



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 5, 2026 – 11:39 AM UTC

PDB ID : 3L4G / pdb_00003l4g
Title : Crystal structure of Homo Sapiens cytoplasmic Phenylalanyl-tRNA synthetase
Authors : Finarov, I.; Moor, N.; Kessler, N.; Klipcan, L.; Safro, M.G.
Deposited on : 2009-12-20
Resolution : 3.30 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:

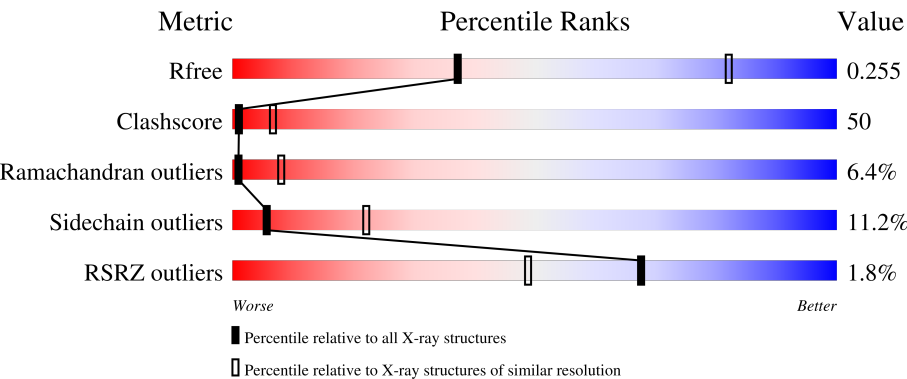
MolProbity : 4-5-2 with Phenix2.0
Mogul : 2022.3.0, CSD as543be (2022)
Xtriage (Phenix) : 2.0
EDS : 3.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4 : 9.0.010 (Gargrove)
Density-Fitness : 1.0.12
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (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 3.30 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	1169 (3.32-3.28)
Clashscore	190562	1209 (3.32-3.28)
Ramachandran outliers	187476	1188 (3.32-3.28)
Sidechain outliers	187428	1187 (3.32-3.28)
RSRZ outliers	180081	1169 (3.32-3.28)

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	508	% 20% 32% 8% • 37%
1	C	508	% 32% 50% 15% •
1	E	508	% 19% 31% 8% • 39%
1	G	508	% 20% 31% 8% • 39%
1	I	508	% 22% 31% 7% • 38%

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Mol	Chain	Length	Quality of chain
1	K	508	
1	M	508	
1	O	508	
2	B	589	
2	D	589	
2	F	589	
2	H	589	
2	J	589	
2	L	589	
2	N	589	
2	P	589	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	PHE	A	509	-	-	X	-
3	PHE	K	509	-	-	X	-

2 Entry composition [i](#)

There are 3 unique types of molecules in this entry. The entry contains 59395 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 Phenylalanyl-tRNA synthetase alpha chain.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	318	Total	C	N	O	S	0	0	0
			2589	1661	453	464	11			
1	C	508	Total	C	N	O	S	0	0	0
			4058	2571	724	747	16			
1	E	309	Total	C	N	O	S	0	0	0
			2517	1618	439	449	11			
1	G	309	Total	C	N	O	S	0	0	0
			2521	1620	440	450	11			
1	I	313	Total	C	N	O	S	0	0	0
			2551	1639	445	456	11			
1	K	349	Total	C	N	O	S	0	0	0
			2746	1755	482	498	11			
1	M	321	Total	C	N	O	S	0	0	0
			2582	1652	456	463	11			
1	O	309	Total	C	N	O	S	0	0	0
			2527	1623	443	450	11			

- Molecule 2 is a protein called Phenylalanyl-tRNA synthetase beta chain.

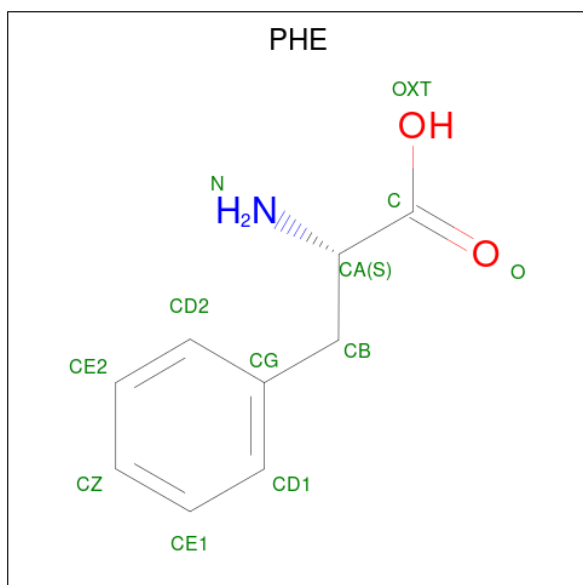
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	589	Total	C	N	O	S	0	0	0
			4651	2981	781	866	23			
2	D	589	Total	C	N	O	S	0	0	0
			4651	2981	781	866	23			
2	F	589	Total	C	N	O	S	0	0	0
			4651	2981	781	866	23			
2	H	589	Total	C	N	O	S	0	0	0
			4651	2981	781	866	23			
2	J	589	Total	C	N	O	S	0	0	0
			4651	2981	781	866	23			
2	L	589	Total	C	N	O	S	0	0	0
			4651	2981	781	866	23			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	N	589	Total 4651	C 2981	N 781	O 866	S 23	0	0	0
2	P	589	Total 4651	C 2981	N 781	O 866	S 23	0	0	0

- Molecule 3 is PHENYLALANINE (CCD ID: PHE) (formula: $\text{C}_9\text{H}_{11}\text{NO}_2$).

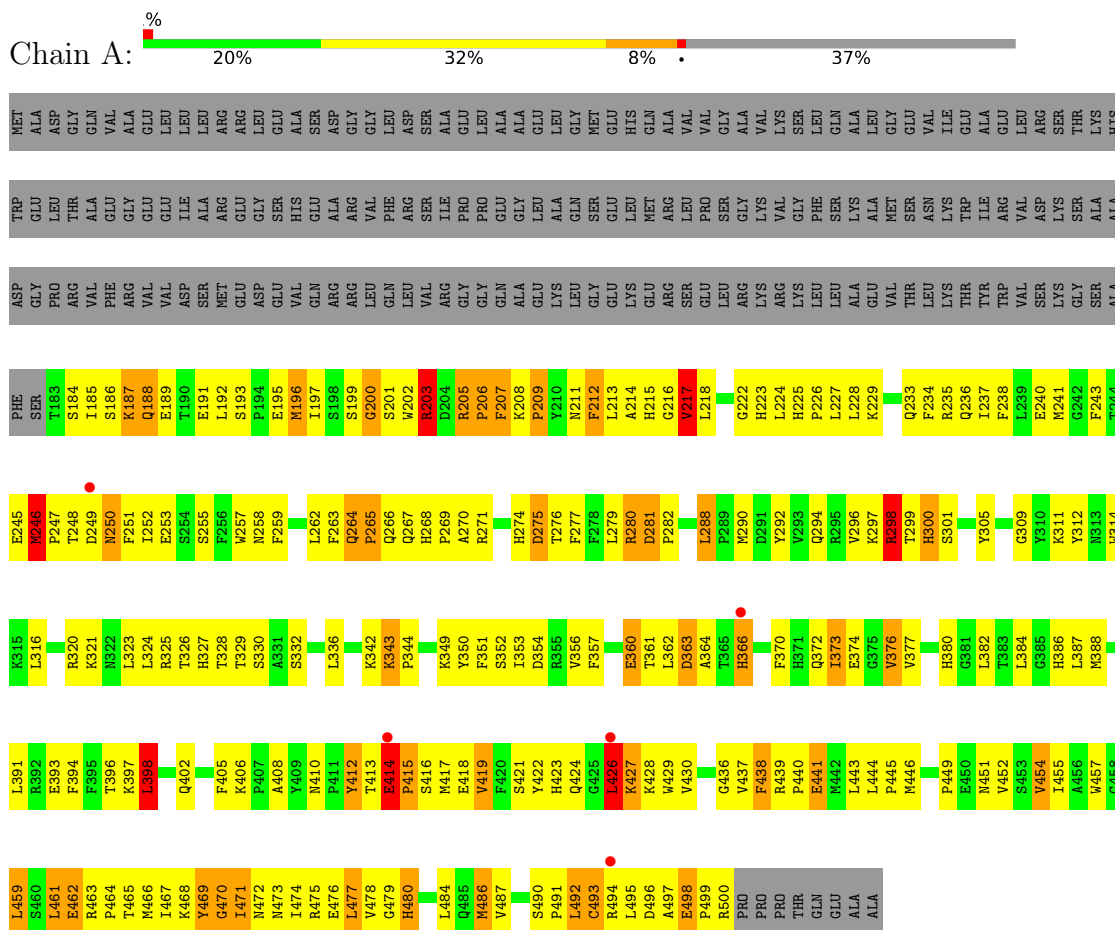


Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
3	A	1	Total 12	C 9	N 1	O 2	0	0
3	C	1	Total 12	C 9	N 1	O 2	0	0
3	E	1	Total 12	C 9	N 1	O 2	0	0
3	G	1	Total 12	C 9	N 1	O 2	0	0
3	I	1	Total 12	C 9	N 1	O 2	0	0
3	K	1	Total 12	C 9	N 1	O 2	0	0
3	M	1	Total 12	C 9	N 1	O 2	0	0
3	O	1	Total 12	C 9	N 1	O 2	0	0

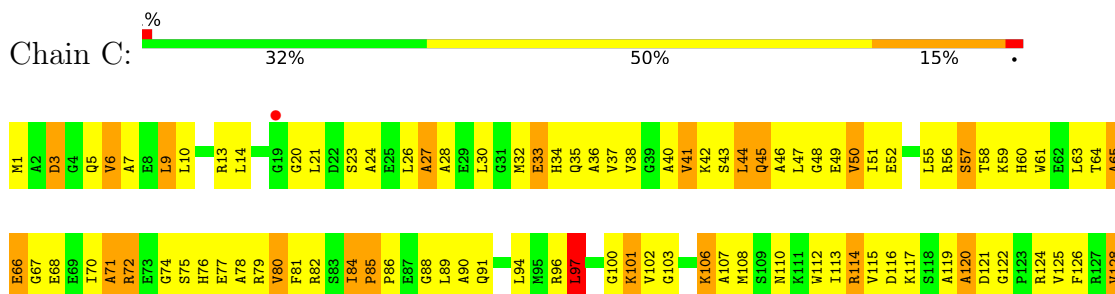
3 Residue-property plots [i](#)

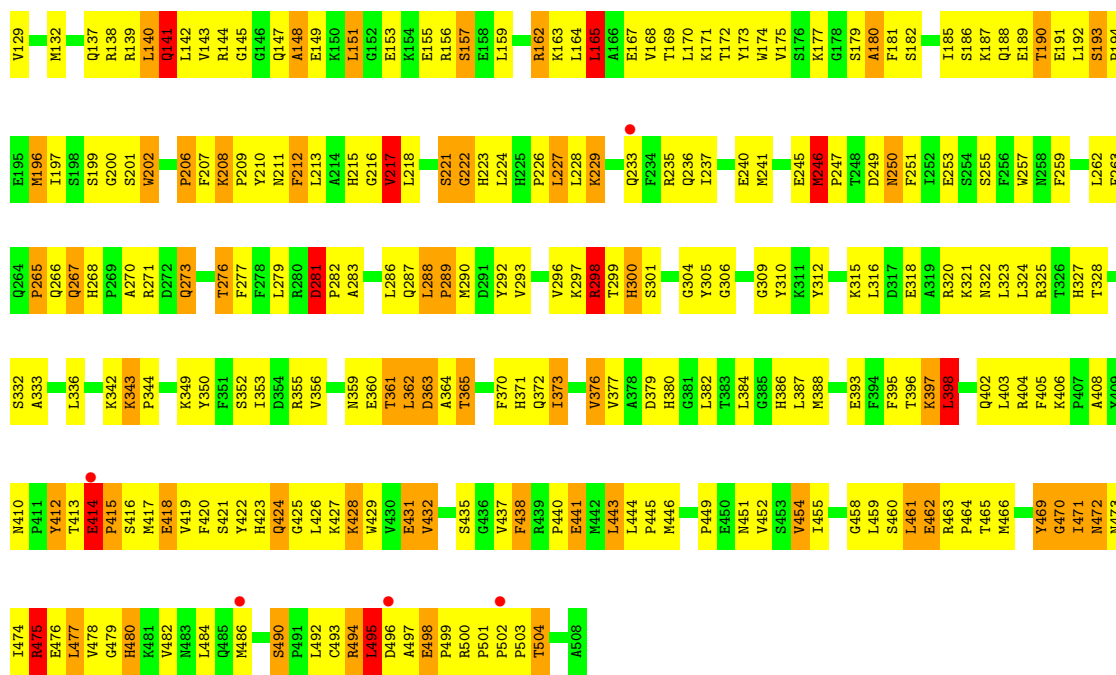
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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: Phenylalanyl-tRNA synthetase alpha chain

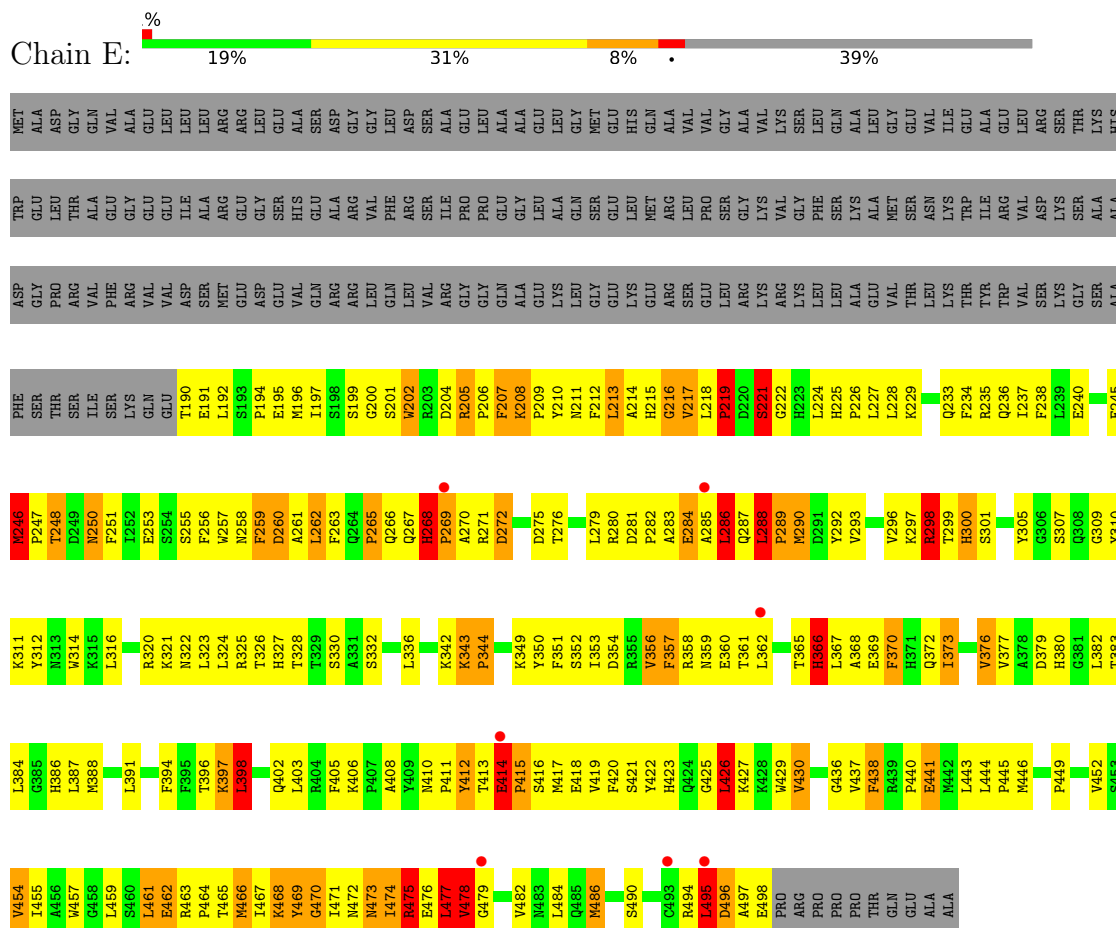


• Molecule 1: Phenylalanyl-tRNA synthetase alpha chain

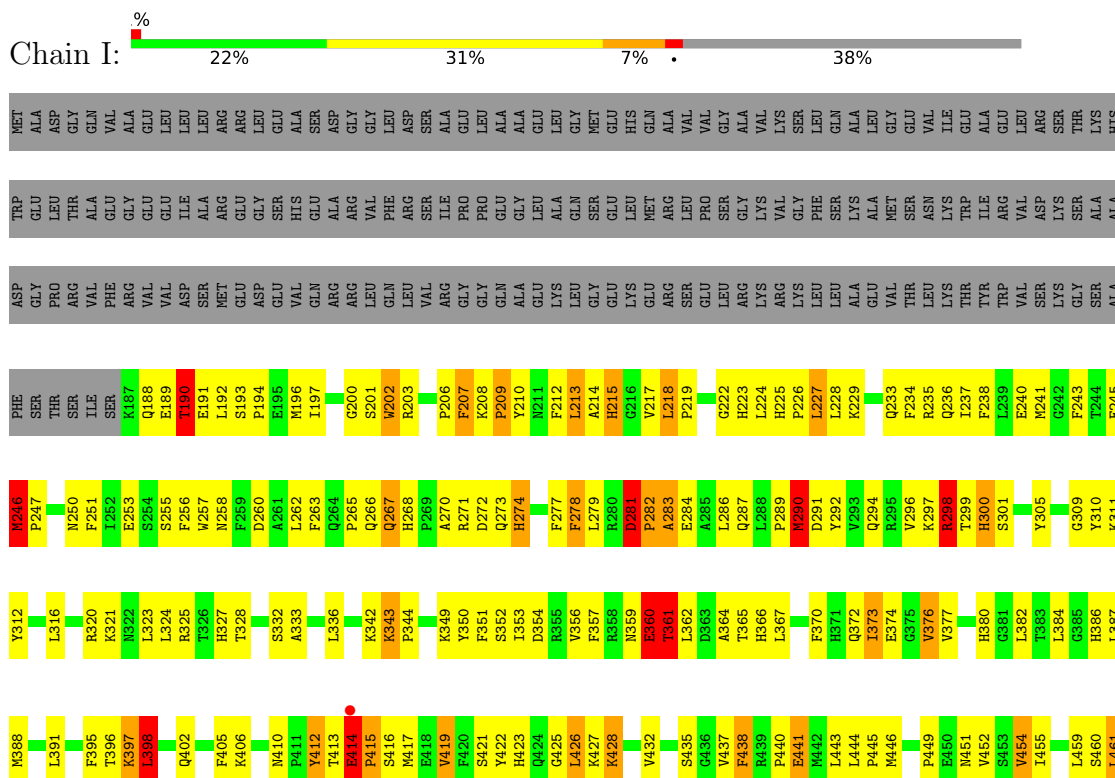
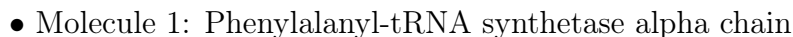




• Molecule 1: Phenylalanyl-tRNA synthetase alpha chain

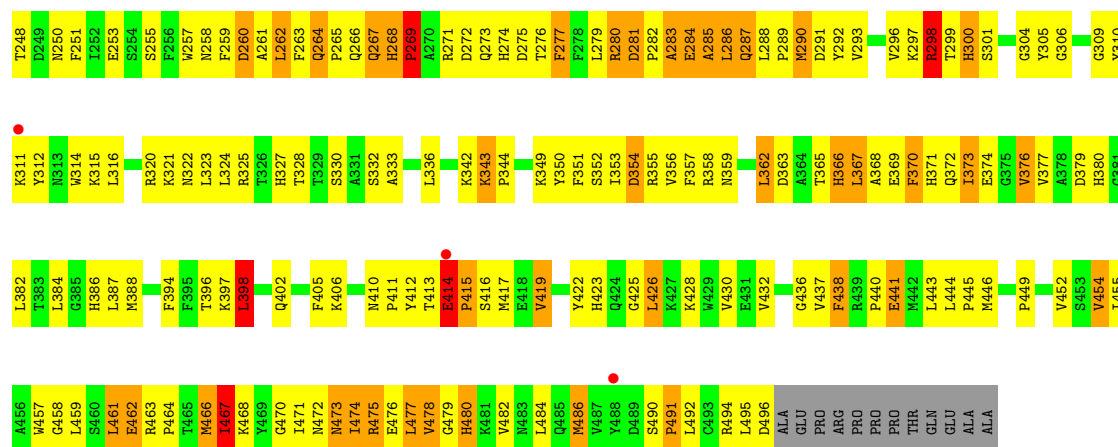


• Molecule 1: Phenylalanyl-tRNA synthetase alpha chain

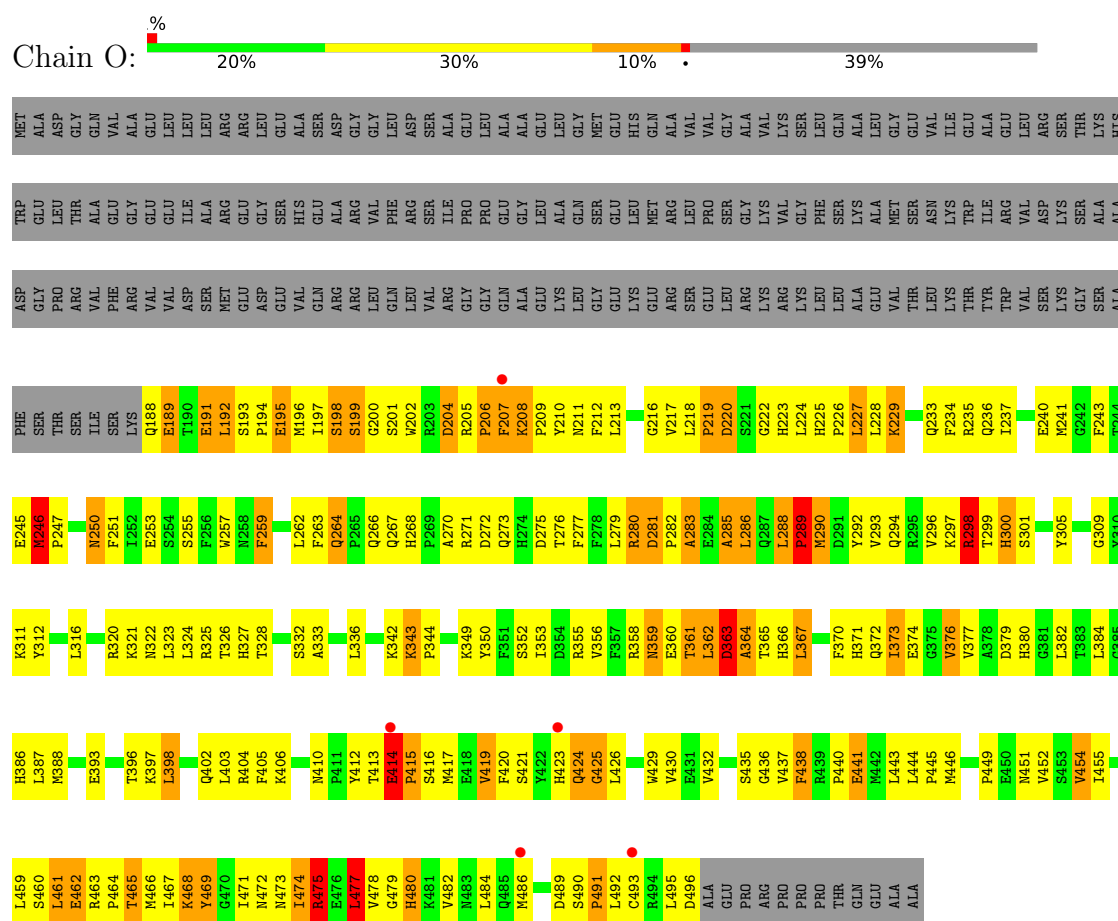


Chain K:

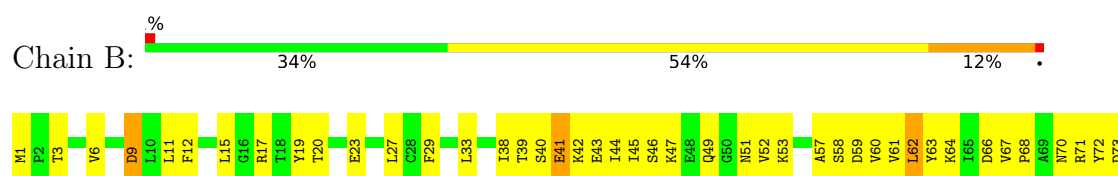


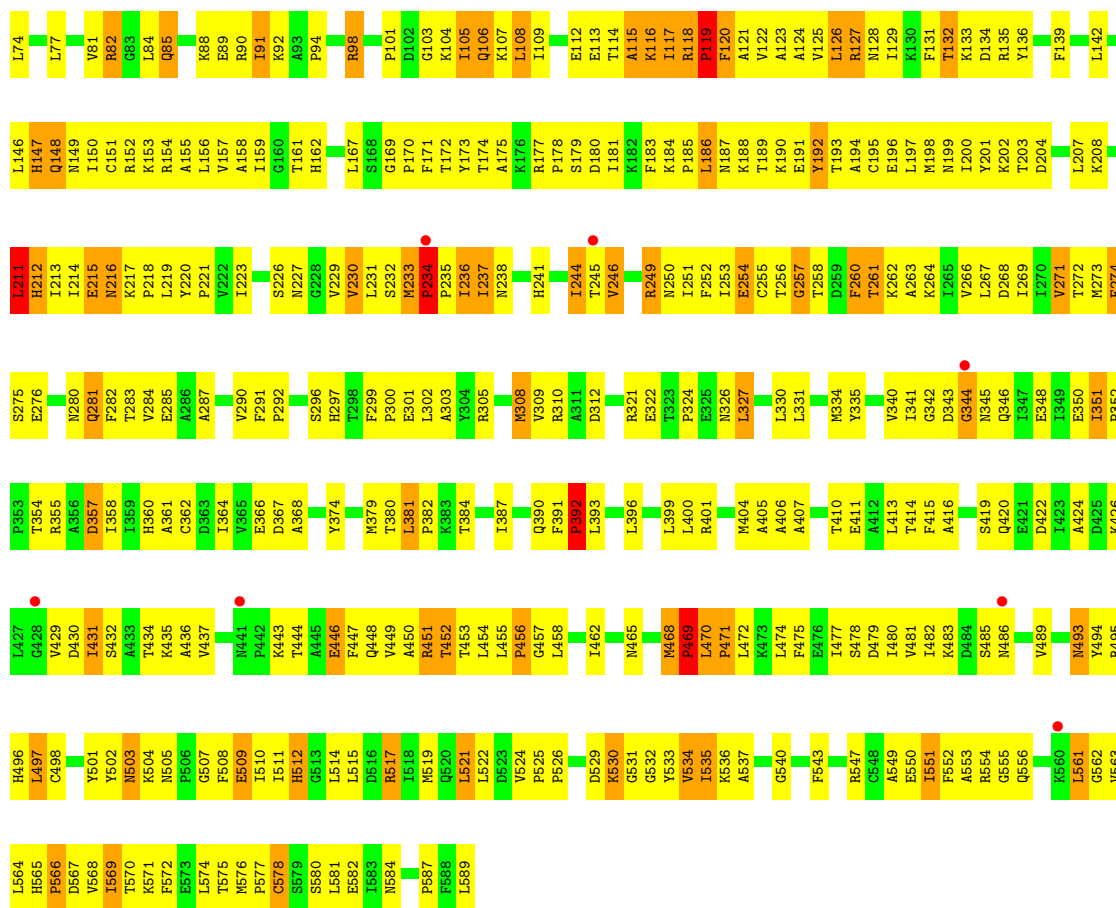


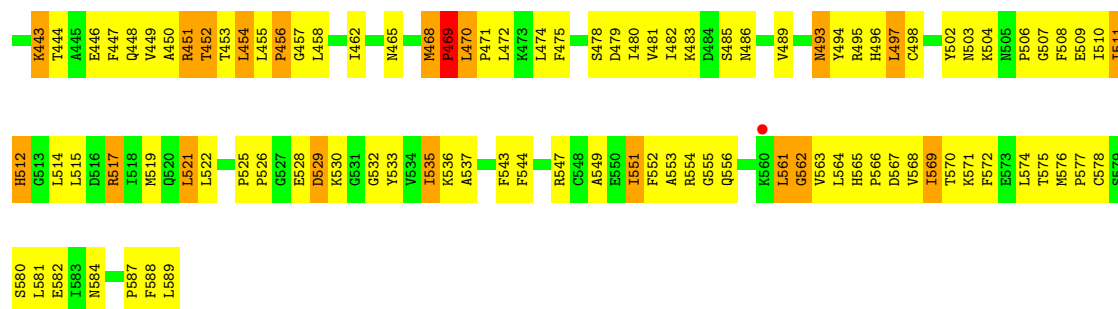
• Molecule 1: Phenylalanyl-tRNA synthetase alpha chain



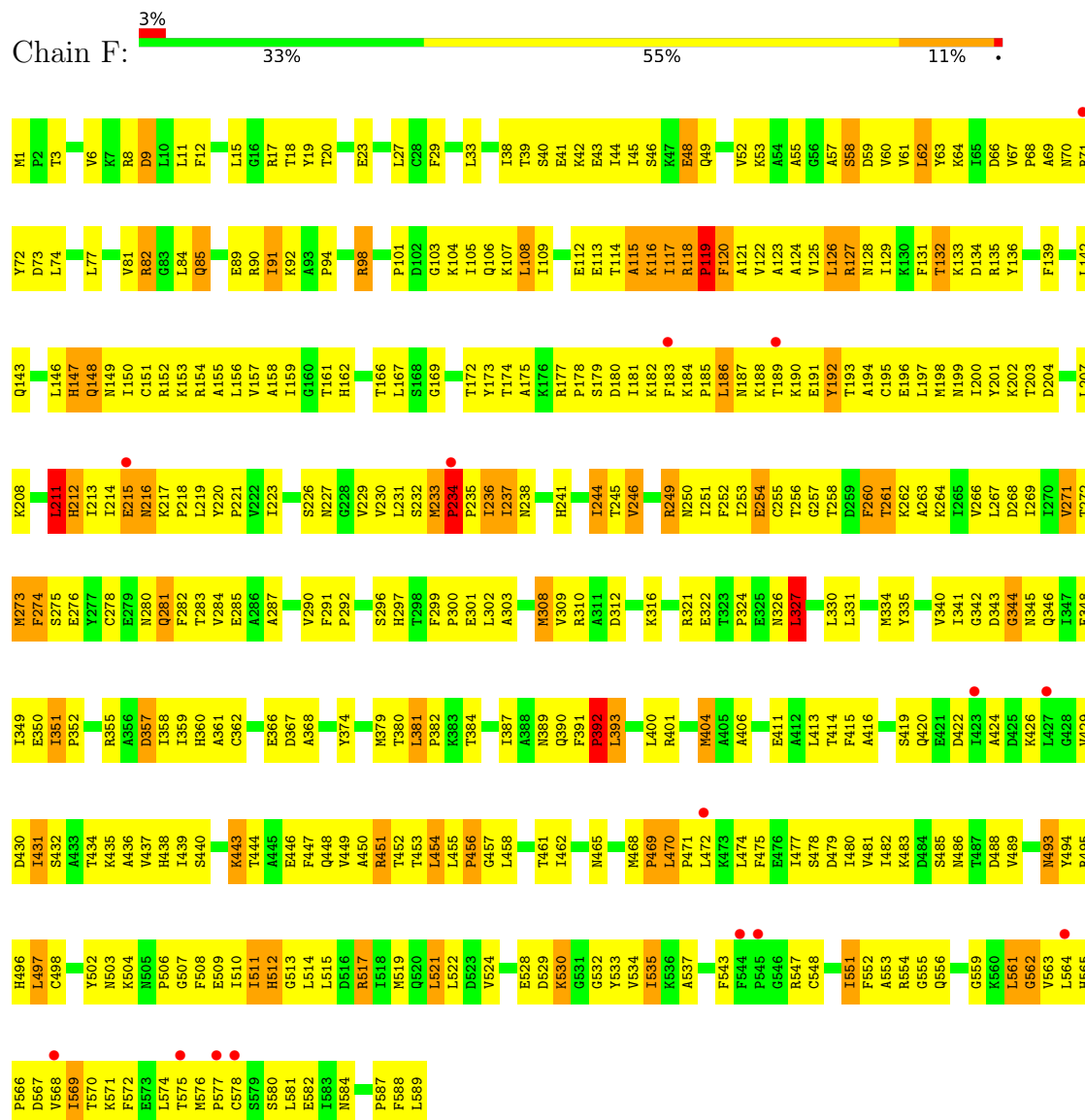
• Molecule 2: Phenylalanyl-tRNA synthetase beta chain





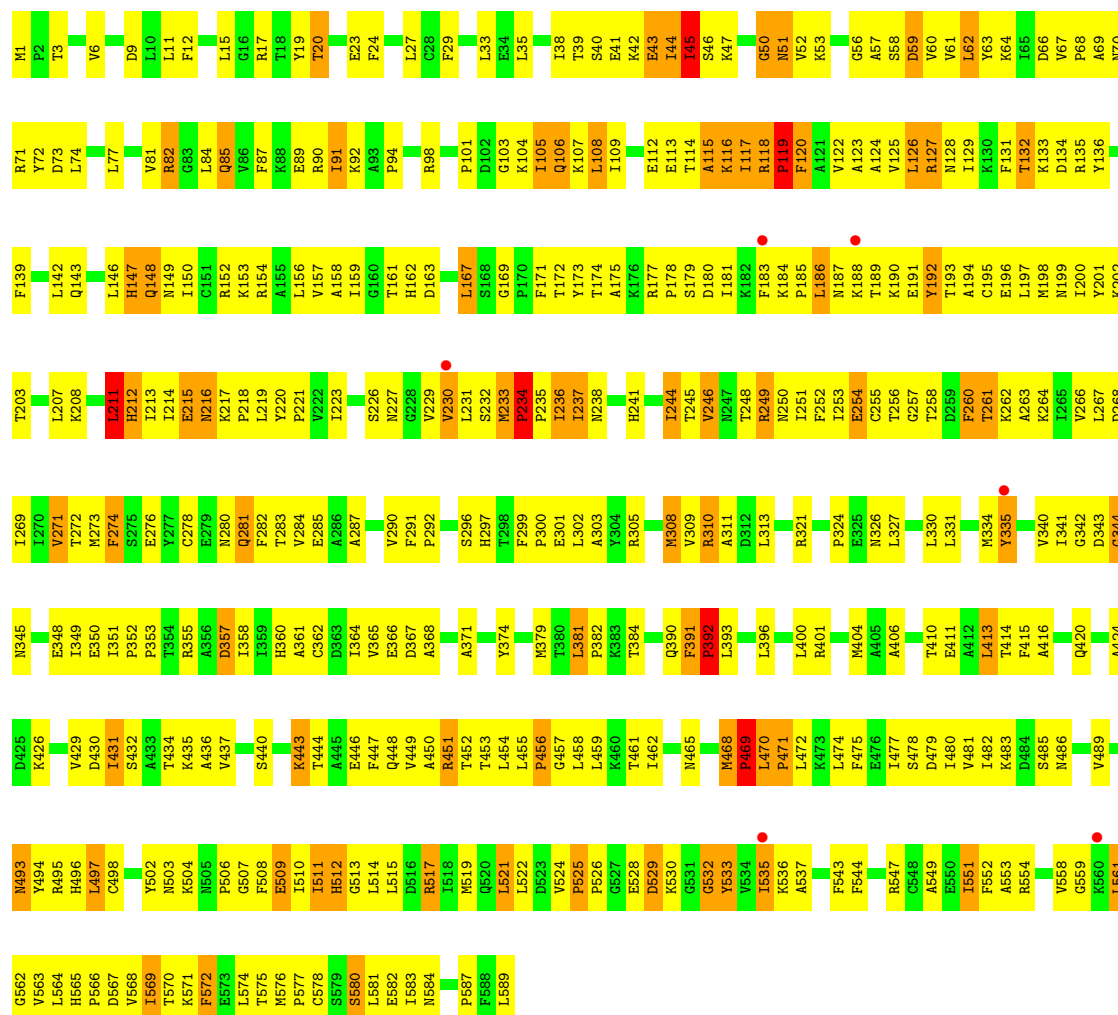


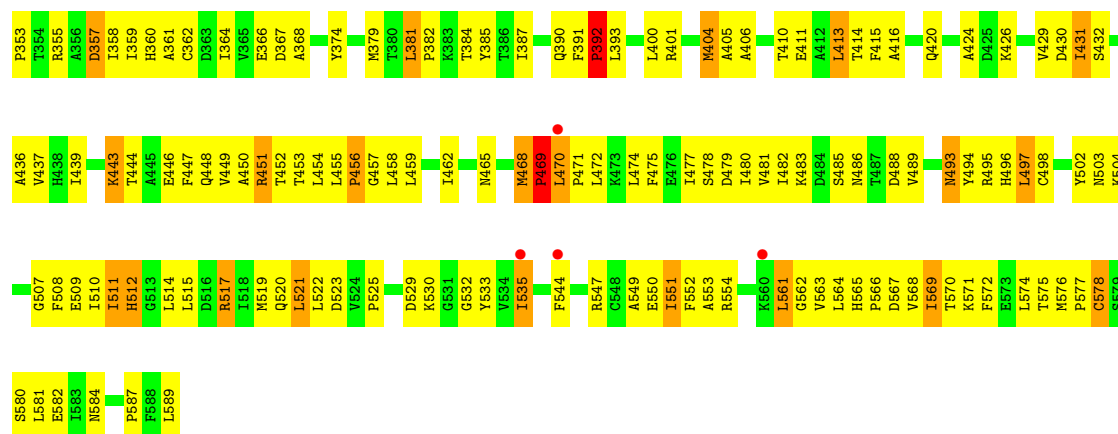
• Molecule 2: Phenylalanyl-tRNA synthetase beta chain



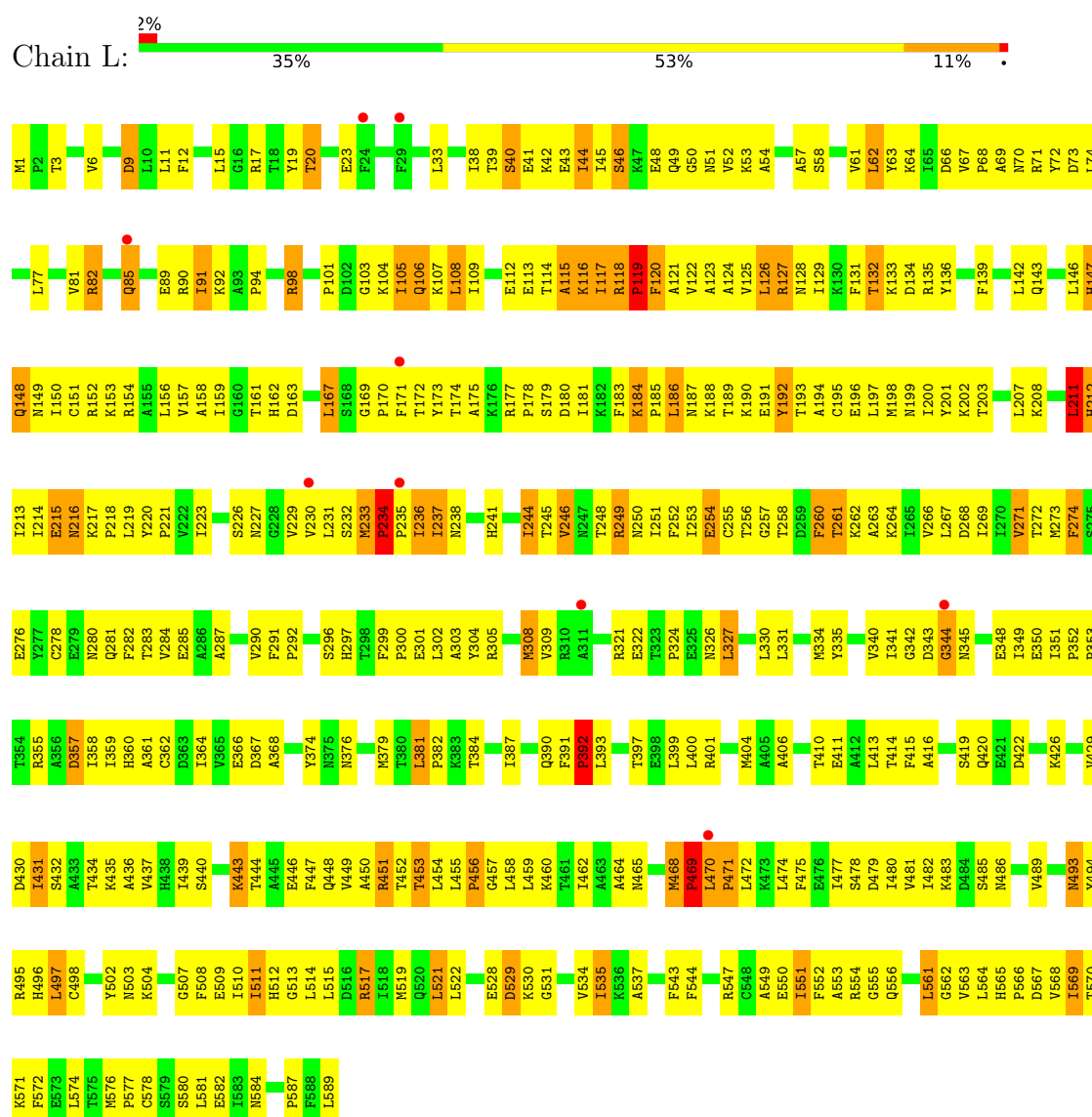
• Molecule 2: Phenylalanyl-tRNA synthetase beta chain



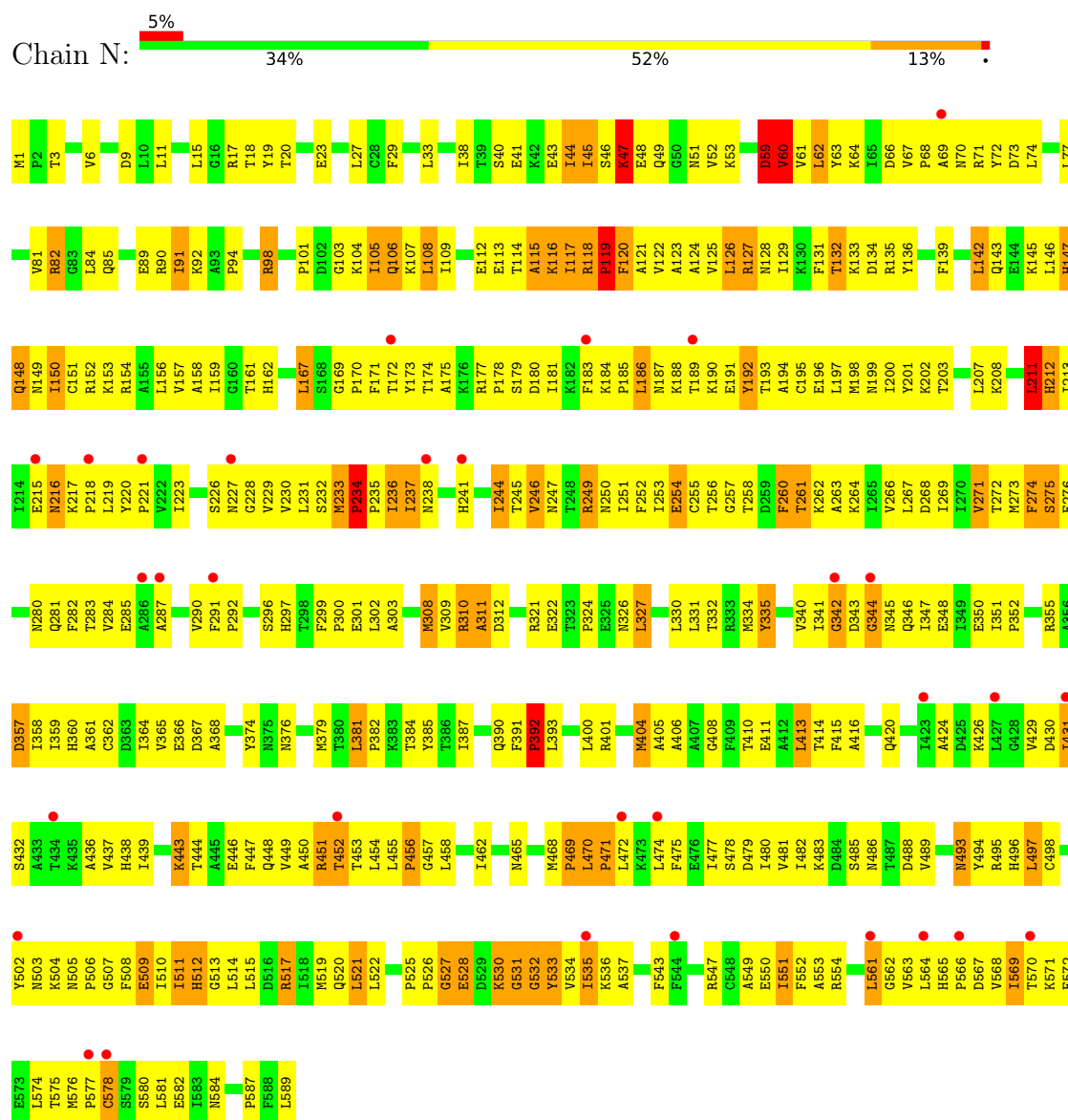




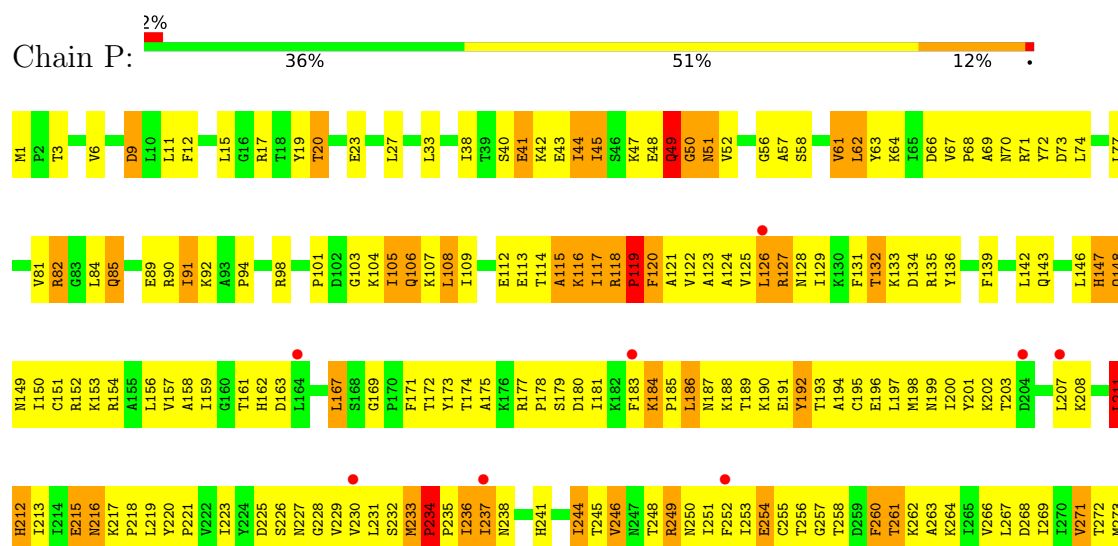
• Molecule 2: Phenylalanyl-tRNA synthetase beta chain

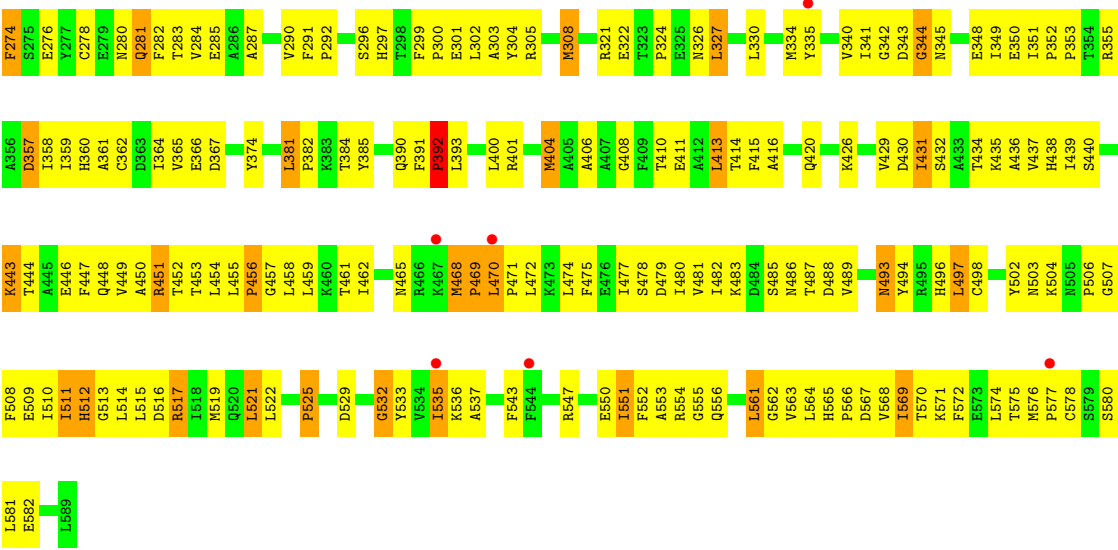


• Molecule 2: Phenylalanyl-tRNA synthetase beta chain



- Molecule 2: Phenylalanyl-tRNA synthetase beta chain





4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	363.34Å 213.88Å 212.96Å 90.00° 125.20° 90.00°	Depositor
Resolution (Å)	30.00 – 3.30 30.00 – 3.30	Depositor EDS
% Data completeness (in resolution range)	96.0 (30.00-3.30) 96.8 (30.00-3.30)	Depositor EDS
R_{merge}	0.07	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.75 (at 3.31Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.242 , 0.287 0.251 , 0.255	Depositor DCC
R_{free} test set	9780 reflections (5.07%)	wwPDB-VP
Wilson B-factor (Å ²)	94.6	Xtriage
Anisotropy	0.240	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.32 , 98.4	EDS
L-test for twinning ²	$\langle L \rangle = 0.50$, $\langle L^2 \rangle = 0.33$	Xtriage
Estimated twinning fraction	0.009 for -h+k-l,-l,-k 0.002 for -h-k-l,l,k 0.000 for 1/2*h+1/2*k+2*1,1/2*h+1/2*k,-1/2*h+1/2*k-l 0.000 for -1/2*h-3/2*k-l,-1/2*h+1/2*k-l,1/2*h+1/2*k 0.000 for -1/2*h+3/2*k-l,1/2*h+1/2*k+l,1/2*h-1/2*k 0.000 for 1/2*h-1/2*k+2*1,-1/2*h+1/2*k,-1/2*h-1/2*k-l 0.000 for -1/2*h+1/2*k+l,1/2*h-1/2*k+l,1/2*h+1/2*k 0.000 for -1/2*h-1/2*k+l,-1/2*h-1/2*k-l,1/2*h-1/2*k 0.000 for 1/2*h+3/2*k,1/2*h-1/2*k,-1/2*h-1/2*k-l 0.000 for 1/2*h-3/2*k,-1/2*h-1/2*k,-1/2*h+1/2*k-l 0.019 for -h-2*1,-k,l	Xtriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	59395	wwPDB-VP
Average B, all atoms (Å ²)	120.0	wwPDB-VP

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.

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.63% of the height of the origin peak. No significant pseudotranslation is detected.*

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	0.61	0/2664	1.09	19/3609 (0.5%)
1	C	0.53	0/4154	1.11	40/5611 (0.7%)
1	E	0.57	0/2591	1.10	24/3511 (0.7%)
1	G	0.55	0/2595	1.09	21/3516 (0.6%)
1	I	0.59	0/2626	1.10	21/3558 (0.6%)
1	K	0.55	0/2819	1.11	27/3818 (0.7%)
1	M	0.51	0/2656	1.04	15/3592 (0.4%)
1	O	0.50	0/2601	0.99	12/3523 (0.3%)
2	B	0.56	0/4742	1.07	31/6420 (0.5%)
2	D	0.50	0/4742	1.03	22/6420 (0.3%)
2	F	0.56	1/4742 (0.0%)	1.06	28/6420 (0.4%)
2	H	0.50	3/4742 (0.1%)	1.03	21/6420 (0.3%)
2	J	0.54	0/4742	1.06	25/6420 (0.4%)
2	L	0.48	0/4742	1.03	22/6420 (0.3%)
2	N	0.52	4/4742 (0.1%)	1.03	24/6420 (0.4%)
2	P	0.45	0/4742	1.02	23/6420 (0.4%)
All	All	0.53	8/60642 (0.0%)	1.06	375/82098 (0.5%)

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
2	N	0	1

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	N	311	ALA	N-CA	-6.18	1.38	1.46
2	N	310	ARG	CA-C	-5.91	1.45	1.52
2	N	310	ARG	C-N	-5.85	1.25	1.33
2	H	311	ALA	N-CA	5.83	1.53	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	273	MET	SD-CE	5.78	1.94	1.79
2	H	310	ARG	C-N	5.44	1.41	1.33
2	H	310	ARG	CA-C	5.40	1.59	1.52
2	N	311	ALA	CA-CB	-5.04	1.45	1.53

All (375) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	J	233	MET	CA-C-N	12.24	132.99	120.38
2	J	233	MET	C-N-CA	12.24	132.99	120.38
2	N	233	MET	CA-C-N	11.90	132.64	120.38
2	N	233	MET	C-N-CA	11.90	132.64	120.38
2	D	233	MET	CA-C-N	11.89	132.63	120.38
2	D	233	MET	C-N-CA	11.89	132.63	120.38
2	H	233	MET	CA-C-N	11.88	132.61	120.38
2	H	233	MET	C-N-CA	11.88	132.61	120.38
2	P	233	MET	CA-C-N	11.86	132.59	120.38
2	P	233	MET	C-N-CA	11.86	132.59	120.38
2	F	233	MET	CA-C-N	11.74	132.47	120.38
2	F	233	MET	C-N-CA	11.74	132.47	120.38
2	B	233	MET	CA-C-N	11.69	132.42	120.38
2	B	233	MET	C-N-CA	11.69	132.42	120.38
2	L	233	MET	CA-C-N	11.58	132.30	120.38
2	L	233	MET	C-N-CA	11.58	132.30	120.38
1	E	275	ASP	N-CA-C	-10.56	99.71	112.59
1	I	495	LEU	N-CA-C	-10.45	100.77	112.57
2	H	234	PRO	N-CA-C	10.29	123.26	110.70
2	J	234	PRO	N-CA-C	10.24	123.20	110.70
2	N	234	PRO	N-CA-C	10.20	123.15	110.70
2	B	234	PRO	N-CA-C	10.15	123.08	110.70
2	L	234	PRO	N-CA-C	10.14	123.07	110.70
2	F	234	PRO	N-CA-C	10.09	123.01	110.70
2	P	234	PRO	N-CA-C	10.03	122.94	110.70
2	D	234	PRO	N-CA-C	9.99	122.89	110.70
1	C	65	ALA	N-CA-C	-9.97	100.38	111.14
1	C	190	THR	N-CA-C	9.88	121.81	111.14
1	E	468	LYS	N-CA-C	-9.28	102.11	113.15
1	C	361	THR	N-CA-C	-9.27	102.55	112.93
1	M	474	ILE	N-CA-C	-8.91	101.42	113.00
1	G	423	HIS	N-CA-C	8.69	122.61	109.41
1	E	288	LEU	CA-C-N	8.64	130.64	119.84
1	E	288	LEU	C-N-CA	8.64	130.64	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	G	192	LEU	N-CA-C	-8.58	99.55	110.19
1	G	275	ASP	N-CA-C	-8.52	102.04	114.39
1	K	39	GLY	N-CA-C	-8.36	104.38	115.32
1	E	268	HIS	CA-C-N	8.26	130.16	119.84
1	E	268	HIS	C-N-CA	8.26	130.16	119.84
1	C	107	ALA	N-CA-C	-8.19	102.55	112.54
1	A	205	ARG	CA-C-N	8.17	130.06	119.84
1	A	205	ARG	C-N-CA	8.17	130.06	119.84
1	K	218	LEU	CA-C-N	8.16	128.21	119.89
1	K	218	LEU	C-N-CA	8.16	128.21	119.89
2	P	452	THR	N-CA-C	-8.05	102.72	114.39
2	H	452	THR	N-CA-C	-8.00	102.79	114.39
2	F	452	THR	N-CA-C	-7.93	102.89	114.39
2	D	452	THR	N-CA-C	-7.91	102.92	114.39
1	K	425	GLY	N-CA-C	-7.90	105.63	114.40
1	I	218	LEU	CA-C-N	7.84	128.31	119.92
1	I	218	LEU	C-N-CA	7.84	128.31	119.92
1	E	288	LEU	N-CA-C	7.63	115.09	108.22
1	M	212	PHE	N-CA-C	7.62	120.99	110.24
2	N	452	THR	N-CA-C	-7.61	103.35	114.39
2	L	452	THR	N-CA-C	-7.61	103.36	114.39
1	G	260	ASP	N-CA-C	7.58	120.50	111.33
2	B	452	THR	N-CA-C	-7.53	103.48	114.39
2	J	468	MET	CA-C-N	7.52	129.24	119.84
2	J	468	MET	C-N-CA	7.52	129.24	119.84
2	L	46	SER	N-CA-C	-7.52	102.01	113.89
2	L	468	MET	CA-C-N	7.50	129.21	119.84
2	L	468	MET	C-N-CA	7.50	129.21	119.84
1	E	268	HIS	N-CA-C	7.48	119.63	109.24
1	A	229	LYS	N-CA-C	-7.45	103.18	111.82
1	A	426	LEU	N-CA-C	-7.44	103.52	112.59
1	A	288	LEU	CA-C-N	7.39	129.08	119.84
1	A	288	LEU	C-N-CA	7.39	129.08	119.84
2	J	452	THR	N-CA-C	-7.37	103.71	114.39
2	J	525	PRO	CA-C-N	7.34	127.50	119.87
2	J	525	PRO	C-N-CA	7.34	127.50	119.87
1	K	38	VAL	N-CA-C	-7.30	103.85	112.98
1	K	217	VAL	N-CA-C	7.28	117.11	106.55
2	B	468	MET	CA-C-N	7.21	128.85	119.84
2	B	468	MET	C-N-CA	7.21	128.85	119.84
1	C	97	LEU	CA-C-N	7.21	128.85	119.84
1	C	97	LEU	C-N-CA	7.21	128.85	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	127	ARG	N-CA-C	7.13	120.66	109.96
2	P	127	ARG	N-CA-C	7.09	120.59	109.96
1	C	495	LEU	N-CA-C	-7.08	103.57	111.71
1	E	260	ASP	N-CA-C	7.05	120.78	111.75
1	I	497	ALA	N-CA-C	-6.99	102.87	112.03
2	L	127	ARG	N-CA-C	6.99	120.45	109.96
1	C	469	TYR	N-CA-C	-6.96	104.76	113.18
2	P	468	MET	CA-C-N	6.94	128.51	119.84
2	P	468	MET	C-N-CA	6.94	128.51	119.84
1	C	145	GLY	N-CA-C	-6.91	103.78	115.80
2	H	468	MET	CA-C-N	6.90	128.47	119.84
2	H	468	MET	C-N-CA	6.90	128.47	119.84
2	H	127	ARG	N-CA-C	6.88	120.29	109.96
2	B	127	ARG	N-CA-C	6.86	120.25	109.96
2	N	497	LEU	N-CA-C	-6.86	97.33	108.52
1	G	424	GLN	N-CA-C	-6.85	102.19	113.50
1	K	229	LYS	N-CA-C	-6.85	103.83	111.71
1	I	496	ASP	N-CA-C	-6.83	103.10	113.89
1	I	229	LYS	N-CA-C	-6.82	103.91	111.82
2	P	497	LEU	N-CA-C	-6.80	97.44	108.52
2	F	127	ARG	N-CA-C	6.79	120.15	109.96
2	J	127	ARG	N-CA-C	6.76	120.09	109.96
2	J	497	LEU	N-CA-C	-6.75	97.51	108.52
2	F	468	MET	CA-C-N	6.75	128.27	119.84
2	F	468	MET	C-N-CA	6.75	128.27	119.84
1	G	495	LEU	N-CA-C	6.73	120.23	108.52
2	N	127	ARG	N-CA-C	6.73	120.05	109.96
1	C	288	LEU	CA-C-N	6.72	128.24	119.84
1	C	288	LEU	C-N-CA	6.72	128.24	119.84
1	O	229	LYS	N-CA-C	-6.70	104.01	111.71
1	C	229	LYS	N-CA-C	-6.58	104.14	111.71
1	M	280	ARG	N-CA-C	-6.57	104.36	112.38
1	I	189	GLU	N-CA-C	6.57	118.78	110.24
2	L	497	LEU	N-CA-C	-6.55	97.84	108.52
2	P	404	MET	N-CA-C	-6.54	104.15	111.28
2	B	404	MET	N-CA-C	-6.52	104.17	111.28
1	G	229	LYS	N-CA-C	-6.51	104.22	111.71
2	D	497	LEU	N-CA-C	-6.48	97.96	108.52
2	H	404	MET	N-CA-C	-6.48	104.22	111.28
2	D	468	MET	CA-C-N	6.47	127.92	119.84
2	D	468	MET	C-N-CA	6.47	127.92	119.84
2	F	497	LEU	N-CA-C	-6.45	98.00	108.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	497	LEU	N-CA-C	-6.42	98.05	108.52
1	K	415	PRO	N-CA-C	-6.42	101.04	111.77
2	H	497	LEU	N-CA-C	-6.41	98.07	108.52
1	K	45	GLN	N-CA-C	-6.41	105.60	113.41
1	C	202	TRP	N-CA-C	-6.38	105.32	113.23
1	A	196	MET	N-CA-C	-6.34	104.37	111.28
1	A	363	ASP	N-CA-C	6.33	117.79	108.86
1	M	229	LYS	N-CA-C	-6.30	104.46	111.71
1	M	415	PRO	N-CA-C	-6.28	101.28	111.77
1	G	415	PRO	N-CA-C	-6.28	101.29	111.77
2	N	468	MET	CA-C-N	6.28	127.69	119.84
2	N	468	MET	C-N-CA	6.28	127.69	119.84
2	N	274	PHE	N-CA-C	6.28	120.94	113.16
2	B	59	ASP	N-CA-C	-6.27	104.69	112.90
2	B	118	ARG	CA-C-N	6.25	127.65	119.84
2	B	118	ARG	C-N-CA	6.25	127.65	119.84
2	N	292	PRO	N-CA-C	-6.23	105.24	113.65
1	C	45	GLN	N-CA-C	-6.18	104.95	113.18
1	C	418	GLU	N-CA-C	-6.18	100.21	110.17
2	J	572	PHE	N-CA-C	-6.14	105.10	112.59
1	G	354	ASP	N-CA-C	6.13	118.39	109.07
2	N	47	LYS	N-CA-C	-6.13	105.50	114.39
2	N	376	ASN	N-CA-C	-6.13	105.09	113.30
1	E	229	LYS	N-CA-C	-6.11	104.69	111.71
1	O	493	CYS	N-CA-C	6.09	118.66	108.73
2	F	184	LYS	CA-C-N	6.09	126.05	119.78
2	F	184	LYS	C-N-CA	6.09	126.05	119.78
2	H	184	LYS	CA-C-N	6.08	126.05	119.78
2	H	184	LYS	C-N-CA	6.08	126.05	119.78
2	D	572	PHE	N-CA-C	-6.08	105.18	112.59
2	L	43	GLU	N-CA-C	-6.08	104.51	112.41
2	D	184	LYS	CA-C-N	6.04	126.00	119.78
2	D	184	LYS	C-N-CA	6.04	126.00	119.78
2	D	404	MET	N-CA-C	-6.03	104.71	111.28
2	F	292	PRO	N-CA-C	-6.03	105.51	113.65
1	K	414	GLU	CA-C-N	-6.02	114.10	120.66
1	K	414	GLU	C-N-CA	-6.02	114.10	120.66
2	L	572	PHE	N-CA-C	-6.02	105.25	112.59
2	B	292	PRO	N-CA-C	-6.01	105.53	113.65
2	J	292	PRO	N-CA-C	-6.01	105.54	113.65
2	L	51	ASN	N-CA-C	6.01	117.42	107.20
2	N	118	ARG	CA-C-N	6.00	127.34	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	N	118	ARG	C-N-CA	6.00	127.34	119.84
1	C	27	ALA	N-CA-C	-5.99	106.13	113.50
2	P	292	PRO	N-CA-C	-5.97	105.59	113.65
2	J	404	MET	N-CA-C	-5.97	104.77	111.28
2	N	184	LYS	CA-C-N	5.96	125.92	119.78
2	N	184	LYS	C-N-CA	5.96	125.92	119.78
2	J	184	LYS	CA-C-N	5.95	125.91	119.78
2	J	184	LYS	C-N-CA	5.95	125.91	119.78
2	N	404	MET	N-CA-C	-5.95	104.79	111.28
2	L	292	PRO	N-CA-C	-5.93	105.64	113.65
2	L	404	MET	N-CA-C	-5.92	104.83	111.28
2	F	404	MET	N-CA-C	-5.91	104.84	111.28
1	C	217	VAL	N-CA-C	5.90	115.85	106.88
2	H	512	HIS	N-CA-C	-5.89	104.85	111.28
2	B	184	LYS	CA-C-N	5.89	125.85	119.78
2	B	184	LYS	C-N-CA	5.89	125.85	119.78
1	O	415	PRO	N-CA-C	-5.87	101.21	112.01
2	B	524	VAL	CA-C-N	5.86	123.88	119.66
2	B	524	VAL	C-N-CA	5.86	123.88	119.66
1	C	193	SER	CA-C-N	5.86	127.16	119.84
1	C	193	SER	C-N-CA	5.86	127.16	119.84
2	F	572	PHE	N-CA-C	-5.86	105.45	112.59
2	B	512	HIS	N-CA-C	-5.85	104.90	111.28
1	C	80	VAL	N-CA-C	5.84	116.62	110.72
2	B	274	PHE	N-CA-C	5.84	120.40	113.16
1	K	222	GLY	N-CA-C	-5.83	103.75	113.02
2	P	184	LYS	CA-C-N	5.83	125.78	119.78
2	P	184	LYS	C-N-CA	5.83	125.78	119.78
2	D	292	PRO	N-CA-C	-5.82	105.79	113.65
1	M	470	GLY	N-CA-C	-5.81	106.48	116.01
1	E	357	PHE	N-CA-C	5.80	117.86	108.41
1	I	415	PRO	N-CA-C	-5.80	101.34	112.01
2	J	351	ILE	CA-C-N	5.80	123.83	119.66
2	J	351	ILE	C-N-CA	5.80	123.83	119.66
2	B	468	MET	N-CA-C	5.79	117.11	109.93
1	M	414	GLU	CA-C-N	-5.76	114.38	120.66
1	M	414	GLU	C-N-CA	-5.76	114.38	120.66
1	A	415	PRO	N-CA-C	-5.76	101.41	112.01
1	K	493	CYS	N-CA-C	5.75	118.96	107.62
2	P	525	PRO	CA-C-N	5.75	127.31	120.23
2	P	525	PRO	C-N-CA	5.75	127.31	120.23
2	B	534	VAL	N-CA-C	5.75	115.93	108.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L	274	PHE	N-CA-C	5.75	120.29	113.16
1	C	490	SER	CA-C-N	5.74	126.21	120.52
1	C	490	SER	C-N-CA	5.74	126.21	120.52
1	C	281	ASP	CA-C-N	-5.74	112.66	119.84
1	C	281	ASP	C-N-CA	-5.74	112.66	119.84
1	O	473	ASN	N-CA-C	-5.74	99.45	108.63
1	A	397	LYS	N-CA-C	-5.73	106.37	113.19
2	H	292	PRO	N-CA-C	-5.73	105.91	113.65
2	H	274	PHE	N-CA-C	5.70	120.23	113.16
2	P	118	ARG	CA-C-N	5.70	126.97	119.84
2	P	118	ARG	C-N-CA	5.70	126.97	119.84
2	D	42	LYS	N-CA-C	-5.69	106.18	113.01
2	D	118	ARG	CA-C-N	5.69	126.95	119.84
2	D	118	ARG	C-N-CA	5.69	126.95	119.84
2	P	512	HIS	N-CA-C	-5.69	105.08	111.28
1	K	368	ALA	N-CA-C	-5.66	106.21	113.23
2	F	512	HIS	N-CA-C	-5.66	105.11	111.28
1	I	278	PHE	N-CA-C	-5.65	102.53	110.50
2	J	274	PHE	N-CA-C	5.65	120.16	113.16
2	F	118	ARG	CA-C-N	5.65	126.90	119.84
2	F	118	ARG	C-N-CA	5.65	126.90	119.84
1	E	262	LEU	N-CA-C	-5.64	106.99	112.97
2	L	184	LYS	CA-C-N	5.63	125.58	119.78
2	L	184	LYS	C-N-CA	5.63	125.58	119.78
2	P	572	PHE	N-CA-C	-5.63	105.72	112.59
1	A	186	SER	N-CA-C	5.63	117.25	109.54
1	I	412	TYR	N-CA-C	5.62	119.89	112.25
1	K	246	MET	CA-C-N	5.62	125.52	119.85
1	K	246	MET	C-N-CA	5.62	125.52	119.85
2	N	572	PHE	N-CA-C	-5.62	105.74	112.59
1	C	218	LEU	CA-C-N	5.61	125.59	120.03
1	C	218	LEU	C-N-CA	5.61	125.59	120.03
2	D	274	PHE	N-CA-C	5.61	120.12	113.16
2	F	58	SER	N-CA-C	-5.61	105.63	113.37
1	E	415	PRO	N-CA-C	-5.61	101.70	112.01
1	G	281	ASP	CA-C-N	-5.61	112.83	119.84
1	G	281	ASP	C-N-CA	-5.61	112.83	119.84
1	G	490	SER	CA-C-N	5.60	126.84	119.84
1	G	490	SER	C-N-CA	5.60	126.84	119.84
2	N	512	HIS	N-CA-C	-5.60	105.18	111.28
1	C	415	PRO	N-CA-C	-5.60	101.71	112.01
1	E	208	LYS	CA-C-N	-5.60	112.84	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	208	LYS	C-N-CA	-5.60	112.84	119.84
1	I	202	TRP	N-CA-C	-5.59	106.62	113.50
2	D	512	HIS	N-CA-C	-5.59	105.19	111.28
1	O	467	ILE	N-CA-C	5.58	116.31	110.62
2	N	310	ARG	CA-C-O	5.57	126.95	120.49
2	L	118	ARG	CA-C-N	5.57	126.80	119.84
2	L	118	ARG	C-N-CA	5.57	126.80	119.84
2	F	43	GLU	N-CA-C	-5.56	106.85	113.97
1	K	471	ILE	N-CA-C	5.55	120.89	109.34
2	J	512	HIS	N-CA-C	-5.55	105.23	111.28
2	F	275	SER	N-CA-C	-5.53	106.61	113.19
1	K	177	LYS	N-CA-C	5.53	118.71	110.14
1	E	207	PHE	N-CA-C	-5.52	98.77	108.20
2	J	118	ARG	CA-C-N	5.51	126.72	119.84
2	J	118	ARG	C-N-CA	5.51	126.72	119.84
1	G	414	GLU	CA-C-N	-5.50	114.66	120.66
1	G	414	GLU	C-N-CA	-5.50	114.66	120.66
1	K	426	LEU	N-CA-C	-5.50	107.21	114.31
1	M	183	THR	N-CA-C	5.50	115.10	107.73
1	O	280	ARG	N-CA-C	-5.50	105.70	112.90
1	A	429	TRP	N-CA-C	5.50	118.04	110.35
2	F	274	PHE	N-CA-C	5.49	119.97	113.16
1	G	196	MET	N-CA-C	-5.49	106.94	113.97
2	B	57	ALA	N-CA-C	-5.48	105.91	112.59
1	A	280	ARG	N-CA-C	-5.48	106.65	113.55
2	H	572	PHE	N-CA-C	-5.48	105.91	112.59
1	M	398	LEU	N-CA-C	-5.47	105.96	113.30
1	K	397	LYS	N-CA-C	-5.47	106.58	113.20
1	M	264	GLN	N-CA-C	-5.46	98.70	108.47
2	B	572	PHE	N-CA-C	-5.45	105.95	112.59
1	G	366	HIS	N-CA-C	5.44	122.40	110.80
1	I	397	LYS	N-CA-C	-5.44	106.71	113.19
1	M	287	GLN	N-CA-C	-5.44	105.28	112.24
2	H	118	ARG	CA-C-N	5.43	126.63	119.84
2	H	118	ARG	C-N-CA	5.43	126.63	119.84
1	M	426	LEU	N-CA-C	-5.43	106.12	114.16
2	B	351	ILE	CA-C-N	5.43	123.57	119.66
2	B	351	ILE	C-N-CA	5.43	123.57	119.66
1	C	475	ARG	N-CA-C	-5.42	105.88	113.37
1	E	246	MET	CA-C-N	5.42	125.33	119.85
1	E	246	MET	C-N-CA	5.42	125.33	119.85
1	G	190	THR	N-CA-C	5.42	118.25	109.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	M	198	SER	N-CA-C	-5.40	104.03	111.81
1	C	57	SER	N-CA-C	5.40	117.98	108.75
1	K	490	SER	CA-C-N	5.38	125.85	120.52
1	K	490	SER	C-N-CA	5.38	125.85	120.52
1	E	259	PHE	N-CA-C	5.38	119.33	112.12
1	I	246	MET	CA-C-N	5.38	125.28	119.85
1	I	246	MET	C-N-CA	5.38	125.28	119.85
1	M	262	LEU	N-CA-C	-5.37	107.03	113.21
2	F	215	GLU	N-CA-C	5.35	118.18	109.24
1	E	398	LEU	N-CA-C	-5.35	106.14	113.30
1	C	246	MET	CA-C-N	5.34	125.24	119.85
1	C	246	MET	C-N-CA	5.34	125.24	119.85
1	E	221	SER	N-CA-C	5.33	122.16	110.80
2	F	468	MET	N-CA-C	5.33	116.54	109.93
1	O	475	ARG	N-CA-C	-5.32	106.86	113.19
1	O	246	MET	CA-C-N	5.32	125.22	119.85
1	O	246	MET	C-N-CA	5.32	125.22	119.85
2	P	274	PHE	N-CA-C	5.32	119.75	113.16
1	E	397	LYS	N-CA-C	-5.32	106.86	113.19
2	B	257	GLY	N-CA-C	5.31	118.74	110.88
2	J	275	SER	N-CA-C	-5.29	106.89	113.19
1	I	281	ASP	N-CA-C	5.29	121.51	109.81
2	N	468	MET	N-CA-C	5.29	116.48	109.93
2	N	275	SER	N-CA-C	-5.26	106.93	113.19
2	N	364	ILE	N-CA-C	-5.26	105.58	110.53
2	F	351	ILE	CA-C-N	5.26	123.44	119.66
2	F	351	ILE	C-N-CA	5.26	123.44	119.66
1	E	412	TYR	N-CA-C	5.25	119.90	111.81
1	C	52	GLU	N-CA-C	-5.25	103.46	110.55
2	J	25	ASP	N-CA-C	-5.25	105.67	111.71
2	F	524	VAL	CA-C-N	5.22	123.42	119.66
2	F	524	VAL	C-N-CA	5.22	123.42	119.66
1	C	28	ALA	N-CA-C	-5.20	105.29	111.69
2	H	525	PRO	CA-C-N	5.20	125.10	119.85
2	H	525	PRO	C-N-CA	5.20	125.10	119.85
1	C	68	GLU	N-CA-C	-5.20	105.68	112.23
2	P	20	THR	N-CA-C	-5.19	103.68	110.53
2	D	20	THR	N-CA-C	-5.19	103.68	110.53
1	A	246	MET	CA-C-N	5.18	125.09	119.85
1	A	246	MET	C-N-CA	5.18	125.09	119.85
2	F	327	LEU	N-CA-C	-5.17	105.64	111.28
1	O	397	LYS	N-CA-C	-5.17	106.94	113.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	397	LYS	N-CA-C	-5.17	107.03	113.19
2	H	20	THR	N-CA-C	-5.17	103.70	110.53
1	K	466	MET	N-CA-C	-5.16	106.24	112.54
2	L	215	GLU	N-CA-C	5.15	117.84	109.24
1	C	412	TYR	N-CA-C	5.15	119.74	111.81
1	C	222	GLY	N-CA-C	-5.14	104.58	112.85
2	P	215	GLU	N-CA-C	5.14	117.82	109.24
1	O	206	PRO	N-CA-C	5.13	118.55	110.80
2	B	275	SER	N-CA-C	-5.13	107.09	113.19
2	L	20	THR	N-CA-C	-5.13	103.76	110.53
1	A	412	TYR	N-CA-C	5.12	119.70	111.81
2	D	215	GLU	N-CA-C	5.12	117.79	109.24
1	A	398	LEU	N-CA-C	-5.12	106.44	113.30
1	I	398	LEU	N-CA-C	-5.12	106.45	113.30
1	G	246	MET	CA-C-N	5.11	125.01	119.85
1	G	246	MET	C-N-CA	5.11	125.01	119.85
1	A	498	GLU	N-CA-C	-5.11	102.61	110.58
2	P	228	GLY	N-CA-C	-5.11	108.19	115.64
2	J	22	GLU	N-CA-C	-5.10	105.90	112.68
2	N	228	GLY	N-CA-C	-5.09	108.20	115.64
2	D	562	GLY	N-CA-C	5.08	117.99	110.42
1	K	41	VAL	N-CA-C	-5.08	106.84	111.67
1	A	217	VAL	N-CA-C	5.08	114.06	106.85
2	B	364	ILE	N-CA-C	-5.07	105.60	110.72
1	I	357	PHE	N-CA-C	5.07	116.65	108.34
2	B	215	GLU	N-CA-C	5.07	117.70	109.24
1	C	398	LEU	N-CA-C	-5.07	106.51	113.30
2	F	562	GLY	N-CA-C	5.06	117.96	110.42
1	O	259	PHE	N-CA-C	5.05	118.87	111.34
1	G	364	ALA	N-CA-C	-5.04	101.09	109.46
2	H	215	GLU	N-CA-C	5.04	117.66	109.24
2	D	275	SER	N-CA-C	-5.04	107.19	113.19
1	K	197	ILE	N-CA-C	-5.04	105.65	113.16
1	E	208	LYS	N-CA-C	5.03	120.94	109.81
2	L	376	ASN	N-CA-C	-5.03	106.56	113.30
2	B	540	GLY	CA-C-N	5.03	125.70	120.12
2	B	540	GLY	C-N-CA	5.03	125.70	120.12
1	K	412	TYR	N-CA-C	5.03	119.55	111.81
1	K	10	LEU	N-CA-C	-5.02	106.25	112.38
1	I	281	ASP	CA-C-N	-5.02	113.57	119.84
1	I	281	ASP	C-N-CA	-5.02	113.57	119.84
2	J	228	GLY	N-CA-C	-5.01	108.33	115.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	P	57	ALA	N-CA-C	-5.01	107.45	113.21
1	C	35	GLN	N-CA-C	-5.01	106.86	113.17
1	C	443	LEU	N-CA-C	5.00	116.58	111.03
1	I	490	SER	CA-C-N	5.00	126.33	120.98
1	I	490	SER	C-N-CA	5.00	126.33	120.98

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	N	533	TYR	Sidechain

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2589	0	2537	279	0
1	C	4058	0	4030	474	0
1	E	2517	0	2462	300	0
1	G	2521	0	2465	315	0
1	I	2551	0	2496	248	0
1	K	2746	0	2632	295	0
1	M	2582	0	2506	334	0
1	O	2527	0	2476	293	0
2	B	4651	0	4751	491	0
2	D	4651	0	4751	477	0
2	F	4651	0	4751	520	0
2	H	4651	0	4751	467	0
2	J	4651	0	4751	477	0
2	L	4651	0	4751	473	0
2	N	4651	0	4751	508	0
2	P	4651	0	4751	472	0
3	A	12	0	8	7	0
3	C	12	0	8	2	0
3	E	12	0	8	1	0
3	G	12	0	8	3	0
3	I	12	0	8	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	K	12	0	8	7	0
3	M	12	0	8	4	0
3	O	12	0	8	4	0
All	All	59395	0	59676	5959	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 50.

