS:CB	2.85	0.48
1:B:124:ARG:HB3	2:D:254:PHE:CD2	2.48	0.48
2:C:25:LYS:HD2	2:C:25:LYS:HA	1.63	0.48
2:C:191:ALA:HB2	2:C:292:ALA:HB2	1.95	0.48
2:C:397:THR:HG23	2:C:436:ARG:HA	1.94	0.48
2:D:73:THR:C	2:D:75:TYR:H	2.20	0.48
2:D:381:ILE:HD13	2:D:447:ILE:CD1	2.44	0.48
2:G:227:ALA:O	2:G:231:LEU:HD13	2.14	0.48
2:G:299:THR:HB	2:G:300:PRO:HD2	1.95	0.48
2:H:71:MET:HE2	2:H:128:THR:HG23	1.95	0.48
2:H:214:LYS:CE	2:H:220:ASP:HA	2.43	0.48
2:C:102:GLU:O	2:C:103:ASP:C	2.56	0.48
2:C:131:ALA:O	2:C:134:ILE:HB	2.14	0.48
2:C:182:ASP:O	2:C:183:GLY:C	2.57	0.48
2:C:366:LEU:CD2	2:C:367:SER:H	2.21	0.48
2:D:50:GLY:O	2:D:53:ALA:N	2.37	0.48
2:D:221:LEU:HD12	2:D:221:LEU:H	1.78	0.48
2:D:224:ASP:OD2	2:D:226:MET:CB	2.61	0.48
2:D:272:ALA:O	2:D:275:GLU:N	2.47	0.48
1:F:87:ALA:HA	2:G:386:THR:CB	2.43	0.48
2:G:412:GLY:HA3	2:G:420:ASN:OD1	2.13	0.48
2:H:292:ALA:O	2:H:295:ASP:HB2	2.14	0.48
1:A:85:LEU:CB	1:B:85:LEU:HD12	2.44	0.48
2:D:60:ASN:C	2:D:62:ASN:N	2.70	0.48
2:D:107:GLU:O	2:D:107:GLU:HG2	2.13	0.48
2:D:232:LYS:O	2:D:233:ASP:C	2.56	0.48
2:C:27:ILE:HD13	2:C:101:ALA:CA	2.44	0.48
2:C:89:ILE:O	2:C:92:ILE:N	2.47	0.48
2:C:300:PRO:O	2:C:301:ALA:C	2.55	0.48
2:C:309:VAL:HG12	2:C:310:GLY:N	2.29	0.48
2:C:423:LEU:HB3	2:C:470:ILE:HG21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:370:ILE:CG2	2:G:371:GLU:N	2.49	0.48
2:H:119:TYR:CD2	2:H:190:THR:HG21	2.48	0.48
2:H:143:ILE:CG2	2:H:144:ASN:H	2.26	0.48
2:H:489:GLU:O	2:H:490:GLU:C	2.56	0.48
1:B:123:GLU:HB3	1:B:127:LYS:HD2	1.95	0.48
2:C:38:SER:C	2:C:39:VAL:CG1	2.86	0.48
2:C:317:ALA:O	2:C:318:VAL:C	2.56	0.48
2:D:124:GLN:O	2:D:127:ALA:HB3	2.14	0.48
2:D:318:VAL:O	2:D:319:GLN:C	2.57	0.48
2:G:225:LYS:NZ	2:G:225:LYS:CB	2.77	0.48
2:H:401:ASN:CA	2:H:434:ALA:O	2.62	0.48
1:A:71:LEU:HA	1:A:74:LYS:HD2	1.96	0.48
1:B:87:ALA:HB2	2:C:388:PRO:HB2	1.96	0.48
2:C:380:LEU:HA	2:C:380:LEU:HD23	1.69	0.48
2:C:495:ASP:CG	2:C:498:ARG:CZ	2.87	0.48
2:D:64:ILE:CG2	2:D:67:ILE:HG13	2.44	0.48
2:D:334:VAL:HB	2:D:339:VAL:HG22	1.96	0.48
2:H:407:ILE:HB	2:H:426:PHE:CE1	2.48	0.48
2:H:503:GLU:O	2:H:506:ASN:ND2	2.47	0.48
2:C:198:GLY:HA2	2:C:201:PHE:HD2	1.79	0.47
2:D:203:GLN:O	2:D:204:VAL:C	2.57	0.47
1:E:75:LEU:O	1:E:76:SER:C	2.57	0.47
2:G:155:LEU:HB2	2:G:185:PHE:CZ	2.48	0.47
2:G:370:ILE:HA	2:G:409:VAL:HA	1.95	0.47
2:H:95:GLN:HG2	2:H:96:TYR:N	2.25	0.47
2:H:154:GLY:HA2	2:H:156:ASP:OD2	2.14	0.47
2:H:332:LYS:HD2	2:H:332:LYS:C	2.39	0.47
2:H:414:ARG:HA	2:H:415:PRO:HD3	1.60	0.47
2:C:143:ILE:CG2	2:C:144:ASN:N	2.76	0.47
2:C:269:LEU:HD12	2:C:270:THR:O	2.14	0.47
2:D:242:LEU:O	2:D:271:ARG:NH1	2.48	0.47
2:D:309:VAL:O	2:D:313:THR:CG2	2.61	0.47
1:F:82:TYR:O	1:F:85:LEU:CB	2.60	0.47
2:G:210:VAL:HB	2:G:214:LYS:HZ1	1.80	0.47
2:G:225:LYS:HB3	2:G:225:LYS:HZ3	1.79	0.47
2:G:483:ARG:HH12	2:G:486:LYS:NZ	2.12	0.47
2:H:161:GLN:O	2:H:179:GLU:HG2	2.13	0.47
2:H:383:ARG:O	2:H:385:THR:N	2.46	0.47
1:B:178:GLN:HG3	1:B:213:GLN:CB	2.44	0.47
2:C:280:HIS:CD2	2:C:281:LEU:HD13	2.49	0.47
2:D:14:SER:O	2:D:36:THR:HG22	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:139:VAL:HG11	2:D:142:ILE:HG13	1.96	0.47
2:D:141:ARG:HG2	2:D:143:ILE:HG13	1.95	0.47
2:D:388:PRO:HB3	2:D:448:ASP:C	2.38	0.47
2:D:483:ARG:HH21	1:F:85:LEU:HD22	1.79	0.47
1:E:160:ALA:HA	1:E:197:TYR:CB	2.44	0.47
2:G:364:THR:HB	2:G:385:THR:N	2.28	0.47
2:G:483:ARG:NH1	2:G:486:LYS:HZ2	2.11	0.47
2:H:368:LEU:HB2	2:H:445:PHE:HE2	1.77	0.47
2:C:27:ILE:HG21	2:C:101:ALA:HA	1.96	0.47
2:C:423:LEU:HB3	2:C:470:ILE:HD13	1.95	0.47
2:D:53:ALA:O	2:D:54:LYS:C	2.56	0.47
2:D:107:GLU:O	2:D:108:PRO:C	2.57	0.47
2:D:270:THR:OG1	2:D:273:LYS:N	2.47	0.47
2:D:308:LEU:HD12	2:D:308:LEU:HA	1.64	0.47
2:H:335:ASN:ND2	2:H:338:GLU:HG3	2.29	0.47
2:H:426:PHE:CB	2:H:468:ILE:CD1	2.85	0.47
2:C:58:ILE:O	2:C:58:ILE:HG22	2.14	0.47
2:C:64:ILE:HG22	2:C:67:ILE:CD1	2.35	0.47
2:C:205:ILE:O	2:C:206:ILE:C	2.54	0.47
2:D:303:ILE:HG22	2:D:304:ASP:N	2.29	0.47
2:G:105:LEU:HD23	2:G:107:GLU:HB3	1.95	0.47
2:G:162:THR:C	2:G:303:ILE:HG23	2.38	0.47
2:G:403:THR:HG23	2:G:404:THR:CG2	2.45	0.47
2:H:204:VAL:HG23	2:H:277:LEU:HD13	1.96	0.47
1:B:167:PRO:O	1:B:168:PHE:HB3	2.13	0.47
2:D:64:ILE:HG22	2:D:67:ILE:HG13	1.96	0.47
2:D:98:LYS:CB	2:D:137:LEU:HD11	2.38	0.47
1:F:68:ILE:HG22	1:F:72:GLU:OE2	2.15	0.47
2:G:390:SER:HB2	2:G:445:PHE:O	2.15	0.47
1:A:105:LYS:HB3	1:A:106:TYR:CE1	2.50	0.47
1:A:134:GLN:HG2	1:A:134:GLN:O	2.15	0.47
1:A:191:GLU:CG	1:A:210:LYS:HD2	2.38	0.47
1:B:71:LEU:O	1:B:72:GLU:C	2.57	0.47
1:B:144:MET:HG2	2:C:253:PRO:HB3	1.97	0.47
1:B:153:LEU:HB3	1:B:158:VAL:CG1	2.44	0.47
2:C:70:HIS:CD2	2:C:75:TYR:CD2	3.03	0.47
2:C:294:GLN:O	2:C:294:GLN:HG2	2.14	0.47
2:C:416:MET:CE	2:C:497:LYS:CB	2.93	0.47
2:C:462:THR:CB	2:C:464:LYS:H	2.18	0.47
2:D:64:ILE:HG21	2:D:89:ILE:HD13	1.97	0.47
2:D:104:TYR:CD2	2:D:105:LEU:CD1	2.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:104:TYR:CD2	2:D:105:LEU:HD13	2.49	0.47
2:D:156:ASP:OD1	2:D:156:ASP:N	2.47	0.47
2:D:212:GLN:O	2:D:215:GLN:HB3	2.14	0.47
2:D:236:GLU:O	2:D:239:LYS:HB3	2.15	0.47
2:D:312:SER:O	2:D:315:ILE:CG1	2.63	0.47
2:D:315:ILE:CG2	2:D:316:PRO:HD2	2.44	0.47
2:D:388:PRO:HG3	2:D:449:ALA:N	2.30	0.47
1:F:158:VAL:CA	1:F:198:LYS:O	2.55	0.47
2:G:17:ALA:HB1	2:G:25:LYS:O	2.15	0.47
2:G:57:ALA:HB1	2:G:63:THR:CB	2.45	0.47
2:G:372:THR:CG2	2:G:373:MET:N	2.78	0.47
2:H:12:THR:C	2:H:13:ASN:ND2	2.73	0.47
2:H:152:ALA:HB2	2:H:342:ILE:CG2	2.38	0.47
2:H:387:ILE:O	2:H:388:PRO:O	2.32	0.47
2:H:391:LYS:HG3	2:H:392:SER:N	2.30	0.47
2:H:397:THR:HG21	2:H:439:PRO:HG2	1.96	0.47
2:H:460:LEU:HD13	2:H:460:LEU:HA	1.60	0.47
1:A:135:ALA:CB	1:B:135:ALA:CB	2.87	0.47
2:C:9:LEU:HA	2:C:14:SER:OG	2.15	0.47
2:C:27:ILE:HG12	2:C:104:TYR:CD2	2.44	0.47
2:C:29:ASN:ND2	2:C:36:THR:CG2	2.73	0.47
2:C:285:THR:O	2:C:285:THR:HG22	2.15	0.47
2:C:296:ALA:CB	2:C:298:LEU:HD22	2.41	0.47
2:C:308:LEU:HD11	2:C:330:PRO:HB2	1.97	0.47
2:C:390:SER:HB2	2:C:445:PHE:O	2.15	0.47
2:D:204:VAL:HG22	2:D:277:LEU:CD1	2.40	0.47
2:D:408:HIS:CE1	2:D:425:ARG:HH11	2.32	0.47
2:G:381:ILE:HD11	2:G:447:ILE:CD1	2.43	0.47
2:H:2:SER:OG	2:H:110:THR:CB	2.61	0.47
2:H:12:THR:HG23	2:H:13:ASN:N	2.22	0.47
2:H:17:ALA:H	2:H:341:ALA:HB1	1.79	0.47
2:H:401:ASN:OD1	2:H:401:ASN:N	2.48	0.47
2:H:445:PHE:CD1	2:H:455:VAL:HG22	2.50	0.47
1:A:142:MET:O	1:A:144:MET:N	2.47	0.47
2:C:198:GLY:O	2:C:201:PHE:CB	2.59	0.47
2:C:221:LEU:O	2:C:222:SER:C	2.58	0.47
2:C:248:THR:OG1	2:C:249:GLN:N	2.48	0.47
2:C:249:GLN:HA	2:C:267:MET:O	2.14	0.47
2:D:129:LYS:HB2	2:D:142:ILE:HD12	1.94	0.47
2:D:307:ILE:CG2	2:D:308:LEU:N	2.51	0.47
2:D:476:LEU:HB2	2:D:480:GLU:OE2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:84:ARG:HA	2:G:388:PRO:HB2	1.97	0.47
2:G:163:ILE:O	2:G:177:ILE:HG23	2.15	0.47
2:G:240:LYS:O	2:G:243:SER:HB2	2.15	0.47
2:G:483:ARG:HH11	2:G:486:LYS:NZ	2.12	0.47
2:H:456:ARG:HA	2:H:467:SER:HB2	1.95	0.47
1:A:169:ASP:C	1:A:171:TYR:N	2.71	0.47
1:A:192:GLU:C	1:A:193:LEU:HD23	2.40	0.47
1:B:97:ARG:CG	1:B:98:GLN:N	2.78	0.47
1:B:122:PHE:HA	1:B:146:TYR:CD2	2.42	0.47
2:C:347:GLN:CA	2:C:347:GLN:HE21	2.27	0.47
2:C:366:LEU:HD23	2:C:366:LEU:HA	1.36	0.47
2:C:459:ASP:OD1	2:C:461:GLY:N	2.39	0.47
2:D:131:ALA:O	2:D:134:ILE:HB	2.15	0.47
1:E:76:SER:HA	1:E:79:GLU:CD	2.39	0.47
1:F:87:ALA:HB2	2:G:388:PRO:HD2	1.97	0.47
2:G:164:LEU:HG	2:G:177:ILE:CG1	2.45	0.47
2:H:407:ILE:HD12	2:H:426:PHE:CZ	2.50	0.47
1:A:114:ASP:OD2	1:B:155:LYS:HE2	2.13	0.46
1:B:124:ARG:HH21	2:D:226:MET:HE3	1.78	0.46
1:B:142:MET:N	1:B:142:MET:CE	2.78	0.46
2:C:164:LEU:HD21	2:C:175:VAL:HG13	1.97	0.46
2:C:266:GLU:O	2:C:267:MET:CB	2.58	0.46
2:C:438:VAL:N	2:C:439:PRO:HD2	2.31	0.46
2:C:478:GLU:O	2:C:481:ILE:HB	2.15	0.46
2:D:111:ARG:HD3	2:D:140:GLU:OE2	2.16	0.46
2:D:366:LEU:O	2:D:368:LEU:CD2	2.63	0.46
2:G:308:LEU:HD21	2:G:319:GLN:CD	2.40	0.46
2:H:4:ILE:HD11	2:H:111:ARG:NH1	2.30	0.46
2:H:192:GLY:N	2:H:288:PRO:HB3	2.30	0.46
2:H:505:ARG:O	2:H:507:GLU:C	2.57	0.46
1:A:95:ARG:CD	2:C:104:TYR:CE1	2.87	0.46
1:B:117:PRO:O	1:B:120:ASP:HB2	2.15	0.46
1:B:204:LEU:HD12	1:B:204:LEU:N	2.20	0.46
2:C:121:ASN:O	2:C:125:ARG:HG2	2.15	0.46
2:C:254:PHE:CE1	2:C:264:HIS:CE1	2.96	0.46
2:C:459:ASP:C	2:C:460:LEU:HD23	2.41	0.46
2:C:498:ARG:C	2:C:500:GLU:N	2.73	0.46
2:D:233:ASP:O	2:D:234:ALA:C	2.58	0.46
2:D:377:PHE:CD1	2:D:377:PHE:C	2.91	0.46
2:D:396:THR:OG1	2:D:439:PRO:HD2	2.15	0.46
2:G:177:ILE:CD1	2:G:292:ALA:CB	2.91	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:289:VAL:O	2:G:292:ALA:HB3	2.15	0.46
2:G:304:ASP:O	2:G:305:LYS:HG2	2.16	0.46
2:H:15:CYS:SG	2:H:338:GLU:HB3	2.56	0.46
2:H:335:ASN:ND2	2:H:338:GLU:CG	2.78	0.46
2:H:366:LEU:HD12	2:H:366:LEU:HA	1.43	0.46
1:A:89:PHE:CG	1:B:89:PHE:HD1	2.29	0.46
1:B:78:MET:O	1:B:79:GLU:C	2.59	0.46
1:B:85:LEU:O	1:B:86:TYR:C	2.58	0.46
1:B:168:PHE:HD2	1:B:173:HIS:HB2	1.80	0.46
2:C:116:VAL:O	2:C:145:GLU:N	2.37	0.46
2:C:281:LEU:O	2:C:282:VAL:C	2.58	0.46
2:D:3:LYS:HD2	2:D:3:LYS:H	1.80	0.46
2:D:41:ALA:HB1	2:D:62:ASN:O	2.15	0.46
2:D:87:GLN:CD	2:D:87:GLN:N	2.69	0.46
2:D:97:LEU:N	2:D:97:LEU:CD1	2.78	0.46
2:D:121:ASN:CG	2:D:122:ASP:N	2.73	0.46
