



Full wwPDB X-ray Structure Validation Report ⓘ

Nov 22, 2023 – 03:36 PM JST

PDB ID : 8GS5
Title : Crystal structure of a constitutively active mutant of human IDH3 holoenzyme in apo form
Authors : Sun, P.; Chen, X.; Ding, J.
Deposited on : 2022-09-04
Resolution : 4.49 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 : 4.02b-467
Xtriage (Phenix) : 1.13
EDS : 2.36
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

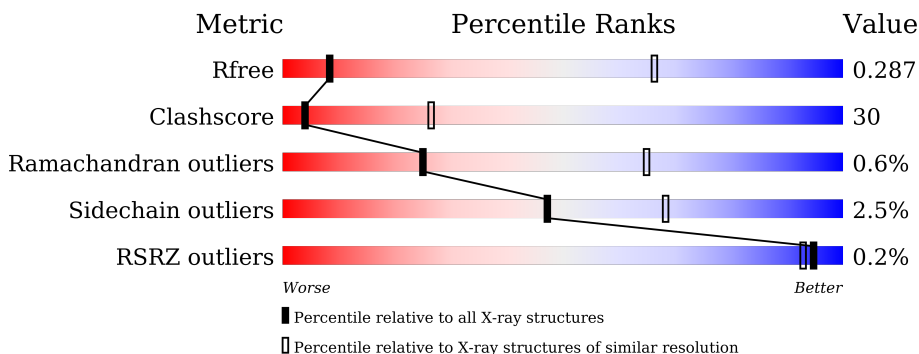
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 4.49 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.




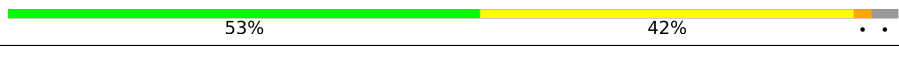
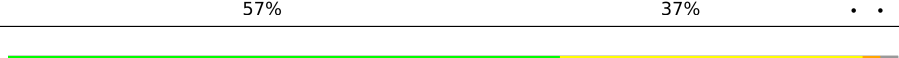



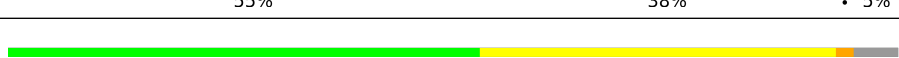



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1051 (5.12-3.80)
Clashscore	141614	1119 (5.12-3.80)
Ramachandran outliers	138981	1065 (5.12-3.80)
Sidechain outliers	138945	1047 (5.12-3.80)
RSRZ outliers	127900	1099 (5.20-3.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. 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	339	60% 38% ..
1	C	339	67% 30% .
1	E	339	63% 35% ..
1	G	339	% 71% 24% . .
1	I	339	68% 29% . .
1	K	339	66% 30% .

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Mol	Chain	Length	Quality of chain
1	M	339	% 
1	O	339	
2	D	354	
2	H	354	
2	L	354	
2	P	354	
3	B	352	
3	F	352	
3	J	352	
3	N	352	

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 39351 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 Isocitrate dehydrogenase [NAD] subunit alpha, mitochondrial.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	C	328	Total 2389	C 1503	N 406	O 459	S 21	0	0	0
1	A	336	Total 2412	C 1510	N 412	O 470	S 20	0	0	0
1	G	324	Total 2444	C 1537	N 417	O 470	S 20	0	0	0
1	E	336	Total 2400	C 1502	N 411	O 465	S 22	0	0	0
1	K	327	Total 2480	C 1561	N 424	O 473	S 22	0	0	0
1	I	336	Total 2439	C 1530	N 414	O 473	S 22	0	0	0
1	O	329	Total 2454	C 1546	N 419	O 467	S 22	0	0	0
1	M	336	Total 2436	C 1524	N 416	O 474	S 22	0	0	0

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	139	ALA	GLN	engineered mutation	UNP P50213
A	139	ALA	GLN	engineered mutation	UNP P50213
G	139	ALA	GLN	engineered mutation	UNP P50213
E	139	ALA	GLN	engineered mutation	UNP P50213
K	139	ALA	GLN	engineered mutation	UNP P50213
I	139	ALA	GLN	engineered mutation	UNP P50213
O	139	ALA	GLN	engineered mutation	UNP P50213
M	139	ALA	GLN	engineered mutation	UNP P50213