All (5959) 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:N:49:GLN:HE21	2:N:52:VAL:HG11	1.06	1.13
2:N:381:LEU:HD23	2:N:382:PRO:HD2	1.30	1.12
2:J:381:LEU:HD23	2:J:382:PRO:HD2	1.26	1.11
2:N:117:ILE:HG23	2:N:217:LYS:HD2	1.33	1.11
1:O:188:GLN:HB2	1:O:206:PRO:HG2	1.33	1.10
2:F:234:PRO:HB2	2:F:235:PRO:HD3	1.31	1.09
1:E:281:ASP:HB3	1:E:282:PRO:HD3	1.14	1.08
1:G:193:SER:HB2	1:G:194:PRO:HD2	1.27	1.08
1:M:213:LEU:HG	2:P:535:ILE:HD11	1.33	1.08
2:F:117:ILE:HG23	2:F:217:LYS:HD2	1.36	1.07
1:M:281:ASP:HB3	1:M:282:PRO:HD2	1.18	1.07
2:B:234:PRO:HB2	2:B:235:PRO:HD3	1.36	1.07
2:F:229:VAL:HG11	2:F:241:HIS:HD2	1.20	1.06
2:J:117:ILE:HG23	2:J:217:LYS:HD2	1.31	1.06
1:M:286:LEU:HD23	1:M:287:GLN:H	1.15	1.06
1:A:281:ASP:HB3	1:A:282:PRO:HD3	1.31	1.06
2:P:40:SER:HB2	2:P:42:LYS:HG2	1.35	1.06
1:M:406:LYS:HD2	2:N:29:PHE:CD1	1.90	1.05
2:N:234:PRO:HB2	2:N:235:PRO:HD3	1.37	1.05
2:P:381:LEU:HD23	2:P:382:PRO:HD2	1.38	1.04
2:H:381:LEU:HD23	2:H:382:PRO:HD2	1.38	1.04
1:C:281:ASP:HB3	1:C:282:PRO:HD3	1.34	1.03
1:K:182:SER:HB3	1:K:185:ILE:HG23	1.35	1.03
2:P:229:VAL:HG11	2:P:241:HIS:HD2	1.24	1.03
2:J:229:VAL:HG11	2:J:241:HIS:HD2	1.23	1.02
1:K:281:ASP:HB3	1:K:282:PRO:HD3	1.41	1.02
2:D:117:ILE:HG23	2:D:217:LYS:HD2	1.41	1.02
1:K:474:ILE:H	1:K:474:ILE:HD12	1.24	1.02
1:M:279:LEU:HB3	1:M:283:ALA:HB2	1.40	1.02
1:M:370:PHE:HB2	1:M:462:GLU:OE2	1.59	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:229:VAL:HG11	2:B:241:HIS:HD2	1.25	1.01
1:O:196:MET:HE2	1:O:202:TRP:HA	1.37	1.01
2:D:234:PRO:HB2	2:D:235:PRO:HD3	1.41	1.01
2:B:125:VAL:HG12	2:B:252:PHE:HA	1.41	1.01
2:J:234:PRO:HB2	2:J:235:PRO:HD3	1.41	1.01
2:F:431:ILE:H	2:F:431:ILE:HD12	1.25	1.00
2:B:381:LEU:HD23	2:B:382:PRO:HD2	1.41	1.00
1:E:414:GLU:HB2	1:E:415:PRO:HD3	1.44	1.00
2:H:117:ILE:HG23	2:H:217:LYS:HD2	1.44	1.00
2:L:234:PRO:HB2	2:L:235:PRO:HD3	1.40	1.00
2:D:229:VAL:HG11	2:D:241:HIS:HD2	1.24	0.99
1:C:115:VAL:HG12	1:C:116:ASP:H	1.25	0.99
1:C:414:GLU:HB2	1:C:415:PRO:HD3	1.44	0.99
1:M:406:LYS:HB2	2:N:29:PHE:CZ	1.98	0.99
2:D:125:VAL:HG12	2:D:252:PHE:HA	1.45	0.99
2:H:462:ILE:HG23	2:H:472:LEU:HD12	1.45	0.99
2:L:229:VAL:HG11	2:L:241:HIS:HD2	1.24	0.99
1:E:367:LEU:HD23	1:E:369:GLU:H	1.26	0.99
2:N:229:VAL:HG11	2:N:241:HIS:HD2	1.26	0.99
1:E:343:LYS:HB2	1:E:344:PRO:HD3	1.44	0.98
2:L:125:VAL:HG12	2:L:252:PHE:HA	1.44	0.98
2:N:431:ILE:H	2:N:431:ILE:HD12	1.27	0.98
2:P:535:ILE:HD12	2:P:535:ILE:H	1.22	0.98
1:I:406:LYS:HD2	2:J:29:PHE:CD1	1.97	0.98
1:M:414:GLU:HB2	1:M:415:PRO:HD3	1.44	0.98
2:B:117:ILE:HG23	2:B:217:LYS:HD2	1.42	0.98
1:I:414:GLU:HB2	1:I:415:PRO:HD3	1.41	0.98
2:N:308:MET:SD	2:N:346:GLN:HB3	2.03	0.98
1:C:21:LEU:HD21	1:C:26:LEU:HD22	1.42	0.98
2:P:234:PRO:HB2	2:P:235:PRO:HD3	1.42	0.98
2:H:234:PRO:HB2	2:H:235:PRO:HD3	1.45	0.97
2:D:60:VAL:HG23	2:D:62:LEU:HD22	1.46	0.97
1:O:343:LYS:HB2	1:O:344:PRO:CD	1.94	0.97
1:I:343:LYS:HB2	1:I:344:PRO:CD	1.94	0.97
1:I:210:TYR:HB3	1:I:212:PHE:HE2	1.29	0.97
2:L:431:ILE:H	2:L:431:ILE:HD12	1.28	0.97
2:J:431:ILE:HD12	2:J:431:ILE:H	1.29	0.96
2:F:462:ILE:HG23	2:F:472:LEU:HD12	1.43	0.96
1:M:343:LYS:HB2	1:M:344:PRO:HD3	1.46	0.96
2:L:71:ARG:HG3	2:L:355:ARG:NH1	1.80	0.96
1:E:343:LYS:HB2	1:E:344:PRO:CD	1.95	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:343:LYS:HB2	1:G:344:PRO:CD	1.94	0.96
1:O:343:LYS:HB2	1:O:344:PRO:HD3	1.48	0.96
2:P:125:VAL:HG12	2:P:252:PHE:HA	1.46	0.96
1:K:343:LYS:HB2	1:K:344:PRO:CD	1.95	0.95
2:H:125:VAL:HG12	2:H:252:PHE:HA	1.47	0.95
2:P:431:ILE:H	2:P:431:ILE:HD12	1.29	0.95
2:H:229:VAL:HG11	2:H:241:HIS:HD2	1.29	0.95
2:L:117:ILE:HG23	2:L:217:LYS:HD2	1.44	0.95
1:M:343:LYS:HB2	1:M:344:PRO:CD	1.95	0.95
2:L:381:LEU:HD23	2:L:382:PRO:HD2	1.48	0.95
1:C:343:LYS:HB2	1:C:344:PRO:CD	1.95	0.95
2:F:381:LEU:HD23	2:F:382:PRO:HD2	1.44	0.95
1:G:398:LEU:HA	1:G:495:LEU:HD23	1.48	0.95
1:E:196:MET:HE3	1:E:202:TRP:HB2	1.49	0.94
1:K:343:LYS:HB2	1:K:344:PRO:HD3	1.50	0.94
1:A:414:GLU:HB2	1:A:415:PRO:HD3	1.46	0.94
1:C:55:LEU:HD21	1:C:171:LYS:HD2	1.47	0.94
2:J:125:VAL:HG12	2:J:252:PHE:HA	1.45	0.94
2:D:381:LEU:HD23	2:D:382:PRO:HD2	1.47	0.94
2:F:182:LYS:HD3	1:K:472:ASN:OD1	1.66	0.94
1:M:212:PHE:CZ	2:P:537:ALA:HB2	2.02	0.94
1:O:374:GLU:OE1	3:O:509:PHE:HB2	1.68	0.94
1:K:414:GLU:HB2	1:K:415:PRO:HD3	1.49	0.94
1:O:414:GLU:HB2	1:O:415:PRO:HD3	1.49	0.94
2:D:431:ILE:H	2:D:431:ILE:HD12	1.33	0.94
2:H:71:ARG:HG3	2:H:355:ARG:NH1	1.82	0.94
2:L:535:ILE:H	2:L:535:ILE:HD12	1.33	0.94
1:A:343:LYS:HB2	1:A:344:PRO:CD	1.98	0.93
1:A:343:LYS:HB2	1:A:344:PRO:HD3	1.50	0.93
2:J:45:ILE:HA	2:J:48:GLU:HG2	1.47	0.93
1:I:343:LYS:HB2	1:I:344:PRO:HD3	1.51	0.93
2:P:462:ILE:HG23	2:P:472:LEU:HD12	1.51	0.93
2:D:159:ILE:HG22	2:D:255:CYS:SG	2.08	0.93
2:B:431:ILE:HD12	2:B:431:ILE:H	1.34	0.93
1:M:193:SER:OG	1:M:194:PRO:HD2	1.67	0.93
1:M:406:LYS:HD2	2:N:29:PHE:CE1	2.02	0.93
1:O:468:LYS:HE3	1:O:495:LEU:HB2	1.47	0.93
1:E:268:HIS:HB3	1:E:272:ASP:OD1	1.69	0.93
1:O:403:LEU:HD22	1:O:419:VAL:HG12	1.50	0.93
1:I:213:LEU:HD21	2:L:534:VAL:HG12	1.52	0.92
2:F:566:PRO:HB3	1:G:197:ILE:HG23	1.52	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:391:PHE:HD2	2:F:392:PRO:HD2	1.34	0.91
2:N:125:VAL:HG12	2:N:252:PHE:HA	1.52	0.91
2:J:159:ILE:HG22	2:J:255:CYS:SG	2.10	0.91
1:M:324:LEU:HB3	1:M:357:PHE:CD1	2.05	0.91
1:O:199:SER:HA	1:O:202:TRP:NE1	1.85	0.91
2:P:117:ILE:HG23	2:P:217:LYS:HD2	1.51	0.91
2:F:229:VAL:HG11	2:F:241:HIS:CD2	2.06	0.91
2:P:159:ILE:HG22	2:P:255:CYS:SG	2.11	0.91
1:M:283:ALA:O	1:M:284:GLU:HB2	1.70	0.91
2:D:462:ILE:HG23	2:D:472:LEU:HD12	1.50	0.91
1:M:279:LEU:HD23	1:M:283:ALA:H	1.35	0.91
2:H:126:LEU:HG	2:H:129:ILE:HD11	1.52	0.91
2:L:126:LEU:HG	2:L:129:ILE:HD11	1.52	0.91
2:N:310:ARG:HH22	2:N:312:ASP:HB2	1.35	0.91
2:D:321:ARG:HD3	2:H:321:ARG:HD3	1.53	0.90
1:G:414:GLU:HB2	1:G:415:PRO:HD3	1.52	0.90
1:C:26:LEU:O	1:C:30:LEU:HG	1.71	0.90
2:N:462:ILE:HG23	2:N:472:LEU:HD12	1.51	0.90
1:K:461:LEU:O	1:K:465:THR:HG22	1.71	0.90
2:N:406:ALA:HA	2:P:406:ALA:HA	1.53	0.90
1:O:193:SER:O	1:O:197:ILE:HG12	1.69	0.90
1:M:224:LEU:HD22	2:N:401:ARG:NH1	1.87	0.90
2:F:535:ILE:H	2:F:535:ILE:HD12	1.34	0.90
1:C:114:ARG:HG2	1:C:114:ARG:HH11	1.34	0.90
1:G:195:GLU:HA	1:G:198:SER:HB3	1.53	0.90
1:I:281:ASP:HB3	1:I:282:PRO:HD3	1.52	0.90
1:G:193:SER:HB2	1:G:194:PRO:CD	2.01	0.89
2:B:159:ILE:HG22	2:B:255:CYS:SG	2.12	0.89
2:F:551:ILE:HD11	2:F:561:LEU:HB2	1.54	0.89
1:C:471:ILE:HG22	1:C:472:ASN:H	1.36	0.89
2:H:431:ILE:H	2:H:431:ILE:HD12	1.34	0.89
1:O:224:LEU:HD22	2:P:401:ARG:NH1	1.87	0.89
1:G:281:ASP:HB3	1:G:282:PRO:HD3	1.53	0.89
1:G:364:ALA:C	1:G:366:HIS:H	1.79	0.89
1:O:495:LEU:HD12	1:O:496:ASP:N	1.87	0.89
2:B:399:LEU:HD13	1:C:494:ARG:HG3	1.55	0.89
2:F:71:ARG:HH22	2:F:366:GLU:CD	1.81	0.89
2:H:535:ILE:HD12	2:H:535:ILE:H	1.35	0.89
1:G:362:LEU:HD22	1:G:475:ARG:HH22	1.35	0.88
2:D:126:LEU:HG	2:D:129:ILE:HD11	1.53	0.88
1:E:267:GLN:HB3	2:F:152:ARG:HD2	1.53	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:343:LYS:HB2	1:C:344:PRO:HD3	1.52	0.88
1:E:212:PHE:CE2	2:H:549:ALA:HB2	2.09	0.88
1:G:343:LYS:HB2	1:G:344:PRO:HD3	1.54	0.88
2:L:45:ILE:HA	2:L:48:GLU:HG2	1.56	0.88
2:N:49:GLN:NE2	2:N:52:VAL:HG11	1.89	0.88
2:B:462:ILE:HG23	2:B:472:LEU:HD12	1.53	0.88
1:E:281:ASP:CB	1:E:282:PRO:HD3	2.04	0.88
2:F:125:VAL:HG12	2:F:252:PHE:HA	1.55	0.88
1:M:281:ASP:HB3	1:M:282:PRO:CD	2.03	0.88
2:D:551:ILE:HD11	2:D:561:LEU:HB2	1.54	0.88
2:L:41:GLU:HA	2:L:44:ILE:HB	1.55	0.88
1:O:199:SER:HA	1:O:202:TRP:HE1	1.36	0.88
1:I:414:GLU:CB	1:I:415:PRO:HD3	2.04	0.87
1:O:281:ASP:HB3	1:O:282:PRO:HD3	1.52	0.87
2:B:71:ARG:HG3	2:B:355:ARG:NH1	1.89	0.87
1:I:473:ASN:O	1:I:476:GLU:HB2	1.75	0.87
1:O:477:LEU:HA	1:O:482:VAL:HG23	1.54	0.87
2:J:512:HIS:CE1	1:K:216:GLY:H	1.91	0.87
2:N:391:PHE:HD2	2:N:392:PRO:HD2	1.36	0.87
2:N:211:LEU:HG	2:N:212:HIS:H	1.40	0.87
2:L:159:ILE:HG22	2:L:255:CYS:SG	2.15	0.87
2:N:126:LEU:HG	2:N:129:ILE:HD11	1.56	0.87
1:E:281:ASP:HB3	1:E:282:PRO:CD	2.04	0.87
1:M:213:LEU:CG	2:P:535:ILE:HD11	2.05	0.87
1:M:277:PHE:CE1	1:M:359:ASN:HB2	2.10	0.87
1:C:112:TRP:CE3	1:C:132:MET:HE1	2.09	0.86
2:N:175:ALA:HB1	2:N:219:LEU:HB3	1.56	0.86
2:L:175:ALA:HB1	2:L:219:LEU:HB3	1.56	0.86
2:B:508:PHE:HE1	2:B:562:GLY:HA2	1.40	0.86
2:B:551:ILE:HD11	2:B:561:LEU:HB2	1.57	0.86
2:P:126:LEU:HG	2:P:129:ILE:HD11	1.54	0.86
1:M:387:LEU:HD23	1:M:455:ILE:HB	1.55	0.86
1:G:402:GLN:O	1:G:421:SER:HA	1.75	0.86
2:J:133:LYS:H	2:J:133:LYS:HD2	1.39	0.86
1:M:286:LEU:CD2	1:M:287:GLN:H	1.88	0.86
2:D:229:VAL:HG11	2:D:241:HIS:CD2	2.10	0.86
2:N:133:LYS:H	2:N:133:LYS:HD2	1.37	0.86
2:P:175:ALA:HB1	2:P:219:LEU:HB3	1.57	0.86
2:D:341:ILE:HD11	2:D:348:GLU:HB2	1.58	0.85
1:A:477:LEU:HD13	1:A:478:VAL:HG23	1.58	0.85
1:E:336:LEU:HB3	1:E:446:MET:HE1	1.56	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:472:ASN:H	1:C:472:ASN:HD22	1.23	0.85
1:E:414:GLU:CB	1:E:415:PRO:HD3	2.07	0.85
1:O:387:LEU:HD23	1:O:455:ILE:HB	1.56	0.85
2:P:229:VAL:HG11	2:P:241:HIS:CD2	2.10	0.85
1:A:199:SER:O	1:A:201:SER:N	2.10	0.85
1:A:387:LEU:HD23	1:A:455:ILE:HB	1.59	0.85
2:B:126:LEU:HG	2:B:129:ILE:HD11	1.57	0.85
2:J:71:ARG:HH22	2:J:366:GLU:CD	1.84	0.85
2:L:229:VAL:HG11	2:L:241:HIS:CD2	2.10	0.85
1:C:471:ILE:HG22	1:C:472:ASN:N	1.90	0.85
2:F:159:ILE:HG22	2:F:255:CYS:SG	2.16	0.85
1:K:387:LEU:HD23	1:K:455:ILE:HB	1.58	0.85
2:N:310:ARG:NH2	2:N:312:ASP:HB2	1.89	0.85
2:P:71:ARG:HG3	2:P:355:ARG:NH1	1.92	0.85
1:C:469:TYR:CZ	1:C:493:CYS:HB2	2.12	0.85
2:D:535:ILE:H	2:D:535:ILE:HD12	1.41	0.85
2:J:551:ILE:HD11	2:J:561:LEU:HB2	1.56	0.85
2:B:133:LYS:H	2:B:133:LYS:HD2	1.42	0.85
2:P:217:LYS:HB3	2:P:218:PRO:HD2	1.58	0.85
1:E:406:LYS:HD2	2:F:29:PHE:CD1	2.12	0.84
2:H:175:ALA:HB1	2:H:219:LEU:HB3	1.59	0.84
2:L:551:ILE:HD11	2:L:561:LEU:HB2	1.57	0.84
1:C:6:VAL:HG11	1:C:32:MET:HE1	1.59	0.84
1:E:217:VAL:HG23	2:H:509:GLU:HB2	1.58	0.84
1:E:367:LEU:HD23	1:E:369:GLU:N	1.91	0.84
2:N:82:ARG:HG2	2:N:335:TYR:OH	1.77	0.84
1:A:414:GLU:CB	1:A:415:PRO:HD3	2.08	0.84
1:M:414:GLU:CB	1:M:415:PRO:HD3	2.06	0.84
2:F:133:LYS:H	2:F:133:LYS:HD2	1.40	0.84
1:I:281:ASP:C	1:I:283:ALA:H	1.85	0.84
2:J:566:PRO:HB3	1:K:197:ILE:HG22	1.60	0.84
1:K:224:LEU:HD22	2:L:401:ARG:NH1	1.92	0.84
1:A:196:MET:HA	1:A:201:SER:HB3	1.60	0.83
2:J:229:VAL:HG11	2:J:241:HIS:CD2	2.11	0.83
1:M:212:PHE:HZ	2:P:537:ALA:HB2	1.40	0.83
2:N:551:ILE:HD11	2:N:561:LEU:HB2	1.59	0.83
2:P:41:GLU:HB3	2:P:58:SER:HA	1.59	0.83
1:C:420:PHE:CD2	1:C:431:GLU:HA	2.11	0.83
2:H:159:ILE:HG22	2:H:255:CYS:SG	2.16	0.83
2:N:71:ARG:HH22	2:N:366:GLU:CD	1.87	0.83
1:I:336:LEU:HB3	1:I:446:MET:HE1	1.61	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:336:LEU:HB3	1:M:446:MET:HE1	1.60	0.83
2:N:334:MET:O	2:N:335:TYR:HB2	1.79	0.83
1:C:140:LEU:HD21	1:C:164:LEU:HD12	1.60	0.83
1:C:414:GLU:CB	1:C:415:PRO:HD3	2.09	0.83
2:F:334:MET:O	2:F:335:TYR:HB2	1.77	0.83
1:M:208:LYS:HG2	1:M:209:PRO:HD2	1.59	0.83
1:M:289:PRO:O	1:M:291:ASP:N	2.12	0.83
2:D:211:LEU:HG	2:D:212:HIS:H	1.43	0.83
2:P:508:PHE:HE1	2:P:562:GLY:HA2	1.41	0.83
2:B:229:VAL:HG11	2:B:241:HIS:CD2	2.14	0.83
2:J:217:LYS:HB3	2:J:218:PRO:HD2	1.60	0.83
2:P:551:ILE:HD11	2:P:561:LEU:HB2	1.58	0.83
1:I:387:LEU:HD23	1:I:455:ILE:HB	1.58	0.83
2:L:217:LYS:HB3	2:L:218:PRO:HD2	1.61	0.83
2:F:535:ILE:HD11	1:G:215:HIS:HE1	1.42	0.83
1:C:431:GLU:O	1:C:432:VAL:HB	1.79	0.83
1:E:280:ARG:HB3	2:F:440:SER:HB2	1.61	0.83
2:F:535:ILE:HD11	1:G:215:HIS:CE1	2.13	0.83
1:K:414:GLU:CB	1:K:415:PRO:HD3	2.09	0.83
1:G:205:ARG:H	1:G:206:PRO:CD	1.92	0.83
1:I:479:GLY:HA3	2:J:415:PHE:CE1	2.14	0.83
2:N:535:ILE:H	2:N:535:ILE:HD12	1.43	0.83
2:H:551:ILE:HD11	2:H:561:LEU:HB2	1.59	0.82
2:J:462:ILE:HG23	2:J:472:LEU:HD12	1.61	0.82
1:G:463:ARG:HA	1:G:466:MET:HE2	1.59	0.82
2:J:187:ASN:C	2:J:188:LYS:HD2	2.04	0.82
1:G:192:LEU:HB2	1:G:207:PHE:CE1	2.14	0.82
2:J:310:ARG:HH22	2:J:312:ASP:HB2	1.43	0.82
2:F:187:ASN:C	2:F:188:LYS:HD2	2.04	0.82
2:J:15:LEU:HD23	2:J:81:VAL:HG13	1.62	0.82
2:F:126:LEU:HG	2:F:129:ILE:HD11	1.62	0.82
1:G:387:LEU:HD23	1:G:455:ILE:HB	1.61	0.82
2:L:211:LEU:HG	2:L:212:HIS:H	1.43	0.82
2:J:175:ALA:HB1	2:J:219:LEU:HB3	1.59	0.82
2:L:62:LEU:HD23	2:L:62:LEU:H	1.43	0.82
2:N:229:VAL:HG11	2:N:241:HIS:CD2	2.12	0.82
2:H:211:LEU:HG	2:H:212:HIS:H	1.43	0.82
2:H:554:ARG:HH11	2:H:554:ARG:HG2	1.45	0.82
1:K:182:SER:HB3	1:K:185:ILE:CG2	2.10	0.82
2:B:420:GLN:HG3	2:B:448:GLN:NE2	1.95	0.82
1:C:23:SER:O	1:C:37:VAL:HG11	1.78	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:175:ALA:HB1	2:F:219:LEU:HB3	1.62	0.82
2:N:60:VAL:HG12	2:N:61:VAL:H	1.44	0.82
1:C:267:GLN:HE22	2:D:262:LYS:HE2	1.44	0.81
2:D:70:ASN:HD22	2:D:71:ARG:NH1	1.78	0.81
2:D:133:LYS:H	2:D:133:LYS:HD2	1.41	0.81
2:D:175:ALA:HB1	2:D:219:LEU:HB3	1.62	0.81
1:G:287:GLN:O	1:G:288:LEU:HD12	1.80	0.81
2:J:126:LEU:HG	2:J:129:ILE:HD11	1.60	0.81
1:C:402:GLN:O	1:C:421:SER:HA	1.80	0.81
2:D:217:LYS:HB3	2:D:218:PRO:HD2	1.61	0.81
2:F:217:LYS:HB3	2:F:218:PRO:HD2	1.62	0.81
2:H:217:LYS:HB3	2:H:218:PRO:HD2	1.60	0.81
1:O:205:ARG:HG3	1:O:206:PRO:HD2	1.60	0.81
2:J:391:PHE:HD2	2:J:392:PRO:HD2	1.45	0.81
1:M:248:THR:HB	1:M:354:ASP:OD2	1.80	0.81
2:N:196:GLU:O	2:N:200:ILE:HG23	1.79	0.81
1:A:336:LEU:HB3	1:A:446:MET:HE1	1.62	0.81
2:B:175:ALA:HB1	2:B:219:LEU:HB3	1.62	0.81
2:N:159:ILE:HG22	2:N:255:CYS:SG	2.21	0.81
2:L:462:ILE:HG23	2:L:472:LEU:HD12	1.62	0.81
2:H:334:MET:O	2:H:335:TYR:HB2	1.78	0.81
1:M:284:GLU:HG3	1:M:320:ARG:HB3	1.63	0.81
1:A:281:ASP:HB3	1:A:282:PRO:CD	2.11	0.81
2:J:196:GLU:O	2:J:200:ILE:HG23	1.80	0.81
2:B:41:GLU:O	2:B:44:ILE:HG22	1.80	0.81
2:D:71:ARG:HG3	2:D:355:ARG:NH1	1.95	0.81
1:O:281:ASP:OD2	2:P:483:LYS:HD3	1.81	0.81
2:P:211:LEU:HG	2:P:212:HIS:H	1.46	0.81
1:C:419:VAL:O	1:C:432:VAL:HG12	1.81	0.81
1:C:475:ARG:HG3	1:C:475:ARG:HH11	1.44	0.81
2:J:334:MET:O	2:J:335:TYR:HB2	1.79	0.81
1:C:281:ASP:HB3	1:C:282:PRO:CD	2.10	0.81
2:L:236:ILE:HG22	2:L:237:ILE:HG13	1.63	0.81
1:C:188:GLN:HA	1:C:188:GLN:HE21	1.46	0.80
2:F:67:VAL:HG13	2:F:68:PRO:HD2	1.61	0.80
1:K:233:GLN:HE22	1:K:495:LEU:HG	1.43	0.80
1:K:287:GLN:O	1:K:288:LEU:HD13	1.80	0.80
1:K:402:GLN:O	1:K:421:SER:HA	1.80	0.80
2:L:426:LYS:HA	2:L:571:LYS:HE2	1.63	0.80
2:N:49:GLN:HE21	2:N:52:VAL:CG1	1.93	0.80
2:N:506:PRO:HD2	1:O:191:GLU:HB2	1.60	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:212:PHE:HE2	2:H:549:ALA:HB2	1.46	0.80
2:N:217:LYS:HB3	2:N:218:PRO:HD2	1.62	0.80
1:O:414:GLU:CB	1:O:415:PRO:HD3	2.10	0.80
1:A:252:ILE:HD13	1:A:279:LEU:HD11	1.64	0.80
2:B:211:LEU:HG	2:B:212:HIS:H	1.45	0.80
2:D:508:PHE:HE1	2:D:562:GLY:HA2	1.47	0.80
2:H:133:LYS:H	2:H:133:LYS:HD2	1.46	0.80
1:I:224:LEU:HD22	2:J:401:ARG:NH1	1.95	0.80
2:N:341:ILE:HD11	2:N:348:GLU:HB2	1.64	0.80
1:E:281:ASP:OD2	2:F:483:LYS:HD3	1.81	0.80
1:I:263:PHE:CE2	1:I:441:GLU:HG3	2.16	0.80
2:P:133:LYS:H	2:P:133:LYS:HD2	1.44	0.80
1:I:361:THR:HG22	1:I:362:LEU:HD23	1.63	0.80
2:L:132:THR:HG23	2:L:133:LYS:HD2	1.64	0.80
1:E:367:LEU:HG	1:E:368:ALA:H	1.43	0.80
1:E:475:ARG:HH11	1:E:475:ARG:HG3	1.46	0.80
2:F:534:VAL:HG22	2:F:552:PHE:HB2	1.63	0.80
2:L:334:MET:O	2:L:335:TYR:HB2	1.81	0.80
1:A:188:GLN:HA	1:A:206:PRO:O	1.82	0.80
1:E:263:PHE:CD2	1:E:441:GLU:HG3	2.16	0.80
2:H:480:ILE:HG12	2:H:496:HIS:CD2	2.17	0.80
2:L:40:SER:O	2:L:44:ILE:HD12	1.81	0.80
2:H:40:SER:HB3	2:H:59:ASP:HA	1.64	0.79
2:B:535:ILE:H	2:B:535:ILE:HD12	1.47	0.79
1:K:280:ARG:HH11	1:K:280:ARG:HB2	1.47	0.79
1:O:263:PHE:CE2	1:O:441:GLU:HG3	2.16	0.79
1:A:192:LEU:HD21	2:D:566:PRO:HG3	1.63	0.79
1:K:367:LEU:HD12	1:K:367:LEU:H	1.45	0.79
1:O:471:ILE:HG22	1:O:472:ASN:N	1.95	0.79
2:P:70:ASN:HD22	2:P:71:ARG:NH1	1.80	0.79
2:B:217:LYS:HB3	2:B:218:PRO:HD2	1.64	0.79
2:F:508:PHE:HE1	2:F:562:GLY:HA2	1.45	0.79
1:C:474:ILE:C	1:C:476:GLU:H	1.88	0.79
2:F:512:HIS:CE1	1:G:216:GLY:H	1.99	0.79
1:M:288:LEU:HB3	1:M:289:PRO:HD2	1.63	0.79
2:D:196:GLU:O	2:D:200:ILE:HG23	1.83	0.79
1:E:477:LEU:HD12	1:E:478:VAL:CG2	2.13	0.79
1:E:224:LEU:HD22	2:F:401:ARG:NH1	1.97	0.79
1:G:224:LEU:HD22	2:H:401:ARG:NH1	1.96	0.79
1:M:279:LEU:HG	1:M:281:ASP:HB2	1.61	0.79
1:C:477:LEU:HA	1:C:482:VAL:HG23	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:211:LEU:HG	2:F:212:HIS:H	1.48	0.79
1:G:458:GLY:HA3	3:G:509:PHE:N	1.98	0.79
2:N:187:ASN:C	2:N:188:LYS:HD2	2.06	0.79
1:C:80:VAL:O	1:C:84:ILE:HG22	1.82	0.79
2:J:45:ILE:HG12	2:J:48:GLU:OE2	1.83	0.79
2:B:187:ASN:C	2:B:188:LYS:HD2	2.07	0.79
2:B:341:ILE:HD11	2:B:348:GLU:HB2	1.65	0.79
1:C:50:VAL:HG12	1:C:51:ILE:HG23	1.65	0.79
1:C:477:LEU:HD23	1:C:486:MET:SD	2.23	0.79
1:M:286:LEU:HD23	1:M:287:GLN:N	1.96	0.79
2:H:196:GLU:O	2:H:200:ILE:HG23	1.83	0.78
2:H:229:VAL:HG11	2:H:241:HIS:CD2	2.17	0.78
2:J:512:HIS:HE1	1:K:215:HIS:HA	1.47	0.78
1:O:196:MET:HG2	1:O:202:TRP:HB3	1.63	0.78
2:D:132:THR:HG23	2:D:133:LYS:HD2	1.64	0.78
1:E:286:LEU:HD22	1:E:322:ASN:OD1	1.83	0.78
1:G:363:ASP:H	1:G:366:HIS:HA	1.48	0.78
2:L:480:ILE:HG12	2:L:496:HIS:CD2	2.19	0.78
2:N:236:ILE:HG22	2:N:237:ILE:HG13	1.65	0.78
1:C:224:LEU:HD22	2:D:401:ARG:NH1	1.98	0.78
1:I:267:GLN:HB3	2:J:152:ARG:HH11	1.48	0.78
1:K:192:LEU:H	1:K:192:LEU:HD12	1.48	0.78
2:B:236:ILE:HG22	2:B:237:ILE:HG13	1.65	0.78
1:C:474:ILE:HD11	1:C:477:LEU:HD11	1.64	0.78
2:D:187:ASN:C	2:D:188:LYS:HD2	2.09	0.78
1:G:414:GLU:CB	1:G:415:PRO:HD3	2.12	0.78
2:H:426:LYS:HA	2:H:571:LYS:HE2	1.65	0.78
1:I:210:TYR:HB3	1:I:212:PHE:CE2	2.16	0.78
1:I:406:LYS:HB2	2:J:29:PHE:CZ	2.18	0.78
2:L:133:LYS:HD2	2:L:133:LYS:H	1.46	0.78
1:M:233:GLN:HE22	1:M:495:LEU:HG	1.47	0.78
2:N:236:ILE:N	2:N:236:ILE:HD12	1.99	0.78
2:N:426:LYS:HA	2:N:571:LYS:HE2	1.66	0.78
1:O:266:GLN:HG2	1:O:271:ARG:HH12	1.47	0.78
1:C:498:GLU:HB3	1:C:499:PRO:HD3	1.66	0.78
2:J:426:LYS:HA	2:J:571:LYS:HE2	1.66	0.78
2:P:334:MET:O	2:P:335:TYR:HB2	1.82	0.78
2:D:15:LEU:HD23	2:D:81:VAL:HG13	1.66	0.78
2:J:211:LEU:HG	2:J:212:HIS:H	1.48	0.78
2:B:391:PHE:HD2	2:B:392:PRO:HD2	1.47	0.78
1:E:384:LEU:HD11	1:E:417:MET:HE3	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:73:ASP:HA	2:H:273:MET:HE1	1.66	0.78
2:J:70:ASN:HD22	2:J:71:ARG:NH1	1.82	0.78
1:M:279:LEU:HD23	1:M:283:ALA:N	1.99	0.78
2:B:334:MET:O	2:B:335:TYR:HB2	1.83	0.78
1:E:282:PRO:CD	2:F:437:VAL:HG13	2.14	0.78
2:L:42:LYS:HG2	2:L:53:LYS:HD3	1.66	0.78
1:E:281:ASP:HB2	2:F:438:HIS:HB2	1.65	0.78
2:J:535:ILE:H	2:J:535:ILE:HD12	1.47	0.78
1:M:467:ILE:HD12	1:M:467:ILE:H	1.48	0.78
2:P:196:GLU:O	2:P:200:ILE:HG23	1.84	0.78
2:B:508:PHE:CE1	2:B:562:GLY:HA2	2.19	0.78
1:C:431:GLU:HG2	1:C:432:VAL:H	1.48	0.78
2:H:125:VAL:HG23	2:H:285:GLU:HB3	1.66	0.78
2:L:70:ASN:HD22	2:L:71:ARG:NH1	1.82	0.78
2:B:185:PRO:HG2	2:B:188:LYS:HB2	1.66	0.77
2:N:132:THR:HG23	2:N:133:LYS:HD2	1.65	0.77
1:O:229:LYS:HE3	1:O:491:PRO:O	1.84	0.77
2:D:62:LEU:HD23	2:D:62:LEU:H	1.49	0.77
2:N:15:LEU:HD23	2:N:81:VAL:HG13	1.66	0.77
1:K:280:ARG:HB2	1:K:280:ARG:NH1	2.00	0.77
2:L:196:GLU:O	2:L:200:ILE:HG23	1.83	0.77
1:M:374:GLU:OE1	3:M:509:PHE:HA	1.85	0.77
1:E:466:MET:SD	1:E:474:ILE:HG12	2.23	0.77
1:G:205:ARG:H	1:G:206:PRO:HD2	1.49	0.77
2:J:125:VAL:HG23	2:J:285:GLU:HB3	1.67	0.77
2:P:187:ASN:C	2:P:188:LYS:HD2	2.08	0.77
2:B:260:PHE:CE1	2:B:264:LYS:HD3	2.19	0.77
2:N:125:VAL:HG23	2:N:285:GLU:HB3	1.64	0.77
2:F:82:ARG:HG2	2:F:335:TYR:OH	1.85	0.77
2:H:420:GLN:HG3	2:H:448:GLN:NE2	2.00	0.77
1:A:408:ALA:HB2	1:A:418:GLU:HG3	1.66	0.77
1:I:233:GLN:NE2	1:I:497:ALA:HB2	2.00	0.77
1:K:480:HIS:H	1:K:480:HIS:CD2	1.99	0.77
2:P:508:PHE:CE1	2:P:562:GLY:HA2	2.19	0.77
2:B:132:THR:HG23	2:B:133:LYS:HD2	1.66	0.77
2:D:40:SER:HA	2:D:62:LEU:HD21	1.67	0.77
2:F:196:GLU:O	2:F:200:ILE:HG23	1.84	0.77
2:B:260:PHE:HE1	2:B:264:LYS:HD3	1.49	0.77
1:C:50:VAL:HG13	1:C:181:PHE:HA	1.67	0.77
2:D:185:PRO:HG2	2:D:188:LYS:HB2	1.67	0.77
1:E:387:LEU:HD23	1:E:455:ILE:HB	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:227:LEU:HD23	1:K:465:THR:HG21	1.66	0.77
2:N:47:LYS:HA	2:N:47:LYS:HE3	1.66	0.77
1:M:422:TYR:HD1	1:M:423:HIS:H	1.33	0.77
1:A:299:THR:HG21	1:A:305:TYR:CE1	2.20	0.76
2:B:196:GLU:O	2:B:200:ILE:HG23	1.84	0.76
1:K:374:GLU:OE1	3:K:509:PHE:HA	1.85	0.76
1:K:477:LEU:HA	1:K:482:VAL:HG23	1.66	0.76
1:O:224:LEU:HD22	2:P:401:ARG:HH12	1.50	0.76
2:F:125:VAL:HG23	2:F:285:GLU:HB3	1.66	0.76
1:K:282:PRO:HD2	2:L:437:VAL:HG13	1.65	0.76
2:N:420:GLN:HG3	2:N:448:GLN:NE2	1.99	0.76
2:D:40:SER:HB3	2:D:42:LYS:HG2	1.66	0.76
2:D:554:ARG:HG2	2:D:554:ARG:HH11	1.50	0.76
1:E:358:ARG:O	1:E:368:ALA:HB1	1.85	0.76
1:G:279:LEU:HD11	1:G:322:ASN:CB	2.16	0.76
1:M:265:PRO:HA	1:M:300:HIS:HE1	1.49	0.76
2:B:71:ARG:HH22	2:B:366:GLU:CD	1.93	0.76
2:F:426:LYS:HA	2:F:571:LYS:HE2	1.67	0.76
2:H:62:LEU:HD23	2:H:62:LEU:H	1.49	0.76
1:K:494:ARG:O	1:K:495:LEU:HG	1.85	0.76
1:M:279:LEU:CG	1:M:281:ASP:HB2	2.15	0.76
2:F:236:ILE:N	2:F:236:ILE:HD12	2.01	0.76
2:H:508:PHE:HE1	2:H:562:GLY:HA2	1.50	0.76
1:E:311:LYS:HD3	2:F:261:THR:HG21	1.68	0.76
2:N:508:PHE:HE1	2:N:562:GLY:HA2	1.51	0.76
1:C:77:GLU:HG2	1:C:106:LYS:HG2	1.68	0.76
1:C:387:LEU:HD23	1:C:455:ILE:HB	1.68	0.76
1:I:233:GLN:HE22	1:I:497:ALA:HB2	1.51	0.76
2:P:15:LEU:HD23	2:P:81:VAL:HG13	1.68	0.76
1:C:85:PRO:HB2	1:C:86:PRO:HD2	1.65	0.76
1:C:336:LEU:HB3	1:C:446:MET:HE1	1.66	0.76
2:H:187:ASN:C	2:H:188:LYS:HD2	2.11	0.76
1:M:324:LEU:HB3	1:M:357:PHE:HD1	1.50	0.76
1:E:267:GLN:NE2	2:F:156:LEU:HD21	2.01	0.76
1:G:281:ASP:HB3	1:G:282:PRO:CD	2.16	0.76
1:K:414:GLU:HB3	2:L:362:CYS:HB3	1.68	0.75
2:L:391:PHE:HD2	2:L:392:PRO:HD2	1.49	0.75
1:M:267:GLN:HA	2:N:152:ARG:HD2	1.66	0.75
2:D:236:ILE:HG22	2:D:237:ILE:HG13	1.67	0.75
2:F:260:PHE:HE1	2:F:264:LYS:HD3	1.51	0.75
2:J:341:ILE:HD11	2:J:348:GLU:HB2	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:196:MET:O	1:K:202:TRP:HD1	1.68	0.75
1:M:266:GLN:HB2	1:M:312:TYR:HE2	1.50	0.75
2:N:509:GLU:HA	1:O:210:TYR:OH	1.86	0.75
1:O:267:GLN:HE21	2:P:262:LYS:HE2	1.49	0.75
1:O:299:THR:HG21	1:O:305:TYR:CE1	2.21	0.75
1:E:265:PRO:HD3	1:E:310:TYR:CE1	2.21	0.75
2:J:185:PRO:HG2	2:J:188:LYS:HB2	1.69	0.75
2:P:125:VAL:HG23	2:P:285:GLU:HB3	1.67	0.75
1:I:361:THR:HG22	1:I:362:LEU:H	1.51	0.75
2:P:391:PHE:HD2	2:P:392:PRO:HD2	1.50	0.75
1:C:414:GLU:HB3	2:D:362:CYS:HB3	1.69	0.75
2:P:185:PRO:HG2	2:P:188:LYS:HB2	1.69	0.75
2:D:334:MET:O	2:D:335:TYR:HB2	1.85	0.75
2:H:185:PRO:HG2	2:H:188:LYS:HB2	1.68	0.75
1:I:414:GLU:HB3	2:J:362:CYS:HB3	1.69	0.75
1:I:468:LYS:HD3	1:I:496:ASP:HA	1.67	0.75
2:B:82:ARG:HG2	2:B:335:TYR:OH	1.86	0.75
1:C:50:VAL:HA	1:C:180:ALA:HB3	1.67	0.75
1:G:477:LEU:HA	1:G:482:VAL:HG23	1.68	0.75
1:K:299:THR:HG21	1:K:305:TYR:CE1	2.21	0.75
1:M:190:THR:HG21	1:M:208:LYS:HZ3	1.51	0.75
1:C:194:PRO:HA	1:C:197:ILE:HD13	1.69	0.75
1:G:259:PHE:HD2	1:G:264:GLN:HG2	1.52	0.75
2:H:236:ILE:HG22	2:H:237:ILE:HG13	1.67	0.75
2:F:15:LEU:HD23	2:F:81:VAL:HG13	1.69	0.75
2:J:554:ARG:HG2	2:J:554:ARG:HH11	1.50	0.75
1:M:414:GLU:HB3	2:N:362:CYS:HB3	1.68	0.75
2:P:426:LYS:HA	2:P:571:LYS:HE2	1.69	0.75
1:C:64:THR:HG22	1:C:65:ALA:N	2.02	0.74
1:G:259:PHE:HZ	1:G:276:THR:HG21	1.52	0.74
2:J:40:SER:O	2:J:44:ILE:HG13	1.85	0.74
2:J:512:HIS:ND1	1:K:216:GLY:N	2.33	0.74
1:K:263:PHE:CE2	1:K:441:GLU:HG3	2.21	0.74
1:M:199:SER:C	1:M:201:SER:H	1.95	0.74
1:A:494:ARG:HD3	2:D:399:LEU:HD21	1.66	0.74
1:G:192:LEU:HG	1:G:196:MET:HG2	1.69	0.74
2:P:132:THR:HG23	2:P:133:LYS:HD2	1.67	0.74
1:C:403:LEU:HD22	1:C:419:VAL:CG2	2.17	0.74
1:C:480:HIS:H	1:C:480:HIS:CD2	2.04	0.74
2:H:267:LEU:HD22	2:H:300:PRO:HB3	1.69	0.74
1:I:475:ARG:HB3	1:I:475:ARG:HH11	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:73:ASP:HA	2:P:273:MET:HE1	1.70	0.74
2:B:186:LEU:HD21	2:B:238:ASN:H	1.53	0.74
2:B:426:LYS:HA	2:B:571:LYS:HE2	1.70	0.74
1:C:472:ASN:HD22	1:C:473:ASN:H	1.32	0.74
1:C:474:ILE:CD1	1:C:477:LEU:HD11	2.16	0.74
1:E:370:PHE:HB2	1:E:462:GLU:OE2	1.87	0.74
1:C:177:LYS:HG2	1:C:181:PHE:CE1	2.23	0.74
1:E:367:LEU:HG	1:E:368:ALA:N	2.01	0.74
2:F:470:LEU:CB	2:F:471:PRO:HD3	2.18	0.74
2:L:40:SER:HA	2:L:62:LEU:HD21	1.67	0.74
2:L:169:GLY:HA3	2:L:226:SER:HB2	1.69	0.74
2:L:187:ASN:C	2:L:188:LYS:HD2	2.11	0.74
1:O:327:HIS:HA	1:O:356:VAL:HG11	1.69	0.74
1:A:282:PRO:HD2	2:B:437:VAL:HG13	1.70	0.74
2:D:42:LYS:HD3	2:D:59:ASP:OD2	1.86	0.74
2:D:125:VAL:HG23	2:D:285:GLU:HB3	1.70	0.74
1:G:336:LEU:HB3	1:G:446:MET:HE1	1.69	0.74
2:H:15:LEU:HD23	2:H:81:VAL:HG13	1.68	0.74
2:J:260:PHE:HE1	2:J:264:LYS:HD3	1.51	0.74
2:L:420:GLN:HG3	2:L:448:GLN:NE2	2.03	0.74
1:O:336:LEU:HB3	1:O:446:MET:HE1	1.69	0.74
1:E:235:ARG:NH2	2:F:390:GLN:OE1	2.21	0.74
2:H:236:ILE:HD12	2:H:236:ILE:N	2.03	0.74
1:A:492:LEU:O	1:A:494:ARG:N	2.20	0.74
1:E:263:PHE:CE2	1:E:441:GLU:HG3	2.22	0.74
2:D:236:ILE:N	2:D:236:ILE:HD12	2.03	0.73
2:P:169:GLY:HA3	2:P:226:SER:HB2	1.70	0.73
2:P:236:ILE:HG22	2:P:237:ILE:HG13	1.69	0.73
1:G:272:ASP:O	1:G:274:HIS:N	2.21	0.73
2:L:321:ARG:HD3	2:P:321:ARG:HD3	1.68	0.73
1:O:402:GLN:O	1:O:421:SER:HA	1.88	0.73
2:P:236:ILE:HD12	2:P:236:ILE:N	2.02	0.73
2:D:517:ARG:HG3	2:D:521:LEU:CD2	2.19	0.73
1:K:336:LEU:HB3	1:K:446:MET:HE1	1.69	0.73
2:L:67:VAL:HG13	2:L:68:PRO:HD2	1.70	0.73
2:P:341:ILE:HD11	2:P:348:GLU:HB2	1.68	0.73
2:B:125:VAL:HG23	2:B:285:GLU:HB3	1.70	0.73
1:E:283:ALA:O	1:E:286:LEU:HD21	1.89	0.73
2:F:508:PHE:CE1	2:F:562:GLY:HA2	2.23	0.73
2:H:508:PHE:CE1	2:H:562:GLY:HA2	2.24	0.73
2:N:513:GLY:HA3	1:O:217:VAL:O	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:258:ASN:HD22	1:A:330:SER:HB3	1.53	0.73
1:C:37:VAL:HG13	1:C:38:VAL:N	2.04	0.73
1:O:468:LYS:HE3	1:O:495:LEU:CB	2.18	0.73
2:B:169:GLY:HA3	2:B:226:SER:HB2	1.69	0.73
2:B:554:ARG:HG2	2:B:554:ARG:HH11	1.52	0.73
1:C:262:LEU:HD21	1:C:333:ALA:HB2	1.69	0.73
2:D:39:THR:HB	2:D:43:GLU:HG3	1.69	0.73
2:D:169:GLY:HA3	2:D:226:SER:HB2	1.69	0.73
1:E:367:LEU:HD13	2:F:415:PHE:CE2	2.24	0.73
2:J:480:ILE:HG12	2:J:496:HIS:CD2	2.24	0.73
2:L:125:VAL:HG23	2:L:285:GLU:HB3	1.69	0.73
2:L:260:PHE:HE1	2:L:264:LYS:HD3	1.54	0.73
1:A:414:GLU:HB3	2:B:362:CYS:HB3	1.69	0.73
2:F:71:ARG:HG3	2:F:355:ARG:NH1	2.04	0.73
2:F:234:PRO:CB	2:F:235:PRO:HD3	2.15	0.73
1:K:227:LEU:CD2	1:K:465:THR:HG21	2.19	0.73
1:C:471:ILE:CG2	1:C:472:ASN:H	2.01	0.73
2:F:420:GLN:HG3	2:F:448:GLN:NE2	2.03	0.73
1:G:271:ARG:HH11	1:G:271:ARG:HG3	1.53	0.73
1:G:414:GLU:HB3	2:H:362:CYS:HB3	1.69	0.73
2:N:528:GLU:HG3	2:N:534:VAL:HG13	1.69	0.73
2:P:420:GLN:HG3	2:P:448:GLN:NE2	2.04	0.73
1:C:77:GLU:HG2	1:C:106:LYS:CG	2.18	0.72
1:G:226:PRO:HB3	1:G:469:TYR:HE1	1.52	0.72
2:J:169:GLY:HA3	2:J:226:SER:HB2	1.70	0.72
2:J:186:LEU:HD22	2:J:238:ASN:O	1.89	0.72
2:J:236:ILE:HD12	2:J:236:ILE:N	2.04	0.72
1:O:281:ASP:CB	1:O:282:PRO:HD3	2.18	0.72
2:J:62:LEU:HD23	2:J:62:LEU:H	1.54	0.72
2:L:554:ARG:HG2	2:L:554:ARG:HH11	1.53	0.72
2:N:534:VAL:HG22	2:N:552:PHE:HB2	1.71	0.72
2:P:260:PHE:HE1	2:P:264:LYS:HD3	1.52	0.72
2:N:126:LEU:HD23	2:N:126:LEU:H	1.54	0.72
2:N:537:ALA:HB2	1:O:212:PHE:CD1	2.24	0.72
2:B:399:LEU:HD11	1:C:494:ARG:HB2	1.70	0.72
1:C:229:LYS:HD2	1:C:494:ARG:CZ	2.19	0.72
1:C:325:ARG:HH21	1:C:325:ARG:HG2	1.53	0.72
1:E:406:LYS:HB2	2:F:29:PHE:CZ	2.25	0.72
1:E:414:GLU:HB3	2:F:362:CYS:HB3	1.70	0.72
1:G:233:GLN:HE22	1:G:495:LEU:HD13	1.53	0.72
1:G:329:THR:OG1	3:G:509:PHE:HB3	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:82:ARG:HG2	2:J:335:TYR:OH	1.89	0.72
2:L:71:ARG:HG3	2:L:355:ARG:CZ	2.18	0.72
2:L:326:ASN:O	2:L:330:LEU:HD23	1.90	0.72
2:P:71:ARG:HH22	2:P:366:GLU:CD	1.98	0.72
2:P:554:ARG:HH11	2:P:554:ARG:HG2	1.53	0.72
2:D:55:ALA:HB1	2:D:59:ASP:HB3	1.71	0.72
2:F:554:ARG:HG2	2:F:554:ARG:HH11	1.53	0.72
1:C:114:ARG:HG2	1:C:114:ARG:NH1	2.00	0.72
1:I:325:ARG:HG2	1:I:325:ARG:HH21	1.54	0.72
2:J:260:PHE:CE1	2:J:264:LYS:HD3	2.24	0.72
2:L:73:ASP:HA	2:L:273:MET:HE1	1.71	0.72
2:L:508:PHE:HE1	2:L:562:GLY:HA2	1.52	0.72
1:M:355:ARG:HA	1:M:370:PHE:O	1.89	0.72
2:B:15:LEU:HD23	2:B:81:VAL:HG13	1.70	0.72
2:L:341:ILE:HD11	2:L:348:GLU:HB2	1.71	0.72
1:A:413:THR:HG21	3:A:509:PHE:HZ	1.52	0.72
2:B:236:ILE:HD12	2:B:236:ILE:N	2.04	0.72
2:D:271:VAL:HG22	2:D:284:VAL:HG22	1.71	0.72
2:J:236:ILE:HG22	2:J:237:ILE:HG13	1.70	0.72
1:K:471:ILE:H	1:K:471:ILE:HD12	1.53	0.72
2:B:186:LEU:HD22	2:B:238:ASN:O	1.90	0.72
1:C:263:PHE:CE2	1:C:441:GLU:HG3	2.25	0.72
2:D:508:PHE:CE1	2:D:562:GLY:HA2	2.25	0.72
1:E:279:LEU:HD11	1:E:322:ASN:HB2	1.70	0.72
2:F:73:ASP:HA	2:F:273:MET:HE1	1.70	0.72
2:J:420:GLN:HG3	2:J:448:GLN:NE2	2.04	0.72
2:J:508:PHE:HE1	2:J:562:GLY:HA2	1.54	0.72
2:N:122:VAL:HG21	2:N:299:PHE:CD2	2.24	0.72
2:B:480:ILE:HG12	2:B:496:HIS:CD2	2.25	0.72
1:I:299:THR:HG21	1:I:305:TYR:CE1	2.24	0.72
1:I:425:GLY:O	1:I:426:LEU:HB2	1.90	0.72
2:N:185:PRO:HG2	2:N:188:LYS:HB2	1.71	0.72
2:N:310:ARG:HH22	2:N:312:ASP:CB	2.03	0.72
2:J:73:ASP:HA	2:J:273:MET:HE1	1.70	0.71
1:M:197:ILE:HG23	2:P:566:PRO:HB3	1.72	0.71
2:B:508:PHE:HE2	1:C:210:TYR:CD2	2.08	0.71
1:C:472:ASN:ND2	1:C:473:ASN:H	1.88	0.71
2:D:82:ARG:HG2	2:D:335:TYR:OH	1.89	0.71
2:F:169:GLY:HA3	2:F:226:SER:HB2	1.71	0.71
1:K:287:GLN:HG3	1:K:288:LEU:H	1.55	0.71
1:K:466:MET:SD	1:K:474:ILE:HG13	2.30	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:470:LEU:CB	2:L:471:PRO:HD3	2.20	0.71
1:M:263:PHE:CE2	1:M:441:GLU:HG3	2.26	0.71
2:N:169:GLY:HA3	2:N:226:SER:HB2	1.71	0.71
1:A:189:GLU:H	1:A:207:PHE:HB3	1.55	0.71
1:E:360:GLU:HG3	1:E:361:THR:H	1.55	0.71
2:F:387:ILE:HD12	1:G:241:MET:HG2	1.70	0.71
1:I:402:GLN:O	1:I:421:SER:HA	1.91	0.71
1:M:359:ASN:ND2	2:N:443:LYS:HE2	2.05	0.71
2:N:308:MET:SD	2:N:346:GLN:HG2	2.30	0.71
1:C:42:LYS:HA	1:C:42:LYS:HE2	1.73	0.71
2:J:267:LEU:HD22	2:J:300:PRO:HB3	1.71	0.71
2:B:271:VAL:HG22	2:B:284:VAL:HG22	1.72	0.71
1:C:299:THR:HG21	1:C:305:TYR:CE1	2.25	0.71
2:D:71:ARG:HH22	2:D:366:GLU:CD	1.98	0.71
2:F:260:PHE:CE1	2:F:264:LYS:HD3	2.26	0.71
1:G:363:ASP:CG	1:G:364:ALA:H	1.99	0.71
2:H:169:GLY:HA3	2:H:226:SER:HB2	1.70	0.71
2:N:267:LEU:HD22	2:N:300:PRO:HB3	1.73	0.71
1:A:492:LEU:C	1:A:494:ARG:H	1.98	0.71
2:B:415:PHE:O	2:B:451:ARG:HD3	1.90	0.71
2:H:186:LEU:HD22	2:H:238:ASN:O	1.91	0.71
2:H:326:ASN:O	2:H:330:LEU:HD23	1.89	0.71
2:L:185:PRO:HG2	2:L:188:LYS:HB2	1.72	0.71
2:N:186:LEU:HD22	2:N:238:ASN:O	1.91	0.71
2:N:387:ILE:HD12	1:O:241:MET:HG2	1.71	0.71
2:D:73:ASP:HA	2:D:273:MET:HE1	1.71	0.71
1:E:196:MET:HE3	1:E:202:TRP:CB	2.21	0.71
2:F:182:LYS:HD3	1:K:472:ASN:CG	2.16	0.71
1:I:263:PHE:CD2	1:I:441:GLU:HG3	2.26	0.71
2:J:132:THR:HG23	2:J:133:LYS:HD2	1.73	0.71
1:O:474:ILE:HD12	1:O:474:ILE:H	1.53	0.71
2:D:426:LYS:HA	2:D:571:LYS:HE2	1.71	0.71
2:B:470:LEU:CB	2:B:471:PRO:HD3	2.20	0.71
2:D:177:ARG:HG2	2:D:178:PRO:HD2	1.73	0.71
2:L:186:LEU:HD21	2:L:238:ASN:H	1.54	0.71
2:L:186:LEU:HD22	2:L:238:ASN:O	1.91	0.71
1:O:208:LYS:HB2	1:O:209:PRO:HD2	1.73	0.71
1:O:414:GLU:HB3	2:P:362:CYS:HB3	1.73	0.71
2:P:480:ILE:HG12	2:P:496:HIS:CD2	2.26	0.71
1:C:495:LEU:O	1:C:499:PRO:HD2	1.90	0.70
1:G:365:THR:O	1:G:367:LEU:HD22	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:387:ILE:HG13	1:O:393:GLU:HG2	1.73	0.70
1:A:267:GLN:HB2	2:B:152:ARG:HD2	1.74	0.70
2:L:517:ARG:HG3	2:L:521:LEU:CD2	2.21	0.70
1:M:473:ASN:HB2	1:M:476:GLU:HB2	1.73	0.70
2:B:67:VAL:HG13	2:B:68:PRO:HD2	1.73	0.70
2:D:480:ILE:HG12	2:D:496:HIS:CD2	2.25	0.70
1:E:199:SER:O	1:E:201:SER:N	2.24	0.70
1:O:365:THR:HG21	1:O:474:ILE:HD12	1.72	0.70
2:P:126:LEU:H	2:P:126:LEU:HD23	1.56	0.70
1:A:414:GLU:HG3	1:A:437:VAL:HB	1.73	0.70
2:L:177:ARG:HG2	2:L:178:PRO:HD2	1.73	0.70
2:N:186:LEU:HD21	2:N:238:ASN:H	1.54	0.70
2:N:554:ARG:HG2	2:N:554:ARG:HH11	1.57	0.70
1:O:286:LEU:HD12	2:P:487:THR:O	1.90	0.70
2:B:234:PRO:CB	2:B:235:PRO:HD3	2.20	0.70
1:E:467:ILE:C	1:E:469:TYR:H	1.96	0.70
2:F:391:PHE:CD2	2:F:392:PRO:HD2	2.22	0.70
1:G:281:ASP:CB	1:G:282:PRO:HD3	2.22	0.70
1:G:299:THR:HG21	1:G:305:TYR:CE1	2.26	0.70
1:I:406:LYS:HD2	2:J:29:PHE:CE1	2.26	0.70
2:L:81:VAL:O	2:L:85:GLN:HB2	1.92	0.70
2:P:81:VAL:O	2:P:85:GLN:HB2	1.92	0.70
2:P:515:LEU:CD1	2:P:551:ILE:HD12	2.21	0.70
2:B:381:LEU:CD2	2:B:382:PRO:HD2	2.20	0.70
1:C:21:LEU:HD12	1:C:175:VAL:CG2	2.22	0.70
2:F:503:ASN:ND2	2:F:504:LYS:H	1.90	0.70
2:J:122:VAL:HG21	2:J:299:PHE:CD2	2.26	0.70
2:J:454:LEU:HD21	2:J:496:HIS:HB2	1.73	0.70
2:N:326:ASN:O	2:N:330:LEU:HD23	1.92	0.70
1:O:266:GLN:HA	1:O:271:ARG:NH1	2.05	0.70
1:O:414:GLU:HG3	1:O:437:VAL:HB	1.74	0.70
2:F:186:LEU:HD21	2:F:238:ASN:H	1.56	0.70
2:F:341:ILE:HD11	2:F:348:GLU:HB2	1.73	0.70
2:F:480:ILE:HG12	2:F:496:HIS:CD2	2.27	0.70
2:D:515:LEU:CD1	2:D:551:ILE:HD12	2.22	0.70
1:E:414:GLU:HG3	1:E:437:VAL:HB	1.74	0.70
2:F:566:PRO:HA	1:G:197:ILE:HD13	1.73	0.70
1:G:417:MET:HB3	2:H:374:TYR:HE1	1.57	0.70
1:G:477:LEU:HD23	1:G:486:MET:SD	2.31	0.70
2:D:67:VAL:HG13	2:D:68:PRO:HD2	1.72	0.70
2:D:326:ASN:O	2:D:330:LEU:HD23	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:576:MET:HB3	2:F:577:PRO:HD2	1.74	0.70
2:N:381:LEU:CD2	2:N:382:PRO:HD2	2.17	0.70
2:B:517:ARG:HG3	2:B:521:LEU:CD2	2.22	0.69
2:F:185:PRO:HG2	2:F:188:LYS:HB2	1.72	0.69
1:I:477:LEU:HD12	1:I:478:VAL:HG23	1.73	0.69
2:L:15:LEU:HD23	2:L:81:VAL:HG13	1.72	0.69
1:M:224:LEU:HD22	2:N:401:ARG:HH12	1.56	0.69
1:E:466:MET:HB2	1:E:467:ILE:HD12	1.74	0.69
1:I:218:LEU:HB2	1:I:219:PRO:HD2	1.74	0.69
2:B:525:PRO:O	2:B:532:GLY:HA3	1.93	0.69
2:D:267:LEU:HD22	2:D:300:PRO:HB3	1.73	0.69
2:H:101:PRO:HB3	2:H:285:GLU:CD	2.17	0.69
2:J:101:PRO:HG2	2:J:105:ILE:HD13	1.74	0.69
2:J:381:LEU:CD2	2:J:382:PRO:HD2	2.16	0.69
1:K:403:LEU:HD22	1:K:419:VAL:HG12	1.74	0.69
2:L:269:ILE:O	2:L:273:MET:HB2	1.92	0.69
2:L:508:PHE:CE1	2:L:562:GLY:HA2	2.27	0.69
2:N:211:LEU:CG	2:N:212:HIS:H	2.05	0.69
2:N:234:PRO:CB	2:N:235:PRO:HD3	2.19	0.69
1:O:288:LEU:HD22	1:O:288:LEU:H	1.57	0.69
1:O:465:THR:O	1:O:469:TYR:HB2	1.92	0.69
1:G:263:PHE:CE2	1:G:441:GLU:HG3	2.28	0.69
1:G:271:ARG:O	1:G:271:ARG:HD3	1.92	0.69
2:J:470:LEU:CB	2:J:471:PRO:HD3	2.21	0.69
1:O:193:SER:C	1:O:197:ILE:HG12	2.17	0.69
2:P:511:ILE:HG22	2:P:561:LEU:HD21	1.74	0.69
1:C:63:LEU:HD11	1:C:140:LEU:HG	1.73	0.69
2:H:525:PRO:O	2:H:532:GLY:HA3	1.93	0.69
1:K:281:ASP:HB3	1:K:282:PRO:CD	2.21	0.69
2:B:42:LYS:H	2:B:58:SER:HB3	1.56	0.69
1:E:408:ALA:HB2	1:E:418:GLU:HG3	1.73	0.69
2:F:517:ARG:HG3	2:F:521:LEU:CD2	2.22	0.69
1:C:27:ALA:HB1	1:C:33:GLU:O	1.92	0.69
1:K:233:GLN:NE2	1:K:495:LEU:HG	2.07	0.69
1:O:288:LEU:HD23	1:O:293:VAL:HG21	1.74	0.69
1:O:365:THR:HG23	1:O:475:ARG:HB2	1.75	0.69
2:P:267:LEU:HD22	2:P:300:PRO:HB3	1.72	0.69
1:A:373:ILE:HG12	1:A:459:LEU:HD12	1.75	0.69
1:A:391:LEU:HD13	1:A:419:VAL:HG11	1.75	0.69
1:A:473:ASN:O	1:A:476:GLU:HB2	1.92	0.69
2:D:186:LEU:HD22	2:D:238:ASN:O	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:260:PHE:HE1	2:D:264:LYS:HD3	1.55	0.69
2:D:569:ILE:HD12	2:D:574:LEU:HB2	1.75	0.69
2:F:42:LYS:N	2:F:58:SER:HB2	2.07	0.69
2:F:70:ASN:HD22	2:F:71:ARG:NH1	1.91	0.69
2:H:67:VAL:HG13	2:H:68:PRO:HD2	1.73	0.69
2:H:70:ASN:HD22	2:H:71:ARG:NH1	1.90	0.69
2:J:564:LEU:HD12	2:J:578:CYS:HB3	1.74	0.69
1:K:211:ASN:HB2	1:K:213:LEU:CD1	2.22	0.69
1:K:477:LEU:HD23	1:K:486:MET:SD	2.33	0.69
2:L:236:ILE:N	2:L:236:ILE:HD12	2.07	0.69
1:O:361:THR:HB	1:O:366:HIS:HB3	1.75	0.69
2:P:186:LEU:HD21	2:P:238:ASN:H	1.58	0.69
1:E:269:PRO:HB3	2:F:149:ASN:ND2	2.08	0.69
1:E:281:ASP:CB	2:F:438:HIS:H	2.05	0.69
2:F:81:VAL:O	2:F:85:GLN:HB2	1.93	0.69
1:G:461:LEU:O	1:G:465:THR:HG23	1.92	0.69
1:I:281:ASP:HB3	1:I:282:PRO:CD	2.23	0.69
2:J:517:ARG:HG3	2:J:521:LEU:CD2	2.23	0.69
2:L:271:VAL:HG22	2:L:284:VAL:HG22	1.74	0.69
1:C:115:VAL:HG12	1:C:116:ASP:N	2.05	0.69
2:F:454:LEU:HD21	2:F:496:HIS:HB2	1.74	0.69
2:N:71:ARG:HG3	2:N:355:ARG:NH1	2.08	0.69
2:P:82:ARG:HG2	2:P:335:TYR:OH	1.93	0.69
2:F:269:ILE:O	2:F:273:MET:HB2	1.93	0.68
2:H:269:ILE:O	2:H:273:MET:HB2	1.92	0.68
2:J:508:PHE:CE1	2:J:562:GLY:HA2	2.28	0.68
1:K:281:ASP:C	1:K:283:ALA:H	2.01	0.68
1:M:286:LEU:HB2	1:M:320:ARG:HH22	1.56	0.68
1:M:286:LEU:HD12	1:M:320:ARG:HH12	1.58	0.68
2:N:508:PHE:CE1	2:N:562:GLY:HA2	2.28	0.68
2:N:517:ARG:HG3	2:N:521:LEU:CD2	2.23	0.68
1:E:283:ALA:HA	1:E:322:ASN:HB2	1.73	0.68
2:F:534:VAL:CG2	2:F:552:PHE:HB2	2.23	0.68
2:H:81:VAL:O	2:H:85:GLN:HB2	1.92	0.68
2:H:177:ARG:HG2	2:H:178:PRO:HD2	1.76	0.68
2:L:267:LEU:HD22	2:L:300:PRO:HB3	1.74	0.68
2:L:507:GLY:O	2:L:510:ILE:HG22	1.94	0.68
2:L:565:HIS:ND1	2:L:566:PRO:HD2	2.07	0.68
2:N:260:PHE:HE1	2:N:264:LYS:HD3	1.56	0.68
2:N:308:MET:SD	2:N:346:GLN:CB	2.80	0.68
1:O:263:PHE:CD2	1:O:441:GLU:HG3	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:470:LEU:CB	2:D:471:PRO:HD3	2.22	0.68
1:E:466:MET:HE2	1:E:466:MET:HA	1.74	0.68
2:H:260:PHE:HE1	2:H:264:LYS:HD3	1.56	0.68
2:N:70:ASN:HD22	2:N:71:ARG:NH1	1.91	0.68
2:N:537:ALA:HB2	1:O:212:PHE:HD1	1.56	0.68
1:O:479:GLY:HA3	2:P:415:PHE:HE1	1.58	0.68
2:B:71:ARG:CG	2:B:355:ARG:NH1	2.55	0.68
2:B:326:ASN:O	2:B:330:LEU:HD23	1.92	0.68
2:J:308:MET:SD	2:J:346:GLN:HB3	2.34	0.68
1:O:259:PHE:HB3	1:O:271:ARG:HH21	1.57	0.68
2:P:101:PRO:HG2	2:P:105:ILE:HD13	1.73	0.68
2:P:470:LEU:CB	2:P:471:PRO:HD3	2.22	0.68
2:B:81:VAL:O	2:B:85:GLN:HB2	1.94	0.68
1:C:414:GLU:HG3	1:C:437:VAL:HB	1.75	0.68
2:P:33:LEU:HD22	2:P:67:VAL:HG22	1.74	0.68
1:A:494:ARG:C	1:A:496:ASP:H	2.00	0.68
1:E:325:ARG:HG2	1:E:325:ARG:HH21	1.59	0.68
2:F:470:LEU:HB3	2:F:471:PRO:HD3	1.73	0.68
2:H:341:ILE:HD11	2:H:348:GLU:HB2	1.74	0.68
2:J:81:VAL:O	2:J:85:GLN:HB2	1.94	0.68
2:J:186:LEU:HD21	2:J:238:ASN:H	1.59	0.68
1:K:195:GLU:H	1:K:195:GLU:CD	2.00	0.68
2:L:341:ILE:HG22	2:L:341:ILE:O	1.93	0.68
2:L:470:LEU:HB3	2:L:471:PRO:HD3	1.74	0.68
1:O:477:LEU:HA	1:O:482:VAL:CG2	2.22	0.68
2:D:101:PRO:HG2	2:D:105:ILE:HD13	1.76	0.68
1:E:367:LEU:HD22	2:F:415:PHE:HE2	1.58	0.68
2:N:227:ASN:HB2	2:N:229:VAL:HG23	1.76	0.68
2:N:528:GLU:H	2:N:534:VAL:CG1	2.07	0.68
1:A:325:ARG:HG2	1:A:325:ARG:HH21	1.57	0.68
2:B:269:ILE:O	2:B:273:MET:HB2	1.94	0.68
1:C:21:LEU:HD12	1:C:175:VAL:HG22	1.75	0.68
2:D:197:LEU:O	2:D:200:ILE:HG13	1.94	0.68
2:D:470:LEU:HB3	2:D:471:PRO:HD3	1.74	0.68
1:E:265:PRO:HA	1:E:300:HIS:HE1	1.56	0.68
2:J:188:LYS:HD2	2:J:188:LYS:N	2.08	0.68
2:P:271:VAL:HG22	2:P:284:VAL:HG22	1.76	0.68
1:C:164:LEU:O	1:C:165:LEU:HB3	1.92	0.68
2:F:391:PHE:HD2	2:F:392:PRO:CD	2.06	0.68
2:H:33:LEU:HD22	2:H:67:VAL:HG22	1.75	0.68
1:I:449:PRO:HG2	1:I:452:VAL:CG2	2.24	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:41:GLU:HB2	2:L:58:SER:OG	1.93	0.68
1:M:190:THR:HG21	1:M:208:LYS:NZ	2.08	0.68
1:M:222:GLY:HA3	2:N:405:ALA:O	1.94	0.68
1:A:263:PHE:CE2	1:A:441:GLU:HG3	2.29	0.68
2:D:565:HIS:O	2:D:568:VAL:HG22	1.94	0.68
1:E:256:PHE:HA	1:E:260:ASP:HB2	1.76	0.68
2:F:166:THR:HG22	2:L:464:ALA:O	1.94	0.68
2:F:186:LEU:HD22	2:F:238:ASN:O	1.93	0.68
1:M:262:LEU:HD21	1:M:333:ALA:HB2	1.76	0.68
1:M:362:LEU:HD21	2:N:447:PHE:HZ	1.57	0.68
2:P:517:ARG:HG3	2:P:521:LEU:CD2	2.24	0.68
1:C:80:VAL:HG23	1:C:94:LEU:HD11	1.74	0.67
2:H:132:THR:HG23	2:H:133:LYS:HD2	1.75	0.67
2:H:211:LEU:CG	2:H:212:HIS:H	2.08	0.67
1:M:449:PRO:HG2	1:M:452:VAL:CG2	2.23	0.67
2:N:507:GLY:O	2:N:510:ILE:HG22	1.94	0.67
1:C:56:ARG:HB2	1:C:172:THR:HG23	1.75	0.67
2:D:81:VAL:O	2:D:85:GLN:HB2	1.94	0.67
1:G:279:LEU:HD11	1:G:322:ASN:HB3	1.75	0.67
2:H:455:LEU:HB3	2:H:456:PRO:HD3	1.76	0.67
2:H:470:LEU:CB	2:H:471:PRO:HD3	2.24	0.67
1:I:466:MET:SD	1:I:474:ILE:HG12	2.34	0.67
1:K:282:PRO:CD	2:L:437:VAL:HG13	2.24	0.67
1:K:414:GLU:HG3	1:K:437:VAL:HB	1.76	0.67
2:L:38:ILE:HG22	2:L:61:VAL:HG11	1.76	0.67
2:N:81:VAL:O	2:N:85:GLN:HB2	1.94	0.67
2:P:525:PRO:O	2:P:532:GLY:HA3	1.94	0.67
2:B:70:ASN:HD22	2:B:71:ARG:NH1	1.92	0.67
2:B:267:LEU:HD22	2:B:300:PRO:HB3	1.77	0.67
2:B:454:LEU:HD21	2:B:496:HIS:HB2	1.77	0.67
1:E:258:ASN:HD22	1:E:330:SER:HB3	1.57	0.67
1:M:258:ASN:ND2	1:M:327:HIS:CE1	2.63	0.67
1:M:263:PHE:CE1	1:M:441:GLU:HB2	2.30	0.67
1:O:484:LEU:HG	2:P:465:ASN:ND2	2.10	0.67
1:A:214:ALA:O	1:A:216:GLY:N	2.26	0.67
1:C:38:VAL:HG13	1:C:173:TYR:HE2	1.58	0.67
2:D:8:ARG:CZ	2:D:61:VAL:HG11	2.24	0.67
2:D:115:ALA:HA	2:D:119:PRO:HA	1.77	0.67
1:E:484:LEU:HG	2:F:465:ASN:ND2	2.09	0.67
2:J:326:ASN:O	2:J:330:LEU:HD23	1.93	0.67
2:L:290:VAL:HG22	2:L:296:SER:OG	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:477:LEU:HD12	1:M:478:VAL:HG23	1.76	0.67
2:N:415:PHE:O	2:N:451:ARG:HD3	1.94	0.67
1:O:373:ILE:CD1	1:O:459:LEU:HD11	2.25	0.67
2:B:244:ILE:H	2:B:244:ILE:HD12	1.57	0.67
2:D:126:LEU:HD23	2:D:126:LEU:H	1.59	0.67
2:D:232:SER:HB2	2:D:238:ASN:HA	1.77	0.67
2:H:260:PHE:CE1	2:H:264:LYS:HD3	2.30	0.67
1:I:494:ARG:O	1:I:498:GLU:HB2	1.93	0.67
2:L:305:ARG:NH1	2:L:358:ILE:O	2.27	0.67
1:M:194:PRO:C	1:M:196:MET:H	2.02	0.67
1:M:199:SER:O	1:M:201:SER:N	2.28	0.67
2:P:115:ALA:HA	2:P:119:PRO:HA	1.77	0.67
1:A:212:PHE:CE1	2:D:549:ALA:HB2	2.28	0.67
2:D:211:LEU:CG	2:D:212:HIS:H	2.07	0.67
2:D:503:ASN:ND2	2:D:504:LYS:H	1.92	0.67
1:E:362:LEU:HD23	1:E:362:LEU:O	1.93	0.67
2:F:101:PRO:HG2	2:F:105:ILE:HD13	1.77	0.67
2:F:267:LEU:HD22	2:F:300:PRO:HB3	1.75	0.67
2:H:420:GLN:HE21	2:H:431:ILE:HG12	1.60	0.67
1:I:414:GLU:HG3	1:I:437:VAL:HB	1.77	0.67
2:L:260:PHE:CE1	2:L:264:LYS:HD3	2.28	0.67
2:P:260:PHE:CE1	2:P:264:LYS:HD3	2.29	0.67
2:B:73:ASP:HA	2:B:273:MET:HE1	1.76	0.67
2:J:470:LEU:HB3	2:J:471:PRO:HD3	1.77	0.67
1:C:153:GLU:O	1:C:157:SER:HB2	1.94	0.67
2:J:569:ILE:HD12	2:J:574:LEU:HB2	1.76	0.67
2:F:132:THR:HG23	2:F:133:LYS:HD2	1.76	0.67
1:G:362:LEU:HD22	1:G:475:ARG:NH2	2.09	0.67
2:J:234:PRO:CB	2:J:235:PRO:HD3	2.23	0.67
2:J:381:LEU:HD23	2:J:382:PRO:CD	2.16	0.67
2:N:101:PRO:HB3	2:N:285:GLU:CD	2.19	0.67
1:O:192:LEU:HD12	1:O:207:PHE:CZ	2.29	0.67
2:P:186:LEU:HD22	2:P:238:ASN:O	1.94	0.67
1:E:191:GLU:HG2	2:H:547:ARG:HE	1.60	0.67
1:E:477:LEU:HD12	1:E:478:VAL:HG23	1.77	0.67
2:F:507:GLY:O	2:F:510:ILE:HG22	1.94	0.67
2:H:186:LEU:HD21	2:H:238:ASN:H	1.59	0.67
2:H:517:ARG:HG3	2:H:521:LEU:CD2	2.25	0.67
2:J:515:LEU:CD1	2:J:551:ILE:HD12	2.25	0.67
1:M:283:ALA:HA	1:M:322:ASN:CG	2.20	0.67
1:M:311:LYS:HD3	2:N:261:THR:HG21	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:423:HIS:HD2	1:M:426:LEU:HD23	1.58	0.67
1:O:188:GLN:CB	1:O:206:PRO:HG2	2.19	0.67
1:O:479:GLY:HA3	2:P:415:PHE:CE1	2.30	0.67
1:C:79:ARG:HG2	1:C:79:ARG:HH11	1.59	0.66
2:F:415:PHE:O	2:F:451:ARG:HD3	1.95	0.66
1:G:192:LEU:HD23	1:G:193:SER:H	1.60	0.66
1:G:230:VAL:HG11	1:G:465:THR:HG22	1.77	0.66
1:I:256:PHE:HA	1:I:260:ASP:OD1	1.95	0.66
2:H:515:LEU:CD1	2:H:551:ILE:HD12	2.25	0.66
2:H:576:MET:HB3	2:H:577:PRO:HD2	1.77	0.66
1:M:484:LEU:HG	2:N:465:ASN:ND2	2.10	0.66
2:N:115:ALA:HA	2:N:119:PRO:HA	1.75	0.66
2:P:67:VAL:HG13	2:P:68:PRO:HD2	1.77	0.66
1:C:6:VAL:CG1	1:C:32:MET:HE1	2.25	0.66
2:D:232:SER:CB	2:D:238:ASN:HA	2.25	0.66
1:G:480:HIS:H	1:G:480:HIS:CD2	2.13	0.66
2:J:126:LEU:HD23	2:J:126:LEU:H	1.60	0.66
1:M:263:PHE:CD2	1:M:441:GLU:HG3	2.30	0.66
1:M:266:GLN:OE1	1:M:314:TRP:HA	1.94	0.66
1:A:479:GLY:HA3	2:B:415:PHE:CE1	2.31	0.66
1:C:471:ILE:CG2	1:C:472:ASN:N	2.59	0.66
2:D:186:LEU:HD21	2:D:238:ASN:H	1.60	0.66
2:D:260:PHE:CE1	2:D:264:LYS:HD3	2.29	0.66
2:L:232:SER:HB2	2:L:238:ASN:HA	1.78	0.66
2:N:576:MET:HB3	2:N:577:PRO:HD2	1.78	0.66
2:D:177:ARG:CG	2:D:178:PRO:HD2	2.26	0.66
2:F:207:LEU:O	2:F:211:LEU:HD22	1.96	0.66
1:E:362:LEU:CD2	1:E:475:ARG:HH22	2.09	0.66
1:E:440:PRO:HG3	2:F:360:HIS:NE2	2.11	0.66
1:G:281:ASP:O	1:G:283:ALA:N	2.28	0.66
2:J:227:ASN:HB2	2:J:229:VAL:HG23	1.76	0.66
1:K:211:ASN:HD22	1:K:211:ASN:N	1.93	0.66
2:N:564:LEU:HD12	2:N:578:CYS:HB3	1.78	0.66
1:O:471:ILE:CG2	1:O:472:ASN:N	2.58	0.66
2:P:62:LEU:N	2:P:62:LEU:HD23	2.11	0.66
2:B:122:VAL:HG21	2:B:299:PHE:CD2	2.31	0.66
1:E:402:GLN:O	1:E:421:SER:HA	1.95	0.66
2:N:73:ASP:HA	2:N:273:MET:HE1	1.76	0.66
2:N:186:LEU:HD23	2:N:237:ILE:HG22	1.77	0.66
1:O:325:ARG:HG2	1:O:325:ARG:HH21	1.60	0.66
1:O:472:ASN:C	1:O:472:ASN:HD22	2.01	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:420:GLN:HE21	2:P:431:ILE:HG12	1.60	0.66
1:C:1:MET:HA	1:C:5:GLN:HB2	1.77	0.66
2:F:470:LEU:CB	2:F:471:PRO:CD	2.73	0.66
2:H:271:VAL:HG22	2:H:284:VAL:HG22	1.76	0.66
2:J:415:PHE:O	2:J:451:ARG:HD3	1.95	0.66
1:M:325:ARG:HG2	1:M:325:ARG:HH21	1.61	0.66
2:N:40:SER:O	2:N:44:ILE:HG13	1.96	0.66
2:N:44:ILE:C	2:N:46:SER:H	2.04	0.66
2:B:444:THR:HG22	2:B:447:PHE:CD1	2.31	0.66
1:G:414:GLU:HG3	1:G:437:VAL:HB	1.78	0.66
1:A:205:ARG:N	1:A:206:PRO:CD	2.58	0.66
2:B:211:LEU:CG	2:B:212:HIS:H	2.08	0.66
2:B:554:ARG:NH2	1:C:502:PRO:HG3	2.11	0.66
1:C:259:PHE:CE1	1:C:271:ARG:HB3	2.30	0.66
2:D:269:ILE:O	2:D:273:MET:HB2	1.95	0.66
1:E:267:GLN:CB	2:F:152:ARG:HD2	2.25	0.66
2:J:115:ALA:HA	2:J:119:PRO:HA	1.76	0.66
1:K:404:ARG:HD3	1:K:429:TRP:CZ2	2.31	0.66
1:M:406:LYS:HB2	2:N:29:PHE:CE2	2.31	0.66
2:H:232:SER:HB2	2:H:238:ASN:HA	1.78	0.65
2:H:507:GLY:O	2:H:510:ILE:HG22	1.95	0.65
2:L:68:PRO:C	2:L:70:ASN:H	2.04	0.65
2:L:234:PRO:CB	2:L:235:PRO:HD3	2.23	0.65
1:M:212:PHE:CE1	2:P:537:ALA:HB2	2.30	0.65
2:B:101:PRO:HB3	2:B:285:GLU:CD	2.21	0.65
2:B:565:HIS:O	2:B:568:VAL:HG22	1.95	0.65
2:F:101:PRO:HB3	2:F:285:GLU:CD	2.21	0.65
1:M:267:GLN:HG3	2:N:262:LYS:HE3	1.78	0.65
1:M:327:HIS:HA	1:M:356:VAL:HG11	1.77	0.65
1:O:423:HIS:HB2	1:O:426:LEU:HD12	1.76	0.65
1:A:473:ASN:HD21	1:A:475:ARG:HB3	1.61	0.65
1:E:414:GLU:HB2	1:E:415:PRO:CD	2.24	0.65
2:H:227:ASN:HB2	2:H:229:VAL:HG23	1.78	0.65
2:L:115:ALA:HA	2:L:119:PRO:HA	1.78	0.65
2:N:271:VAL:HG22	2:N:284:VAL:HG22	1.79	0.65
1:O:474:ILE:O	1:O:478:VAL:HG23	1.96	0.65
2:P:197:LEU:O	2:P:200:ILE:HG13	1.95	0.65
1:A:495:LEU:HD12	1:A:498:GLU:OE2	1.96	0.65
2:B:115:ALA:HA	2:B:119:PRO:HA	1.77	0.65
2:B:188:LYS:HD2	2:B:188:LYS:N	2.12	0.65
2:B:420:GLN:H	2:B:448:GLN:NE2	1.94	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:208:LYS:HE3	1:C:209:PRO:CD	2.27	0.65
1:E:494:ARG:CB	1:E:494:ARG:HH11	2.09	0.65
2:J:15:LEU:HA	2:J:85:GLN:HE22	1.62	0.65
2:J:271:VAL:HG22	2:J:284:VAL:HG22	1.79	0.65
2:L:107:LYS:HE2	2:L:109:ILE:HD11	1.79	0.65
2:P:38:ILE:HG22	2:P:61:VAL:HG21	1.77	0.65
2:P:101:PRO:HB3	2:P:285:GLU:CD	2.20	0.65
2:P:576:MET:HB3	2:P:577:PRO:HD2	1.77	0.65
2:F:115:ALA:HA	2:F:119:PRO:HA	1.79	0.65
2:H:115:ALA:HA	2:H:119:PRO:HA	1.77	0.65
2:J:269:ILE:O	2:J:273:MET:HB2	1.97	0.65
2:N:391:PHE:CD2	2:N:392:PRO:HD2	2.26	0.65
2:N:470:LEU:CB	2:N:471:PRO:HD3	2.25	0.65
2:P:6:VAL:HG21	2:P:11:LEU:HD12	1.78	0.65
2:P:269:ILE:O	2:P:273:MET:HB2	1.96	0.65
2:P:326:ASN:O	2:P:330:LEU:HD23	1.95	0.65
2:D:420:GLN:HG3	2:D:448:GLN:NE2	2.11	0.65
2:J:503:ASN:ND2	2:J:504:LYS:H	1.95	0.65
1:M:479:GLY:HA3	2:N:415:PHE:CE1	2.31	0.65
2:N:480:ILE:HG12	2:N:496:HIS:CD2	2.31	0.65
2:P:341:ILE:O	2:P:341:ILE:HG22	1.97	0.65
2:B:569:ILE:HD12	2:B:574:LEU:HB2	1.79	0.65
2:H:71:ARG:HG3	2:H:355:ARG:CZ	2.27	0.65
2:J:444:THR:HG22	2:J:447:PHE:CD1	2.31	0.65
2:L:101:PRO:HG2	2:L:105:ILE:HD13	1.77	0.65
2:L:232:SER:CB	2:L:238:ASN:HA	2.27	0.65
2:L:470:LEU:CB	2:L:471:PRO:CD	2.75	0.65
1:M:423:HIS:CD2	1:M:426:LEU:HD23	2.31	0.65
1:O:466:MET:SD	1:O:474:ILE:HG13	2.37	0.65
2:P:232:SER:CB	2:P:238:ASN:HA	2.26	0.65
2:B:470:LEU:HB3	2:B:471:PRO:HD3	1.79	0.65
1:G:362:LEU:CD2	1:G:475:ARG:HH22	2.09	0.65
2:H:62:LEU:HD23	2:H:62:LEU:N	2.11	0.65
2:H:565:HIS:O	2:H:568:VAL:HG22	1.96	0.65
2:L:62:LEU:HD23	2:L:62:LEU:N	2.10	0.65
1:M:193:SER:HB3	1:M:195:GLU:OE1	1.97	0.65
2:N:420:GLN:H	2:N:448:GLN:NE2	1.95	0.65
2:P:227:ASN:HB2	2:P:229:VAL:HG23	1.78	0.65
1:A:224:LEU:HD22	2:B:401:ARG:NH1	2.11	0.65
2:B:321:ARG:HD3	2:F:321:ARG:HD3	1.78	0.65
2:B:420:GLN:HE21	2:B:431:ILE:HG12	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:420:GLN:H	2:D:448:GLN:NE2	1.95	0.65
2:H:101:PRO:HG2	2:H:105:ILE:HD13	1.78	0.65
1:I:289:PRO:O	1:I:291:ASP:N	2.30	0.65
1:M:279:LEU:HD23	1:M:283:ALA:CA	2.27	0.65
1:O:193:SER:HB2	1:O:194:PRO:HD2	1.76	0.65
1:C:112:TRP:CZ3	1:C:132:MET:HE1	2.32	0.65
2:D:101:PRO:HB3	2:D:285:GLU:CD	2.21	0.65
2:D:470:LEU:CB	2:D:471:PRO:CD	2.74	0.65
2:F:8:ARG:CZ	2:F:61:VAL:HG11	2.27	0.65
2:H:15:LEU:HA	2:H:85:GLN:HE22	1.61	0.65
2:H:391:PHE:HD2	2:H:392:PRO:HD2	1.61	0.65
1:I:267:GLN:HB2	2:J:152:ARG:HD2	1.77	0.65
1:I:374:GLU:OE1	3:I:509:PHE:HB2	1.97	0.65
2:L:48:GLU:HG3	2:L:49:GLN:H	1.62	0.65
2:B:515:LEU:CD1	2:B:551:ILE:HD12	2.28	0.64
1:C:266:GLN:HB2	1:C:312:TYR:HE2	1.61	0.64
2:F:420:GLN:H	2:F:448:GLN:NE2	1.94	0.64
1:G:282:PRO:HD2	2:H:437:VAL:HG13	1.77	0.64
1:K:325:ARG:HH21	1:K:325:ARG:HG2	1.61	0.64
2:L:101:PRO:HB3	2:L:285:GLU:CD	2.22	0.64
1:M:284:GLU:CG	1:M:320:ARG:HE	2.10	0.64
2:N:232:SER:CB	2:N:238:ASN:HA	2.26	0.64
2:N:260:PHE:CE1	2:N:264:LYS:HD3	2.32	0.64
2:N:515:LEU:CD1	2:N:551:ILE:HD12	2.27	0.64
1:C:472:ASN:HD22	1:C:472:ASN:N	1.88	0.64
1:E:288:LEU:HD12	1:E:293:VAL:HG21	1.79	0.64
2:F:188:LYS:HD2	2:F:188:LYS:N	2.12	0.64
2:L:188:LYS:HE2	2:L:201:TYR:OH	1.98	0.64
2:N:71:ARG:CG	2:N:355:ARG:NH1	2.60	0.64
2:N:188:LYS:HD2	2:N:188:LYS:N	2.12	0.64
2:N:549:ALA:HB2	1:O:212:PHE:CE1	2.32	0.64
2:P:415:PHE:O	2:P:451:ARG:HD3	1.97	0.64
1:C:75:SER:HB2	1:C:77:GLU:OE2	1.97	0.64
2:D:420:GLN:HE21	2:D:431:ILE:HG12	1.61	0.64
1:E:217:VAL:HB	2:H:510:ILE:HA	1.77	0.64
2:F:227:ASN:HB2	2:F:229:VAL:HG23	1.79	0.64
1:G:233:GLN:NE2	1:G:495:LEU:HD13	2.12	0.64
2:H:71:ARG:HH22	2:H:366:GLU:CD	2.05	0.64
2:L:177:ARG:CG	2:L:178:PRO:HD2	2.27	0.64
2:N:533:TYR:HA	2:N:552:PHE:O	1.98	0.64
2:B:15:LEU:HA	2:B:85:GLN:HE22	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:420:PHE:HD2	1:C:431:GLU:HA	1.58	0.64
2:F:334:MET:HG2	2:F:367:ASP:HB3	1.78	0.64
2:F:514:LEU:HD23	2:F:581:LEU:HD23	1.77	0.64
1:G:266:GLN:HE21	1:G:318:GLU:HG2	1.62	0.64
1:I:449:PRO:HG2	1:I:452:VAL:HG23	1.79	0.64
2:J:232:SER:CB	2:J:238:ASN:HA	2.28	0.64
2:L:197:LEU:O	2:L:200:ILE:HG13	1.97	0.64
2:N:436:ALA:HB1	2:N:449:VAL:HG11	1.79	0.64
1:C:3:ASP:OD2	1:C:40:ALA:HA	1.97	0.64
2:F:71:ARG:CG	2:F:355:ARG:NH1	2.60	0.64
2:H:71:ARG:CG	2:H:355:ARG:NH1	2.58	0.64
2:J:245:THR:HG22	2:J:246:VAL:N	2.11	0.64
1:O:495:LEU:HD12	1:O:496:ASP:H	1.62	0.64
2:P:15:LEU:HA	2:P:85:GLN:HE22	1.63	0.64
2:P:507:GLY:O	2:P:510:ILE:HG22	1.97	0.64
2:D:122:VAL:HG21	2:D:299:PHE:CD2	2.32	0.64
1:G:423:HIS:CB	1:G:427:LYS:HA	2.27	0.64
2:N:67:VAL:HG13	2:N:68:PRO:HD2	1.78	0.64
1:A:494:ARG:HH21	2:D:390:GLN:HE22	1.46	0.64
1:C:498:GLU:CB	1:C:499:PRO:HD3	2.26	0.64
2:D:68:PRO:C	2:D:70:ASN:H	2.05	0.64
2:D:227:ASN:HB2	2:D:229:VAL:HG23	1.79	0.64
1:E:279:LEU:HD11	1:E:322:ASN:CB	2.28	0.64
1:G:325:ARG:HG2	1:G:325:ARG:HH21	1.63	0.64
1:I:272:ASP:C	1:I:274:HIS:H	2.05	0.64
2:J:341:ILE:O	2:J:341:ILE:HG22	1.96	0.64
1:M:286:LEU:HD12	1:M:320:ARG:NH1	2.13	0.64
2:N:178:PRO:O	2:N:194:ALA:HB3	1.98	0.64
2:N:197:LEU:O	2:N:200:ILE:HG13	1.98	0.64
1:A:212:PHE:CD2	2:D:537:ALA:HB2	2.33	0.64
1:E:258:ASN:C	1:E:259:PHE:HD2	2.06	0.64
1:E:417:MET:HB3	2:F:374:TYR:HE1	1.63	0.64
2:F:436:ALA:HB1	2:F:449:VAL:HG11	1.80	0.64
2:F:454:LEU:CD2	2:F:496:HIS:HB2	2.28	0.64
2:H:197:LEU:O	2:H:200:ILE:HG13	1.98	0.64
2:J:162:HIS:CD2	2:J:231:LEU:HD12	2.33	0.64
1:K:461:LEU:O	1:K:465:THR:CG2	2.46	0.64
1:O:477:LEU:HD23	1:O:486:MET:SD	2.38	0.64
2:P:470:LEU:HB3	2:P:471:PRO:HD3	1.79	0.64
1:A:417:MET:HB3	2:B:374:TYR:HE1	1.63	0.64
2:B:90:ARG:HB3	2:B:90:ARG:NH1	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:391:PHE:HD2	2:D:392:PRO:HD2	1.63	0.64
2:F:182:LYS:HG2	1:K:472:ASN:HB2	1.80	0.64
2:F:245:THR:HG22	2:F:246:VAL:N	2.12	0.64
2:F:512:HIS:CE1	1:G:216:GLY:N	2.65	0.64
1:G:367:LEU:HD22	1:G:367:LEU:H	1.62	0.64
2:H:566:PRO:O	2:H:570:THR:HG23	1.98	0.64
1:I:194:PRO:O	1:I:197:ILE:HG22	1.98	0.64
2:N:33:LEU:HD22	2:N:67:VAL:HG22	1.80	0.64
2:N:454:LEU:HD21	2:N:496:HIS:HB2	1.79	0.64
2:P:232:SER:HB2	2:P:238:ASN:HA	1.80	0.64
2:B:470:LEU:CB	2:B:471:PRO:CD	2.76	0.64
2:F:308:MET:O	2:F:308:MET:HE2	1.97	0.64
1:G:440:PRO:HG3	2:H:360:HIS:NE2	2.13	0.64
2:H:232:SER:CB	2:H:238:ASN:HA	2.28	0.64
2:H:503:ASN:ND2	2:H:504:LYS:H	1.96	0.64
1:I:384:LEU:HD11	1:I:417:MET:HE3	1.79	0.64
2:L:420:GLN:H	2:L:448:GLN:NE2	1.95	0.64
2:L:569:ILE:HD12	2:L:574:LEU:HB2	1.79	0.64
2:N:308:MET:CG	2:N:346:GLN:HB3	2.28	0.64
1:O:197:ILE:C	1:O:199:SER:H	2.05	0.64
2:B:455:LEU:HB3	2:B:456:PRO:HD3	1.81	0.63
2:B:507:GLY:O	2:B:510:ILE:HG22	1.98	0.63
1:C:20:GLY:HA2	1:C:174:TRP:HE1	1.63	0.63
1:C:140:LEU:HD11	1:C:159:LEU:HD21	1.78	0.63
1:E:479:GLY:HA3	2:F:415:PHE:CE1	2.33	0.63
2:F:177:ARG:HG2	2:F:178:PRO:HD2	1.80	0.63
2:F:211:LEU:CG	2:F:212:HIS:H	2.11	0.63
1:I:235:ARG:NH2	2:J:390:GLN:OE1	2.30	0.63
1:I:349:LYS:HG2	1:I:377:VAL:HG22	1.79	0.63
2:J:68:PRO:C	2:J:70:ASN:H	2.06	0.63
2:L:211:LEU:CG	2:L:212:HIS:H	2.08	0.63
2:N:41:GLU:HB2	2:N:59:ASP:HA	1.79	0.63
2:N:68:PRO:C	2:N:70:ASN:H	2.06	0.63
2:P:455:LEU:HB3	2:P:456:PRO:HD3	1.80	0.63
1:A:406:LYS:HB2	2:B:29:PHE:CZ	2.33	0.63
2:B:101:PRO:HG2	2:B:105:ILE:HD13	1.79	0.63
2:D:576:MET:HB3	2:D:577:PRO:HD2	1.80	0.63
2:F:406:ALA:HA	2:H:406:ALA:HA	1.79	0.63
2:J:207:LEU:O	2:J:211:LEU:HD22	1.98	0.63
1:M:466:MET:HA	1:M:471:ILE:HG22	1.79	0.63
1:O:188:GLN:O	1:O:188:GLN:HG2	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:9:LEU:O	1:C:9:LEU:HD13	1.97	0.63
1:C:472:ASN:HD22	1:C:473:ASN:N	1.97	0.63
2:D:48:GLU:HG2	2:D:49:GLN:HG3	1.80	0.63
2:D:234:PRO:CB	2:D:235:PRO:HD3	2.24	0.63
2:D:420:GLN:H	2:D:448:GLN:HE21	1.44	0.63
2:D:507:GLY:O	2:D:510:ILE:HG22	1.98	0.63
1:E:406:LYS:HD2	2:F:29:PHE:CE1	2.33	0.63
1:G:417:MET:HB3	2:H:374:TYR:CE1	2.33	0.63
1:O:477:LEU:HD23	1:O:486:MET:HE1	1.80	0.63
1:A:311:LYS:HD3	2:B:261:THR:HG21	1.80	0.63
1:C:38:VAL:HG13	1:C:173:TYR:CE2	2.33	0.63
1:C:67:GLY:HA2	1:C:164:LEU:HD13	1.81	0.63
2:D:415:PHE:O	2:D:451:ARG:HD3	1.99	0.63
1:E:467:ILE:HA	1:E:470:GLY:HA2	1.81	0.63
2:J:387:ILE:HD12	1:K:241:MET:HG2	1.80	0.63
2:L:420:GLN:H	2:L:448:GLN:HE21	1.46	0.63
2:P:177:ARG:HG2	2:P:178:PRO:HD2	1.80	0.63
1:A:217:VAL:HG23	2:D:510:ILE:HA	1.79	0.63
1:C:140:LEU:CD2	1:C:164:LEU:HD12	2.27	0.63
1:C:202:TRP:HA	1:C:207:PHE:HZ	1.63	0.63
1:C:414:GLU:HB2	1:C:415:PRO:CD	2.25	0.63
1:C:484:LEU:HG	2:D:465:ASN:ND2	2.14	0.63
2:D:41:GLU:HB3	2:D:58:SER:OG	1.99	0.63
1:E:299:THR:HG21	1:E:305:TYR:CE1	2.33	0.63
2:F:186:LEU:HD23	2:F:237:ILE:HG22	1.81	0.63
1:G:228:LEU:HD12	2:H:411:GLU:CD	2.22	0.63
1:I:281:ASP:CB	1:I:282:PRO:HD3	2.28	0.63
2:J:147:HIS:CE1	2:J:159:ILE:H	2.16	0.63
1:K:414:GLU:HB2	1:K:415:PRO:CD	2.28	0.63
2:L:126:LEU:HD23	2:L:126:LEU:H	1.62	0.63
2:L:420:GLN:HE21	2:L:431:ILE:HG12	1.63	0.63
1:M:288:LEU:HB3	1:M:289:PRO:CD	2.26	0.63
2:B:310:ARG:HH22	2:B:312:ASP:HB2	1.64	0.63
2:F:232:SER:CB	2:F:238:ASN:HA	2.28	0.63
2:J:101:PRO:HB3	2:J:285:GLU:CD	2.24	0.63
2:J:420:GLN:HE21	2:J:431:ILE:HG12	1.62	0.63
1:O:466:MET:SD	1:O:474:ILE:CG1	2.87	0.63
2:P:68:PRO:C	2:P:70:ASN:H	2.05	0.63
2:P:244:ILE:HD12	2:P:244:ILE:H	1.63	0.63
2:B:420:GLN:H	2:B:448:GLN:HE21	1.45	0.63
1:C:235:ARG:NH2	2:D:390:GLN:OE1	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:188:LYS:HD2	2:D:188:LYS:N	2.14	0.63
1:I:479:GLY:HA3	2:J:415:PHE:HE1	1.64	0.63
2:J:211:LEU:CG	2:J:212:HIS:H	2.11	0.63
1:K:373:ILE:CD1	1:K:459:LEU:HD11	2.29	0.63
2:L:52:VAL:O	2:L:52:VAL:HG12	1.98	0.63
2:N:177:ARG:HG2	2:N:178:PRO:HD2	1.79	0.63
2:N:232:SER:HB2	2:N:238:ASN:HA	1.79	0.63
2:N:391:PHE:HD2	2:N:392:PRO:CD	2.09	0.63
1:A:266:GLN:NE2	1:A:314:TRP:CD1	2.67	0.63
2:B:42:LYS:N	2:B:58:SER:HB3	2.14	0.63
1:C:475:ARG:HG3	1:C:475:ARG:NH1	2.13	0.63
1:E:362:LEU:HG	1:E:475:ARG:HH22	1.62	0.63
1:E:367:LEU:CD2	1:E:369:GLU:HG2	2.28	0.63
2:F:566:PRO:HB3	1:G:197:ILE:CG2	2.28	0.63
2:H:519:MET:HG3	2:H:533:TYR:CD1	2.34	0.63
2:J:77:LEU:HD23	2:J:77:LEU:C	2.23	0.63
1:K:263:PHE:CD2	1:K:441:GLU:HG3	2.34	0.63
1:M:299:THR:HG21	1:M:305:TYR:CE1	2.33	0.63
2:N:569:ILE:O	2:N:569:ILE:HD12	1.99	0.63
2:P:454:LEU:HD21	2:P:496:HIS:HB2	1.81	0.63
2:B:290:VAL:HG22	2:B:296:SER:OG	1.99	0.63
2:B:400:LEU:HD21	2:B:522:LEU:HD21	1.80	0.63
1:C:1:MET:HA	1:C:5:GLN:CG	2.29	0.63
1:C:181:PHE:HD2	1:C:182:SER:N	1.96	0.63
2:F:401:ARG:HD2	2:F:411:GLU:OE2	1.98	0.63
1:M:279:LEU:HB3	1:M:283:ALA:CB	2.24	0.63
1:M:414:GLU:HB2	1:M:415:PRO:CD	2.24	0.63
2:N:245:THR:HG22	2:N:246:VAL:N	2.13	0.63
1:O:370:PHE:HB2	1:O:462:GLU:OE2	1.99	0.63
1:A:496:ASP:C	1:A:498:GLU:H	2.07	0.62
1:G:188:GLN:HG2	1:G:189:GLU:N	2.13	0.62
2:H:177:ARG:CG	2:H:178:PRO:HD2	2.30	0.62
1:K:199:SER:OG	1:K:200:GLY:N	2.32	0.62
1:M:277:PHE:CD1	1:M:277:PHE:N	2.66	0.62
2:N:90:ARG:NH1	2:N:90:ARG:HB3	2.13	0.62
2:P:569:ILE:HD12	2:P:574:LEU:HB2	1.81	0.62
1:A:326:THR:C	1:A:356:VAL:CG1	2.72	0.62
1:C:70:ILE:HG12	1:C:164:LEU:HD11	1.80	0.62
2:D:15:LEU:HA	2:D:85:GLN:HE22	1.62	0.62
2:D:245:THR:HG22	2:D:246:VAL:N	2.14	0.62
1:O:471:ILE:HG22	1:O:472:ASN:H	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:503:ASN:ND2	2:P:504:LYS:H	1.97	0.62
2:P:564:LEU:HD12	2:P:578:CYS:HB3	1.81	0.62
1:A:235:ARG:NH2	2:B:390:GLN:OE1	2.26	0.62
2:B:245:THR:HG22	2:B:246:VAL:N	2.13	0.62
2:D:107:LYS:HE2	2:D:109:ILE:HD11	1.81	0.62
2:D:178:PRO:O	2:D:194:ALA:HB3	1.99	0.62
2:J:470:LEU:CB	2:J:471:PRO:CD	2.77	0.62
1:K:404:ARG:HD3	1:K:429:TRP:CH2	2.34	0.62
1:K:484:LEU:HG	2:L:465:ASN:ND2	2.14	0.62
2:P:569:ILE:HD13	2:P:576:MET:O	1.98	0.62
2:B:147:HIS:CE1	2:B:159:ILE:H	2.17	0.62
1:C:140:LEU:O	1:C:143:VAL:HG12	1.99	0.62
2:F:49:GLN:O	2:F:52:VAL:HG22	2.00	0.62
2:J:197:LEU:O	2:J:200:ILE:HG13	1.99	0.62
2:N:565:HIS:O	2:N:568:VAL:HG22	2.00	0.62
2:B:426:LYS:O	2:B:568:VAL:HG12	2.00	0.62
1:E:362:LEU:CG	1:E:475:ARG:HH22	2.13	0.62
1:G:395:PHE:CZ	1:G:432:VAL:HG23	2.34	0.62
2:H:68:PRO:C	2:H:70:ASN:H	2.06	0.62
2:H:436:ALA:HB1	2:H:449:VAL:HG11	1.82	0.62
2:J:308:MET:HE2	2:J:308:MET:O	2.00	0.62
2:L:227:ASN:HB2	2:L:229:VAL:HG23	1.81	0.62
2:N:133:LYS:HD2	2:N:133:LYS:N	2.12	0.62
2:N:269:ILE:O	2:N:273:MET:HB2	1.99	0.62
2:P:107:LYS:HE2	2:P:109:ILE:HD11	1.82	0.62
1:A:214:ALA:O	2:D:512:HIS:HE1	1.82	0.62
2:B:177:ARG:HG2	2:B:178:PRO:HD2	1.81	0.62
2:B:504:LYS:O	1:C:194:PRO:HD3	1.98	0.62
2:F:515:LEU:CD1	2:F:551:ILE:HD12	2.30	0.62
2:J:128:ASN:H	2:J:250:ASN:ND2	1.98	0.62
2:L:40:SER:HA	2:L:62:LEU:CD2	2.29	0.62
1:M:265:PRO:HA	1:M:300:HIS:CE1	2.32	0.62
2:P:211:LEU:CG	2:P:212:HIS:H	2.10	0.62
2:P:420:GLN:H	2:P:448:GLN:NE2	1.98	0.62
1:A:266:GLN:HG2	1:A:271:ARG:NH1	2.14	0.62
2:B:68:PRO:C	2:B:70:ASN:H	2.08	0.62
1:C:140:LEU:CD1	1:C:159:LEU:HD21	2.30	0.62
2:F:197:LEU:O	2:F:200:ILE:HG13	2.00	0.62
2:F:565:HIS:O	2:F:568:VAL:HG22	1.99	0.62
1:I:492:LEU:HD22	2:L:399:LEU:HB3	1.81	0.62
2:L:71:ARG:CG	2:L:355:ARG:NH1	2.60	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:358:ARG:HG2	1:M:358:ARG:HH11	1.64	0.62
2:N:511:ILE:HG22	2:N:561:LEU:HD21	1.80	0.62
1:O:373:ILE:HG12	1:O:459:LEU:HD12	1.82	0.62
1:A:402:GLN:O	1:A:421:SER:HA	1.98	0.62
2:B:249:ARG:C	2:B:250:ASN:HD22	2.07	0.62
1:C:417:MET:HB3	2:D:374:TYR:HE1	1.64	0.62
2:J:310:ARG:NH2	2:J:312:ASP:HB2	2.13	0.62
2:J:454:LEU:CD2	2:J:496:HIS:HB2	2.29	0.62
2:L:535:ILE:H	2:L:535:ILE:CD1	2.09	0.62
2:P:188:LYS:HD2	2:P:188:LYS:N	2.13	0.62
2:P:207:LEU:O	2:P:211:LEU:HD22	1.98	0.62
2:P:565:HIS:O	2:P:568:VAL:HG22	1.99	0.62
1:C:64:THR:HG22	1:C:65:ALA:H	1.64	0.62
2:D:304:TYR:CE1	2:D:353:PRO:HD3	2.34	0.62
1:E:449:PRO:HG2	1:E:452:VAL:CG2	2.30	0.62
1:E:495:LEU:H	1:E:495:LEU:HD12	1.64	0.62
1:G:230:VAL:HG21	1:G:465:THR:HG22	1.81	0.62
2:H:415:PHE:O	2:H:451:ARG:HD3	1.99	0.62
1:I:493:CYS:SG	1:I:496:ASP:OD2	2.58	0.62
1:K:414:GLU:CG	1:K:415:PRO:HD3	2.29	0.62
1:O:414:GLU:HB2	1:O:415:PRO:CD	2.29	0.62
1:O:435:SER:HA	3:O:509:PHE:CE2	2.34	0.62
2:D:124:ALA:CB	2:D:300:PRO:HD3	2.30	0.62
1:E:327:HIS:CA	1:E:356:VAL:HG11	2.29	0.62
1:G:343:LYS:CB	1:G:344:PRO:CD	2.77	0.62
2:H:420:GLN:H	2:H:448:GLN:NE2	1.98	0.62
2:H:470:LEU:HB3	2:H:471:PRO:HD3	1.81	0.62
1:I:193:SER:HB2	1:I:194:PRO:HD2	1.81	0.62
1:K:281:ASP:O	1:K:283:ALA:N	2.32	0.62
2:N:420:GLN:HG3	2:N:448:GLN:HE21	1.64	0.62
1:A:414:GLU:HB2	1:A:415:PRO:CD	2.26	0.61
1:A:480:HIS:H	1:A:480:HIS:CD2	2.16	0.61
1:C:113:ILE:HD12	1:C:125:VAL:HG11	1.81	0.61
1:C:449:PRO:HG2	1:C:452:VAL:CG2	2.30	0.61
2:F:41:GLU:HB3	2:F:58:SER:CB	2.29	0.61
2:F:262:LYS:O	2:F:266:VAL:HG23	1.99	0.61
2:F:420:GLN:H	2:F:448:GLN:HE21	1.47	0.61
1:G:263:PHE:CD2	1:G:441:GLU:HG3	2.35	0.61
2:H:188:LYS:HD2	2:H:188:LYS:N	2.15	0.61
2:H:341:ILE:O	2:H:341:ILE:HG22	1.99	0.61
2:L:15:LEU:HA	2:L:85:GLN:HE22	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:82:ARG:HG2	2:L:335:TYR:OH	2.00	0.61
2:L:215:GLU:OE1	2:L:221:PRO:HD2	2.00	0.61
2:N:310:ARG:O	2:N:311:ALA:C	2.36	0.61
1:O:280:ARG:HB2	2:P:440:SER:HA	1.80	0.61
1:A:373:ILE:CD1	1:A:459:LEU:HD11	2.29	0.61
1:C:188:GLN:HA	1:C:188:GLN:NE2	2.14	0.61
1:C:263:PHE:CD2	1:C:441:GLU:HG3	2.35	0.61
1:E:284:GLU:O	1:E:286:LEU:HG	2.00	0.61
1:I:260:ASP:CG	1:I:271:ARG:HH22	2.08	0.61
2:L:178:PRO:O	2:L:194:ALA:HB3	1.99	0.61
2:N:101:PRO:HG2	2:N:105:ILE:HD13	1.81	0.61
1:A:316:LEU:O	1:A:316:LEU:HD23	2.00	0.61
2:D:33:LEU:HD22	2:D:67:VAL:HG22	1.81	0.61
2:D:565:HIS:ND1	2:D:566:PRO:HD2	2.15	0.61
1:G:247:PRO:HB3	2:H:391:PHE:CE1	2.35	0.61
2:H:44:ILE:O	2:H:46:SER:N	2.33	0.61
2:H:515:LEU:HD23	2:H:515:LEU:C	2.25	0.61
2:J:406:ALA:HA	2:L:406:ALA:HA	1.82	0.61
1:M:355:ARG:HG3	1:M:371:HIS:CD2	2.35	0.61
2:N:503:ASN:ND2	2:N:504:LYS:H	1.98	0.61
1:O:267:GLN:HA	2:P:152:ARG:NH1	2.16	0.61
2:P:178:PRO:O	2:P:194:ALA:HB3	2.00	0.61
1:A:326:THR:C	1:A:356:VAL:HG11	2.26	0.61
1:C:208:LYS:HE3	1:C:209:PRO:HD2	1.81	0.61
1:G:226:PRO:HB3	1:G:469:TYR:CE1	2.33	0.61
2:H:426:LYS:O	2:H:568:VAL:HG12	2.01	0.61
2:H:515:LEU:HD23	2:H:515:LEU:O	2.00	0.61
1:I:468:LYS:HD3	1:I:496:ASP:CA	2.30	0.61
2:J:290:VAL:HG22	2:J:296:SER:OG	2.00	0.61
1:K:210:TYR:HB3	1:K:212:PHE:HE1	1.66	0.61
1:M:414:GLU:CG	1:M:415:PRO:HD3	2.30	0.61
1:M:425:GLY:O	1:M:426:LEU:HD22	2.00	0.61
2:B:71:ARG:HG3	2:B:355:ARG:CZ	2.29	0.61
2:B:232:SER:CB	2:B:238:ASN:HA	2.30	0.61
1:E:466:MET:O	1:E:470:GLY:HA2	2.01	0.61
1:E:477:LEU:HD12	1:E:478:VAL:HG22	1.80	0.61
2:F:124:ALA:HA	2:F:287:ALA:HB2	1.83	0.61
1:G:364:ALA:C	1:G:366:HIS:N	2.52	0.61
2:H:107:LYS:HE2	2:H:109:ILE:HD11	1.82	0.61
1:I:281:ASP:O	1:I:283:ALA:N	2.33	0.61
2:J:117:ILE:N	2:J:117:ILE:HD12	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:454:LEU:HD21	2:L:496:HIS:HB2	1.82	0.61
2:P:245:THR:HG22	2:P:246:VAL:N	2.14	0.61
2:P:360:HIS:HD2	2:P:362:CYS:HB2	1.66	0.61
1:A:440:PRO:HG3	2:B:360:HIS:NE2	2.16	0.61
3:A:509:PHE:O	3:A:509:PHE:CD1	2.53	0.61
1:C:208:LYS:HE2	1:C:209:PRO:O	2.00	0.61
1:C:266:GLN:HE22	1:C:315:LYS:H	1.49	0.61
2:F:515:LEU:C	2:F:515:LEU:HD23	2.26	0.61
1:G:224:LEU:HD22	2:H:401:ARG:HH12	1.65	0.61
1:G:420:PHE:HD2	1:G:431:GLU:HA	1.66	0.61
2:H:564:LEU:HD12	2:H:578:CYS:HB3	1.81	0.61
2:L:188:LYS:HD2	2:L:188:LYS:N	2.15	0.61
1:A:494:ARG:HE	2:D:395:LYS:HE3	1.66	0.61
2:B:20:THR:HB	2:B:23:GLU:H	1.66	0.61
1:E:265:PRO:HD3	1:E:310:TYR:CZ	2.35	0.61
2:F:118:ARG:HB2	2:F:173:TYR:OH	2.00	0.61
1:G:271:ARG:HG3	1:G:271:ARG:NH1	2.15	0.61
1:I:492:LEU:HD11	2:L:400:LEU:HD23	1.82	0.61
2:N:264:LYS:HD2	2:N:301:GLU:CD	2.26	0.61
2:N:505:ASN:HB2	1:O:191:GLU:CD	2.26	0.61
1:A:192:LEU:HD21	2:D:566:PRO:CG	2.31	0.61
1:C:292:TYR:O	1:C:296:VAL:HG23	2.01	0.61
2:D:341:ILE:HG22	2:D:341:ILE:O	2.00	0.61
2:F:133:LYS:HD2	2:F:133:LYS:N	2.14	0.61
2:H:245:THR:HG22	2:H:246:VAL:N	2.15	0.61
2:H:480:ILE:HG12	2:H:496:HIS:NE2	2.16	0.61
1:I:197:ILE:HD11	2:L:566:PRO:HG3	1.83	0.61
1:I:292:TYR:O	1:I:296:VAL:HG23	2.00	0.61
1:I:422:TYR:HE1	1:I:427:LYS:HA	1.66	0.61
2:J:71:ARG:HG3	2:J:355:ARG:NH1	2.15	0.61
2:J:107:LYS:HE2	2:J:109:ILE:HD11	1.81	0.61
2:J:232:SER:HB2	2:J:238:ASN:HA	1.82	0.61
2:J:515:LEU:HD23	2:J:515:LEU:C	2.25	0.61
2:J:565:HIS:ND1	2:J:566:PRO:HD2	2.15	0.61
2:L:207:LEU:O	2:L:211:LEU:HD22	2.00	0.61
2:L:515:LEU:CD1	2:L:551:ILE:HD12	2.31	0.61
2:N:90:ARG:HB3	2:N:90:ARG:HH11	1.66	0.61
2:N:420:GLN:H	2:N:448:GLN:HE21	1.47	0.61
2:B:537:ALA:HB2	1:C:212:PHE:CD1	2.36	0.61
1:C:57:SER:HB3	1:C:171:LYS:HD3	1.83	0.61
1:E:281:ASP:HB2	2:F:438:HIS:H	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:68:PRO:C	2:F:70:ASN:H	2.09	0.61
2:F:569:ILE:HD12	2:F:574:LEU:HB2	1.81	0.61
1:I:388:MET:HE2	2:J:379:MET:HG2	1.82	0.61
1:I:440:PRO:HG3	2:J:360:HIS:NE2	2.15	0.61
1:M:414:GLU:HG3	1:M:437:VAL:HB	1.81	0.61
2:P:470:LEU:CB	2:P:471:PRO:CD	2.77	0.61
1:C:61:TRP:CZ3	1:C:167:GLU:HB2	2.36	0.61
2:F:381:LEU:CD2	2:F:382:PRO:HD2	2.26	0.61
1:G:449:PRO:HG2	1:G:452:VAL:CG2	2.31	0.61
2:H:126:LEU:H	2:H:126:LEU:HD23	1.65	0.61
1:K:420:PHE:CD2	1:K:431:GLU:HA	2.36	0.61
2:N:470:LEU:HB3	2:N:471:PRO:HD3	1.83	0.61
1:A:357:PHE:HE2	2:B:416:ALA:HB3	1.66	0.60
2:F:236:ILE:HG22	2:F:237:ILE:HG13	1.81	0.60
2:H:565:HIS:ND1	2:H:566:PRO:HD2	2.16	0.60
1:I:343:LYS:CB	1:I:344:PRO:CD	2.77	0.60
2:J:178:PRO:O	2:J:194:ALA:HB3	2.00	0.60
2:P:50:GLY:O	2:P:51:ASN:HB2	2.00	0.60
1:A:414:GLU:CG	1:A:415:PRO:HD3	2.31	0.60
1:C:119:ALA:O	1:C:121:ASP:N	2.34	0.60
1:C:472:ASN:ND2	1:C:473:ASN:N	2.48	0.60
2:H:470:LEU:CB	2:H:471:PRO:CD	2.79	0.60
1:I:258:ASN:ND2	1:I:327:HIS:CE1	2.69	0.60
1:K:479:GLY:HA3	2:L:415:PHE:CE1	2.36	0.60
2:L:565:HIS:O	2:L:568:VAL:HG22	2.01	0.60
2:F:128:ASN:H	2:F:250:ASN:ND2	1.99	0.60
2:H:262:LYS:O	2:H:266:VAL:HG23	2.01	0.60
1:I:377:VAL:HG12	1:I:382:LEU:HD11	1.83	0.60
2:J:436:ALA:HB1	2:J:449:VAL:HG11	1.83	0.60
2:L:186:LEU:HD23	2:L:237:ILE:HG22	1.83	0.60
2:L:245:THR:HG22	2:L:246:VAL:N	2.16	0.60
1:M:449:PRO:HG2	1:M:452:VAL:HG23	1.82	0.60
2:N:77:LEU:HD23	2:N:77:LEU:C	2.27	0.60
2:B:197:LEU:O	2:B:200:ILE:HG13	2.01	0.60
1:C:384:LEU:HD11	1:C:417:MET:HE3	1.83	0.60
2:F:232:SER:HB2	2:F:238:ASN:HA	1.81	0.60
2:F:537:ALA:HB2	1:G:212:PHE:CD2	2.37	0.60
2:B:497:LEU:HD23	2:B:497:LEU:C	2.25	0.60
1:C:193:SER:OG	1:C:196:MET:HG3	2.00	0.60
2:F:126:LEU:HD23	2:F:126:LEU:H	1.64	0.60
2:F:301:GLU:O	2:F:303:ALA:N	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:424:GLN:OE1	1:G:426:LEU:HD13	2.02	0.60
1:K:440:PRO:HG3	2:L:360:HIS:NE2	2.17	0.60
2:L:244:ILE:H	2:L:244:ILE:HD12	1.66	0.60
2:N:334:MET:HG2	2:N:367:ASP:HB3	1.81	0.60
1:O:403:LEU:HD22	1:O:419:VAL:CG1	2.30	0.60
1:C:282:PRO:HD2	2:D:437:VAL:HG13	1.83	0.60
2:D:6:VAL:HG21	2:D:11:LEU:HD12	1.83	0.60
2:D:290:VAL:HG22	2:D:296:SER:OG	2.02	0.60
1:E:417:MET:HB3	2:F:374:TYR:CE1	2.36	0.60
2:F:67:VAL:CG1	2:F:68:PRO:HD2	2.31	0.60
2:F:182:LYS:CG	1:K:472:ASN:HB2	2.32	0.60
2:J:533:TYR:HA	2:J:552:PHE:O	2.00	0.60
2:L:124:ALA:CB	2:L:300:PRO:HD3	2.31	0.60
1:M:370:PHE:CB	1:M:462:GLU:OE2	2.44	0.60
2:N:38:ILE:HD13	2:N:63:TYR:HE1	1.67	0.60