2:D:317:ALA:O	2:D:318:VAL:C	2.58	0.46
2:G:163:ILE:CG2	2:G:164:LEU:N	2.78	0.46
2:G:210:VAL:HG12	2:G:221:LEU:CD1	2.39	0.46
2:G:273:LYS:O	2:G:277:LEU:HB2	2.15	0.46
2:H:486:LYS:O	2:H:486:LYS:NZ	2.47	0.46
1:A:89:PHE:CE2	1:B:89:PHE:HA	2.51	0.46
1:B:173:HIS:HB3	1:B:209:VAL:HG21	1.97	0.46
2:C:2:SER:HB3	2:C:110:THR:HG22	1.98	0.46
2:C:372:THR:OG1	2:C:373:MET:N	2.48	0.46
2:C:399:ALA:HB3	2:H:355:VAL:HG11	1.97	0.46
2:D:164:LEU:HD13	2:D:165:VAL:CA	2.46	0.46
2:D:319:GLN:O	2:D:320:GLU:C	2.59	0.46
2:D:380:LEU:O	2:D:381:ILE:HG13	2.15	0.46
2:H:27:ILE:HG12	2:H:104:TYR:HD2	1.81	0.46
2:H:141:ARG:HH12	2:H:143:ILE:HD11	1.59	0.46
2:H:172:THR:C	2:H:196:LEU:O	2.58	0.46
2:H:387:ILE:HG21	2:H:387:ILE:HD13	1.67	0.46
1:A:172:LEU:N	1:A:172:LEU:CD2	2.75	0.46
1:B:116:LEU:HA	1:B:116:LEU:HD23	1.57	0.46
2:C:380:LEU:HD12	2:C:445:PHE:HE1	1.79	0.46
2:D:89:ILE:C	2:D:91:ALA:N	2.71	0.46
2:D:386:THR:CG2	2:D:389:THR:HG22	2.45	0.46
2:D:421:LYS:CE	2:D:480:GLU:OE2	2.63	0.46
2:G:459:ASP:HB3	2:G:462:THR:HB	1.97	0.46
2:H:5:ILE:HD12	2:H:109:VAL:HG11	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:67:ILE:HD13	2:H:89:ILE:CG1	2.45	0.46
2:H:117:PRO:HD2	2:H:120:PHE:CE1	2.51	0.46
1:A:131:ASP:OD1	1:B:134:GLN:NE2	2.48	0.46
1:A:144:MET:HE1	2:D:266:GLU:CD	2.41	0.46
2:C:166:TYR:CE2	2:C:322:ILE:HD11	2.50	0.46
2:C:484:MET:HE3	2:C:484:MET:HA	1.97	0.46
2:D:29:ASN:O	2:D:31:GLU:N	2.49	0.46
2:D:348:GLY:O	2:D:349:GLY:C	2.58	0.46
2:D:503:GLU:O	2:D:505:ARG:N	2.48	0.46
1:E:80:HIS:O	1:E:81:ARG:C	2.58	0.46
1:F:65:LYS:CA	1:F:68:ILE:HD12	2.34	0.46
2:G:91:ALA:O	2:G:135:ALA:CB	2.64	0.46
2:G:166:TYR:CE1	2:G:318:VAL:HG11	2.50	0.46
2:G:277:LEU:O	2:G:280:HIS:CD2	2.69	0.46
2:G:400:ASP:N	2:G:400:ASP:OD1	2.49	0.46
1:B:179:ALA:HB2	1:B:210:LYS:HE2	1.97	0.46
2:C:409:VAL:CG1	2:C:409:VAL:O	2.63	0.46
2:D:248:THR:OG1	2:D:249:GLN:N	2.47	0.46
2:D:361:LEU:HD23	2:D:361:LEU:HA	1.33	0.46
2:D:484:MET:HE2	2:D:484:MET:C	2.40	0.46
2:G:496:ARG:HD2	2:G:497:LYS:N	2.30	0.46
2:H:118:ALA:HB2	2:H:144:ASN:HB3	1.96	0.46
2:H:118:ALA:CB	2:H:144:ASN:HD22	2.29	0.46
2:H:339:VAL:HA	2:H:342:ILE:HG13	1.98	0.46
2:H:383:ARG:HG2	2:H:384:ASN:HD22	1.78	0.46
2:H:397:THR:HB	2:H:439:PRO:HG2	1.96	0.46
1:A:95:ARG:HA	1:A:98:GLN:HE21	1.81	0.46
1:B:111:LEU:O	1:B:114:ASP:N	2.48	0.46
1:B:153:LEU:HD12	1:B:158:VAL:HG21	1.98	0.46
1:B:190:VAL:N	1:B:210:LYS:O	2.45	0.46
2:C:27:ILE:HD13	2:C:101:ALA:HB1	1.97	0.46
2:C:87:GLN:HE21	2:C:87:GLN:HB2	1.59	0.46
2:C:493:GLU:O	2:C:496:ARG:HG3	2.14	0.46
2:C:500:GLU:N	2:C:500:GLU:CD	2.73	0.46
2:D:64:ILE:HD13	2:D:89:ILE:CG1	2.45	0.46
2:D:280:HIS:NE2	2:D:281:LEU:CD1	2.78	0.46
2:G:372:THR:HG22	2:G:373:MET:HB2	1.96	0.46
2:H:7:ILE:HD13	2:H:97:LEU:CD2	2.46	0.46
1:B:142:MET:HE3	2:C:254:PHE:HZ	1.81	0.46
2:C:60:ASN:OD1	2:C:62:ASN:N	2.46	0.46
2:C:221:LEU:O	2:C:224:ASP:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:293:LEU:HD23	2:C:293:LEU:HA	1.51	0.46
2:D:329:GLU:OE1	2:D:330:PRO:HD2	2.16	0.46
2:D:422:SER:OG	2:D:423:LEU:N	2.46	0.46
2:G:385:THR:O	2:G:386:THR:C	2.59	0.46
2:H:498:ARG:O	2:H:499:LYS:C	2.59	0.46
1:A:83:LEU:O	1:A:86:TYR:HB2	2.16	0.46
1:A:119:LEU:HD11	1:A:197:TYR:HH	1.72	0.46
1:A:177:MET:HE3	2:C:225:LYS:CD	2.46	0.46
2:C:283:GLU:OE1	2:C:283:GLU:O	2.34	0.46
2:D:173:PHE:CE1	2:D:175:VAL:CG1	2.99	0.46
2:D:201:PHE:O	2:D:204:VAL:HG12	2.16	0.46
2:D:230:ARG:HB3	2:D:252:LEU:HD21	1.96	0.46
2:D:290:ARG:O	2:D:293:LEU:N	2.49	0.46
2:G:91:ALA:CB	2:G:134:ILE:HG22	2.45	0.46
2:H:72:GLY:HA2	2:H:127:ALA:HB2	1.98	0.46
2:H:283:GLU:OE1	2:H:283:GLU:HA	2.15	0.46
2:H:388:PRO:O	2:H:388:PRO:HG2	2.15	0.46
1:A:86:TYR:HE2	1:A:90:GLU:OE2	1.98	0.45
1:B:82:TYR:N	1:B:82:TYR:CD1	2.83	0.45
1:B:105:LYS:O	1:B:107:ARG:N	2.49	0.45
2:C:205:ILE:CD1	2:C:274:PHE:CE2	2.92	0.45
2:C:216:GLU:OE1	2:C:216:GLU:HA	2.16	0.45
2:C:395:PHE:CE2	2:C:443:VAL:CG1	2.99	0.45
2:C:505:ARG:HH11	2:C:505:ARG:CG	2.28	0.45
2:D:251:SER:OG	2:D:252:LEU:N	2.47	0.45
2:D:310:GLY:O	2:D:311:GLY:C	2.58	0.45
2:D:490:GLU:HG2	1:F:81:ARG:NH2	2.31	0.45
2:G:459:ASP:HB3	2:G:462:THR:CB	2.46	0.45
2:H:16:VAL:CG1	2:H:100:TYR:OH	2.64	0.45
2:H:118:ALA:HB2	2:H:144:ASN:HD22	1.80	0.45
2:H:130:ASP:O	2:H:131:ALA:C	2.58	0.45
2:H:170:GLY:O	2:H:198:GLY:N	2.43	0.45
2:H:432:PRO:HA	2:H:433:PRO:HD3	1.82	0.45
2:H:464:LYS:NZ	2:H:464:LYS:CB	2.76	0.45
1:A:75:LEU:HA	1:A:75:LEU:HD23	1.17	0.45
1:A:192:GLU:CD	1:A:195:LYS:HG2	2.41	0.45
1:A:193:LEU:HB3	2:C:226:MET:SD	2.56	0.45
2:C:60:ASN:ND2	2:C:62:ASN:O	2.50	0.45
2:C:67:ILE:CD1	2:C:89:ILE:HD13	2.47	0.45
2:C:347:GLN:HE21	2:C:347:GLN:C	2.24	0.45
2:D:67:ILE:C	2:D:69:ARG:N	2.73	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:113:VAL:HG13	2:D:113:VAL:O	2.14	0.45
2:D:221:LEU:C	2:D:223:LYS:N	2.72	0.45
2:G:94:LEU:HD22	2:G:94:LEU:N	2.31	0.45
2:G:94:LEU:HA	2:G:97:LEU:HB2	1.97	0.45
2:G:414:ARG:HE	2:G:491:ASN:CB	2.29	0.45
2:H:62:ASN:CB	2:H:79:ILE:CG2	2.94	0.45
2:H:109:VAL:CG2	2:H:111:ARG:O	2.62	0.45
2:H:156:ASP:HA	2:H:180:LEU:CD2	2.46	0.45
2:H:181:GLY:O	2:H:183:GLY:N	2.49	0.45
1:A:204:LEU:O	1:A:205:ARG:C	2.60	0.45
1:B:85:LEU:HD22	1:B:85:LEU:HA	1.73	0.45
2:C:73:THR:HG23	2:C:75:TYR:HB3	1.98	0.45
2:C:482:GLN:HA	2:C:485:ILE:HD12	1.98	0.45
2:D:85:THR:OG1	2:D:87:GLN:NE2	2.49	0.45
2:D:267:MET:SD	2:D:267:MET:C	2.99	0.45
2:D:499:LYS:O	2:D:502:ALA:HB3	2.16	0.45
2:H:192:GLY:O	2:H:288:PRO:CG	2.65	0.45
1:A:177:MET:HE3	2:C:225:LYS:HD3	1.99	0.45
2:C:20:GLU:O	2:C:21:GLY:O	2.35	0.45
2:C:52:VAL:HG22	2:C:52:VAL:O	2.17	0.45
2:D:269:LEU:CD1	2:D:270:THR:O	2.65	0.45
2:G:82:LYS:HE2	2:G:82:LYS:HB2	1.83	0.45
2:H:71:MET:O	2:H:124:GLN:CB	2.64	0.45
2:H:109:VAL:O	2:H:109:VAL:HG22	2.17	0.45
2:H:364:THR:C	2:H:366:LEU:N	2.74	0.45
1:A:143:GLU:O	1:A:147:ARG:HB2	2.16	0.45
1:B:67:GLN:HE21	1:B:67:GLN:N	2.14	0.45
1:B:119:LEU:HA	1:B:119:LEU:HD22	1.06	0.45
2:C:227:ALA:O	2:C:231:LEU:HD12	2.17	0.45
2:C:276:GLU:O	2:C:278:SER:N	2.50	0.45
2:D:67:ILE:HD13	2:D:89:ILE:CD1	2.47	0.45
2:D:380:LEU:C	2:D:381:ILE:HG13	2.41	0.45
1:E:97:ARG:HG3	1:E:98:GLN:OE1	2.15	0.45
2:H:147:THR:O	2:H:151:LEU:N	2.50	0.45
2:H:168:LEU:HD13	2:H:172:THR:O	2.17	0.45
1:A:81:ARG:NH2	2:C:355:VAL:HG22	2.31	0.45
1:B:193:LEU:HD21	2:D:226:MET:CG	2.43	0.45
2:C:64:ILE:CD1	2:C:89:ILE:HG12	2.47	0.45
2:C:67:ILE:HD13	2:C:89:ILE:CB	2.44	0.45
2:C:104:TYR:C	2:C:104:TYR:CD1	2.94	0.45
2:C:221:LEU:HD21	2:C:255:ILE:CG2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:405:VAL:HA	2:H:356:LYS:O	2.17	0.45
2:D:51:GLU:O	2:D:52:VAL:C	2.60	0.45
2:D:104:TYR:CE2	2:D:105:LEU:HD11	2.51	0.45
2:D:245:VAL:HG23	2:D:246:THR:N	2.32	0.45
2:D:332:LYS:O	2:D:334:VAL:HG23	2.16	0.45
2:D:486:LYS:HE3	2:D:486:LYS:HB2	1.80	0.45
2:G:332:LYS:C	2:G:334:VAL:H	2.25	0.45
2:G:369:GLY:C	2:G:370:ILE:HG13	2.41	0.45
2:G:443:VAL:O	2:G:443:VAL:HG13	2.17	0.45
2:H:332:LYS:C	2:H:334:VAL:H	2.25	0.45
2:D:56:GLN:C	2:D:56:GLN:CD	2.85	0.45
2:D:386:THR:HG22	2:D:389:THR:CG2	2.47	0.45
2:D:388:PRO:HD3	2:D:449:ALA:HA	1.98	0.45
2:G:121:ASN:OD1	2:G:121:ASN:N	2.50	0.45
2:G:145:GLU:HB2	2:G:146:PRO:CD	2.34	0.45
2:G:438:VAL:N	2:G:439:PRO:HD2	2.32	0.45
2:H:27:ILE:HG23	2:H:104:TYR:CD2	2.52	0.45
2:H:94:LEU:HD12	2:H:97:LEU:CB	2.47	0.45
2:H:208:TYR:CZ	2:H:273:LYS:HD2	2.51	0.45
2:H:365:PRO:O	2:H:366:LEU:CD1	2.65	0.45
1:A:200:LYS:C	1:A:202:ARG:H	2.23	0.45
1:B:67:GLN:CA	1:B:67:GLN:NE2	2.76	0.45
2:C:8:ASP:HA	2:C:115:THR:CG2	2.44	0.45
2:C:36:THR:HG22	2:C:37:PRO:HD2	1.99	0.45
2:C:395:PHE:HE2	2:C:443:VAL:HG11	1.82	0.45
2:D:160:ASP:HA	2:D:180:LEU:CD2	2.47	0.45
2:D:184:VAL:HG12	2:D:185:PHE:H	1.81	0.45
2:D:207:ASP:O	2:D:208:TYR:C	2.59	0.45
2:D:377:PHE:HB3	2:D:415:PRO:O	2.17	0.45
1:E:176:VAL:CB	2:G:225:LYS:HD3	2.47	0.45
2:G:290:ARG:HA	2:G:293:LEU:HB2	1.99	0.45
2:G:347:GLN:OE1	2:G:350:VAL:HB	2.17	0.45
2:H:149:ALA:HB2	2:H:339:VAL:HG13	1.97	0.45
1:A:174:GLN:OE1	1:A:208:MET:HB3	2.16	0.45
2:C:16:VAL:CG1	2:C:100:TYR:OH	2.65	0.45
2:C:363:VAL:HA	2:C:386:THR:HA	1.99	0.45
2:C:496:ARG:O	2:C:499:LYS:CB	2.59	0.45
2:G:214:LYS:HG2	2:G:220:ASP:HA	1.99	0.45
2:G:377:PHE:CG	2:G:410:LEU:HD12	2.52	0.45
2:G:445:PHE:HD1	2:G:455:VAL:CG2	2.30	0.45
2:H:141:ARG:CZ	2:H:347:GLN:HE21	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:371:GLU:N	2:H:410:LEU:HD11	2.32	0.45
2:H:405:VAL:HG11	2:H:441:ILE:HD11	1.99	0.45
1:A:78:MET:SD	1:A:82:TYR:CE1	3.10	0.45
1:A:78:MET:HE2	1:A:81:ARG:HD3	1.98	0.45
1:A:127:LYS:HA	1:A:129:GLU:OE1	2.17	0.45
1:B:78:MET:O	1:B:81:ARG:N	2.50	0.45
1:B:89:PHE:O	1:B:92:PHE:N	2.32	0.45
1:B:120:ASP:OD2	1:B:194:GLN:NE2	2.49	0.45
2:C:50:GLY:O	2:C:51:GLU:C	2.59	0.45
2:C:116:VAL:HB	2:C:117:PRO:CD	2.47	0.45
2:C:162:THR:H	2:C:304:ASP:CG	2.25	0.45
2:C:408:HIS:NE2	2:C:410:LEU:HD21	2.32	0.45
2:D:299:THR:H	2:D:302:ASP:CG	2.23	0.45
1:F:94:ARG:NH2	1:F:97:ARG:NH1	2.65	0.45
2:G:164:LEU:CB	2:G:177:ILE:HG12	2.47	0.45
2:G:239:LYS:CA	2:G:242:LEU:HD22	2.46	0.45
2:G:360:LEU:HD22	2:G:360:LEU:HA	1.86	0.45
2:G:361:LEU:CD2	2:G:387:ILE:CD1	2.87	0.45
2:H:468:ILE:HG22	2:H:469:THR:O	2.17	0.45
1:A:89:PHE:CB	1:B:89:PHE:HD1	2.27	0.44
1:A:150:VAL:O	1:A:154:LYS:HB2	2.17	0.44