- Molecule 2 is a protein called Isocitrate dehydrogenase [NAD] subunit gamma, mitochondrial.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	D	339	Total 2496	C 1556	N 456	O 466	S 18	0	0	0
2	H	347	Total 2555	C 1594	N 467	O 476	S 18	0	0	0
2	L	347	Total 2569	C 1606	N 469	O 477	S 17	0	0	0
2	P	346	Total 2539	C 1590	N 462	O 469	S 18	0	0	0

- Molecule 3 is a protein called Isoform A of Isocitrate dehydrogenase [NAD] subunit beta, mitochondrial.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	B	335	Total 2466	C 1557	N 425	O 465	S 19	0	0	0
3	F	335	Total 2400	C 1516	N 420	O 446	S 18	0	0	0
3	J	335	Total 2465	C 1557	N 429	O 459	S 20	0	0	0
3	N	334	Total 2407	C 1515	N 417	O 456	S 19	0	0	0

There are 48 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	341	GLU	-	expression tag	UNP O43837-2
B	342	ILE	-	expression tag	UNP O43837-2
B	343	CYS	-	expression tag	UNP O43837-2
B	344	ARG	-	expression tag	UNP O43837-2
B	345	ARG	-	expression tag	UNP O43837-2
B	346	VAL	-	expression tag	UNP O43837-2
B	347	LYS	-	expression tag	UNP O43837-2
B	348	ASP	-	expression tag	UNP O43837-2
B	349	LEU	-	expression tag	UNP O43837-2
B	350	ASP	-	expression tag	UNP O43837-2
B	351	GLU	-	expression tag	UNP O43837-2
B	352	ASN	-	expression tag	UNP O43837-2
F	341	GLU	-	expression tag	UNP O43837-2
F	342	ILE	-	expression tag	UNP O43837-2
F	343	CYS	-	expression tag	UNP O43837-2
F	344	ARG	-	expression tag	UNP O43837-2
F	345	ARG	-	expression tag	UNP O43837-2
F	346	VAL	-	expression tag	UNP O43837-2

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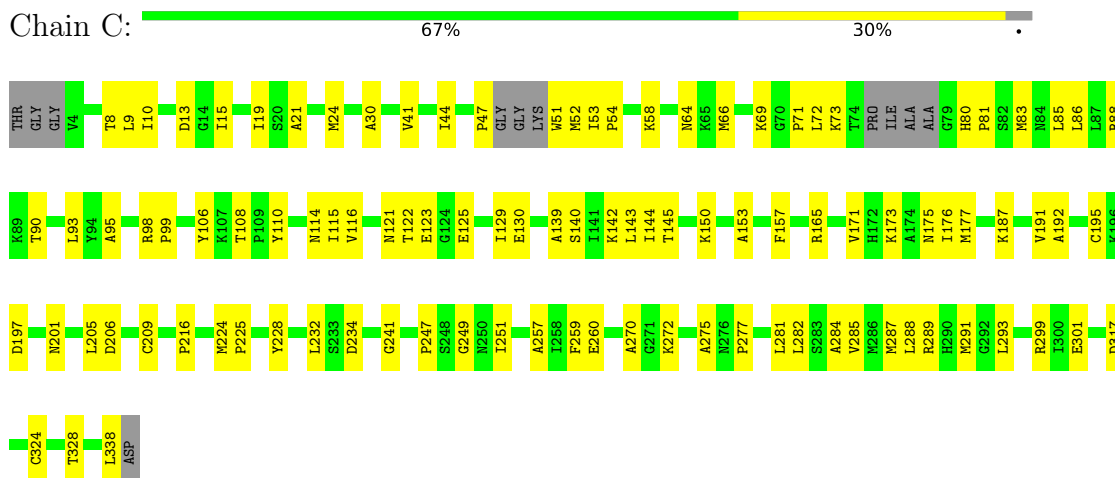
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Chain	Residue	Modelled	Actual	Comment	Reference
F	347	LYS	-	expression tag	UNP O43837-2
F	348	ASP	-	expression tag	UNP O43837-2
F	349	LEU	-	expression tag	UNP O43837-2
F	350	ASP	-	expression tag	UNP O43837-2
F	351	GLU	-	expression tag	UNP O43837-2
F	352	ASN	-	expression tag	UNP O43837-2
J	341	GLU	-	expression tag	UNP O43837-2
J	342	ILE	-	expression tag	UNP O43837-2
J	343	CYS	-	expression tag	UNP O43837-2
J	344	ARG	-	expression tag	UNP O43837-2
J	345	ARG	-	expression tag	UNP O43837-2
J	346	VAL	-	expression tag	UNP O43837-2
J	347	LYS	-	expression tag	UNP O43837-2
J	348	ASP	-	expression tag	UNP O43837-2
J	349	LEU	-	expression tag	UNP O43837-2
J	350	ASP	-	expression tag	UNP O43837-2
J	351	GLU	-	expression tag	UNP O43837-2
J	352	ASN	-	expression tag	UNP O43837-2
N	341	GLU	-	expression tag	UNP O43837-2
N	342	ILE	-	expression tag	UNP O43837-2
N	343	CYS	-	expression tag	UNP O43837-2
N	344	ARG	-	expression tag	UNP O43837-2
N	345	ARG	-	expression tag	UNP O43837-2
N	346	VAL	-	expression tag	UNP O43837-2
N	347	LYS	-	expression tag	UNP O43837-2
N	348	ASP	-	expression tag	UNP O43837-2
N	349	LEU	-	expression tag	UNP O43837-2
N	350	ASP	-	expression tag	UNP O43837-2
N	351	GLU	-	expression tag	UNP O43837-2
N	352	ASN	-	expression tag	UNP O43837-2