2:N:470:LEU:CB	2:N:471:PRO:CD	2.79	0.60
1:O:279:LEU:HD12	2:P:437:VAL:HG12	1.83	0.60
2:P:301:GLU:O	2:P:303:ALA:N	2.34	0.60
1:C:23:SER:OG	1:C:173:TYR:HB2	2.00	0.60
1:C:116:ASP:O	1:C:117:LYS:HD3	2.02	0.60
1:C:151:LEU:HG	1:C:156:ARG:HD3	1.83	0.60
2:D:249:ARG:C	2:D:250:ASN:HD22	2.08	0.60
2:D:543:PHE:CD2	2:D:562:GLY:HA3	2.37	0.60
2:F:142:LEU:HD23	2:F:142:LEU:C	2.27	0.60
2:F:177:ARG:CG	2:F:178:PRO:HD2	2.31	0.60
2:F:310:ARG:HH22	2:F:312:ASP:HB2	1.67	0.60
2:H:82:ARG:HG2	2:H:335:TYR:OH	2.01	0.60
2:H:90:ARG:NH1	2:H:90:ARG:HB3	2.17	0.60
2:H:381:LEU:CD2	2:H:382:PRO:HD2	2.23	0.60
1:M:233:GLN:NE2	1:M:495:LEU:HG	2.17	0.60
1:M:277:PHE:CZ	1:M:359:ASN:HB2	2.36	0.60
2:B:45:ILE:C	2:B:47:LYS:H	2.08	0.60
2:B:124:ALA:HA	2:B:287:ALA:HB2	1.84	0.60
2:B:232:SER:HB2	2:B:238:ASN:HA	1.84	0.60
1:C:56:ARG:HB2	1:C:172:THR:CG2	2.32	0.60
1:E:412:TYR:O	1:E:438:PHE:HA	2.02	0.60
2:F:192:TYR:N	2:F:192:TYR:CD1	2.69	0.60
1:G:266:GLN:HE21	1:G:318:GLU:CG	2.15	0.60
2:H:207:LEU:O	2:H:211:LEU:HD22	2.02	0.60
1:I:350:TYR:HB2	1:I:376:VAL:HG13	1.84	0.60
2:J:507:GLY:O	2:J:510:ILE:HG22	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:373:ILE:HG12	1:K:459:LEU:HD12	1.84	0.60
2:L:249:ARG:C	2:L:250:ASN:HD22	2.09	0.60
2:N:249:ARG:C	2:N:250:ASN:HD22	2.10	0.60
1:O:188:GLN:HG3	1:O:206:PRO:O	2.01	0.60
1:O:414:GLU:CG	1:O:415:PRO:HD3	2.32	0.60
2:P:262:LYS:O	2:P:266:VAL:HG23	2.01	0.60
1:A:267:GLN:HE22	2:B:262:LYS:NZ	1.99	0.60
2:B:192:TYR:N	2:B:192:TYR:CD1	2.69	0.60
1:C:229:LYS:HD2	1:C:494:ARG:NH1	2.17	0.60
2:D:360:HIS:HD2	2:D:362:CYS:HB2	1.66	0.60
1:G:262:LEU:O	1:G:412:TYR:HB3	2.02	0.60
1:G:266:GLN:NE2	1:G:318:GLU:HB3	2.17	0.60
2:J:124:ALA:CB	2:J:300:PRO:HD3	2.31	0.60
2:N:62:LEU:HD23	2:N:62:LEU:H	1.67	0.60
2:N:207:LEU:O	2:N:211:LEU:HD22	2.01	0.60
2:P:290:VAL:HG22	2:P:296:SER:OG	2.01	0.60
1:A:449:PRO:HG2	1:A:452:VAL:CG2	2.31	0.60
2:B:391:PHE:HD2	2:B:392:PRO:CD	2.15	0.60
1:C:224:LEU:HD22	2:D:401:ARG:HH12	1.67	0.60
2:D:271:VAL:HG22	2:D:284:VAL:CG2	2.32	0.60
1:E:494:ARG:HG3	1:E:495:LEU:HD12	1.82	0.60
2:P:122:VAL:HG21	2:P:299:PHE:CD2	2.36	0.60
2:P:420:GLN:H	2:P:448:GLN:HE21	1.48	0.60
2:B:454:LEU:CD2	2:B:496:HIS:HB2	2.31	0.59
2:J:172:THR:O	2:J:223:ILE:HA	2.02	0.59
2:L:360:HIS:HD2	2:L:362:CYS:HB2	1.67	0.59
2:L:515:LEU:HD11	2:L:551:ILE:HG21	1.84	0.59
1:M:215:HIS:O	1:M:217:VAL:N	2.33	0.59
1:A:187:LYS:HA	1:A:187:LYS:HE3	1.84	0.59
1:A:279:LEU:HD22	2:B:437:VAL:HG12	1.84	0.59
1:A:479:GLY:HA3	2:B:415:PHE:HE1	1.67	0.59
2:B:360:HIS:HD2	2:B:362:CYS:HB2	1.67	0.59
2:B:451:ARG:HH22	2:B:478:SER:HB3	1.67	0.59
2:B:508:PHE:CD1	2:B:563:VAL:HG23	2.37	0.59
2:B:515:LEU:HD23	2:B:515:LEU:C	2.27	0.59
1:C:477:LEU:HD12	1:C:478:VAL:HG23	1.84	0.59
2:F:436:ALA:HB1	2:F:449:VAL:CG1	2.33	0.59
2:F:455:LEU:HB3	2:F:456:PRO:HD3	1.84	0.59
2:H:20:THR:HB	2:H:23:GLU:H	1.67	0.59
2:H:188:LYS:HE2	2:H:201:TYR:OH	2.02	0.59
2:J:400:LEU:HD21	2:J:522:LEU:HD21	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:197:ILE:HD13	1:K:197:ILE:H	1.68	0.59
2:N:454:LEU:CD2	2:N:496:HIS:HB2	2.32	0.59
2:D:133:LYS:HD2	2:D:133:LYS:N	2.16	0.59
2:D:244:ILE:H	2:D:244:ILE:HD12	1.67	0.59
2:F:122:VAL:HG21	2:F:299:PHE:CD2	2.38	0.59
1:G:363:ASP:N	1:G:366:HIS:HA	2.15	0.59
1:G:479:GLY:O	1:G:482:VAL:HG12	2.02	0.59
1:K:227:LEU:HD22	1:K:461:LEU:HD12	1.82	0.59
2:L:33:LEU:HD22	2:L:67:VAL:HG22	1.84	0.59
2:L:576:MET:HB3	2:L:577:PRO:HD2	1.85	0.59
2:P:207:LEU:HD21	2:P:237:ILE:HG23	1.83	0.59
2:F:53:LYS:C	2:F:55:ALA:H	2.11	0.59
2:F:532:GLY:O	2:F:553:ALA:HA	2.03	0.59
2:J:177:ARG:CG	2:J:178:PRO:HD2	2.32	0.59
2:J:360:HIS:HD2	2:J:362:CYS:HB2	1.68	0.59
2:J:576:MET:HB3	2:J:577:PRO:HD2	1.83	0.59
1:K:262:LEU:O	1:K:412:TYR:HB3	2.02	0.59
2:L:301:GLU:O	2:L:303:ALA:N	2.35	0.59
1:M:262:LEU:O	1:M:412:TYR:HB3	2.02	0.59
2:P:71:ARG:HG3	2:P:355:ARG:CZ	2.32	0.59
1:A:350:TYR:HB2	1:A:376:VAL:HG13	1.83	0.59
2:B:301:GLU:O	2:B:303:ALA:N	2.35	0.59
1:C:267:GLN:NE2	2:D:262:LYS:HE2	2.15	0.59
2:D:142:LEU:HD23	2:D:142:LEU:C	2.28	0.59
2:D:301:GLU:O	2:D:303:ALA:N	2.36	0.59
1:E:282:PRO:CG	2:F:437:VAL:HG13	2.32	0.59
1:K:466:MET:HG3	1:K:471:ILE:HG22	1.83	0.59
1:A:207:PHE:CE2	2:D:544:PHE:HZ	2.20	0.59
2:B:157:VAL:HG11	2:B:266:VAL:HG21	1.84	0.59
2:D:262:LYS:O	2:D:266:VAL:HG23	2.02	0.59
2:D:321:ARG:HD3	2:H:321:ARG:CD	2.32	0.59
2:D:515:LEU:HD23	2:D:515:LEU:O	2.03	0.59
2:L:503:ASN:ND2	2:L:504:LYS:H	2.00	0.59
1:M:210:TYR:HB3	1:M:212:PHE:HE2	1.67	0.59
2:P:40:SER:HB2	2:P:42:LYS:CG	2.21	0.59
1:A:299:THR:HG21	1:A:305:TYR:CD1	2.38	0.59
1:A:412:TYR:O	1:A:438:PHE:HA	2.02	0.59
2:B:177:ARG:CG	2:B:178:PRO:HD2	2.32	0.59
1:E:414:GLU:CG	1:E:415:PRO:HD3	2.32	0.59
1:E:479:GLY:HA3	2:F:415:PHE:HE1	1.67	0.59
2:F:564:LEU:HD12	2:F:578:CYS:HB3	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:124:ALA:HA	2:H:287:ALA:HB2	1.84	0.59
2:J:301:GLU:HG3	2:J:301:GLU:O	2.01	0.59
2:J:451:ARG:HH22	2:J:478:SER:HB3	1.67	0.59
1:M:284:GLU:HG3	1:M:320:ARG:HE	1.66	0.59
2:N:172:THR:O	2:N:223:ILE:HA	2.03	0.59
2:N:351:ILE:HD12	2:N:351:ILE:N	2.17	0.59
2:N:515:LEU:C	2:N:515:LEU:HD23	2.27	0.59
1:O:281:ASP:HB2	2:P:438:HIS:HB2	1.83	0.59
1:O:471:ILE:CG2	1:O:472:ASN:H	2.14	0.59
2:P:124:ALA:CB	2:P:300:PRO:HD3	2.33	0.59
1:C:115:VAL:CG1	1:C:116:ASP:H	2.07	0.59
1:E:192:LEU:HD11	2:H:544:PHE:CD2	2.37	0.59
2:F:90:ARG:NH1	2:F:90:ARG:HB3	2.16	0.59
2:F:360:HIS:HD2	2:F:362:CYS:HB2	1.67	0.59
1:G:210:TYR:CD1	1:G:211:ASN:N	2.71	0.59
1:G:233:GLN:O	1:G:237:ILE:HG12	2.03	0.59
2:H:6:VAL:HG21	2:H:11:LEU:HD12	1.84	0.59
1:M:296:VAL:O	1:M:300:HIS:HB2	2.03	0.59
2:N:215:GLU:OE1	2:N:221:PRO:HD2	2.02	0.59
1:A:207:PHE:N	1:A:207:PHE:CD2	2.70	0.59
1:C:137:GLN:HE21	1:C:141:GLN:HG3	1.66	0.59
2:D:207:LEU:O	2:D:211:LEU:HD22	2.02	0.59
1:E:235:ARG:NH1	1:E:245:GLU:OE1	2.35	0.59
1:I:224:LEU:HD22	2:J:401:ARG:HH12	1.68	0.59
1:I:278:PHE:CE1	1:I:321:LYS:HD3	2.37	0.59
1:I:466:MET:SD	1:I:474:ILE:CG1	2.91	0.59
1:K:37:VAL:C	1:K:39:GLY:H	2.11	0.59
1:K:449:PRO:HG2	1:K:452:VAL:CG2	2.32	0.59
1:K:480:HIS:CD2	1:K:480:HIS:N	2.66	0.59
2:N:525:PRO:O	2:N:532:GLY:HA2	2.02	0.59
1:O:280:ARG:HB2	2:P:440:SER:CA	2.32	0.59
1:O:299:THR:HG21	1:O:305:TYR:CD1	2.38	0.59
2:P:48:GLU:HG3	2:P:49:GLN:H	1.68	0.59
1:A:222:GLY:HA3	2:B:405:ALA:O	2.02	0.59
1:A:236:GLN:O	1:A:240:GLU:HG3	2.03	0.59
1:A:263:PHE:CD2	1:A:441:GLU:HG3	2.37	0.59
2:B:186:LEU:HD23	2:B:237:ILE:HG22	1.84	0.59
2:B:576:MET:HB3	2:B:577:PRO:HD2	1.84	0.59
1:C:408:ALA:HB2	1:C:418:GLU:HG3	1.83	0.59
1:C:472:ASN:H	1:C:472:ASN:ND2	1.99	0.59
2:F:308:MET:SD	2:F:346:GLN:HB3	2.42	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:268:HIS:O	1:G:270:ALA:N	2.36	0.59
2:H:360:HIS:HD2	2:H:362:CYS:HB2	1.66	0.59
2:J:133:LYS:HD2	2:J:133:LYS:N	2.15	0.59
2:J:321:ARG:HD3	2:N:321:ARG:HD3	1.83	0.59
2:L:45:ILE:O	2:L:45:ILE:HG22	2.03	0.59
2:N:177:ARG:CG	2:N:178:PRO:HD2	2.32	0.59
2:P:565:HIS:ND1	2:P:566:PRO:HD2	2.18	0.59
1:A:373:ILE:HG12	1:A:459:LEU:CD1	2.32	0.58
2:B:185:PRO:HB2	2:B:188:LYS:HD3	1.85	0.58
2:B:436:ALA:HB1	2:B:449:VAL:HG11	1.85	0.58
1:E:298:ARG:HG2	1:E:299:THR:N	2.17	0.58
1:G:412:TYR:O	1:G:438:PHE:HA	2.03	0.58
1:G:413:THR:HB	1:G:437:VAL:H	1.68	0.58
1:G:423:HIS:CD2	1:G:427:LYS:HG2	2.38	0.58
2:H:301:GLU:O	2:H:303:ALA:N	2.36	0.58
2:L:39:THR:HB	2:L:44:ILE:HG13	1.83	0.58
2:L:90:ARG:HB3	2:L:90:ARG:NH1	2.17	0.58
1:M:292:TYR:O	1:M:296:VAL:HG23	2.02	0.58
1:M:466:MET:HA	1:M:471:ILE:CG2	2.33	0.58
2:N:360:HIS:HD2	2:N:362:CYS:HB2	1.67	0.58
1:O:405:PHE:CE2	1:O:419:VAL:HG13	2.37	0.58
1:O:417:MET:HB3	2:P:374:TYR:HE1	1.66	0.58
2:B:470:LEU:HB2	2:B:471:PRO:HD3	1.86	0.58
1:C:343:LYS:CB	1:C:344:PRO:CD	2.78	0.58
2:J:360:HIS:CD2	2:J:362:CYS:H	2.21	0.58
1:K:198:SER:O	1:K:199:SER:HB3	2.03	0.58
1:K:316:LEU:O	1:K:316:LEU:HD23	2.03	0.58
1:K:474:ILE:C	1:K:476:GLU:H	2.11	0.58
2:N:41:GLU:HA	2:N:41:GLU:OE2	2.03	0.58
2:N:132:THR:HG22	2:N:134:ASP:N	2.18	0.58
2:N:147:HIS:CE1	2:N:159:ILE:H	2.22	0.58
1:O:362:LEU:HD22	2:P:443:LYS:HD3	1.85	0.58
1:A:251:PHE:H	2:B:493:ASN:HD21	1.49	0.58
1:A:417:MET:HB3	2:B:374:TYR:CE1	2.38	0.58
2:B:126:LEU:HD23	2:B:126:LEU:H	1.68	0.58
2:B:178:PRO:O	2:B:194:ALA:HB3	2.02	0.58
1:E:253:GLU:OE1	1:E:257:TRP:HB2	2.03	0.58
1:E:367:LEU:CG	1:E:368:ALA:N	2.66	0.58
1:E:384:LEU:CD1	1:E:417:MET:HE3	2.32	0.58
2:F:39:THR:O	2:F:62:LEU:HD23	2.03	0.58
2:H:449:VAL:HG12	2:H:450:ALA:N	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:391:LEU:HD13	1:I:419:VAL:HG11	1.86	0.58
2:J:147:HIS:CE1	2:J:159:ILE:HG12	2.38	0.58
2:L:42:LYS:HD3	2:L:42:LYS:O	2.02	0.58
1:M:272:ASP:CG	1:M:273:GLN:H	2.11	0.58
1:M:279:LEU:HD22	1:M:322:ASN:HD22	1.68	0.58
1:M:466:MET:HB3	1:M:467:ILE:HD12	1.85	0.58
2:N:189:THR:HG23	2:N:190:LYS:H	1.68	0.58
1:O:298:ARG:HG3	1:O:298:ARG:NH1	2.19	0.58
2:P:514:LEU:HD23	2:P:581:LEU:HD23	1.83	0.58
2:B:308:MET:HE2	2:B:308:MET:O	2.03	0.58
1:E:287:GLN:OE1	1:E:287:GLN:HA	2.04	0.58
2:F:290:VAL:HG22	2:F:296:SER:OG	2.03	0.58
2:F:449:VAL:HG12	2:F:450:ALA:N	2.19	0.58
2:F:470:LEU:HB2	2:F:471:PRO:CD	2.34	0.58
1:G:414:GLU:CG	1:G:415:PRO:HD3	2.32	0.58
2:H:142:LEU:HD23	2:H:142:LEU:C	2.29	0.58
2:H:147:HIS:CE1	2:H:159:ILE:H	2.20	0.58
2:H:420:GLN:H	2:H:448:GLN:HE21	1.50	0.58
2:J:62:LEU:HD23	2:J:62:LEU:N	2.18	0.58
2:J:420:GLN:HG3	2:J:448:GLN:HE21	1.67	0.58
1:K:362:LEU:HB2	2:L:443:LYS:HD3	1.85	0.58
2:L:20:THR:HB	2:L:23:GLU:H	1.69	0.58
2:L:515:LEU:HD23	2:L:515:LEU:C	2.27	0.58
1:M:412:TYR:O	1:M:438:PHE:HA	2.03	0.58
1:O:412:TYR:O	1:O:438:PHE:HA	2.03	0.58
2:P:400:LEU:HD21	2:P:522:LEU:HD21	1.84	0.58
2:P:426:LYS:O	2:P:568:VAL:HG12	2.01	0.58
2:P:515:LEU:HD11	2:P:551:ILE:HG21	1.86	0.58
2:B:221:PRO:HB2	2:B:234:PRO:HG2	1.86	0.58
2:B:399:LEU:CD1	1:C:494:ARG:HB2	2.34	0.58
2:B:414:THR:HG23	2:B:457:GLY:HA3	1.85	0.58
1:C:47:LEU:HD23	1:C:209:PRO:HD3	1.85	0.58
1:C:412:TYR:O	1:C:438:PHE:HA	2.03	0.58
2:D:188:LYS:HE2	2:D:201:TYR:OH	2.04	0.58
2:D:357:ASP:O	2:D:359:ILE:HG23	2.04	0.58
1:E:218:LEU:HD23	1:E:219:PRO:HD2	1.86	0.58
2:F:62:LEU:HD23	2:F:62:LEU:N	2.19	0.58
2:F:147:HIS:CE1	2:F:159:ILE:H	2.22	0.58
2:F:515:LEU:HD23	2:F:515:LEU:O	2.03	0.58
1:G:219:PRO:O	1:G:221:SER:N	2.36	0.58
2:H:77:LEU:HD23	2:H:77:LEU:C	2.28	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:178:PRO:O	2:H:194:ALA:HB3	2.02	0.58
2:J:90:ARG:HB3	2:J:90:ARG:NH1	2.19	0.58
1:K:292:TYR:O	1:K:296:VAL:HG23	2.03	0.58
2:L:71:ARG:HH22	2:L:366:GLU:CD	2.10	0.58
2:L:426:LYS:HA	2:L:571:LYS:CE	2.34	0.58
2:L:449:VAL:HG12	2:L:450:ALA:N	2.17	0.58
1:M:216:GLY:O	1:M:217:VAL:C	2.46	0.58
1:M:422:TYR:HD1	1:M:423:HIS:N	2.01	0.58
2:P:414:THR:HG23	2:P:457:GLY:HA3	1.86	0.58
1:A:214:ALA:O	2:D:512:HIS:CE1	2.57	0.58
1:A:494:ARG:HE	2:D:395:LYS:CE	2.17	0.58
1:C:55:LEU:CD2	1:C:171:LYS:HD2	2.27	0.58
1:C:64:THR:HB	1:C:67:GLY:H	1.67	0.58
1:C:77:GLU:HG3	1:C:106:LYS:HB3	1.86	0.58
2:D:45:ILE:HD13	2:D:52:VAL:HB	1.84	0.58
2:D:124:ALA:HA	2:D:287:ALA:HB2	1.84	0.58
2:D:324:PRO:HG3	2:D:344:GLY:O	2.04	0.58
2:J:498:CYS:HB2	2:J:582:GLU:HG3	1.85	0.58
2:J:511:ILE:HG22	2:J:561:LEU:HD21	1.85	0.58
1:M:365:THR:O	1:M:474:ILE:HD12	2.04	0.58
2:N:436:ALA:HB1	2:N:449:VAL:CG1	2.32	0.58
1:O:355:ARG:HA	1:O:371:HIS:HA	1.86	0.58
1:E:367:LEU:HD22	2:F:415:PHE:CE2	2.39	0.58
1:K:279:LEU:HD21	1:K:322:ASN:HB3	1.86	0.58
1:K:417:MET:HB3	2:L:374:TYR:CE1	2.39	0.58
2:L:122:VAL:HG21	2:L:299:PHE:CD2	2.37	0.58
2:L:185:PRO:HB2	2:L:188:LYS:HD3	1.86	0.58
1:M:199:SER:C	1:M:201:SER:N	2.57	0.58
1:M:213:LEU:O	1:M:215:HIS:N	2.31	0.58
1:O:276:THR:HG23	1:O:326:THR:CG2	2.33	0.58
2:B:227:ASN:HB2	2:B:229:VAL:HG23	1.85	0.58
2:B:420:GLN:HG3	2:B:448:GLN:HE21	1.68	0.58
2:D:20:THR:HB	2:D:23:GLU:H	1.69	0.58
2:F:142:LEU:HD23	2:F:142:LEU:O	2.04	0.58
2:F:341:ILE:HG22	2:F:341:ILE:O	2.02	0.58
2:F:451:ARG:HH22	2:F:478:SER:HB3	1.68	0.58
1:G:268:HIS:O	1:G:271:ARG:N	2.37	0.58
1:K:280:ARG:HH11	1:K:280:ARG:CB	2.16	0.58
1:K:398:LEU:HA	1:K:495:LEU:HD13	1.84	0.58
2:L:124:ALA:HA	2:L:287:ALA:HB2	1.85	0.58
1:M:213:LEU:C	1:M:215:HIS:H	2.12	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:207:LEU:O	2:B:211:LEU:HD22	2.04	0.58
2:B:391:PHE:CD2	2:B:392:PRO:HD2	2.35	0.58
2:B:515:LEU:HD23	2:B:515:LEU:O	2.04	0.58
2:D:207:LEU:HD21	2:D:237:ILE:HG23	1.84	0.58
1:E:265:PRO:HA	1:E:300:HIS:CE1	2.37	0.58
1:E:414:GLU:CB	1:E:415:PRO:CD	2.80	0.58
2:F:244:ILE:H	2:F:244:ILE:HD12	1.67	0.58
1:G:480:HIS:CD2	1:G:480:HIS:N	2.71	0.58
2:H:334:MET:HG2	2:H:367:ASP:HB3	1.86	0.58
2:J:185:PRO:HB2	2:J:188:LYS:HD3	1.84	0.58
2:J:554:ARG:HG2	2:J:554:ARG:NH1	2.18	0.58
2:N:193:THR:HG22	2:N:194:ALA:N	2.19	0.58
1:O:253:GLU:OE1	1:O:257:TRP:HB2	2.04	0.58
1:O:377:VAL:HG12	1:O:382:LEU:HD11	1.85	0.58
2:B:45:ILE:O	2:B:47:LYS:N	2.37	0.58
2:B:107:LYS:HE2	2:B:109:ILE:HD11	1.85	0.58
1:C:38:VAL:HG22	1:C:173:TYR:HD2	1.69	0.58
1:C:165:LEU:HD12	1:C:165:LEU:O	2.04	0.58
1:C:186:SER:C	1:C:188:GLN:H	2.12	0.58
1:E:191:GLU:HG2	2:H:547:ARG:NE	2.18	0.58
2:F:221:PRO:HB2	2:F:234:PRO:HG2	1.84	0.58
2:H:290:VAL:HG22	2:H:296:SER:OG	2.04	0.58
1:I:414:GLU:CG	1:I:415:PRO:HD3	2.33	0.58
2:J:152:ARG:HD3	2:J:156:LEU:HD11	1.86	0.58
2:J:301:GLU:O	2:J:303:ALA:N	2.36	0.58
2:N:126:LEU:HD23	2:N:126:LEU:N	2.19	0.58
2:N:185:PRO:HB2	2:N:188:LYS:HD3	1.85	0.58
2:N:290:VAL:HG22	2:N:296:SER:OG	2.04	0.58
2:N:431:ILE:H	2:N:431:ILE:CD1	2.00	0.58
1:O:403:LEU:CD2	1:O:419:VAL:HG12	2.30	0.58
1:C:41:VAL:HG12	1:C:45:GLN:HE21	1.68	0.57
1:C:128:VAL:HG12	1:C:129:VAL:HG13	1.85	0.57
2:D:139:PHE:CE2	2:D:161:THR:HG21	2.38	0.57
2:D:264:LYS:HD2	2:D:301:GLU:CD	2.29	0.57
2:F:420:GLN:HE21	2:F:431:ILE:HG12	1.68	0.57
1:G:233:GLN:OE1	1:G:495:LEU:HD13	2.04	0.57
1:I:299:THR:HG21	1:I:305:TYR:CD1	2.38	0.57
2:J:401:ARG:HD2	2:J:411:GLU:OE2	2.04	0.57
2:N:198:MET:SD	2:N:220:TYR:HE2	2.27	0.57
2:P:177:ARG:CG	2:P:178:PRO:HD2	2.33	0.57
2:P:449:VAL:HG12	2:P:450:ALA:N	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:298:ARG:HG2	1:C:299:THR:N	2.19	0.57
1:E:324:LEU:HB3	1:E:357:PHE:CD1	2.39	0.57
1:E:494:ARG:HD3	2:H:396:LEU:HD13	1.84	0.57
1:I:359:ASN:ND2	2:J:443:LYS:HE2	2.19	0.57
2:J:566:PRO:O	2:J:570:THR:HG23	2.04	0.57
1:K:227:LEU:CD2	1:K:461:LEU:HD12	2.34	0.57
2:N:20:THR:HB	2:N:23:GLU:H	1.69	0.57
2:N:569:ILE:HD12	2:N:574:LEU:HB2	1.84	0.57
2:P:264:LYS:HD2	2:P:301:GLU:CD	2.29	0.57
1:A:233:GLN:O	1:A:237:ILE:HG12	2.04	0.57
1:A:414:GLU:CB	1:A:415:PRO:CD	2.80	0.57
2:B:529:ASP:O	2:B:531:GLY:N	2.35	0.57
1:C:449:PRO:HG2	1:C:452:VAL:HG23	1.86	0.57
2:J:192:TYR:N	2:J:192:TYR:CD1	2.72	0.57
2:L:535:ILE:HD12	2:L:535:ILE:N	2.14	0.57
1:M:437:VAL:O	1:M:438:PHE:C	2.47	0.57
2:N:547:ARG:HG2	2:N:547:ARG:HH11	1.68	0.57
1:O:468:LYS:HG2	1:O:495:LEU:HD23	1.86	0.57
2:P:163:ASP:OD2	2:P:248:THR:HG23	2.04	0.57
1:A:207:PHE:N	1:A:207:PHE:HD2	2.03	0.57
1:A:413:THR:HB	1:A:437:VAL:H	1.69	0.57
2:B:407:ALA:HA	1:C:221:SER:HB3	1.84	0.57
2:D:215:GLU:OE1	2:D:221:PRO:HD2	2.03	0.57
2:F:508:PHE:CD1	2:F:563:VAL:HG23	2.39	0.57
2:F:512:HIS:ND1	1:G:216:GLY:N	2.51	0.57
1:G:325:ARG:NH1	1:G:354:ASP:OD2	2.38	0.57
1:G:403:LEU:HD22	1:G:419:VAL:CG1	2.34	0.57
2:H:129:ILE:HD12	2:H:251:ILE:HD12	1.85	0.57
2:H:569:ILE:HD13	2:H:576:MET:O	2.04	0.57
2:J:67:VAL:HG13	2:J:68:PRO:HD2	1.86	0.57
2:J:207:LEU:HD21	2:J:237:ILE:HG23	1.86	0.57
1:K:350:TYR:HB2	1:K:376:VAL:HG13	1.87	0.57
2:L:45:ILE:HA	2:L:48:GLU:CG	2.31	0.57
1:M:221:SER:O	2:N:408:GLY:HA2	2.04	0.57
1:M:298:ARG:HG2	1:M:299:THR:N	2.19	0.57
1:M:471:ILE:HG12	1:M:472:ASN:N	2.19	0.57
2:N:188:LYS:HE2	2:N:201:TYR:OH	2.04	0.57
2:N:236:ILE:N	2:N:236:ILE:CD1	2.65	0.57
1:O:417:MET:HB3	2:P:374:TYR:CE1	2.40	0.57
1:O:477:LEU:CA	1:O:482:VAL:HG23	2.32	0.57
2:P:124:ALA:HA	2:P:287:ALA:HB2	1.84	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:508:PHE:CD1	2:P:563:VAL:HG23	2.39	0.57
2:B:262:LYS:O	2:B:266:VAL:HG23	2.04	0.57
2:B:341:ILE:O	2:B:341:ILE:HG22	2.03	0.57
2:B:508:PHE:HE1	2:B:562:GLY:CA	2.14	0.57
2:B:529:ASP:OD2	2:B:530:LYS:HG3	2.04	0.57
1:E:282:PRO:HD3	2:F:437:VAL:HG13	1.85	0.57
1:E:388:MET:HE2	2:F:379:MET:HG2	1.86	0.57
2:F:178:PRO:O	2:F:194:ALA:HB3	2.04	0.57
2:H:420:GLN:HG3	2:H:448:GLN:HE21	1.69	0.57
1:I:316:LEU:O	1:I:316:LEU:HD23	2.04	0.57
1:I:468:LYS:HB3	1:I:496:ASP:OD1	2.03	0.57
1:K:299:THR:HG21	1:K:305:TYR:CD1	2.40	0.57
2:L:415:PHE:O	2:L:451:ARG:HD3	2.04	0.57
2:N:175:ALA:CB	2:N:219:LEU:HB3	2.33	0.57
2:N:414:THR:HG23	2:N:457:GLY:HA3	1.86	0.57
2:P:6:VAL:CG2	2:P:11:LEU:HD12	2.34	0.57
2:P:185:PRO:HB2	2:P:188:LYS:HD3	1.87	0.57
2:B:186:LEU:CD2	2:B:238:ASN:H	2.16	0.57
1:C:149:GLU:C	1:C:151:LEU:H	2.13	0.57
1:C:350:TYR:HB2	1:C:376:VAL:HG13	1.87	0.57
1:C:423:HIS:NE2	1:C:426:LEU:HD23	2.19	0.57
1:C:431:GLU:HG2	1:C:432:VAL:N	2.16	0.57
2:D:6:VAL:CG2	2:D:11:LEU:HD12	2.35	0.57
2:D:62:LEU:HD23	2:D:62:LEU:N	2.19	0.57
2:D:454:LEU:CD2	2:D:496:HIS:HB2	2.35	0.57
2:F:15:LEU:HA	2:F:85:GLN:HE22	1.70	0.57
2:F:139:PHE:CE2	2:F:161:THR:HG21	2.40	0.57
1:G:282:PRO:O	1:G:322:ASN:HB2	2.05	0.57
2:H:554:ARG:HG2	2:H:554:ARG:NH1	2.16	0.57
1:I:277:PHE:HD1	1:I:324:LEU:HD12	1.69	0.57
1:I:282:PRO:O	1:I:284:GLU:N	2.38	0.57
1:I:373:ILE:CD1	1:I:459:LEU:HD11	2.35	0.57
1:I:479:GLY:CA	2:J:415:PHE:CE1	2.88	0.57
2:L:133:LYS:HD2	2:L:133:LYS:N	2.19	0.57
2:L:507:GLY:HA3	2:L:510:ILE:HG22	1.87	0.57
1:M:279:LEU:CB	1:M:322:ASN:HB2	2.34	0.57
1:O:262:LEU:HD21	1:O:333:ALA:HB2	1.85	0.57
2:P:117:ILE:HD12	2:P:117:ILE:N	2.19	0.57
2:P:267:LEU:CD2	2:P:300:PRO:HB3	2.35	0.57
2:P:458:LEU:HD22	2:P:474:LEU:HB3	1.85	0.57
1:C:3:ASP:O	1:C:7:ALA:HB2	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:57:ALA:C	2:F:59:ASP:H	2.10	0.57
2:F:73:ASP:CA	2:F:273:MET:HE1	2.35	0.57
1:G:420:PHE:CD2	1:G:431:GLU:HA	2.39	0.57
2:H:185:PRO:HB2	2:H:188:LYS:HD3	1.84	0.57
2:H:267:LEU:CD2	2:H:300:PRO:HB3	2.33	0.57
2:H:343:ASP:O	2:H:345:ASN:N	2.38	0.57
2:H:400:LEU:HD21	2:H:522:LEU:HD21	1.87	0.57
2:J:334:MET:HG2	2:J:367:ASP:HB3	1.87	0.57
1:K:266:GLN:NE2	1:K:318:GLU:HB3	2.19	0.57
1:K:412:TYR:O	1:K:438:PHE:HA	2.05	0.57
2:L:436:ALA:HB1	2:L:449:VAL:HG11	1.86	0.57
2:N:15:LEU:HA	2:N:85:GLN:HE22	1.68	0.57
2:N:199:ASN:HA	2:N:202:LYS:HG3	1.87	0.57
2:N:420:GLN:HE21	2:N:431:ILE:HG12	1.69	0.57
1:O:365:THR:HG23	1:O:475:ARG:CB	2.34	0.57
1:O:440:PRO:HG3	2:P:360:HIS:NE2	2.19	0.57
2:P:147:HIS:CE1	2:P:159:ILE:H	2.23	0.57
1:C:44:LEU:HB3	1:C:51:ILE:HD11	1.86	0.57
1:C:45:GLN:O	1:C:48:GLY:O	2.22	0.57
1:E:217:VAL:CG2	2:H:509:GLU:HB2	2.31	0.57
1:E:475:ARG:HG3	1:E:475:ARG:NH1	2.14	0.57
2:F:152:ARG:HD3	2:F:156:LEU:HD11	1.87	0.57
1:G:367:LEU:HD23	1:G:367:LEU:C	2.30	0.57
1:G:484:LEU:HG	2:H:465:ASN:ND2	2.20	0.57
2:H:249:ARG:C	2:H:250:ASN:HD22	2.12	0.57
2:J:20:THR:HB	2:J:23:GLU:H	1.69	0.57
2:L:186:LEU:CD2	2:L:238:ASN:H	2.18	0.57
2:L:207:LEU:HD21	2:L:237:ILE:HG23	1.87	0.57
1:M:286:LEU:CG	1:M:320:ARG:HH12	2.18	0.57
2:N:308:MET:HE2	2:N:308:MET:O	2.03	0.57
2:N:385:TYR:CE1	1:O:349:LYS:HE2	2.39	0.57
2:P:431:ILE:H	2:P:431:ILE:CD1	2.03	0.57
1:A:226:PRO:HG2	1:A:486:MET:HE1	1.85	0.57
2:B:33:LEU:HD22	2:B:67:VAL:HG22	1.87	0.57
2:B:42:LYS:HB3	2:B:58:SER:HB3	1.87	0.57
2:B:77:LEU:HD23	2:B:77:LEU:C	2.30	0.57
2:B:207:LEU:HD21	2:B:237:ILE:HG23	1.87	0.57
1:C:440:PRO:HG3	2:D:360:HIS:NE2	2.19	0.57
2:D:455:LEU:HB3	2:D:456:PRO:HD3	1.87	0.57
1:E:292:TYR:O	1:E:296:VAL:HG23	2.05	0.57
2:F:236:ILE:N	2:F:236:ILE:CD1	2.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:569:ILE:HD12	2:F:569:ILE:O	2.05	0.57
1:G:268:HIS:C	1:G:270:ALA:H	2.12	0.57
2:H:73:ASP:CA	2:H:273:MET:HE1	2.35	0.57
2:H:201:TYR:C	2:H:203:THR:H	2.13	0.57
2:H:414:THR:HG23	2:H:457:GLY:HA3	1.87	0.57
2:J:129:ILE:HD12	2:J:251:ILE:HD12	1.87	0.57
2:L:129:ILE:HD12	2:L:251:ILE:HD12	1.85	0.57
1:M:216:GLY:O	2:P:513:GLY:HA3	2.05	0.57
2:P:20:THR:HB	2:P:23:GLU:H	1.70	0.57
2:P:71:ARG:CG	2:P:355:ARG:NH1	2.66	0.57
1:A:498:GLU:O	1:A:500:ARG:N	2.37	0.57
2:B:172:THR:O	2:B:223:ILE:HA	2.05	0.57
1:C:181:PHE:C	1:C:181:PHE:CD2	2.81	0.57
1:C:299:THR:HG21	1:C:305:TYR:CD1	2.40	0.57
1:C:305:TYR:HB3	1:C:444:LEU:HD12	1.87	0.57
1:C:437:VAL:O	1:C:438:PHE:C	2.48	0.57
2:D:71:ARG:CG	2:D:355:ARG:NH1	2.68	0.57
2:D:90:ARG:HB3	2:D:90:ARG:NH1	2.20	0.57
1:E:449:PRO:HG2	1:E:452:VAL:HG23	1.86	0.57
2:F:533:TYR:HA	2:F:552:PHE:O	2.04	0.57
2:H:124:ALA:CB	2:H:300:PRO:HD3	2.34	0.57
2:H:181:ILE:HD11	2:H:194:ALA:HB2	1.87	0.57
2:H:436:ALA:HB1	2:H:449:VAL:CG1	2.35	0.57
2:J:142:LEU:C	2:J:142:LEU:HD23	2.30	0.57
2:J:391:PHE:HD2	2:J:392:PRO:CD	2.17	0.57
2:L:414:THR:HG23	2:L:457:GLY:HA3	1.86	0.57
2:P:179:SER:N	2:P:195:CYS:HB2	2.19	0.57
2:P:381:LEU:CD2	2:P:382:PRO:HD2	2.24	0.57
2:P:436:ALA:HB1	2:P:449:VAL:HG11	1.86	0.57
2:P:508:PHE:HE1	2:P:562:GLY:CA	2.14	0.57
2:B:128:ASN:H	2:B:250:ASN:ND2	2.03	0.56
2:B:152:ARG:HD3	2:B:156:LEU:HD11	1.86	0.56
2:B:334:MET:HG2	2:B:367:ASP:HB3	1.87	0.56
2:F:20:THR:HB	2:F:23:GLU:H	1.70	0.56
1:G:273:GLN:O	1:G:274:HIS:C	2.48	0.56
1:G:474:ILE:C	1:G:476:GLU:H	2.13	0.56
2:J:71:ARG:NH2	2:J:366:GLU:OE2	2.35	0.56
2:J:142:LEU:HD23	2:J:142:LEU:O	2.05	0.56
1:M:261:ALA:C	1:M:263:PHE:H	2.12	0.56
1:M:440:PRO:HG3	2:N:360:HIS:NE2	2.19	0.56
2:N:44:ILE:C	2:N:46:SER:N	2.63	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:308:MET:SD	2:N:346:GLN:CG	2.93	0.56
2:N:517:ARG:HG3	2:N:521:LEU:HD23	1.87	0.56
1:O:316:LEU:O	1:O:316:LEU:HD23	2.05	0.56
2:P:334:MET:HG2	2:P:367:ASP:HB3	1.86	0.56
1:A:226:PRO:HG2	1:A:486:MET:CE	2.35	0.56
1:C:279:LEU:HD12	1:C:322:ASN:HB3	1.86	0.56
2:D:221:PRO:HB2	2:D:234:PRO:HG2	1.87	0.56
2:F:186:LEU:CD2	2:F:238:ASN:H	2.18	0.56
1:G:192:LEU:HD23	1:G:193:SER:N	2.20	0.56
1:G:350:TYR:HB2	1:G:376:VAL:HG13	1.87	0.56
1:G:466:MET:HG2	1:G:474:ILE:HB	1.87	0.56
2:H:192:TYR:N	2:H:192:TYR:CD1	2.73	0.56
1:K:397:LYS:O	1:K:495:LEU:HD13	2.05	0.56
2:L:381:LEU:CD2	2:L:382:PRO:HD2	2.30	0.56
1:M:417:MET:HB3	2:N:374:TYR:CE1	2.41	0.56
1:A:468:LYS:O	1:A:469:TYR:HB2	2.05	0.56
2:B:133:LYS:HD2	2:B:133:LYS:N	2.15	0.56
1:C:37:VAL:HG13	1:C:38:VAL:H	1.69	0.56
1:C:108:MET:C	1:C:110:ASN:H	2.12	0.56
1:C:388:MET:HE3	1:C:405:PHE:CD1	2.40	0.56
1:C:414:GLU:CB	1:C:415:PRO:CD	2.81	0.56
2:D:157:VAL:HG11	2:D:266:VAL:HG21	1.87	0.56
2:D:267:LEU:CD2	2:D:300:PRO:HB3	2.35	0.56
2:D:360:HIS:CD2	2:D:362:CYS:H	2.23	0.56
2:D:414:THR:HG23	2:D:457:GLY:HA3	1.86	0.56
1:E:316:LEU:HD23	1:E:316:LEU:O	2.05	0.56
2:F:420:GLN:NE2	2:F:431:ILE:HG21	2.20	0.56
2:F:511:ILE:HG22	2:F:561:LEU:HD21	1.88	0.56
2:F:547:ARG:HH11	2:F:547:ARG:HG2	1.69	0.56
1:G:236:GLN:O	1:G:240:GLU:HG3	2.06	0.56
1:G:329:THR:HG1	3:G:509:PHE:HB3	1.70	0.56
2:H:122:VAL:HG21	2:H:299:PHE:CD2	2.39	0.56
2:H:454:LEU:HD21	2:H:496:HIS:HB2	1.86	0.56
2:H:533:TYR:H	2:H:533:TYR:HD2	1.52	0.56
2:H:569:ILE:HD12	2:H:574:LEU:HB2	1.85	0.56
1:I:200:GLY:C	1:I:202:TRP:H	2.13	0.56
2:J:33:LEU:HD22	2:J:67:VAL:HG22	1.87	0.56
2:J:131:PHE:CE2	2:J:136:TYR:HA	2.40	0.56
2:J:177:ARG:HG2	2:J:178:PRO:HD2	1.85	0.56
2:J:436:ALA:HB1	2:J:449:VAL:CG1	2.34	0.56
1:K:236:GLN:O	1:K:240:GLU:HG3	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:364:ALA:O	1:K:475:ARG:NE	2.37	0.56
1:M:475:ARG:HH11	1:M:475:ARG:HG3	1.71	0.56
2:N:124:ALA:CB	2:N:300:PRO:HD3	2.35	0.56
2:N:128:ASN:H	2:N:250:ASN:ND2	2.03	0.56
2:N:575:THR:O	1:O:197:ILE:HG21	2.04	0.56
1:O:425:GLY:O	1:O:426:LEU:HG	2.05	0.56
2:P:52:VAL:HG23	2:P:52:VAL:O	2.04	0.56
2:P:515:LEU:O	2:P:515:LEU:HD23	2.05	0.56
2:D:172:THR:O	2:D:223:ILE:HA	2.06	0.56
1:E:287:GLN:OE1	1:E:320:ARG:NH1	2.38	0.56
1:E:350:TYR:HB2	1:E:376:VAL:HG13	1.86	0.56
2:F:234:PRO:HB2	2:F:235:PRO:CD	2.19	0.56
1:I:468:LYS:O	1:I:469:TYR:CD1	2.57	0.56
1:I:477:LEU:HD12	1:I:478:VAL:CG2	2.36	0.56
2:J:515:LEU:HD23	2:J:515:LEU:O	2.04	0.56
1:K:253:GLU:OE1	1:K:257:TRP:HB2	2.06	0.56
1:M:286:LEU:CD1	1:M:320:ARG:HH12	2.18	0.56
1:M:367:LEU:HD23	1:M:474:ILE:HG22	1.87	0.56
2:N:124:ALA:HA	2:N:287:ALA:HB2	1.87	0.56
2:N:301:GLU:O	2:N:303:ALA:N	2.38	0.56
2:N:508:PHE:CD1	2:N:563:VAL:HG23	2.40	0.56
2:P:215:GLU:OE1	2:P:221:PRO:HD2	2.05	0.56
2:P:236:ILE:N	2:P:236:ILE:CD1	2.68	0.56
1:A:353:ILE:HG23	1:A:373:ILE:HG22	1.88	0.56
2:B:503:ASN:ND2	2:B:504:LYS:H	2.04	0.56
1:C:480:HIS:CD2	1:C:480:HIS:N	2.72	0.56
2:D:497:LEU:C	2:D:497:LEU:HD23	2.30	0.56
1:E:360:GLU:HG3	1:E:361:THR:N	2.20	0.56
1:E:437:VAL:O	1:E:438:PHE:C	2.48	0.56
2:J:186:LEU:HD23	2:J:237:ILE:HG22	1.86	0.56
1:K:437:VAL:O	1:K:438:PHE:C	2.47	0.56
1:K:479:GLY:HA3	2:L:415:PHE:HE1	1.70	0.56
2:L:360:HIS:CD2	2:L:362:CYS:H	2.23	0.56
2:L:426:LYS:O	2:L:568:VAL:HG12	2.05	0.56
1:M:267:GLN:CA	2:N:152:ARG:HD2	2.35	0.56
2:N:107:LYS:HE2	2:N:109:ILE:HD11	1.85	0.56
2:N:444:THR:HG22	2:N:447:PHE:CD1	2.41	0.56
2:P:391:PHE:HD2	2:P:392:PRO:CD	2.17	0.56
1:A:205:ARG:N	1:A:206:PRO:HD2	2.21	0.56
1:A:406:LYS:HD2	2:B:29:PHE:CD1	2.40	0.56
1:C:228:LEU:HD12	2:D:411:GLU:CD	2.31	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:569:ILE:HD12	2:D:569:ILE:O	2.06	0.56
1:E:325:ARG:NH2	1:E:356:VAL:HG13	2.20	0.56
2:F:172:THR:O	2:F:223:ILE:HA	2.05	0.56
1:G:299:THR:HG21	1:G:305:TYR:CD1	2.41	0.56
2:H:454:LEU:CD2	2:H:496:HIS:HB2	2.35	0.56
1:I:414:GLU:HB2	1:I:415:PRO:CD	2.22	0.56
1:K:279:LEU:HD23	1:K:279:LEU:H	1.69	0.56
2:L:142:LEU:HD23	2:L:142:LEU:C	2.31	0.56
2:L:357:ASP:OD1	2:L:358:ILE:HD12	2.06	0.56
2:L:400:LEU:HD21	2:L:522:LEU:HD21	1.87	0.56
2:L:455:LEU:HB3	2:L:456:PRO:HD3	1.88	0.56
1:M:426:LEU:HB3	1:M:428:LYS:HG2	1.88	0.56
2:N:6:VAL:HG21	2:N:11:LEU:HD12	1.86	0.56
2:N:117:ILE:HD12	2:N:117:ILE:N	2.20	0.56
2:P:189:THR:HG23	2:P:190:LYS:H	1.70	0.56
2:P:268:ASP:O	2:P:272:THR:HG22	2.05	0.56
1:A:247:PRO:HB3	2:B:391:PHE:CE1	2.40	0.56
2:D:189:THR:HG23	2:D:190:LYS:H	1.70	0.56
2:D:451:ARG:HH22	2:D:478:SER:HB3	1.71	0.56
1:E:296:VAL:O	1:E:300:HIS:HB2	2.05	0.56
2:H:85:GLN:HB3	2:H:91:ILE:HG21	1.88	0.56
2:H:497:LEU:HD23	2:H:497:LEU:C	2.30	0.56
2:J:193:THR:HG22	2:J:194:ALA:N	2.21	0.56
1:K:296:VAL:O	1:K:300:HIS:HB2	2.05	0.56
1:K:413:THR:HB	1:K:437:VAL:H	1.71	0.56
1:K:437:VAL:HG13	1:K:455:ILE:HG22	1.88	0.56
2:L:172:THR:O	2:L:223:ILE:HA	2.06	0.56
2:L:175:ALA:CB	2:L:219:LEU:HB3	2.32	0.56
2:L:301:GLU:O	2:L:301:GLU:HG3	2.06	0.56
2:L:444:THR:HG22	2:L:447:PHE:CD1	2.41	0.56
2:L:498:CYS:HB2	2:L:582:GLU:HG3	1.88	0.56
2:P:249:ARG:C	2:P:250:ASN:HD22	2.14	0.56
2:P:547:ARG:HG2	2:P:547:ARG:HH11	1.71	0.56
2:D:77:LEU:C	2:D:77:LEU:HD23	2.30	0.56
2:D:515:LEU:HD23	2:D:515:LEU:C	2.31	0.56
2:D:517:ARG:HG3	2:D:521:LEU:HD23	1.88	0.56
2:D:547:ARG:HG2	2:D:547:ARG:HH11	1.71	0.56
1:E:373:ILE:CD1	1:E:459:LEU:HD11	2.36	0.56
2:F:77:LEU:HD23	2:F:77:LEU:C	2.30	0.56
1:I:417:MET:HB3	2:J:374:TYR:HE1	1.70	0.56
1:K:438:PHE:CD1	1:K:454:VAL:HG22	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:357:ASP:O	2:L:359:ILE:HG23	2.05	0.56
1:O:285:ALA:HB2	1:O:322:ASN:OD1	2.05	0.56
2:P:188:LYS:HE2	2:P:201:TYR:OH	2.05	0.56
2:P:444:THR:HG22	2:P:447:PHE:CD1	2.41	0.56
1:A:484:LEU:HG	2:B:465:ASN:ND2	2.21	0.56
2:B:569:ILE:HD13	2:B:576:MET:O	2.05	0.56
1:C:78:ALA:O	1:C:82:ARG:HG3	2.06	0.56
1:C:80:VAL:CG2	1:C:94:LEU:HD11	2.35	0.56
1:C:360:GLU:C	1:C:362:LEU:H	2.14	0.56
1:C:474:ILE:C	1:C:476:GLU:N	2.52	0.56
1:E:288:LEU:CD1	1:E:293:VAL:HG21	2.35	0.56
1:E:413:THR:HB	1:E:437:VAL:H	1.70	0.56
1:G:388:MET:HE2	2:H:379:MET:HG2	1.88	0.56
2:H:132:THR:HG22	2:H:135:ARG:H	1.70	0.56
2:J:414:THR:HG23	2:J:457:GLY:HA3	1.87	0.56
2:L:38:ILE:HD13	2:L:63:TYR:HE1	1.71	0.56
1:M:353:ILE:HG12	1:M:373:ILE:HB	1.87	0.56
1:A:228:LEU:HD12	2:B:411:GLU:CD	2.30	0.56
1:A:274:HIS:O	1:A:275:ASP:HB2	2.05	0.56
2:B:561:LEU:HD23	2:B:562:GLY:N	2.21	0.56
1:C:360:GLU:OE1	1:C:362:LEU:HD23	2.05	0.56
2:D:470:LEU:HB2	2:D:471:PRO:CD	2.36	0.56
2:F:326:ASN:O	2:F:330:LEU:HD23	2.06	0.56
2:F:426:LYS:O	2:F:568:VAL:HG12	2.05	0.56
2:F:566:PRO:HB3	1:G:197:ILE:HG12	1.87	0.56
2:H:58:SER:C	2:H:60:VAL:H	2.14	0.56
2:H:514:LEU:HD23	2:H:581:LEU:HD23	1.86	0.56
1:I:412:TYR:O	1:I:438:PHE:HA	2.05	0.56
2:J:281:GLN:HG2	2:J:282:PHE:CD1	2.41	0.56
1:K:417:MET:HB3	2:L:374:TYR:HE1	1.71	0.56
2:N:531:GLY:O	2:N:532:GLY:O	2.24	0.56
2:P:42:LYS:HG3	2:P:43:GLU:N	2.20	0.56
2:P:172:THR:O	2:P:223:ILE:HA	2.06	0.56
2:P:186:LEU:HD23	2:P:237:ILE:HG22	1.87	0.56
2:B:360:HIS:CD2	2:B:362:CYS:H	2.23	0.55
2:B:576:MET:H	2:B:576:MET:HE2	1.71	0.55
1:C:40:ALA:O	1:C:43:SER:N	2.39	0.55
2:D:179:SER:N	2:D:195:CYS:HB2	2.22	0.55
2:D:436:ALA:HB1	2:D:449:VAL:HG11	1.87	0.55
1:E:267:GLN:HB3	2:F:152:ARG:CD	2.31	0.55
1:E:349:LYS:HG2	1:E:377:VAL:HG22	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:267:GLN:CB	2:J:152:ARG:HD2	2.36	0.55
1:I:417:MET:HB3	2:J:374:TYR:CE1	2.41	0.55
1:I:494:ARG:C	1:I:496:ASP:H	2.14	0.55
2:J:262:LYS:O	2:J:266:VAL:HG23	2.06	0.55
2:J:449:VAL:HG12	2:J:450:ALA:N	2.19	0.55
2:L:517:ARG:HG3	2:L:521:LEU:HD23	1.87	0.55
1:M:388:MET:HE3	1:M:405:PHE:CD1	2.41	0.55
2:N:400:LEU:HD21	2:N:522:LEU:HD21	1.88	0.55
2:P:343:ASP:O	2:P:345:ASN:N	2.40	0.55
1:A:298:ARG:HG2	1:A:299:THR:N	2.21	0.55
1:A:298:ARG:HG3	1:A:298:ARG:NH1	2.21	0.55
2:B:188:LYS:HE2	2:B:201:TYR:OH	2.05	0.55
2:B:436:ALA:HB1	2:B:449:VAL:CG1	2.36	0.55
1:G:355:ARG:HG2	1:G:357:PHE:CE1	2.41	0.55
1:G:420:PHE:CE1	2:H:29:PHE:HE1	2.24	0.55
1:G:437:VAL:O	1:G:438:PHE:C	2.48	0.55
2:H:6:VAL:CG2	2:H:11:LEU:HD12	2.36	0.55
2:H:215:GLU:OE1	2:H:221:PRO:HD2	2.04	0.55
2:H:236:ILE:N	2:H:236:ILE:CD1	2.69	0.55
1:I:477:LEU:HD12	1:I:477:LEU:C	2.31	0.55
2:J:569:ILE:HD12	2:J:569:ILE:O	2.05	0.55
1:K:438:PHE:HD1	1:K:454:VAL:HG22	1.71	0.55
2:L:193:THR:HG22	2:L:194:ALA:N	2.20	0.55
2:L:268:ASP:O	2:L:272:THR:HG22	2.06	0.55
1:M:413:THR:HB	1:M:437:VAL:H	1.71	0.55
1:O:388:MET:HE3	1:O:405:PHE:CD1	2.41	0.55
1:O:424:GLN:O	1:O:426:LEU:N	2.39	0.55
2:P:49:GLN:O	2:P:51:ASN:N	2.39	0.55
2:P:90:ARG:NH1	2:P:90:ARG:HB3	2.21	0.55
2:P:305:ARG:NH1	2:P:358:ILE:O	2.35	0.55
1:C:151:LEU:H	1:C:151:LEU:CD2	2.18	0.55
1:C:197:ILE:H	1:C:197:ILE:HD12	1.71	0.55
1:C:417:MET:HB3	2:D:374:TYR:CE1	2.39	0.55
2:D:381:LEU:CD2	2:D:382:PRO:HD2	2.28	0.55
2:H:221:PRO:HB2	2:H:234:PRO:HG2	1.89	0.55
1:I:223:HIS:HB2	2:J:410:THR:HG23	1.88	0.55
1:I:233:GLN:O	1:I:237:ILE:HG12	2.07	0.55
2:J:91:ILE:HG12	2:J:92:LYS:N	2.19	0.55
2:J:547:ARG:NH2	1:K:210:TYR:HB2	2.21	0.55
2:L:6:VAL:HG21	2:L:11:LEU:HD12	1.88	0.55
2:L:262:LYS:O	2:L:266:VAL:HG23	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:221:PRO:HB2	2:N:234:PRO:HG2	1.88	0.55
2:N:458:LEU:HD22	2:N:474:LEU:HB3	1.89	0.55
1:O:298:ARG:HG2	1:O:299:THR:N	2.22	0.55
2:B:62:LEU:N	2:B:62:LEU:HD23	2.22	0.55
2:B:449:VAL:HG12	2:B:450:ALA:N	2.20	0.55
2:B:485:SER:C	2:B:486:ASN:HD22	2.14	0.55
2:B:515:LEU:HD11	2:B:551:ILE:HG21	1.88	0.55
1:C:58:THR:O	1:C:169:THR:HA	2.07	0.55
1:C:177:LYS:HG2	1:C:181:PHE:CD1	2.42	0.55
1:C:193:SER:O	1:C:197:ILE:HD12	2.05	0.55
2:D:554:ARG:HG2	2:D:554:ARG:NH1	2.19	0.55
1:E:362:LEU:HD21	1:E:475:ARG:HH22	1.72	0.55
2:F:215:GLU:OE1	2:F:221:PRO:HD2	2.06	0.55
2:F:554:ARG:HG2	2:F:554:ARG:NH1	2.21	0.55
1:G:465:THR:O	1:G:469:TYR:HB2	2.05	0.55
2:H:508:PHE:CD1	2:H:563:VAL:HG23	2.42	0.55
1:I:395:PHE:CE2	1:I:432:VAL:HG12	2.42	0.55
2:J:122:VAL:CG2	2:J:299:PHE:CD2	2.89	0.55
1:K:356:VAL:C	1:K:357:PHE:CD1	2.84	0.55
1:K:358:ARG:HH11	1:K:358:ARG:HG3	1.72	0.55
2:L:470:LEU:HB2	2:L:471:PRO:CD	2.36	0.55
2:N:201:TYR:C	2:N:203:THR:H	2.14	0.55
2:P:62:LEU:HD23	2:P:62:LEU:H	1.71	0.55
2:P:304:TYR:CE1	2:P:353:PRO:HD3	2.42	0.55
2:P:436:ALA:HB1	2:P:449:VAL:CG1	2.36	0.55
1:A:360:GLU:O	1:A:361:THR:HG23	2.06	0.55
2:B:236:ILE:N	2:B:236:ILE:CD1	2.70	0.55
1:C:89:LEU:O	1:C:90:ALA:C	2.50	0.55
1:C:189:GLU:HB3	1:C:206:PRO:O	2.07	0.55
1:C:422:TYR:OH	1:C:427:LYS:HG3	2.06	0.55
2:D:199:ASN:HA	2:D:202:LYS:HG3	1.88	0.55
2:D:508:PHE:CD1	2:D:563:VAL:HG23	2.42	0.55
1:E:271:ARG:C	1:E:272:ASP:OD1	2.50	0.55
2:F:387:ILE:HG13	1:G:393:GLU:HG2	1.89	0.55
2:F:497:LEU:HD23	2:F:497:LEU:C	2.32	0.55
2:H:301:GLU:O	2:H:301:GLU:HG3	2.07	0.55
2:J:236:ILE:N	2:J:236:ILE:CD1	2.70	0.55
1:K:185:ILE:C	1:K:187:LYS:H	2.15	0.55
2:L:201:TYR:C	2:L:203:THR:H	2.14	0.55
1:M:196:MET:HA	1:M:201:SER:HB3	1.88	0.55
1:O:484:LEU:HG	2:P:465:ASN:CG	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:454:LEU:CD2	2:P:496:HIS:HB2	2.36	0.55
2:P:470:LEU:HB2	2:P:471:PRO:CD	2.37	0.55
1:A:437:VAL:O	1:A:438:PHE:C	2.48	0.55
1:C:266:GLN:HB2	1:C:312:TYR:CE2	2.41	0.55
2:F:331:LEU:HD21	2:F:368:ALA:HB2	1.89	0.55
2:H:199:ASN:HA	2:H:202:LYS:HG3	1.88	0.55
2:H:268:ASP:O	2:H:272:THR:HG22	2.07	0.55
2:J:244:ILE:H	2:J:244:ILE:HD12	1.69	0.55
1:M:423:HIS:C	1:M:425:GLY:H	2.14	0.55
2:N:122:VAL:HG23	2:N:299:PHE:CG	2.42	0.55
2:N:192:TYR:N	2:N:192:TYR:CD1	2.75	0.55
2:N:308:MET:HE2	2:N:308:MET:C	2.31	0.55
1:O:268:HIS:ND1	1:O:270:ALA:HB3	2.21	0.55
2:P:77:LEU:HD23	2:P:77:LEU:C	2.32	0.55
1:A:492:LEU:HD22	2:D:399:LEU:HB3	1.88	0.55
2:B:39:THR:O	2:B:62:LEU:HD23	2.06	0.55
1:C:236:GLN:O	1:C:240:GLU:HG3	2.07	0.55
2:D:147:HIS:CE1	2:D:159:ILE:H	2.24	0.55
2:D:193:THR:HG22	2:D:194:ALA:N	2.22	0.55
2:F:124:ALA:HA	2:F:287:ALA:CB	2.37	0.55
2:F:308:MET:HE2	2:F:308:MET:C	2.31	0.55
2:F:462:ILE:HG23	2:F:472:LEU:CD1	2.26	0.55
1:G:366:HIS:CD2	1:G:473:ASN:HD21	2.24	0.55
1:I:188:GLN:HA	1:I:206:PRO:O	2.06	0.55
1:I:281:ASP:C	1:I:283:ALA:N	2.54	0.55
1:K:420:PHE:HD2	1:K:431:GLU:HA	1.71	0.55
2:L:77:LEU:C	2:L:77:LEU:HD23	2.32	0.55
2:L:221:PRO:HB2	2:L:234:PRO:HG2	1.89	0.55
2:N:324:PRO:HG3	2:N:344:GLY:O	2.07	0.55
2:N:357:ASP:OD1	2:N:358:ILE:HD12	2.07	0.55
2:N:449:VAL:HG12	2:N:450:ALA:N	2.21	0.55
1:O:373:ILE:HD13	1:O:459:LEU:HD11	1.88	0.55
2:B:509:GLU:O	1:C:217:VAL:HG23	2.07	0.55
1:C:64:THR:CG2	1:C:65:ALA:N	2.69	0.55
1:C:124:ARG:HD3	1:C:126:PHE:CZ	2.41	0.55
2:D:449:VAL:HG12	2:D:450:ALA:N	2.21	0.55
2:F:91:ILE:HG12	2:F:92:LYS:N	2.22	0.55
2:F:181:ILE:HD11	2:F:194:ALA:HB2	1.89	0.55
2:F:343:ASP:O	2:F:345:ASN:N	2.40	0.55
2:H:207:LEU:HD21	2:H:237:ILE:HG23	1.87	0.55
1:K:211:ASN:ND2	1:K:211:ASN:H	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:388:MET:HE2	2:L:379:MET:HG2	1.89	0.55
2:L:179:SER:N	2:L:195:CYS:HB2	2.22	0.55
2:L:264:LYS:HD2	2:L:301:GLU:CD	2.31	0.55
2:L:454:LEU:CD2	2:L:496:HIS:HB2	2.36	0.55
2:N:27:LEU:HD12	2:N:84:LEU:HD13	1.89	0.55
2:N:514:LEU:HD23	2:N:581:LEU:HD23	1.89	0.55
2:N:565:HIS:CD2	2:N:567:ASP:HB2	2.42	0.55
1:O:437:VAL:O	1:O:438:PHE:C	2.48	0.55
2:P:41:GLU:CB	2:P:58:SER:HA	2.34	0.55
2:P:157:VAL:HG11	2:P:266:VAL:HG21	1.89	0.55
2:P:199:ASN:HA	2:P:202:LYS:HG3	1.89	0.55
2:P:401:ARG:HD2	2:P:411:GLU:OE2	2.06	0.55
2:P:462:ILE:HG23	2:P:472:LEU:CD1	2.30	0.55
2:D:124:ALA:HA	2:D:287:ALA:CB	2.36	0.55
2:D:167:LEU:HD13	2:D:171:PHE:CE2	2.41	0.55
2:D:343:ASP:O	2:D:345:ASN:N	2.40	0.55
2:F:185:PRO:HB2	2:F:188:LYS:HD3	1.89	0.55
2:F:458:LEU:HD22	2:F:474:LEU:HB3	1.87	0.55
2:H:128:ASN:H	2:H:250:ASN:ND2	2.04	0.55
2:H:547:ARG:HG2	2:H:547:ARG:HH11	1.72	0.55
1:I:266:GLN:HG2	1:I:271:ARG:NH1	2.22	0.55
1:I:298:ARG:HG2	1:I:299:THR:N	2.21	0.55
2:J:199:ASN:HA	2:J:202:LYS:HG3	1.88	0.55
2:L:61:VAL:HG12	2:L:62:LEU:N	2.21	0.55
2:L:271:VAL:HG22	2:L:284:VAL:CG2	2.36	0.55
1:M:233:GLN:O	1:M:237:ILE:HG12	2.07	0.55
2:N:455:LEU:HB3	2:N:456:PRO:HD3	1.89	0.55
2:P:133:LYS:HD2	2:P:133:LYS:N	2.17	0.55
2:P:271:VAL:HG22	2:P:284:VAL:CG2	2.35	0.55
1:A:280:ARG:HH11	1:A:280:ARG:HG3	1.71	0.55
2:D:85:GLN:HB3	2:D:91:ILE:HG21	1.88	0.55
2:D:305:ARG:NH1	2:D:358:ILE:O	2.40	0.55
2:D:515:LEU:HD11	2:D:551:ILE:HG21	1.87	0.55
2:H:142:LEU:HD23	2:H:142:LEU:O	2.07	0.55
2:J:271:VAL:HG22	2:J:284:VAL:CG2	2.36	0.55
2:L:569:ILE:HD12	2:L:569:ILE:O	2.06	0.55
1:M:271:ARG:HG2	1:M:271:ARG:HH11	1.72	0.55
2:N:207:LEU:HD21	2:N:237:ILE:HG23	1.87	0.55
2:J:565:HIS:CD2	2:J:567:ASP:HB2	2.42	0.54
1:M:373:ILE:CD1	1:M:459:LEU:HD11	2.37	0.54
2:N:179:SER:N	2:N:195:CYS:HB2	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:282:PRO:O	1:O:283:ALA:C	2.50	0.54
2:P:221:PRO:HB2	2:P:234:PRO:HG2	1.88	0.54
2:B:351:ILE:N	2:B:351:ILE:HD12	2.23	0.54
2:B:458:LEU:HD22	2:B:474:LEU:HB3	1.89	0.54
1:C:37:VAL:CG1	1:C:38:VAL:N	2.68	0.54
1:C:268:HIS:HD2	1:C:270:ALA:HB3	1.72	0.54
2:D:128:ASN:H	2:D:250:ASN:ND2	2.04	0.54
1:I:414:GLU:CB	1:I:415:PRO:CD	2.79	0.54
2:J:215:GLU:OE1	2:J:221:PRO:HD2	2.07	0.54
1:K:298:ARG:HG2	1:K:299:THR:N	2.21	0.54
2:L:199:ASN:HA	2:L:202:LYS:HG3	1.89	0.54
2:L:470:LEU:HB2	2:L:471:PRO:HD3	1.90	0.54
2:L:515:LEU:HD23	2:L:515:LEU:O	2.06	0.54
2:N:350:GLU:O	2:N:352:PRO:HD3	2.08	0.54
2:N:360:HIS:CD2	2:N:362:CYS:H	2.26	0.54
2:N:426:LYS:O	2:N:568:VAL:HG12	2.06	0.54
2:N:515:LEU:HD23	2:N:515:LEU:O	2.07	0.54
2:P:128:ASN:H	2:P:250:ASN:ND2	2.04	0.54
2:P:515:LEU:HD23	2:P:515:LEU:C	2.33	0.54
1:A:363:ASP:HB3	1:A:366:HIS:O	2.08	0.54
1:A:408:ALA:HB2	1:A:418:GLU:CG	2.36	0.54
1:A:427:LYS:HG2	1:A:427:LYS:O	2.06	0.54
2:B:201:TYR:C	2:B:203:THR:H	2.13	0.54
1:C:296:VAL:O	1:C:300:HIS:HB2	2.06	0.54
1:C:359:ASN:OD1	2:D:443:LYS:HE2	2.07	0.54
1:C:388:MET:HE2	2:D:379:MET:HG2	1.88	0.54
1:C:414:GLU:CG	1:C:415:PRO:HD3	2.37	0.54
2:D:192:TYR:N	2:D:192:TYR:CD1	2.75	0.54
2:D:334:MET:HG2	2:D:367:ASP:HB3	1.90	0.54
2:D:436:ALA:HB1	2:D:449:VAL:CG1	2.37	0.54
2:F:193:THR:HG22	2:F:194:ALA:N	2.22	0.54
2:F:566:PRO:CB	1:G:197:ILE:HG23	2.33	0.54
1:G:414:GLU:HB2	1:G:415:PRO:CD	2.30	0.54
2:H:186:LEU:HD23	2:H:237:ILE:HG22	1.89	0.54
2:H:193:THR:HG22	2:H:194:ALA:N	2.22	0.54
1:I:212:PHE:HE1	2:L:537:ALA:HA	1.72	0.54
2:J:519:MET:HE2	2:J:519:MET:HA	1.88	0.54
1:K:210:TYR:O	1:K:212:PHE:HD1	1.90	0.54
2:L:117:ILE:HD12	2:L:117:ILE:N	2.22	0.54
1:M:268:HIS:HD2	1:M:271:ARG:HB2	1.72	0.54
1:M:316:LEU:HD23	1:M:316:LEU:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:244:ILE:H	2:N:244:ILE:HD12	1.73	0.54
2:N:262:LYS:O	2:N:266:VAL:HG23	2.06	0.54
1:A:214:ALA:C	1:A:216:GLY:H	2.15	0.54
1:A:413:THR:CG2	3:A:509:PHE:HZ	2.18	0.54
1:C:50:VAL:CA	1:C:180:ALA:HB3	2.37	0.54
1:C:403:LEU:HD22	1:C:419:VAL:HG22	1.90	0.54
2:D:535:ILE:HD12	2:D:535:ILE:N	2.17	0.54
2:F:6:VAL:HG21	2:F:11:LEU:HD12	1.89	0.54
1:G:391:LEU:HD13	1:G:419:VAL:HG21	1.89	0.54
2:H:124:ALA:HA	2:H:287:ALA:CB	2.38	0.54
2:H:163:ASP:OD2	2:H:248:THR:HG23	2.07	0.54
2:H:360:HIS:CD2	2:H:362:CYS:H	2.25	0.54
1:K:223:HIS:HB2	2:L:410:THR:HG23	1.89	0.54
1:K:424:GLN:O	1:K:424:GLN:HG2	2.07	0.54
2:L:162:HIS:CD2	2:L:231:LEU:HD12	2.42	0.54
2:L:436:ALA:HB1	2:L:449:VAL:CG1	2.36	0.54
2:L:451:ARG:HH22	2:L:478:SER:HB3	1.72	0.54
2:N:122:VAL:CG2	2:N:299:PHE:CD2	2.90	0.54
2:P:152:ARG:HD3	2:P:156:LEU:HD11	1.90	0.54
2:P:235:PRO:HB2	2:P:236:ILE:HD12	1.89	0.54
1:A:343:LYS:CB	1:A:344:PRO:CD	2.81	0.54
2:B:271:VAL:HG22	2:B:284:VAL:CG2	2.36	0.54
1:C:1:MET:HA	1:C:5:GLN:CB	2.37	0.54
1:C:165:LEU:HD12	1:C:165:LEU:C	2.32	0.54
1:C:373:ILE:CD1	1:C:459:LEU:HD11	2.37	0.54
2:D:117:ILE:HD12	2:D:117:ILE:N	2.22	0.54
2:D:185:PRO:HB2	2:D:188:LYS:HD3	1.88	0.54
2:D:566:PRO:O	2:D:570:THR:HG23	2.06	0.54
1:E:279:LEU:HD22	1:E:282:PRO:HD2	1.88	0.54
1:G:296:VAL:O	1:G:300:HIS:HB2	2.08	0.54
2:J:189:THR:HG23	2:J:190:LYS:H	1.73	0.54
2:J:576:MET:H	2:J:576:MET:HE2	1.73	0.54
1:K:211:ASN:HB2	1:K:213:LEU:HD13	1.88	0.54
1:K:359:ASN:HD21	2:L:443:LYS:HD2	1.72	0.54
2:L:267:LEU:CD2	2:L:300:PRO:HB3	2.38	0.54
2:L:511:ILE:HG22	2:L:561:LEU:HD21	1.90	0.54
2:N:108:LEU:HD21	2:N:173:TYR:HB2	1.88	0.54
2:B:169:GLY:HA3	2:B:226:SER:CB	2.37	0.54
2:B:215:GLU:O	2:B:216:ASN:HB3	2.08	0.54
2:B:343:ASP:O	2:B:345:ASN:N	2.41	0.54
1:C:268:HIS:CD2	1:C:270:ALA:HB3	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:281:ASP:O	1:C:283:ALA:N	2.34	0.54
2:D:268:ASP:O	2:D:272:THR:HG22	2.07	0.54
2:D:351:ILE:HD12	2:D:351:ILE:N	2.22	0.54
1:E:196:MET:HA	1:E:201:SER:HB3	1.88	0.54
1:G:279:LEU:HD11	1:G:322:ASN:HB2	1.89	0.54
1:G:475:ARG:HH11	1:G:475:ARG:HG3	1.71	0.54
2:H:462:ILE:HG23	2:H:472:LEU:CD1	2.27	0.54
1:I:437:VAL:O	1:I:438:PHE:C	2.50	0.54
2:J:532:GLY:O	2:J:553:ALA:HA	2.07	0.54
1:K:11:LEU:O	1:K:13:ARG:N	2.41	0.54
1:K:324:LEU:O	1:K:325:ARG:C	2.50	0.54
1:M:235:ARG:NH2	2:N:390:GLN:OE1	2.38	0.54
1:M:362:LEU:HD21	2:N:447:PHE:CZ	2.40	0.54
2:P:126:LEU:HD23	2:P:126:LEU:N	2.20	0.54
2:P:512:HIS:HA	2:P:561:LEU:HD11	1.88	0.54
2:B:90:ARG:HB3	2:B:90:ARG:HH11	1.71	0.54
2:B:132:THR:HG22	2:B:134:ASP:N	2.23	0.54
2:B:387:ILE:HD12	1:C:241:MET:HG2	1.90	0.54
1:C:40:ALA:O	1:C:42:LYS:N	2.40	0.54
2:D:181:ILE:HD11	2:D:194:ALA:HB2	1.89	0.54
2:D:185:PRO:HG2	2:D:188:LYS:CB	2.37	0.54
2:D:201:TYR:C	2:D:203:THR:H	2.14	0.54
2:D:454:LEU:HD21	2:D:496:HIS:HB2	1.89	0.54
1:E:233:GLN:O	1:E:237:ILE:HG12	2.08	0.54
2:F:117:ILE:HD12	2:F:117:ILE:N	2.22	0.54
1:G:235:ARG:NH2	2:H:390:GLN:OE1	2.36	0.54
2:H:139:PHE:CE2	2:H:161:THR:HG21	2.42	0.54
2:J:124:ALA:HA	2:J:287:ALA:HB2	1.89	0.54
2:J:299:PHE:HB3	2:J:300:PRO:HA	1.90	0.54
1:K:213:LEU:HD13	1:K:213:LEU:H	1.72	0.54
1:K:414:GLU:CB	1:K:415:PRO:CD	2.82	0.54
2:L:147:HIS:CE1	2:L:159:ILE:H	2.25	0.54
2:L:334:MET:HG2	2:L:367:ASP:HB3	1.89	0.54
2:N:515:LEU:HD11	2:N:551:ILE:HG21	1.90	0.54
2:P:45:ILE:HG22	2:P:49:GLN:HB2	1.89	0.54
2:P:470:LEU:HB2	2:P:471:PRO:HD3	1.89	0.54
2:B:147:HIS:CE1	2:B:159:ILE:HG12	2.43	0.54
1:E:358:ARG:HG2	1:E:368:ALA:HA	1.90	0.54
2:F:115:ALA:O	2:F:116:LYS:HG3	2.07	0.54
2:F:569:ILE:HD13	2:F:576:MET:O	2.08	0.54
1:G:292:TYR:O	1:G:296:VAL:HG23	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:298:ARG:HG3	1:G:298:ARG:NH1	2.22	0.54
2:L:343:ASP:O	2:L:345:ASN:N	2.41	0.54
2:L:391:PHE:HD2	2:L:392:PRO:CD	2.19	0.54
2:N:343:ASP:O	2:N:345:ASN:N	2.41	0.54
2:N:420:GLN:NE2	2:N:431:ILE:HG21	2.23	0.54
2:P:193:THR:HG22	2:P:194:ALA:N	2.23	0.54
1:A:213:LEU:O	1:A:213:LEU:HD13	2.08	0.54
1:A:422:TYR:CE2	1:A:428:LYS:HA	2.42	0.54
2:B:117:ILE:N	2:B:117:ILE:HD12	2.23	0.54
2:B:554:ARG:HG2	2:B:554:ARG:NH1	2.18	0.54
1:C:271:ARG:HA	1:C:276:THR:HG21	1.90	0.54
1:C:413:THR:HB	1:C:437:VAL:H	1.73	0.54
1:E:224:LEU:HD22	2:F:401:ARG:HH12	1.69	0.54
1:E:373:ILE:HD13	1:E:459:LEU:HD11	1.90	0.54
1:E:403:LEU:HD22	1:E:419:VAL:CG1	2.37	0.54
2:F:213:ILE:O	2:F:213:ILE:HG22	2.07	0.54
2:F:360:HIS:CD2	2:F:362:CYS:H	2.26	0.54
2:H:38:ILE:HG22	2:H:61:VAL:CG1	2.38	0.54
1:I:373:ILE:HG12	1:I:459:LEU:HD12	1.89	0.54
1:I:428:LYS:NZ	1:I:428:LYS:HB3	2.23	0.54
2:J:507:GLY:HA3	2:J:510:ILE:HG22	1.89	0.54
2:L:90:ARG:HB3	2:L:90:ARG:HH11	1.73	0.54
2:L:169:GLY:HA3	2:L:226:SER:CB	2.37	0.54
1:M:466:MET:HE1	1:M:474:ILE:HG12	1.90	0.54
1:O:208:LYS:HB2	1:O:209:PRO:CD	2.38	0.54
2:P:234:PRO:CB	2:P:235:PRO:HD3	2.25	0.54
2:P:357:ASP:OD1	2:P:358:ILE:HD12	2.08	0.54
2:P:566:PRO:O	2:P:570:THR:HG23	2.08	0.54
1:C:177:LYS:HG2	1:C:181:PHE:HE1	1.70	0.54
1:C:179:SER:O	1:C:181:PHE:N	2.41	0.54
1:C:343:LYS:CB	1:C:344:PRO:HD3	2.34	0.54
2:D:142:LEU:HD23	2:D:142:LEU:O	2.08	0.54
2:D:186:LEU:HD23	2:D:237:ILE:HG22	1.90	0.54
2:F:576:MET:CB	2:F:577:PRO:HD2	2.38	0.54
1:G:278:PHE:O	2:H:440:SER:HB3	2.08	0.54
2:H:82:ARG:HD2	2:H:94:PRO:HG3	1.89	0.54
2:H:90:ARG:HB3	2:H:90:ARG:HH11	1.72	0.54
2:H:189:THR:HG23	2:H:190:LYS:H	1.73	0.54
2:H:271:VAL:HG22	2:H:284:VAL:CG2	2.37	0.54
2:H:470:LEU:HB2	2:H:471:PRO:HD3	1.90	0.54
2:J:179:SER:N	2:J:195:CYS:HB2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:185:PRO:HG2	2:J:188:LYS:CB	2.37	0.54
2:L:181:ILE:HD11	2:L:194:ALA:HB2	1.90	0.54
2:L:308:MET:HE2	2:L:308:MET:O	2.08	0.54
2:L:420:GLN:HG3	2:L:448:GLN:HE21	1.72	0.54
2:L:508:PHE:CD1	2:L:563:VAL:HG23	2.42	0.54
1:M:193:SER:H	1:M:196:MET:HB2	1.72	0.54
1:M:342:LYS:O	1:M:343:LYS:C	2.50	0.54
1:M:388:MET:HE2	2:N:379:MET:HG2	1.89	0.54
2:P:56:GLY:C	2:P:58:SER:H	2.15	0.54
2:P:129:ILE:HD12	2:P:251:ILE:HD12	1.89	0.54
2:P:360:HIS:CD2	2:P:362:CYS:H	2.26	0.54
2:P:507:GLY:HA3	2:P:510:ILE:HG22	1.90	0.54
2:B:118:ARG:HB2	2:B:173:TYR:OH	2.09	0.53
2:B:129:ILE:HD12	2:B:251:ILE:HD12	1.89	0.53
2:B:193:THR:HG22	2:B:194:ALA:N	2.22	0.53
2:B:470:LEU:HB2	2:B:471:PRO:CD	2.36	0.53
1:C:179:SER:C	1:C:181:PHE:H	2.15	0.53
1:C:247:PRO:HB3	2:D:391:PHE:CE1	2.43	0.53
1:E:325:ARG:O	1:E:356:VAL:HG12	2.08	0.53
2:F:215:GLU:O	2:F:216:ASN:HB3	2.07	0.53
2:F:299:PHE:HB3	2:F:300:PRO:HA	1.89	0.53
2:F:565:HIS:CD2	2:F:567:ASP:HB2	2.43	0.53
1:G:414:GLU:CB	1:G:415:PRO:CD	2.84	0.53
1:I:343:LYS:CB	1:I:344:PRO:HD3	2.32	0.53
2:J:455:LEU:HB3	2:J:456:PRO:HD3	1.89	0.53
1:K:342:LYS:O	1:K:343:LYS:C	2.51	0.53
1:K:474:ILE:HD12	1:K:474:ILE:N	2.07	0.53
2:L:179:SER:HA	2:L:193:THR:HG21	1.90	0.53
2:L:189:THR:HG23	2:L:190:LYS:H	1.73	0.53
1:M:350:TYR:HB2	1:M:376:VAL:HG13	1.88	0.53
2:N:512:HIS:HA	2:N:561:LEU:HD11	1.90	0.53
2:P:420:GLN:HG3	2:P:448:GLN:HE21	1.73	0.53
1:A:449:PRO:HG2	1:A:452:VAL:HG23	1.89	0.53
2:B:301:GLU:O	2:B:301:GLU:HG3	2.08	0.53
2:B:308:MET:SD	2:B:346:GLN:HB3	2.48	0.53
1:C:165:LEU:C	1:C:165:LEU:CD1	2.82	0.53
1:C:246:MET:HE1	1:C:332:SER:CA	2.37	0.53
1:C:316:LEU:O	1:C:316:LEU:HD23	2.08	0.53
1:C:479:GLY:HA3	2:D:415:PHE:HE1	1.73	0.53
2:D:122:VAL:HG23	2:D:299:PHE:CG	2.44	0.53
2:D:177:ARG:HG2	2:D:178:PRO:CD	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:466:MET:HA	1:E:466:MET:CE	2.38	0.53
2:F:271:VAL:HG22	2:F:284:VAL:HG22	1.89	0.53
2:F:515:LEU:HD11	2:F:551:ILE:HG21	1.88	0.53
2:H:38:ILE:HD13	2:H:63:TYR:HE1	1.73	0.53
2:H:117:ILE:HD12	2:H:117:ILE:N	2.23	0.53
2:H:234:PRO:HB2	2:H:235:PRO:CD	2.31	0.53
2:H:519:MET:HG3	2:H:533:TYR:CE1	2.43	0.53
1:I:413:THR:HB	1:I:437:VAL:H	1.72	0.53
2:J:169:GLY:HA3	2:J:226:SER:CB	2.38	0.53
2:J:565:HIS:O	2:J:568:VAL:HG22	2.08	0.53
1:K:359:ASN:ND2	2:L:443:LYS:HE2	2.23	0.53
1:K:449:PRO:HG2	1:K:452:VAL:HG23	1.90	0.53
2:L:124:ALA:HA	2:L:287:ALA:CB	2.38	0.53
2:L:177:ARG:HG2	2:L:178:PRO:CD	2.37	0.53
2:L:235:PRO:HB2	2:L:236:ILE:HD12	1.90	0.53
2:N:186:LEU:CD2	2:N:238:ASN:H	2.21	0.53
2:N:470:LEU:HB2	2:N:471:PRO:CD	2.38	0.53
2:N:547:ARG:HG2	2:N:547:ARG:NH1	2.22	0.53
1:O:413:THR:HB	1:O:437:VAL:H	1.72	0.53
1:O:449:PRO:HG2	1:O:452:VAL:CG2	2.39	0.53
1:A:196:MET:HB3	1:A:202:TRP:HB3	1.90	0.53
1:A:422:TYR:HD2	1:A:423:HIS:H	1.57	0.53
2:B:139:PHE:CE2	2:B:161:THR:HG21	2.43	0.53
2:B:185:PRO:HG2	2:B:188:LYS:CB	2.36	0.53
2:B:200:ILE:HD12	2:B:200:ILE:O	2.09	0.53
2:B:299:PHE:HB3	2:B:300:PRO:HA	1.91	0.53
2:B:401:ARG:HD2	2:B:411:GLU:OE2	2.08	0.53
2:B:566:PRO:O	2:B:570:THR:HG23	2.08	0.53
1:C:100:GLY:O	1:C:101:LYS:C	2.51	0.53
1:C:106:LYS:HG3	1:C:106:LYS:O	2.08	0.53
1:C:246:MET:HE1	1:C:332:SER:HA	1.90	0.53
1:C:267:GLN:O	2:D:152:ARG:HD2	2.09	0.53
2:D:414:THR:CG2	2:D:457:GLY:HA3	2.39	0.53
2:D:480:ILE:HG12	2:D:496:HIS:NE2	2.22	0.53
1:E:194:PRO:HD2	1:E:195:GLU:OE1	2.08	0.53
2:F:189:THR:HG23	2:F:190:LYS:H	1.73	0.53
1:G:469:TYR:OH	1:G:493:CYS:HB2	2.07	0.53
2:H:133:LYS:HD2	2:H:133:LYS:N	2.21	0.53
2:H:507:GLY:HA3	2:H:510:ILE:HG22	1.91	0.53
2:J:45:ILE:O	2:J:45:ILE:HG22	2.08	0.53
1:K:281:ASP:C	1:K:283:ALA:N	2.67	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:298:ARG:HG3	1:K:298:ARG:NH1	2.23	0.53
1:M:480:HIS:N	1:M:480:HIS:CD2	2.76	0.53
2:N:152:ARG:HD3	2:N:156:LEU:HD11	1.89	0.53
1:O:435:SER:HA	3:O:509:PHE:HE2	1.74	0.53
2:P:40:SER:C	2:P:42:LYS:H	2.15	0.53
1:E:494:ARG:NH1	1:E:494:ARG:HB3	2.23	0.53
3:E:509:PHE:N	3:E:509:PHE:CD1	2.77	0.53
2:H:470:LEU:HB2	2:H:471:PRO:CD	2.39	0.53
2:J:201:TYR:C	2:J:203:THR:H	2.15	0.53
2:J:420:GLN:H	2:J:448:GLN:HE21	1.57	0.53
2:J:512:HIS:CE1	1:K:216:GLY:N	2.71	0.53
1:K:248:THR:CG2	1:K:354:ASP:OD1	2.56	0.53
1:K:279:LEU:HD12	1:K:282:PRO:HD2	1.90	0.53
1:K:395:PHE:CZ	1:K:432:VAL:HG23	2.44	0.53
1:M:279:LEU:HB3	1:M:322:ASN:HB2	1.89	0.53
2:N:142:LEU:HD23	2:N:142:LEU:C	2.33	0.53
1:O:365:THR:CG2	1:O:475:ARG:HB2	2.38	0.53
1:A:384:LEU:HD11	1:A:417:MET:HE3	1.89	0.53
1:A:479:GLY:CA	2:B:415:PHE:CE1	2.90	0.53
2:B:108:LEU:HD21	2:B:173:TYR:HB2	1.89	0.53
1:C:342:LYS:O	1:C:343:LYS:C	2.51	0.53
1:E:325:ARG:NH1	1:E:354:ASP:OD2	2.39	0.53
1:E:342:LYS:O	1:E:343:LYS:C	2.52	0.53
2:F:301:GLU:O	2:F:301:GLU:HG3	2.08	0.53
2:J:6:VAL:HG21	2:J:11:LEU:HD12	1.91	0.53
2:J:126:LEU:HD23	2:J:126:LEU:N	2.24	0.53
2:J:267:LEU:CD2	2:J:300:PRO:HB3	2.37	0.53
2:J:343:ASP:O	2:J:345:ASN:N	2.42	0.53
2:L:131:PHE:CE2	2:L:136:TYR:HA	2.44	0.53
1:M:210:TYR:HB3	1:M:212:PHE:CE2	2.43	0.53
1:M:217:VAL:O	1:M:217:VAL:HG12	2.08	0.53
2:N:115:ALA:O	2:N:116:LYS:HG3	2.08	0.53
2:N:267:LEU:CD2	2:N:300:PRO:HB3	2.37	0.53
1:O:466:MET:SD	1:O:474:ILE:HG12	2.49	0.53
2:P:162:HIS:CD2	2:P:231:LEU:HD12	2.44	0.53
2:P:169:GLY:HA3	2:P:226:SER:CB	2.38	0.53
2:P:185:PRO:HG2	2:P:188:LYS:CB	2.37	0.53
2:P:192:TYR:N	2:P:192:TYR:CD1	2.76	0.53
2:B:179:SER:N	2:B:195:CYS:HB2	2.24	0.53
2:B:416:ALA:HA	2:B:451:ARG:HG3	1.91	0.53
1:C:370:PHE:HB2	1:C:462:GLU:OE2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:42:LYS:HB3	2:F:58:SER:OG	2.08	0.53
2:F:147:HIS:CE1	2:F:159:ILE:HG12	2.43	0.53
2:F:199:ASN:HA	2:F:202:LYS:HG3	1.91	0.53
2:F:208:LYS:O	2:F:211:LEU:HD21	2.09	0.53
2:H:108:LEU:HD21	2:H:173:TYR:HB2	1.91	0.53
2:J:420:GLN:NE2	2:J:431:ILE:HG21	2.24	0.53
1:K:373:ILE:HD13	1:K:459:LEU:HD11	1.90	0.53
2:L:128:ASN:H	2:L:250:ASN:ND2	2.06	0.53
1:M:324:LEU:O	1:M:325:ARG:C	2.52	0.53
2:N:179:SER:HA	2:N:193:THR:HG21	1.91	0.53
2:N:180:ASP:O	2:N:181:ILE:HG23	2.08	0.53
2:N:414:THR:CG2	2:N:457:GLY:HA3	2.39	0.53
2:B:90:ARG:HH11	2:B:90:ARG:CB	2.22	0.53
2:B:181:ILE:HD11	2:B:194:ALA:HB2	1.91	0.53
2:B:234:PRO:HB2	2:B:235:PRO:CD	2.23	0.53
2:B:480:ILE:HG12	2:B:496:HIS:NE2	2.24	0.53
1:C:85:PRO:HB2	1:C:86:PRO:CD	2.34	0.53
2:D:169:GLY:HA3	2:D:226:SER:CB	2.38	0.53
2:F:62:LEU:HD23	2:F:62:LEU:H	1.74	0.53
2:F:420:GLN:HG3	2:F:448:GLN:HE21	1.70	0.53
2:F:482:ILE:HG22	2:F:483:LYS:O	2.09	0.53
1:G:342:LYS:O	1:G:343:LYS:C	2.51	0.53
2:H:91:ILE:HG12	2:H:92:LYS:N	2.23	0.53
2:H:185:PRO:HG2	2:H:188:LYS:CB	2.38	0.53
2:H:244:ILE:HD12	2:H:244:ILE:H	1.73	0.53
2:H:391:PHE:HD2	2:H:392:PRO:CD	2.22	0.53
1:I:243:PHE:CD2	1:I:349:LYS:HB3	2.44	0.53
2:J:426:LYS:HA	2:J:571:LYS:CE	2.36	0.53
1:M:359:ASN:HD21	2:N:443:LYS:HE2	1.74	0.53
2:N:565:HIS:ND1	2:N:566:PRO:HD2	2.22	0.53
2:P:391:PHE:CD2	2:P:392:PRO:HD2	2.38	0.53
2:P:554:ARG:HG2	2:P:554:ARG:NH1	2.21	0.53
1:A:388:MET:HE2	2:B:379:MET:HG2	1.90	0.53
1:C:72:ARG:HB3	1:C:72:ARG:NH1	2.24	0.53
1:C:96:ARG:O	1:C:97:LEU:HB2	2.07	0.53
2:D:122:VAL:CG2	2:D:299:PHE:CD2	2.92	0.53
2:D:584:ASN:ND2	2:D:587:PRO:HD3	2.24	0.53
1:E:438:PHE:CD1	1:E:454:VAL:HG22	2.43	0.53
2:F:162:HIS:CD2	2:F:231:LEU:HD12	2.43	0.53
1:G:286:LEU:O	1:G:287:GLN:HB2	2.09	0.53
1:I:218:LEU:HD23	1:I:218:LEU:H	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:267:GLN:NE2	2:J:262:LYS:HE3	2.23	0.53
2:J:8:ARG:NH2	2:J:61:VAL:HG21	2.24	0.53
2:J:215:GLU:O	2:J:216:ASN:HB3	2.08	0.53
2:J:420:GLN:H	2:J:448:GLN:NE2	2.07	0.53
2:L:192:TYR:N	2:L:192:TYR:CD1	2.77	0.53
1:O:292:TYR:O	1:O:296:VAL:HG23	2.09	0.53
1:O:343:LYS:CB	1:O:344:PRO:HD3	2.31	0.53
1:A:323:LEU:C	1:A:323:LEU:HD12	2.34	0.53
2:B:126:LEU:HD21	2:B:251:ILE:HB	1.90	0.53
1:C:327:HIS:HA	1:C:356:VAL:HG11	1.90	0.53
2:D:331:LEU:HD21	2:D:368:ALA:HB2	1.90	0.53
2:H:175:ALA:CB	2:H:219:LEU:HB3	2.36	0.53
2:H:186:LEU:CD2	2:H:238:ASN:H	2.21	0.53
2:H:264:LYS:HD2	2:H:301:GLU:CD	2.34	0.53
2:H:458:LEU:HD22	2:H:474:LEU:HB3	1.91	0.53
2:J:90:ARG:HB3	2:J:90:ARG:HH11	1.73	0.53
1:K:233:GLN:O	1:K:237:ILE:HG12	2.08	0.53
2:L:485:SER:C	2:L:486:ASN:HD22	2.17	0.53
1:M:258:ASN:HD21	1:M:327:HIS:CE1	2.26	0.53
2:N:147:HIS:ND1	2:N:154:ARG:HG2	2.24	0.53
2:N:169:GLY:HA3	2:N:226:SER:CB	2.39	0.53
2:P:201:TYR:C	2:P:203:THR:H	2.16	0.53
2:P:498:CYS:HB2	2:P:582:GLU:HG3	1.91	0.53
2:B:131:PHE:CE2	2:B:136:TYR:HA	2.43	0.53
2:B:215:GLU:OE1	2:B:221:PRO:HD2	2.08	0.53
1:C:64:THR:HG22	1:C:66:GLU:H	1.74	0.53
1:C:227:LEU:HD22	1:C:461:LEU:HD12	1.91	0.53
1:C:277:PHE:CZ	1:C:359:ASN:HA	2.44	0.53
1:C:427:LYS:O	1:C:428:LYS:HB2	2.09	0.53
2:D:8:ARG:NH1	2:D:61:VAL:HG11	2.23	0.53
2:D:17:ARG:CZ	2:D:19:TYR:HE1	2.22	0.53
2:D:175:ALA:HA	2:D:220:TYR:O	2.09	0.53
2:D:234:PRO:HB2	2:D:235:PRO:CD	2.28	0.53
1:G:316:LEU:HD23	1:G:316:LEU:O	2.08	0.53
2:J:234:PRO:HB2	2:J:235:PRO:CD	2.28	0.53
2:L:142:LEU:HD23	2:L:142:LEU:O	2.09	0.53
1:M:208:LYS:HG2	1:M:209:PRO:CD	2.36	0.53
2:N:131:PHE:CE2	2:N:136:TYR:HA	2.43	0.53
2:N:154:ARG:HA	2:N:157:VAL:O	2.09	0.53
2:N:213:ILE:O	2:N:213:ILE:HG22	2.08	0.53
2:N:497:LEU:HD23	2:N:497:LEU:C	2.33	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:554:ARG:HG2	2:N:554:ARG:NH1	2.23	0.53
1:O:414:GLU:CB	1:O:415:PRO:CD	2.82	0.53
2:P:543:PHE:CD2	2:P:562:GLY:HA3	2.44	0.53
1:A:437:VAL:HG13	1:A:455:ILE:HG22	1.91	0.52
2:B:91:ILE:HG12	2:B:92:LYS:N	2.22	0.52
2:B:162:HIS:CD2	2:B:231:LEU:HD12	2.44	0.52
1:C:71:ALA:HB1	1:C:144:ARG:HD3	1.91	0.52
1:C:328:THR:OG1	1:C:372:GLN:NE2	2.41	0.52
1:C:373:ILE:HG12	1:C:459:LEU:HD12	1.91	0.52
1:E:259:PHE:HE2	1:E:326:THR:HG1	1.56	0.52
2:F:291:PHE:CE1	2:F:297:HIS:HD2	2.27	0.52
2:F:400:LEU:HD21	2:F:522:LEU:HD21	1.91	0.52
2:F:400:LEU:HD23	1:G:492:LEU:HD11	1.90	0.52
2:F:414:THR:HG23	2:F:457:GLY:HA3	1.91	0.52
1:G:277:PHE:HB2	1:G:324:LEU:HB2	1.91	0.52
1:G:279:LEU:HA	2:H:440:SER:H	1.73	0.52
2:H:118:ARG:HB2	2:H:173:TYR:OH	2.09	0.52
2:H:431:ILE:H	2:H:431:ILE:CD1	2.07	0.52
2:H:508:PHE:HE1	2:H:562:GLY:CA	2.20	0.52
1:M:355:ARG:HD3	1:M:371:HIS:NE2	2.24	0.52
2:N:271:VAL:HG22	2:N:284:VAL:CG2	2.38	0.52
2:N:462:ILE:HG23	2:N:472:LEU:CD1	2.33	0.52
1:O:477:LEU:HD23	1:O:486:MET:CE	2.38	0.52
2:P:113:GLU:HB3	2:P:219:LEU:HD13	1.91	0.52
2:P:123:ALA:HB1	2:P:253:ILE:O	2.09	0.52
1:A:193:SER:O	1:A:197:ILE:HG13	2.09	0.52
1:A:296:VAL:O	1:A:300:HIS:HB2	2.09	0.52
3:A:509:PHE:O	3:A:509:PHE:CG	2.62	0.52
2:B:122:VAL:CG2	2:B:299:PHE:CD2	2.92	0.52
2:B:508:PHE:CE2	1:C:210:TYR:CD2	2.93	0.52
2:D:48:GLU:CD	2:D:49:GLN:HE21	2.17	0.52
2:D:201:TYR:C	2:D:203:THR:N	2.67	0.52
2:D:236:ILE:N	2:D:236:ILE:CD1	2.69	0.52
2:D:299:PHE:HB3	2:D:300:PRO:HA	1.91	0.52
2:D:391:PHE:C	2:D:391:PHE:CD2	2.87	0.52
2:F:188:LYS:HE2	2:F:201:TYR:OH	2.09	0.52
2:F:503:ASN:O	2:F:577:PRO:HD2	2.08	0.52
2:H:391:PHE:C	2:H:391:PHE:CD2	2.87	0.52
1:I:251:PHE:H	2:J:493:ASN:HD21	1.57	0.52
2:J:470:LEU:HB2	2:J:471:PRO:HD3	1.90	0.52
2:J:517:ARG:HG3	2:J:521:LEU:HD23	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:180:ALA:HB1	1:K:204:ASP:O	2.08	0.52
1:K:271:ARG:HG2	1:K:271:ARG:O	2.09	0.52
1:K:357:PHE:CD1	1:K:357:PHE:N	2.77	0.52
2:L:45:ILE:HG12	2:L:48:GLU:OE2	2.09	0.52
2:L:147:HIS:ND1	2:L:154:ARG:HG2	2.24	0.52
2:L:157:VAL:HG11	2:L:266:VAL:HG21	1.91	0.52
2:L:233:MET:HE3	2:L:236:ILE:HB	1.91	0.52
2:L:350:GLU:O	2:L:352:PRO:HD3	2.09	0.52
2:L:480:ILE:HG12	2:L:496:HIS:NE2	2.24	0.52
2:L:514:LEU:HD23	2:L:581:LEU:HD23	1.91	0.52
1:M:236:GLN:O	1:M:240:GLU:HG3	2.09	0.52
2:N:60:VAL:HG12	2:N:61:VAL:N	2.17	0.52
2:N:105:ILE:O	2:N:106:GLN:C	2.52	0.52
2:N:357:ASP:O	2:N:359:ILE:HG23	2.10	0.52
2:N:498:CYS:HB2	2:N:582:GLU:HG3	1.90	0.52
1:O:196:MET:HA	1:O:201:SER:HB2	1.91	0.52
1:O:259:PHE:O	1:O:264:GLN:HB2	2.09	0.52
1:A:342:LYS:O	1:A:343:LYS:C	2.53	0.52
2:B:310:ARG:NH2	2:B:312:ASP:HB2	2.23	0.52
1:C:21:LEU:HD11	1:C:26:LEU:HD23	1.92	0.52
1:C:114:ARG:NH1	1:C:114:ARG:CG	2.69	0.52
1:C:438:PHE:CD1	1:C:454:VAL:HG22	2.44	0.52
2:D:180:ASP:O	2:D:181:ILE:HG23	2.09	0.52
2:D:444:THR:HG22	2:D:447:PHE:CD1	2.43	0.52
2:D:458:LEU:HD22	2:D:474:LEU:HB3	1.90	0.52
2:F:565:HIS:ND1	2:F:566:PRO:HD2	2.25	0.52
1:G:227:LEU:HD22	1:G:465:THR:HG21	1.90	0.52
1:G:366:HIS:NE2	1:G:473:ASN:ND2	2.58	0.52
1:G:414:GLU:CD	2:H:362:CYS:SG	2.93	0.52
2:H:44:ILE:O	2:H:45:ILE:C	2.53	0.52
2:H:324:PRO:HG3	2:H:344:GLY:O	2.08	0.52
2:H:543:PHE:CD2	2:H:562:GLY:HA3	2.45	0.52
1:I:227:LEU:HD22	1:I:461:LEU:HD12	1.91	0.52
1:I:342:LYS:O	1:I:343:LYS:C	2.52	0.52
1:I:422:TYR:CE1	1:I:427:LYS:HA	2.45	0.52
2:J:245:THR:CG2	2:J:246:VAL:N	2.73	0.52
2:J:458:LEU:HD22	2:J:474:LEU:HB3	1.92	0.52
1:K:287:GLN:O	1:K:288:LEU:CD1	2.55	0.52
1:K:373:ILE:HG12	1:K:459:LEU:CD1	2.39	0.52
2:L:139:PHE:CE2	2:L:161:THR:HG21	2.44	0.52
2:N:90:ARG:HH11	2:N:90:ARG:CB	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:124:ALA:HA	2:N:287:ALA:CB	2.39	0.52
2:N:208:LYS:O	2:N:211:LEU:HD21	2.09	0.52
2:N:299:PHE:HB3	2:N:300:PRO:HA	1.91	0.52
2:N:387:ILE:HG23	1:O:241:MET:HG2	1.91	0.52
2:N:480:ILE:C	2:N:480:ILE:HD12	2.33	0.52
1:O:350:TYR:HB2	1:O:376:VAL:HG13	1.91	0.52
1:O:406:LYS:HD3	1:O:420:PHE:CE2	2.45	0.52
2:P:124:ALA:HA	2:P:287:ALA:CB	2.39	0.52
2:P:215:GLU:O	2:P:216:ASN:HB3	2.09	0.52
2:P:301:GLU:O	2:P:301:GLU:HG3	2.10	0.52
2:P:459:LEU:HA	2:P:462:ILE:HD12	1.89	0.52
1:A:193:SER:HB3	1:A:196:MET:HE3	1.92	0.52
1:A:391:LEU:HD13	1:A:419:VAL:CG1	2.38	0.52
2:B:85:GLN:HB3	2:B:91:ILE:HG21	1.91	0.52
1:C:138:ARG:HG2	1:C:138:ARG:HH11	1.75	0.52
2:D:55:ALA:CB	2:D:59:ASP:HB3	2.39	0.52
1:E:279:LEU:HD12	1:E:279:LEU:O	2.10	0.52
1:E:298:ARG:HG3	1:E:298:ARG:NH1	2.24	0.52
2:F:90:ARG:HB3	2:F:90:ARG:HH11	1.74	0.52
2:J:42:LYS:HE2	2:J:59:ASP:OD1	2.09	0.52
2:J:175:ALA:HA	2:J:220:TYR:O	2.10	0.52
2:J:186:LEU:CD2	2:J:238:ASN:H	2.20	0.52
1:K:281:ASP:CB	1:K:282:PRO:HD3	2.29	0.52
2:L:118:ARG:CZ	2:L:257:GLY:HA2	2.39	0.52
2:L:547:ARG:HG2	2:L:547:ARG:HH11	1.74	0.52
1:M:286:LEU:CG	1:M:287:GLN:H	2.22	0.52
1:M:289:PRO:HG2	1:M:293:VAL:HG23	1.91	0.52
2:N:132:THR:HG22	2:N:134:ASP:H	1.74	0.52
2:P:38:ILE:HD13	2:P:63:TYR:HE1	1.73	0.52
2:B:565:HIS:ND1	2:B:566:PRO:HD2	2.25	0.52
1:C:288:LEU:HB2	1:C:289:PRO:HD2	1.91	0.52
2:D:301:GLU:O	2:D:301:GLU:HG3	2.10	0.52
2:F:444:THR:HG22	2:F:447:PHE:CD1	2.45	0.52
2:H:113:GLU:HB3	2:H:219:LEU:HD13	1.92	0.52
2:J:114:THR:O	2:J:117:ILE:HD12	2.09	0.52
2:L:70:ASN:HB3	2:L:71:ARG:HD2	1.91	0.52
2:L:108:LEU:HD21	2:L:173:TYR:HB2	1.92	0.52
2:L:280:ASN:HB3	2:L:283:THR:HG21	1.92	0.52
2:L:414:THR:CG2	2:L:457:GLY:HA3	2.39	0.52
1:M:417:MET:HB3	2:N:374:TYR:HE1	1.73	0.52
1:O:342:LYS:O	1:O:343:LYS:C	2.52	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:186:LEU:CD2	2:P:238:ASN:H	2.21	0.52
1:A:470:GLY:O	1:A:471:ILE:HD12	2.09	0.52
2:B:414:THR:CG2	2:B:457:GLY:HA3	2.40	0.52
1:C:20:GLY:HA2	1:C:174:TRP:NE1	2.24	0.52
1:C:64:THR:OG1	1:C:165:LEU:N	2.43	0.52
1:C:100:GLY:O	1:C:103:GLY:N	2.43	0.52
1:C:377:VAL:HG12	1:C:382:LEU:HD11	1.92	0.52
1:C:449:PRO:HB2	1:C:451:ASN:OD1	2.09	0.52
2:D:131:PHE:CE2	2:D:136:TYR:HA	2.44	0.52
2:F:103:GLY:O	2:F:105:ILE:N	2.40	0.52
2:F:107:LYS:HE2	2:F:109:ILE:HD11	1.91	0.52
2:F:245:THR:CG2	2:F:246:VAL:N	2.73	0.52
2:H:162:HIS:CD2	2:H:231:LEU:HD12	2.45	0.52
2:H:179:SER:N	2:H:195:CYS:HB2	2.24	0.52
2:H:565:HIS:CD2	2:H:567:ASP:HB2	2.45	0.52
2:L:122:VAL:HG23	2:L:299:PHE:CG	2.45	0.52
2:N:280:ASN:HB3	2:N:283:THR:HG21	1.91	0.52
2:N:470:LEU:HB2	2:N:471:PRO:HD3	1.91	0.52
1:A:267:GLN:NE2	2:B:262:LYS:NZ	2.58	0.52
1:A:377:VAL:HG12	1:A:382:LEU:HD11	1.92	0.52
2:B:167:LEU:HD13	2:B:171:PHE:CE2	2.44	0.52
2:D:115:ALA:O	2:D:116:LYS:HG3	2.10	0.52
2:D:118:ARG:HB2	2:D:173:TYR:OH	2.10	0.52
2:D:215:GLU:O	2:D:216:ASN:HB3	2.10	0.52
1:E:267:GLN:CA	2:F:152:ARG:HD2	2.39	0.52
1:E:288:LEU:CB	1:E:289:PRO:HD2	2.40	0.52
2:F:57:ALA:O	2:F:60:VAL:HG23	2.10	0.52
2:F:154:ARG:HA	2:F:157:VAL:O	2.10	0.52
2:F:249:ARG:C	2:F:250:ASN:HD22	2.18	0.52
1:I:365:THR:HA	1:I:474:ILE:HD12	1.92	0.52
2:J:351:ILE:N	2:J:351:ILE:HD12	2.24	0.52
2:J:470:LEU:HB2	2:J:471:PRO:CD	2.39	0.52
1:K:185:ILE:O	1:K:187:LYS:N	2.43	0.52
2:L:118:ARG:HB2	2:L:173:TYR:OH	2.10	0.52
2:L:324:PRO:HG3	2:L:344:GLY:O	2.08	0.52
1:M:229:LYS:HE3	1:M:491:PRO:O	2.08	0.52
1:M:283:ALA:HA	1:M:322:ASN:HB2	1.90	0.52
2:N:301:GLU:O	2:N:301:GLU:HG3	2.09	0.52
2:N:508:PHE:HB2	2:N:563:VAL:CG2	2.39	0.52
2:P:48:GLU:HG3	2:P:49:GLN:N	2.25	0.52
2:P:179:SER:HA	2:P:193:THR:HG21	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:420:GLN:NE2	2:B:431:ILE:HG21	2.25	0.52
1:C:301:SER:HB2	1:C:312:TYR:O	2.10	0.52
2:D:233:MET:HE3	2:D:236:ILE:HB	1.92	0.52
1:E:466:MET:C	1:E:467:ILE:HD12	2.35	0.52
2:F:264:LYS:HD2	2:F:301:GLU:CD	2.34	0.52
1:G:206:PRO:O	1:G:207:PHE:C	2.52	0.52
1:I:438:PHE:CD1	1:I:454:VAL:HG22	2.44	0.52
2:J:181:ILE:HD11	2:J:194:ALA:HB2	1.90	0.52
2:J:459:LEU:HA	2:J:462:ILE:HD12	1.92	0.52
1:M:282:PRO:O	1:M:283:ALA:C	2.53	0.52
1:M:305:TYR:HB3	1:M:444:LEU:HD12	1.90	0.52
2:N:341:ILE:HG22	2:N:341:ILE:O	2.08	0.52
2:P:118:ARG:HB2	2:P:173:TYR:OH	2.10	0.52
2:B:71:ARG:CG	2:B:355:ARG:CZ	2.88	0.52
1:C:266:GLN:OE1	1:C:318:GLU:HB3	2.09	0.52
2:D:126:LEU:HD23	2:D:126:LEU:N	2.23	0.52
2:D:213:ILE:O	2:D:213:ILE:HG22	2.10	0.52
2:D:420:GLN:NE2	2:D:431:ILE:HG21	2.25	0.52
2:D:507:GLY:HA3	2:D:510:ILE:HG22	1.91	0.52
1:E:438:PHE:HD1	1:E:454:VAL:HG22	1.74	0.52
1:E:467:ILE:C	1:E:469:TYR:N	2.64	0.52
2:F:126:LEU:HD23	2:F:126:LEU:N	2.25	0.52
1:K:343:LYS:CB	1:K:344:PRO:CD	2.78	0.52
1:M:262:LEU:CD2	1:M:333:ALA:HB2	2.39	0.52
2:N:235:PRO:HB2	2:N:236:ILE:HD12	1.92	0.52
2:P:485:SER:C	2:P:486:ASN:HD22	2.18	0.52
1:A:438:PHE:HD1	1:A:454:VAL:HG22	1.75	0.52
1:C:40:ALA:O	1:C:41:VAL:C	2.52	0.52
1:C:74:GLY:HA2	1:C:137:GLN:HG3	1.92	0.52
1:C:233:GLN:O	1:C:237:ILE:HG12	2.09	0.52
2:D:129:ILE:HD12	2:D:251:ILE:HD12	1.92	0.52
2:D:426:LYS:O	2:D:568:VAL:HG12	2.10	0.52
1:E:377:VAL:HG12	1:E:382:LEU:HD11	1.92	0.52
2:F:132:THR:HG22	2:F:134:ASP:N	2.25	0.52
1:G:253:GLU:OE1	1:G:257:TRP:HB2	2.10	0.52
1:G:449:PRO:HG2	1:G:452:VAL:HG23	1.91	0.52
2:H:172:THR:O	2:H:223:ILE:HA	2.09	0.52
2:H:498:CYS:HB2	2:H:582:GLU:HG3	1.91	0.52
2:H:515:LEU:HD11	2:H:551:ILE:CG2	2.41	0.52
2:H:515:LEU:HD11	2:H:551:ILE:HG21	1.92	0.52
1:I:214:ALA:O	1:I:215:HIS:C	2.53	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:311:LYS:HD3	2:J:261:THR:HG21	1.91	0.52
1:I:323:LEU:C	1:I:323:LEU:HD12	2.35	0.52
2:J:208:LYS:O	2:J:211:LEU:HD21	2.10	0.52
1:K:42:LYS:C	1:K:44:LEU:H	2.17	0.52
1:K:251:PHE:H	2:L:493:ASN:HD21	1.58	0.52
1:K:403:LEU:HD22	1:K:419:VAL:CG1	2.38	0.52
2:L:113:GLU:HB3	2:L:219:LEU:HD13	1.92	0.52
2:L:299:PHE:HB3	2:L:300:PRO:HA	1.91	0.52
2:L:458:LEU:HD22	2:L:474:LEU:HB3	1.92	0.52
2:L:554:ARG:HG2	2:L:554:ARG:NH1	2.21	0.52
1:M:285:ALA:O	1:M:286:LEU:O	2.27	0.52
2:N:534:VAL:HG23	2:N:534:VAL:O	2.09	0.52
1:O:296:VAL:O	1:O:300:HIS:HB2	2.10	0.52
2:P:576:MET:CB	2:P:577:PRO:HD2	2.40	0.52
1:A:262:LEU:HD22	1:A:329:THR:HG22	1.91	0.51
1:A:325:ARG:NH1	1:A:354:ASP:OD2	2.43	0.51
1:A:349:LYS:HE2	2:D:385:TYR:CE1	2.44	0.51
2:B:124:ALA:HA	2:B:287:ALA:CB	2.39	0.51
2:B:147:HIS:HE1	2:B:158:ALA:HA	1.74	0.51
2:B:508:PHE:HB2	2:B:563:VAL:CG2	2.41	0.51
2:D:569:ILE:HD13	2:D:576:MET:O	2.11	0.51
2:F:517:ARG:HG3	2:F:521:LEU:HD23	1.91	0.51
1:G:305:TYR:HB3	1:G:444:LEU:HD12	1.91	0.51
2:H:215:GLU:O	2:H:216:ASN:HB3	2.09	0.51
2:H:299:PHE:HB3	2:H:300:PRO:HA	1.91	0.51
2:H:547:ARG:HG2	2:H:547:ARG:NH1	2.26	0.51
1:I:279:LEU:O	1:I:283:ALA:HB2	2.10	0.51
1:I:327:HIS:HA	1:I:356:VAL:HG11	1.91	0.51
2:J:565:HIS:HD2	2:J:567:ASP:HB2	1.76	0.51
2:L:123:ALA:HB1	2:L:253:ILE:O	2.11	0.51
2:L:281:GLN:HG2	2:L:282:PHE:CD1	2.44	0.51
1:M:196:MET:O	1:M:202:TRP:HD1	1.92	0.51
2:N:129:ILE:HD12	2:N:251:ILE:HD12	1.92	0.51
1:O:267:GLN:HE21	2:P:262:LYS:CE	2.19	0.51
1:O:343:LYS:CB	1:O:344:PRO:CD	2.77	0.51
1:O:364:ALA:HB3	1:O:366:HIS:CD2	2.45	0.51
2:P:33:LEU:CD2	2:P:67:VAL:HG22	2.40	0.51
2:P:351:ILE:N	2:P:351:ILE:HD12	2.24	0.51
2:P:547:ARG:HG2	2:P:547:ARG:NH1	2.26	0.51
1:C:40:ALA:C	1:C:42:LYS:N	2.67	0.51
1:C:46:ALA:O	1:C:48:GLY:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:84:ILE:HD11	1:C:125:VAL:O	2.11	0.51
2:D:280:ASN:HB3	2:D:283:THR:HG21	1.92	0.51
2:D:508:PHE:HB2	2:D:563:VAL:CG2	2.40	0.51
2:D:519:MET:HG3	2:D:533:TYR:CE1	2.45	0.51
2:D:576:MET:CB	2:D:577:PRO:HD2	2.40	0.51
1:E:324:LEU:O	1:E:325:ARG:C	2.54	0.51
1:E:358:ARG:HD2	1:E:360:GLU:HB2	1.93	0.51
1:E:413:THR:HG21	1:E:436:GLY:HA3	1.91	0.51
2:F:357:ASP:O	2:F:359:ILE:HG23	2.10	0.51
2:F:470:LEU:HB2	2:F:471:PRO:HD3	1.87	0.51
2:H:401:ARG:HD2	2:H:411:GLU:OE2	2.10	0.51
2:J:126:LEU:HD21	2:J:251:ILE:HB	1.92	0.51
2:L:528:GLU:O	2:L:528:GLU:HG3	2.09	0.51
2:L:569:ILE:HD13	2:L:576:MET:O	2.10	0.51
1:M:479:GLY:HA2	2:N:413:LEU:O	2.11	0.51
2:N:139:PHE:CE2	2:N:161:THR:HG21	2.46	0.51
1:O:233:GLN:O	1:O:237:ILE:HG12	2.11	0.51
2:P:175:ALA:CB	2:P:219:LEU:HB3	2.34	0.51
2:B:124:ALA:CB	2:B:300:PRO:HD3	2.40	0.51
2:B:308:MET:SD	2:B:346:GLN:HG2	2.50	0.51
1:C:37:VAL:CG1	1:C:38:VAL:H	2.24	0.51
2:D:132:THR:HG22	2:D:134:ASP:N	2.25	0.51
1:G:188:GLN:HG3	1:G:208:LYS:HB2	1.91	0.51
1:G:208:LYS:HE2	1:G:210:TYR:HB2	1.92	0.51
2:H:51:ASN:C	2:H:53:LYS:H	2.18	0.51
2:J:127:ARG:NH1	2:J:285:GLU:OE1	2.43	0.51
2:J:308:MET:HE2	2:J:308:MET:C	2.35	0.51
2:J:324:PRO:HG3	2:J:344:GLY:O	2.09	0.51
1:K:474:ILE:C	1:K:476:GLU:N	2.65	0.51
1:K:484:LEU:HG	2:L:465:ASN:CG	2.36	0.51
1:M:298:ARG:HG3	1:M:298:ARG:NH1	2.24	0.51
2:N:142:LEU:HD23	2:N:142:LEU:O	2.10	0.51
2:N:426:LYS:HA	2:N:571:LYS:CE	2.37	0.51
2:P:118:ARG:CZ	2:P:257:GLY:HA2	2.41	0.51
2:P:142:LEU:HD23	2:P:142:LEU:C	2.34	0.51
2:P:497:LEU:HD23	2:P:497:LEU:C	2.35	0.51
1:A:474:ILE:O	1:A:477:LEU:HD12	2.11	0.51
2:B:62:LEU:HD23	2:B:62:LEU:H	1.74	0.51
2:B:122:VAL:HG23	2:B:299:PHE:CG	2.46	0.51
1:C:255:SER:HB2	1:C:321:LYS:O	2.09	0.51
1:C:353:ILE:HG23	1:C:373:ILE:HG22	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:248:THR:HG21	1:E:354:ASP:HB3	1.92	0.51
1:E:288:LEU:HB2	1:E:289:PRO:HD2	1.92	0.51
1:E:353:ILE:HG12	1:E:373:ILE:HB	1.92	0.51
2:H:131:PHE:CE2	2:H:136:TYR:HA	2.46	0.51
2:H:177:ARG:HG2	2:H:178:PRO:CD	2.40	0.51
1:I:324:LEU:O	1:I:325:ARG:C	2.54	0.51
2:J:508:PHE:CD1	2:J:563:VAL:HG23	2.45	0.51
2:J:512:HIS:CE1	1:K:215:HIS:HA	2.35	0.51
1:K:211:ASN:HD22	1:K:211:ASN:H	1.59	0.51
1:K:228:LEU:HD12	2:L:411:GLU:CD	2.35	0.51
1:M:268:HIS:CD2	1:M:271:ARG:HB2	2.45	0.51
2:N:245:THR:CG2	2:N:246:VAL:N	2.74	0.51
1:O:243:PHE:CD2	1:O:349:LYS:HB3	2.46	0.51
2:P:148:GLN:HA	2:P:153:LYS:HA	1.92	0.51
2:P:299:PHE:HB3	2:P:300:PRO:HA	1.91	0.51
1:A:207:PHE:CZ	2:D:544:PHE:HZ	2.28	0.51
2:B:179:SER:HA	2:B:193:THR:HG21	1.91	0.51
2:B:507:GLY:HA3	2:B:510:ILE:HG22	1.92	0.51
2:D:123:ALA:HB1	2:D:253:ILE:O	2.10	0.51
2:D:179:SER:HA	2:D:193:THR:HG21	1.92	0.51
2:D:350:GLU:O	2:D:352:PRO:HD3	2.11	0.51
1:E:282:PRO:HG2	2:F:437:VAL:HG13	1.92	0.51
1:G:243:PHE:CD2	1:G:349:LYS:HB3	2.44	0.51
1:G:255:SER:HB2	1:G:321:LYS:O	2.11	0.51
1:G:281:ASP:CB	1:G:282:PRO:CD	2.84	0.51
1:G:373:ILE:CD1	1:G:459:LEU:HD11	2.41	0.51
2:J:280:ASN:HB3	2:J:283:THR:HG21	1.91	0.51
2:L:180:ASP:O	2:L:181:ILE:HG23	2.09	0.51
2:N:127:ARG:NH1	2:N:285:GLU:OE1	2.44	0.51
2:D:148:GLN:HA	2:D:153:LYS:HA	1.93	0.51
2:D:391:PHE:HD2	2:D:392:PRO:CD	2.24	0.51