1:A:201:ASP:OD1	1:A:202:ARG:N	2.50	0.44
1:B:86:TYR:HD1	1:B:86:TYR:HA	1.55	0.44
1:B:94:ARG:O	1:B:98:GLN:HG3	2.16	0.44
1:B:146:TYR:O	1:B:147:ARG:C	2.58	0.44
1:B:152:ALA:HA	1:B:155:LYS:HB2	1.98	0.44
1:B:174:GLN:OE1	1:B:208:MET:HE1	2.17	0.44
1:B:189:VAL:N	1:B:211:VAL:HG23	2.31	0.44
1:B:189:VAL:HG22	1:B:209:VAL:HG11	1.98	0.44
2:C:157:LYS:HE3	2:C:356:LYS:HZ2	1.82	0.44
2:D:71:MET:SD	2:D:86:PRO:CB	3.06	0.44
2:D:159:GLU:O	2:D:160:ASP:C	2.59	0.44
2:G:77:VAL:HG13	2:G:79:ILE:HG13	1.99	0.44
2:H:7:ILE:CD1	2:H:97:LEU:HD23	2.46	0.44
2:H:374:GLY:N	2:H:375:GLY:CA	2.79	0.44
1:A:138:ILE:HG21	1:B:139:LEU:CD2	2.29	0.44
2:C:10:GLY:N	2:C:14:SER:OG	2.47	0.44
2:C:39:VAL:O	2:C:39:VAL:HG22	2.17	0.44
2:C:153:TYR:CZ	2:C:334:VAL:HG12	2.52	0.44
2:C:217:HIS:ND1	2:C:217:HIS:N	2.65	0.44
2:C:443:VAL:HA	2:C:456:ARG:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:231:LEU:O	2:D:232:LYS:O	2.35	0.44
2:D:361:LEU:HD22	2:D:387:ILE:HG12	1.94	0.44
2:D:476:LEU:HD13	2:D:476:LEU:HA	1.73	0.44
2:G:372:THR:O	2:G:375:GLY:N	2.49	0.44
2:G:383:ARG:CD	2:G:384:ASN:H	2.25	0.44
2:G:470:ILE:HA	2:G:471:LYS:NZ	2.32	0.44
2:H:151:LEU:HD12	2:H:151:LEU:HA	1.63	0.44
2:H:370:ILE:HD13	2:H:407:ILE:CG2	2.43	0.44
2:H:448:ASP:CG	2:H:450:ASN:H	2.25	0.44
1:A:95:ARG:O	1:A:96:THR:C	2.60	0.44
1:A:187:ASN:ND2	1:A:187:ASN:C	2.76	0.44
1:B:75:LEU:HD22	1:B:75:LEU:HA	1.69	0.44
2:C:483:ARG:HD2	2:C:483:ARG:HA	1.68	0.44
2:D:343:GLY:O	2:D:344:ALA:C	2.60	0.44
2:D:465:GLU:O	2:D:467:SER:OG	2.35	0.44
1:F:148:SER:HA	1:F:151:ASP:CB	2.47	0.44
2:G:238:ALA:O	2:G:242:LEU:HD13	2.17	0.44
2:G:370:ILE:CD1	2:G:445:PHE:HZ	2.29	0.44
2:H:12:THR:C	2:H:13:ASN:CG	2.85	0.44
2:H:155:LEU:HB3	2:H:158:GLU:OE1	2.17	0.44
2:H:306:VAL:CG1	2:H:307:ILE:N	2.78	0.44
1:B:186:PRO:C	1:B:187:ASN:HD22	2.25	0.44
2:C:220:ASP:CG	2:C:222:SER:HG	2.24	0.44
2:C:362:ASP:O	2:C:363:VAL:HG22	2.17	0.44
2:C:414:ARG:HB2	2:C:420:ASN:HD21	1.83	0.44
2:D:29:ASN:HB2	2:D:30:PRO:CD	2.47	0.44
2:D:77:VAL:O	2:D:77:VAL:HG13	2.18	0.44
2:D:381:ILE:CD1	2:D:447:ILE:HD11	2.48	0.44
2:H:180:LEU:HD11	2:H:183:GLY:O	2.17	0.44
2:H:316:PRO:O	2:H:320:GLU:HB2	2.17	0.44
1:A:144:MET:HE1	2:D:266:GLU:HG3	2.00	0.44
1:B:142:MET:HE2	1:B:142:MET:HA	1.98	0.44
2:D:18:VAL:HG11	2:D:27:ILE:HD11	1.99	0.44
2:D:29:ASN:O	2:D:30:PRO:C	2.60	0.44
2:D:110:THR:O	2:D:111:ARG:C	2.60	0.44
2:D:168:LEU:CD1	2:D:197:GLY:HA2	2.46	0.44
2:D:426:PHE:HZ	2:D:457:ALA:CB	2.31	0.44
2:D:505:ARG:HG3	2:D:506:ASN:N	2.33	0.44
2:G:293:LEU:HD22	2:G:299:THR:C	2.43	0.44
2:G:368:LEU:HB2	2:G:381:ILE:HB	1.99	0.44
2:H:11:THR:N	2:H:68:LYS:HD3	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:361:LEU:CD1	2:H:387:ILE:HD12	2.43	0.44
1:B:169:ASP:H	1:B:173:HIS:CD2	2.34	0.44
2:C:41:ALA:HB1	2:C:60:ASN:HD22	1.81	0.44
2:C:124:GLN:O	2:C:127:ALA:N	2.51	0.44
2:C:250:ILE:HG22	2:C:252:LEU:HD22	2.00	0.44
2:G:97:LEU:O	2:G:100:TYR:HD1	2.00	0.44
2:G:214:LYS:HE3	2:G:220:ASP:OD1	2.17	0.44
2:H:425:ARG:O	2:H:426:PHE:HB3	2.17	0.44
1:A:188:THR:O	1:A:211:VAL:HG23	2.17	0.44
1:A:204:LEU:H	1:A:204:LEU:HD12	1.82	0.44
1:B:85:LEU:HD23	2:H:483:ARG:HH21	1.83	0.44
1:B:201:ASP:O	1:B:201:ASP:CG	2.59	0.44
2:D:167:ASP:OD1	2:D:168:LEU:N	2.50	0.44
2:G:234:ALA:O	2:G:237:LYS:HB3	2.17	0.44
2:H:160:ASP:CG	2:H:181:GLY:HA2	2.43	0.44
2:H:377:PHE:CD1	2:H:377:PHE:C	2.92	0.44
2:H:379:LYS:O	2:H:380:LEU:HD23	2.18	0.44
1:B:81:ARG:O	1:B:82:TYR:HD1	2.01	0.44
2:C:157:LYS:HE3	2:C:356:LYS:NZ	2.32	0.44
2:C:194:ASN:O	2:C:195:HIS:CD2	2.70	0.44
2:C:494:ALA:C	2:C:496:ARG:N	2.76	0.44
2:D:9:LEU:HA	2:D:9:LEU:HD12	1.77	0.44
2:D:29:ASN:HA	2:D:100:TYR:CD1	2.53	0.44
2:D:192:GLY:CA	2:D:288:PRO:HB3	2.47	0.44
2:D:361:LEU:CD1	2:D:387:ILE:CD1	2.95	0.44
2:G:214:LYS:HE3	2:G:220:ASP:CG	2.42	0.44
2:G:503:GLU:C	2:G:505:ARG:H	2.25	0.44
2:H:379:LYS:HE2	2:H:379:LYS:HB2	1.72	0.44
2:H:458:LYS:HA	2:H:465:GLU:HB3	2.00	0.44
1:A:80:HIS:C	1:A:82:TYR:N	2.74	0.44
1:A:119:LEU:CD1	1:A:197:TYR:CE2	3.01	0.44
2:C:395:PHE:HB3	2:H:358:VAL:HG23	2.00	0.44
2:C:496:ARG:C	2:C:496:ARG:HE	2.26	0.44
1:E:104:GLU:HA	1:F:107:ARG:HH12	1.83	0.44
1:A:108:ALA:HB2	1:A:156:GLU:OE1	2.17	0.43
1:B:142:MET:C	1:B:144:MET:N	2.75	0.43
2:C:88:GLU:O	2:C:91:ALA:HB3	2.18	0.43
2:C:270:THR:HG22	2:C:272:ALA:H	1.83	0.43
2:C:284:ARG:HE	2:C:284:ARG:HB3	1.32	0.43
2:D:31:GLU:C	2:D:32:GLY:O	2.59	0.43
2:D:86:PRO:O	2:D:87:GLN:C	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:196:LEU:HD12	2:D:196:LEU:HA	1.64	0.43
2:D:198:GLY:C	2:D:200:ASP:N	2.75	0.43
2:D:217:HIS:CD2	2:D:263:LEU:HD21	2.53	0.43
2:D:286:MET:O	2:D:287:GLY:C	2.61	0.43
2:D:387:ILE:HG21	2:D:387:ILE:HD13	1.58	0.43
2:D:479:GLU:O	2:D:482:GLN:N	2.51	0.43
2:G:179:GLU:HB2	2:G:188:LYS:NZ	2.33	0.43
2:G:334:VAL:HG13	2:G:336:PRO:N	2.32	0.43
2:H:115:THR:OG1	2:H:145:GLU:HG2	2.16	0.43
1:A:196:GLY:CA	1:A:207:ALA:HB2	2.48	0.43
2:C:74:ASP:O	2:C:75:TYR:C	2.60	0.43
2:C:118:ALA:HB2	2:C:146:PRO:HG2	2.00	0.43
2:C:368:LEU:HA	2:C:368:LEU:HD23	1.46	0.43
2:D:4:ILE:HD13	2:D:351:ILE:CG2	2.48	0.43
2:D:160:ASP:HA	2:D:180:LEU:HD23	1.99	0.43
1:E:193:LEU:H	1:E:209:VAL:HA	1.83	0.43
2:G:154:GLY:C	2:G:155:LEU:HD22	2.43	0.43
2:H:127:ALA:O	2:H:130:ASP:CB	2.50	0.43
2:H:368:LEU:HD22	2:H:411:GLN:HB2	1.98	0.43
1:A:78:MET:C	1:A:82:TYR:CD2	2.96	0.43
1:B:94:ARG:HD2	1:B:98:GLN:HG3	2.00	0.43
2:C:339:VAL:CG1	2:C:340:VAL:N	2.80	0.43
2:D:17:ALA:C	2:D:345:ALA:HB2	2.43	0.43
2:D:371:GLU:O	2:D:371:GLU:HG3	2.18	0.43
2:G:41:ALA:HB2	2:G:62:ASN:O	2.18	0.43
2:H:184:VAL:CG1	2:H:185:PHE:N	2.79	0.43
1:A:75:LEU:CD2	1:B:75:LEU:CD2	2.96	0.43
1:B:67:GLN:HA	1:B:67:GLN:NE2	2.31	0.43
1:B:142:MET:CE	2:C:254:PHE:CZ	3.01	0.43
1:B:166:LYS:HG2	1:B:167:PRO:CD	2.48	0.43
2:C:39:VAL:O	2:C:39:VAL:CG2	2.62	0.43
2:C:43:LYS:HA	2:C:43:LYS:HD2	1.55	0.43
2:C:47:ARG:HD3	2:C:92:ILE:HD13	2.00	0.43
2:C:253:PRO:HB2	2:C:254:PHE:CD1	2.53	0.43
2:C:291:GLN:HA	2:C:291:GLN:OE1	2.19	0.43
2:C:396:THR:HG23	2:H:361:LEU:HB2	2.00	0.43
2:D:83:GLN:O	2:D:83:GLN:HG3	2.17	0.43
2:D:204:VAL:HG21	2:D:277:LEU:O	2.18	0.43
2:D:507:GLU:OE1	2:D:507:GLU:CA	2.62	0.43
1:E:77:GLU:O	1:E:81:ARG:HG2	2.18	0.43
2:G:205:ILE:HD13	2:G:235:ALA:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:418:ALA:C	2:G:420:ASN:N	2.77	0.43
2:G:484:MET:N	2:G:484:MET:SD	2.91	0.43
2:H:12:THR:HB	2:H:170:GLY:H	1.84	0.43
2:H:287:GLY:O	2:H:291:GLN:HB2	2.18	0.43
2:H:324:ARG:HG3	2:H:325:GLU:N	2.32	0.43
1:A:75:LEU:CD2	1:B:75:LEU:HD22	2.48	0.43
1:A:171:TYR:HB3	1:A:172:LEU:HD23	2.00	0.43
2:C:164:LEU:HD21	2:C:175:VAL:CG1	2.49	0.43
2:C:207:ASP:O	2:C:210:VAL:N	2.52	0.43
2:D:89:ILE:O	2:D:92:ILE:N	2.51	0.43
2:D:387:ILE:O	2:D:388:PRO:C	2.61	0.43
1:E:63:ALA:HA	1:E:66:ALA:CB	2.48	0.43
1:E:75:LEU:O	1:E:78:MET:CB	2.63	0.43
1:E:134:GLN:C	1:E:136:LYS:N	2.76	0.43
1:F:69:ALA:HA	1:F:72:GLU:OE1	2.19	0.43
2:G:144:ASN:HD21	2:G:147:THR:H	1.62	0.43
2:H:86:PRO:O	2:H:89:ILE:HB	2.18	0.43
1:A:78:MET:SD	1:A:82:TYR:CZ	3.11	0.43
1:A:142:MET:C	1:A:144:MET:N	2.76	0.43
1:A:168:PHE:CE2	1:A:175:ALA:HB2	2.53	0.43
2:C:1:MET:CG	2:C:2:SER:H	2.30	0.43
2:C:157:LYS:CE	2:C:356:LYS:HZ2	2.31	0.43
2:C:241:GLU:O	2:C:245:VAL:CG1	2.66	0.43
2:D:80:GLU:OE1	2:D:80:GLU:N	2.51	0.43
2:D:89:ILE:O	2:D:90:SER:C	2.62	0.43
2:D:180:LEU:HD12	2:D:183:GLY:C	2.43	0.43
2:D:204:VAL:CG2	2:D:277:LEU:HD13	2.42	0.43
2:D:208:TYR:HE2	2:D:273:LYS:HD3	1.83	0.43
2:D:225:LYS:O	2:D:228:LEU:HB3	2.18	0.43
2:D:290:ARG:CA	2:D:293:LEU:HG	2.45	0.43
1:E:144:MET:O	1:E:148:SER:CB	2.66	0.43
2:G:161:GLN:HG2	2:G:180:LEU:HB2	2.00	0.43
2:G:387:ILE:HG22	2:G:449:ALA:HA	2.00	0.43
2:H:273:LYS:HD3	2:H:276:GLU:OE1	2.19	0.43
2:H:347:GLN:HA	2:H:350:VAL:HG23	2.01	0.43
1:A:84:ARG:HH22	2:C:354:GLU:N	2.16	0.43
1:A:106:TYR:CD2	1:A:202:ARG:NH1	2.71	0.43
1:A:118:VAL:C	1:A:120:ASP:N	2.77	0.43
1:A:161:ILE:H	1:A:196:GLY:C	2.27	0.43
2:C:97:LEU:HD12	2:C:97:LEU:HA	1.39	0.43
2:C:298:LEU:HD12	2:C:298:LEU:HA	1.78	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:361:LEU:O	2:C:387:ILE:HD12	2.19	0.43
2:C:400:ASP:O	2:C:401:ASN:HB2	2.18	0.43
2:C:434:ALA:HB1	2:C:435:PRO:HD2	2.00	0.43
2:D:33:ASN:O	2:D:34:ARG:C	2.62	0.43
1:E:67:GLN:O	1:E:68:ILE:C	2.62	0.43
1:E:72:GLU:O	1:E:75:LEU:HB2	2.18	0.43
2:G:164:LEU:HD23	2:G:176:SER:C	2.44	0.43
2:G:293:LEU:HD22	2:G:300:PRO:N	2.34	0.43
2:H:88:GLU:HA	2:H:91:ALA:CB	2.45	0.43
2:H:90:SER:O	2:H:94:LEU:HD22	2.19	0.43
2:H:113:VAL:CG2	2:H:141:ARG:HB3	2.49	0.43
2:C:153:TYR:CE1	2:C:334:VAL:CB	3.02	0.43
2:C:196:LEU:HD12	2:C:196:LEU:C	2.38	0.43
2:C:245:VAL:CG2	2:C:246:THR:N	2.79	0.43
2:C:369:GLY:HA3	2:C:378:THR:O	2.17	0.43
2:C:401:ASN:O	2:C:402:GLN:C	2.61	0.43
2:C:497:LYS:O	2:C:500:GLU:OE2	2.37	0.43
2:D:280:HIS:CD2	2:D:281:LEU:H	2.37	0.43
2:D:395:PHE:HD1	2:D:395:PHE:HA	1.64	0.43
1:F:74:LYS:O	1:F:78:MET:CB	2.62	0.43
2:G:152:ALA:CA	2:G:346:ILE:HD12	2.32	0.43
2:G:155:LEU:HD13	2:G:155:LEU:HA	1.79	0.43
2:G:346:ILE:O	2:G:350:VAL:HG23	2.19	0.43
2:H:24:VAL:CG1	2:H:345:ALA:HB1	2.49	0.43
2:H:143:ILE:HG22	2:H:144:ASN:H	1.82	0.43
2:H:202:ASP:O	2:H:206:ILE:HD12	2.19	0.43
1:A:84:ARG:NH2	2:C:354:GLU:N	2.67	0.43
2:C:128:THR:OG1	2:C:129:LYS:N	2.52	0.43
2:C:483:ARG:O	2:C:487:GLU:OE1	2.36	0.43
2:D:5:ILE:HD11	2:D:109:VAL:HG11	2.00	0.43
2:D:21:GLY:C	2:D:23:GLU:N	2.75	0.43
2:G:206:ILE:HG12	2:G:231:LEU:HB3	2.01	0.43
2:G:274:PHE:CA	2:G:277:LEU:HB2	2.48	0.43
2:G:366:LEU:HD13	2:G:412:GLY:CA	2.48	0.43
2:G:370:ILE:CG2	2:G:408:HIS:O	2.60	0.43
1:A:199:LEU:HD23	1:A:199:LEU:C	2.44	0.43
1:B:110:SER:O	1:B:111:LEU:C	2.59	0.43
2:C:92:ILE:O	2:C:95:GLN:HB2	2.19	0.43
2:C:470:ILE:O	2:C:471:LYS:C	2.61	0.43
2:C:500:GLU:HA	2:C:503:GLU:CG	2.49	0.43
2:D:51:GLU:O	2:D:53:ALA:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:198:GLY:O	2:D:199:ASP:C	2.62	0.43
2:D:267:MET:SD	2:D:268:THR:N	2.92	0.43
2:D:361:LEU:CD1	2:D:387:ILE:HG13	2.48	0.43
2:D:438:VAL:N	2:D:439:PRO:HD3	2.33	0.43
1:E:94:ARG:CA	1:E:97:ARG:HB3	2.49	0.43
1:F:75:LEU:O	1:F:76:SER:C	2.60	0.43
2:G:107:GLU:O	2:G:107:GLU:HG2	2.19	0.43
2:G:173:PHE:CZ	2:G:175:VAL:CG1	2.97	0.43
2:G:372:THR:HB	2:G:376:VAL:CG1	2.24	0.43
2:G:403:THR:C	2:G:404:THR:HG22	2.43	0.43
2:H:4:ILE:HG12	2:H:111:ARG:HB2	2.01	0.43
2:H:88:GLU:O	2:H:91:ALA:HB3	2.19	0.43
2:H:203:GLN:CD	2:H:206:ILE:HD12	2.44	0.43
2:H:272:ALA:HA	2:H:275:GLU:OE1	2.19	0.43
2:C:18:VAL:HG12	2:C:27:ILE:CD1	2.49	0.42
2:C:226:MET:HE2	2:C:226:MET:HB3	1.88	0.42
2:D:79:ILE:HD12	2:D:84:TYR:CE2	2.51	0.42
2:D:147:THR:O	2:D:151:LEU:HD13	2.19	0.42
2:G:153:TYR:OH	2:G:334:VAL:HG12	2.19	0.42
2:G:238:ALA:C	2:G:242:LEU:HD22	2.43	0.42
2:H:386:THR:CG2	2:H:387:ILE:O	2.55	0.42
2:H:403:THR:OG1	2:H:404:THR:N	2.52	0.42
1:A:171:TYR:CB	1:A:172:LEU:HD23	2.50	0.42
1:B:193:LEU:HD23	1:B:193:LEU:O	2.18	0.42
2:C:71:MET:SD	2:C:86:PRO:HB2	2.58	0.42
2:C:75:TYR:C	2:C:75:TYR:HD1	2.27	0.42
2:C:138:GLU:OE2	2:C:140:GLU:OE1	2.37	0.42
2:C:162:THR:N	2:C:304:ASP:OD1	2.52	0.42
2:C:285:THR:C	2:C:286:MET:HE2	2.44	0.42
2:D:201:PHE:C	2:D:203:GLN:N	2.71	0.42
2:D:328:LYS:HG2	2:D:329:GLU:N	2.28	0.42
2:D:495:ASP:O	2:D:497:LYS:N	2.52	0.42
1:F:82:TYR:HD1	1:F:82:TYR:HA	1.78	0.42
2:G:54:LYS:O	2:G:57:ALA:HB3	2.19	0.42
2:G:486:LYS:HE3	2:G:490:GLU:OE2	2.19	0.42
2:H:119:TYR:HD2	2:H:190:THR:HG21	1.84	0.42
1:A:120:ASP:C	1:A:122:PHE:N	2.73	0.42
1:A:185:GLU:HB3	1:A:186:PRO:CD	2.50	0.42
1:A:198:LYS:O	1:A:198:LYS:CG	2.66	0.42
1:A:208:MET:H	1:A:208:MET:HG2	1.60	0.42
1:B:188:THR:C	1:B:211:VAL:CG2	2.92	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:257:ALA:HB1	2:C:261:GLY:C	2.44	0.42
2:C:287:GLY:O	2:C:288:PRO:C	2.59	0.42
2:C:307:ILE:O	2:C:308:LEU:HD12	2.20	0.42
2:D:16:VAL:HG11	2:D:100:TYR:OH	2.18	0.42
2:D:246:THR:O	2:D:246:THR:OG1	2.36	0.42
2:D:506:ASN:C	2:D:508:ALA:H	2.27	0.42
1:F:75:LEU:HD13	1:F:76:SER:N	2.35	0.42
1:F:165:GLY:HA2	1:F:189:VAL:H	1.84	0.42
2:G:144:ASN:OD1	2:G:147:THR:CG2	2.68	0.42
2:G:298:LEU:HB3	2:G:302:ASP:CG	2.44	0.42
2:G:308:LEU:CD1	2:G:330:PRO:CB	2.96	0.42
2:H:67:ILE:HD11	2:H:89:ILE:HG21	1.78	0.42
2:H:358:VAL:HG23	2:H:359:VAL:N	2.34	0.42
2:H:367:SER:OG	2:H:413:GLU:OE1	2.37	0.42
2:H:392:SER:CB	2:H:444:THR:HB	2.48	0.42
2:H:401:ASN:HB3	2:H:433:PRO:C	2.44	0.42
1:A:89:PHE:C	1:A:91:ASN:N	2.76	0.42
2:C:42:PHE:HD1	2:C:42:PHE:H	1.67	0.42
2:D:270:THR:OG1	2:D:272:ALA:N	2.52	0.42
2:D:408:HIS:CD2	2:D:425:ARG:HD2	2.53	0.42
2:G:243:SER:CB	2:G:315:ILE:HA	2.50	0.42
2:G:255:ILE:H	2:G:264:HIS:CB	2.33	0.42
2:G:477:SER:OG	2:G:478:GLU:N	2.51	0.42
2:H:370:ILE:CD1	2:H:407:ILE:HG23	2.43	0.42
2:H:460:LEU:N	2:H:460:LEU:CD2	2.79	0.42
1:A:75:LEU:O	1:A:76:SER:C	2.62	0.42
1:A:120:ASP:OD2	1:A:205:ARG:NH2	2.51	0.42
1:A:160:ALA:CB	1:A:197:TYR:CE1	3.02	0.42
1:B:119:LEU:HD22	1:B:122:PHE:HB2	2.01	0.42
1:B:153:LEU:HA	1:B:153:LEU:HD22	1.60	0.42
2:C:68:LYS:CE	2:C:117:PRO:HG3	2.49	0.42
2:C:175:VAL:CG1	2:C:176:SER:N	2.82	0.42
2:C:209:LEU:O	2:C:210:VAL:C	2.60	0.42
2:C:267:MET:HB2	2:C:267:MET:HE2	1.65	0.42
2:C:330:PRO:O	2:C:330:PRO:HG2	2.19	0.42
2:C:380:LEU:O	2:C:391:LYS:CD	2.67	0.42
2:D:7:ILE:HG22	2:D:8:ASP:N	2.35	0.42
2:D:97:LEU:HA	2:D:97:LEU:HD12	1.67	0.42
2:D:145:GLU:O	2:D:146:PRO:C	2.61	0.42
2:D:208:TYR:CE2	2:D:273:LYS:HD3	2.54	0.42
2:D:280:HIS:O	2:D:281:LEU:C	2.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:421:LYS:NZ	2:D:480:GLU:CD	2.77	0.42
1:E:70:GLU:H	1:E:70:GLU:HG3	1.67	0.42
2:G:144:ASN:O	2:G:145:GLU:C	2.62	0.42
2:G:369:GLY:CA	2:G:377:PHE:CE1	3.02	0.42
2:G:397:THR:CB	2:G:436:ARG:HA	2.49	0.42
1:A:93:ARG:O	1:A:94:ARG:C	2.63	0.42
1:A:174:GLN:O	1:A:208:MET:HA	2.19	0.42
1:B:116:LEU:HD22	1:B:197:TYR:CE2	2.54	0.42
2:C:110:THR:HG23	2:C:111:ARG:CG	2.26	0.42
2:G:226:MET:HE2	2:G:226:MET:HB3	1.87	0.42
2:H:18:VAL:O	2:H:24:VAL:HG13	2.19	0.42
2:H:496:ARG:C	2:H:498:ARG:H	2.24	0.42
1:A:92:PHE:HZ	1:B:92:PHE:CE1	2.36	0.42
1:A:118:VAL:HG12	1:A:119:LEU:N	2.34	0.42
1:A:123:GLU:OE1	1:A:195:LYS:HB2	2.19	0.42
1:B:114:ASP:O	1:B:117:PRO:HD2	2.20	0.42
1:B:128:ILE:O	1:B:128:ILE:HG22	2.20	0.42
2:C:440:GLN:O	2:C:441:ILE:HG13	2.19	0.42
2:D:39:VAL:CG2	2:D:53:ALA:HB3	2.50	0.42
2:D:101:ALA:O	2:D:105:LEU:HD22	2.20	0.42
2:D:213:PHE:HZ	2:D:263:LEU:HD13	1.83	0.42
2:H:71:MET:SD	2:H:87:GLN:HG3	2.60	0.42
2:H:401:ASN:ND2	2:H:433:PRO:O	2.53	0.42
1:A:120:ASP:HA	1:A:123:GLU:OE2	2.20	0.42
1:A:124:ARG:NH2	2:C:230:ARG:HD2	2.34	0.42
1:B:169:ASP:O	1:B:173:HIS:HD2	2.03	0.42
2:C:182:ASP:C	2:C:184:VAL:N	2.75	0.42
2:C:273:LYS:CE	2:C:277:LEU:HD21	2.50	0.42
2:C:325:GLU:C	2:C:325:GLU:OE1	2.63	0.42
2:D:3:LYS:HD2	2:D:3:LYS:N	2.35	0.42
2:D:18:VAL:HG22	2:D:19:LEU:N	2.34	0.42
2:D:50:GLY:O	2:D:51:GLU:C	2.62	0.42
2:D:73:THR:O	2:D:75:TYR:N	2.53	0.42
2:D:141:ARG:HG3	2:D:142:ILE:N	2.34	0.42
2:D:150:ALA:O	2:D:155:LEU:HD22	2.20	0.42
2:D:356:LYS:HD3	2:G:406:ASP:HB2	2.02	0.42
2:D:408:HIS:CE1	2:D:425:ARG:NH1	2.88	0.42
2:D:421:LYS:HE2	2:D:421:LYS:HB2	1.41	0.42
1:F:85:LEU:HD13	1:F:85:LEU:HA	1.83	0.42
2:G:173:PHE:HZ	2:G:175:VAL:HG13	1.78	0.42
2:G:369:GLY:C	2:G:377:PHE:HE1	2.28	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:395:PHE:CD1	2:G:395:PHE:N	2.87	0.42
2:G:400:ASP:CB	2:G:401:ASN:ND2	2.83	0.42
2:G:418:ALA:C	2:G:420:ASN:H	2.28	0.42
2:G:504:LEU:C	2:G:506:ASN:N	2.77	0.42
1:A:69:ALA:HA	1:A:72:GLU:CD	2.44	0.42
1:A:111:LEU:HD23	1:A:111:LEU:HA	1.56	0.42
1:A:200:LYS:O	1:A:201:ASP:OD1	2.37	0.42
2:C:145:GLU:HB2	2:C:146:PRO:CD	2.41	0.42
2:C:394:VAL:CG2	2:H:363:VAL:HG11	2.46	0.42
2:C:471:LYS:H	2:C:471:LYS:NZ	2.15	0.42
2:D:334:VAL:O	2:D:336:PRO:HD3	2.19	0.42
2:D:468:ILE:HG22	2:D:469:THR:C	2.44	0.42
2:G:120:PHE:CG	2:G:124:GLN:CD	2.98	0.42
2:G:164:LEU:HD23	2:G:177:ILE:HG13	2.02	0.42
2:G:226:MET:O	2:G:226:MET:HG2	2.19	0.42
2:G:293:LEU:HD13	2:G:300:PRO:CG	2.41	0.42
2:G:480:GLU:CD	2:G:481:ILE:HG13	2.45	0.42
2:H:71:MET:HE2	2:H:128:THR:CG2	2.49	0.42
2:H:339:VAL:HA	2:H:342:ILE:CG1	2.50	0.42
2:H:380:LEU:HD23	2:H:380:LEU:HA	1.26	0.42
2:H:414:ARG:CZ	2:H:491:ASN:ND2	2.83	0.42
2:C:335:ASN:OD1	2:C:335:ASN:C	2.63	0.42
2:C:466:GLN:HA	2:C:466:GLN:NE2	2.34	0.42
2:D:10:GLY:HA2	2:D:68:LYS:NZ	2.34	0.42
2:D:209:LEU:HA	2:D:209:LEU:HD22	1.72	0.42
1:F:91:ASN:O	1:F:92:PHE:C	2.62	0.42
2:G:370:ILE:CG1	2:G:445:PHE:HZ	2.33	0.42
2:G:402:GLN:HG2	2:G:404:THR:O	2.20	0.42
2:H:12:THR:HB	2:H:170:GLY:N	2.35	0.42
2:H:305:LYS:HE2	2:H:328:LYS:HD3	2.02	0.42
2:H:377:PHE:CE1	2:H:378:THR:O	2.73	0.42
1:A:92:PHE:CE2	1:B:92:PHE:CZ	3.08	0.41
1:A:200:LYS:O	1:A:202:ARG:N	2.47	0.41
1:B:199:LEU:O	1:B:200:LYS:C	2.61	0.41
2:C:64:ILE:HG22	2:C:65:ILE:N	2.34	0.41
2:C:204:VAL:HG21	2:C:277:LEU:O	2.20	0.41
2:D:4:ILE:CD1	2:D:351:ILE:HB	2.50	0.41
2:D:6:GLY:CA	2:D:344:ALA:HB1	2.50	0.41
2:D:210:VAL:CA	2:D:221:LEU:HD13	2.50	0.41
2:D:303:ILE:HG22	2:D:304:ASP:C	2.45	0.41
2:D:309:VAL:C	2:D:336:PRO:HB3	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:171:GLY:O	2:G:195:HIS:HA	2.19	0.41
2:G:242:LEU:HD13	2:G:242:LEU:H	1.84	0.41
2:H:8:ASP:O	2:H:14:SER:CB	2.67	0.41
2:H:15:CYS:SG	2:H:341:ALA:HB3	2.60	0.41
2:H:132:GLY:O	2:H:137:LEU:HB2	2.19	0.41
2:H:154:GLY:C	2:H:156:ASP:H	2.26	0.41
2:H:281:LEU:CD1	2:H:284:ARG:NH1	2.81	0.41
2:H:397:THR:O	2:H:397:THR:HG23	2.20	0.41
1:A:144:MET:HE1	2:D:266:GLU:CG	2.50	0.41
1:B:119:LEU:HD21	1:B:149:LEU:HD22	2.02	0.41
1:B:135:ALA:O	1:B:138:ILE:HB	2.20	0.41
2:C:48:LEU:C	2:C:49:VAL:HG12	2.44	0.41
2:C:148:ALA:O	2:C:149:ALA:C	2.62	0.41
2:C:151:LEU:HD22	2:C:347:GLN:HG2	1.99	0.41
2:C:327:GLY:C	2:C:328:LYS:HG3	2.45	0.41
2:C:366:LEU:HA	2:C:383:ARG:HG3	2.02	0.41
2:D:44:ASN:C	2:D:46:GLU:N	2.72	0.41
2:D:303:ILE:HG22	2:D:305:LYS:N	2.35	0.41
2:D:357:ASP:CG	2:G:374:GLY:H	2.28	0.41
2:D:423:LEU:HD13	2:D:470:ILE:HD13	2.01	0.41
1:F:98:GLN:HA	1:F:101:GLU:HG3	2.02	0.41
2:G:163:ILE:HA	2:G:303:ILE:CG2	2.50	0.41
2:G:163:ILE:HA	2:G:303:ILE:HG23	2.01	0.41
2:H:24:VAL:HG11	2:H:345:ALA:HB1	2.01	0.41
2:H:116:VAL:CG1	2:H:117:PRO:CD	2.92	0.41
1:A:192:GLU:CG	1:A:195:LYS:HA	2.50	0.41
1:B:133:GLU:HB2	1:B:134:GLN:H	1.69	0.41
2:C:164:LEU:O	2:C:306:VAL:HG13	2.20	0.41
2:C:208:TYR:C	2:C:208:TYR:CD1	2.98	0.41
2:C:243:SER:C	2:C:271:ARG:HH12	2.27	0.41
2:C:374:GLY:C	2:C:376:VAL:N	2.78	0.41
2:C:399:ALA:CB	2:H:355:VAL:HG11	2.50	0.41
2:D:214:LYS:O	2:D:218:GLY:N	2.52	0.41