1:E:425:GLY:O	1:E:426:LEU:HB2	2.10	0.51
2:F:40:SER:O	2:F:44:ILE:HG13	2.10	0.51
2:F:201:TYR:C	2:F:203:THR:H	2.17	0.51
2:F:207:LEU:HD21	2:F:237:ILE:HG23	1.93	0.51
1:G:298:ARG:HG2	1:G:299:THR:N	2.24	0.51
1:I:278:PHE:CD1	1:I:321:LYS:HD3	2.46	0.51
1:I:353:ILE:HG23	1:I:373:ILE:HG22	1.92	0.51
2:J:124:ALA:HA	2:J:287:ALA:CB	2.41	0.51
2:J:221:PRO:HB2	2:J:234:PRO:HG2	1.93	0.51
2:J:547:ARG:HG2	2:J:547:ARG:HH11	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:359:ASN:HD21	2:L:443:LYS:CE	2.23	0.51
2:L:67:VAL:CG1	2:L:68:PRO:HD2	2.39	0.51
2:L:236:ILE:N	2:L:236:ILE:CD1	2.72	0.51
2:L:401:ARG:HG2	2:L:477:ILE:HD12	1.92	0.51
1:M:246:MET:HG3	1:M:352:SER:HB3	1.93	0.51
1:M:466:MET:SD	1:M:471:ILE:HG23	2.49	0.51
2:N:17:ARG:CZ	2:N:19:TYR:HE1	2.23	0.51
2:N:157:VAL:HG21	2:N:263:ALA:N	2.26	0.51
2:N:485:SER:C	2:N:486:ASN:HD22	2.18	0.51
1:O:210:TYR:HD2	1:O:212:PHE:CE2	2.28	0.51
1:O:328:THR:H	1:O:372:GLN:NE2	2.08	0.51
2:B:201:TYR:C	2:B:203:THR:N	2.66	0.51
2:B:267:LEU:CD2	2:B:300:PRO:HB3	2.41	0.51
2:B:268:ASP:O	2:B:272:THR:HG22	2.10	0.51
2:B:406:ALA:HA	2:D:406:ALA:HA	1.93	0.51
2:B:575:THR:HB	2:B:576:MET:CE	2.41	0.51
1:C:147:GLN:C	1:C:149:GLU:H	2.18	0.51
1:C:404:ARG:HD3	1:C:429:TRP:CZ2	2.46	0.51
1:C:426:LEU:HD22	1:C:426:LEU:N	2.26	0.51
2:D:147:HIS:ND1	2:D:154:ARG:HG2	2.25	0.51
2:D:564:LEU:HD12	2:D:578:CYS:HB3	1.92	0.51
1:E:301:SER:HB2	1:E:312:TYR:O	2.10	0.51
2:F:118:ARG:CZ	2:F:257:GLY:HA2	2.41	0.51
2:F:324:PRO:HG3	2:F:344:GLY:O	2.11	0.51
2:H:180:ASP:O	2:H:181:ILE:HG23	2.11	0.51
2:H:414:THR:CG2	2:H:457:GLY:HA3	2.41	0.51
2:J:566:PRO:CB	1:K:197:ILE:HG22	2.38	0.51
1:K:192:LEU:HD12	1:K:192:LEU:N	2.22	0.51
2:N:71:ARG:NH2	2:N:366:GLU:OE2	2.37	0.51
1:O:464:PRO:HG2	1:O:465:THR:H	1.76	0.51
2:P:131:PHE:CE2	2:P:136:TYR:HA	2.46	0.51
2:P:426:LYS:HA	2:P:571:LYS:CE	2.40	0.51
2:B:17:ARG:CZ	2:B:19:TYR:HE1	2.24	0.51
1:C:81:PHE:CE2	1:C:132:MET:HB2	2.46	0.51
1:C:151:LEU:H	1:C:151:LEU:HD23	1.76	0.51
2:D:38:ILE:HD13	2:D:63:TYR:HE1	1.75	0.51
2:D:39:THR:O	2:D:62:LEU:HD23	2.09	0.51
2:D:162:HIS:CD2	2:D:231:LEU:HD12	2.45	0.51
1:E:268:HIS:HB3	1:E:272:ASP:CG	2.34	0.51
2:F:45:ILE:HG22	2:F:45:ILE:O	2.10	0.51
2:H:468:MET:HE3	2:H:469:PRO:HD2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:282:PRO:HD2	2:J:437:VAL:HG13	1.92	0.51
2:J:105:ILE:O	2:J:106:GLN:C	2.53	0.51
2:J:123:ALA:HB1	2:J:253:ILE:O	2.10	0.51
2:J:180:ASP:O	2:J:181:ILE:HG23	2.10	0.51
2:J:305:ARG:HB2	2:J:351:ILE:HB	1.93	0.51
1:K:474:ILE:H	1:K:474:ILE:CD1	1.95	0.51
2:L:85:GLN:HB3	2:L:91:ILE:HG21	1.91	0.51
1:M:283:ALA:O	1:M:284:GLU:CB	2.50	0.51
2:N:133:LYS:H	2:N:133:LYS:CD	2.08	0.51
2:N:175:ALA:HA	2:N:220:TYR:O	2.10	0.51
1:O:324:LEU:O	1:O:325:ARG:C	2.53	0.51
2:P:90:ARG:HB3	2:P:90:ARG:HH11	1.76	0.51
2:P:91:ILE:HG12	2:P:92:LYS:N	2.24	0.51
2:P:115:ALA:O	2:P:116:LYS:HG3	2.10	0.51
2:P:181:ILE:HD11	2:P:194:ALA:HB2	1.92	0.51
2:P:280:ASN:HB3	2:P:283:THR:HG21	1.92	0.51
1:A:474:ILE:C	1:A:476:GLU:H	2.19	0.51
2:B:199:ASN:HA	2:B:202:LYS:HG3	1.92	0.51
2:B:274:PHE:C	2:B:276:GLU:H	2.18	0.51
2:B:565:HIS:CD2	2:B:567:ASP:HB2	2.46	0.51
2:B:576:MET:CB	2:B:577:PRO:HD2	2.41	0.51
1:E:246:MET:HE1	1:E:332:SER:HA	1.93	0.51
2:F:38:ILE:HD13	2:F:63:TYR:HE1	1.74	0.51
2:F:179:SER:HA	2:F:193:THR:HG21	1.93	0.51
1:G:324:LEU:O	1:G:325:ARG:C	2.54	0.51
2:H:426:LYS:HA	2:H:571:LYS:CE	2.39	0.51
2:H:482:ILE:HG22	2:H:483:LYS:O	2.11	0.51
1:I:258:ASN:HD21	1:I:327:HIS:CE1	2.29	0.51
1:I:475:ARG:HB3	1:I:475:ARG:NH1	2.25	0.51
2:J:147:HIS:HE1	2:J:159:ILE:H	1.56	0.51
2:J:387:ILE:HG13	1:K:393:GLU:HG2	1.92	0.51
2:L:71:ARG:CG	2:L:355:ARG:CZ	2.89	0.51
2:L:566:PRO:O	2:L:570:THR:HG23	2.10	0.51
2:N:123:ALA:HB1	2:N:253:ILE:O	2.10	0.51
2:N:126:LEU:N	2:N:126:LEU:CD2	2.74	0.51
2:P:139:PHE:CE2	2:P:161:THR:HG21	2.45	0.51
2:P:180:ASP:O	2:P:181:ILE:HG23	2.11	0.51
2:P:201:TYR:C	2:P:203:THR:N	2.68	0.51
1:A:208:LYS:N	1:A:209:PRO:CD	2.74	0.51
1:A:393:GLU:HG2	2:D:387:ILE:HG13	1.93	0.51
1:A:438:PHE:CD1	1:A:454:VAL:HG22	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:174:THR:OG1	2:B:175:ALA:N	2.43	0.51
1:C:128:VAL:HG12	1:C:129:VAL:N	2.26	0.51
1:C:268:HIS:CD2	1:C:270:ALA:H	2.29	0.51
2:D:175:ALA:CB	2:D:219:LEU:HB3	2.38	0.51
2:F:508:PHE:HB2	2:F:563:VAL:CG2	2.41	0.51
2:F:548:CYS:O	1:G:212:PHE:HE2	1.93	0.51
1:G:367:LEU:HD22	1:G:367:LEU:N	2.25	0.51
2:J:146:LEU:HD13	2:J:266:VAL:HG13	1.92	0.51
1:M:283:ALA:HB1	1:M:322:ASN:H	1.76	0.51
2:N:565:HIS:HD2	2:N:567:ASP:HB2	1.75	0.51
1:O:372:GLN:NE2	3:O:509:PHE:N	2.58	0.51
2:P:508:PHE:HB2	2:P:563:VAL:CG2	2.40	0.51
2:P:535:ILE:HD12	2:P:535:ILE:N	2.07	0.51
1:A:282:PRO:CD	2:B:437:VAL:HG13	2.41	0.50
1:A:477:LEU:HD12	1:A:477:LEU:H	1.75	0.50
2:B:200:ILE:HD12	2:B:200:ILE:C	2.35	0.50
2:D:420:GLN:HG3	2:D:448:GLN:HE21	1.76	0.50
1:E:258:ASN:HA	1:E:330:SER:CB	2.40	0.50
1:E:370:PHE:N	1:E:370:PHE:HD2	2.10	0.50
2:F:528:GLU:HG3	2:F:528:GLU:O	2.10	0.50
1:G:246:MET:HE1	1:G:332:SER:OG	2.11	0.50
2:H:201:TYR:C	2:H:203:THR:N	2.67	0.50
2:H:291:PHE:CE1	2:H:297:HIS:HD2	2.29	0.50
2:H:444:THR:HG22	2:H:447:PHE:CD1	2.46	0.50
2:N:113:GLU:HB3	2:N:219:LEU:HD13	1.92	0.50
2:N:331:LEU:HD21	2:N:368:ALA:HB2	1.94	0.50
2:N:507:GLY:HA3	2:N:510:ILE:HG22	1.92	0.50
2:B:308:MET:HE3	2:B:309:VAL:C	2.36	0.50
1:C:196:MET:HE1	1:C:207:PHE:CE2	2.46	0.50
2:D:519:MET:HG3	2:D:533:TYR:CD1	2.46	0.50
1:E:246:MET:HE1	1:E:332:SER:CA	2.41	0.50
2:F:431:ILE:H	2:F:431:ILE:CD1	1.99	0.50
2:H:67:VAL:CG1	2:H:68:PRO:HD2	2.41	0.50
2:H:154:ARG:HA	2:H:157:VAL:O	2.11	0.50
2:H:169:GLY:HA3	2:H:226:SER:CB	2.38	0.50
2:H:213:ILE:HG22	2:H:213:ILE:O	2.12	0.50
1:I:484:LEU:HG	2:J:465:ASN:ND2	2.27	0.50
2:J:167:LEU:HD13	2:J:171:PHE:CE2	2.45	0.50
2:J:201:TYR:C	2:J:203:THR:N	2.68	0.50
2:J:576:MET:CB	2:J:577:PRO:HD2	2.41	0.50
2:L:208:LYS:O	2:L:211:LEU:HD21	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:564:LEU:HD12	2:L:578:CYS:HB3	1.93	0.50
1:M:484:LEU:HG	2:N:465:ASN:CG	2.36	0.50
2:N:437:VAL:O	2:N:449:VAL:HG13	2.10	0.50
1:O:316:LEU:HD23	1:O:320:ARG:HG2	1.93	0.50
2:P:85:GLN:HB3	2:P:91:ILE:HG21	1.92	0.50
2:P:142:LEU:HD23	2:P:142:LEU:O	2.10	0.50
1:A:264:GLN:O	1:A:265:PRO:O	2.29	0.50
2:B:148:GLN:HA	2:B:153:LYS:HA	1.92	0.50
2:B:281:GLN:HG2	2:B:282:PHE:CD1	2.47	0.50
1:C:84:ILE:HB	1:C:89:LEU:HD22	1.92	0.50
2:D:154:ARG:HA	2:D:157:VAL:O	2.11	0.50
1:E:370:PHE:N	1:E:370:PHE:CD2	2.80	0.50
2:F:71:ARG:NH2	2:F:366:GLU:OE2	2.39	0.50
2:F:114:THR:O	2:F:117:ILE:HD12	2.10	0.50
1:G:259:PHE:CD2	1:G:271:ARG:HG2	2.47	0.50
1:G:373:ILE:HD13	1:G:459:LEU:HD11	1.93	0.50
2:H:508:PHE:HB2	2:H:563:VAL:CG2	2.41	0.50
2:J:60:VAL:HG12	2:J:61:VAL:N	2.26	0.50
2:L:391:PHE:CD2	2:L:392:PRO:HD2	2.39	0.50
2:N:201:TYR:C	2:N:203:THR:N	2.67	0.50
2:N:543:PHE:CD2	2:N:562:GLY:HA3	2.46	0.50
1:O:414:GLU:CD	2:P:362:CYS:SG	2.94	0.50
2:P:414:THR:CG2	2:P:457:GLY:HA3	2.41	0.50
2:P:565:HIS:CD2	2:P:567:ASP:HB2	2.46	0.50
1:A:326:THR:O	1:A:356:VAL:HG11	2.12	0.50
2:B:175:ALA:CB	2:B:219:LEU:HB3	2.39	0.50
1:C:38:VAL:HG22	1:C:173:TYR:CD2	2.47	0.50
1:C:181:PHE:CD2	1:C:182:SER:N	2.79	0.50
1:C:298:ARG:HG3	1:C:298:ARG:NH1	2.25	0.50
2:D:58:SER:O	2:D:60:VAL:HG22	2.10	0.50
2:F:112:GLU:C	2:F:114:THR:H	2.19	0.50
2:F:169:GLY:HA3	2:F:226:SER:CB	2.40	0.50
2:F:450:ALA:HB3	2:F:481:VAL:HG11	1.93	0.50
1:G:266:GLN:HE21	1:G:318:GLU:HB3	1.77	0.50
2:H:118:ARG:CZ	2:H:257:GLY:HA2	2.41	0.50
2:H:280:ASN:HB3	2:H:283:THR:HG21	1.93	0.50
2:J:38:ILE:HD13	2:J:63:TYR:HE1	1.75	0.50
2:J:132:THR:HG22	2:J:134:ASP:N	2.26	0.50
1:K:422:TYR:O	1:K:423:HIS:C	2.55	0.50
2:L:148:GLN:HA	2:L:153:LYS:HA	1.93	0.50
2:L:304:TYR:CE1	2:L:353:PRO:HD3	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:228:LEU:HD12	2:N:411:GLU:CD	2.36	0.50
1:M:279:LEU:HD11	2:N:437:VAL:CG1	2.42	0.50
2:N:167:LEU:HD13	2:N:171:PHE:CE2	2.46	0.50
1:O:294:GLN:NE2	1:O:297:LYS:HD3	2.27	0.50
1:O:373:ILE:HG12	1:O:459:LEU:CD1	2.41	0.50
2:P:101:PRO:CG	2:P:105:ILE:HD13	2.42	0.50
2:B:468:MET:HE3	2:B:469:PRO:HD2	1.93	0.50
1:C:79:ARG:HG2	1:C:79:ARG:NH1	2.26	0.50
1:C:404:ARG:HB2	1:C:429:TRP:CZ3	2.47	0.50
2:D:124:ALA:HB1	2:D:300:PRO:HD3	1.93	0.50
2:D:565:HIS:CD2	2:D:567:ASP:HB2	2.46	0.50
1:E:210:TYR:HB2	2:H:547:ARG:HH22	1.77	0.50
2:F:351:ILE:HD12	2:F:351:ILE:N	2.26	0.50
2:F:547:ARG:HG2	2:F:547:ARG:NH1	2.24	0.50
2:H:33:LEU:CD2	2:H:67:VAL:HG22	2.40	0.50
2:H:123:ALA:HB1	2:H:253:ILE:O	2.11	0.50
2:H:148:GLN:HA	2:H:153:LYS:HA	1.94	0.50
2:H:303:ALA:O	2:H:353:PRO:HB3	2.11	0.50
2:H:340:VAL:CG1	2:H:344:GLY:HA2	2.42	0.50
2:H:451:ARG:HH22	2:H:478:SER:HB3	1.76	0.50
1:I:207:PHE:N	1:I:207:PHE:CD2	2.80	0.50
2:L:90:ARG:HH11	2:L:90:ARG:CB	2.25	0.50
2:L:167:LEU:HD13	2:L:171:PHE:CE2	2.47	0.50
2:L:351:ILE:HD12	2:L:351:ILE:N	2.26	0.50
2:L:495:ARG:HH11	2:L:495:ARG:HG3	1.76	0.50
1:M:370:PHE:N	1:M:370:PHE:CD1	2.79	0.50
1:O:247:PRO:HB3	2:P:391:PHE:CE1	2.46	0.50
2:P:451:ARG:HH22	2:P:478:SER:HB3	1.76	0.50
1:A:193:SER:HB2	1:A:195:GLU:OE1	2.11	0.50
1:A:324:LEU:O	1:A:325:ARG:C	2.53	0.50
1:A:471:ILE:HG23	1:A:472:ASN:N	2.27	0.50
2:B:73:ASP:CA	2:B:273:MET:HE1	2.42	0.50
2:B:189:THR:HG23	2:B:190:LYS:H	1.77	0.50
2:B:208:LYS:O	2:B:211:LEU:HD21	2.11	0.50
1:C:44:LEU:HD12	1:C:51:ILE:HG12	1.92	0.50
1:C:286:LEU:O	1:C:287:GLN:HB2	2.10	0.50
1:G:402:GLN:HB3	1:G:422:TYR:HB2	1.92	0.50
2:H:401:ARG:HG2	2:H:477:ILE:HD12	1.92	0.50
2:H:437:VAL:O	2:H:449:VAL:HG13	2.11	0.50
2:J:118:ARG:HB2	2:J:173:TYR:OH	2.11	0.50
2:J:122:VAL:HG23	2:J:299:PHE:CG	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:304:TYR:CD1	2:L:353:PRO:HD3	2.46	0.50
1:M:223:HIS:HB2	2:N:410:THR:HG23	1.93	0.50
1:M:246:MET:HG2	1:M:351:PHE:O	2.12	0.50
2:N:132:THR:CG2	2:N:133:LYS:N	2.74	0.50
2:N:185:PRO:HG2	2:N:188:LYS:CB	2.40	0.50
1:O:301:SER:HB2	1:O:312:TYR:O	2.12	0.50
1:O:420:PHE:HA	1:O:430:VAL:O	2.12	0.50
1:A:292:TYR:O	1:A:296:VAL:HG23	2.11	0.50
1:A:357:PHE:CE2	2:B:416:ALA:HB3	2.46	0.50
1:A:396:THR:C	1:A:398:LEU:H	2.18	0.50
1:A:426:LEU:O	1:A:428:LYS:N	2.44	0.50
2:D:113:GLU:HB3	2:D:219:LEU:HD13	1.94	0.50
1:E:299:THR:HG21	1:E:305:TYR:CD1	2.47	0.50
1:E:494:ARG:HH11	1:E:494:ARG:HB2	1.77	0.50
2:F:174:THR:OG1	2:F:175:ALA:N	2.43	0.50
2:F:446:GLU:O	2:F:447:PHE:CD2	2.65	0.50
1:G:208:LYS:O	1:G:208:LYS:HG2	2.11	0.50
1:G:233:GLN:CD	1:G:495:LEU:HD13	2.36	0.50
1:G:471:ILE:HG22	1:G:472:ASN:N	2.26	0.50
2:H:576:MET:CB	2:H:577:PRO:HD2	2.41	0.50
2:J:40:SER:H	2:J:43:GLU:HB2	1.77	0.50
2:J:132:THR:HB	2:J:135:ARG:HG3	1.92	0.50
2:L:152:ARG:HD3	2:L:156:LEU:HD11	1.93	0.50
2:N:148:GLN:HA	2:N:153:LYS:HA	1.94	0.50
2:N:274:PHE:C	2:N:276:GLU:H	2.19	0.50
1:O:259:PHE:CE2	1:O:271:ARG:HG3	2.47	0.50
2:P:42:LYS:CG	2:P:43:GLU:N	2.74	0.50
2:P:105:ILE:O	2:P:106:GLN:C	2.55	0.50
2:P:208:LYS:O	2:P:211:LEU:HD21	2.12	0.50
2:P:245:THR:CG2	2:P:246:VAL:N	2.75	0.50
1:A:267:GLN:NE2	2:B:262:LYS:HZ1	2.10	0.50
2:B:213:ILE:HG22	2:B:213:ILE:O	2.11	0.50
2:B:482:ILE:HG22	2:B:483:LYS:O	2.12	0.50
2:D:114:THR:O	2:D:117:ILE:HD12	2.12	0.50
2:D:304:TYR:CD1	2:D:353:PRO:HD3	2.47	0.50
1:E:204:ASP:O	1:E:205:ARG:C	2.54	0.50
1:E:258:ASN:HA	1:E:330:SER:HB3	1.93	0.50
1:E:281:ASP:HB2	2:F:438:HIS:CB	2.39	0.50
2:F:426:LYS:HA	2:F:571:LYS:CE	2.39	0.50
1:G:421:SER:HB2	1:G:432:VAL:HG11	1.93	0.50
1:G:438:PHE:CD1	1:G:454:VAL:HG22	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:511:ILE:HG22	2:H:561:LEU:HD21	1.93	0.50
2:J:148:GLN:HA	2:J:153:LYS:HA	1.94	0.50
2:J:174:THR:OG1	2:J:175:ALA:N	2.44	0.50
2:J:391:PHE:CD2	2:J:392:PRO:HD2	2.36	0.50
2:J:416:ALA:O	2:J:451:ARG:HG3	2.12	0.50
2:J:450:ALA:HB3	2:J:481:VAL:HG11	1.94	0.50
1:K:192:LEU:H	1:K:192:LEU:CD1	2.23	0.50
1:K:424:GLN:C	1:K:426:LEU:N	2.67	0.50
2:L:126:LEU:HD23	2:L:126:LEU:N	2.27	0.50
1:M:458:GLY:HA3	3:M:509:PHE:N	2.27	0.50
1:M:473:ASN:C	1:M:475:ARG:N	2.70	0.50
2:N:576:MET:CB	2:N:577:PRO:HD2	2.41	0.50
1:O:286:LEU:HB2	2:P:488:ASP:O	2.12	0.50
2:P:42:LYS:CG	2:P:43:GLU:H	2.24	0.50
2:P:217:LYS:HB3	2:P:218:PRO:CD	2.38	0.50
1:A:188:GLN:OE1	1:A:209:PRO:HD3	2.12	0.50
2:B:245:THR:CG2	2:B:246:VAL:N	2.74	0.50
2:B:553:ALA:O	2:B:554:ARG:C	2.55	0.50
1:C:84:ILE:HD11	1:C:125:VAL:C	2.36	0.50
1:C:113:ILE:HD12	1:C:125:VAL:CG1	2.42	0.50
1:C:253:GLU:OE1	1:C:257:TRP:HB2	2.12	0.50
1:C:479:GLY:HA3	2:D:415:PHE:CE1	2.46	0.50
2:D:105:ILE:O	2:D:106:GLN:C	2.54	0.50
2:F:280:ASN:HB3	2:F:283:THR:HG21	1.94	0.50
1:G:282:PRO:CD	2:H:437:VAL:HG13	2.40	0.50
1:G:363:ASP:CG	1:G:364:ALA:N	2.69	0.50
2:H:122:VAL:HG23	2:H:299:PHE:CG	2.46	0.50
2:H:535:ILE:H	2:H:535:ILE:CD1	2.05	0.50
1:K:413:THR:HG21	1:K:436:GLY:HA3	1.94	0.50
1:K:458:GLY:HA3	3:K:509:PHE:HB2	1.92	0.50
1:K:471:ILE:H	1:K:471:ILE:CD1	2.20	0.50
2:L:154:ARG:HA	2:L:157:VAL:O	2.12	0.50
2:L:213:ILE:O	2:L:213:ILE:HG22	2.10	0.50
2:L:416:ALA:HA	2:L:451:ARG:HG3	1.93	0.50
1:M:259:PHE:O	1:M:261:ALA:N	2.45	0.50
2:N:91:ILE:HG12	2:N:92:LYS:N	2.26	0.50
2:N:147:HIS:CE1	2:N:159:ILE:HG12	2.47	0.50
2:P:108:LEU:HD21	2:P:173:TYR:HB2	1.93	0.50
2:P:324:PRO:HG3	2:P:344:GLY:O	2.12	0.50
1:A:443:LEU:HD11	1:A:454:VAL:HG13	1.94	0.49
2:B:565:HIS:HD2	2:B:567:ASP:HB2	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:88:GLY:HA3	1:C:124:ARG:HD3	1.92	0.49
1:C:324:LEU:O	1:C:325:ARG:C	2.55	0.49
2:D:508:PHE:HE1	2:D:562:GLY:CA	2.20	0.49
2:F:308:MET:HE3	2:F:309:VAL:C	2.37	0.49
2:F:507:GLY:HA3	2:F:510:ILE:HG22	1.94	0.49
1:G:343:LYS:HB2	1:G:344:PRO:HD2	1.88	0.49
1:G:438:PHE:HD1	1:G:454:VAL:HG22	1.76	0.49
2:H:350:GLU:O	2:H:352:PRO:HD3	2.11	0.49
2:H:485:SER:C	2:H:486:ASN:HD22	2.20	0.49
1:I:253:GLU:OE1	1:I:257:TRP:HB2	2.12	0.49
2:J:175:ALA:CB	2:J:219:LEU:HB3	2.36	0.49
2:J:188:LYS:HE2	2:J:201:TYR:OH	2.12	0.49
2:J:213:ILE:HG22	2:J:213:ILE:O	2.11	0.49
2:J:414:THR:CG2	2:J:457:GLY:HA3	2.42	0.49
2:J:515:LEU:HD11	2:J:551:ILE:HG21	1.94	0.49
2:J:569:ILE:HD13	2:J:576:MET:O	2.12	0.49
1:K:37:VAL:C	1:K:39:GLY:N	2.70	0.49
2:L:6:VAL:CG2	2:L:11:LEU:HD12	2.42	0.49
2:L:71:ARG:HG2	2:L:355:ARG:NH2	2.27	0.49
2:L:105:ILE:O	2:L:106:GLN:C	2.54	0.49
2:L:124:ALA:HB1	2:L:300:PRO:HD3	1.94	0.49
2:N:124:ALA:HB1	2:N:300:PRO:HD3	1.93	0.49
2:N:126:LEU:HD21	2:N:251:ILE:HB	1.94	0.49
2:N:143:GLN:HG3	2:N:159:ILE:HD12	1.93	0.49
2:P:70:ASN:HB3	2:P:71:ARG:HD2	1.93	0.49
2:P:175:ALA:HA	2:P:220:TYR:O	2.12	0.49
2:B:235:PRO:HB2	2:B:236:ILE:HD12	1.94	0.49
2:B:396:LEU:HD22	1:C:495:LEU:HD13	1.94	0.49
1:C:7:ALA:C	1:C:9:LEU:N	2.70	0.49
2:D:186:LEU:CD2	2:D:238:ASN:H	2.22	0.49
1:E:202:TRP:CD1	1:E:202:TRP:C	2.90	0.49
1:E:437:VAL:HG13	1:E:455:ILE:HG22	1.95	0.49
2:F:177:ARG:HG2	2:F:178:PRO:CD	2.42	0.49
2:H:39:THR:O	2:H:62:LEU:HD23	2.12	0.49
2:H:179:SER:HA	2:H:193:THR:HG21	1.94	0.49
2:H:357:ASP:OD1	2:H:358:ILE:HD12	2.12	0.49
2:J:41:GLU:HA	2:J:44:ILE:HD12	1.93	0.49
2:J:249:ARG:C	2:J:250:ASN:HD22	2.20	0.49
2:J:549:ALA:HB2	1:K:212:PHE:HE2	1.77	0.49
1:K:224:LEU:HD22	2:L:401:ARG:HH12	1.72	0.49
2:L:201:TYR:C	2:L:203:THR:N	2.68	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:215:GLU:O	2:N:216:ASN:HB3	2.11	0.49
2:P:233:MET:HE3	2:P:236:ILE:HB	1.94	0.49
2:P:404:MET:CE	2:P:497:LEU:HD21	2.42	0.49
1:A:246:MET:HE1	1:A:332:SER:CA	2.42	0.49
1:A:494:ARG:C	1:A:496:ASP:N	2.69	0.49
2:B:132:THR:HG22	2:B:135:ARG:H	1.77	0.49
1:C:193:SER:O	1:C:197:ILE:CD1	2.60	0.49
1:C:325:ARG:HH21	1:C:325:ARG:CG	2.25	0.49
1:C:353:ILE:HG12	1:C:373:ILE:HB	1.94	0.49
2:D:349:ILE:HD13	2:D:364:ILE:HG21	1.94	0.49
1:E:474:ILE:O	1:E:475:ARG:HB2	2.11	0.49
2:F:183:PHE:CD2	2:F:230:VAL:HG11	2.47	0.49
2:F:513:GLY:HA3	1:G:217:VAL:O	2.13	0.49
1:G:267:GLN:O	1:G:268:HIS:C	2.55	0.49
1:G:469:TYR:CZ	1:G:493:CYS:HB2	2.47	0.49
2:H:90:ARG:HH11	2:H:90:ARG:CB	2.25	0.49
1:I:360:GLU:HA	2:J:443:LYS:HE3	1.94	0.49
1:K:343:LYS:CB	1:K:344:PRO:HD3	2.32	0.49
1:K:377:VAL:HG12	1:K:382:LEU:HD11	1.94	0.49
1:K:424:GLN:C	1:K:426:LEU:H	2.21	0.49
1:M:225:HIS:CD2	2:N:413:LEU:HB2	2.47	0.49
1:M:226:PRO:HG2	1:M:486:MET:CE	2.42	0.49
1:M:370:PHE:HB2	1:M:462:GLU:CD	2.37	0.49
2:N:177:ARG:HG2	2:N:178:PRO:CD	2.43	0.49
2:N:584:ASN:ND2	2:N:587:PRO:HD3	2.27	0.49
1:O:236:GLN:O	1:O:240:GLU:HG3	2.11	0.49
1:O:251:PHE:H	2:P:493:ASN:HD21	1.60	0.49
2:P:515:LEU:HD11	2:P:551:ILE:CG2	2.42	0.49
1:A:316:LEU:HD23	1:A:320:ARG:HG2	1.94	0.49
1:A:363:ASP:CG	1:A:364:ALA:H	2.19	0.49
2:B:105:ILE:O	2:B:106:GLN:C	2.55	0.49
2:B:127:ARG:NH1	2:B:285:GLU:OE1	2.45	0.49
2:B:132:THR:HG22	2:B:134:ASP:H	1.78	0.49
1:C:60:HIS:CE1	1:C:168:VAL:HB	2.46	0.49
1:C:233:GLN:OE1	1:C:497:ALA:HB1	2.12	0.49
1:E:248:THR:HG21	1:E:354:ASP:CB	2.42	0.49
1:E:328:THR:OG1	1:E:372:GLN:NE2	2.44	0.49
2:F:132:THR:HG22	2:F:135:ARG:H	1.76	0.49
1:G:423:HIS:HB3	1:G:427:LYS:HA	1.93	0.49
1:I:226:PRO:HG2	1:I:486:MET:CE	2.42	0.49
1:I:226:PRO:HG2	1:I:486:MET:HE1	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:132:THR:HG22	2:J:135:ARG:H	1.77	0.49
2:L:175:ALA:HA	2:L:220:TYR:O	2.12	0.49
2:L:215:GLU:O	2:L:216:ASN:HB3	2.11	0.49
2:N:44:ILE:O	2:N:46:SER:N	2.46	0.49
2:N:45:ILE:HG22	2:N:45:ILE:O	2.12	0.49
2:N:291:PHE:CE1	2:N:297:HIS:HD2	2.30	0.49
1:O:246:MET:HE1	1:O:332:SER:HA	1.95	0.49
2:P:420:GLN:NE2	2:P:431:ILE:HG21	2.27	0.49
1:A:413:THR:HG21	3:A:509:PHE:CZ	2.42	0.49
2:B:42:LYS:HG3	2:B:43:GLU:N	2.28	0.49
2:B:321:ARG:HH21	2:F:380:THR:HG21	1.78	0.49
2:B:429:VAL:HG12	2:B:430:ASP:N	2.27	0.49
2:B:547:ARG:HG2	2:B:547:ARG:HH11	1.77	0.49
1:C:23:SER:O	1:C:27:ALA:HB2	2.12	0.49
1:C:72:ARG:HB3	1:C:72:ARG:HH11	1.77	0.49
1:C:373:ILE:HG12	1:C:459:LEU:CD1	2.43	0.49
2:D:91:ILE:HG12	2:D:92:LYS:N	2.27	0.49
2:D:235:PRO:HB2	2:D:236:ILE:HD12	1.93	0.49
2:D:514:LEU:HD23	2:D:581:LEU:HD23	1.95	0.49
1:E:247:PRO:HB3	2:F:391:PHE:CE1	2.47	0.49
2:F:33:LEU:HD22	2:F:67:VAL:HG22	1.92	0.49
2:F:512:HIS:HE1	1:G:215:HIS:HA	1.77	0.49
1:G:266:GLN:HA	1:G:271:ARG:NH1	2.27	0.49
2:H:147:HIS:CE1	2:H:159:ILE:HG12	2.48	0.49
2:H:245:THR:CG2	2:H:246:VAL:N	2.76	0.49
2:J:304:TYR:CE1	2:J:353:PRO:HD3	2.47	0.49
2:J:553:ALA:O	2:J:554:ARG:C	2.55	0.49
2:L:91:ILE:HG12	2:L:92:LYS:N	2.26	0.49
2:N:566:PRO:O	2:N:570:THR:HG23	2.12	0.49
1:O:477:LEU:HD12	1:O:478:VAL:HG23	1.94	0.49
2:P:132:THR:HG22	2:P:134:ASP:N	2.27	0.49
2:P:350:GLU:O	2:P:352:PRO:HD3	2.12	0.49
2:B:462:ILE:HG23	2:B:472:LEU:CD1	2.36	0.49
2:B:543:PHE:CD2	2:B:562:GLY:HA3	2.47	0.49
1:C:328:THR:H	1:C:372:GLN:NE2	2.10	0.49
1:C:426:LEU:HD22	1:C:426:LEU:H	1.76	0.49
2:D:90:ARG:HB3	2:D:90:ARG:HH11	1.76	0.49
2:D:547:ARG:HG2	2:D:547:ARG:NH1	2.26	0.49
1:E:251:PHE:H	2:F:493:ASN:HD21	1.59	0.49
2:F:108:LEU:HD21	2:F:173:TYR:HB2	1.94	0.49
2:F:416:ALA:O	2:F:451:ARG:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:225:HIS:HE1	1:G:477:LEU:HD13	1.78	0.49
2:H:105:ILE:O	2:H:106:GLN:C	2.56	0.49
1:I:265:PRO:HD3	1:I:310:TYR:CZ	2.48	0.49
2:L:543:PHE:CD2	2:L:562:GLY:HA3	2.47	0.49
2:L:576:MET:CB	2:L:577:PRO:HD2	2.43	0.49
1:M:373:ILE:HD13	1:M:459:LEU:HD11	1.95	0.49
2:N:59:ASP:O	2:N:59:ASP:CG	2.56	0.49
2:N:451:ARG:HH22	2:N:478:SER:HB3	1.76	0.49
1:O:264:GLN:O	1:O:271:ARG:NH2	2.45	0.49
1:O:468:LYS:HG2	1:O:495:LEU:HB3	1.95	0.49
1:A:374:GLU:OE1	3:A:509:PHE:HB2	2.12	0.49
2:B:15:LEU:CD1	2:B:19:TYR:HE2	2.25	0.49
2:B:123:ALA:HB1	2:B:253:ILE:O	2.11	0.49
1:C:380:HIS:CD2	1:C:452:VAL:HG22	2.47	0.49
2:D:188:LYS:HE2	2:D:201:TYR:CE2	2.47	0.49
1:E:494:ARG:HH11	1:E:494:ARG:HB3	1.78	0.49
2:F:42:LYS:HG2	2:F:58:SER:O	2.12	0.49
2:H:44:ILE:O	2:H:47:LYS:HG2	2.13	0.49
2:H:512:HIS:HA	2:H:561:LEU:HD11	1.93	0.49
1:I:246:MET:HE1	1:I:332:SER:HA	1.95	0.49
1:I:247:PRO:HB3	2:J:391:PHE:CE1	2.48	0.49
1:I:350:TYR:HB2	1:I:376:VAL:CG1	2.42	0.49
2:J:73:ASP:CA	2:J:273:MET:HE1	2.40	0.49
2:J:115:ALA:O	2:J:116:LYS:HG3	2.12	0.49
2:J:468:MET:HE3	2:J:469:PRO:HD2	1.95	0.49
1:K:316:LEU:HD23	1:K:320:ARG:HG2	1.95	0.49
2:L:126:LEU:HD21	2:L:251:ILE:HB	1.95	0.49
2:L:163:ASP:OD2	2:L:248:THR:HG23	2.12	0.49
2:L:185:PRO:HG2	2:L:188:LYS:CB	2.40	0.49
2:L:584:ASN:ND2	2:L:587:PRO:HD3	2.28	0.49
1:M:475:ARG:HH11	1:M:475:ARG:CG	2.26	0.49
2:N:122:VAL:CG2	2:N:299:PHE:CG	2.96	0.49
2:P:308:MET:HE2	2:P:308:MET:O	2.11	0.49
1:A:255:SER:HB2	1:A:321:LYS:O	2.12	0.49
1:A:258:ASN:ND2	1:A:330:SER:HB3	2.25	0.49
1:A:294:GLN:NE2	1:A:297:LYS:HD3	2.27	0.49
1:A:406:LYS:HD2	2:B:29:PHE:CE1	2.47	0.49
1:C:27:ALA:O	1:C:32:MET:O	2.30	0.49
1:C:112:TRP:CD2	1:C:132:MET:HE1	2.46	0.49
2:D:444:THR:HG21	2:D:446:GLU:HG3	1.94	0.49
2:D:485:SER:C	2:D:486:ASN:HD22	2.20	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:267:GLN:HA	2:F:152:ARG:HD2	1.94	0.49
2:F:175:ALA:HA	2:F:220:TYR:O	2.12	0.49
1:G:471:ILE:CG2	1:G:473:ASN:O	2.61	0.49
2:J:274:PHE:C	2:J:276:GLU:H	2.20	0.49
2:L:132:THR:HG22	2:L:134:ASP:N	2.27	0.49
1:M:193:SER:HB3	1:M:195:GLU:CD	2.38	0.49
1:M:243:PHE:CD2	1:M:349:LYS:HB3	2.48	0.49
2:N:68:PRO:C	2:N:70:ASN:N	2.71	0.49
2:N:233:MET:HE3	2:N:236:ILE:HB	1.94	0.49
2:N:420:GLN:HG2	2:N:449:VAL:HG23	1.95	0.49
2:P:122:VAL:HG23	2:P:299:PHE:CG	2.47	0.49
2:P:213:ILE:HG22	2:P:213:ILE:O	2.11	0.49
2:P:404:MET:HE2	2:P:497:LEU:HD21	1.94	0.49
2:P:535:ILE:H	2:P:535:ILE:CD1	2.01	0.49
1:A:187:LYS:HE3	1:A:187:LYS:CA	2.42	0.49
2:B:126:LEU:CD2	2:B:251:ILE:HB	2.43	0.49
2:B:142:LEU:C	2:B:142:LEU:HD23	2.38	0.49
1:C:211:ASN:HD21	1:C:213:LEU:HB2	1.78	0.49
1:C:438:PHE:HD1	1:C:454:VAL:HG22	1.77	0.49
2:D:245:THR:CG2	2:D:246:VAL:N	2.75	0.49
1:E:228:LEU:HD12	2:F:411:GLU:CD	2.38	0.49
1:E:473:ASN:HD22	1:E:476:GLU:CD	2.20	0.49
2:F:73:ASP:C	2:F:273:MET:HE1	2.38	0.49
2:F:122:VAL:CG2	2:F:299:PHE:CD2	2.96	0.49
2:F:201:TYR:C	2:F:203:THR:N	2.69	0.49
2:F:393:LEU:HD22	2:F:495:ARG:NH1	2.28	0.49
1:G:425:GLY:O	1:G:427:LYS:N	2.46	0.49
2:H:115:ALA:O	2:H:116:LYS:HG3	2.13	0.49
2:H:416:ALA:HA	2:H:451:ARG:HG3	1.95	0.49
2:H:565:HIS:HD2	2:H:567:ASP:HB2	1.78	0.49
2:J:385:TYR:CE1	1:K:349:LYS:HE2	2.48	0.49
1:K:235:ARG:NH2	2:L:390:GLN:OE1	2.45	0.49
1:K:284:GLU:HG2	1:K:320:ARG:HB3	1.95	0.49
1:K:396:THR:C	1:K:398:LEU:H	2.21	0.49
2:L:565:HIS:CD2	2:L:567:ASP:HB2	2.47	0.49
1:M:264:GLN:HG2	1:M:411:PRO:HB2	1.94	0.49
1:M:328:THR:H	1:M:372:GLN:NE2	2.10	0.49
1:M:438:PHE:CD1	1:M:454:VAL:HG22	2.48	0.49
2:N:114:THR:O	2:N:117:ILE:HD12	2.13	0.49
2:N:234:PRO:HB2	2:N:235:PRO:CD	2.25	0.49
2:N:479:ASP:HA	2:N:494:TYR:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:569:ILE:HD13	2:N:576:MET:O	2.13	0.49
1:O:246:MET:HE1	1:O:332:SER:CA	2.43	0.49
1:O:262:LEU:O	1:O:412:TYR:HB3	2.13	0.49
1:O:276:THR:HG23	1:O:326:THR:HG21	1.95	0.49
1:O:285:ALA:O	1:O:286:LEU:HG	2.13	0.49
2:P:281:GLN:HG2	2:P:282:PHE:CD1	2.48	0.49
1:A:216:GLY:HA3	2:D:512:HIS:ND1	2.27	0.49
1:A:361:THR:O	1:A:362:LEU:C	2.56	0.49
2:B:430:ASP:C	2:B:432:SER:H	2.21	0.49
1:C:64:THR:CG2	1:C:65:ALA:H	2.26	0.49
1:C:139:ARG:HD2	1:C:155:GLU:OE1	2.12	0.49
1:C:197:ILE:HD12	1:C:197:ILE:N	2.28	0.49
2:D:82:ARG:HD2	2:D:94:PRO:HG3	1.95	0.49
2:D:219:LEU:C	2:D:220:TYR:HD1	2.21	0.49
1:E:307:SER:CB	1:E:441:GLU:OE1	2.61	0.49
1:E:328:THR:H	1:E:372:GLN:NE2	2.11	0.49
1:E:343:LYS:CB	1:E:344:PRO:HD3	2.30	0.49
2:F:90:ARG:HH11	2:F:90:ARG:CB	2.26	0.49
2:F:148:GLN:HA	2:F:153:LYS:HA	1.95	0.49
2:F:480:ILE:C	2:F:480:ILE:HD12	2.37	0.49
1:G:192:LEU:HD12	1:G:207:PHE:CD1	2.48	0.49
1:G:246:MET:HE1	1:G:332:SER:HA	1.94	0.49
2:H:175:ALA:HA	2:H:220:TYR:O	2.13	0.49
2:H:234:PRO:CB	2:H:235:PRO:HD3	2.28	0.49
1:I:212:PHE:CE1	2:L:549:ALA:HB2	2.48	0.49
2:J:128:ASN:HA	2:J:249:ARG:HD3	1.95	0.49
2:J:431:ILE:H	2:J:431:ILE:CD1	2.01	0.49
2:J:547:ARG:HG2	2:J:547:ARG:NH1	2.28	0.49
1:K:328:THR:H	1:K:372:GLN:NE2	2.11	0.49
2:L:401:ARG:HD2	2:L:411:GLU:OE2	2.13	0.49
2:N:118:ARG:HB2	2:N:173:TYR:OH	2.13	0.49
1:O:281:ASP:C	1:O:283:ALA:H	2.21	0.49
1:O:316:LEU:HD21	1:O:320:ARG:HD3	1.95	0.49
1:O:364:ALA:O	1:O:366:HIS:N	2.39	0.49
2:P:146:LEU:HD13	2:P:266:VAL:HG13	1.93	0.49
2:P:154:ARG:HA	2:P:157:VAL:O	2.13	0.49
1:A:387:LEU:HD13	1:A:387:LEU:C	2.38	0.48
1:A:413:THR:HG21	1:A:436:GLY:HA3	1.93	0.48
1:C:75:SER:O	1:C:79:ARG:HB2	2.13	0.48
1:C:396:THR:C	1:C:398:LEU:H	2.20	0.48
2:D:132:THR:HB	2:D:135:ARG:HG3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:152:ARG:HD3	2:D:156:LEU:HD11	1.94	0.48
2:F:82:ARG:HD2	2:F:94:PRO:HG3	1.95	0.48
2:F:131:PHE:CE2	2:F:136:TYR:HA	2.48	0.48
2:F:179:SER:N	2:F:195:CYS:HB2	2.27	0.48
1:G:425:GLY:O	1:G:427:LYS:HG3	2.13	0.48
1:I:289:PRO:O	1:I:290:MET:C	2.56	0.48
1:K:246:MET:HE1	1:K:332:SER:HA	1.95	0.48
2:L:62:LEU:N	2:L:62:LEU:CD2	2.76	0.48
2:L:129:ILE:HD12	2:L:251:ILE:CD1	2.43	0.48
2:N:340:VAL:CG1	2:N:344:GLY:HA2	2.43	0.48
1:O:281:ASP:CB	1:O:282:PRO:CD	2.90	0.48
2:P:291:PHE:CE1	2:P:297:HIS:HD2	2.32	0.48
1:A:328:THR:OG1	1:A:372:GLN:NE2	2.45	0.48
2:B:132:THR:O	2:B:133:LYS:C	2.56	0.48
1:C:459:LEU:HD12	1:C:459:LEU:C	2.39	0.48
1:C:471:ILE:HG22	1:C:473:ASN:N	2.28	0.48
2:D:401:ARG:HD2	2:D:411:GLU:OE2	2.13	0.48
2:H:126:LEU:HD23	2:H:126:LEU:N	2.28	0.48
2:H:532:GLY:O	2:H:553:ALA:HA	2.13	0.48
1:I:296:VAL:O	1:I:300:HIS:HB2	2.12	0.48
1:I:463:ARG:O	1:I:466:MET:HB2	2.12	0.48
2:J:132:THR:HB	2:J:135:ARG:CG	2.43	0.48
2:J:235:PRO:HB2	2:J:236:ILE:HD12	1.95	0.48
2:L:115:ALA:O	2:L:116:LYS:HG3	2.13	0.48
2:L:497:LEU:C	2:L:497:LEU:HD23	2.38	0.48
1:O:438:PHE:HD1	1:O:454:VAL:HG22	1.78	0.48
2:P:188:LYS:HE2	2:P:201:TYR:CE2	2.48	0.48
1:A:491:PRO:O	1:A:493:CYS:N	2.46	0.48
2:B:115:ALA:O	2:B:116:LYS:HG3	2.13	0.48
2:B:177:ARG:HG2	2:B:178:PRO:CD	2.43	0.48
1:C:179:SER:C	1:C:181:PHE:N	2.69	0.48
2:F:537:ALA:HB2	1:G:212:PHE:HD2	1.76	0.48
1:G:288:LEU:HB3	1:G:293:VAL:HG21	1.96	0.48
2:J:27:LEU:HD12	2:J:84:LEU:HD13	1.95	0.48
2:J:264:LYS:HD2	2:J:301:GLU:CD	2.38	0.48
2:J:479:ASP:HA	2:J:494:TYR:O	2.12	0.48
2:J:549:ALA:HB2	1:K:212:PHE:CE2	2.49	0.48
1:K:279:LEU:CD2	1:K:323:LEU:HA	2.43	0.48
1:K:458:GLY:N	3:K:509:PHE:HB2	2.27	0.48
1:K:497:ALA:C	1:K:498:GLU:HG3	2.39	0.48
2:L:188:LYS:HE2	2:L:201:TYR:CE2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:565:HIS:HD2	2:L:567:ASP:HB2	1.78	0.48
1:M:466:MET:O	1:M:467:ILE:C	2.56	0.48
2:N:62:LEU:HD23	2:N:62:LEU:N	2.28	0.48
1:O:443:LEU:HA	1:O:446:MET:HE2	1.94	0.48
1:O:477:LEU:HA	1:O:482:VAL:CB	2.42	0.48
2:P:70:ASN:HD22	2:P:71:ARG:CZ	2.26	0.48
2:P:126:LEU:N	2:P:126:LEU:CD2	2.76	0.48
1:A:343:LYS:CB	1:A:344:PRO:HD3	2.34	0.48
1:A:349:LYS:HG2	1:A:377:VAL:HG22	1.94	0.48
2:B:132:THR:CG2	2:B:133:LYS:N	2.77	0.48
2:B:357:ASP:OD1	2:B:358:ILE:HD12	2.12	0.48
1:C:189:GLU:HB3	1:C:207:PHE:HA	1.94	0.48
1:C:277:PHE:CE1	1:C:359:ASN:HA	2.48	0.48
1:C:499:PRO:O	1:C:501:PRO:HD3	2.14	0.48
2:D:108:LEU:HD21	2:D:173:TYR:HB2	1.95	0.48
2:D:146:LEU:HD13	2:D:266:VAL:HG13	1.96	0.48
1:E:210:TYR:HD2	1:E:212:PHE:CE1	2.31	0.48
2:F:414:THR:CG2	2:F:457:GLY:HA3	2.44	0.48
1:G:228:LEU:HD12	2:H:411:GLU:OE2	2.14	0.48
2:H:167:LEU:HD13	2:H:171:PHE:CE2	2.48	0.48
2:H:174:THR:OG1	2:H:175:ALA:N	2.46	0.48
1:I:268:HIS:HD2	1:I:270:ALA:HB3	1.77	0.48
1:I:277:PHE:CE2	1:I:359:ASN:CG	2.91	0.48
2:J:103:GLY:O	2:J:105:ILE:N	2.44	0.48
2:J:154:ARG:HA	2:J:157:VAL:O	2.12	0.48
1:K:211:ASN:N	1:K:211:ASN:ND2	2.56	0.48
1:K:477:LEU:HD23	1:K:486:MET:CE	2.43	0.48
2:L:146:LEU:HD13	2:L:266:VAL:HG13	1.94	0.48
2:N:85:GLN:HB3	2:N:91:ILE:HG21	1.94	0.48
2:N:122:VAL:HG22	2:N:123:ALA:N	2.29	0.48
2:N:439:ILE:HD12	2:N:439:ILE:N	2.27	0.48
1:O:223:HIS:HB2	2:P:410:THR:HG23	1.96	0.48
1:O:327:HIS:CA	1:O:356:VAL:HG11	2.40	0.48
1:O:349:LYS:HG2	1:O:377:VAL:HG22	1.95	0.48
2:P:147:HIS:ND1	2:P:154:ARG:HG2	2.28	0.48
1:A:208:LYS:N	1:A:209:PRO:HD3	2.28	0.48
1:A:267:GLN:HA	2:B:152:ARG:NH1	2.29	0.48
1:A:426:LEU:C	1:A:428:LYS:H	2.21	0.48
2:B:267:LEU:HD23	2:B:267:LEU:C	2.37	0.48
1:C:74:GLY:HA2	1:C:137:GLN:CG	2.43	0.48
1:C:147:GLN:O	1:C:149:GLU:N	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:223:HIS:HB2	2:D:410:THR:HG23	1.95	0.48
1:C:479:GLY:CA	2:D:415:PHE:CE1	2.95	0.48
2:D:208:LYS:O	2:D:211:LEU:HD21	2.13	0.48
2:F:105:ILE:O	2:F:106:GLN:C	2.57	0.48
2:F:535:ILE:H	2:F:535:ILE:CD1	2.12	0.48
2:H:533:TYR:CD2	2:H:533:TYR:N	2.81	0.48
1:I:246:MET:HE1	1:I:332:SER:CA	2.43	0.48
1:I:289:PRO:O	1:I:292:TYR:N	2.45	0.48
2:J:113:GLU:H	2:J:113:GLU:CD	2.22	0.48
2:J:514:LEU:HD23	2:J:581:LEU:HD23	1.94	0.48
1:K:279:LEU:HD23	1:K:279:LEU:N	2.28	0.48
1:K:316:LEU:HD21	1:K:320:ARG:HD3	1.95	0.48
2:L:41:GLU:OE1	2:L:45:ILE:HD11	2.13	0.48
1:M:275:ASP:O	1:M:276:THR:HG23	2.13	0.48
1:M:283:ALA:HA	1:M:322:ASN:CB	2.43	0.48
2:P:357:ASP:O	2:P:359:ILE:HG23	2.13	0.48
2:P:517:ARG:CZ	2:P:521:LEU:HD21	2.43	0.48
2:B:154:ARG:HA	2:B:157:VAL:O	2.14	0.48
2:B:331:LEU:HD21	2:B:368:ALA:HB2	1.96	0.48
1:E:484:LEU:HG	2:F:465:ASN:CG	2.38	0.48
2:F:180:ASP:O	2:F:181:ILE:HG23	2.14	0.48
1:G:195:GLU:CA	1:G:198:SER:HB3	2.36	0.48
1:G:246:MET:HE1	1:G:332:SER:CA	2.43	0.48
1:G:262:LEU:HA	1:G:442:MET:HG3	1.94	0.48
2:H:41:GLU:CD	2:H:41:GLU:C	2.81	0.48
1:I:298:ARG:HG3	1:I:298:ARG:NH1	2.28	0.48
1:I:492:LEU:CD2	2:L:399:LEU:HB3	2.43	0.48
2:J:139:PHE:CE2	2:J:161:THR:HG21	2.48	0.48
2:J:508:PHE:HB2	2:J:563:VAL:CG2	2.44	0.48
2:L:547:ARG:HG2	2:L:547:ARG:NH1	2.28	0.48
2:N:20:THR:HB	2:N:23:GLU:HG3	1.96	0.48
1:O:197:ILE:O	1:O:197:ILE:HG22	2.14	0.48
1:O:235:ARG:NH1	1:O:245:GLU:OE1	2.46	0.48
1:O:328:THR:OG1	1:O:372:GLN:NE2	2.46	0.48
1:O:438:PHE:CD1	1:O:454:VAL:HG22	2.48	0.48
2:P:480:ILE:HG12	2:P:496:HIS:NE2	2.28	0.48
2:B:103:GLY:O	2:B:105:ILE:N	2.42	0.48
2:B:569:ILE:HD12	2:B:569:ILE:O	2.13	0.48
2:D:143:GLN:HG3	2:D:159:ILE:HD12	1.96	0.48
2:D:271:VAL:HG21	2:D:284:VAL:CG1	2.44	0.48
1:E:210:TYR:HB2	2:H:547:ARG:NH2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:204:ASP:HB3	1:G:206:PRO:HD2	1.96	0.48
1:G:266:GLN:HE21	1:G:318:GLU:CB	2.27	0.48
1:G:423:HIS:HB2	1:G:427:LYS:HA	1.94	0.48
2:H:526:PRO:HA	2:H:533:TYR:CE2	2.48	0.48
1:I:367:LEU:HD11	1:I:478:VAL:HB	1.96	0.48
2:J:90:ARG:HH11	2:J:90:ARG:CB	2.26	0.48
2:J:416:ALA:HA	2:J:451:ARG:HG3	1.95	0.48
2:J:575:THR:HB	2:J:576:MET:CE	2.43	0.48
1:K:255:SER:HB2	1:K:321:LYS:O	2.13	0.48
1:K:325:ARG:NH1	1:K:354:ASP:OD1	2.47	0.48
1:K:359:ASN:HD21	2:L:443:LYS:CD	2.27	0.48
1:K:422:TYR:O	1:K:422:TYR:CD2	2.66	0.48
2:L:70:ASN:HD22	2:L:71:ARG:CZ	2.26	0.48
2:L:508:PHE:HB2	2:L:563:VAL:CG2	2.44	0.48
1:M:353:ILE:HG23	1:M:373:ILE:HG22	1.95	0.48
2:N:103:GLY:O	2:N:105:ILE:N	2.41	0.48
2:N:446:GLU:O	2:N:447:PHE:CD2	2.67	0.48
1:O:449:PRO:HB2	1:O:451:ASN:OD1	2.14	0.48
2:P:355:ARG:HB3	2:P:358:ILE:HD13	1.96	0.48
2:B:547:ARG:HG2	2:B:547:ARG:NH1	2.29	0.48
1:C:199:SER:OG	1:C:200:GLY:N	2.47	0.48
1:C:287:GLN:HG3	1:C:288:LEU:N	2.28	0.48
1:C:289:PRO:O	1:C:293:VAL:HG23	2.13	0.48
2:D:59:ASP:OD2	2:D:59:ASP:C	2.57	0.48
2:D:493:ASN:HD22	2:D:493:ASN:N	2.11	0.48
2:D:519:MET:HE1	2:D:588:PHE:CZ	2.48	0.48
2:D:553:ALA:O	2:D:554:ARG:C	2.57	0.48
2:D:561:LEU:HD23	2:D:562:GLY:N	2.29	0.48
2:F:512:HIS:HA	2:F:561:LEU:HD11	1.96	0.48
2:F:566:PRO:O	2:F:570:THR:HG23	2.14	0.48
2:H:42:LYS:O	2:H:43:GLU:C	2.57	0.48
2:H:124:ALA:HB1	2:H:300:PRO:HD3	1.95	0.48
2:H:200:ILE:C	2:H:200:ILE:HD12	2.39	0.48
2:H:528:GLU:O	2:H:529:ASP:C	2.57	0.48
1:I:286:LEU:O	1:I:287:GLN:HB2	2.13	0.48
1:I:325:ARG:HH21	1:I:325:ARG:CG	2.24	0.48
2:J:85:GLN:HB3	2:J:91:ILE:HG21	1.95	0.48
1:K:410:ASN:HB2	1:K:413:THR:OG1	2.14	0.48
2:L:126:LEU:CG	2:L:129:ILE:HD11	2.35	0.48
2:L:245:THR:CG2	2:L:246:VAL:N	2.77	0.48
1:M:251:PHE:H	2:N:493:ASN:HD21	1.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:328:THR:OG1	1:M:372:GLN:NE2	2.46	0.48
1:M:373:ILE:CG2	1:M:461:LEU:HD23	2.44	0.48
1:M:425:GLY:C	1:M:426:LEU:HD22	2.39	0.48
1:M:480:HIS:C	1:M:482:VAL:H	2.20	0.48
2:N:183:PHE:CD2	2:N:230:VAL:HG11	2.48	0.48
1:O:229:LYS:CE	1:O:491:PRO:O	2.59	0.48
1:O:474:ILE:H	1:O:474:ILE:CD1	2.19	0.48
1:O:480:HIS:CD2	1:O:480:HIS:N	2.81	0.48
2:P:73:ASP:CA	2:P:273:MET:HE1	2.42	0.48
1:A:196:MET:O	1:A:202:TRP:HD1	1.97	0.48
1:A:316:LEU:HD23	1:A:316:LEU:C	2.38	0.48
1:A:410:ASN:HB2	1:A:413:THR:OG1	2.14	0.48
1:C:262:LEU:O	1:C:412:TYR:HB3	2.14	0.48
1:C:474:ILE:HG13	1:C:478:VAL:HG23	1.96	0.48
2:D:470:LEU:HB2	2:D:471:PRO:HD3	1.94	0.48
2:F:404:MET:CE	2:F:497:LEU:HD21	2.44	0.48
2:F:570:THR:CG2	1:G:197:ILE:HG22	2.43	0.48
1:G:206:PRO:O	1:G:207:PHE:O	2.32	0.48
2:H:126:LEU:CG	2:H:129:ILE:HD11	2.35	0.48
1:I:281:ASP:OD2	2:J:483:LYS:HD3	2.13	0.48
1:I:373:ILE:CG2	1:I:461:LEU:HD23	2.43	0.48
1:I:469:TYR:HB3	1:I:471:ILE:HG12	1.96	0.48
2:J:360:HIS:CG	2:J:361:ALA:N	2.82	0.48
1:K:185:ILE:C	1:K:187:LYS:N	2.72	0.48
1:K:235:ARG:NH1	1:K:245:GLU:OE1	2.47	0.48
2:L:82:ARG:HD2	2:L:94:PRO:HG3	1.95	0.48
2:L:198:MET:SD	2:L:220:TYR:HE2	2.37	0.48
1:M:267:GLN:O	1:M:268:HIS:C	2.56	0.48
1:M:301:SER:HB2	1:M:312:TYR:O	2.14	0.48
2:N:1:MET:O	2:N:1:MET:HG3	2.14	0.48
1:O:218:LEU:HD12	1:O:219:PRO:HD2	1.95	0.48
1:O:281:ASP:HB3	2:P:438:HIS:H	1.78	0.48
2:P:124:ALA:HB1	2:P:300:PRO:HD3	1.96	0.48
2:P:482:ILE:HG22	2:P:483:LYS:O	2.14	0.48
1:A:246:MET:HE1	1:A:332:SER:OG	2.13	0.48
2:B:68:PRO:C	2:B:70:ASN:N	2.72	0.48
2:B:324:PRO:HG3	2:B:344:GLY:O	2.13	0.48
2:B:480:ILE:C	2:B:480:ILE:HD12	2.39	0.48
1:C:365:THR:HG21	1:C:474:ILE:H	1.78	0.48
2:D:455:LEU:HD13	2:D:455:LEU:C	2.39	0.48
2:D:525:PRO:O	2:D:532:GLY:HA3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:494:ARG:CB	1:E:494:ARG:NH1	2.76	0.48
2:F:127:ARG:NH1	2:F:285:GLU:OE1	2.47	0.48
2:F:565:HIS:HD2	2:F:567:ASP:HB2	1.78	0.48
1:G:272:ASP:O	1:G:273:GLN:C	2.57	0.48
2:H:112:GLU:C	2:H:114:THR:H	2.22	0.48
2:J:20:THR:HB	2:J:23:GLU:HG3	1.96	0.48
2:J:101:PRO:CG	2:J:105:ILE:HD13	2.41	0.48
2:J:308:MET:HE3	2:J:309:VAL:C	2.39	0.48
2:J:485:SER:C	2:J:486:ASN:HD22	2.22	0.48
1:K:388:MET:HE3	1:K:405:PHE:CD1	2.49	0.48
1:M:279:LEU:HD23	1:M:283:ALA:HA	1.94	0.48
1:M:377:VAL:HG12	1:M:382:LEU:HD11	1.95	0.48
1:M:382:LEU:HA	1:M:386:HIS:ND1	2.28	0.48
2:N:401:ARG:HD2	2:N:411:GLU:OE2	2.13	0.48
2:N:530:LYS:HD2	2:N:530:LYS:C	2.39	0.48
1:O:421:SER:HB3	1:O:432:VAL:HG11	1.95	0.48
1:A:492:LEU:C	1:A:494:ARG:N	2.66	0.47
2:B:391:PHE:CD2	2:B:391:PHE:C	2.91	0.47
2:D:197:LEU:HA	2:D:200:ILE:HG12	1.95	0.47
2:D:308:MET:HE2	2:D:308:MET:O	2.14	0.47
1:E:268:HIS:CE1	1:E:411:PRO:HG2	2.49	0.47
2:F:132:THR:O	2:F:133:LYS:C	2.56	0.47
2:F:309:VAL:HG23	2:F:349:ILE:HD12	1.96	0.47
2:F:543:PHE:CD2	2:F:562:GLY:HA3	2.49	0.47
2:H:60:VAL:O	2:H:62:LEU:HD22	2.14	0.47
2:H:190:LYS:HB3	2:H:191:GLU:H	1.49	0.47
2:H:340:VAL:HG11	2:H:344:GLY:HA2	1.96	0.47
2:H:569:ILE:HD12	2:H:569:ILE:O	2.14	0.47
1:I:373:ILE:HG12	1:I:459:LEU:CD1	2.44	0.47
1:I:467:ILE:C	1:I:469:TYR:H	2.22	0.47
2:L:61:VAL:CG1	2:L:62:LEU:N	2.77	0.47
1:M:238:PHE:HE1	1:M:373:ILE:HD12	1.79	0.47
1:M:402:GLN:HB3	1:M:422:TYR:HB2	1.95	0.47
1:M:414:GLU:CB	1:M:415:PRO:CD	2.79	0.47
2:N:414:THR:HB	2:N:451:ARG:NH1	2.29	0.47
2:P:15:LEU:HD13	2:P:19:TYR:HE2	1.78	0.47
2:P:112:GLU:C	2:P:114:THR:H	2.22	0.47
2:P:132:THR:HG22	2:P:135:ARG:H	1.78	0.47
1:A:193:SER:OG	1:A:196:MET:HG3	2.13	0.47
1:A:207:PHE:CZ	2:D:544:PHE:CZ	3.02	0.47
1:A:316:LEU:HD21	1:A:320:ARG:HD3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:370:PHE:HB2	1:A:462:GLU:OE2	2.13	0.47
2:B:67:VAL:CG1	2:B:68:PRO:HD2	2.44	0.47
1:C:484:LEU:HG	2:D:465:ASN:CG	2.39	0.47
2:D:67:VAL:CG1	2:D:68:PRO:HD2	2.40	0.47
2:D:515:LEU:HD11	2:D:551:ILE:HD12	1.95	0.47
1:E:194:PRO:HA	1:E:197:ILE:HD12	1.96	0.47
1:E:477:LEU:CD1	1:E:478:VAL:HG22	2.44	0.47
2:F:576:MET:HB3	2:F:577:PRO:CD	2.43	0.47
1:I:362:LEU:HD23	1:I:362:LEU:H	1.79	0.47
1:K:359:ASN:ND2	2:L:443:LYS:CE	2.77	0.47
1:M:259:PHE:O	1:M:262:LEU:N	2.46	0.47
1:M:423:HIS:C	1:M:425:GLY:N	2.71	0.47
1:M:480:HIS:CD2	1:M:480:HIS:H	2.32	0.47
2:N:308:MET:HA	2:N:347:ILE:O	2.13	0.47
2:P:147:HIS:CE1	2:P:159:ILE:HG12	2.48	0.47
1:A:200:GLY:O	1:A:203:ARG:HB2	2.14	0.47
1:A:262:LEU:O	1:A:412:TYR:HB3	2.15	0.47
1:A:327:HIS:HA	1:A:356:VAL:HG11	1.96	0.47
2:B:495:ARG:HG3	2:B:495:ARG:HH11	1.79	0.47
2:B:517:ARG:HG3	2:B:521:LEU:HD23	1.96	0.47
1:C:77:GLU:H	1:C:77:GLU:CD	2.22	0.47
1:C:140:LEU:O	1:C:142:LEU:N	2.48	0.47
1:C:423:HIS:CD2	1:C:426:LEU:HD23	2.49	0.47
2:D:126:LEU:CG	2:D:129:ILE:HD11	2.36	0.47
2:D:400:LEU:HD21	2:D:522:LEU:HD21	1.96	0.47
2:F:3:THR:HG21	2:F:64:LYS:HG3	1.97	0.47
1:G:260:ASP:CG	1:G:271:ARG:HH22	2.22	0.47
2:H:198:MET:SD	2:H:220:TYR:HE2	2.37	0.47
2:J:8:ARG:CZ	2:J:61:VAL:HG21	2.44	0.47
2:J:462:ILE:HG23	2:J:472:LEU:CD1	2.38	0.47
2:J:584:ASN:O	2:J:587:PRO:HD2	2.15	0.47
1:K:211:ASN:C	1:K:213:LEU:H	2.23	0.47
3:K:509:PHE:CG	3:K:509:PHE:OXT	2.66	0.47
2:L:68:PRO:C	2:L:70:ASN:N	2.70	0.47
2:L:73:ASP:CA	2:L:273:MET:HE1	2.41	0.47
1:M:343:LYS:CB	1:M:344:PRO:CD	2.79	0.47
2:N:131:PHE:CD2	2:N:136:TYR:HA	2.49	0.47
2:P:132:THR:HB	2:P:135:ARG:HG3	1.96	0.47
1:A:246:MET:HG2	1:A:351:PHE:O	2.14	0.47
2:B:41:GLU:OE1	2:B:44:ILE:HG21	2.15	0.47
2:B:291:PHE:CE1	2:B:297:HIS:HD2	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:40:SER:HB2	2:D:60:VAL:O	2.13	0.47
1:E:255:SER:HB2	1:E:321:LYS:O	2.14	0.47
1:E:497:ALA:C	1:E:498:GLU:HG3	2.39	0.47
2:F:41:GLU:HB3	2:F:58:SER:HB2	1.96	0.47
1:G:189:GLU:OE1	1:G:206:PRO:HB3	2.14	0.47
1:I:277:PHE:HE2	1:I:359:ASN:CG	2.23	0.47
1:I:373:ILE:HD13	1:I:459:LEU:HD11	1.95	0.47
2:J:71:ARG:CG	2:J:355:ARG:NH1	2.77	0.47
2:J:126:LEU:N	2:J:126:LEU:CD2	2.77	0.47
1:K:243:PHE:CD2	1:K:349:LYS:HB3	2.49	0.47
1:K:443:LEU:HA	1:K:446:MET:HE2	1.95	0.47
2:N:118:ARG:CZ	2:N:257:GLY:HA2	2.44	0.47
2:N:271:VAL:HG21	2:N:284:VAL:CG1	2.44	0.47
1:O:449:PRO:HG2	1:O:452:VAL:HG23	1.97	0.47
1:C:229:LYS:HE2	1:C:469:TYR:OH	2.15	0.47
1:C:268:HIS:HD2	1:C:270:ALA:H	1.63	0.47
1:C:395:PHE:CE2	1:C:432:VAL:HG22	2.49	0.47
2:D:132:THR:HG22	2:D:134:ASP:H	1.79	0.47
1:E:202:TRP:C	1:E:204:ASP:H	2.21	0.47
1:E:217:VAL:O	2:H:513:GLY:HA3	2.14	0.47
1:E:396:THR:C	1:E:398:LEU:H	2.21	0.47
2:F:219:LEU:C	2:F:220:TYR:HD1	2.22	0.47
2:F:437:VAL:O	2:F:449:VAL:HG13	2.14	0.47
2:F:508:PHE:HE1	2:F:562:GLY:CA	2.20	0.47
1:G:420:PHE:CE2	1:G:431:GLU:HB2	2.50	0.47
2:H:101:PRO:CG	2:H:105:ILE:HD13	2.44	0.47
2:H:414:THR:HB	2:H:451:ARG:NH1	2.29	0.47
2:H:446:GLU:O	2:H:447:PHE:CD2	2.68	0.47
2:J:147:HIS:O	2:J:151:CYS:HB2	2.14	0.47
1:K:301:SER:HB2	1:K:312:TYR:O	2.14	0.47
2:L:41:GLU:OE2	2:L:44:ILE:HG21	2.14	0.47
2:L:122:VAL:CG2	2:L:299:PHE:CD2	2.98	0.47
1:M:253:GLU:OE1	1:M:257:TRP:HB2	2.15	0.47
1:M:264:GLN:OE1	1:M:412:TYR:HE2	1.97	0.47
2:N:132:THR:HB	2:N:135:ARG:HG3	1.97	0.47
2:N:420:GLN:HG2	2:N:449:VAL:CG2	2.45	0.47
1:O:437:VAL:HG13	1:O:455:ILE:HG22	1.96	0.47
1:A:238:PHE:HE1	1:A:373:ILE:HD12	1.79	0.47
1:A:325:ARG:O	1:A:356:VAL:HG13	2.14	0.47
1:A:494:ARG:NH2	2:D:390:GLN:HE22	2.10	0.47
2:B:308:MET:HE2	2:B:308:MET:C	2.40	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:486:ASN:HD22	2:B:486:ASN:N	2.11	0.47
1:C:77:GLU:CG	1:C:106:LYS:HG2	2.42	0.47
1:E:258:ASN:ND2	1:E:330:SER:HB3	2.26	0.47
2:H:267:LEU:C	2:H:267:LEU:HD23	2.39	0.47
1:I:234:PHE:CD2	1:I:373:ILE:HD13	2.49	0.47
1:I:279:LEU:HD12	1:I:283:ALA:HA	1.96	0.47
2:L:3:THR:HG21	2:L:64:LYS:HG3	1.97	0.47
2:L:45:ILE:HG23	2:L:48:GLU:CD	2.39	0.47
2:L:495:ARG:HG3	2:L:495:ARG:NH1	2.29	0.47
2:L:508:PHE:CE1	2:L:561:LEU:HD22	2.49	0.47
2:N:72:TYR:C	2:N:74:LEU:H	2.23	0.47
2:N:112:GLU:C	2:N:114:THR:H	2.22	0.47
1:O:235:ARG:NH2	2:P:390:GLN:OE1	2.40	0.47
1:O:255:SER:HB2	1:O:321:LYS:O	2.15	0.47
2:P:3:THR:HG21	2:P:64:LYS:HG3	1.96	0.47
2:P:340:VAL:CG1	2:P:344:GLY:HA2	2.44	0.47
2:P:503:ASN:O	2:P:577:PRO:HD2	2.15	0.47
1:A:191:GLU:HA	1:A:191:GLU:OE1	2.14	0.47
1:A:422:TYR:HD2	1:A:423:HIS:N	2.11	0.47
1:A:465:THR:C	1:A:467:ILE:H	2.23	0.47
2:B:128:ASN:HA	2:B:249:ARG:HD3	1.97	0.47
2:B:223:ILE:HD13	2:B:254:GLU:HG3	1.95	0.47
2:B:451:ARG:NH2	2:B:478:SER:HB3	2.30	0.47
1:C:186:SER:O	1:C:188:GLN:N	2.40	0.47
2:D:274:PHE:C	2:D:276:GLU:H	2.22	0.47
1:E:226:PRO:HG2	1:E:486:MET:CE	2.45	0.47
1:E:307:SER:HB2	1:E:441:GLU:OE1	2.15	0.47
1:E:422:TYR:HD1	1:E:423:HIS:N	2.12	0.47
2:F:157:VAL:HG21	2:F:263:ALA:N	2.30	0.47
2:F:215:GLU:OE2	2:F:235:PRO:HG2	2.14	0.47
2:F:444:THR:HG21	2:F:446:GLU:HG3	1.96	0.47
2:F:506:PRO:HD3	2:F:577:PRO:HG3	1.97	0.47
1:G:301:SER:HB2	1:G:312:TYR:O	2.14	0.47
1:G:420:PHE:HE2	1:G:431:GLU:HB2	1.79	0.47
2:H:235:PRO:HB2	2:H:236:ILE:HD12	1.97	0.47
1:I:193:SER:OG	1:I:196:MET:HB2	2.15	0.47
1:I:384:LEU:CD1	1:I:417:MET:HE3	2.45	0.47
1:I:438:PHE:HD1	1:I:454:VAL:HG22	1.78	0.47
2:J:131:PHE:CD2	2:J:136:TYR:HA	2.50	0.47
2:J:132:THR:O	2:J:133:LYS:C	2.57	0.47
2:J:482:ILE:HG22	2:J:483:LYS:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:354:ASP:OD2	1:K:355:ARG:N	2.43	0.47
1:K:367:LEU:HD12	1:K:367:LEU:N	2.22	0.47
1:K:473:ASN:O	1:K:476:GLU:HB3	2.15	0.47
1:K:477:LEU:HD23	1:K:486:MET:HE1	1.97	0.47
2:L:48:GLU:HG3	2:L:49:GLN:N	2.27	0.47
2:L:128:ASN:HA	2:L:249:ARG:HD3	1.96	0.47
1:M:255:SER:HB2	1:M:321:LYS:O	2.14	0.47
1:M:370:PHE:N	1:M:370:PHE:HD1	2.13	0.47
1:M:373:ILE:HG12	1:M:459:LEU:HD12	1.96	0.47
1:M:396:THR:C	1:M:398:LEU:H	2.21	0.47
1:M:477:LEU:HD12	1:M:478:VAL:CG2	2.43	0.47
2:N:118:ARG:NH2	2:N:256:THR:O	2.48	0.47
2:N:506:PRO:HD2	1:O:191:GLU:CB	2.40	0.47
1:O:298:ARG:HG3	1:O:298:ARG:HH11	1.80	0.47
1:O:298:ARG:HH11	1:O:298:ARG:CG	2.28	0.47
1:O:362:LEU:CD2	2:P:443:LYS:HD3	2.44	0.47
1:O:382:LEU:HA	1:O:386:HIS:ND1	2.30	0.47
1:O:387:LEU:HD11	1:O:435:SER:OG	2.14	0.47
1:O:396:THR:C	1:O:398:LEU:H	2.23	0.47
2:P:142:LEU:HD23	2:P:146:LEU:HG	1.97	0.47
2:P:569:ILE:HD12	2:P:569:ILE:O	2.15	0.47
2:B:124:ALA:HB1	2:B:300:PRO:HD3	1.96	0.47
2:B:131:PHE:CD2	2:B:136:TYR:HA	2.50	0.47
2:D:139:PHE:HA	2:D:274:PHE:CZ	2.49	0.47
2:D:174:THR:OG1	2:D:175:ALA:N	2.47	0.47
2:F:112:GLU:C	2:F:114:THR:N	2.73	0.47
2:F:185:PRO:HG2	2:F:188:LYS:CB	2.43	0.47
2:H:349:ILE:HD13	2:H:364:ILE:HG21	1.96	0.47
2:J:17:ARG:CZ	2:J:19:TYR:HE1	2.27	0.47
1:M:194:PRO:O	1:M:196:MET:N	2.48	0.47
1:M:195:GLU:O	1:M:199:SER:HB2	2.14	0.47
2:N:6:VAL:CG2	2:N:11:LEU:HD12	2.44	0.47
2:N:147:HIS:O	2:N:151:CYS:HB2	2.15	0.47
2:N:322:GLU:HB2	2:N:327:LEU:CD1	2.44	0.47
2:P:517:ARG:HG3	2:P:521:LEU:HD23	1.93	0.47
1:A:388:MET:HE3	1:A:405:PHE:CD1	2.49	0.47
2:B:211:LEU:CG	2:B:212:HIS:N	2.78	0.47
2:B:219:LEU:C	2:B:220:TYR:HD1	2.22	0.47
2:B:261:THR:HA	2:B:264:LYS:HE2	1.96	0.47
1:C:140:LEU:C	1:C:142:LEU:N	2.71	0.47
1:C:404:ARG:HD3	1:C:429:TRP:CH2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:469:TYR:CZ	1:C:493:CYS:CB	2.94	0.47
2:D:308:MET:HE3	2:D:309:VAL:C	2.39	0.47
2:D:431:ILE:H	2:D:431:ILE:CD1	2.05	0.47
2:F:1:MET:O	2:F:1:MET:HG3	2.14	0.47
2:F:48:GLU:HG3	2:F:49:GLN:HG3	1.97	0.47
2:F:267:LEU:CD2	2:F:300:PRO:HB3	2.44	0.47
2:F:420:GLN:HG2	2:F:449:VAL:CG2	2.45	0.47
2:F:529:ASP:O	2:F:530:LYS:HB2	2.15	0.47
2:H:274:PHE:C	2:H:276:GLU:H	2.23	0.47
2:H:391:PHE:CD2	2:H:392:PRO:HD2	2.46	0.47
2:H:416:ALA:O	2:H:451:ARG:HG3	2.15	0.47
2:J:426:LYS:O	2:J:568:VAL:HG12	2.14	0.47
2:J:437:VAL:O	2:J:449:VAL:HG13	2.14	0.47
2:J:451:ARG:NH2	2:J:478:SER:HB3	2.30	0.47
2:L:147:HIS:CE1	2:L:159:ILE:HG12	2.50	0.47
2:L:439:ILE:N	2:L:439:ILE:HD12	2.30	0.47
1:M:495:LEU:O	1:M:496:ASP:HB2	2.15	0.47
2:N:416:ALA:HA	2:N:451:ARG:HG3	1.95	0.47
1:O:208:LYS:CE	1:O:208:LYS:H	2.27	0.47
1:O:353:ILE:HG23	1:O:373:ILE:HG22	1.97	0.47
2:P:177:ARG:HG2	2:P:178:PRO:CD	2.43	0.47
2:P:565:HIS:HD2	2:P:567:ASP:HB2	1.79	0.47
1:A:382:LEU:HA	1:A:386:HIS:ND1	2.30	0.47
2:B:1:MET:HG3	2:B:1:MET:O	2.15	0.47
1:C:120:ALA:HB1	2:H:103:GLY:HA2	1.97	0.47
1:C:316:LEU:HD23	1:C:320:ARG:HG2	1.95	0.47
2:D:90:ARG:HH11	2:D:90:ARG:CB	2.27	0.47
2:D:565:HIS:HD2	2:D:567:ASP:HB2	1.80	0.47
1:E:343:LYS:CB	1:E:344:PRO:CD	2.78	0.47
2:F:404:MET:HE2	2:F:497:LEU:HD21	1.96	0.47
1:G:258:ASN:O	1:G:262:LEU:HD12	2.14	0.47
1:G:380:HIS:CD2	1:G:452:VAL:HG22	2.50	0.47
2:H:42:LYS:O	2:H:44:ILE:N	2.47	0.47
2:H:127:ARG:NH1	2:H:285:GLU:OE1	2.47	0.47
2:H:508:PHE:CE1	2:H:561:LEU:HD22	2.50	0.47
1:I:246:MET:HG2	1:I:351:PHE:O	2.15	0.47
1:I:281:ASP:CB	1:I:282:PRO:CD	2.91	0.47
2:J:132:THR:HG22	2:J:134:ASP:H	1.80	0.47
2:J:177:ARG:HG2	2:J:178:PRO:CD	2.45	0.47
2:J:357:ASP:O	2:J:359:ILE:HG23	2.15	0.47
1:K:458:GLY:HA3	3:K:509:PHE:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:517:ARG:CZ	2:L:521:LEU:HD21	2.45	0.47
2:L:553:ALA:O	2:L:554:ARG:C	2.58	0.47
1:M:218:LEU:HD22	2:P:516:ASP:HB2	1.97	0.47
1:M:458:GLY:HA3	3:M:509:PHE:HB2	1.97	0.47
2:B:112:GLU:C	2:B:114:THR:H	2.21	0.46
2:B:147:HIS:ND1	2:B:154:ARG:HG2	2.29	0.46
2:B:512:HIS:ND1	1:C:216:GLY:N	2.63	0.46
1:C:75:SER:CB	1:C:77:GLU:OE2	2.64	0.46
1:C:106:LYS:HB2	1:C:106:LYS:NZ	2.30	0.46
1:C:316:LEU:HD21	1:C:320:ARG:HD3	1.97	0.46
3:C:509:PHE:N	3:C:509:PHE:CD1	2.82	0.46
2:D:101:PRO:CG	2:D:105:ILE:HD13	2.44	0.46
2:D:126:LEU:HD21	2:D:251:ILE:HB	1.97	0.46
2:D:526:PRO:HA	2:D:533:TYR:CE2	2.50	0.46
1:E:285:ALA:O	1:E:286:LEU:HB3	2.16	0.46
1:E:467:ILE:HA	1:E:470:GLY:CA	2.45	0.46
1:G:363:ASP:O	1:G:366:HIS:HB3	2.15	0.46
2:H:50:GLY:O	2:H:51:ASN:CG	2.58	0.46
2:H:129:ILE:HD12	2:H:251:ILE:CD1	2.44	0.46
2:H:472:LEU:HB2	2:H:502:TYR:HB3	1.98	0.46
1:I:296:VAL:O	1:I:297:LYS:C	2.58	0.46
2:J:45:ILE:HG23	2:J:48:GLU:HG3	1.97	0.46
2:J:271:VAL:HG21	2:J:284:VAL:CG1	2.45	0.46
2:J:291:PHE:CE1	2:J:297:HIS:HD2	2.33	0.46
1:K:267:GLN:HA	2:L:152:ARG:NH1	2.30	0.46
1:K:349:LYS:HG2	1:K:377:VAL:HG22	1.97	0.46
1:K:395:PHE:CE2	1:K:432:VAL:HG23	2.50	0.46
1:K:425:GLY:C	1:K:426:LEU:HD23	2.40	0.46
2:L:308:MET:HE2	2:L:308:MET:C	2.40	0.46
2:L:519:MET:HE2	2:L:519:MET:HA	1.96	0.46
2:L:528:GLU:O	2:L:529:ASP:O	2.33	0.46
2:N:519:MET:HG3	2:N:533:TYR:CE1	2.49	0.46
2:P:15:LEU:CD1	2:P:19:TYR:HE2	2.28	0.46
2:P:234:PRO:HB2	2:P:235:PRO:CD	2.29	0.46
2:P:271:VAL:HG21	2:P:284:VAL:CG1	2.45	0.46
2:B:146:LEU:HD13	2:B:266:VAL:HG13	1.96	0.46
2:B:399:LEU:CD1	1:C:494:ARG:HG3	2.38	0.46
2:B:564:LEU:HD12	2:B:578:CYS:HB3	1.95	0.46
1:C:26:LEU:O	1:C:26:LEU:HG	2.15	0.46
1:C:207:PHE:N	1:C:207:PHE:CD1	2.83	0.46
1:C:289:PRO:HB2	1:C:292:TYR:HB3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:410:ASN:HB2	1:C:413:THR:OG1	2.15	0.46
1:C:498:GLU:HB3	1:C:499:PRO:CD	2.41	0.46
2:D:150:ILE:HD12	2:D:150:ILE:O	2.15	0.46
2:D:303:ALA:O	2:D:353:PRO:HB3	2.15	0.46
1:E:192:LEU:HG	1:E:196:MET:CE	2.44	0.46
1:E:197:ILE:HG23	2:H:566:PRO:HB3	1.96	0.46
2:F:132:THR:HG22	2:F:134:ASP:H	1.79	0.46
2:F:401:ARG:HG2	2:F:477:ILE:HD12	1.95	0.46
1:G:259:PHE:CD2	1:G:264:GLN:HG2	2.42	0.46
2:H:128:ASN:HA	2:H:249:ARG:HD3	1.97	0.46
2:H:576:MET:N	2:H:576:MET:SD	2.89	0.46
1:I:316:LEU:HD21	1:I:320:ARG:HD3	1.96	0.46
2:J:550:GLU:HB3	2:J:552:PHE:HE1	1.81	0.46
1:K:193:SER:HB2	1:K:194:PRO:HD2	1.97	0.46
1:K:430:VAL:O	1:K:432:VAL:HG13	2.15	0.46
2:L:131:PHE:CD2	2:L:136:TYR:HA	2.50	0.46
2:L:291:PHE:CE1	2:L:297:HIS:HD2	2.34	0.46
2:N:274:PHE:C	2:N:276:GLU:N	2.74	0.46
2:N:493:ASN:HD22	2:N:493:ASN:N	2.13	0.46
1:O:288:LEU:O	1:O:290:MET:N	2.48	0.46
2:P:122:VAL:CG2	2:P:299:PHE:CD2	2.98	0.46
2:P:126:LEU:HD21	2:P:251:ILE:HB	1.97	0.46
2:P:174:THR:OG1	2:P:175:ALA:N	2.47	0.46
2:P:414:THR:HB	2:P:451:ARG:NH1	2.29	0.46
1:A:276:THR:HG22	1:A:277:PHE:N	2.30	0.46
1:A:324:LEU:HB3	1:A:357:PHE:HB2	1.98	0.46
2:B:175:ALA:HA	2:B:220:TYR:O	2.14	0.46
1:C:7:ALA:C	1:C:9:LEU:H	2.24	0.46
1:C:206:PRO:O	1:C:206:PRO:HG2	2.15	0.46
1:C:493:CYS:C	1:C:497:ALA:HB2	2.41	0.46
2:D:70:ASN:HB3	2:D:71:ARG:HD2	1.97	0.46
2:D:118:ARG:CZ	2:D:257:GLY:HA2	2.44	0.46
2:F:122:VAL:HG23	2:F:299:PHE:CG	2.50	0.46
2:F:420:GLN:HG2	2:F:449:VAL:HG23	1.96	0.46
2:F:485:SER:C	2:F:486:ASN:HD22	2.23	0.46
1:G:355:ARG:HG2	1:G:357:PHE:CZ	2.50	0.46
1:G:373:ILE:CG2	1:G:461:LEU:HD23	2.45	0.46
2:H:139:PHE:HA	2:H:274:PHE:CZ	2.51	0.46
2:H:181:ILE:CD1	2:H:194:ALA:HB2	2.45	0.46
2:J:112:GLU:C	2:J:114:THR:H	2.24	0.46
1:M:323:LEU:C	1:M:323:LEU:HD12	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:414:GLU:CD	2:N:362:CYS:SG	2.98	0.46
2:N:121:ALA:CB	2:N:256:THR:HA	2.45	0.46
1:O:410:ASN:HB2	1:O:413:THR:OG1	2.15	0.46
2:P:90:ARG:HH11	2:P:90:ARG:CB	2.29	0.46
2:P:167:LEU:HD13	2:P:171:PHE:CE2	2.51	0.46
2:B:42:LYS:CB	2:B:58:SER:HB3	2.46	0.46
2:B:133:LYS:H	2:B:133:LYS:CD	2.13	0.46
2:B:519:MET:HG3	2:B:533:TYR:CE1	2.50	0.46
2:B:584:ASN:ND2	2:B:587:PRO:HD3	2.29	0.46
1:C:246:MET:HE1	1:C:332:SER:OG	2.15	0.46
2:D:126:LEU:N	2:D:126:LEU:CD2	2.79	0.46
2:D:515:LEU:HD11	2:D:551:ILE:CG2	2.45	0.46
2:F:27:LEU:CD1	2:F:84:LEU:HD22	2.46	0.46
1:G:223:HIS:HB2	2:H:410:THR:HG23	1.97	0.46
1:G:353:ILE:HG23	1:G:373:ILE:HG22	1.96	0.46
1:G:366:HIS:CE1	1:G:475:ARG:HB2	2.50	0.46
1:G:425:GLY:C	1:G:427:LYS:N	2.73	0.46
2:H:208:LYS:O	2:H:211:LEU:HD21	2.16	0.46
2:H:351:ILE:N	2:H:351:ILE:HD12	2.30	0.46
1:I:217:VAL:O	2:L:513:GLY:HA3	2.15	0.46
2:J:387:ILE:HG23	1:K:241:MET:HG2	1.97	0.46
2:L:174:THR:OG1	2:L:175:ALA:N	2.47	0.46
2:L:274:PHE:C	2:L:276:GLU:H	2.23	0.46
1:M:265:PRO:HD3	1:M:310:TYR:CZ	2.50	0.46
2:N:27:LEU:CD1	2:N:84:LEU:HD13	2.44	0.46
2:N:147:HIS:HE1	2:N:158:ALA:HA	1.81	0.46
1:O:259:PHE:HB3	1:O:271:ARG:NH2	2.28	0.46
2:P:515:LEU:HD13	2:P:551:ILE:HD12	1.97	0.46
1:A:223:HIS:HB2	2:B:410:THR:HG23	1.97	0.46
1:A:279:LEU:HD22	2:B:437:VAL:CG1	2.45	0.46
1:C:463:ARG:N	1:C:464:PRO:HD2	2.31	0.46
2:D:508:PHE:CE1	2:D:561:LEU:HD22	2.49	0.46
1:E:190:THR:HG22	1:E:207:PHE:HB3	1.98	0.46
1:E:258:ASN:C	1:E:259:PHE:CD2	2.90	0.46
2:F:17:ARG:HE	2:F:17:ARG:HB3	1.61	0.46
2:F:40:SER:HA	2:F:62:LEU:CD2	2.45	0.46
2:F:535:ILE:HD12	2:F:535:ILE:N	2.17	0.46
1:G:230:VAL:HG11	1:G:465:THR:CG2	2.45	0.46
1:G:259:PHE:CZ	1:G:276:THR:HG21	2.41	0.46
2:H:72:TYR:C	2:H:74:LEU:H	2.23	0.46
1:I:316:LEU:HD23	1:I:320:ARG:HG2	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:396:THR:C	1:I:398:LEU:H	2.21	0.46
2:J:113:GLU:HB3	2:J:219:LEU:HD13	1.97	0.46
2:L:17:ARG:CZ	2:L:19:TYR:HE1	2.28	0.46
2:L:340:VAL:CG1	2:L:344:GLY:HA2	2.45	0.46
2:L:472:LEU:HB2	2:L:502:TYR:HB3	1.98	0.46
1:M:206:PRO:O	1:M:208:LYS:N	2.45	0.46
2:N:120:PHE:HE1	2:N:258:THR:C	2.24	0.46
2:P:40:SER:C	2:P:42:LYS:N	2.71	0.46
2:P:446:GLU:O	2:P:447:PHE:CD2	2.68	0.46
1:A:439:ARG:HE	1:A:441:GLU:CD	2.24	0.46
1:A:486:MET:HE2	1:A:487:VAL:N	2.31	0.46
1:C:251:PHE:H	2:D:493:ASN:HD21	1.64	0.46
1:C:343:LYS:HB2	1:C:344:PRO:HD2	1.91	0.46
2:D:132:THR:CG2	2:D:133:LYS:N	2.79	0.46
2:D:304:TYR:CE1	2:D:353:PRO:CD	2.99	0.46
1:E:206:PRO:CB	1:E:208:LYS:HE3	2.45	0.46
1:E:373:ILE:HG12	1:E:459:LEU:HD12	1.97	0.46
2:F:233:MET:HE3	2:F:236:ILE:HB	1.98	0.46
2:F:512:HIS:ND1	1:G:216:GLY:HA3	2.31	0.46
1:G:343:LYS:CB	1:G:344:PRO:HD3	2.34	0.46
1:G:474:ILE:O	1:G:474:ILE:HG12	2.15	0.46
2:H:215:GLU:OE2	2:H:235:PRO:HG2	2.15	0.46
2:H:429:VAL:HG12	2:H:430:ASP:N	2.31	0.46
2:J:512:HIS:HA	2:J:561:LEU:HD11	1.98	0.46
1:K:6:VAL:O	1:K:7:ALA:C	2.58	0.46
2:L:127:ARG:NH1	2:L:285:GLU:OE1	2.48	0.46
2:L:234:PRO:HB2	2:L:235:PRO:CD	2.27	0.46
2:L:271:VAL:HG21	2:L:284:VAL:CG1	2.46	0.46
2:L:416:ALA:O	2:L:451:ARG:HG3	2.16	0.46
2:L:479:ASP:HA	2:L:494:TYR:O	2.16	0.46
2:N:3:THR:HG21	2:N:64:LYS:HG3	1.97	0.46
2:N:40:SER:OG	2:N:59:ASP:O	2.31	0.46
2:N:503:ASN:O	2:N:577:PRO:HD2	2.16	0.46
2:P:67:VAL:CG1	2:P:68:PRO:HD2	2.45	0.46
2:P:401:ARG:HG2	2:P:477:ILE:HD12	1.97	0.46
2:B:73:ASP:C	2:B:273:MET:HE1	2.41	0.46
2:B:512:HIS:CE1	1:C:216:GLY:N	2.83	0.46
1:E:218:LEU:O	1:E:219:PRO:O	2.34	0.46
1:E:267:GLN:HE22	2:F:156:LEU:HD21	1.80	0.46
2:F:126:LEU:HD21	2:F:251:ILE:HB	1.98	0.46
2:F:235:PRO:HB2	2:F:236:ILE:HD12	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:364:ALA:O	1:G:365:THR:HB	2.15	0.46
1:G:426:LEU:H	1:G:426:LEU:CD1	2.28	0.46
1:G:443:LEU:HD11	1:G:454:VAL:HG13	1.97	0.46
2:H:146:LEU:HD13	2:H:266:VAL:HG13	1.97	0.46
2:H:188:LYS:HE2	2:H:201:TYR:CE2	2.50	0.46
2:H:533:TYR:HA	2:H:552:PHE:O	2.16	0.46
1:I:227:LEU:CD2	1:I:461:LEU:HD12	2.46	0.46
1:I:228:LEU:HD12	2:J:411:GLU:CD	2.41	0.46
1:I:373:ILE:HG22	1:I:461:LEU:HD23	1.98	0.46
2:J:108:LEU:HD21	2:J:173:TYR:HB2	1.97	0.46
1:K:279:LEU:HD23	1:K:323:LEU:HA	1.96	0.46
2:L:303:ALA:O	2:L:353:PRO:HB3	2.15	0.46
2:L:437:VAL:O	2:L:449:VAL:HG13	2.15	0.46
1:M:413:THR:HG21	1:M:436:GLY:HA3	1.97	0.46
2:N:268:ASP:O	2:N:272:THR:HG22	2.16	0.46
1:O:234:PHE:CZ	1:O:398:LEU:HD21	2.50	0.46
1:O:463:ARG:N	1:O:464:PRO:HD2	2.31	0.46
2:P:274:PHE:C	2:P:276:GLU:H	2.23	0.46
2:B:72:TYR:C	2:B:74:LEU:H	2.24	0.46
2:B:340:VAL:CG1	2:B:344:GLY:HA2	2.46	0.46
2:B:414:THR:HB	2:B:451:ARG:NH1	2.30	0.46
1:C:119:ALA:C	1:C:121:ASP:N	2.73	0.46
2:D:416:ALA:HA	2:D:451:ARG:HG3	1.97	0.46
2:D:446:GLU:O	2:D:447:PHE:CD2	2.69	0.46
1:E:204:ASP:O	1:E:206:PRO:HD3	2.15	0.46
2:F:98:ARG:HG2	2:F:98:ARG:NH1	2.30	0.46
2:F:188:LYS:HE2	2:F:201:TYR:CE2	2.51	0.46
2:F:281:GLN:HG2	2:F:282:PHE:CD1	2.51	0.46
2:F:480:ILE:HG12	2:F:496:HIS:NE2	2.31	0.46
1:G:479:GLY:HA3	2:H:415:PHE:CE1	2.51	0.46
1:I:212:PHE:O	1:I:213:LEU:C	2.59	0.46
1:I:237:ILE:HD12	1:I:397:LYS:HB3	1.97	0.46
1:I:301:SER:HB2	1:I:312:TYR:O	2.16	0.46
1:K:211:ASN:HB2	1:K:213:LEU:HD11	1.95	0.46
1:K:327:HIS:HA	1:K:356:VAL:HG11	1.97	0.46
1:K:358:ARG:HG3	1:K:358:ARG:NH1	2.31	0.46
1:K:384:LEU:HD11	1:K:417:MET:HE3	1.97	0.46
1:K:414:GLU:HG3	1:K:415:PRO:HD3	1.96	0.46
2:L:114:THR:O	2:L:117:ILE:HD12	2.16	0.46
2:N:197:LEU:HA	2:N:200:ILE:HG12	1.96	0.46
2:N:517:ARG:CZ	2:N:521:LEU:HD21	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:553:ALA:O	2:N:554:ARG:C	2.58	0.46
2:P:62:LEU:N	2:P:62:LEU:CD2	2.78	0.46
2:P:132:THR:O	2:P:133:LYS:C	2.59	0.46
1:A:266:GLN:HE21	1:A:314:TRP:CD1	2.33	0.46
1:A:373:ILE:CG2	1:A:461:LEU:HD23	2.46	0.46
1:A:394:PHE:CD2	1:A:457:TRP:HZ2	2.33	0.46
2:B:49:GLN:HE21	2:B:52:VAL:CG2	2.29	0.46
2:B:280:ASN:HB3	2:B:283:THR:HG21	1.97	0.46
1:C:268:HIS:HD2	1:C:270:ALA:CB	2.29	0.46
2:D:103:GLY:O	2:D:105:ILE:N	2.43	0.46
2:D:131:PHE:CD2	2:D:136:TYR:HA	2.50	0.46
2:D:480:ILE:C	2:D:480:ILE:HD12	2.40	0.46
2:F:17:ARG:CZ	2:F:19:TYR:HE1	2.28	0.46
2:F:52:VAL:HG23	2:F:52:VAL:O	2.16	0.46
1:G:227:LEU:CD2	1:G:465:THR:HG21	2.45	0.46
1:G:396:THR:C	1:G:398:LEU:H	2.22	0.46
1:G:414:GLU:CD	2:H:362:CYS:HG	2.24	0.46
1:I:305:TYR:HB3	1:I:444:LEU:HD12	1.97	0.46
2:J:120:PHE:HE1	2:J:258:THR:C	2.24	0.46
2:J:198:MET:SD	2:J:220:TYR:HE2	2.39	0.46
2:J:340:VAL:CG1	2:J:344:GLY:HA2	2.46	0.46
2:J:430:ASP:C	2:J:432:SER:H	2.24	0.46
1:K:264:GLN:NE2	1:K:411:PRO:HG2	2.31	0.46
2:L:397:THR:HG23	2:L:477:ILE:HG21	1.97	0.46
1:M:228:LEU:HD12	2:N:411:GLU:OE2	2.16	0.46
1:M:261:ALA:HB1	1:M:292:TYR:OH	2.16	0.46
2:N:512:HIS:CE1	1:O:216:GLY:H	2.32	0.46
2:P:72:TYR:C	2:P:74:LEU:H	2.24	0.46
2:B:147:HIS:C	2:B:149:ASN:H	2.23	0.46
2:B:183:PHE:O	2:B:191:GLU:HA	2.16	0.46
2:B:533:TYR:HA	2:B:552:PHE:O	2.16	0.46
1:C:119:ALA:O	1:C:120:ALA:C	2.59	0.46
2:D:340:VAL:CG1	2:D:344:GLY:HA2	2.46	0.46
2:D:475:PHE:HA	2:D:498:CYS:O	2.16	0.46
2:D:482:ILE:HG22	2:D:483:LYS:O	2.16	0.46
2:F:44:ILE:C	2:F:46:SER:H	2.23	0.46
2:F:113:GLU:HB3	2:F:219:LEU:HD13	1.98	0.46
2:F:123:ALA:HB1	2:F:253:ILE:O	2.16	0.46
1:G:443:LEU:HA	1:G:446:MET:HE2	1.98	0.46
2:H:152:ARG:HD3	2:H:156:LEU:HD11	1.97	0.46
2:J:1:MET:HG3	2:J:1:MET:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:449:PRO:HB2	1:K:451:ASN:OD1	2.16	0.46
1:K:472:ASN:O	1:K:472:ASN:ND2	2.49	0.46
2:L:132:THR:HG22	2:L:134:ASP:H	1.80	0.46
2:L:446:GLU:O	2:L:447:PHE:CD2	2.69	0.46
2:N:47:LYS:HB3	2:N:48:GLU:OE1	2.16	0.46
2:N:49:GLN:HG2	2:N:52:VAL:HG11	1.98	0.46
2:N:139:PHE:HA	2:N:274:PHE:CZ	2.51	0.46
2:N:157:VAL:HG22	2:N:263:ALA:HB2	1.98	0.46
1:O:406:LYS:HD3	1:O:420:PHE:HE2	1.80	0.46
1:A:277:PHE:HB2	1:A:324:LEU:HB2	1.98	0.45
1:A:444:LEU:N	1:A:445:PRO:HD2	2.31	0.45
2:B:157:VAL:HG21	2:B:263:ALA:N	2.31	0.45
2:B:512:HIS:ND1	1:C:216:GLY:HA3	2.31	0.45
1:C:61:TRP:CH2	1:C:167:GLU:HB2	2.52	0.45
1:C:208:LYS:CE	1:C:209:PRO:O	2.64	0.45
1:C:414:GLU:CD	2:D:362:CYS:SG	3.00	0.45
2:D:472:LEU:HB2	2:D:502:TYR:HB3	1.98	0.45
1:E:327:HIS:N	1:E:356:VAL:HG11	2.31	0.45
2:F:126:LEU:N	2:F:126:LEU:CD2	2.79	0.45
2:F:147:HIS:C	2:F:149:ASN:H	2.25	0.45
2:F:553:ALA:O	2:F:554:ARG:C	2.58	0.45
1:G:246:MET:SD	1:G:350:TYR:HB3	2.56	0.45
1:G:294:GLN:NE2	1:G:297:LYS:HD3	2.30	0.45
2:H:126:LEU:HD21	2:H:251:ILE:HB	1.98	0.45
2:H:362:CYS:HA	2:H:365:VAL:HG23	1.98	0.45
1:I:192:LEU:HD11	2:L:544:PHE:CD2	2.51	0.45
2:J:233:MET:HE3	2:J:236:ILE:HB	1.97	0.45
1:K:193:SER:O	1:K:197:ILE:HD13	2.16	0.45
2:L:71:ARG:HG3	2:L:355:ARG:HH12	1.74	0.45
2:L:143:GLN:HG3	2:L:159:ILE:HD12	1.97	0.45
1:M:279:LEU:HG	1:M:281:ASP:CB	2.40	0.45
2:N:49:GLN:NE2	2:N:52:VAL:HG21	2.30	0.45
2:N:128:ASN:HA	2:N:249:ARG:HD3	1.97	0.45
2:N:157:VAL:HG11	2:N:263:ALA:HA	1.98	0.45
2:N:234:PRO:CB	2:N:235:PRO:CD	2.92	0.45
2:N:322:GLU:HB2	2:N:327:LEU:HD13	1.97	0.45
2:N:391:PHE:CD2	2:N:391:PHE:C	2.94	0.45
1:O:271:ARG:O	1:O:271:ARG:HG2	2.15	0.45
2:P:163:ASP:CG	2:P:248:THR:HG23	2.40	0.45
2:P:439:ILE:HD12	2:P:439:ILE:N	2.31	0.45
2:P:450:ALA:HB3	2:P:481:VAL:HG11	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:268:HIS:HA	1:A:269:PRO:HD3	1.77	0.45
1:A:316:LEU:O	1:A:320:ARG:HG2	2.16	0.45
1:A:373:ILE:HD13	1:A:459:LEU:HD11	1.96	0.45
1:C:228:LEU:HD12	2:D:411:GLU:OE2	2.16	0.45
2:D:72:TYR:C	2:D:74:LEU:H	2.23	0.45
1:E:238:PHE:HE1	1:E:373:ILE:HD12	1.82	0.45
2:H:480:ILE:C	2:H:480:ILE:HD12	2.41	0.45
1:I:364:ALA:C	1:I:366:HIS:H	2.24	0.45
2:L:132:THR:CG2	2:L:133:LYS:N	2.79	0.45
1:M:247:PRO:HB3	2:N:391:PHE:CE1	2.51	0.45
1:M:349:LYS:HG2	1:M:377:VAL:HG22	1.99	0.45
1:M:358:ARG:HG2	1:M:358:ARG:NH1	2.29	0.45
1:M:438:PHE:HD1	1:M:454:VAL:HG22	1.81	0.45
1:M:473:ASN:C	1:M:475:ARG:H	2.23	0.45
2:N:505:ASN:HB2	1:O:191:GLU:CG	2.46	0.45
1:O:193:SER:OG	1:O:195:GLU:HG2	2.17	0.45
1:O:472:ASN:C	1:O:472:ASN:ND2	2.72	0.45
2:P:197:LEU:HA	2:P:200:ILE:HG12	1.97	0.45
2:P:553:ALA:O	2:P:554:ARG:C	2.58	0.45
2:B:132:THR:HB	2:B:135:ARG:HG3	1.97	0.45
2:B:515:LEU:HD11	2:B:551:ILE:CG2	2.47	0.45
2:D:17:ARG:CZ	2:D:19:TYR:CE1	2.99	0.45
2:D:281:GLN:HG2	2:D:282:PHE:CD1	2.52	0.45
2:D:430:ASP:C	2:D:432:SER:H	2.23	0.45
2:D:434:THR:O	2:D:435:LYS:HB2	2.16	0.45
2:D:462:ILE:HG23	2:D:472:LEU:CD1	2.35	0.45
1:E:262:LEU:O	1:E:412:TYR:HB3	2.16	0.45
1:E:301:SER:O	1:E:311:LYS:HA	2.16	0.45
2:F:72:TYR:C	2:F:74:LEU:H	2.25	0.45
2:F:515:LEU:HD11	2:F:551:ILE:CG2	2.46	0.45
1:G:426:LEU:H	1:G:426:LEU:HD12	1.81	0.45
1:G:474:ILE:C	1:G:476:GLU:N	2.75	0.45
2:H:223:ILE:HD13	2:H:254:GLU:HG3	1.99	0.45
2:H:479:ASP:HA	2:H:494:TYR:O	2.17	0.45
1:I:466:MET:CE	1:I:474:ILE:HG13	2.46	0.45
2:J:179:SER:HA	2:J:193:THR:HG21	1.98	0.45
1:K:219:PRO:O	1:K:221:SER:N	2.46	0.45
1:K:464:PRO:HG2	1:K:465:THR:H	1.81	0.45
2:L:101:PRO:CG	2:L:105:ILE:HD13	2.45	0.45
2:L:197:LEU:HA	2:L:200:ILE:HG12	1.98	0.45
2:L:391:PHE:CD2	2:L:391:PHE:C	2.92	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:234:PHE:CD2	1:M:373:ILE:HD13	2.51	0.45
1:O:404:ARG:HD3	1:O:429:TRP:CZ2	2.51	0.45
2:P:223:ILE:CD1	2:P:254:GLU:HG3	2.46	0.45
2:P:308:MET:HE2	2:P:308:MET:C	2.42	0.45
2:P:322:GLU:HB2	2:P:327:LEU:CD1	2.46	0.45
2:P:515:LEU:HD11	2:P:551:ILE:HD12	1.95	0.45
2:P:519:MET:HE2	2:P:519:MET:HA	1.99	0.45
1:A:492:LEU:CD2	2:D:399:LEU:HB3	2.45	0.45
1:A:496:ASP:O	1:A:498:GLU:N	2.50	0.45
2:B:147:HIS:HE1	2:B:159:ILE:H	1.63	0.45
2:B:426:LYS:HA	2:B:571:LYS:CE	2.43	0.45
1:C:84:ILE:CD1	1:C:125:VAL:HG12	2.46	0.45
1:C:90:ALA:HB2	1:C:121:ASP:OD2	2.17	0.45
1:C:273:GLN:HE21	1:C:273:GLN:HB3	1.60	0.45
1:C:349:LYS:HG2	1:C:377:VAL:HG22	1.98	0.45
2:D:112:GLU:C	2:D:114:THR:H	2.24	0.45
1:E:215:HIS:O	1:E:215:HIS:CG	2.69	0.45
2:F:143:GLN:HG3	2:F:159:ILE:HD12	1.99	0.45
2:H:68:PRO:C	2:H:70:ASN:N	2.71	0.45
2:H:70:ASN:HB3	2:H:71:ARG:HD2	1.98	0.45
2:H:533:TYR:HD2	2:H:533:TYR:N	2.14	0.45
1:I:388:MET:HE3	1:I:405:PHE:CD1	2.52	0.45
1:I:406:LYS:HB2	2:J:29:PHE:CE2	2.50	0.45
2:J:4:VAL:HG22	2:J:145:LYS:HE3	1.97	0.45
2:J:197:LEU:HA	2:J:200:ILE:HG12	1.99	0.45
2:J:331:LEU:HD21	2:J:368:ALA:HB2	1.98	0.45
1:K:279:LEU:CD2	1:K:322:ASN:C	2.90	0.45
2:L:118:ARG:NH2	2:L:256:THR:O	2.49	0.45
1:M:276:THR:HB	1:M:277:PHE:H	1.56	0.45
2:N:132:THR:HG23	2:N:133:LYS:N	2.32	0.45
2:N:211:LEU:HG	2:N:212:HIS:N	2.20	0.45
2:P:112:GLU:C	2:P:114:THR:N	2.75	0.45
2:P:411:GLU:HA	2:P:475:PHE:O	2.16	0.45
1:A:234:PHE:CD2	1:A:373:ILE:HD13	2.51	0.45
1:A:380:HIS:CD2	1:A:452:VAL:HG22	2.52	0.45
2:B:183:PHE:CD2	2:B:230:VAL:HG11	2.51	0.45
2:B:453:THR:HG23	2:B:456:PRO:CD	2.47	0.45
2:B:495:ARG:HG3	2:B:495:ARG:NH1	2.31	0.45
1:C:282:PRO:CD	2:D:437:VAL:HG13	2.45	0.45
1:E:443:LEU:HD11	1:E:454:VAL:HG13	1.98	0.45
2:F:101:PRO:CG	2:F:105:ILE:HD13	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:439:ILE:HD12	2:F:439:ILE:N	2.31	0.45
2:F:570:THR:HG21	1:G:197:ILE:HG22	1.98	0.45
2:H:62:LEU:N	2:H:62:LEU:CD2	2.77	0.45
2:H:493:ASN:HD22	2:H:493:ASN:N	2.14	0.45
2:H:515:LEU:HD11	2:H:551:ILE:HD12	1.98	0.45
2:J:157:VAL:HG21	2:J:263:ALA:N	2.31	0.45
2:J:480:ILE:C	2:J:480:ILE:HD12	2.41	0.45
2:J:497:LEU:HD23	2:J:497:LEU:C	2.41	0.45
1:K:210:TYR:HB3	1:K:212:PHE:CE1	2.49	0.45
2:L:72:TYR:C	2:L:74:LEU:H	2.24	0.45
2:L:112:GLU:C	2:L:114:THR:H	2.23	0.45
2:L:146:LEU:HD11	2:L:159:ILE:HD13	1.98	0.45
2:L:211:LEU:CG	2:L:212:HIS:N	2.78	0.45
1:M:327:HIS:HA	1:M:356:VAL:CG1	2.44	0.45
2:N:112:GLU:C	2:N:114:THR:N	2.75	0.45
2:P:132:THR:HG22	2:P:134:ASP:H	1.81	0.45
2:P:261:THR:HA	2:P:264:LYS:HE2	1.98	0.45
1:A:246:MET:HE1	1:A:332:SER:HA	1.97	0.45
2:B:274:PHE:C	2:B:276:GLU:N	2.72	0.45
2:D:68:PRO:C	2:D:70:ASN:N	2.70	0.45
2:D:322:GLU:HB2	2:D:327:LEU:CD1	2.47	0.45
1:E:216:GLY:HA3	2:H:512:HIS:ND1	2.32	0.45
2:F:6:VAL:CG2	2:F:11:LEU:HD12	2.46	0.45
2:F:42:LYS:H	2:F:58:SER:HB2	1.80	0.45
2:F:512:HIS:ND1	1:G:216:GLY:CA	2.80	0.45
1:G:379:ASP:CG	1:G:380:HIS:H	2.25	0.45
1:G:402:GLN:HB2	1:G:422:TYR:H	1.82	0.45
1:G:413:THR:HG21	1:G:436:GLY:HA3	1.99	0.45
1:G:449:PRO:HB2	1:G:451:ASN:OD1	2.16	0.45
1:G:459:LEU:HD12	1:G:459:LEU:C	2.42	0.45
1:G:463:ARG:N	1:G:464:PRO:HD2	2.31	0.45
1:G:484:LEU:HG	2:H:465:ASN:CG	2.41	0.45
1:M:225:HIS:CE1	2:N:413:LEU:HD12	2.52	0.45
1:M:246:MET:HE1	1:M:332:SER:CA	2.46	0.45
1:M:467:ILE:O	1:M:468:LYS:C	2.59	0.45
2:N:146:LEU:HD11	2:N:159:ILE:HD13	1.98	0.45
2:N:146:LEU:HD13	2:N:266:VAL:HG13	1.98	0.45
2:N:162:HIS:CD2	2:N:231:LEU:HD12	2.52	0.45
2:N:188:LYS:HE2	2:N:201:TYR:CE2	2.50	0.45
2:N:526:PRO:HA	2:N:533:TYR:CD2	2.52	0.45
1:O:228:LEU:HD12	2:P:411:GLU:CD	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:128:ASN:HA	2:P:249:ARG:HD3	1.98	0.45
2:B:17:ARG:CZ	2:B:19:TYR:CE1	3.00	0.45
2:B:38:ILE:HD13	2:B:63:TYR:HE1	1.81	0.45
2:B:113:GLU:HB3	2:B:219:LEU:HD13	1.98	0.45
1:C:208:LYS:HE3	1:C:209:PRO:N	2.31	0.45
1:C:437:VAL:O	1:C:438:PHE:O	2.34	0.45
1:C:461:LEU:HD22	1:C:461:LEU:HA	1.83	0.45
2:D:127:ARG:NH1	2:D:285:GLU:OE1	2.50	0.45
2:D:451:ARG:NH2	2:D:478:SER:HB3	2.31	0.45
2:D:528:GLU:C	2:D:530:LYS:H	2.24	0.45
2:F:147:HIS:HE1	2:F:158:ALA:HA	1.82	0.45
2:F:357:ASP:OD1	2:F:358:ILE:HD12	2.15	0.45
2:F:498:CYS:HB2	2:F:582:GLU:HG3	1.97	0.45
1:G:468:LYS:O	1:G:469:TYR:HD2	2.00	0.45
1:G:469:TYR:CE2	1:G:493:CYS:HB2	2.51	0.45
2:H:157:VAL:HG21	2:H:263:ALA:N	2.32	0.45
2:H:219:LEU:C	2:H:220:TYR:HD1	2.25	0.45
2:H:310:ARG:O	2:H:313:LEU:HB3	2.17	0.45
1:I:246:MET:HG3	1:I:352:SER:HB3	1.99	0.45
1:K:373:ILE:HG22	1:K:461:LEU:HD23	1.99	0.45
1:K:391:LEU:HD13	1:K:419:VAL:HG21	1.98	0.45
1:K:463:ARG:N	1:K:464:PRO:HD2	2.31	0.45
2:L:507:GLY:CA	2:L:510:ILE:HG22	2.46	0.45
1:M:194:PRO:C	1:M:196:MET:N	2.68	0.45
2:N:43:GLU:O	2:N:47:LYS:HB2	2.17	0.45
2:N:142:LEU:HD23	2:N:146:LEU:HG	1.98	0.45
2:P:82:ARG:HD2	2:P:94:PRO:HG3	1.98	0.45
2:P:157:VAL:HG21	2:P:263:ALA:N	2.32	0.45
2:P:223:ILE:HD13	2:P:254:GLU:HG3	1.98	0.45
2:P:479:ASP:HA	2:P:494:TYR:O	2.17	0.45
1:A:241:MET:HG2	2:D:387:ILE:HD12	1.99	0.45
1:A:298:ARG:HH11	1:A:298:ARG:CG	2.30	0.45
1:A:353:ILE:HG12	1:A:373:ILE:HB	1.98	0.45
2:B:112:GLU:C	2:B:114:THR:N	2.74	0.45
2:B:120:PHE:HE1	2:B:258:THR:C	2.25	0.45
2:B:181:ILE:CD1	2:B:194:ALA:HB2	2.47	0.45
2:B:223:ILE:CD1	2:B:254:GLU:HG3	2.47	0.45
2:B:508:PHE:HE2	1:C:210:TYR:CE2	2.35	0.45
1:C:227:LEU:CD2	1:C:461:LEU:HD12	2.47	0.45
1:E:414:GLU:CD	2:F:362:CYS:SG	3.00	0.45
2:F:414:THR:HB	2:F:451:ARG:NH1	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:207:PHE:O	1:G:209:PRO:HD3	2.17	0.45
1:G:316:LEU:HD23	1:G:320:ARG:HG2	1.99	0.45
1:G:359:ASN:HD21	2:H:443:LYS:HD2	1.82	0.45
2:H:143:GLN:HG3	2:H:159:ILE:HD12	1.98	0.45
1:I:237:ILE:HD12	1:I:397:LYS:CB	2.47	0.45
1:I:287:GLN:HB3	2:J:488:ASP:CB	2.46	0.45
1:I:343:LYS:HB2	1:I:344:PRO:HD2	1.91	0.45
2:J:68:PRO:C	2:J:70:ASN:N	2.70	0.45
2:J:515:LEU:HD13	2:J:551:ILE:HD12	1.99	0.45
1:K:497:ALA:O	1:K:498:GLU:HG3	2.16	0.45
2:L:181:ILE:CD1	2:L:194:ALA:HB2	2.47	0.45
2:L:475:PHE:HA	2:L:498:CYS:O	2.16	0.45
1:M:258:ASN:HA	1:M:330:SER:HB3	1.98	0.45
2:N:495:ARG:HH11	2:N:495:ARG:HG3	1.81	0.45
1:O:413:THR:HG21	1:O:436:GLY:HA3	1.99	0.45
1:O:480:HIS:CD2	1:O:480:HIS:H	2.34	0.45
2:P:132:THR:HB	2:P:135:ARG:CG	2.46	0.45
2:P:416:ALA:O	2:P:451:ARG:HG3	2.16	0.45
2:P:472:LEU:HB2	2:P:502:TYR:HB3	1.98	0.45
1:A:207:PHE:HD2	1:A:207:PHE:H	1.65	0.45
2:B:70:ASN:HB3	2:B:71:ARG:HD2	1.99	0.45
2:B:82:ARG:HD2	2:B:94:PRO:HG3	1.99	0.45
2:B:157:VAL:HG22	2:B:263:ALA:HB2	1.98	0.45
2:B:188:LYS:HE2	2:B:201:TYR:CE2	2.52	0.45
1:C:408:ALA:CB	1:C:418:GLU:HG3	2.45	0.45
2:D:68:PRO:O	2:D:70:ASN:N	2.50	0.45
2:D:183:PHE:CD2	2:D:230:VAL:HG11	2.52	0.45
1:E:225:HIS:HA	1:E:226:PRO:HD3	1.87	0.45
1:E:269:PRO:HB3	2:F:149:ASN:HD21	1.80	0.45
2:F:53:LYS:C	2:F:55:ALA:N	2.73	0.45
2:F:68:PRO:C	2:F:70:ASN:N	2.73	0.45
2:F:519:MET:HE1	2:F:588:PHE:CZ	2.52	0.45
2:H:41:GLU:HB3	2:H:58:SER:HB3	1.98	0.45
2:H:73:ASP:C	2:H:273:MET:HE1	2.42	0.45
2:H:233:MET:HE3	2:H:236:ILE:HB	1.99	0.45
2:H:444:THR:HG21	2:H:446:GLU:HG3	1.98	0.45
1:I:262:LEU:O	1:I:412:TYR:HB3	2.16	0.45
2:J:322:GLU:HB2	2:J:327:LEU:HD13	1.98	0.45
2:L:46:SER:HB2	2:L:53:LYS:HE2	1.99	0.45
2:L:157:VAL:HG21	2:L:263:ALA:N	2.32	0.45
1:M:279:LEU:HD11	2:N:437:VAL:HG13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:410:ASN:HB2	1:M:413:THR:OG1	2.17	0.45
1:M:466:MET:CE	1:M:474:ILE:HG12	2.47	0.45
2:N:186:LEU:HD23	2:N:237:ILE:CG2	2.46	0.45
2:N:211:LEU:CG	2:N:212:HIS:N	2.75	0.45
2:N:515:LEU:HD11	2:N:551:ILE:CG2	2.46	0.45
2:N:520:GLN:NE2	1:O:489:ASP:OD1	2.50	0.45
2:P:267:LEU:C	2:P:267:LEU:HD23	2.42	0.45
1:A:370:PHE:CD1	1:A:370:PHE:C	2.95	0.45
1:A:440:PRO:HG3	2:B:360:HIS:HE2	1.80	0.45
2:B:142:LEU:HD23	2:B:142:LEU:O	2.17	0.45
2:B:180:ASP:O	2:B:181:ILE:HG23	2.16	0.45
2:B:340:VAL:HG11	2:B:344:GLY:HA2	1.98	0.45
2:B:360:HIS:CG	2:B:361:ALA:N	2.85	0.45
2:B:549:ALA:HB2	1:C:212:PHE:CE2	2.51	0.45