2:D:230:ARG:CZ	2:D:252:LEU:HD11	2.48	0.41
2:D:242:LEU:HD21	2:D:248:THR:HG22	2.02	0.41
2:D:279:ALA:C	2:D:282:VAL:HB	2.45	0.41
2:D:497:LYS:O	2:D:498:ARG:C	2.63	0.41
1:E:81:ARG:O	1:E:84:ARG:N	2.53	0.41
1:F:160:ALA:HA	1:F:196:GLY:C	2.46	0.41
1:F:194:GLN:O	1:F:207:ALA:HB2	2.21	0.41
2:G:167:ASP:HB3	2:G:174:ASP:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:358:VAL:HG23	2:G:359:VAL:N	2.35	0.41
2:H:160:ASP:OD1	2:H:182:ASP:N	2.53	0.41
2:H:168:LEU:HD12	2:H:169:GLY:O	2.20	0.41
2:H:231:LEU:O	2:H:235:ALA:CB	2.68	0.41
2:C:87:GLN:O	2:C:91:ALA:CB	2.66	0.41
2:C:227:ALA:O	2:C:228:LEU:C	2.62	0.41
2:G:413:GLU:O	2:G:414:ARG:C	2.63	0.41
2:G:499:LYS:HE2	2:G:500:GLU:OE1	2.21	0.41
2:H:186:GLU:O	2:H:186:GLU:HG3	2.20	0.41
2:C:42:PHE:N	2:C:42:PHE:HD1	2.14	0.41
2:C:369:GLY:C	2:C:370:ILE:HG13	2.46	0.41
2:D:420:ASN:N	2:D:420:ASN:HD22	2.17	0.41
2:D:476:LEU:HB3	2:D:480:GLU:HB3	2.02	0.41
2:D:476:LEU:O	2:D:480:GLU:HB3	2.21	0.41
2:G:274:PHE:C	2:G:277:LEU:HB2	2.45	0.41
2:H:457:ALA:O	2:H:465:GLU:HB2	2.20	0.41
1:A:84:ARG:HH21	2:C:354:GLU:HB2	1.82	0.41
1:A:145:VAL:O	1:A:148:SER:HB3	2.21	0.41
1:A:190:VAL:N	1:A:210:LYS:O	2.47	0.41
2:C:326:LEU:HD22	2:C:326:LEU:H	1.86	0.41
2:D:37:PRO:HG2	2:D:51:GLU:N	2.35	0.41
2:D:315:ILE:HG21	2:D:318:VAL:HG23	2.02	0.41
2:D:444:THR:O	2:D:445:PHE:CD1	2.66	0.41
1:E:83:LEU:CD1	1:E:83:LEU:C	2.92	0.41
2:G:10:GLY:CA	2:G:13:ASN:O	2.68	0.41
2:G:180:LEU:HG	2:G:182:ASP:H	1.86	0.41
2:G:358:VAL:HG23	2:G:359:VAL:H	1.85	0.41
2:H:51:GLU:C	2:H:54:LYS:H	2.29	0.41
2:H:381:ILE:HD11	2:H:445:PHE:CB	2.50	0.41
1:B:119:LEU:O	1:B:123:GLU:OE1	2.38	0.41
2:C:198:GLY:O	2:C:199:ASP:C	2.64	0.41
2:C:234:ALA:HA	2:C:237:LYS:HD3	2.02	0.41
2:C:366:LEU:HD22	2:C:367:SER:N	2.28	0.41
2:D:329:GLU:HA	2:D:330:PRO:HD2	1.96	0.41
2:D:358:VAL:HG22	2:G:372:THR:HA	2.02	0.41
2:D:397:THR:HG23	2:D:436:ARG:CG	2.50	0.41
1:F:63:ALA:HA	1:F:66:ALA:CB	2.51	0.41
1:F:83:LEU:O	2:G:388:PRO:HG2	2.21	0.41
2:G:6:GLY:O	2:G:16:VAL:HA	2.21	0.41
2:G:70:HIS:CD2	2:G:75:TYR:CD1	3.09	0.41
2:G:225:LYS:O	2:G:229:GLN:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:400:ASP:HB3	2:G:401:ASN:ND2	2.35	0.41
2:G:426:PHE:CD1	2:G:468:ILE:HD12	2.53	0.41
2:H:210:VAL:O	2:H:214:LYS:CG	2.56	0.41
2:H:290:ARG:HA	2:H:293:LEU:HD11	2.02	0.41
1:A:107:ARG:C	1:B:107:ARG:HG2	2.45	0.41
1:A:135:ALA:O	1:A:138:ILE:HB	2.21	0.41
1:B:83:LEU:HD22	1:B:83:LEU:HA	1.75	0.41
1:B:125:ALA:HA	2:D:254:PHE:CZ	2.54	0.41
2:C:27:ILE:CD1	2:C:101:ALA:CB	2.98	0.41
2:C:97:LEU:HA	2:C:100:TYR:CE1	2.55	0.41
2:D:11:THR:HG23	2:D:68:LYS:HZ2	1.86	0.41
2:D:50:GLY:O	2:D:53:ALA:CB	2.69	0.41
2:D:200:ASP:C	2:D:281:LEU:HD21	2.43	0.41
2:D:366:LEU:CD2	2:D:412:GLY:HA2	2.51	0.41
2:D:373:MET:HE2	2:D:395:PHE:CD2	2.56	0.41
2:D:498:ARG:O	2:D:499:LYS:C	2.62	0.41
1:F:60:GLU:CA	1:F:63:ALA:HB3	2.50	0.41
1:F:95:ARG:HG3	1:F:99:GLU:OE2	2.21	0.41
2:G:381:ILE:HD11	2:G:447:ILE:HD11	1.94	0.41
2:H:6:GLY:CA	2:H:344:ALA:HB1	2.50	0.41
2:H:287:GLY:C	2:H:289:VAL:N	2.78	0.41
2:H:409:VAL:O	2:H:423:LEU:HB2	2.21	0.41
2:H:485:ILE:C	2:H:487:GLU:N	2.77	0.41
1:A:126:LEU:O	1:A:126:LEU:HD22	2.21	0.41
1:A:143:GLU:HB2	1:A:147:ARG:HH12	1.86	0.41
1:A:192:GLU:OE2	1:A:195:LYS:CB	2.69	0.41
1:A:205:ARG:O	1:A:205:ARG:HD3	2.21	0.41
1:B:149:LEU:HD23	1:B:150:VAL:N	2.35	0.41
1:B:153:LEU:CD1	1:B:158:VAL:HG21	2.51	0.41
1:B:190:VAL:CG1	1:B:191:GLU:HG2	2.50	0.41
2:C:9:LEU:HD13	2:C:94:LEU:HD11	2.03	0.41
2:C:75:TYR:HE1	2:C:77:VAL:HB	1.86	0.41
2:C:75:TYR:CE1	2:C:77:VAL:HB	2.56	0.41
2:C:144:ASN:O	2:C:146:PRO:N	2.54	0.41
2:C:151:LEU:O	2:C:154:GLY:CA	2.69	0.41
2:C:203:GLN:O	2:C:206:ILE:N	2.54	0.41
2:C:208:TYR:O	2:C:212:GLN:HG2	2.21	0.41
2:C:225:LYS:HE3	2:C:225:LYS:HB3	1.75	0.41
2:C:338:GLU:O	2:C:339:VAL:C	2.62	0.41
2:C:431:ILE:CD1	2:C:441:ILE:HD11	2.50	0.41
2:C:488:ALA:O	2:C:491:ASN:O	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:500:GLU:OE1	2:C:503:GLU:HG3	2.21	0.41
2:D:8:ASP:OD1	2:D:340:VAL:HG11	2.21	0.41
2:D:33:ASN:C	2:D:35:THR:N	2.77	0.41
2:D:60:ASN:OD1	2:D:62:ASN:HB2	2.21	0.41
2:D:164:LEU:HD23	2:D:177:ILE:CG1	2.51	0.41
2:D:258:ASN:OD1	2:D:260:ASN:ND2	2.53	0.41
2:D:445:PHE:CD1	2:D:445:PHE:N	2.88	0.41
1:E:140:GLN:C	1:E:142:MET:N	2.78	0.41
1:F:80:HIS:HA	1:F:83:LEU:HG	2.03	0.41
1:F:91:ASN:OD1	2:G:386:THR:OG1	2.39	0.41
1:F:141:GLY:C	1:F:143:GLU:H	2.29	0.41
2:G:48:LEU:O	2:G:53:ALA:HB2	2.21	0.41
2:G:72:GLY:HA3	2:G:124:GLN:HB3	2.03	0.41
2:G:154:GLY:O	2:G:157:LYS:HE2	2.21	0.41
2:G:169:GLY:N	2:G:172:THR:O	2.50	0.41
2:G:228:LEU:HA	2:G:231:LEU:HD13	2.03	0.41
2:G:479:GLU:HA	2:G:482:GLN:NE2	2.35	0.41
2:H:5:ILE:O	2:H:112:ALA:HB1	2.21	0.41
2:H:214:LYS:HE3	2:H:220:ASP:HA	2.03	0.41
2:H:383:ARG:O	2:H:384:ASN:C	2.58	0.41
1:B:169:ASP:HB2	1:B:172:LEU:HG	2.02	0.41
2:C:395:PHE:HE2	2:C:443:VAL:CG1	2.34	0.41
2:C:416:MET:HE2	2:C:496:ARG:NH2	2.36	0.41
2:C:472:SER:O	2:C:473:SER:HB3	2.21	0.41
2:D:77:VAL:O	2:D:77:VAL:CG1	2.66	0.41
2:D:120:PHE:CD2	2:D:124:GLN:HB3	2.56	0.41
2:D:303:ILE:CG2	2:D:304:ASP:N	2.84	0.41
2:D:361:LEU:HD11	2:D:387:ILE:HD12	2.03	0.41
1:F:89:PHE:O	1:F:90:GLU:C	2.64	0.41
2:G:459:ASP:HB3	2:G:462:THR:OG1	2.21	0.41
2:G:474:SER:C	2:G:476:LEU:H	2.29	0.41
2:H:202:ASP:OD2	2:H:235:ALA:HB3	2.21	0.41
2:H:203:GLN:NE2	2:H:206:ILE:HB	2.36	0.41
2:H:238:ALA:O	2:H:242:LEU:N	2.54	0.41
2:H:377:PHE:CD1	2:H:378:THR:N	2.89	0.41
1:B:199:LEU:CD2	1:B:199:LEU:C	2.94	0.40
2:C:47:ARG:HD3	2:C:92:ILE:CD1	2.51	0.40
2:D:153:TYR:HD2	2:D:331:HIS:CD2	2.40	0.40
2:D:361:LEU:HD22	2:D:387:ILE:HG13	1.99	0.40
2:D:372:THR:HB	2:D:378:THR:OG1	2.21	0.40
1:F:74:LYS:HG3	1:F:78:MET:HG2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:15:CYS:SG	2:H:338:GLU:HB2	2.61	0.40
2:H:104:TYR:C	2:H:104:TYR:CD1	2.99	0.40
2:H:361:LEU:HD13	2:H:362:ASP:N	2.36	0.40
1:A:143:GLU:HB2	1:A:147:ARG:NH1	2.35	0.40
1:A:162:GLU:HG2	1:A:166:LYS:NZ	2.36	0.40
1:A:187:ASN:ND2	1:A:187:ASN:O	2.54	0.40
1:B:125:ALA:HB3	1:B:126:LEU:HD23	2.03	0.40
2:C:116:VAL:O	2:C:145:GLU:HG3	2.22	0.40
2:C:335:ASN:OD1	2:C:337:ASP:N	2.54	0.40
2:D:121:ASN:OD1	2:D:124:GLN:N	2.41	0.40
2:D:252:LEU:O	2:D:255:ILE:HD11	2.19	0.40
2:D:270:THR:H	2:D:270:THR:HG23	1.51	0.40
2:D:357:ASP:O	2:G:398:ALA:HB2	2.22	0.40
2:D:407:ILE:HG22	2:D:409:VAL:CG1	2.51	0.40
2:D:476:LEU:HB3	2:D:480:GLU:CB	2.51	0.40
2:G:90:SER:O	2:G:94:LEU:HD23	2.21	0.40
2:G:273:LYS:HA	2:G:276:GLU:HG2	2.03	0.40
2:G:303:ILE:HG21	2:G:306:VAL:CG2	2.51	0.40
2:G:497:LYS:C	2:G:499:LYS:H	2.27	0.40
2:H:16:VAL:HG13	2:H:100:TYR:OH	2.22	0.40
2:H:355:VAL:O	2:H:355:VAL:HG12	2.21	0.40
2:H:363:VAL:O	2:H:364:THR:CB	2.69	0.40
2:C:362:ASP:O	2:C:363:VAL:CG1	2.63	0.40
2:C:483:ARG:O	2:C:487:GLU:HB2	2.21	0.40
2:D:60:ASN:C	2:D:62:ASN:H	2.29	0.40
2:D:62:ASN:ND2	2:D:80:GLU:CD	2.66	0.40
2:D:75:TYR:CD1	2:D:76:LYS:N	2.89	0.40
2:D:344:ALA:O	2:D:345:ALA:C	2.63	0.40
2:D:423:LEU:O	2:D:424:GLY:C	2.64	0.40
1:E:84:ARG:HG2	1:E:88:ASP:OD2	2.22	0.40
2:G:438:VAL:N	2:G:439:PRO:CD	2.84	0.40
2:G:469:THR:O	2:G:469:THR:OG1	2.34	0.40
2:H:146:PRO:HB2	2:H:178:LEU:HD11	2.03	0.40
1:A:141:GLY:C	1:A:142:MET:SD	3.04	0.40
1:B:121:ASN:HA	1:B:124:ARG:CB	2.31	0.40
2:C:414:ARG:HB2	2:C:420:ASN:ND2	2.36	0.40
2:D:80:GLU:OE1	2:D:80:GLU:CA	2.69	0.40
2:D:198:GLY:O	2:D:200:ASP:N	2.54	0.40
2:D:444:THR:C	2:D:445:PHE:CD1	2.91	0.40
2:D:505:ARG:C	2:D:507:GLU:H	2.28	0.40
1:E:85:LEU:O	1:E:86:TYR:C	2.62	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:213:PHE:CE1	2:G:217:HIS:HD2	2.39	0.40
2:G:310:GLY:O	2:G:313:THR:HG22	2.20	0.40
2:G:345:ALA:O	2:G:346:ILE:C	2.63	0.40
2:H:5:ILE:CG2	2:H:16:VAL:HG23	2.52	0.40
1:A:119:LEU:HD11	1:A:197:TYR:CE2	2.57	0.40
1:A:199:LEU:O	1:A:200:LYS:O	2.39	0.40
1:B:173:HIS:CD2	1:B:173:HIS:N	2.88	0.40
1:B:188:THR:C	1:B:211:VAL:HG22	2.47	0.40
2:C:20:GLU:C	2:C:21:GLY:O	2.63	0.40
2:C:125:ARG:O	2:C:126:GLN:C	2.63	0.40
2:C:334:VAL:HG22	2:C:335:ASN:N	2.37	0.40
2:C:460:LEU:N	2:C:460:LEU:HD23	2.37	0.40
2:D:37:PRO:CG	2:D:51:GLU:HG2	2.25	0.40
2:D:151:LEU:N	2:D:151:LEU:HD12	2.37	0.40
2:D:208:TYR:HD2	2:D:277:LEU:CD1	2.35	0.40
2:D:286:MET:O	2:D:289:VAL:N	2.54	0.40
1:E:69:ALA:O	1:E:72:GLU:OE1	2.39	0.40
1:E:72:GLU:CA	1:E:75:LEU:HB2	2.51	0.40
2:G:198:GLY:HA3	2:G:312:SER:OG	2.21	0.40
2:G:204:VAL:HG13	2:G:277:LEU:HD22	2.04	0.40
2:G:281:LEU:CA	2:G:284:ARG:HG3	2.38	0.40
2:G:306:VAL:CG1	2:G:307:ILE:H	2.34	0.40
2:G:390:SER:HB3	2:G:447:ILE:H	1.85	0.40
2:H:96:TYR:C	2:H:98:LYS:N	2.78	0.40
2:H:149:ALA:HB1	2:H:339:VAL:CG1	2.46	0.40
2:H:484:MET:HE2	2:H:484:MET:HB2	1.75	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 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	154/213 (72%)	125 (81%)	26 (17%)	3 (2%)	6	34
1	B	152/213 (71%)	119 (78%)	27 (18%)	6 (4%)	2	21
1	E	127/213 (60%)	103 (81%)	22 (17%)	2 (2%)	7	37
1	F	124/213 (58%)	100 (81%)	22 (18%)	2 (2%)	7	37
2	C	507/509 (100%)	458 (90%)	47 (9%)	2 (0%)	30	65
2	D	507/509 (100%)	426 (84%)	72 (14%)	9 (2%)	6	35
2	G	498/509 (98%)	430 (86%)	62 (12%)	6 (1%)	10	42
2	H	497/509 (98%)	423 (85%)	63 (13%)	11 (2%)	5	31
All	All	2566/2888 (89%)	2184 (85%)	341 (13%)	41 (2%)	7	37

All (41) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	D	359	VAL
1	E	170	PRO
2	H	253	PRO
1	B	168	PHE
2	D	361	LEU
2	D	383	ARG
2	G	39	VAL
2	G	40	VAL
2	H	28	PRO
2	H	39	VAL
2	H	387	ILE
2	C	363	VAL
1	F	89	PHE
2	H	504	LEU
2	D	504	LEU
2	H	12	THR
1	B	64	ALA
2	D	226	MET
2	D	309	VAL
1	E	80	HIS
2	G	373	MET
2	H	383	ARG
1	A	75	LEU
1	A	187	ASN
1	B	93	ARG
1	B	106	TYR
1	B	122	PHE

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Mol	Chain	Res	Type
2	D	307	ILE
2	G	492	ALA
1	A	164	VAL
2	D	439	PRO
2	H	346	ILE
2	H	485	ILE
1	B	158	VAL
1	F	164	VAL
2	G	37	PRO
2	G	252	LEU
2	D	318	VAL
2	H	26	VAL
2	C	359	VAL
2	H	32	GLY

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	128/174 (74%)	81 (63%)	47 (37%)	0	1
1	B	129/174 (74%)	86 (67%)	43 (33%)	0	2
1	E	35/174 (20%)	25 (71%)	10 (29%)	0	3
1	F	39/174 (22%)	27 (69%)	12 (31%)	0	2
2	C	416/418 (100%)	295 (71%)	121 (29%)	0	3
2	D	416/418 (100%)	295 (71%)	121 (29%)	0	3
2	G	316/418 (76%)	242 (77%)	74 (23%)	1	5
2	H	319/418 (76%)	218 (68%)	101 (32%)	0	2
All	All	1798/2368 (76%)	1269 (71%)	529 (29%)	0	3