1:C:222:GLY:HA3	2:D:405:ALA:O	2.17	0.45
1:C:464:PRO:HG2	1:C:465:THR:H	1.82	0.45
2:D:163:ASP:OD2	2:D:248:THR:HG23	2.16	0.45
1:E:495:LEU:O	1:E:496:ASP:CG	2.60	0.45
2:F:389:ASN:OD1	1:G:397:LYS:NZ	2.50	0.45
1:G:461:LEU:HD22	1:G:461:LEU:HA	1.83	0.45
2:H:553:ALA:O	2:H:554:ARG:C	2.59	0.45
1:I:238:PHE:HE1	1:I:373:ILE:HD12	1.81	0.45
2:J:223:ILE:CD1	2:J:254:GLU:HG3	2.47	0.45
2:J:223:ILE:HD13	2:J:254:GLU:HG3	1.98	0.45
2:L:430:ASP:C	2:L:432:SER:H	2.24	0.45
1:M:443:LEU:HD11	1:M:454:VAL:HG13	1.99	0.45
2:N:73:ASP:CA	2:N:273:MET:HE1	2.45	0.45
2:N:132:THR:O	2:N:133:LYS:C	2.60	0.45
2:N:416:ALA:O	2:N:451:ARG:HG3	2.16	0.45
2:N:475:PHE:HA	2:N:498:CYS:O	2.16	0.45
2:P:42:LYS:HG3	2:P:43:GLU:H	1.82	0.45
2:P:139:PHE:HA	2:P:274:PHE:CZ	2.52	0.45
2:P:183:PHE:O	2:P:191:GLU:HA	2.17	0.45
1:A:360:GLU:HA	1:A:360:GLU:OE2	2.17	0.44
2:B:132:THR:HG23	2:B:133:LYS:N	2.32	0.44
2:B:233:MET:HE3	2:B:236:ILE:HB	1.99	0.44
2:B:479:ASP:HA	2:B:494:TYR:O	2.16	0.44
2:B:503:ASN:O	2:B:577:PRO:HD2	2.17	0.44
1:C:76:HIS:O	1:C:79:ARG:HB3	2.17	0.44
1:C:194:PRO:CA	1:C:197:ILE:HD13	2.45	0.44
1:C:226:PRO:HG3	1:C:490:SER:CB	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:444:LEU:N	1:E:445:PRO:HD2	2.32	0.44
1:E:467:ILE:C	1:E:470:GLY:H	2.25	0.44
1:E:477:LEU:HA	1:E:482:VAL:HG23	1.98	0.44
2:F:3:THR:CG2	2:F:64:LYS:HG3	2.47	0.44
2:F:131:PHE:CD2	2:F:136:TYR:HA	2.52	0.44
2:F:190:LYS:HB3	2:F:191:GLU:H	1.44	0.44
2:F:584:ASN:ND2	2:F:587:PRO:HD3	2.31	0.44
2:H:3:THR:HG21	2:H:64:LYS:HG3	1.99	0.44
2:H:217:LYS:HB3	2:H:218:PRO:CD	2.40	0.44
2:H:465:ASN:HB3	2:H:468:MET:HG2	1.99	0.44
1:I:262:LEU:HD21	1:I:333:ALA:HB2	1.98	0.44
2:J:124:ALA:HB1	2:J:300:PRO:HD3	1.98	0.44
2:J:219:LEU:C	2:J:220:TYR:HD1	2.25	0.44
1:K:238:PHE:HE1	1:K:373:ILE:HD12	1.82	0.44
1:K:294:GLN:NE2	1:K:297:LYS:HD3	2.32	0.44
1:K:347:PRO:C	1:K:348:VAL:HG13	2.42	0.44
2:L:39:THR:OG1	2:L:44:ILE:HD11	2.17	0.44
2:L:429:VAL:HG12	2:L:430:ASP:N	2.32	0.44
2:L:455:LEU:HD13	2:L:459:LEU:HD22	1.99	0.44
2:N:537:ALA:CB	1:O:212:PHE:CD1	2.99	0.44
1:O:419:VAL:O	1:O:432:VAL:HG22	2.17	0.44
2:P:198:MET:SD	2:P:220:TYR:HE2	2.40	0.44
1:A:246:MET:HG3	1:A:352:SER:HB3	1.98	0.44
1:A:301:SER:HB2	1:A:312:TYR:O	2.17	0.44
1:A:414:GLU:HG3	1:A:415:PRO:HD3	2.00	0.44
1:C:325:ARG:HG2	1:C:325:ARG:NH2	2.27	0.44
1:C:474:ILE:O	1:C:476:GLU:N	2.49	0.44
2:D:45:ILE:CD1	2:D:52:VAL:HB	2.45	0.44
2:D:183:PHE:O	2:D:191:GLU:HA	2.17	0.44
2:D:486:ASN:HD22	2:D:486:ASN:N	2.15	0.44
1:E:259:PHE:CD2	1:E:259:PHE:N	2.84	0.44
2:F:414:THR:HG22	2:F:415:PHE:O	2.16	0.44
2:H:122:VAL:HG22	2:H:123:ALA:N	2.31	0.44
2:H:132:THR:HG22	2:H:134:ASP:N	2.31	0.44
2:H:211:LEU:CG	2:H:212:HIS:N	2.78	0.44
2:H:331:LEU:HD21	2:H:368:ALA:HB2	2.00	0.44
2:H:503:ASN:O	2:H:577:PRO:HD2	2.17	0.44
2:H:575:THR:HB	2:H:576:MET:CE	2.47	0.44
1:K:246:MET:HE1	1:K:332:SER:CA	2.46	0.44
1:M:437:VAL:O	1:M:438:PHE:O	2.34	0.44
1:O:288:LEU:HD22	1:O:288:LEU:N	2.27	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:305:TYR:HB3	1:O:444:LEU:HD12	1.99	0.44
1:O:414:GLU:HG2	1:O:437:VAL:O	2.18	0.44
1:A:262:LEU:CD2	1:A:329:THR:HG22	2.47	0.44
1:A:494:ARG:HG2	2:D:395:LYS:HE2	1.98	0.44
2:B:355:ARG:HD3	2:B:357:ASP:OD1	2.17	0.44
2:B:416:ALA:O	2:B:451:ARG:HG3	2.17	0.44
2:D:132:THR:HG22	2:D:135:ARG:H	1.82	0.44
2:D:132:THR:HB	2:D:135:ARG:CG	2.47	0.44
2:D:360:HIS:CG	2:D:361:ALA:N	2.85	0.44
2:F:15:LEU:CD1	2:F:19:TYR:HE2	2.29	0.44
2:F:197:LEU:HA	2:F:200:ILE:HG12	2.00	0.44
2:F:340:VAL:CG1	2:F:344:GLY:HA2	2.46	0.44
2:F:482:ILE:CG2	2:F:483:LYS:N	2.80	0.44
1:G:258:ASN:ND2	1:G:259:PHE:CE1	2.81	0.44
2:H:71:ARG:CG	2:H:355:ARG:CZ	2.93	0.44
2:H:223:ILE:HB	2:H:231:LEU:HB2	1.99	0.44
2:H:449:VAL:CG1	2:H:450:ALA:N	2.81	0.44
1:I:410:ASN:HB2	1:I:413:THR:OG1	2.17	0.44
1:I:437:VAL:HG13	1:I:455:ILE:HG22	1.98	0.44
2:J:27:LEU:CD1	2:J:84:LEU:HD22	2.47	0.44
2:J:237:ILE:H	2:J:237:ILE:HD12	1.82	0.44
2:L:103:GLY:O	2:L:105:ILE:N	2.44	0.44
2:L:112:GLU:C	2:L:114:THR:N	2.75	0.44
2:L:486:ASN:HD22	2:L:486:ASN:N	2.13	0.44
1:M:196:MET:SD	1:M:201:SER:HB3	2.57	0.44
1:M:384:LEU:HD11	1:M:417:MET:HE3	1.99	0.44
2:N:132:THR:HG22	2:N:135:ARG:H	1.82	0.44
2:N:181:ILE:O	2:N:193:THR:HA	2.17	0.44
1:O:250:ASN:CG	1:O:250:ASN:O	2.60	0.44
1:O:279:LEU:HD12	2:P:437:VAL:CG1	2.45	0.44
1:O:365:THR:HG22	1:O:365:THR:O	2.16	0.44
2:P:40:SER:HB3	2:P:58:SER:O	2.17	0.44
2:P:129:ILE:HD12	2:P:251:ILE:CD1	2.47	0.44
2:P:391:PHE:CD2	2:P:391:PHE:C	2.92	0.44
1:A:266:GLN:HB2	1:A:312:TYR:HE2	1.83	0.44
2:B:45:ILE:C	2:B:47:LYS:N	2.74	0.44
2:B:167:LEU:HD13	2:B:171:PHE:HE2	1.82	0.44
2:B:455:LEU:HD13	2:B:455:LEU:C	2.42	0.44
1:C:20:GLY:HA3	1:C:174:TRP:HZ2	1.82	0.44
1:C:100:GLY:O	1:C:102:VAL:N	2.50	0.44
1:C:265:PRO:HD3	1:C:310:TYR:CZ	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:373:ILE:HD13	1:C:459:LEU:HD11	1.98	0.44
1:C:440:PRO:HG3	2:D:360:HIS:HE2	1.83	0.44
2:D:128:ASN:HA	2:D:249:ARG:HD3	1.99	0.44
2:D:139:PHE:CZ	2:D:161:THR:HG21	2.51	0.44
1:E:221:SER:HB3	1:E:222:GLY:H	1.51	0.44
2:H:147:HIS:C	2:H:149:ASN:H	2.25	0.44
2:H:157:VAL:HG11	2:H:266:VAL:HG21	1.99	0.44
2:H:305:ARG:NH1	2:H:358:ILE:O	2.47	0.44
1:I:236:GLN:O	1:I:240:GLU:HG3	2.18	0.44
1:I:267:GLN:HE22	2:J:262:LYS:HE3	1.82	0.44
1:I:353:ILE:HG12	1:I:373:ILE:HB	1.99	0.44
1:I:444:LEU:N	1:I:445:PRO:HD2	2.33	0.44
1:I:495:LEU:O	1:I:495:LEU:HD23	2.17	0.44
2:J:143:GLN:HG3	2:J:159:ILE:HD12	1.99	0.44
2:J:268:ASP:O	2:J:272:THR:HG22	2.16	0.44
2:J:304:TYR:CD1	2:J:353:PRO:HD3	2.53	0.44
1:K:424:GLN:C	1:K:427:LYS:H	2.26	0.44
2:L:530:LYS:O	2:L:531:GLY:C	2.61	0.44
1:M:299:THR:HG21	1:M:305:TYR:CD1	2.53	0.44
2:N:174:THR:OG1	2:N:175:ALA:N	2.48	0.44
2:N:450:ALA:HB3	2:N:481:VAL:HG11	1.99	0.44
2:N:534:VAL:HG21	2:N:536:LYS:HE3	1.98	0.44
1:O:204:ASP:O	1:O:205:ARG:C	2.60	0.44
1:O:267:GLN:O	1:O:267:GLN:HG2	2.18	0.44
1:O:296:VAL:O	1:O:297:LYS:C	2.59	0.44
1:O:316:LEU:CD2	1:O:320:ARG:HD3	2.47	0.44
2:P:429:VAL:HG12	2:P:430:ASP:N	2.32	0.44
1:A:225:HIS:NE2	1:A:477:LEU:O	2.47	0.44
1:A:396:THR:C	1:A:398:LEU:N	2.75	0.44
2:B:126:LEU:HD23	2:B:126:LEU:N	2.33	0.44
2:D:120:PHE:HE1	2:D:258:THR:C	2.25	0.44
2:D:147:HIS:CE1	2:D:159:ILE:HG12	2.53	0.44
2:D:147:HIS:C	2:D:149:ASN:H	2.26	0.44
2:D:157:VAL:HG22	2:D:263:ALA:HB2	1.99	0.44
2:D:391:PHE:O	2:D:392:PRO:C	2.60	0.44
2:D:420:GLN:HG2	2:D:449:VAL:CG2	2.47	0.44
1:E:226:PRO:HG3	1:E:490:SER:CB	2.47	0.44
2:F:261:THR:HA	2:F:264:LYS:HE2	1.98	0.44
2:F:455:LEU:C	2:F:455:LEU:HD13	2.43	0.44
2:H:132:THR:HB	2:H:135:ARG:HG3	2.00	0.44
2:H:430:ASP:C	2:H:432:SER:H	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:142:LEU:HD23	2:J:146:LEU:HG	2.00	0.44
2:J:157:VAL:HG11	2:J:266:VAL:HG21	1.99	0.44
2:J:508:PHE:HE1	2:J:562:GLY:CA	2.27	0.44
1:K:325:ARG:HH21	1:K:325:ARG:CG	2.30	0.44
2:L:308:MET:HE3	2:L:309:VAL:C	2.43	0.44
2:N:129:ILE:HD12	2:N:251:ILE:CD1	2.48	0.44
2:N:576:MET:HB3	2:N:577:PRO:CD	2.47	0.44
1:O:259:PHE:CD2	1:O:271:ARG:HG3	2.53	0.44
1:A:414:GLU:HG3	1:A:415:PRO:CD	2.48	0.44
2:B:260:PHE:HE1	2:B:264:LYS:CD	2.22	0.44
1:C:423:HIS:ND1	1:C:424:GLN:N	2.66	0.44
1:C:444:LEU:N	1:C:445:PRO:HD2	2.33	0.44
2:D:71:ARG:HG3	2:D:355:ARG:CZ	2.45	0.44
2:D:576:MET:SD	2:D:576:MET:N	2.90	0.44
1:E:494:ARG:O	1:E:495:LEU:C	2.60	0.44
2:F:334:MET:HG2	2:F:367:ASP:CB	2.46	0.44
2:F:391:PHE:CD2	2:F:391:PHE:C	2.93	0.44
1:G:251:PHE:H	2:H:493:ASN:HD21	1.65	0.44
1:G:365:THR:C	1:G:366:HIS:CG	2.96	0.44
1:G:404:ARG:HD3	1:G:429:TRP:CZ2	2.52	0.44
2:H:120:PHE:HE1	2:H:258:THR:C	2.26	0.44
1:I:212:PHE:CE1	2:L:537:ALA:HB2	2.53	0.44
1:I:465:THR:C	1:I:467:ILE:H	2.26	0.44
2:J:72:TYR:C	2:J:74:LEU:H	2.25	0.44
2:J:147:HIS:HE1	2:J:158:ALA:HA	1.83	0.44
1:K:280:ARG:O	1:K:283:ALA:HB2	2.17	0.44
1:M:264:GLN:HE21	1:M:264:GLN:HB3	1.65	0.44
1:M:268:HIS:HB3	1:M:271:ARG:HD2	1.99	0.44
1:M:414:GLU:HG3	1:M:415:PRO:CD	2.47	0.44
1:O:196:MET:C	1:O:198:SER:H	2.26	0.44
2:P:219:LEU:C	2:P:220:TYR:HD1	2.26	0.44
2:P:480:ILE:C	2:P:480:ILE:HD12	2.43	0.44
1:A:350:TYR:HB2	1:A:376:VAL:CG1	2.47	0.44
2:B:132:THR:HB	2:B:135:ARG:CG	2.48	0.44
2:B:554:ARG:HH22	1:C:502:PRO:HG3	1.81	0.44
1:C:51:ILE:HD12	1:C:51:ILE:O	2.18	0.44
1:C:458:GLY:HA3	3:C:509:PHE:HB2	1.99	0.44
2:D:70:ASN:HD22	2:D:71:ARG:CZ	2.30	0.44
2:D:576:MET:H	2:D:576:MET:HE2	1.83	0.44
1:E:362:LEU:HD21	1:E:475:ARG:NH2	2.33	0.44
1:E:410:ASN:HB2	1:E:413:THR:OG1	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:473:ASN:OD1	1:E:473:ASN:N	2.50	0.44
2:F:128:ASN:HA	2:F:249:ARG:HD3	1.98	0.44
2:F:142:LEU:HD23	2:F:146:LEU:HG	2.00	0.44
2:F:213:ILE:O	2:F:213:ILE:CG2	2.66	0.44
1:G:424:GLN:C	1:G:424:GLN:NE2	2.75	0.44
2:H:420:GLN:NE2	2:H:431:ILE:HG21	2.32	0.44
2:H:517:ARG:HG3	2:H:521:LEU:HD23	1.98	0.44
2:J:133:LYS:H	2:J:133:LYS:CD	2.11	0.44
1:K:253:GLU:OE1	1:K:257:TRP:CB	2.65	0.44
2:L:183:PHE:O	2:L:191:GLU:HA	2.17	0.44
1:M:213:LEU:C	1:M:215:HIS:N	2.74	0.44
1:M:214:ALA:O	1:M:215:HIS:HB3	2.18	0.44
2:N:310:ARG:C	2:N:312:ASP:N	2.76	0.44
1:O:277:PHE:CE2	1:O:359:ASN:HB2	2.53	0.44
1:A:202:TRP:O	1:A:203:ARG:O	2.36	0.44
1:A:226:PRO:HG3	1:A:490:SER:CB	2.48	0.44
2:B:406:ALA:O	1:C:221:SER:HA	2.18	0.44
1:C:63:LEU:HD21	1:C:71:ALA:HB2	2.00	0.44
1:C:388:MET:HE3	1:C:405:PHE:CE1	2.52	0.44
1:C:443:LEU:HA	1:C:446:MET:HE2	1.99	0.44
2:D:450:ALA:HB3	2:D:481:VAL:HG11	1.98	0.44
1:E:298:ARG:HH11	1:E:298:ARG:CG	2.31	0.44
1:E:391:LEU:HD13	1:E:419:VAL:HG21	2.00	0.44
2:F:268:ASP:O	2:F:272:THR:HG22	2.18	0.44
2:F:271:VAL:HG22	2:F:284:VAL:CG2	2.48	0.44
2:F:310:ARG:NH2	2:F:312:ASP:HB2	2.32	0.44
2:H:122:VAL:CG2	2:H:299:PHE:CD2	3.01	0.44
2:H:147:HIS:ND1	2:H:154:ARG:HG2	2.32	0.44
2:H:281:GLN:HG2	2:H:282:PHE:CD1	2.53	0.44
2:J:3:THR:HG21	2:J:64:LYS:HG3	2.00	0.44
2:J:126:LEU:CD2	2:J:251:ILE:HB	2.48	0.44
2:J:446:GLU:H	2:J:446:GLU:HG2	1.58	0.44
1:K:427:LYS:HE2	1:K:427:LYS:HB3	1.83	0.44
1:K:458:GLY:HA3	3:K:509:PHE:CB	2.47	0.44
2:L:122:VAL:HG22	2:L:267:LEU:HD12	2.00	0.44
2:L:219:LEU:C	2:L:220:TYR:HD1	2.25	0.44
2:L:508:PHE:HE1	2:L:562:GLY:CA	2.23	0.44
2:L:515:LEU:HD11	2:L:551:ILE:CG2	2.47	0.44
1:M:343:LYS:CB	1:M:344:PRO:HD3	2.31	0.44
2:N:53:LYS:N	2:N:53:LYS:HD2	2.32	0.44
2:N:70:ASN:HB3	2:N:71:ARG:HD2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:566:PRO:HB3	1:O:202:TRP:CZ3	2.53	0.44
1:O:373:ILE:CG2	1:O:461:LEU:HD23	2.48	0.44
2:P:147:HIS:HE1	2:P:158:ALA:HA	1.83	0.44
2:P:437:VAL:O	2:P:449:VAL:HG13	2.18	0.44
2:P:482:ILE:CG2	2:P:483:LYS:N	2.80	0.44
1:A:477:LEU:HD13	1:A:478:VAL:N	2.33	0.44
2:B:198:MET:HE1	2:B:236:ILE:HG12	2.00	0.44
2:B:514:LEU:HD23	2:B:581:LEU:HD23	2.00	0.44
1:C:365:THR:CG2	1:C:474:ILE:H	2.31	0.44
2:D:146:LEU:HD11	2:D:159:ILE:HD13	2.00	0.44
2:D:437:VAL:O	2:D:449:VAL:HG13	2.17	0.44
2:F:57:ALA:C	2:F:59:ASP:N	2.72	0.44
2:F:147:HIS:HE1	2:F:159:ILE:H	1.63	0.44
1:G:189:GLU:CB	1:G:206:PRO:HA	2.48	0.44
2:H:87:PHE:HE1	2:H:371:ALA:HA	1.83	0.44
2:H:450:ALA:HB3	2:H:481:VAL:HG11	1.98	0.44
2:H:576:MET:HB3	2:H:577:PRO:CD	2.47	0.44
1:I:190:THR:HG23	1:I:191:GLU:H	1.81	0.44
1:I:197:ILE:CD1	2:L:566:PRO:HG3	2.45	0.44
2:J:122:VAL:CG2	2:J:299:PHE:CG	3.00	0.44
2:J:129:ILE:HD12	2:J:251:ILE:CD1	2.48	0.44
2:J:132:THR:CG2	2:J:133:LYS:N	2.81	0.44
2:J:355:ARG:HD3	2:J:357:ASP:OD1	2.17	0.44
2:J:561:LEU:HD23	2:J:562:GLY:N	2.32	0.44
1:K:440:PRO:HG3	2:L:360:HIS:HE2	1.83	0.44
2:L:126:LEU:HB2	2:L:278:CYS:SG	2.58	0.44
2:L:420:GLN:NE2	2:L:431:ILE:HG21	2.32	0.44
1:M:280:ARG:HB3	2:N:438:HIS:O	2.18	0.44
2:N:183:PHE:O	2:N:191:GLU:HA	2.18	0.44
2:N:519:MET:HA	2:N:519:MET:HE2	1.99	0.44
2:P:126:LEU:HB2	2:P:278:CYS:SG	2.58	0.44
2:P:127:ARG:NH1	2:P:285:GLU:OE1	2.51	0.44
2:P:458:LEU:O	2:P:461:THR:HB	2.18	0.44
1:A:235:ARG:NH1	1:A:245:GLU:OE1	2.51	0.43
2:B:555:GLY:O	2:B:556:GLN:HB3	2.17	0.43
2:B:561:LEU:C	2:B:561:LEU:CD2	2.91	0.43
1:C:23:SER:HA	1:C:37:VAL:HG21	1.99	0.43
1:C:124:ARG:HD3	1:C:126:PHE:CE1	2.53	0.43
1:C:495:LEU:C	1:C:499:PRO:HD2	2.42	0.43
2:D:6:VAL:HB	2:D:77:LEU:HD12	2.00	0.43
2:D:147:HIS:HE1	2:D:158:ALA:HA	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:197:LEU:HA	2:D:200:ILE:CG1	2.48	0.43
2:D:223:ILE:HB	2:D:231:LEU:HB2	2.00	0.43
2:D:575:THR:HB	2:D:576:MET:CE	2.48	0.43
1:E:237:ILE:HD12	1:E:397:LYS:HB3	2.00	0.43
1:E:296:VAL:O	1:E:297:LYS:C	2.61	0.43
2:F:400:LEU:CD2	1:G:492:LEU:HD11	2.48	0.43
2:F:430:ASP:C	2:F:432:SER:H	2.26	0.43
2:F:495:ARG:HH11	2:F:495:ARG:HG3	1.82	0.43
1:G:268:HIS:C	1:G:270:ALA:N	2.70	0.43
1:G:388:MET:HE3	1:G:405:PHE:CD1	2.53	0.43
2:H:71:ARG:HG2	2:H:355:ARG:NH2	2.33	0.43
2:H:519:MET:HE2	2:H:519:MET:HA	2.00	0.43
1:I:301:SER:O	1:I:311:LYS:HA	2.17	0.43
1:I:414:GLU:CD	2:J:362:CYS:SG	3.01	0.43
2:J:6:VAL:CG2	2:J:11:LEU:HD12	2.47	0.43
2:J:68:PRO:O	2:J:70:ASN:N	2.51	0.43
2:J:480:ILE:HG12	2:J:496:HIS:NE2	2.33	0.43
2:L:68:PRO:O	2:L:70:ASN:N	2.51	0.43
2:L:515:LEU:HD13	2:L:551:ILE:HD12	1.97	0.43
2:L:543:PHE:N	2:L:543:PHE:CD1	2.87	0.43
1:M:216:GLY:O	2:P:513:GLY:CA	2.66	0.43
2:N:181:ILE:HD11	2:N:194:ALA:HB2	2.00	0.43
2:N:197:LEU:HA	2:N:200:ILE:CG1	2.48	0.43
2:N:508:PHE:HE1	2:N:562:GLY:CA	2.24	0.43
2:N:547:ARG:NH2	1:O:210:TYR:HB2	2.33	0.43
2:N:569:ILE:O	2:N:574:LEU:HB2	2.18	0.43
1:O:272:ASP:OD1	1:O:273:GLN:N	2.50	0.43
2:P:3:THR:CG2	2:P:64:LYS:HG3	2.48	0.43
2:P:103:GLY:O	2:P:105:ILE:N	2.44	0.43
2:P:183:PHE:CD2	2:P:230:VAL:HG11	2.52	0.43
2:P:575:THR:HB	2:P:576:MET:CE	2.47	0.43
2:B:223:ILE:HB	2:B:231:LEU:HB2	2.00	0.43
1:C:298:ARG:CG	1:C:298:ARG:HH11	2.31	0.43
1:C:373:ILE:CG2	1:C:461:LEU:HD23	2.48	0.43
1:C:382:LEU:HA	1:C:386:HIS:ND1	2.33	0.43
1:C:498:GLU:CB	1:C:499:PRO:CD	2.94	0.43
2:D:429:VAL:HG12	2:D:430:ASP:N	2.33	0.43
2:D:498:CYS:HB2	2:D:582:GLU:HG3	2.00	0.43
1:E:475:ARG:C	1:E:477:LEU:H	2.26	0.43
1:E:479:GLY:CA	2:F:415:PHE:CE1	3.01	0.43
1:G:226:PRO:HG2	1:G:486:MET:CE	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:414:GLU:HG3	1:G:415:PRO:HD3	1.97	0.43
2:H:103:GLY:O	2:H:105:ILE:N	2.43	0.43
2:H:183:PHE:O	2:H:191:GLU:HA	2.17	0.43
1:I:222:GLY:HA3	2:J:405:ALA:O	2.18	0.43
1:I:316:LEU:HD23	1:I:316:LEU:C	2.43	0.43
1:I:325:ARG:NH1	1:I:354:ASP:OD2	2.50	0.43
2:J:152:ARG:HB2	2:J:156:LEU:CD1	2.49	0.43
1:K:279:LEU:HA	2:L:440:SER:H	1.82	0.43
1:K:328:THR:OG1	1:K:372:GLN:NE2	2.50	0.43
2:L:355:ARG:HB3	2:L:358:ILE:HD13	2.00	0.43
1:M:226:PRO:HG3	1:M:490:SER:CB	2.48	0.43
1:M:296:VAL:O	1:M:297:LYS:C	2.61	0.43
1:M:379:ASP:CG	1:M:380:HIS:H	2.25	0.43
2:N:113:GLU:H	2:N:113:GLU:CD	2.26	0.43
2:N:132:THR:HB	2:N:135:ARG:CG	2.48	0.43
2:N:223:ILE:CD1	2:N:254:GLU:HG3	2.48	0.43
2:N:391:PHE:O	2:N:392:PRO:C	2.61	0.43
2:P:211:LEU:CG	2:P:212:HIS:N	2.80	0.43
2:P:465:ASN:HB3	2:P:468:MET:HG2	2.00	0.43
2:P:493:ASN:HD22	2:P:493:ASN:N	2.16	0.43
1:A:463:ARG:N	1:A:464:PRO:HD2	2.33	0.43
2:B:147:HIS:NE2	2:B:159:ILE:HG12	2.33	0.43
2:B:407:ALA:CA	1:C:221:SER:HB3	2.47	0.43
2:B:450:ALA:O	2:B:451:ARG:C	2.61	0.43
2:B:456:PRO:O	2:B:457:GLY:C	2.59	0.43
1:C:7:ALA:O	1:C:10:LEU:N	2.51	0.43
1:C:466:MET:O	1:C:471:ILE:N	2.52	0.43
1:C:470:GLY:C	1:C:471:ILE:HG13	2.43	0.43
2:D:157:VAL:HG21	2:D:263:ALA:N	2.32	0.43
2:D:181:ILE:CD1	2:D:194:ALA:HB2	2.47	0.43
2:D:291:PHE:CE1	2:D:297:HIS:HD2	2.36	0.43
2:D:416:ALA:O	2:D:451:ARG:HG3	2.17	0.43
1:E:281:ASP:HB3	2:F:438:HIS:H	1.81	0.43
1:E:414:GLU:HG2	1:E:437:VAL:O	2.19	0.43
1:E:471:ILE:HD11	1:E:473:ASN:HD21	1.83	0.43
2:F:131:PHE:CE1	2:F:251:ILE:HD11	2.54	0.43
2:F:182:LYS:HB2	1:K:472:ASN:CB	2.48	0.43
2:F:217:LYS:HB3	2:F:218:PRO:CD	2.42	0.43
1:G:194:PRO:O	1:G:195:GLU:CB	2.66	0.43
1:G:444:LEU:N	1:G:445:PRO:HD2	2.33	0.43
1:I:382:LEU:HA	1:I:386:HIS:ND1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:15:LEU:CD1	2:J:19:TYR:HE2	2.31	0.43
2:J:120:PHE:HB3	2:J:291:PHE:HE2	1.83	0.43
2:J:139:PHE:HA	2:J:274:PHE:CZ	2.54	0.43
2:J:420:GLN:HG2	2:J:449:VAL:HG23	2.00	0.43
2:J:471:PRO:HA	2:J:502:TYR:O	2.18	0.43
2:L:71:ARG:HD2	2:L:71:ARG:N	2.33	0.43
2:L:200:ILE:C	2:L:200:ILE:HD12	2.44	0.43
1:M:237:ILE:HD12	1:M:397:LYS:HB3	1.99	0.43
1:M:246:MET:HE1	1:M:332:SER:HA	1.99	0.43
1:M:316:LEU:HD23	1:M:316:LEU:C	2.44	0.43
1:M:367:LEU:HB3	1:M:368:ALA:H	1.56	0.43
1:O:226:PRO:HG2	1:O:486:MET:CE	2.48	0.43
1:O:282:PRO:CD	2:P:437:VAL:HG13	2.47	0.43
1:O:437:VAL:O	1:O:438:PHE:O	2.36	0.43
1:A:214:ALA:C	1:A:216:GLY:N	2.74	0.43
1:A:267:GLN:CB	2:B:152:ARG:HD2	2.44	0.43
1:A:296:VAL:O	1:A:297:LYS:C	2.60	0.43
2:B:430:ASP:C	2:B:432:SER:N	2.74	0.43
1:C:379:ASP:CG	1:C:380:HIS:H	2.26	0.43
2:D:167:LEU:HD13	2:D:171:PHE:HE2	1.81	0.43
2:D:482:ILE:CG2	2:D:483:LYS:N	2.82	0.43
2:F:139:PHE:HE2	2:F:161:THR:HG21	1.83	0.43
2:F:472:LEU:HB2	2:F:502:TYR:HB3	2.00	0.43
1:G:296:VAL:O	1:G:297:LYS:C	2.61	0.43
1:G:373:ILE:HG12	1:G:459:LEU:HD12	2.01	0.43
2:H:42:LYS:HE3	2:H:59:ASP:OD1	2.17	0.43
2:H:358:ILE:O	2:H:358:ILE:HG22	2.19	0.43
2:J:118:ARG:CZ	2:J:257:GLY:HA2	2.48	0.43
2:J:420:GLN:HG2	2:J:449:VAL:CG2	2.48	0.43
1:K:234:PHE:CZ	1:K:398:LEU:HD21	2.53	0.43
1:K:414:GLU:HG3	1:K:415:PRO:CD	2.47	0.43
2:L:71:ARG:CG	2:L:355:ARG:HH12	2.29	0.43
1:M:221:SER:C	2:N:408:GLY:HA2	2.44	0.43
2:N:47:LYS:HE3	2:N:47:LYS:CA	2.43	0.43
2:N:67:VAL:CG1	2:N:68:PRO:HD2	2.46	0.43
2:N:171:PHE:HD2	2:N:231:LEU:HD21	1.83	0.43
2:N:190:LYS:HB3	2:N:191:GLU:H	1.47	0.43
2:N:444:THR:HG21	2:N:446:GLU:HG3	2.00	0.43
2:N:482:ILE:HG22	2:N:483:LYS:O	2.17	0.43
2:N:527:GLY:O	2:N:532:GLY:HA3	2.18	0.43
1:O:188:GLN:O	1:O:189:GLU:C	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:414:GLU:HG3	1:O:415:PRO:HD3	1.99	0.43
2:P:131:PHE:CD2	2:P:136:TYR:HA	2.52	0.43
2:P:197:LEU:HA	2:P:200:ILE:CG1	2.48	0.43
1:A:467:ILE:C	1:A:469:TYR:H	2.26	0.43
1:C:63:LEU:HD13	1:C:143:VAL:CG1	2.49	0.43
1:C:175:VAL:O	1:C:175:VAL:HG23	2.18	0.43
2:D:503:ASN:O	2:D:577:PRO:HD2	2.18	0.43
2:F:17:ARG:CZ	2:F:19:TYR:CE1	3.01	0.43
2:F:98:ARG:HG2	2:F:98:ARG:HH11	1.83	0.43
2:F:223:ILE:CD1	2:F:254:GLU:HG3	2.49	0.43
2:F:280:ASN:O	2:F:283:THR:HG22	2.18	0.43
2:F:310:ARG:HA	2:F:346:GLN:HA	1.99	0.43
2:F:450:ALA:O	2:F:451:ARG:C	2.61	0.43
2:F:495:ARG:NH1	2:F:495:ARG:HG3	2.33	0.43
1:G:357:PHE:N	1:G:357:PHE:CD1	2.86	0.43
1:G:370:PHE:CB	1:G:462:GLU:OE2	2.67	0.43
2:H:57:ALA:O	2:H:60:VAL:HG23	2.18	0.43
2:H:114:THR:O	2:H:117:ILE:HD12	2.18	0.43
2:H:120:PHE:CD1	2:H:120:PHE:N	2.85	0.43
2:H:482:ILE:CG2	2:H:483:LYS:N	2.81	0.43
1:I:188:GLN:OE1	1:I:208:LYS:HE2	2.18	0.43
2:J:45:ILE:HG23	2:J:48:GLU:CG	2.48	0.43
2:J:190:LYS:HB3	2:J:191:GLU:H	1.46	0.43
2:J:308:MET:HG2	2:J:347:ILE:O	2.19	0.43
1:K:480:HIS:ND1	2:L:460:LYS:HE2	2.32	0.43
2:L:147:HIS:O	2:L:151:CYS:HB2	2.19	0.43
1:M:227:LEU:HD22	1:M:461:LEU:HD12	2.00	0.43
1:M:349:LYS:HE2	2:P:385:TYR:CE1	2.53	0.43
2:N:401:ARG:HG2	2:N:477:ILE:HD12	1.99	0.43
2:N:450:ALA:O	2:N:451:ARG:C	2.62	0.43
2:N:472:LEU:HB2	2:N:502:TYR:HB3	2.00	0.43
1:O:210:TYR:CD2	1:O:212:PHE:HE2	2.36	0.43
1:O:275:ASP:O	1:O:359:ASN:HB3	2.18	0.43
1:O:365:THR:HG23	1:O:475:ARG:CG	2.48	0.43
1:O:460:SER:O	1:O:464:PRO:CD	2.67	0.43
2:P:126:LEU:CG	2:P:129:ILE:HD11	2.38	0.43
2:P:304:TYR:CD1	2:P:353:PRO:HD3	2.53	0.43
2:P:431:ILE:HD12	2:P:431:ILE:N	2.14	0.43
1:A:398:LEU:HD12	1:A:398:LEU:HA	1.81	0.43
1:A:424:GLN:N	1:A:424:GLN:CD	2.76	0.43
1:A:469:TYR:O	1:A:470:GLY:O	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:484:LEU:HG	2:B:465:ASN:CG	2.43	0.43
2:B:512:HIS:ND1	1:C:216:GLY:CA	2.82	0.43
1:C:32:MET:HE2	1:C:36:ALA:CB	2.48	0.43
1:C:281:ASP:C	1:C:283:ALA:N	2.76	0.43
1:E:265:PRO:CA	1:E:300:HIS:HE1	2.26	0.43
1:E:327:HIS:HA	1:E:356:VAL:HG11	1.99	0.43
1:E:469:TYR:O	1:E:470:GLY:C	2.61	0.43
2:F:142:LEU:C	2:F:142:LEU:CD2	2.91	0.43
2:F:291:PHE:CD1	2:F:297:HIS:CD2	3.07	0.43
2:F:434:THR:O	2:F:435:LYS:HB2	2.18	0.43
1:G:225:HIS:CD2	2:H:413:LEU:HB2	2.53	0.43
2:H:131:PHE:CD2	2:H:136:TYR:HA	2.52	0.43
1:I:289:PRO:HG2	1:I:292:TYR:HB3	2.01	0.43
1:I:328:THR:OG1	1:I:372:GLN:NE2	2.49	0.43
1:I:374:GLU:OE1	3:I:509:PHE:CB	2.65	0.43
2:J:112:GLU:C	2:J:114:THR:N	2.76	0.43
2:J:272:THR:CG2	2:J:273:MET:N	2.82	0.43
1:K:197:ILE:HD13	1:K:197:ILE:N	2.32	0.43
2:L:122:VAL:HG22	2:L:123:ALA:N	2.34	0.43
1:M:288:LEU:HD23	1:M:288:LEU:HA	1.90	0.43
2:N:3:THR:CG2	2:N:64:LYS:HG3	2.48	0.43
1:O:233:GLN:OE1	1:O:495:LEU:HG	2.18	0.43
1:O:289:PRO:O	1:O:293:VAL:HG23	2.18	0.43
2:P:349:ILE:HD13	2:P:364:ILE:HG21	1.99	0.43
1:A:251:PHE:H	2:B:493:ASN:ND2	2.16	0.43
1:A:363:ASP:CG	1:A:364:ALA:N	2.76	0.43
2:B:117:ILE:C	2:B:118:ARG:HG2	2.43	0.43
2:B:126:LEU:CD2	2:B:126:LEU:N	2.82	0.43
2:B:142:LEU:HD23	2:B:146:LEU:HG	2.00	0.43
2:B:343:ASP:O	2:B:344:GLY:C	2.62	0.43
1:C:84:ILE:HB	1:C:89:LEU:CD2	2.48	0.43
1:C:181:PHE:HD2	1:C:181:PHE:C	2.25	0.43
1:C:387:LEU:HD11	1:C:435:SER:OG	2.18	0.43
2:D:112:GLU:C	2:D:114:THR:N	2.76	0.43
2:D:357:ASP:OD1	2:D:358:ILE:HD12	2.19	0.43
2:D:533:TYR:HA	2:D:552:PHE:O	2.19	0.43
1:E:261:ALA:HB1	1:E:292:TYR:OH	2.18	0.43
2:F:198:MET:HE1	2:F:236:ILE:HG12	2.01	0.43
2:H:118:ARG:NH2	2:H:256:THR:O	2.52	0.43
1:I:336:LEU:CB	1:I:446:MET:HE1	2.41	0.43
2:J:27:LEU:CD1	2:J:84:LEU:HD13	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:298:ARG:CG	1:K:298:ARG:HH11	2.31	0.43
1:K:373:ILE:CG2	1:K:461:LEU:HD23	2.49	0.43
1:K:397:LYS:O	1:K:495:LEU:CD1	2.66	0.43
2:L:126:LEU:N	2:L:126:LEU:CD2	2.82	0.43
2:L:465:ASN:HB3	2:L:468:MET:HG2	2.00	0.43
2:L:482:ILE:HG22	2:L:483:LYS:O	2.19	0.43
2:L:584:ASN:O	2:L:587:PRO:HD2	2.18	0.43
1:M:301:SER:O	1:M:311:LYS:HA	2.19	0.43
1:M:458:GLY:N	3:M:509:PHE:HB2	2.34	0.43
1:M:472:ASN:HB2	1:M:473:ASN:H	1.68	0.43
1:M:492:LEU:O	1:M:494:ARG:HG2	2.18	0.43
2:N:132:THR:HG23	2:N:133:LYS:CD	2.44	0.43
2:N:213:ILE:O	2:N:213:ILE:CG2	2.66	0.43
2:N:275:SER:OG	2:N:282:PHE:HA	2.19	0.43
2:N:430:ASP:C	2:N:432:SER:H	2.26	0.43
1:O:281:ASP:HB3	1:O:282:PRO:CD	2.36	0.43
2:P:200:ILE:C	2:P:200:ILE:HD12	2.44	0.43
2:P:430:ASP:C	2:P:432:SER:H	2.25	0.43
1:A:250:ASN:CG	1:A:250:ASN:O	2.60	0.43
3:A:509:PHE:CD1	3:A:509:PHE:C	2.97	0.43
2:B:12:PHE:HB3	2:B:17:ARG:O	2.19	0.43
2:B:15:LEU:HD13	2:B:19:TYR:HE2	1.84	0.43
2:B:129:ILE:HD12	2:B:251:ILE:CD1	2.49	0.43
1:C:472:ASN:N	1:C:472:ASN:ND2	2.54	0.43
1:C:479:GLY:HA2	2:D:415:PHE:CE1	2.54	0.43
2:D:211:LEU:CG	2:D:212:HIS:N	2.77	0.43
1:E:226:PRO:HG2	1:E:486:MET:HE1	2.01	0.43
1:E:459:LEU:HD12	1:E:459:LEU:C	2.43	0.43
1:E:463:ARG:N	1:E:464:PRO:HD2	2.33	0.43
2:F:274:PHE:C	2:F:276:GLU:N	2.77	0.43
2:F:387:ILE:HG23	1:G:241:MET:HG2	2.01	0.43
2:F:479:ASP:HA	2:F:494:TYR:O	2.18	0.43
1:G:188:GLN:HG2	1:G:189:GLU:H	1.83	0.43
2:H:112:GLU:C	2:H:114:THR:N	2.75	0.43
2:H:308:MET:HE3	2:H:309:VAL:C	2.44	0.43
1:I:356:VAL:CG2	1:I:370:PHE:CE1	3.02	0.43
2:J:350:GLU:O	2:J:352:PRO:HD3	2.19	0.43
1:K:247:PRO:HB3	2:L:391:PHE:CE1	2.54	0.43
2:L:98:ARG:HD2	2:L:98:ARG:O	2.19	0.43
1:M:373:ILE:HG22	1:M:461:LEU:HD23	2.00	0.43
1:M:414:GLU:HG3	1:M:415:PRO:HD3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:471:ILE:CG1	1:M:472:ASN:N	2.82	0.43
2:N:68:PRO:O	2:N:70:ASN:N	2.52	0.43
2:N:340:VAL:HG11	2:N:344:GLY:HA2	2.01	0.43
1:O:373:ILE:HG22	1:O:461:LEU:HD23	2.01	0.43
1:O:479:GLY:O	1:O:482:VAL:HG12	2.19	0.43
1:A:258:ASN:O	1:A:259:PHE:HD2	2.02	0.43
1:A:298:ARG:HG3	1:A:298:ARG:HH11	1.82	0.43
2:B:122:VAL:CG2	2:B:299:PHE:CG	3.02	0.43
1:C:498:GLU:CG	1:C:499:PRO:HD3	2.49	0.43
2:D:551:ILE:CD1	2:D:561:LEU:HB2	2.36	0.43
1:E:206:PRO:HB2	1:E:208:LYS:HE3	2.00	0.43
1:E:228:LEU:HD12	2:F:411:GLU:OE2	2.18	0.43
1:E:305:TYR:HB3	1:E:444:LEU:HD12	2.00	0.43
1:E:325:ARG:HH21	1:E:325:ARG:CG	2.29	0.43
1:E:414:GLU:HG3	1:E:415:PRO:CD	2.49	0.43
2:F:267:LEU:HD23	2:F:267:LEU:C	2.44	0.43
2:F:274:PHE:C	2:F:276:GLU:H	2.26	0.43
2:F:569:ILE:O	2:F:574:LEU:HB2	2.19	0.43
2:F:589:LEU:HD23	2:F:589:LEU:HA	1.84	0.43
1:G:235:ARG:NH1	1:G:245:GLU:OE1	2.52	0.43
2:H:343:ASP:O	2:H:344:GLY:C	2.60	0.43
2:H:471:PRO:HA	2:H:502:TYR:O	2.19	0.43
1:I:226:PRO:HG3	1:I:490:SER:CB	2.49	0.43
2:J:181:ILE:CD1	2:J:194:ALA:HB2	2.49	0.43
2:J:321:ARG:CD	2:N:321:ARG:HD3	2.48	0.43
2:J:446:GLU:O	2:J:447:PHE:CD2	2.72	0.43
1:K:189:GLU:HG3	1:K:190:THR:N	2.34	0.43
2:L:132:THR:HG22	2:L:135:ARG:H	1.84	0.43
2:L:183:PHE:CD2	2:L:230:VAL:HG11	2.53	0.43
2:L:450:ALA:HB3	2:L:481:VAL:HG11	2.01	0.43
1:M:218:LEU:HD22	2:P:516:ASP:CB	2.49	0.43
1:M:226:PRO:HG2	1:M:486:MET:HE1	2.01	0.43
1:M:298:ARG:HH11	1:M:298:ARG:CG	2.32	0.43
1:M:463:ARG:N	1:M:464:PRO:HD2	2.34	0.43
1:M:477:LEU:CD1	1:M:477:LEU:O	2.67	0.43
2:N:358:ILE:O	2:N:358:ILE:HG22	2.19	0.43
2:N:527:GLY:HA2	2:N:534:VAL:HG12	1.99	0.43
1:O:205:ARG:CG	1:O:206:PRO:HD2	2.42	0.43
1:O:414:GLU:HG3	1:O:415:PRO:CD	2.48	0.43
1:O:466:MET:HG2	1:O:474:ILE:HG23	2.01	0.43
1:O:474:ILE:O	1:O:477:LEU:HD12	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:38:ILE:HG22	2:P:61:VAL:CG2	2.46	0.43
2:P:147:HIS:C	2:P:149:ASN:H	2.27	0.43
2:P:225:ASP:OD1	2:P:229:VAL:HB	2.18	0.43
2:P:444:THR:HG21	2:P:446:GLU:HG3	2.01	0.43
2:P:475:PHE:HA	2:P:498:CYS:O	2.19	0.43
1:A:449:PRO:HB2	1:A:451:ASN:OD1	2.19	0.43
2:B:6:VAL:HG21	2:B:11:LEU:HD12	2.01	0.43
2:B:450:ALA:HB3	2:B:481:VAL:HG11	2.01	0.43
2:B:452:THR:O	2:B:452:THR:HG22	2.19	0.43
2:B:512:HIS:HE1	1:C:215:HIS:HA	1.83	0.43
2:B:576:MET:N	2:B:576:MET:SD	2.92	0.43
1:C:32:MET:HE2	1:C:36:ALA:HB1	2.01	0.43
1:C:186:SER:C	1:C:188:GLN:N	2.76	0.43
2:D:129:ILE:HD12	2:D:251:ILE:CD1	2.48	0.43
2:D:430:ASP:C	2:D:432:SER:N	2.77	0.43
2:D:479:ASP:HA	2:D:494:TYR:O	2.18	0.43
1:E:359:ASN:OD1	2:F:443:LYS:HE2	2.19	0.43
2:F:431:ILE:HD12	2:F:431:ILE:N	2.10	0.43
1:G:225:HIS:NE2	1:G:477:LEU:O	2.50	0.43
1:G:298:ARG:HG3	1:G:298:ARG:HH11	1.84	0.43
1:G:373:ILE:HG22	1:G:461:LEU:HD23	2.01	0.43
2:H:132:THR:O	2:H:133:LYS:C	2.61	0.43
2:H:163:ASP:CG	2:H:248:THR:HG23	2.44	0.43
2:H:391:PHE:O	2:H:392:PRO:C	2.62	0.43
2:J:115:ALA:O	2:J:116:LYS:CB	2.67	0.43
2:J:340:VAL:HG11	2:J:344:GLY:HA2	2.01	0.43
2:J:515:LEU:HD11	2:J:551:ILE:HD12	1.99	0.43
2:J:544:PHE:HZ	1:K:207:PHE:CD2	2.36	0.43
1:K:184:SER:C	1:K:186:SER:H	2.27	0.43
2:L:157:VAL:HG22	2:L:263:ALA:HB2	2.01	0.43
2:L:434:THR:O	2:L:435:LYS:HB2	2.19	0.43
1:M:268:HIS:O	1:M:269:PRO:O	2.36	0.43
1:M:367:LEU:HD23	1:M:474:ILE:CG2	2.48	0.43
2:N:185:PRO:O	2:N:186:LEU:C	2.62	0.43
2:N:219:LEU:C	2:N:220:TYR:HD1	2.26	0.43
2:P:114:THR:O	2:P:117:ILE:HD12	2.19	0.43
2:P:132:THR:CG2	2:P:133:LYS:N	2.81	0.43
2:P:223:ILE:HB	2:P:231:LEU:HB2	2.01	0.43
2:P:391:PHE:O	2:P:392:PRO:C	2.62	0.43
2:P:414:THR:HB	2:P:451:ARG:HH11	1.84	0.43
2:B:529:ASP:CG	2:B:530:LYS:H	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:550:GLU:HB3	2:B:552:PHE:HE1	1.84	0.42
1:C:137:GLN:C	1:C:139:ARG:H	2.27	0.42
2:D:85:GLN:HB3	2:D:91:ILE:CG2	2.49	0.42
2:D:223:ILE:HD13	2:D:254:GLU:HG3	2.01	0.42
1:E:425:GLY:O	1:E:426:LEU:CB	2.67	0.42
1:G:233:GLN:OE1	1:G:495:LEU:CD1	2.66	0.42
1:G:298:ARG:HH11	1:G:298:ARG:CG	2.31	0.42
2:H:17:ARG:CZ	2:H:19:TYR:HE1	2.31	0.42
2:H:528:GLU:O	2:H:530:LYS:N	2.52	0.42
1:I:387:LEU:HD11	1:I:435:SER:OG	2.19	0.42
2:J:120:PHE:CD1	2:J:120:PHE:N	2.87	0.42
2:J:391:PHE:CD2	2:J:391:PHE:C	2.93	0.42
2:J:472:LEU:HB2	2:J:502:TYR:HB3	2.01	0.42
1:K:316:LEU:HD23	1:K:316:LEU:C	2.44	0.42
1:K:420:PHE:HA	1:K:430:VAL:O	2.19	0.42
1:K:461:LEU:HD22	1:K:461:LEU:HA	1.82	0.42
2:L:3:THR:CG2	2:L:64:LYS:HG3	2.49	0.42
2:L:20:THR:HB	2:L:23:GLU:HG3	2.00	0.42
2:L:91:ILE:HG12	2:L:92:LYS:O	2.18	0.42
2:L:132:THR:O	2:L:133:LYS:C	2.60	0.42
2:L:449:VAL:CG1	2:L:450:ALA:N	2.82	0.42
2:L:503:ASN:O	2:L:577:PRO:HD2	2.19	0.42
1:M:271:ARG:HG2	1:M:271:ARG:O	2.19	0.42
2:N:17:ARG:CZ	2:N:19:TYR:CE1	3.01	0.42
2:N:118:ARG:NE	2:N:257:GLY:HA2	2.34	0.42
2:P:71:ARG:HD2	2:P:71:ARG:N	2.34	0.42
2:P:113:GLU:H	2:P:113:GLU:CD	2.27	0.42
2:P:118:ARG:NH2	2:P:256:THR:O	2.52	0.42
1:A:217:VAL:O	1:A:218:LEU:C	2.62	0.42
1:A:243:PHE:CD2	1:A:349:LYS:HB3	2.54	0.42
1:A:462:GLU:H	1:A:462:GLU:HG2	1.54	0.42
2:B:114:THR:O	2:B:117:ILE:HD12	2.19	0.42
2:B:272:THR:HG21	2:B:354:THR:HG22	2.01	0.42
2:B:387:ILE:HG13	1:C:393:GLU:HG2	2.01	0.42
2:B:431:ILE:H	2:B:431:ILE:CD1	2.06	0.42
2:B:451:ARG:HH22	2:B:478:SER:CB	2.32	0.42
1:C:24:ALA:O	1:C:27:ALA:HB3	2.18	0.42
1:C:437:VAL:HG13	1:C:455:ILE:HG22	2.00	0.42
2:D:132:THR:O	2:D:133:LYS:C	2.60	0.42
2:D:213:ILE:O	2:D:213:ILE:CG2	2.68	0.42
2:D:340:VAL:HG11	2:D:344:GLY:HA2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:468:MET:HE3	2:D:469:PRO:HD2	2.01	0.42
2:D:535:ILE:N	2:D:535:ILE:CD1	2.80	0.42
1:E:325:ARG:HH21	1:E:356:VAL:HG13	1.82	0.42
2:F:85:GLN:HB3	2:F:91:ILE:HG21	2.00	0.42
2:F:185:PRO:O	2:F:186:LEU:C	2.62	0.42
2:F:360:HIS:CG	2:F:361:ALA:N	2.88	0.42
2:F:416:ALA:HA	2:F:451:ARG:HG3	1.99	0.42
2:F:537:ALA:CB	1:G:212:PHE:CD2	3.02	0.42
1:G:410:ASN:HB2	1:G:413:THR:OG1	2.18	0.42
2:H:3:THR:CG2	2:H:64:LYS:HG3	2.49	0.42
2:H:183:PHE:CD2	2:H:230:VAL:HG11	2.54	0.42
2:H:197:LEU:HA	2:H:200:ILE:HG12	2.01	0.42
2:H:446:GLU:H	2:H:446:GLU:HG2	1.62	0.42
2:H:506:PRO:HD3	2:H:577:PRO:HG3	2.01	0.42
1:I:200:GLY:C	1:I:202:TRP:N	2.77	0.42
1:I:267:GLN:HB3	2:J:152:ARG:NH1	2.25	0.42
1:I:277:PHE:CD1	1:I:324:LEU:HD12	2.50	0.42
1:I:294:GLN:NE2	1:I:297:LYS:HD3	2.35	0.42
2:J:424:ALA:HB1	2:J:429:VAL:O	2.19	0.42
1:K:263:PHE:CZ	1:K:310:TYR:CE1	3.07	0.42
1:K:458:GLY:CA	3:K:509:PHE:HB2	2.49	0.42
1:M:206:PRO:C	1:M:208:LYS:H	2.25	0.42
1:M:356:VAL:O	1:M:369:GLU:HB2	2.19	0.42
1:M:406:LYS:CD	2:N:29:PHE:CE1	2.90	0.42
2:N:342:GLY:C	2:N:344:GLY:H	2.28	0.42
2:N:355:ARG:HD3	2:N:357:ASP:OD1	2.19	0.42
2:N:452:THR:O	2:N:452:THR:HG22	2.19	0.42
1:O:444:LEU:N	1:O:445:PRO:HD2	2.34	0.42
2:P:450:ALA:O	2:P:451:ARG:C	2.62	0.42
1:A:414:GLU:HG2	1:A:437:VAL:O	2.20	0.42
2:B:41:GLU:HB2	2:B:58:SER:HA	2.01	0.42
1:C:1:MET:HA	1:C:5:GLN:HG3	2.01	0.42
2:D:1:MET:HG3	2:D:1:MET:O	2.20	0.42
2:D:122:VAL:CG2	2:D:299:PHE:CG	3.02	0.42
2:D:223:ILE:CD1	2:D:254:GLU:HG3	2.49	0.42
2:D:452:THR:HG22	2:D:452:THR:O	2.20	0.42
2:D:543:PHE:CD1	2:D:543:PHE:N	2.88	0.42
1:E:246:MET:HG2	1:E:351:PHE:O	2.19	0.42
1:E:383:THR:HG22	2:F:316:LYS:O	2.19	0.42
2:F:157:VAL:HG22	2:F:263:ALA:HB2	2.01	0.42
2:F:211:LEU:CG	2:F:212:HIS:N	2.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:200:ILE:HD12	2:H:200:ILE:O	2.19	0.42
1:I:267:GLN:HB2	1:I:267:GLN:HE21	1.60	0.42
1:I:281:ASP:OD2	2:J:483:LYS:CD	2.68	0.42
2:J:142:LEU:C	2:J:142:LEU:CD2	2.92	0.42
1:K:279:LEU:HD21	1:K:322:ASN:C	2.44	0.42
2:L:147:HIS:C	2:L:149:ASN:H	2.27	0.42
2:L:340:VAL:HG11	2:L:344:GLY:HA2	2.00	0.42
2:L:521:LEU:HD13	2:L:521:LEU:HA	1.90	0.42
1:M:359:ASN:HD21	2:N:443:LYS:HG3	1.84	0.42
1:M:371:HIS:HB2	1:M:461:LEU:CB	2.50	0.42
2:N:411:GLU:HA	2:N:475:PHE:O	2.18	0.42
1:O:323:LEU:HD12	1:O:323:LEU:C	2.44	0.42
1:O:364:ALA:C	1:O:366:HIS:N	2.78	0.42
2:P:1:MET:HG3	2:P:1:MET:O	2.20	0.42
2:P:117:ILE:C	2:P:118:ARG:HG2	2.44	0.42
2:P:343:ASP:O	2:P:344:GLY:C	2.61	0.42
1:A:422:TYR:HE2	1:A:427:LYS:O	2.02	0.42
1:A:499:PRO:HG2	2:D:589:LEU:OXT	2.20	0.42
2:B:401:ARG:HG2	2:B:477:ILE:HD12	2.01	0.42
2:B:509:GLU:C	1:C:217:VAL:HG23	2.45	0.42
2:B:535:ILE:HG22	2:B:549:ALA:HB1	2.02	0.42
2:D:391:PHE:CD2	2:D:392:PRO:HD2	2.49	0.42
1:E:266:GLN:C	1:E:267:GLN:CG	2.93	0.42
2:F:146:LEU:HD11	2:F:159:ILE:HD13	2.00	0.42
2:F:147:HIS:ND1	2:F:154:ARG:HG2	2.35	0.42
1:G:382:LEU:HA	1:G:386:HIS:ND1	2.35	0.42
1:G:384:LEU:HD11	1:G:417:MET:HE3	2.02	0.42
2:H:1:MET:HG3	2:H:1:MET:O	2.19	0.42
2:J:429:VAL:HG12	2:J:430:ASP:N	2.34	0.42
2:J:439:ILE:N	2:J:439:ILE:HD12	2.33	0.42
1:K:316:LEU:O	1:K:320:ARG:HG2	2.19	0.42
1:K:476:GLU:O	1:K:476:GLU:HG3	2.17	0.42
2:L:331:LEU:HD21	2:L:368:ALA:HB2	2.02	0.42
1:M:260:ASP:O	1:M:296:VAL:HG11	2.19	0.42
1:M:265:PRO:CA	1:M:300:HIS:HE1	2.26	0.42
1:M:388:MET:HE3	1:M:405:PHE:CE1	2.53	0.42
2:N:82:ARG:HD2	2:N:94:PRO:HG3	2.01	0.42
2:P:6:VAL:HB	2:P:77:LEU:HD12	2.02	0.42
1:A:426:LEU:C	1:A:428:LYS:N	2.77	0.42
2:B:420:GLN:HG2	2:B:449:VAL:HG23	2.01	0.42
1:C:492:LEU:HA	1:C:494:ARG:HE	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:519:MET:HE1	2:D:588:PHE:CE1	2.55	0.42
1:E:271:ARG:O	1:E:272:ASP:OD1	2.37	0.42
2:F:129:ILE:HD12	2:F:251:ILE:HD12	2.00	0.42
1:G:205:ARG:O	1:G:206:PRO:O	2.37	0.42
2:H:261:THR:HA	2:H:264:LYS:HE2	2.02	0.42
2:H:271:VAL:HG21	2:H:284:VAL:CG1	2.49	0.42
2:H:524:VAL:HG13	2:H:532:GLY:HA2	2.01	0.42
1:I:207:PHE:O	1:I:209:PRO:HD3	2.20	0.42
1:I:463:ARG:N	1:I:464:PRO:HD2	2.34	0.42
1:I:476:GLU:O	1:I:482:VAL:HA	2.19	0.42
2:J:249:ARG:HG2	2:J:249:ARG:HH11	1.85	0.42
2:J:455:LEU:HD13	2:J:455:LEU:C	2.44	0.42
2:J:468:MET:HA	2:J:469:PRO:HD3	1.88	0.42
1:K:308:GLN:O	1:K:309:GLY:O	2.37	0.42
2:L:121:ALA:CB	2:L:256:THR:HA	2.49	0.42
2:L:360:HIS:CG	2:L:361:ALA:N	2.87	0.42
2:N:486:ASN:HD22	2:N:486:ASN:N	2.17	0.42
1:O:406:LYS:HB3	1:O:420:PHE:HE2	1.85	0.42
2:P:280:ASN:O	2:P:283:THR:HG22	2.19	0.42
1:A:277:PHE:CD2	1:A:324:LEU:HD12	2.54	0.42
1:A:328:THR:H	1:A:372:GLN:NE2	2.18	0.42
2:B:49:GLN:HE21	2:B:52:VAL:HG21	1.84	0.42
2:B:264:LYS:HD2	2:B:301:GLU:CD	2.44	0.42
2:B:411:GLU:HA	2:B:475:PHE:O	2.19	0.42
1:C:34:HIS:HA	1:C:37:VAL:HG12	2.02	0.42
1:E:211:ASN:ND2	1:E:214:ALA:HB2	2.34	0.42
2:F:120:PHE:HE1	2:F:258:THR:C	2.27	0.42
2:F:129:ILE:HD12	2:F:251:ILE:CD1	2.50	0.42
1:G:258:ASN:HA	1:G:330:SER:HB3	2.00	0.42
1:G:316:LEU:HD21	1:G:320:ARG:HD3	2.01	0.42
1:G:480:HIS:HA	2:H:461:THR:OG1	2.18	0.42
1:I:396:THR:C	1:I:398:LEU:N	2.77	0.42
1:I:426:LEU:O	1:I:427:LYS:C	2.63	0.42
2:J:211:LEU:CG	2:J:212:HIS:N	2.81	0.42
1:K:213:LEU:C	1:K:213:LEU:HD22	2.45	0.42
2:L:1:MET:HG3	2:L:1:MET:O	2.20	0.42
2:L:120:PHE:HE1	2:L:258:THR:C	2.27	0.42
2:L:267:LEU:HD23	2:L:267:LEU:C	2.45	0.42
2:L:280:ASN:O	2:L:283:THR:HG22	2.20	0.42
2:L:322:GLU:HB2	2:L:327:LEU:HD13	2.00	0.42
1:M:316:LEU:HD23	1:M:320:ARG:HG2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:419:VAL:O	1:M:432:VAL:HG22	2.20	0.42
1:M:444:LEU:N	1:M:445:PRO:HD2	2.33	0.42
2:N:150:ILE:HD12	2:N:150:ILE:O	2.20	0.42
1:O:288:LEU:N	1:O:288:LEU:HD13	2.35	0.42
2:P:122:VAL:HG22	2:P:123:ALA:N	2.33	0.42
2:P:416:ALA:HA	2:P:451:ARG:HG3	2.01	0.42
1:A:424:GLN:N	1:A:424:GLN:OE1	2.52	0.42
2:B:17:ARG:HE	2:B:17:ARG:HB3	1.65	0.42
2:B:121:ALA:CB	2:B:256:THR:HA	2.49	0.42
2:B:139:PHE:CZ	2:B:161:THR:HG21	2.55	0.42
2:B:267:LEU:CD2	2:B:267:LEU:C	2.93	0.42
2:B:482:ILE:CG2	2:B:483:LYS:N	2.79	0.42
1:C:41:VAL:O	1:C:45:GLN:HG3	2.20	0.42
1:C:84:ILE:HA	1:C:85:PRO:HD2	1.95	0.42
1:C:470:GLY:O	1:C:471:ILE:CG1	2.67	0.42
2:D:142:LEU:C	2:D:142:LEU:CD2	2.92	0.42
1:E:370:PHE:HD2	1:E:370:PHE:H	1.67	0.42
2:F:322:GLU:HB2	2:F:327:LEU:CD1	2.50	0.42
2:F:475:PHE:HA	2:F:498:CYS:O	2.19	0.42
1:G:194:PRO:O	1:G:195:GLU:HB2	2.20	0.42
2:H:27:LEU:HD11	2:H:84:LEU:HD22	2.02	0.42
2:J:515:LEU:HD11	2:J:551:ILE:CG2	2.49	0.42
1:K:208:LYS:HA	1:K:209:PRO:HD3	1.92	0.42
1:K:262:LEU:CD2	1:K:329:THR:HG22	2.49	0.42
1:K:403:LEU:CD2	1:K:419:VAL:HG12	2.45	0.42
1:K:444:LEU:N	1:K:445:PRO:HD2	2.35	0.42
2:L:132:THR:HB	2:L:135:ARG:HG3	2.01	0.42
2:L:261:THR:HA	2:L:264:LYS:HE2	2.01	0.42
2:L:453:THR:HG23	2:L:456:PRO:CD	2.50	0.42
2:N:281:GLN:HG2	2:N:282:PHE:CD1	2.55	0.42
2:N:471:PRO:HA	2:N:502:TYR:O	2.20	0.42
1:O:222:GLY:O	1:O:223:HIS:CG	2.73	0.42
1:O:464:PRO:HG2	1:O:465:THR:N	2.35	0.42
2:P:12:PHE:HB3	2:P:17:ARG:O	2.20	0.42
2:P:20:THR:HB	2:P:23:GLU:HG3	2.02	0.42
2:P:268:ASP:O	2:P:272:THR:CG2	2.68	0.42
2:P:434:THR:O	2:P:435:LYS:HB2	2.20	0.42
2:P:449:VAL:CG1	2:P:450:ALA:N	2.83	0.42
2:P:536:LYS:O	2:P:537:ALA:C	2.63	0.42
1:A:258:ASN:ND2	1:A:327:HIS:CE1	2.88	0.42
1:A:474:ILE:C	1:A:476:GLU:N	2.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:115:ALA:O	2:B:116:LYS:CB	2.68	0.42
1:C:163:LYS:O	1:C:163:LYS:HG2	2.19	0.42
1:C:246:MET:HG3	1:C:352:SER:HB3	2.01	0.42
1:C:396:THR:C	1:C:398:LEU:N	2.78	0.42
2:D:73:ASP:CA	2:D:273:MET:HE1	2.43	0.42
1:E:246:MET:HG3	1:E:352:SER:HB3	2.01	0.42
1:E:360:GLU:CG	1:E:361:THR:H	2.28	0.42
2:F:147:HIS:O	2:F:151:CYS:HB2	2.20	0.42
2:F:212:HIS:C	2:F:214:ILE:H	2.28	0.42
1:G:189:GLU:HB3	1:G:206:PRO:C	2.45	0.42
2:H:15:LEU:CD1	2:H:19:TYR:HE2	2.33	0.42
2:H:41:GLU:HB3	2:H:58:SER:O	2.20	0.42
2:H:434:THR:O	2:H:435:LYS:HB2	2.19	0.42
2:H:511:ILE:HG21	2:H:580:SER:O	2.20	0.42
1:I:212:PHE:CE1	2:L:537:ALA:HA	2.54	0.42
2:J:183:PHE:O	2:J:191:GLU:HA	2.19	0.42
2:J:267:LEU:HD23	2:J:267:LEU:C	2.45	0.42
2:J:349:ILE:HD13	2:J:364:ILE:HG21	2.02	0.42
1:K:218:LEU:HA	1:K:219:PRO:HD2	1.86	0.42
1:K:343:LYS:HB2	1:K:344:PRO:HD2	1.95	0.42
1:K:471:ILE:HD12	1:K:471:ILE:N	2.29	0.42
2:L:322:GLU:HB2	2:L:327:LEU:CD1	2.50	0.42
1:M:479:GLY:HA3	2:N:415:PHE:HE1	1.77	0.42
2:N:495:ARG:HG3	2:N:495:ARG:NH1	2.35	0.42
2:N:519:MET:HG3	2:N:533:TYR:CZ	2.54	0.42
1:O:225:HIS:HA	1:O:226:PRO:HD3	1.85	0.42
1:O:281:ASP:CB	2:P:438:HIS:H	2.33	0.42
1:O:363:ASP:HB3	1:O:364:ALA:H	1.64	0.42
1:O:379:ASP:CG	1:O:380:HIS:H	2.28	0.42
2:P:322:GLU:HB2	2:P:327:LEU:HD13	2.01	0.42
2:B:85:GLN:HB3	2:B:91:ILE:CG2	2.48	0.42
2:B:120:PHE:HB3	2:B:291:PHE:HE2	1.85	0.42
2:B:146:LEU:HD11	2:B:159:ILE:HD13	2.01	0.42
2:B:350:GLU:O	2:B:352:PRO:HD3	2.19	0.42
2:B:419:SER:O	2:B:422:ASP:HB2	2.20	0.42
1:C:233:GLN:NE2	1:C:497:ALA:HB3	2.35	0.42
1:C:474:ILE:CG1	1:C:477:LEU:HD11	2.50	0.42
2:D:126:LEU:HB2	2:D:278:CYS:SG	2.59	0.42
2:D:133:LYS:H	2:D:133:LYS:CD	2.13	0.42
2:D:217:LYS:HB3	2:D:218:PRO:CD	2.41	0.42
2:D:233:MET:HA	2:D:234:PRO:HD2	1.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:267:LEU:HD23	2:D:267:LEU:C	2.45	0.42
2:D:343:ASP:O	2:D:344:GLY:C	2.63	0.42
2:D:482:ILE:HG22	2:D:483:LYS:N	2.35	0.42
1:E:192:LEU:HG	1:E:196:MET:HE2	2.02	0.42
1:E:246:MET:HE1	1:E:332:SER:OG	2.19	0.42
1:E:283:ALA:C	1:E:286:LEU:HD21	2.45	0.42
1:E:298:ARG:HG3	1:E:298:ARG:HH11	1.85	0.42
1:E:365:THR:O	1:E:366:HIS:HB2	2.19	0.42
2:F:70:ASN:HB3	2:F:71:ARG:HD2	2.02	0.42
2:F:115:ALA:O	2:F:116:LYS:CB	2.68	0.42
2:F:132:THR:HB	2:F:135:ARG:CG	2.50	0.42
2:F:449:VAL:CG1	2:F:450:ALA:N	2.83	0.42
2:F:554:ARG:NH1	2:F:554:ARG:CG	2.83	0.42
1:G:305:TYR:HB3	1:G:444:LEU:CD1	2.50	0.42
1:G:349:LYS:HG2	1:G:377:VAL:HG22	2.01	0.42
1:G:398:LEU:HD12	1:G:495:LEU:CD2	2.49	0.42
2:H:71:ARG:CG	2:H:355:ARG:HH12	2.30	0.42
2:H:122:VAL:HG22	2:H:267:LEU:HD12	2.02	0.42
2:H:424:ALA:HB1	2:H:429:VAL:O	2.20	0.42
2:H:495:ARG:HH11	2:H:495:ARG:HG3	1.85	0.42
2:J:70:ASN:HB3	2:J:71:ARG:HD2	2.02	0.42
2:J:82:ARG:NH1	2:J:276:GLU:OE1	2.53	0.42
2:J:430:ASP:C	2:J:432:SER:N	2.78	0.42
2:L:274:PHE:C	2:L:276:GLU:N	2.77	0.42
2:L:451:ARG:NH2	2:L:478:SER:HB3	2.35	0.42
1:M:279:LEU:HB2	1:M:322:ASN:CB	2.50	0.42
2:N:167:LEU:CD2	2:N:231:LEU:HD13	2.49	0.42
2:P:27:LEU:O	2:P:27:LEU:HD13	2.20	0.42
2:P:68:PRO:O	2:P:70:ASN:N	2.53	0.42
2:P:143:GLN:HG3	2:P:159:ILE:HD12	2.01	0.42
2:P:147:HIS:O	2:P:151:CYS:HB2	2.20	0.42
2:P:455:LEU:C	2:P:455:LEU:HD13	2.45	0.42
1:A:486:MET:HE2	1:A:486:MET:C	2.45	0.42
2:B:213:ILE:O	2:B:213:ILE:CG2	2.68	0.42
2:B:229:VAL:HG12	2:B:230:VAL:N	2.34	0.42
2:B:526:PRO:HA	2:B:533:TYR:CE2	2.55	0.42
1:C:14:LEU:HD21	1:C:175:VAL:O	2.20	0.42
1:C:355:ARG:HA	1:C:371:HIS:HA	2.02	0.42
1:C:361:THR:OG1	2:D:443:LYS:HE3	2.19	0.42
1:C:476:GLU:HG3	1:C:476:GLU:O	2.18	0.42
2:D:40:SER:CB	2:D:60:VAL:H	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:142:LEU:HD23	2:D:146:LEU:HG	2.02	0.42
2:D:589:LEU:HD23	2:D:589:LEU:HA	1.84	0.42
1:E:466:MET:HB2	1:E:467:ILE:CD1	2.46	0.42
2:F:9:ASP:OD2	2:F:9:ASP:N	2.52	0.42
2:F:153:LYS:C	2:F:155:ALA:H	2.28	0.42
2:F:271:VAL:HG21	2:F:284:VAL:CG1	2.50	0.42
2:F:350:GLU:O	2:F:352:PRO:HD3	2.20	0.42
2:F:451:ARG:NH2	2:F:478:SER:HB3	2.34	0.42
1:G:225:HIS:HA	1:G:226:PRO:HD3	1.85	0.42
2:H:126:LEU:N	2:H:126:LEU:CD2	2.83	0.42
2:H:132:THR:CG2	2:H:133:LYS:N	2.83	0.42
2:H:139:PHE:CZ	2:H:161:THR:HG21	2.55	0.42
2:H:223:ILE:CD1	2:H:254:GLU:HG3	2.49	0.42
2:H:561:LEU:HD23	2:H:562:GLY:N	2.35	0.42
1:I:235:ARG:NH1	1:I:245:GLU:OE1	2.53	0.42
2:J:188:LYS:HE2	2:J:201:TYR:CE2	2.55	0.42
2:J:465:ASN:HB3	2:J:468:MET:HG2	2.02	0.42
2:L:126:LEU:CD2	2:L:251:ILE:HB	2.50	0.42
2:L:419:SER:OG	2:L:422:ASP:OD2	2.35	0.42
2:L:471:PRO:HA	2:L:502:TYR:O	2.20	0.42
1:M:285:ALA:O	2:N:488:ASP:O	2.38	0.42
1:M:323:LEU:HD12	1:M:324:LEU:C	2.44	0.42
2:N:67:VAL:HG11	2:N:74:LEU:HB2	2.02	0.42
2:N:280:ASN:O	2:N:283:THR:HG22	2.20	0.42
1:O:398:LEU:HD12	1:O:398:LEU:HA	1.88	0.42
2:P:274:PHE:C	2:P:276:GLU:N	2.76	0.42
2:P:335:TYR:O	2:P:352:PRO:HG2	2.20	0.42
1:A:305:TYR:HB3	1:A:444:LEU:HD12	2.01	0.41
2:B:27:LEU:HD11	2:B:84:LEU:HD22	2.02	0.41
2:B:139:PHE:HA	2:B:274:PHE:CZ	2.55	0.41
2:B:446:GLU:O	2:B:447:PHE:CD2	2.72	0.41
2:B:498:CYS:HB2	2:B:582:GLU:HG3	2.02	0.41
1:C:138:ARG:HG2	1:C:138:ARG:O	2.20	0.41
1:C:235:ARG:NH1	1:C:245:GLU:OE1	2.52	0.41
1:C:237:ILE:HD12	1:C:397:LYS:CB	2.50	0.41
1:C:296:VAL:O	1:C:297:LYS:C	2.62	0.41
1:C:316:LEU:O	1:C:320:ARG:HG2	2.19	0.41
2:D:274:PHE:C	2:D:276:GLU:N	2.75	0.41
1:E:323:LEU:C	1:E:323:LEU:HD12	2.43	0.41
1:E:380:HIS:CD2	1:E:452:VAL:HG22	2.55	0.41
1:E:388:MET:HE3	1:E:405:PHE:CD1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:20:THR:H	2:F:23:GLU:HB2	1.85	0.41
2:F:27:LEU:HD11	2:F:84:LEU:HD22	2.01	0.41
2:F:181:ILE:CD1	2:F:194:ALA:HB2	2.49	0.41
2:F:183:PHE:O	2:F:191:GLU:HA	2.20	0.41
2:F:190:LYS:NZ	2:J:523:ASP:OD1	2.52	0.41
2:F:343:ASP:O	2:F:344:GLY:C	2.62	0.41
2:F:450:ALA:O	2:F:451:ARG:O	2.38	0.41
1:G:279:LEU:H	1:G:279:LEU:HD12	1.85	0.41
1:G:301:SER:CB	1:G:312:TYR:O	2.68	0.41
1:G:365:THR:HG22	1:G:367:LEU:CD2	2.50	0.41
1:I:423:HIS:C	1:I:425:GLY:N	2.78	0.41
2:J:53:LYS:HB2	2:J:54:ALA:H	1.63	0.41
2:J:131:PHE:HE2	2:J:136:TYR:HA	1.82	0.41
2:J:213:ILE:O	2:J:213:ILE:CG2	2.67	0.41
2:J:309:VAL:HG23	2:J:349:ILE:HD12	2.01	0.41
1:K:196:MET:O	1:K:202:TRP:CD1	2.59	0.41
2:L:40:SER:O	2:L:41:GLU:HG2	2.19	0.41
1:M:193:SER:CB	1:M:194:PRO:HD2	2.47	0.41
1:M:373:ILE:HG12	1:M:459:LEU:CD1	2.50	0.41
2:N:147:HIS:C	2:N:149:ASN:H	2.28	0.41
2:N:550:GLU:HB3	2:N:552:PHE:HE1	1.85	0.41
1:O:226:PRO:HB3	1:O:469:TYR:CE1	2.54	0.41
1:O:228:LEU:HD12	2:P:411:GLU:OE2	2.19	0.41
2:P:47:LYS:HG2	2:P:47:LYS:O	2.20	0.41
2:P:183:PHE:HD2	2:P:184:LYS:H	1.68	0.41
2:B:6:VAL:CG2	2:B:11:LEU:HD12	2.50	0.41
2:B:271:VAL:HG21	2:B:284:VAL:CG1	2.49	0.41
2:B:437:VAL:O	2:B:449:VAL:HG13	2.19	0.41
2:B:589:LEU:HD23	1:C:495:LEU:CD1	2.49	0.41
2:D:91:ILE:HG12	2:D:92:LYS:O	2.19	0.41
2:D:503:ASN:ND2	2:D:504:LYS:N	2.65	0.41
2:D:536:LYS:O	2:D:537:ALA:C	2.62	0.41
1:E:236:GLN:O	1:E:240:GLU:HG3	2.20	0.41
2:F:120:PHE:HB3	2:F:291:PHE:HE2	1.85	0.41
2:F:121:ALA:CB	2:F:256:THR:HA	2.50	0.41
2:F:186:LEU:HD23	2:F:237:ILE:CG2	2.48	0.41
2:F:355:ARG:HD3	2:F:357:ASP:OD1	2.20	0.41
2:F:482:ILE:HG22	2:F:483:LYS:N	2.35	0.41
2:F:575:THR:HB	2:F:576:MET:CE	2.51	0.41
1:G:468:LYS:HB2	1:G:468:LYS:NZ	2.35	0.41
2:J:15:LEU:HD13	2:J:19:TYR:HE2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:91:ILE:HG12	2:J:92:LYS:O	2.20	0.41
2:J:212:HIS:C	2:J:214:ILE:N	2.77	0.41
2:J:245:THR:CG2	2:J:246:VAL:H	2.33	0.41
2:J:343:ASP:O	2:J:344:GLY:C	2.62	0.41
2:J:404:MET:HE2	2:J:497:LEU:HD21	2.02	0.41
1:K:382:LEU:HA	1:K:386:HIS:ND1	2.35	0.41
2:L:430:ASP:C	2:L:432:SER:N	2.78	0.41
2:L:551:ILE:CD1	2:L:561:LEU:HB2	2.40	0.41
1:M:266:GLN:NE2	1:M:315:LYS:O	2.49	0.41
1:M:279:LEU:CD2	1:M:281:ASP:HB2	2.50	0.41
1:M:281:ASP:CB	1:M:282:PRO:CD	2.82	0.41
1:M:366:HIS:HD2	1:M:474:ILE:HD12	1.84	0.41
1:M:491:PRO:HB2	1:M:492:LEU:H	1.62	0.41
1:O:218:LEU:O	1:O:220:ASP:N	2.53	0.41
1:O:316:LEU:O	1:O:320:ARG:HG2	2.20	0.41
2:P:340:VAL:HG11	2:P:344:GLY:HA2	2.01	0.41
2:P:486:ASN:HD22	2:P:486:ASN:N	2.17	0.41
1:A:443:LEU:CD1	1:A:454:VAL:HG13	2.50	0.41
2:B:3:THR:HG21	2:B:64:LYS:HG3	2.01	0.41
2:B:171:PHE:CD1	2:B:171:PHE:N	2.88	0.41
2:B:181:ILE:HG13	2:B:194:ALA:HB2	2.01	0.41
2:B:505:ASN:HB2	1:C:191:GLU:OE1	2.20	0.41
2:B:529:ASP:C	2:B:531:GLY:H	2.26	0.41
1:C:190:THR:HG22	1:C:191:GLU:HG3	2.02	0.41
1:C:414:GLU:HG2	1:C:437:VAL:O	2.20	0.41
2:D:121:ALA:CB	2:D:256:THR:HA	2.50	0.41
2:F:139:PHE:CZ	2:F:161:THR:HG21	2.55	0.41
1:G:226:PRO:HG2	1:G:486:MET:HE1	2.03	0.41
1:G:414:GLU:HG2	1:G:437:VAL:O	2.20	0.41
1:G:420:PHE:HE1	2:H:29:PHE:HE1	1.68	0.41
2:H:475:PHE:HA	2:H:498:CYS:O	2.20	0.41
2:H:558:VAL:CG1	2:H:583:ILE:HB	2.49	0.41
1:I:287:GLN:HB3	2:J:488:ASP:HA	2.02	0.41
1:I:395:PHE:CE2	1:I:432:VAL:CG1	3.03	0.41
2:J:185:PRO:O	2:J:186:LEU:C	2.62	0.41
2:J:569:ILE:O	2:J:574:LEU:HB2	2.19	0.41
1:K:261:ALA:C	1:K:263:PHE:H	2.28	0.41
1:K:296:VAL:O	1:K:297:LYS:C	2.62	0.41
2:L:9:ASP:N	2:L:9:ASP:OD2	2.52	0.41
2:L:12:PHE:HB3	2:L:17:ARG:O	2.20	0.41
2:L:147:HIS:HE1	2:L:158:ALA:HA	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:183:PHE:HD2	2:L:184:LYS:H	1.68	0.41
2:L:223:ILE:CD1	2:L:254:GLU:HG3	2.50	0.41
2:L:512:HIS:HA	2:L:561:LEU:HD11	2.02	0.41
2:N:343:ASP:O	2:N:344:GLY:C	2.63	0.41
2:N:360:HIS:CD2	2:N:362:CYS:HB2	2.52	0.41
2:N:404:MET:HE2	2:N:497:LEU:HD21	2.00	0.41
1:O:192:LEU:HD23	1:O:202:TRP:HE3	1.85	0.41
1:O:235:ARG:HH11	1:O:245:GLU:CD	2.28	0.41
2:B:472:LEU:HB2	2:B:502:TYR:HB3	2.01	0.41
1:C:470:GLY:O	1:C:471:ILE:HG13	2.19	0.41
2:D:147:HIS:O	2:D:151:CYS:HB2	2.21	0.41
2:D:362:CYS:HA	2:D:365:VAL:HG23	2.02	0.41
2:D:424:ALA:HB1	2:D:429:VAL:O	2.20	0.41
1:E:234:PHE:CD2	1:E:373:ILE:HD13	2.55	0.41
1:E:396:THR:C	1:E:398:LEU:N	2.78	0.41
2:F:85:GLN:OE1	2:F:85:GLN:HA	2.21	0.41
2:F:475:PHE:CD1	2:F:475:PHE:C	2.97	0.41
1:G:192:LEU:O	1:G:193:SER:HB3	2.20	0.41
1:G:364:ALA:O	1:G:365:THR:CB	2.69	0.41
2:H:495:ARG:HG3	2:H:495:ARG:NH1	2.35	0.41
2:H:503:ASN:O	2:H:504:LYS:C	2.63	0.41
1:I:225:HIS:CD2	2:J:413:LEU:HB2	2.55	0.41
2:J:15:LEU:HA	2:J:85:GLN:NE2	2.33	0.41
2:J:183:PHE:CD2	2:J:230:VAL:HG11	2.54	0.41
2:J:212:HIS:C	2:J:214:ILE:H	2.27	0.41
2:J:520:GLN:NE2	1:K:489:ASP:OD1	2.54	0.41
1:K:480:HIS:H	1:K:480:HIS:HD2	1.58	0.41
2:L:98:ARG:NH1	2:L:98:ARG:HG2	2.36	0.41
2:L:391:PHE:O	2:L:392:PRO:C	2.63	0.41
1:M:200:GLY:O	1:M:202:TRP:N	2.54	0.41
1:M:258:ASN:HD22	1:M:330:SER:HB3	1.85	0.41
2:N:424:ALA:HB1	2:N:429:VAL:O	2.20	0.41
2:N:515:LEU:HD11	2:N:551:ILE:HD12	2.00	0.41
2:N:584:ASN:O	2:N:587:PRO:HD2	2.20	0.41
1:O:275:ASP:HB2	1:O:360:GLU:OE1	2.20	0.41
1:O:276:THR:HG22	1:O:277:PHE:N	2.36	0.41
1:O:365:THR:HG21	1:O:474:ILE:CD1	2.46	0.41
2:P:17:ARG:HE	2:P:17:ARG:HB3	1.70	0.41
2:P:146:LEU:HD11	2:P:159:ILE:HD13	2.02	0.41
2:P:234:PRO:CB	2:P:235:PRO:CD	2.96	0.41
2:P:360:HIS:CG	2:P:361:ALA:N	2.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:424:GLN:C	1:A:427:LYS:H	2.29	0.41
1:A:474:ILE:HG23	1:A:475:ARG:N	2.36	0.41
2:B:322:GLU:HB2	2:B:327:LEU:HD13	2.03	0.41
2:B:380:THR:HG21	2:F:321:ARG:HH21	1.85	0.41
2:B:501:TYR:CE1	2:B:503:ASN:HB2	2.55	0.41
1:C:460:SER:O	1:C:464:PRO:CD	2.68	0.41
2:D:120:PHE:HB3	2:D:291:PHE:HE2	1.85	0.41
2:D:198:MET:SD	2:D:220:TYR:HE2	2.43	0.41
2:D:280:ASN:O	2:D:283:THR:HG22	2.20	0.41
2:D:495:ARG:HH11	2:D:495:ARG:HG3	1.85	0.41
1:E:287:GLN:O	2:F:488:ASP:HB2	2.20	0.41
2:F:124:ALA:CB	2:F:300:PRO:HD3	2.50	0.41
2:F:197:LEU:HA	2:F:200:ILE:CG1	2.51	0.41
2:F:419:SER:OG	2:F:422:ASP:OD2	2.38	0.41
1:G:366:HIS:O	1:G:475:ARG:NH1	2.53	0.41
1:G:414:GLU:HG3	1:G:415:PRO:CD	2.51	0.41
1:G:437:VAL:HG13	1:G:455:ILE:HG22	2.02	0.41
2:H:85:GLN:HB3	2:H:91:ILE:CG2	2.50	0.41
2:H:480:ILE:HG21	2:H:496:HIS:HD2	1.84	0.41
1:I:208:LYS:O	1:I:209:PRO:O	2.39	0.41
1:I:316:LEU:CD2	1:I:320:ARG:HD3	2.51	0.41
2:J:357:ASP:OD1	2:J:358:ILE:HD12	2.20	0.41
2:J:455:LEU:HD13	2:J:459:LEU:HD22	2.02	0.41
1:K:279:LEU:CD2	1:K:323:LEU:CA	2.98	0.41
2:L:197:LEU:HA	2:L:200:ILE:CG1	2.50	0.41
2:L:305:ARG:HB2	2:L:351:ILE:HB	2.02	0.41
1:M:396:THR:C	1:M:398:LEU:N	2.78	0.41
2:N:98:ARG:HG2	2:N:98:ARG:NH1	2.35	0.41
2:N:145:LYS:O	2:N:148:GLN:NE2	2.53	0.41
2:P:121:ALA:CB	2:P:256:THR:HA	2.50	0.41
2:P:475:PHE:CD1	2:P:475:PHE:C	2.97	0.41
2:B:101:PRO:CG	2:B:105:ILE:HD13	2.48	0.41
2:B:204:ASP:O	2:B:208:LYS:HB2	2.21	0.41
2:B:475:PHE:HA	2:B:498:CYS:O	2.21	0.41
2:B:497:LEU:HD23	2:B:497:LEU:O	2.19	0.41
2:B:534:VAL:CG2	2:B:552:PHE:HB2	2.51	0.41
1:C:13:ARG:HG3	1:C:26:LEU:HD21	2.03	0.41
1:C:196:MET:HE1	1:C:207:PHE:CZ	2.55	0.41
1:C:464:PRO:HG2	1:C:465:THR:N	2.36	0.41
2:D:49:GLN:O	2:D:50:GLY:C	2.63	0.41
2:D:426:LYS:HA	2:D:571:LYS:CE	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:62:LEU:N	2:F:62:LEU:CD2	2.84	0.41
2:F:570:THR:HG23	1:G:197:ILE:HG21	2.02	0.41
1:G:328:THR:OG1	1:G:372:GLN:NE2	2.54	0.41
1:G:437:VAL:O	1:G:438:PHE:O	2.38	0.41
2:H:20:THR:H	2:H:23:GLU:HB2	1.86	0.41
2:H:459:LEU:HD23	2:H:572:PHE:CD1	2.56	0.41
2:H:468:MET:HA	2:H:469:PRO:HD3	1.91	0.41
1:I:241:MET:HG2	2:L:387:ILE:HD12	2.02	0.41
2:J:475:PHE:HA	2:J:498:CYS:O	2.19	0.41
2:J:589:LEU:HD23	2:J:589:LEU:HA	1.87	0.41
1:K:267:GLN:NE2	2:L:262:LYS:HE2	2.35	0.41
1:K:437:VAL:O	1:K:438:PHE:O	2.38	0.41
2:L:133:LYS:H	2:L:133:LYS:CD	2.16	0.41
2:L:190:LYS:HB3	2:L:191:GLU:H	1.49	0.41
2:L:223:ILE:HD13	2:L:254:GLU:HG3	2.01	0.41
2:L:349:ILE:HD13	2:L:364:ILE:HG21	2.01	0.41
1:M:215:HIS:O	1:M:215:HIS:ND1	2.51	0.41
1:M:248:THR:O	1:M:248:THR:HG22	2.20	0.41
1:M:277:PHE:N	1:M:277:PHE:HD1	2.18	0.41
2:N:120:PHE:HE1	2:N:258:THR:O	2.03	0.41
2:N:126:LEU:CD2	2:N:251:ILE:HB	2.51	0.41
2:N:157:VAL:HG11	2:N:266:VAL:HG21	2.03	0.41
2:N:186:LEU:HD22	2:N:186:LEU:H	1.84	0.41
2:N:450:ALA:O	2:N:451:ARG:O	2.38	0.41
2:N:509:GLU:HG3	1:O:210:TYR:HE1	1.86	0.41
2:N:589:LEU:HD23	2:N:589:LEU:HA	1.91	0.41
1:O:425:GLY:C	1:O:426:LEU:HG	2.45	0.41
2:P:147:HIS:HE1	2:P:159:ILE:H	1.68	0.41
2:P:506:PRO:HD3	2:P:577:PRO:HG3	2.02	0.41
2:P:555:GLY:O	2:P:556:GLN:HB3	2.21	0.41
2:B:9:ASP:OD2	2:B:9:ASP:N	2.53	0.41
2:B:212:HIS:C	2:B:214:ILE:N	2.78	0.41
1:C:51:ILE:H	1:C:51:ILE:HG13	1.71	0.41
1:C:77:GLU:CG	1:C:106:LYS:HB3	2.50	0.41
1:C:304:GLY:C	1:C:306:GLY:N	2.77	0.41
1:C:492:LEU:O	1:C:496:ASP:HB2	2.19	0.41
2:D:143:GLN:HG3	2:D:159:ILE:CD1	2.50	0.41
2:D:495:ARG:HG3	2:D:495:ARG:NH1	2.36	0.41
2:D:535:ILE:H	2:D:535:ILE:CD1	2.18	0.41
1:E:279:LEU:HD12	1:E:279:LEU:C	2.45	0.41
1:E:280:ARG:HB3	2:F:440:SER:CB	2.42	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:379:ASP:CG	1:E:380:HIS:H	2.28	0.41
1:E:388:MET:HE3	1:E:405:PHE:CE1	2.55	0.41
1:E:422:TYR:N	1:E:429:TRP:CE3	2.89	0.41
1:E:426:LEU:HD23	1:E:427:LYS:H	1.85	0.41
2:F:204:ASP:O	2:F:208:LYS:HB2	2.21	0.41
2:H:126:LEU:HB2	2:H:278:CYS:SG	2.60	0.41
2:H:142:LEU:C	2:H:142:LEU:CD2	2.93	0.41
2:H:147:HIS:HE1	2:H:158:ALA:HA	1.84	0.41
1:I:282:PRO:C	1:I:284:GLU:N	2.78	0.41
2:J:154:ARG:HD2	2:J:210:TYR:CD2	2.55	0.41
2:J:495:ARG:HG3	2:J:495:ARG:HH11	1.85	0.41
2:L:15:LEU:CD1	2:L:19:TYR:HE2	2.33	0.41
2:L:213:ILE:O	2:L:213:ILE:CG2	2.68	0.41
2:L:458:LEU:HA	2:L:458:LEU:HD23	1.79	0.41
1:M:272:ASP:CG	1:M:273:GLN:N	2.78	0.41
1:M:279:LEU:CD2	1:M:283:ALA:H	2.19	0.41
1:M:304:GLY:C	1:M:306:GLY:N	2.78	0.41
1:M:316:LEU:HD21	1:M:320:ARG:HD3	2.03	0.41
1:M:480:HIS:C	1:M:482:VAL:N	2.77	0.41
2:N:41:GLU:C	2:N:43:GLU:H	2.28	0.41
2:N:332:THR:C	2:N:334:MET:N	2.79	0.41
2:N:475:PHE:CD1	2:N:475:PHE:C	2.99	0.41
2:N:508:PHE:HE2	1:O:210:TYR:CD2	2.38	0.41
1:O:197:ILE:O	1:O:199:SER:N	2.46	0.41
1:O:227:LEU:HD23	1:O:465:THR:HG21	2.03	0.41
2:P:27:LEU:HD11	2:P:84:LEU:HD22	2.03	0.41
2:P:41:GLU:HA	2:P:44:ILE:HD12	2.02	0.41
2:P:471:PRO:HA	2:P:502:TYR:O	2.20	0.41
2:B:186:LEU:HD22	2:B:186:LEU:H	1.86	0.41
1:C:162:ARG:O	1:C:164:LEU:HD23	2.21	0.41
1:C:211:ASN:ND2	1:C:213:LEU:HD23	2.35	0.41
2:F:207:LEU:N	2:F:207:LEU:HD12	2.36	0.41
2:F:322:GLU:HB2	2:F:327:LEU:HD13	2.03	0.41
2:F:451:ARG:HH22	2:F:478:SER:CB	2.32	0.41
1:G:367:LEU:C	1:G:367:LEU:CD2	2.94	0.41
2:H:212:HIS:C	2:H:214:ILE:H	2.29	0.41
2:H:360:HIS:CG	2:H:361:ALA:N	2.88	0.41
2:H:414:THR:HB	2:H:451:ARG:HH11	1.86	0.41
1:I:200:GLY:HA2	1:I:202:TRP:CZ3	2.56	0.41
1:I:246:MET:SD	1:I:350:TYR:HB3	2.60	0.41
1:I:380:HIS:CD2	1:I:452:VAL:HG22	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:217:LYS:HB3	2:J:218:PRO:CD	2.40	0.41
2:L:343:ASP:O	2:L:344:GLY:C	2.63	0.41
2:L:589:LEU:HD23	2:L:589:LEU:HA	1.91	0.41
1:M:203:ARG:C	1:M:205:ARG:H	2.28	0.41
1:M:237:ILE:HD12	1:M:397:LYS:CB	2.50	0.41
1:M:467:ILE:HD12	1:M:467:ILE:N	2.24	0.41
2:N:123:ALA:HB2	2:N:254:GLU:HA	2.03	0.41
2:N:217:LYS:HB3	2:N:218:PRO:CD	2.41	0.41
1:O:226:PRO:HG3	1:O:490:SER:CB	2.51	0.41
2:P:181:ILE:CD1	2:P:194:ALA:HB2	2.50	0.41
1:A:193:SER:HG	1:A:196:MET:HG3	1.86	0.41
1:A:197:ILE:HG21	2:D:569:ILE:HG12	2.03	0.41
1:A:264:GLN:HA	1:A:265:PRO:HD2	1.90	0.41
1:A:415:PRO:HD2	1:A:437:VAL:CG2	2.51	0.41
2:B:40:SER:HB3	2:B:58:SER:O	2.21	0.41
2:B:179:SER:HA	2:B:193:THR:CG2	2.51	0.41
2:B:434:THR:O	2:B:435:LYS:HB2	2.21	0.41
2:B:444:THR:HG21	2:B:446:GLU:HG3	2.03	0.41
2:B:536:LYS:O	2:B:537:ALA:C	2.62	0.41
1:C:188:GLN:HE21	1:C:188:GLN:CA	2.18	0.41
1:C:323:LEU:C	1:C:323:LEU:HD12	2.46	0.41
1:C:480:HIS:H	1:C:480:HIS:HD2	1.58	0.41
2:D:117:ILE:C	2:D:118:ARG:HG2	2.46	0.41
2:D:153:LYS:C	2:D:155:ALA:H	2.28	0.41
2:D:506:PRO:HD3	2:D:577:PRO:HG3	2.03	0.41
1:E:382:LEU:HA	1:E:386:HIS:ND1	2.35	0.41
2:F:126:LEU:CD2	2:F:251:ILE:HB	2.51	0.41
2:F:503:ASN:O	2:F:576:MET:HB3	2.21	0.41
2:F:521:LEU:HD13	2:F:521:LEU:HA	1.94	0.41
1:G:193:SER:CB	1:G:194:PRO:CD	2.81	0.41
1:G:246:MET:HG3	1:G:352:SER:HB3	2.03	0.41
1:G:250:ASN:O	1:G:250:ASN:CG	2.63	0.41
1:G:464:PRO:O	1:G:468:LYS:N	2.46	0.41
1:G:475:ARG:HG3	1:G:475:ARG:NH1	2.34	0.41
2:H:24:PHE:HD2	2:H:35:LEU:HD12	1.85	0.41
2:H:27:LEU:CD1	2:H:84:LEU:HD22	2.51	0.41
2:H:68:PRO:O	2:H:70:ASN:N	2.53	0.41
2:H:211:LEU:HG	2:H:212:HIS:N	2.23	0.41
2:H:274:PHE:C	2:H:276:GLU:N	2.76	0.41
2:H:308:MET:HE2	2:H:308:MET:O	2.20	0.41
1:I:255:SER:HB2	1:I:321:LYS:O	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:282:PRO:C	1:I:284:GLU:H	2.28	0.41
1:I:325:ARG:CG	1:I:325:ARG:NH2	2.84	0.41
1:I:460:SER:O	1:I:464:PRO:HD2	2.21	0.41
2:J:146:LEU:HD11	2:J:159:ILE:HD13	2.02	0.41
2:J:161:THR:HG22	2:J:253:ILE:HG12	2.02	0.41
2:J:186:LEU:HD22	2:J:186:LEU:H	1.86	0.41
2:J:223:ILE:HB	2:J:231:LEU:HB2	2.01	0.41
2:J:259:ASP:C	2:J:259:ASP:OD1	2.63	0.41
2:J:269:ILE:O	2:J:272:THR:HG22	2.21	0.41
2:J:272:THR:HG23	2:J:273:MET:N	2.36	0.41
2:J:401:ARG:HG2	2:J:477:ILE:HD12	2.03	0.41
2:J:470:LEU:HB3	2:J:471:PRO:CD	2.47	0.41
1:K:279:LEU:HD23	1:K:322:ASN:O	2.20	0.41
1:K:287:GLN:HG3	1:K:288:LEU:N	2.29	0.41
1:K:473:ASN:OD1	1:K:475:ARG:HB2	2.21	0.41
2:L:117:ILE:C	2:L:118:ARG:HG2	2.46	0.41
2:L:555:GLY:O	2:L:556:GLN:HB3	2.21	0.41
1:M:193:SER:O	1:M:196:MET:HB2	2.20	0.41
1:M:284:GLU:HG2	1:M:320:ARG:HH21	1.86	0.41
1:M:475:ARG:CG	1:M:475:ARG:NH1	2.84	0.41
2:N:20:THR:H	2:N:23:GLU:HB2	1.86	0.41
2:N:362:CYS:HA	2:N:365:VAL:HG23	2.02	0.41
2:N:480:ILE:HG12	2:N:496:HIS:NE2	2.35	0.41
1:O:325:ARG:HG2	1:O:325:ARG:NH2	2.33	0.41
2:P:41:GLU:HA	2:P:44:ILE:CD1	2.51	0.41
2:P:120:PHE:HB3	2:P:291:PHE:HE2	1.86	0.41
2:P:179:SER:HA	2:P:193:THR:CG2	2.50	0.41
2:P:232:SER:HB3	2:P:238:ASN:HA	2.01	0.41
2:P:362:CYS:HA	2:P:365:VAL:HG23	2.03	0.41
2:P:507:GLY:CA	2:P:510:ILE:HG22	2.51	0.41
2:P:550:GLU:HB3	2:P:552:PHE:HE1	1.86	0.41
1:A:248:THR:HG21	1:A:354:ASP:CB	2.51	0.41
1:A:384:LEU:CD1	1:A:417:MET:HE3	2.51	0.41
2:B:186:LEU:HD21	2:B:238:ASN:N	2.28	0.41
2:B:212:HIS:C	2:B:214:ILE:H	2.28	0.41
2:B:305:ARG:HB2	2:B:351:ILE:HB	2.02	0.41
1:C:325:ARG:CG	1:C:325:ARG:NH2	2.84	0.41
1:C:384:LEU:CD1	1:C:417:MET:HE3	2.48	0.41
1:C:406:LYS:HB3	1:C:420:PHE:HE1	1.86	0.41
1:C:424:GLN:O	1:C:425:GLY:C	2.64	0.41
1:C:469:TYR:OH	1:C:493:CYS:HB2	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:474:ILE:HD12	1:C:474:ILE:HA	1.84	0.41
2:D:212:HIS:C	2:D:214:ILE:N	2.79	0.41
1:E:250:ASN:CG	1:E:250:ASN:O	2.64	0.41
1:E:260:ASP:OD2	1:E:314:TRP:NE1	2.53	0.41
2:F:212:HIS:C	2:F:214:ILE:N	2.78	0.41
2:F:309:VAL:CG2	2:F:349:ILE:HD12	2.51	0.41
2:F:424:ALA:HB1	2:F:429:VAL:O	2.21	0.41
2:F:493:ASN:HD22	2:F:493:ASN:N	2.19	0.41
2:F:519:MET:HA	2:F:519:MET:HE2	2.03	0.41
2:F:555:GLY:O	2:F:556:GLN:HB3	2.20	0.41
1:G:420:PHE:CD1	2:H:29:PHE:HE1	2.38	0.41
2:H:70:ASN:HD22	2:H:71:ARG:CZ	2.33	0.41
2:H:146:LEU:HD11	2:H:159:ILE:HD13	2.03	0.41
2:J:17:ARG:CZ	2:J:19:TYR:CE1	3.04	0.41
2:J:121:ALA:CB	2:J:256:THR:HA	2.51	0.41
2:J:261:THR:HA	2:J:264:LYS:HE2	2.03	0.41
1:K:225:HIS:NE2	1:K:477:LEU:O	2.52	0.41
1:K:304:GLY:C	1:K:306:GLY:N	2.76	0.41
2:L:113:GLU:H	2:L:113:GLU:CD	2.29	0.41
2:L:223:ILE:HB	2:L:231:LEU:HB2	2.03	0.41
2:L:268:ASP:O	2:L:272:THR:CG2	2.68	0.41
2:L:468:MET:HE3	2:L:469:PRO:HD2	2.02	0.41
1:M:268:HIS:O	1:M:269:PRO:C	2.64	0.41
1:M:394:PHE:CD2	1:M:457:TRP:HZ2	2.38	0.41
1:M:466:MET:HB3	1:M:467:ILE:H	1.45	0.41
2:N:117:ILE:C	2:N:118:ARG:HG2	2.45	0.41
2:N:308:MET:HE3	2:N:309:VAL:C	2.46	0.41
2:N:575:THR:HB	2:N:576:MET:CE	2.51	0.41
1:O:384:LEU:HD11	1:O:417:MET:HE3	2.03	0.41
1:O:396:THR:C	1:O:398:LEU:N	2.79	0.41
2:P:45:ILE:HG22	2:P:49:GLN:CB	2.51	0.41
2:P:67:VAL:HG11	2:P:74:LEU:HB2	2.02	0.41
2:P:349:ILE:CD1	2:P:364:ILE:HG21	2.51	0.41
2:P:472:LEU:HD23	2:P:472:LEU:HA	1.97	0.41
2:B:147:HIS:O	2:B:151:CYS:HB2	2.21	0.40
2:B:399:LEU:HD13	1:C:494:ARG:CG	2.38	0.40
2:B:424:ALA:HB1	2:B:429:VAL:O	2.21	0.40
2:B:575:THR:HB	2:B:576:MET:HE1	2.03	0.40
1:C:148:ALA:O	1:C:151:LEU:HD21	2.21	0.40
2:D:71:ARG:HD2	2:D:71:ARG:N	2.36	0.40
2:D:308:MET:HE2	2:D:308:MET:C	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:450:ALA:O	2:D:451:ARG:C	2.63	0.40
1:E:316:LEU:HD23	1:E:320:ARG:HG2	2.03	0.40
1:E:406:LYS:HB2	2:F:29:PHE:CE1	2.56	0.40
2:F:186:LEU:HD21	2:F:238:ASN:N	2.31	0.40
2:F:429:VAL:HG12	2:F:430:ASP:N	2.35	0.40
2:F:521:LEU:O	1:G:491:PRO:HB2	2.21	0.40
2:H:12:PHE:HB3	2:H:17:ARG:O	2.21	0.40
2:H:507:GLY:CA	2:H:510:ILE:HG22	2.50	0.40
2:H:536:LYS:O	2:H:537:ALA:C	2.63	0.40
2:H:589:LEU:HA	2:H:589:LEU:HD23	1.87	0.40
1:I:477:LEU:CD1	1:I:478:VAL:HG23	2.48	0.40
2:J:27:LEU:HD11	2:J:84:LEU:HD22	2.04	0.40
2:J:153:LYS:C	2:J:155:ALA:H	2.28	0.40
2:J:342:GLY:C	2:J:344:GLY:H	2.29	0.40
1:K:228:LEU:HD12	2:L:411:GLU:OE2	2.20	0.40
1:K:298:ARG:HG3	1:K:298:ARG:HH11	1.84	0.40
1:K:479:GLY:CA	2:L:415:PHE:CE1	3.03	0.40
2:L:207:LEU:HD12	2:L:207:LEU:N	2.36	0.40
2:L:249:ARG:C	2:L:250:ASN:ND2	2.79	0.40
2:N:70:ASN:HD22	2:N:71:ARG:CZ	2.34	0.40
2:N:198:MET:SD	2:N:220:TYR:CE2	3.11	0.40
2:N:360:HIS:CG	2:N:361:ALA:N	2.88	0.40
1:O:479:GLY:CA	2:P:415:PHE:CE1	3.02	0.40
2:P:519:MET:HB3	2:P:533:TYR:CE2	2.56	0.40
2:P:533:TYR:HA	2:P:552:PHE:O	2.21	0.40
1:A:422:TYR:HE2	1:A:427:LYS:C	2.29	0.40
1:A:463:ARG:O	1:A:467:ILE:HG13	2.21	0.40
1:A:496:ASP:C	1:A:498:GLU:N	2.74	0.40
2:B:27:LEU:CD1	2:B:84:LEU:HD22	2.51	0.40
2:B:33:LEU:CD2	2:B:67:VAL:HG22	2.50	0.40
2:B:471:PRO:HA	2:B:502:TYR:O	2.21	0.40
1:C:70:ILE:N	1:C:70:ILE:CD1	2.84	0.40
1:C:250:ASN:CG	1:C:250:ASN:O	2.64	0.40
1:C:503:PRO:O	1:C:504:THR:C	2.64	0.40
2:D:555:GLY:O	2:D:556:GLN:HB3	2.21	0.40
1:E:437:VAL:O	1:E:438:PHE:O	2.39	0.40
1:E:477:LEU:C	1:E:478:VAL:CG2	2.94	0.40
1:G:281:ASP:CG	1:G:282:PRO:HD3	2.45	0.40
2:H:156:LEU:HD12	2:H:156:LEU:N	2.37	0.40
2:H:171:PHE:N	2:H:171:PHE:CD1	2.89	0.40
2:H:268:ASP:O	2:H:272:THR:CG2	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:267:GLN:HA	2:J:152:ARG:NH1	2.37	0.40
1:I:437:VAL:O	1:I:438:PHE:O	2.39	0.40
1:I:460:SER:O	1:I:464:PRO:CD	2.69	0.40
2:J:122:VAL:HG22	2:J:123:ALA:N	2.35	0.40
2:J:230:VAL:HG13	2:J:230:VAL:O	2.21	0.40
2:J:232:SER:HB3	2:J:238:ASN:HA	2.02	0.40
2:J:274:PHE:C	2:J:276:GLU:N	2.73	0.40
1:K:367:LEU:H	1:K:367:LEU:CD1	2.23	0.40
2:L:17:ARG:CZ	2:L:19:TYR:CE1	3.03	0.40
2:L:120:PHE:HB3	2:L:291:PHE:HE2	1.85	0.40
2:L:129:ILE:CD1	2:L:251:ILE:HD12	2.50	0.40
2:L:156:LEU:N	2:L:156:LEU:HD12	2.35	0.40
2:L:212:HIS:C	2:L:214:ILE:H	2.29	0.40
2:L:411:GLU:HA	2:L:475:PHE:O	2.21	0.40
2:N:430:ASP:C	2:N:432:SER:N	2.80	0.40
1:O:225:HIS:CD2	2:P:413:LEU:HB2	2.56	0.40
2:P:157:VAL:HG22	2:P:263:ALA:HB2	2.03	0.40
1:A:268:HIS:HD2	1:A:270:ALA:HB3	1.86	0.40
1:A:422:TYR:CD2	1:A:423:HIS:N	2.89	0.40
2:B:3:THR:CG2	2:B:64:LYS:HG3	2.52	0.40
2:B:88:LYS:HB2	2:B:90:ARG:HG3	2.03	0.40
2:D:12:PHE:HB3	2:D:17:ARG:O	2.21	0.40
2:D:33:LEU:CD2	2:D:67:VAL:HG22	2.49	0.40
2:D:122:VAL:HG22	2:D:123:ALA:N	2.37	0.40
2:D:420:GLN:HG2	2:D:449:VAL:HG23	2.02	0.40
2:D:475:PHE:CD1	2:D:475:PHE:C	2.96	0.40
1:E:258:ASN:O	1:E:259:PHE:HD2	2.03	0.40
1:E:420:PHE:HA	1:E:430:VAL:O	2.21	0.40
2:F:42:LYS:HB3	2:F:58:SER:CB	2.51	0.40
2:F:70:ASN:HD22	2:F:71:ARG:CZ	2.35	0.40
2:F:186:LEU:HD22	2:F:186:LEU:H	1.86	0.40
2:F:430:ASP:C	2:F:432:SER:N	2.79	0.40
2:F:458:LEU:O	2:F:461:THR:HB	2.21	0.40
1:G:189:GLU:HB2	1:G:206:PRO:HA	2.03	0.40
1:G:208:LYS:O	1:G:210:TYR:N	2.54	0.40
1:G:391:LEU:HD13	1:G:419:VAL:CG2	2.51	0.40
2:H:126:LEU:CD2	2:H:251:ILE:HB	2.52	0.40
2:H:129:ILE:CD1	2:H:251:ILE:HD12	2.51	0.40
1:I:414:GLU:HG2	1:I:437:VAL:O	2.21	0.40
1:I:443:LEU:HD11	1:I:454:VAL:HG13	2.04	0.40
2:J:62:LEU:N	2:J:62:LEU:CD2	2.83	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:450:ALA:O	2:J:451:ARG:C	2.64	0.40
2:J:530:LYS:O	2:J:530:LYS:HG3	2.20	0.40
1:K:323:LEU:HD12	1:K:324:LEU:C	2.47	0.40
1:K:364:ALA:HB1	1:K:475:ARG:HH21	1.84	0.40
2:L:147:HIS:NE2	2:L:159:ILE:HG12	2.37	0.40
2:L:468:MET:HA	2:L:469:PRO:HD3	1.93	0.40
2:L:550:GLU:HB3	2:L:552:PHE:HE1	1.87	0.40
1:M:298:ARG:HG3	1:M:298:ARG:HH11	1.85	0.40
2:N:223:ILE:HB	2:N:231:LEU:HB2	2.02	0.40
2:N:429:VAL:HG12	2:N:430:ASP:N	2.35	0.40
1:O:301:SER:O	1:O:311:LYS:HA	2.21	0.40
1:O:350:TYR:HB2	1:O:376:VAL:CG1	2.51	0.40
2:P:9:ASP:OD2	2:P:9:ASP:N	2.53	0.40
2:P:576:MET:HE2	2:P:576:MET:H	1.87	0.40
1:A:253:GLU:OE1	1:A:257:TRP:HB2	2.21	0.40
2:B:118:ARG:CZ	2:B:257:GLY:HA2	2.51	0.40
2:B:153:LYS:C	2:B:155:ALA:H	2.30	0.40
2:B:207:LEU:HD12	2:B:207:LEU:N	2.36	0.40
2:B:480:ILE:HG21	2:B:496:HIS:HD2	1.86	0.40
1:C:163:LYS:O	1:C:163:LYS:CG	2.70	0.40
1:C:200:GLY:C	1:C:202:TRP:H	2.29	0.40
1:C:211:ASN:C	1:C:213:LEU:H	2.29	0.40
1:C:268:HIS:CD2	1:C:270:ALA:CB	3.04	0.40
2:D:20:THR:HB	2:D:23:GLU:HG3	2.03	0.40
2:D:62:LEU:N	2:D:62:LEU:CD2	2.85	0.40
2:D:132:THR:HG23	2:D:133:LYS:N	2.36	0.40
2:D:198:MET:HE1	2:D:236:ILE:HG12	2.03	0.40
1:E:373:ILE:CG2	1:E:461:LEU:HD23	2.51	0.40
1:E:394:PHE:CD2	1:E:457:TRP:HZ2	2.40	0.40
2:F:12:PHE:HB3	2:F:17:ARG:O	2.21	0.40
2:F:71:ARG:HG3	2:F:355:ARG:CZ	2.51	0.40
2:F:113:GLU:H	2:F:113:GLU:CD	2.30	0.40
2:F:181:ILE:O	2:F:193:THR:HA	2.21	0.40
2:F:551:ILE:HG12	2:F:559:GLY:O	2.22	0.40
2:F:570:THR:CG2	1:G:197:ILE:CG2	2.99	0.40
1:G:388:MET:HE3	1:G:405:PHE:CE1	2.56	0.40
1:G:460:SER:O	1:G:464:PRO:CD	2.69	0.40
2:H:91:ILE:HG12	2:H:92:LYS:O	2.21	0.40
2:H:551:ILE:HG12	2:H:559:GLY:C	2.46	0.40
1:I:202:TRP:CD1	1:I:202:TRP:C	2.99	0.40
1:I:440:PRO:HG3	2:J:360:HIS:HE2	1.83	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:449:PRO:HB2	1:I:451:ASN:OD1	2.22	0.40
2:J:503:ASN:O	2:J:504:LYS:C	2.65	0.40
2:J:584:ASN:ND2	2:J:587:PRO:HD3	2.36	0.40
1:K:432:VAL:HG23	1:K:432:VAL:O	2.21	0.40
2:L:115:ALA:O	2:L:116:LYS:CB	2.69	0.40
2:L:139:PHE:CZ	2:L:161:THR:HG21	2.57	0.40
2:L:444:THR:HG21	2:L:446:GLU:HG3	2.02	0.40
1:M:196:MET:HE1	1:M:202:TRP:HB3	2.04	0.40
1:M:305:TYR:HB3	1:M:444:LEU:CD1	2.51	0.40
1:M:474:ILE:HG22	1:M:474:ILE:O	2.20	0.40
2:N:103:GLY:O	2:N:105:ILE:HG12	2.22	0.40
2:N:171:PHE:CD2	2:N:231:LEU:HD21	2.57	0.40
2:N:245:THR:O	2:N:247:ASN:N	2.55	0.40
2:N:503:ASN:O	2:N:576:MET:HB3	2.21	0.40
1:O:222:GLY:N	2:P:408:GLY:HA2	2.37	0.40
1:O:359:ASN:HD21	2:P:443:LYS:HD2	1.86	0.40
2:P:120:PHE:HE1	2:P:258:THR:C	2.29	0.40
2:P:122:VAL:CG2	2:P:299:PHE:CG	3.05	0.40
1:A:224:LEU:HD22	2:B:401:ARG:HH12	1.86	0.40
1:A:316:LEU:CD2	1:A:320:ARG:HD3	2.52	0.40
1:A:461:LEU:HD22	1:A:461:LEU:HA	1.83	0.40
2:B:98:ARG:NH1	2:B:98:ARG:HG2	2.36	0.40
2:B:123:ALA:HB2	2:B:254:GLU:HA	2.02	0.40
2:B:420:GLN:HG2	2:B:449:VAL:CG2	2.52	0.40
2:B:576:MET:HB3	2:B:577:PRO:CD	2.50	0.40
2:D:113:GLU:CD	2:D:113:GLU:H	2.30	0.40
2:D:183:PHE:HD2	2:D:184:LYS:H	1.69	0.40
2:D:458:LEU:HD23	2:D:458:LEU:HA	1.87	0.40
2:D:503:ASN:O	2:D:504:LYS:C	2.64	0.40
2:D:511:ILE:HG22	2:D:561:LEU:HD21	2.03	0.40
1:E:202:TRP:C	1:E:204:ASP:N	2.80	0.40
1:E:261:ALA:C	1:E:263:PHE:H	2.29	0.40
2:F:42:LYS:O	2:F:46:SER:HB2	2.21	0.40
2:F:118:ARG:NH2	2:F:256:THR:O	2.54	0.40
2:F:126:LEU:HB2	2:F:278:CYS:SG	2.62	0.40
2:F:584:ASN:O	2:F:587:PRO:HD2	2.22	0.40
1:G:316:LEU:CD2	1:G:320:ARG:HD3	2.51	0.40
1:G:403:LEU:CD2	1:G:419:VAL:HG12	2.52	0.40
2:H:185:PRO:O	2:H:186:LEU:C	2.65	0.40
2:H:411:GLU:HA	2:H:475:PHE:O	2.22	0.40
2:H:486:ASN:HD22	2:H:486:ASN:N	2.18	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:584:ASN:ND2	2:H:587:PRO:HD3	2.37	0.40
1:I:272:ASP:O	1:I:274:HIS:N	2.55	0.40
2:J:200:ILE:C	2:J:200:ILE:HD12	2.46	0.40
2:J:444:THR:HG21	2:J:446:GLU:HG3	2.04	0.40
2:J:482:ILE:CG2	2:J:483:LYS:N	2.84	0.40
2:J:486:ASN:HD22	2:J:486:ASN:N	2.19	0.40
2:J:512:HIS:ND1	1:K:216:GLY:CA	2.85	0.40
1:K:189:GLU:O	1:K:208:LYS:N	2.39	0.40
1:K:190:THR:HB	1:K:191:GLU:H	1.69	0.40
1:K:201:SER:C	1:K:203:ARG:N	2.77	0.40
1:K:250:ASN:CG	1:K:250:ASN:O	2.64	0.40
1:K:280:ARG:HG2	1:K:281:ASP:N	2.35	0.40
1:K:380:HIS:CD2	1:K:452:VAL:HG22	2.56	0.40
1:K:396:THR:C	1:K:398:LEU:N	2.79	0.40
1:K:414:GLU:HG2	1:K:437:VAL:O	2.21	0.40
2:L:142:LEU:C	2:L:142:LEU:CD2	2.95	0.40
2:L:358:ILE:O	2:L:358:ILE:HG22	2.22	0.40
1:M:266:GLN:HB2	1:M:312:TYR:CE2	2.42	0.40
2:N:44:ILE:HG13	2:N:44:ILE:H	1.54	0.40
2:N:334:MET:HG2	2:N:367:ASP:CB	2.50	0.40
2:N:566:PRO:HB3	1:O:202:TRP:CH2	2.56	0.40
1:O:211:ASN:HD22	1:O:212:PHE:N	2.20	0.40
1:O:227:LEU:HD22	1:O:461:LEU:HD12	2.04	0.40
1:O:246:MET:HG3	1:O:352:SER:HB3	2.03	0.40
2:P:260:PHE:CD1	2:P:260:PHE:C	3.00	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	316/508 (62%)	246 (78%)	42 (13%)	28 (9%)	0 4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	C	506/508 (100%)	382 (76%)	84 (17%)	40 (8%)	1	5
1	E	307/508 (60%)	233 (76%)	42 (14%)	32 (10%)	0	2
1	G	307/508 (60%)	241 (78%)	34 (11%)	32 (10%)	0	2
1	I	311/508 (61%)	254 (82%)	38 (12%)	19 (6%)	1	9
1	K	343/508 (68%)	257 (75%)	58 (17%)	28 (8%)	0	5
1	M	319/508 (63%)	233 (73%)	46 (14%)	40 (12%)	0	1
1	O	307/508 (60%)	243 (79%)	36 (12%)	28 (9%)	0	3
2	B	587/589 (100%)	484 (82%)	77 (13%)	26 (4%)	2	13
2	D	587/589 (100%)	480 (82%)	77 (13%)	30 (5%)	1	11
2	F	587/589 (100%)	485 (83%)	78 (13%)	24 (4%)	2	15
2	H	587/589 (100%)	478 (81%)	74 (13%)	35 (6%)	1	9
2	J	587/589 (100%)	482 (82%)	78 (13%)	27 (5%)	2	13
2	L	587/589 (100%)	478 (81%)	82 (14%)	27 (5%)	2	13
2	N	587/589 (100%)	479 (82%)	75 (13%)	33 (6%)	1	9
2	P	587/589 (100%)	474 (81%)	84 (14%)	29 (5%)	1	12
All	All	7412/8776 (84%)	5929 (80%)	1005 (14%)	478 (6%)	1	8