All (529) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	59	GLU

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Mol	Chain	Res	Type
1	A	60	GLU
1	A	72	GLU
1	A	75	LEU
1	A	78	MET
1	A	83	LEU
1	A	84	ARG
1	A	86	TYR
1	A	89	PHE
1	A	90	GLU
1	A	91	ASN
1	A	92	PHE
1	A	95	ARG
1	A	104	GLU
1	A	106	TYR
1	A	109	GLN
1	A	111	LEU
1	A	113	SER
1	A	114	ASP
1	A	115	LEU
1	A	118	VAL
1	A	119	LEU
1	A	126	LEU
1	A	131	ASP
1	A	132	ASN
1	A	133	GLU
1	A	134	GLN
1	A	140	GLN
1	A	142	MET
1	A	143	GLU
1	A	144	MET
1	A	147	ARG
1	A	153	LEU
1	A	159	GLU
1	A	166	LYS
1	A	168	PHE
1	A	172	LEU
1	A	176	VAL
1	A	182	GLU
1	A	187	ASN
1	A	188	THR
1	A	191	GLU
1	A	198	LYS

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Mol	Chain	Res	Type
1	A	203	VAL
1	A	205	ARG
1	A	208	MET
1	A	213	GLN
1	B	60	GLU
1	B	61	LEU
1	B	67	GLN
1	B	71	LEU
1	B	72	GLU
1	B	75	LEU
1	B	77	GLU
1	B	80	HIS
1	B	83	LEU
1	B	84	ARG
1	B	85	LEU
1	B	86	TYR
1	B	93	ARG
1	B	96	THR
1	B	97	ARG
1	B	101	GLU
1	B	109	GLN
1	B	115	LEU
1	B	118	VAL
1	B	119	LEU
1	B	121	ASN
1	B	126	LEU
1	B	129	GLU
1	B	130	THR
1	B	133	GLU
1	B	136	LYS
1	B	144	MET
1	B	145	VAL
1	B	148	SER
1	B	150	VAL
1	B	153	LEU
1	B	159	GLU
1	B	169	ASP
1	B	172	LEU
1	B	176	VAL
1	B	187	ASN
1	B	188	THR
1	B	189	VAL

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Mol	Chain	Res	Type
1	B	190	VAL
1	B	199	LEU
1	B	201	ASP
1	B	204	LEU
1	B	209	VAL
2	C	3	LYS
2	C	11	THR
2	C	12	THR
2	C	13	ASN
2	C	16	VAL
2	C	18	VAL
2	C	19	LEU
2	C	23	GLU
2	C	34	ARG
2	C	36	THR
2	C	38	SER
2	C	39	VAL
2	C	40	VAL
2	C	42	PHE
2	C	43	LYS
2	C	49	VAL
2	C	62	ASN
2	C	66	SER
2	C	75	TYR
2	C	77	VAL
2	C	87	GLN
2	C	97	LEU
2	C	98	LYS
2	C	102	GLU
2	C	103	ASP
2	C	105	LEU
2	C	109	VAL
2	C	120	PHE
2	C	121	ASN
2	C	125	ARG
2	C	128	THR
2	C	133	ARG
2	C	141	ARG
2	C	144	ASN
2	C	155	LEU
2	C	156	ASP
2	C	157	LYS