All (478) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	200	GLY
1	A	203	ARG
1	A	206	PRO
1	A	215	HIS
1	A	265	PRO
1	A	275	ASP
1	A	360	GLU
1	A	427	LYS
1	A	469	TYR
1	A	470	GLY
1	A	492	LEU
1	A	493	CYS
2	B	46	SER
2	B	53	LYS
2	B	115	ALA
2	B	116	LYS
2	B	186	LEU

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Mol	Chain	Res	Type
2	B	211	LEU
2	B	216	ASN
2	B	234	PRO
2	B	302	LEU
2	B	451	ARG
2	B	470	LEU
2	B	530	LYS
1	C	33	GLU
1	C	101	LYS
1	C	120	ALA
1	C	343	LYS
1	C	362	LEU
1	C	363	ASP
1	C	428	LYS
1	C	432	VAL
1	C	438	PHE
2	D	115	ALA
2	D	116	LYS
2	D	186	LEU
2	D	211	LEU
2	D	216	ASN
2	D	234	PRO
2	D	302	LEU
2	D	451	ARG
2	D	470	LEU
1	E	200	GLY
1	E	219	PRO
1	E	221	SER
1	E	272	ASP
1	E	366	HIS
1	E	472	ASN
1	E	475	ARG
1	E	496	ASP
2	F	115	ALA
2	F	116	LYS
2	F	186	LEU
2	F	211	LEU
2	F	216	ASN
2	F	234	PRO
2	F	302	LEU
2	F	451	ARG
2	F	470	LEU

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Mol	Chain	Res	Type
2	F	530	LYS
1	G	191	GLU
1	G	204	ASP
1	G	205	ARG
1	G	206	PRO
1	G	207	PHE
1	G	213	LEU
1	G	220	ASP
1	G	273	GLN
1	G	274	HIS
1	G	281	ASP
1	G	343	LYS
1	G	366	HIS
1	G	438	PHE
2	H	44	ILE
2	H	45	ILE
2	H	115	ALA
2	H	116	LYS
2	H	186	LEU
2	H	211	LEU
2	H	216	ASN
2	H	234	PRO
2	H	302	LEU
2	H	451	ARG
2	H	470	LEU
2	H	529	ASP
1	I	190	THR
1	I	209	PRO
1	I	283	ALA
1	I	290	MET
1	I	343	LYS
1	I	361	THR
1	I	426	LEU
2	J	115	ALA
2	J	116	LYS
2	J	186	LEU
2	J	211	LEU
2	J	216	ASN
2	J	234	PRO
2	J	302	LEU
2	J	451	ARG
2	J	470	LEU

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Mol	Chain	Res	Type
2	J	529	ASP
1	K	188	GLN
1	K	199	SER
1	K	360	GLU
1	K	367	LEU
1	K	497	ALA
2	L	115	ALA
2	L	116	LYS
2	L	186	LEU
2	L	211	LEU
2	L	216	ASN
2	L	234	PRO
2	L	302	LEU
2	L	451	ARG
2	L	470	LEU
2	L	529	ASP
1	M	179	SER
1	M	184	SER
1	M	185	ILE
1	M	207	PHE
1	M	217	VAL
1	M	260	ASP
1	M	269	PRO
1	M	284	GLU
1	M	285	ALA
1	M	286	LEU
1	M	290	MET
1	M	438	PHE
1	M	466	MET
2	N	44	ILE
2	N	115	ALA
2	N	116	LYS
2	N	186	LEU
2	N	211	LEU
2	N	216	ASN
2	N	234	PRO
2	N	451	ARG
2	N	470	LEU
2	N	532	GLY
1	O	213	LEU
1	O	283	ALA
1	O	285	ALA