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Mol	Chain	Res	Type
2	C	164	LEU
2	C	165	VAL
2	C	166	TYR
2	C	168	LEU
2	C	172	THR
2	C	182	ASP
2	C	184	VAL
2	C	190	THR
2	C	194	ASN
2	C	196	LEU
2	C	203	GLN
2	C	204	VAL
2	C	210	VAL
2	C	214	LYS
2	C	216	GLU
2	C	217	HIS
2	C	225	LYS
2	C	226	MET
2	C	229	GLN
2	C	231	LEU
2	C	237	LYS
2	C	242	LEU
2	C	245	VAL
2	C	247	GLN
2	C	252	LEU
2	C	254	PHE
2	C	259	GLU
2	C	262	PRO
2	C	267	MET
2	C	269	LEU
2	C	271	ARG
2	C	281	LEU
2	C	282	VAL
2	C	284	ARG
2	C	291	GLN
2	C	293	LEU
2	C	298	LEU
2	C	323	LYS
2	C	324	ARG
2	C	325	GLU
2	C	326	LEU
2	C	334	VAL

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Mol	Chain	Res	Type
2	C	338	GLU
2	C	347	GLN
2	C	355	VAL
2	C	361	LEU
2	C	362	ASP
2	C	363	VAL
2	C	366	LEU
2	C	372	THR
2	C	376	VAL
2	C	377	PHE
2	C	379	LYS
2	C	384	ASN
2	C	396	THR
2	C	403	THR
2	C	404	THR
2	C	405	VAL
2	C	409	VAL
2	C	416	MET
2	C	428	LEU
2	C	436	ARG
2	C	440	GLN
2	C	443	VAL
2	C	444	THR
2	C	446	ASP
2	C	453	VAL
2	C	455	VAL
2	C	456	ARG
2	C	460	LEU
2	C	466	GLN
2	C	467	SER
2	C	469	THR
2	C	471	LYS
2	C	480	GLU
2	C	483	ARG
2	C	484	MET
2	C	487	GLU
2	C	490	GLU
2	C	496	ARG
2	C	499	LYS
2	C	500	GLU
2	C	504	LEU
2	C	505	ARG

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Mol	Chain	Res	Type
2	D	1	MET
2	D	3	LYS
2	D	13	ASN
2	D	16	VAL
2	D	18	VAL
2	D	19	LEU
2	D	20	GLU
2	D	23	GLU
2	D	29	ASN
2	D	35	THR
2	D	39	VAL
2	D	40	VAL
2	D	42	PHE
2	D	44	ASN
2	D	46	GLU
2	D	49	VAL
2	D	55	ARG
2	D	56	GLN
2	D	63	THR
2	D	69	ARG
2	D	74	ASP
2	D	77	VAL
2	D	80	GLU
2	D	85	THR
2	D	87	GLN
2	D	94	LEU
2	D	105	LEU
2	D	109	VAL
2	D	110	THR
2	D	120	PHE
2	D	121	ASN
2	D	144	ASN
2	D	151	LEU
2	D	153	TYR
2	D	155	LEU
2	D	157	LYS
2	D	164	LEU
2	D	165	VAL
2	D	166	TYR
2	D	168	LEU
2	D	172	THR
2	D	173	PHE

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Mol	Chain	Res	Type
2	D	178	LEU
2	D	180	LEU
2	D	184	VAL
2	D	193	ASP
2	D	194	ASN
2	D	199	ASP
2	D	208	TYR
2	D	209	LEU
2	D	210	VAL
2	D	215	GLN
2	D	222	SER
2	D	225	LYS
2	D	231	LEU
2	D	245	VAL
2	D	246	THR
2	D	260	ASN
2	D	263	LEU
2	D	269	LEU
2	D	270	THR
2	D	273	LYS
2	D	274	PHE
2	D	277	LEU
2	D	286	MET
2	D	294	GLN
2	D	304	ASP
2	D	305	LYS
2	D	319	GLN
2	D	320	GLU
2	D	324	ARG
2	D	332	LYS
2	D	334	VAL
2	D	337	ASP
2	D	338	GLU
2	D	339	VAL
2	D	358	VAL
2	D	360	LEU
2	D	366	LEU
2	D	367	SER
2	D	368	LEU
2	D	371	GLU
2	D	372	THR
2	D	376	VAL

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Mol	Chain	Res	Type
2	D	380	LEU
2	D	389	THR
2	D	390	SER
2	D	394	VAL
2	D	395	PHE
2	D	409	VAL
2	D	410	LEU
2	D	416	MET
2	D	420	ASN
2	D	421	LYS
2	D	426	PHE
2	D	436	ARG
2	D	438	VAL
2	D	440	GLN
2	D	443	VAL
2	D	444	THR
2	D	446	ASP
2	D	450	ASN
2	D	453	VAL
2	D	456	ARG
2	D	459	ASP
2	D	462	THR
2	D	464	LYS
2	D	465	GLU
2	D	467	SER
2	D	469	THR
2	D	472	SER
2	D	476	LEU
2	D	482	GLN
2	D	483	ARG
2	D	484	MET
2	D	487	GLU
2	D	489	GLU
2	D	491	ASN
2	D	495	ASP
2	D	497	LYS
2	D	504	LEU
1	E	61	LEU
1	E	65	LYS
1	E	70	GLU
1	E	72	GLU
1	E	75	LEU

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Mol	Chain	Res	Type
1	E	79	GLU
1	E	83	LEU
1	E	84	ARG
1	E	89	PHE
1	E	92	PHE
1	F	61	LEU
1	F	67	GLN
1	F	70	GLU
1	F	74	LYS
1	F	75	LEU
1	F	81	ARG
1	F	82	TYR
1	F	83	LEU
1	F	85	LEU
1	F	86	TYR
1	F	94	ARG
1	F	96	THR
2	G	66	SER
2	G	73	THR
2	G	77	VAL
2	G	82	LYS
2	G	87	GLN
2	G	100	TYR
2	G	105	LEU
2	G	121	ASN
2	G	147	THR
2	G	156	ASP
2	G	157	LYS
2	G	158	GLU
2	G	159	GLU
2	G	161	GLN
2	G	164	LEU
2	G	165	VAL
2	G	174	ASP
2	G	184	VAL
2	G	194	ASN
2	G	201	PHE
2	G	204	VAL
2	G	215	GLN
2	G	220	ASP
2	G	221	LEU
2	G	225	LYS

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Mol	Chain	Res	Type
2	G	226	MET
2	G	242	LEU
2	G	246	THR
2	G	277	LEU
2	G	281	LEU
2	G	308	LEU
2	G	314	ARG
2	G	319	GLN
2	G	320	GLU
2	G	325	GLU
2	G	326	LEU
2	G	331	HIS
2	G	355	VAL
2	G	356	LYS
2	G	357	ASP
2	G	360	LEU
2	G	363	VAL
2	G	371	GLU
2	G	373	MET
2	G	378	THR
2	G	389	THR
2	G	393	GLN
2	G	395	PHE
2	G	396	THR
2	G	397	THR
2	G	400	ASP
2	G	401	ASN
2	G	402	GLN
2	G	403	THR
2	G	404	THR
2	G	408	HIS
2	G	409	VAL
2	G	414	ARG
2	G	422	SER
2	G	436	ARG
2	G	440	GLN
2	G	453	VAL
2	G	466	GLN
2	G	471	LYS
2	G	476	LEU
2	G	484	MET
2	G	491	ASN

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Mol	Chain	Res	Type
2	G	493	GLU
2	G	497	LYS
2	G	498	ARG
2	G	499	LYS
2	G	500	GLU
2	G	505	ARG
2	G	507	GLU
2	H	1	MET
2	H	9	LEU
2	H	11	THR
2	H	15	CYS
2	H	16	VAL
2	H	18	VAL
2	H	19	LEU
2	H	23	GLU
2	H	73	THR
2	H	77	VAL
2	H	78	GLU
2	H	82	LYS
2	H	94	LEU
2	H	95	GLN
2	H	96	TYR
2	H	99	SER
2	H	100	TYR
2	H	105	LEU
2	H	109	VAL
2	H	111	ARG
2	H	113	VAL
2	H	116	VAL
2	H	119	TYR
2	H	121	ASN
2	H	122	ASP
2	H	125	ARG
2	H	128	THR
2	H	153	TYR
2	H	155	LEU
2	H	156	ASP
2	H	157	LYS
2	H	164	LEU
2	H	165	VAL
2	H	168	LEU
2	H	174	ASP

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Mol	Chain	Res	Type
2	H	175	VAL
2	H	176	SER
2	H	185	PHE
2	H	186	GLU
2	H	193	ASP
2	H	194	ASN
2	H	195	HIS
2	H	203	GLN
2	H	285	THR
2	H	290	ARG
2	H	293	LEU
2	H	294	GLN
2	H	308	LEU
2	H	325	GLU
2	H	326	LEU
2	H	328	LYS
2	H	332	LYS
2	H	338	GLU
2	H	358	VAL
2	H	359	VAL
2	H	361	LEU
2	H	363	VAL
2	H	366	LEU
2	H	367	SER
2	H	368	LEU
2	H	376	VAL
2	H	378	THR
2	H	380	LEU
2	H	382	GLU
2	H	386	THR
2	H	389	THR
2	H	393	GLN
2	H	395	PHE
2	H	396	THR
2	H	401	ASN
2	H	403	THR
2	H	405	VAL
2	H	409	VAL
2	H	410	LEU
2	H	411	GLN
2	H	416	MET
2	H	420	ASN

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Mol	Chain	Res	Type
2	H	425	ARG
2	H	438	VAL
2	H	443	VAL
2	H	444	THR
2	H	453	VAL
2	H	455	VAL
2	H	459	ASP
2	H	462	THR
2	H	464	LYS
2	H	465	GLU
2	H	469	THR
2	H	471	LYS
2	H	476	LEU
2	H	479	GLU
2	H	480	GLU
2	H	482	GLN
2	H	483	ARG
2	H	486	LYS
2	H	487	GLU
2	H	496	ARG
2	H	498	ARG
2	H	503	GLU
2	H	504	LEU
2	H	506	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (65) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	91	ASN
1	A	98	GLN
1	A	121	ASN
1	A	173	HIS
1	A	178	GLN
1	A	187	ASN
1	A	213	GLN
1	B	67	GLN
1	B	98	GLN
1	B	173	HIS
1	B	178	GLN
1	B	187	ASN
1	B	194	GLN
2	C	13	ASN

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Mol	Chain	Res	Type
2	C	70	HIS
2	C	87	GLN
2	C	161	GLN
2	C	195	HIS
2	C	212	GLN
2	C	229	GLN
2	C	249	GLN
2	C	264	HIS
2	C	331	HIS
2	C	347	GLN
2	C	450	ASN
2	C	466	GLN
2	C	506	ASN
2	D	29	ASN
2	D	56	GLN
2	D	62	ASN
2	D	161	GLN
2	D	260	ASN
2	D	280	HIS
2	D	319	GLN
2	D	335	ASN
2	D	408	HIS
2	D	420	ASN
2	D	466	GLN
2	D	491	ASN
1	E	80	HIS
1	F	67	GLN
2	G	70	HIS
2	G	83	GLN
2	G	124	GLN
2	G	203	GLN
2	G	212	GLN
2	G	215	GLN
2	G	217	HIS
2	G	280	HIS
2	G	319	GLN
2	G	331	HIS
2	G	384	ASN
2	G	401	ASN
2	G	411	GLN
2	G	427	GLN
2	H	87	GLN

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Mol	Chain	Res	Type
2	H	95	GLN
2	H	144	ASN
2	H	195	HIS
2	H	203	GLN
2	H	212	GLN
2	H	347	GLN
2	H	384	ASN
2	H	450	ASN
2	H	506	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

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 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	156/213 (73%)	-0.32	0 100 100	108, 165, 240, 281	0
1	B	154/213 (72%)	-0.32	0 100 100	108, 151, 213, 293	0
1	E	135/213 (63%)	0.07	1 (0%) 84 69	193, 261, 363, 476	0
1	F	130/213 (61%)	0.00	0 100 100	185, 244, 324, 370	0
2	C	509/509 (100%)	-0.35	0 100 100	109, 152, 216, 283	0
2	D	509/509 (100%)	-0.30	1 (0%) 91 82	109, 163, 217, 333	0
2	G	502/509 (98%)	0.13	13 (2%) 57 42	141, 283, 373, 481	0
2	H	501/509 (98%)	0.06	14 (2%) 55 41	115, 237, 370, 516	0
All	All	2596/2888 (89%)	-0.13	29 (1%) 78 61	108, 193, 341, 516	0

All (29) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	G	303	ILE	5.2
2	H	209	LEU	4.2
2	H	166	TYR	3.5
2	H	7	ILE	3.4
2	G	9	LEU	3.3
2	H	201	PHE	3.2
2	G	319	GLN	3.2
2	G	197	GLY	3.0
2	G	322	ILE	3.0
2	G	305	LYS	3.0
2	H	227	ALA	2.6
2	H	66	SER	2.6
2	H	312	SER	2.6
2	G	318	VAL	2.6
2	D	411	GLN	2.4
2	H	18	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
2	H	353	GLY	2.3
2	G	18	VAL	2.3
2	G	11	THR	2.3
1	E	177	MET	2.2
2	G	329	GLU	2.2
2	G	113	VAL	2.2
2	H	230	ARG	2.2
2	H	282	VAL	2.2
2	H	231	LEU	2.1
2	H	197	GLY	2.1
2	G	251	SER	2.1
2	G	438	VAL	2.1
2	H	198	GLY	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.