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Mol	Chain	Res	Type
1	O	289	PRO
1	O	363	ASP
1	O	364	ALA
1	O	438	PHE
2	P	44	ILE
2	P	51	ASN
2	P	115	ALA
2	P	116	LYS
2	P	186	LEU
2	P	211	LEU
2	P	216	ASN
2	P	234	PRO
2	P	302	LEU
2	P	451	ARG
2	P	470	LEU
1	A	184	SER
1	A	188	GLN
1	A	211	ASN
1	A	298	ARG
1	A	309	GLY
1	A	343	LYS
1	A	438	PHE
1	A	497	ALA
2	B	51	ASN
2	B	246	VAL
2	B	342	GLY
2	B	344	GLY
2	B	443	LYS
1	C	122	GLY
1	C	141	GLN
1	C	148	ALA
1	C	165	LEU
1	C	180	ALA
1	C	185	ILE
1	C	187	LYS
1	C	201	SER
1	C	212	PHE
1	C	298	ARG
1	C	309	GLY
1	C	431	GLU
1	C	498	GLU
2	D	44	ILE

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Mol	Chain	Res	Type
2	D	47	LYS
2	D	51	ASN
2	D	246	VAL
2	D	342	GLY
2	D	344	GLY
2	D	443	LYS
2	D	529	ASP
1	E	209	PRO
1	E	265	PRO
1	E	289	PRO
1	E	290	MET
1	E	298	ARG
1	E	309	GLY
1	E	343	LYS
1	E	426	LEU
1	E	438	PHE
1	E	470	GLY
1	E	474	ILE
1	E	477	LEU
2	F	342	GLY
2	F	344	GLY
2	F	443	LYS
1	G	193	SER
1	G	201	SER
1	G	298	ARG
1	G	309	GLY
1	G	422	TYR
1	G	426	LEU
2	H	43	GLU
2	H	246	VAL
2	H	342	GLY
2	H	344	GLY
2	H	443	LYS
2	H	532	GLY
1	I	201	SER
1	I	281	ASP
1	I	298	ARG
1	I	309	GLY
1	I	360	GLU
1	I	438	PHE
2	J	246	VAL
2	J	342	GLY

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Mol	Chain	Res	Type
2	J	344	GLY
1	K	12	ARG
1	K	186	SER
1	K	192	LEU
1	K	212	PHE
1	K	220	ASP
1	K	298	ARG
1	K	309	GLY
1	K	343	LYS
1	K	362	LEU
1	K	428	LYS
1	K	438	PHE
1	K	471	ILE
2	L	57	ALA
2	L	246	VAL
2	L	342	GLY
2	L	344	GLY
2	L	443	LYS
1	M	182	SER
1	M	188	GLN
1	M	195	GLU
1	M	200	GLY
1	M	214	ALA
1	M	216	GLY
1	M	298	ARG
1	M	309	GLY
1	M	343	LYS
1	M	362	LEU
1	M	367	LEU
1	M	491	PRO
2	N	246	VAL
2	N	302	LEU
2	N	342	GLY
2	N	344	GLY
2	N	443	LYS
2	N	531	GLY
1	O	189	GLU
1	O	192	LEU
1	O	199	SER
1	O	200	GLY
1	O	298	ARG
1	O	309	GLY

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Mol	Chain	Res	Type
1	O	343	LYS
1	O	367	LEU
1	O	425	GLY
2	P	50	GLY
2	P	246	VAL
2	P	342	GLY
2	P	344	GLY
2	P	443	LYS
2	B	104	LYS
2	B	469	PRO
1	C	41	VAL
1	C	265	PRO
1	C	281	ASP
1	C	289	PRO
1	C	364	ALA
1	C	414	GLU
1	C	424	GLN
1	C	504	THR
2	D	69	ALA
2	D	104	LYS
1	E	270	ALA
1	E	469	TYR
1	E	495	LEU
2	F	48	GLU
2	F	104	LYS
2	F	246	VAL
2	F	469	PRO
1	G	268	HIS
1	G	269	PRO
1	G	287	GLN
1	G	492	LEU
2	H	52	VAL
2	H	104	LYS
2	H	469	PRO
1	I	273	GLN
2	J	104	LYS
2	J	106	GLN
2	J	443	LYS
1	K	190	THR
1	K	364	ALA
2	L	69	ALA
2	L	104	LYS

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Mol	Chain	Res	Type
1	M	199	SER
1	M	201	SER
1	M	467	ILE
2	N	59	ASP
2	N	104	LYS
2	N	106	GLN
2	N	469	PRO
2	N	528	GLU
1	O	219	PRO
1	O	359	ASN
1	O	362	LEU
1	O	424	GLN
2	P	104	LYS
2	P	469	PRO
2	P	532	GLY
1	A	212	PHE
1	A	250	ASN
1	A	414	GLU
1	A	466	MET
2	B	260	PHE
1	C	71	ALA
1	C	249	ASP
1	C	250	ASN
2	D	50	GLY
2	D	57	ALA
2	D	106	GLN
2	D	119	PRO
2	D	260	PHE
2	D	469	PRO
1	E	205	ARG
1	E	213	LEU
1	E	250	ASN
1	E	286	LEU
1	E	414	GLU
2	F	260	PHE
1	G	200	GLY
1	G	214	ALA
1	G	250	ASN
1	G	290	MET
1	G	363	ASP
1	G	414	GLU
2	H	51	ASN

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Mol	Chain	Res	Type
2	H	56	GLY
2	H	59	ASP
2	H	69	ALA
2	H	260	PHE
1	I	215	HIS
1	I	250	ASN
1	I	414	GLU
1	I	469	TYR
2	J	69	ALA
2	J	260	PHE
2	J	469	PRO
1	K	180	ALA
1	K	250	ASN
1	K	414	GLU
2	L	50	GLY
2	L	106	GLN
2	L	260	PHE
2	L	469	PRO
1	M	180	ALA
1	M	220	ASP
1	M	250	ASN
1	M	283	ALA
1	M	414	GLU
2	N	51	ASN
2	N	69	ALA
2	N	260	PHE
1	O	198	SER
1	O	220	ASP
1	O	250	ASN
1	O	414	GLU
1	O	491	PRO
2	P	69	ALA
2	P	106	GLN
2	P	167	LEU
2	P	260	PHE
1	A	209	PRO
1	A	249	ASP
2	B	106	GLN
2	B	119	PRO
2	B	281	GLN
2	B	456	PRO
1	C	50	VAL

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Mol	Chain	Res	Type
2	D	167	LEU
2	D	392	PRO
2	D	456	PRO
1	E	217	VAL
2	F	69	ALA
2	F	119	PRO
2	F	167	LEU
2	F	281	GLN
2	F	392	PRO
2	F	456	PRO
2	H	106	GLN
2	H	119	PRO
2	H	167	LEU
2	H	281	GLN
2	H	335	TYR
2	J	51	ASN
2	J	119	PRO
2	J	167	LEU
2	J	281	GLN
2	J	335	TYR
2	J	392	PRO
1	K	43	SER
2	L	54	ALA
2	L	119	PRO
2	L	167	LEU
2	L	392	PRO
1	M	205	ARG
1	M	206	PRO
1	M	430	VAL
1	M	473	ASN
2	N	45	ILE
2	N	119	PRO
2	N	167	LEU
2	N	335	TYR
2	N	392	PRO
2	N	456	PRO
2	N	527	GLY
1	O	286	LEU
1	O	477	LEU
2	P	49	GLN
2	P	119	PRO
2	P	456	PRO

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Mol	Chain	Res	Type
1	A	185	ILE
2	B	392	PRO
1	C	157	SER
1	C	221	SER
2	D	281	GLN
1	G	249	ASP
2	H	392	PRO
2	H	456	PRO
2	J	456	PRO
1	K	281	ASP
2	L	456	PRO
1	M	281	ASP
2	P	281	GLN
2	P	392	PRO
1	C	97	LEU
1	C	471	ILE
1	E	216	GLY
1	E	269	PRO
1	K	4	GLY
2	N	60	VAL
1	C	85	PRO
1	E	478	VAL
1	G	209	PRO
2	H	50	GLY
1	I	282	PRO
1	K	265	PRO
1	M	478	VAL
1	A	281	ASP
2	D	105	ILE
2	L	105	ILE
1	M	268	HIS
2	N	105	ILE
1	O	281	ASP
2	P	105	ILE
2	B	105	ILE
2	H	105	ILE
2	J	105	ILE
1	K	185	ILE
1	C	470	GLY
1	G	216	GLY
1	K	288	LEU

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	281/434 (65%)	252 (90%)	29 (10%)	7	25
1	C	434/434 (100%)	383 (88%)	51 (12%)	5	20
1	E	272/434 (63%)	234 (86%)	38 (14%)	3	15
1	G	273/434 (63%)	243 (89%)	30 (11%)	6	23
1	I	276/434 (64%)	248 (90%)	28 (10%)	7	26
1	K	284/434 (65%)	245 (86%)	39 (14%)	3	16
1	M	276/434 (64%)	242 (88%)	34 (12%)	4	19
1	O	274/434 (63%)	239 (87%)	35 (13%)	4	18
2	B	513/513 (100%)	454 (88%)	59 (12%)	5	21
2	D	513/513 (100%)	459 (90%)	54 (10%)	6	25
2	F	513/513 (100%)	461 (90%)	52 (10%)	7	26
2	H	513/513 (100%)	458 (89%)	55 (11%)	6	24
2	J	513/513 (100%)	460 (90%)	53 (10%)	7	25
2	L	513/513 (100%)	459 (90%)	54 (10%)	6	25
2	N	513/513 (100%)	455 (89%)	58 (11%)	5	21
2	P	513/513 (100%)	458 (89%)	55 (11%)	6	24
All	All	6474/7576 (86%)	5750 (89%)	724 (11%)	6	22

All (724) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	187	LYS
1	A	203	ARG
1	A	207	PHE
1	A	217	VAL
1	A	227	LEU
1	A	246	MET
1	A	264	GLN
1	A	288	LEU

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Mol	Chain	Res	Type
1	A	290	MET
1	A	298	ARG
1	A	300	HIS
1	A	366	HIS
1	A	373	ILE
1	A	376	VAL
1	A	398	LEU
1	A	414	GLU
1	A	416	SER
1	A	419	VAL
1	A	426	LEU
1	A	430	VAL
1	A	441	GLU
1	A	454	VAL
1	A	459	LEU
1	A	461	LEU
1	A	462	GLU
1	A	471	ILE
1	A	477	LEU
1	A	480	HIS
1	A	486	MET
2	B	9	ASP
2	B	41	GLU
2	B	60	VAL
2	B	61	VAL
2	B	62	LEU
2	B	66	ASP
2	B	82	ARG
2	B	85	GLN
2	B	89	GLU
2	B	91	ILE
2	B	98	ARG
2	B	108	LEU
2	B	117	ILE
2	B	119	PRO
2	B	120	PHE
2	B	126	LEU
2	B	132	THR
2	B	147	HIS
2	B	148	GLN
2	B	150	ILE
2	B	170	PRO

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Mol	Chain	Res	Type
2	B	192	TYR
2	B	211	LEU
2	B	212	HIS
2	B	230	VAL
2	B	234	PRO
2	B	236	ILE
2	B	237	ILE
2	B	244	ILE
2	B	249	ARG
2	B	254	GLU
2	B	261	THR
2	B	271	VAL
2	B	308	MET
2	B	327	LEU
2	B	357	ASP
2	B	381	LEU
2	B	384	THR
2	B	392	PRO
2	B	393	LEU
2	B	413	LEU
2	B	431	ILE
2	B	446	GLU
2	B	469	PRO
2	B	471	PRO
2	B	489	VAL
2	B	493	ASN
2	B	503	ASN
2	B	509	GLU
2	B	511	ILE
2	B	517	ARG
2	B	521	LEU
2	B	535	ILE
2	B	551	ILE
2	B	561	LEU
2	B	566	PRO
2	B	569	ILE
2	B	578	CYS
2	B	580	SER
1	C	3	ASP
1	C	6	VAL
1	C	9	LEU
1	C	44	LEU

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Mol	Chain	Res	Type
1	C	49	GLU
1	C	59	LYS
1	C	66	GLU
1	C	72	ARG
1	C	84	ILE
1	C	91	GLN
1	C	97	LEU
1	C	106	LYS
1	C	114	ARG
1	C	128	VAL
1	C	140	LEU
1	C	141	GLN
1	C	151	LEU
1	C	162	ARG
1	C	165	LEU
1	C	170	LEU
1	C	192	LEU
1	C	196	MET
1	C	206	PRO
1	C	208	LYS
1	C	217	VAL
1	C	227	LEU
1	C	246	MET
1	C	267	GLN
1	C	273	GLN
1	C	276	THR
1	C	290	MET
1	C	298	ARG
1	C	300	HIS
1	C	363	ASP
1	C	365	THR
1	C	373	ILE
1	C	376	VAL
1	C	398	LEU
1	C	414	GLU
1	C	416	SER
1	C	441	GLU
1	C	454	VAL
1	C	461	LEU
1	C	462	GLU
1	C	472	ASN
1	C	475	ARG

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Mol	Chain	Res	Type
1	C	477	LEU
1	C	480	HIS
1	C	494	ARG
1	C	495	LEU
1	C	500	ARG
2	D	9	ASP
2	D	51	ASN
2	D	62	LEU
2	D	66	ASP
2	D	82	ARG
2	D	85	GLN
2	D	89	GLU
2	D	91	ILE
2	D	98	ARG
2	D	108	LEU
2	D	117	ILE
2	D	119	PRO
2	D	120	PHE
2	D	126	LEU
2	D	132	THR
2	D	147	HIS
2	D	148	GLN
2	D	150	ILE
2	D	192	TYR
2	D	211	LEU
2	D	212	HIS
2	D	234	PRO
2	D	236	ILE
2	D	237	ILE
2	D	244	ILE
2	D	249	ARG
2	D	254	GLU
2	D	261	THR
2	D	271	VAL
2	D	308	MET
2	D	323	THR
2	D	327	LEU
2	D	357	ASP
2	D	381	LEU
2	D	384	THR
2	D	392	PRO
2	D	393	LEU

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Mol	Chain	Res	Type
2	D	413	LEU
2	D	431	ILE
2	D	453	THR
2	D	454	LEU
2	D	469	PRO
2	D	489	VAL
2	D	493	ASN
2	D	509	GLU
2	D	511	ILE
2	D	517	ARG
2	D	521	LEU
2	D	529	ASP
2	D	535	ILE
2	D	551	ILE
2	D	561	LEU
2	D	569	ILE
2	D	580	SER
1	E	202	TRP
1	E	213	LEU
1	E	219	PRO
1	E	227	LEU
1	E	246	MET
1	E	248	THR
1	E	268	HIS
1	E	276	THR
1	E	284	GLU
1	E	286	LEU
1	E	288	LEU
1	E	290	MET
1	E	298	ARG
1	E	300	HIS
1	E	344	PRO
1	E	356	VAL
1	E	366	HIS
1	E	370	PHE
1	E	373	ILE
1	E	376	VAL
1	E	398	LEU
1	E	414	GLU
1	E	416	SER
1	E	426	LEU
1	E	430	VAL

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Mol	Chain	Res	Type
1	E	441	GLU
1	E	454	VAL
1	E	461	LEU
1	E	462	GLU
1	E	465	THR
1	E	466	MET
1	E	468	LYS
1	E	473	ASN
1	E	475	ARG
1	E	477	LEU
1	E	478	VAL
1	E	486	MET
1	E	495	LEU
2	F	9	ASP
2	F	18	THR
2	F	62	LEU
2	F	66	ASP
2	F	82	ARG
2	F	85	GLN
2	F	89	GLU
2	F	91	ILE
2	F	98	ARG
2	F	108	LEU
2	F	117	ILE
2	F	119	PRO
2	F	120	PHE
2	F	126	LEU
2	F	132	THR
2	F	147	HIS
2	F	148	GLN
2	F	150	ILE
2	F	192	TYR
2	F	211	LEU
2	F	212	HIS
2	F	234	PRO
2	F	236	ILE
2	F	237	ILE
2	F	244	ILE
2	F	249	ARG
2	F	254	GLU
2	F	261	THR
2	F	271	VAL

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Mol	Chain	Res	Type
2	F	308	MET
2	F	327	LEU
2	F	357	ASP
2	F	381	LEU
2	F	384	THR
2	F	392	PRO
2	F	393	LEU
2	F	413	LEU
2	F	431	ILE
2	F	453	THR
2	F	454	LEU
2	F	469	PRO
2	F	489	VAL
2	F	493	ASN
2	F	509	GLU
2	F	511	ILE
2	F	517	ARG
2	F	521	LEU
2	F	535	ILE
2	F	551	ILE
2	F	561	LEU
2	F	569	ILE
2	F	580	SER
1	G	202	TRP
1	G	207	PHE
1	G	211	ASN
1	G	227	LEU
1	G	246	MET
1	G	268	HIS
1	G	271	ARG
1	G	274	HIS
1	G	275	ASP
1	G	279	LEU
1	G	290	MET
1	G	298	ARG
1	G	300	HIS
1	G	367	LEU
1	G	373	ILE
1	G	376	VAL
1	G	398	LEU
1	G	414	GLU
1	G	416	SER

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Mol	Chain	Res	Type
1	G	423	HIS
1	G	424	GLN
1	G	432	VAL
1	G	441	GLU
1	G	454	VAL
1	G	461	LEU
1	G	462	GLU
1	G	468	LYS
1	G	475	ARG
1	G	476	GLU
1	G	480	HIS
2	H	9	ASP
2	H	45	ILE
2	H	62	LEU
2	H	66	ASP
2	H	82	ARG
2	H	85	GLN
2	H	89	GLU
2	H	91	ILE
2	H	98	ARG
2	H	108	LEU
2	H	117	ILE
2	H	119	PRO
2	H	120	PHE
2	H	126	LEU
2	H	132	THR
2	H	147	HIS
2	H	148	GLN
2	H	150	ILE
2	H	192	TYR
2	H	211	LEU
2	H	212	HIS
2	H	230	VAL
2	H	234	PRO
2	H	236	ILE
2	H	237	ILE
2	H	244	ILE
2	H	249	ARG
2	H	254	GLU
2	H	261	THR
2	H	271	VAL
2	H	308	MET

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Mol	Chain	Res	Type
2	H	327	LEU
2	H	357	ASP
2	H	381	LEU
2	H	384	THR
2	H	391	PHE
2	H	392	PRO
2	H	393	LEU
2	H	413	LEU
2	H	431	ILE
2	H	453	THR
2	H	469	PRO
2	H	471	PRO
2	H	489	VAL
2	H	493	ASN
2	H	509	GLU
2	H	511	ILE
2	H	517	ARG
2	H	521	LEU
2	H	533	TYR
2	H	535	ILE
2	H	551	ILE
2	H	561	LEU
2	H	569	ILE
2	H	580	SER
1	I	190	THR
1	I	203	ARG
1	I	207	PHE
1	I	213	LEU
1	I	227	LEU
1	I	246	MET
1	I	267	GLN
1	I	274	HIS
1	I	290	MET
1	I	298	ARG
1	I	300	HIS
1	I	360	GLU
1	I	361	THR
1	I	373	ILE
1	I	376	VAL
1	I	398	LEU
1	I	414	GLU
1	I	416	SER

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Mol	Chain	Res	Type
1	I	419	VAL
1	I	428	LYS
1	I	441	GLU
1	I	454	VAL
1	I	461	LEU
1	I	462	GLU
1	I	475	ARG
1	I	486	MET
1	I	493	CYS
1	I	499	PRO
2	J	9	ASP
2	J	61	VAL
2	J	62	LEU
2	J	66	ASP
2	J	82	ARG
2	J	85	GLN
2	J	89	GLU
2	J	91	ILE
2	J	98	ARG
2	J	108	LEU
2	J	117	ILE
2	J	119	PRO
2	J	120	PHE
2	J	126	LEU
2	J	127	ARG
2	J	132	THR
2	J	147	HIS
2	J	148	GLN
2	J	150	ILE
2	J	170	PRO
2	J	192	TYR
2	J	211	LEU
2	J	212	HIS
2	J	234	PRO
2	J	236	ILE
2	J	237	ILE
2	J	244	ILE
2	J	249	ARG
2	J	254	GLU
2	J	271	VAL
2	J	308	MET
2	J	327	LEU

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Mol	Chain	Res	Type
2	J	357	ASP
2	J	381	LEU
2	J	384	THR
2	J	392	PRO
2	J	393	LEU
2	J	413	LEU
2	J	431	ILE
2	J	453	THR
2	J	469	PRO
2	J	489	VAL
2	J	493	ASN
2	J	509	GLU
2	J	511	ILE
2	J	517	ARG
2	J	521	LEU
2	J	535	ILE
2	J	551	ILE
2	J	561	LEU
2	J	569	ILE
2	J	578	CYS
2	J	580	SER
1	K	185	ILE
1	K	188	GLN
1	K	194	PRO
1	K	195	GLU
1	K	197	ILE
1	K	211	ASN
1	K	213	LEU
1	K	217	VAL
1	K	220	ASP
1	K	227	LEU
1	K	246	MET
1	K	267	GLN
1	K	280	ARG
1	K	286	LEU
1	K	288	LEU
1	K	290	MET
1	K	298	ARG
1	K	300	HIS
1	K	367	LEU
1	K	373	ILE
1	K	376	VAL

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Mol	Chain	Res	Type
1	K	398	LEU
1	K	414	GLU
1	K	416	SER
1	K	419	VAL
1	K	424	GLN
1	K	426	LEU
1	K	432	VAL
1	K	441	GLU
1	K	454	VAL
1	K	459	LEU
1	K	461	LEU
1	K	462	GLU
1	K	465	THR
1	K	474	ILE
1	K	477	LEU
1	K	480	HIS
1	K	492	LEU
1	K	493	CYS
2	L	9	ASP
2	L	40	SER
2	L	44	ILE
2	L	62	LEU
2	L	66	ASP
2	L	82	ARG
2	L	85	GLN
2	L	89	GLU
2	L	91	ILE
2	L	98	ARG
2	L	108	LEU
2	L	117	ILE
2	L	119	PRO
2	L	120	PHE
2	L	126	LEU
2	L	132	THR
2	L	147	HIS
2	L	148	GLN
2	L	150	ILE
2	L	170	PRO
2	L	192	TYR
2	L	211	LEU
2	L	212	HIS
2	L	234	PRO

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Mol	Chain	Res	Type
2	L	236	ILE
2	L	237	ILE
2	L	244	ILE
2	L	249	ARG
2	L	254	GLU
2	L	261	THR
2	L	271	VAL
2	L	308	MET
2	L	327	LEU
2	L	357	ASP
2	L	381	LEU
2	L	384	THR
2	L	392	PRO
2	L	393	LEU
2	L	413	LEU
2	L	431	ILE
2	L	453	THR
2	L	469	PRO
2	L	471	PRO
2	L	489	VAL
2	L	493	ASN
2	L	509	GLU
2	L	511	ILE
2	L	517	ARG
2	L	521	LEU
2	L	535	ILE
2	L	551	ILE
2	L	561	LEU
2	L	569	ILE
2	L	580	SER
1	M	195	GLU
1	M	204	ASP
1	M	206	PRO
1	M	208	LYS
1	M	213	LEU
1	M	218	LEU
1	M	227	LEU
1	M	246	MET
1	M	267	GLN
1	M	269	PRO
1	M	274	HIS
1	M	277	PHE

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Mol	Chain	Res	Type
1	M	290	MET
1	M	298	ARG
1	M	300	HIS
1	M	354	ASP
1	M	363	ASP
1	M	366	HIS
1	M	370	PHE
1	M	373	ILE
1	M	376	VAL
1	M	398	LEU
1	M	414	GLU
1	M	416	SER
1	M	419	VAL
1	M	441	GLU
1	M	454	VAL
1	M	461	LEU
1	M	462	GLU
1	M	467	ILE
1	M	475	ARG
1	M	477	LEU
1	M	480	HIS
1	M	486	MET
2	N	9	ASP
2	N	18	THR
2	N	47	LYS
2	N	59	ASP
2	N	60	VAL
2	N	62	LEU
2	N	66	ASP
2	N	82	ARG
2	N	89	GLU
2	N	91	ILE
2	N	98	ARG
2	N	108	LEU
2	N	117	ILE
2	N	119	PRO
2	N	120	PHE
2	N	126	LEU
2	N	132	THR
2	N	142	LEU
2	N	147	HIS
2	N	148	GLN

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Mol	Chain	Res	Type
2	N	150	ILE
2	N	170	PRO
2	N	192	TYR
2	N	211	LEU
2	N	212	HIS
2	N	234	PRO
2	N	236	ILE
2	N	237	ILE
2	N	244	ILE
2	N	249	ARG
2	N	254	GLU
2	N	261	THR
2	N	271	VAL
2	N	308	MET
2	N	327	LEU
2	N	357	ASP
2	N	381	LEU
2	N	384	THR
2	N	392	PRO
2	N	393	LEU
2	N	413	LEU
2	N	431	ILE
2	N	453	THR
2	N	469	PRO
2	N	471	PRO
2	N	489	VAL
2	N	493	ASN
2	N	509	GLU
2	N	511	ILE
2	N	517	ARG
2	N	521	LEU
2	N	530	LYS
2	N	535	ILE
2	N	551	ILE
2	N	561	LEU
2	N	569	ILE
2	N	578	CYS
2	N	580	SER
1	O	191	GLU
1	O	195	GLU
1	O	204	ASP
1	O	207	PHE

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Mol	Chain	Res	Type
1	O	208	LYS
1	O	227	LEU
1	O	246	MET
1	O	264	GLN
1	O	288	LEU
1	O	289	PRO
1	O	290	MET
1	O	298	ARG
1	O	300	HIS
1	O	358	ARG
1	O	361	THR
1	O	363	ASP
1	O	367	LEU
1	O	373	ILE
1	O	376	VAL
1	O	398	LEU
1	O	414	GLU
1	O	416	SER
1	O	419	VAL
1	O	441	GLU
1	O	454	VAL
1	O	461	LEU
1	O	462	GLU
1	O	465	THR
1	O	468	LYS
1	O	469	TYR
1	O	474	ILE
1	O	475	ARG
1	O	477	LEU
1	O	480	HIS
1	O	492	LEU
2	P	9	ASP
2	P	41	GLU
2	P	45	ILE
2	P	49	GLN
2	P	61	VAL
2	P	62	LEU
2	P	66	ASP
2	P	82	ARG
2	P	85	GLN
2	P	89	GLU
2	P	91	ILE

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Mol	Chain	Res	Type
2	P	98	ARG
2	P	108	LEU
2	P	117	ILE
2	P	119	PRO
2	P	120	PHE
2	P	126	LEU
2	P	132	THR
2	P	147	HIS
2	P	148	GLN
2	P	150	ILE
2	P	192	TYR
2	P	211	LEU
2	P	212	HIS
2	P	234	PRO
2	P	236	ILE
2	P	237	ILE
2	P	244	ILE
2	P	249	ARG
2	P	254	GLU
2	P	261	THR
2	P	271	VAL
2	P	308	MET
2	P	327	LEU
2	P	357	ASP
2	P	381	LEU
2	P	384	THR
2	P	392	PRO
2	P	393	LEU
2	P	413	LEU
2	P	431	ILE
2	P	453	THR
2	P	469	PRO
2	P	489	VAL
2	P	493	ASN
2	P	509	GLU
2	P	511	ILE
2	P	517	ARG
2	P	521	LEU
2	P	529	ASP
2	P	535	ILE
2	P	551	ILE
2	P	561	LEU

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Mol	Chain	Res	Type
2	P	569	ILE
2	P	580	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (261) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	223	HIS
1	A	258	ASN
1	A	267	GLN
1	A	268	HIS
1	A	294	GLN
1	A	302	GLN
1	A	308	GLN
1	A	359	ASN
1	A	372	GLN
1	A	473	ASN
1	A	480	HIS
2	B	49	GLN
2	B	70	ASN
2	B	143	GLN
2	B	147	HIS
2	B	162	HIS
2	B	187	ASN
2	B	212	HIS
2	B	241	HIS
2	B	297	HIS
2	B	345	ASN
2	B	360	HIS
2	B	420	GLN
2	B	448	GLN
2	B	486	ASN
2	B	493	ASN
2	B	503	ASN
2	B	584	ASN
1	C	45	GLN
1	C	60	HIS
1	C	91	GLN
1	C	110	ASN
1	C	137	GLN
1	C	141	GLN
1	C	188	GLN
1	C	211	ASN

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Mol	Chain	Res	Type
1	C	223	HIS
1	C	233	GLN
1	C	264	GLN
1	C	266	GLN
1	C	268	HIS
1	C	273	GLN
1	C	274	HIS
1	C	294	GLN
1	C	302	GLN
1	C	308	GLN
1	C	322	ASN
1	C	372	GLN
1	C	410	ASN
1	C	472	ASN
1	C	480	HIS
1	C	505	GLN
2	D	49	GLN
2	D	70	ASN
2	D	85	GLN
2	D	143	GLN
2	D	147	HIS
2	D	162	HIS
2	D	187	ASN
2	D	212	HIS
2	D	241	HIS
2	D	250	ASN
2	D	297	HIS
2	D	326	ASN
2	D	345	ASN
2	D	360	HIS
2	D	420	GLN
2	D	448	GLN
2	D	486	ASN
2	D	493	ASN
2	D	503	ASN
2	D	512	HIS
2	D	584	ASN
1	E	223	HIS
1	E	294	GLN
1	E	300	HIS
1	E	302	GLN
1	E	308	GLN

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Mol	Chain	Res	Type
1	E	372	GLN
1	E	423	HIS
2	F	70	ASN
2	F	143	GLN
2	F	147	HIS
2	F	162	HIS
2	F	187	ASN
2	F	212	HIS
2	F	241	HIS
2	F	250	ASN
2	F	297	HIS
2	F	345	ASN
2	F	360	HIS
2	F	420	GLN
2	F	448	GLN
2	F	486	ASN
2	F	493	ASN
2	F	503	ASN
2	F	584	ASN
1	G	211	ASN
1	G	215	HIS
1	G	223	HIS
1	G	266	GLN
1	G	268	HIS
1	G	274	HIS
1	G	294	GLN
1	G	302	GLN
1	G	308	GLN
1	G	359	ASN
1	G	372	GLN
1	G	410	ASN
1	G	423	HIS
1	G	472	ASN
2	H	70	ASN
2	H	85	GLN
2	H	143	GLN
2	H	147	HIS
2	H	162	HIS
2	H	187	ASN
2	H	212	HIS
2	H	241	HIS
2	H	250	ASN

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Mol	Chain	Res	Type
2	H	297	HIS
2	H	345	ASN
2	H	360	HIS
2	H	389	ASN
2	H	420	GLN
2	H	448	GLN
2	H	486	ASN
2	H	493	ASN
2	H	503	ASN
2	H	584	ASN
1	I	233	GLN
1	I	258	ASN
1	I	268	HIS
1	I	273	GLN
1	I	294	GLN
1	I	302	GLN
1	I	308	GLN
1	I	313	ASN
1	I	327	HIS
1	I	359	ASN
1	I	372	GLN
2	J	49	GLN
2	J	70	ASN
2	J	85	GLN
2	J	147	HIS
2	J	162	HIS
2	J	187	ASN
2	J	212	HIS
2	J	241	HIS
2	J	250	ASN
2	J	297	HIS
2	J	345	ASN
2	J	360	HIS
2	J	420	GLN
2	J	448	GLN
2	J	486	ASN
2	J	493	ASN
2	J	503	ASN
2	J	584	ASN
1	K	188	GLN
1	K	211	ASN
1	K	215	HIS

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Mol	Chain	Res	Type
1	K	223	HIS
1	K	233	GLN
1	K	264	GLN
1	K	268	HIS
1	K	287	GLN
1	K	294	GLN
1	K	302	GLN
1	K	308	GLN
1	K	359	ASN
1	K	372	GLN
1	K	472	ASN
1	K	480	HIS
2	L	51	ASN
2	L	70	ASN
2	L	147	HIS
2	L	162	HIS
2	L	187	ASN
2	L	212	HIS
2	L	241	HIS
2	L	250	ASN
2	L	297	HIS
2	L	345	ASN
2	L	360	HIS
2	L	402	HIS
2	L	420	GLN
2	L	441	ASN
2	L	448	GLN
2	L	486	ASN
2	L	493	ASN
2	L	503	ASN
2	L	584	ASN
1	M	223	HIS
1	M	233	GLN
1	M	258	ASN
1	M	264	GLN
1	M	268	HIS
1	M	273	GLN
1	M	294	GLN
1	M	300	HIS
1	M	302	GLN
1	M	308	GLN
1	M	322	ASN

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Mol	Chain	Res	Type
1	M	359	ASN
1	M	366	HIS
1	M	372	GLN
1	M	410	ASN
1	M	423	HIS
2	N	49	GLN
2	N	70	ASN
2	N	85	GLN
2	N	143	GLN
2	N	147	HIS
2	N	162	HIS
2	N	187	ASN
2	N	212	HIS
2	N	241	HIS
2	N	297	HIS
2	N	345	ASN
2	N	360	HIS
2	N	378	GLN
2	N	420	GLN
2	N	448	GLN
2	N	486	ASN
2	N	493	ASN
2	N	503	ASN
2	N	584	ASN
1	O	188	GLN
1	O	211	ASN
1	O	223	HIS
1	O	258	ASN
1	O	264	GLN
1	O	294	GLN
1	O	302	GLN
1	O	308	GLN
1	O	359	ASN
1	O	366	HIS
1	O	372	GLN
1	O	472	ASN
2	P	70	ASN
2	P	85	GLN
2	P	143	GLN
2	P	147	HIS
2	P	162	HIS
2	P	187	ASN

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Mol	Chain	Res	Type
2	P	212	HIS
2	P	241	HIS
2	P	250	ASN
2	P	297	HIS
2	P	345	ASN
2	P	360	HIS
2	P	389	ASN
2	P	402	HIS
2	P	420	GLN
2	P	441	ASN
2	P	448	GLN
2	P	486	ASN
2	P	493	ASN
2	P	503	ASN
2	P	584	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](#)

8 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	PHE	G	509	-	11,12,12	0.67	0	11,15,15	0.27	0
3	PHE	E	509	-	11,12,12	0.85	0	11,15,15	0.25	0
3	PHE	C	509	-	11,12,12	0.76	0	11,15,15	0.41	0
3	PHE	K	509	-	11,12,12	0.73	0	11,15,15	0.34	0
3	PHE	M	509	-	11,12,12	0.70	0	11,15,15	0.34	0
3	PHE	O	509	-	11,12,12	0.88	0	11,15,15	0.27	0
3	PHE	A	509	-	11,12,12	0.97	0	11,15,15	0.43	0
3	PHE	I	509	-	11,12,12	0.66	0	11,15,15	0.24	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	PHE	G	509	-	-	2/8/8/8	0/1/1/1
3	PHE	E	509	-	-	4/8/8/8	0/1/1/1
3	PHE	C	509	-	-	0/8/8/8	0/1/1/1
3	PHE	K	509	-	-	1/8/8/8	0/1/1/1
3	PHE	M	509	-	-	4/8/8/8	0/1/1/1
3	PHE	O	509	-	-	4/8/8/8	0/1/1/1
3	PHE	A	509	-	-	0/8/8/8	0/1/1/1
3	PHE	I	509	-	-	4/8/8/8	0/1/1/1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (19) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	E	509	PHE	O-C-CA-N
3	I	509	PHE	N-CA-CB-CG
3	O	509	PHE	N-CA-CB-CG
3	O	509	PHE	C-CA-CB-CG
3	E	509	PHE	OXT-C-CA-N
3	M	509	PHE	CA-CB-CG-CD2
3	M	509	PHE	CA-CB-CG-CD1
3	I	509	PHE	C-CA-CB-CG
3	I	509	PHE	CA-CB-CG-CD1
3	I	509	PHE	CA-CB-CG-CD2

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Mol	Chain	Res	Type	Atoms
3	E	509	PHE	OXT-C-CA-CB
3	O	509	PHE	O-C-CA-CB
3	O	509	PHE	OXT-C-CA-CB
3	E	509	PHE	O-C-CA-CB
3	M	509	PHE	OXT-C-CA-N
3	G	509	PHE	O-C-CA-N
3	G	509	PHE	OXT-C-CA-N
3	K	509	PHE	CA-CB-CG-CD2
3	M	509	PHE	O-C-CA-N

There are no ring outliers.

8 monomers are involved in 30 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	G	509	PHE	3	0
3	E	509	PHE	1	0
3	C	509	PHE	2	0
3	K	509	PHE	7	0
3	M	509	PHE	4	0
3	O	509	PHE	4	0
3	A	509	PHE	7	0
3	I	509	PHE	2	0

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	318/508 (62%)	-0.19	5 (1%) 70 52	47, 84, 168, 200	0
1	C	508/508 (100%)	-0.14	6 (1%) 76 58	50, 107, 181, 201	0
1	E	309/508 (60%)	0.02	7 (2%) 61 42	47, 103, 181, 201	0
1	G	309/508 (60%)	-0.04	4 (1%) 75 56	54, 103, 179, 200	0
1	I	313/508 (61%)	-0.24	4 (1%) 75 56	42, 91, 164, 192	0
1	K	349/508 (68%)	-0.15	4 (1%) 78 60	48, 101, 178, 201	0
1	M	321/508 (63%)	0.21	5 (1%) 70 52	51, 133, 189, 201	0
1	O	309/508 (60%)	-0.06	5 (1%) 70 52	65, 112, 183, 201	0
2	B	589/589 (100%)	-0.12	7 (1%) 76 58	47, 93, 154, 201	0
2	D	589/589 (100%)	0.15	7 (1%) 76 58	56, 129, 199, 201	0
2	F	589/589 (100%)	0.14	15 (2%) 58 39	51, 104, 175, 201	0
2	H	589/589 (100%)	0.16	6 (1%) 79 63	63, 131, 188, 201	0
2	J	589/589 (100%)	-0.04	7 (1%) 76 58	57, 99, 158, 201	0
2	L	589/589 (100%)	0.13	9 (1%) 72 53	61, 139, 201, 201	0
2	N	589/589 (100%)	0.44	31 (5%) 32 22	58, 134, 192, 201	0
2	P	589/589 (100%)	0.28	14 (2%) 59 40	73, 153, 201, 201	0
All	All	7448/8776 (84%)	0.06	136 (1%) 67 49	42, 114, 190, 201	0

All (136) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	O	486	MET	4.0
2	N	535	ILE	3.9
1	M	227	LEU	3.8
2	H	335	TYR	3.7
2	N	577	PRO	3.6

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Mol	Chain	Res	Type	RSRZ
2	L	344	GLY	3.4
2	H	183	PHE	3.4
1	A	249	ASP	3.3
2	F	578	CYS	3.3
1	C	496	ASP	3.3
2	F	545	PRO	3.3
2	F	544	PHE	3.3
2	N	423	ILE	3.2
2	D	344	GLY	3.2
2	N	215	GLU	3.2
2	J	183	PHE	3.2
1	O	414	GLU	3.1
1	M	488	TYR	3.1
2	N	221	PRO	3.0
1	K	414	GLU	3.0
2	B	245	THR	3.0
2	P	335	TYR	3.0
2	N	570	THR	3.0
1	A	494	ARG	2.9
1	E	269	PRO	2.9
1	M	206	PRO	2.9
1	E	479	GLY	2.9
1	E	285	ALA	2.9
1	A	366	HIS	2.9
2	F	568	VAL	2.8
2	D	560	LYS	2.8
2	F	423	ILE	2.8
2	N	564	LEU	2.8
2	N	172	THR	2.8
1	A	414	GLU	2.8
2	P	204	ASP	2.7
2	N	427	LEU	2.7
2	J	544	PHE	2.7
2	N	561	LEU	2.7
2	P	230	VAL	2.7
2	H	560	LYS	2.7
2	N	241	HIS	2.7
1	C	502	PRO	2.6
2	D	183	PHE	2.6
2	H	535	ILE	2.6
2	N	434	THR	2.6
2	N	452	THR	2.6

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Mol	Chain	Res	Type	RSRZ
2	D	235	PRO	2.6
2	L	29	PHE	2.6
2	N	544	PHE	2.6
1	G	249	ASP	2.6
1	C	414	GLU	2.6
2	N	472	LEU	2.6
2	B	560	LYS	2.6
2	L	171	PHE	2.5
2	N	291	PHE	2.5
2	J	470	LEU	2.5
2	L	85	GLN	2.5
2	N	227	ASN	2.5
1	K	486	MET	2.5
2	F	427	LEU	2.5
1	M	414	GLU	2.5
1	G	211	ASN	2.5
2	P	252	PHE	2.5
2	P	470	LEU	2.5
2	N	287	ALA	2.5
2	N	474	LEU	2.5
1	C	486	MET	2.4
2	H	188	LYS	2.4
1	E	495	LEU	2.4
2	F	189	THR	2.4
2	B	428	GLY	2.4
2	D	244	ILE	2.4
2	F	472	LEU	2.4
2	P	164	LEU	2.4
1	E	362	LEU	2.4
2	B	441	ASN	2.4
2	P	237	ILE	2.4
1	E	493	CYS	2.4
2	D	218	PRO	2.4
2	N	578	CYS	2.4
2	L	311	ALA	2.3
1	E	414	GLU	2.3
2	F	234	PRO	2.3
1	G	414	GLU	2.3
2	F	71	ARG	2.3
1	O	207	PHE	2.3
2	L	230	VAL	2.3
1	C	19	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
2	N	189	THR	2.3
2	N	238	ASN	2.3
2	J	234	PRO	2.3
2	L	235	PRO	2.3
1	A	426	LEU	2.3
2	B	486	ASN	2.3
1	I	496	ASP	2.3
2	N	502	TYR	2.2
2	F	564	LEU	2.2
1	M	311	LYS	2.2
2	J	560	LYS	2.2
2	P	467	LYS	2.2
2	D	335	TYR	2.2
1	I	414	GLU	2.2
1	O	493	CYS	2.2
2	H	230	VAL	2.2
2	F	215	GLU	2.2
1	K	423	HIS	2.2
2	P	126	LEU	2.1
2	N	286	ALA	2.1
2	F	575	THR	2.1
2	P	535	ILE	2.1
2	P	544	PHE	2.1
2	J	535	ILE	2.1
2	N	69	ALA	2.1
2	N	566	PRO	2.1
2	F	183	PHE	2.1
1	G	202	TRP	2.1
1	O	423	HIS	2.1
2	L	470	LEU	2.1
2	B	344	GLY	2.1
2	N	342	GLY	2.1
2	F	577	PRO	2.1
2	L	24	PHE	2.1
2	J	238	ASN	2.1
1	K	204	ASP	2.1
2	P	183	PHE	2.1
2	N	431	ILE	2.0
1	C	233	GLN	2.0
2	N	344	GLY	2.0
2	N	218	PRO	2.0
2	P	577	PRO	2.0

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Mol	Chain	Res	Type	RSRZ
1	I	495	LEU	2.0
2	N	183	PHE	2.0
1	I	499	PRO	2.0
2	B	234	PRO	2.0
2	P	207	LEU	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](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
3	PHE	A	509	12/12	0.91	0.17	90,92,129,130	0
3	PHE	M	509	12/12	0.91	0.16	96,99,201,201	0
3	PHE	C	509	12/12	0.92	0.15	81,83,172,174	0
3	PHE	G	509	12/12	0.93	0.14	81,86,201,201	0
3	PHE	O	509	12/12	0.93	0.10	82,84,201,201	0
3	PHE	K	509	12/12	0.95	0.11	82,83,189,189	0
3	PHE	E	509	12/12	0.95	0.15	68,71,201,201	0
3	PHE	I	509	12/12	0.95	0.12	64,69,201,201	0

6.5 Other polymers [i](#)

There are no such residues in this entry.