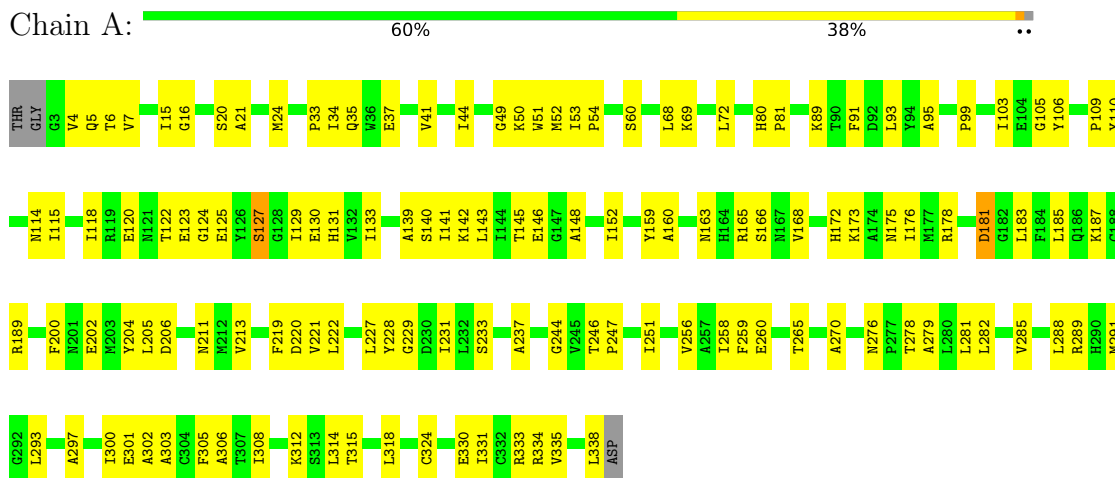
3 Residue-property plots [i](#)

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: Isocitrate dehydrogenase [NAD] subunit alpha, mitochondrial

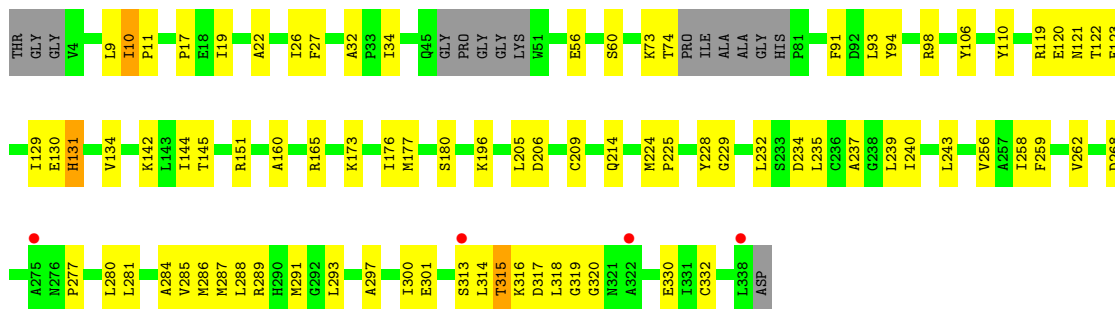


- Molecule 1: Isocitrate dehydrogenase [NAD] subunit alpha, mitochondrial



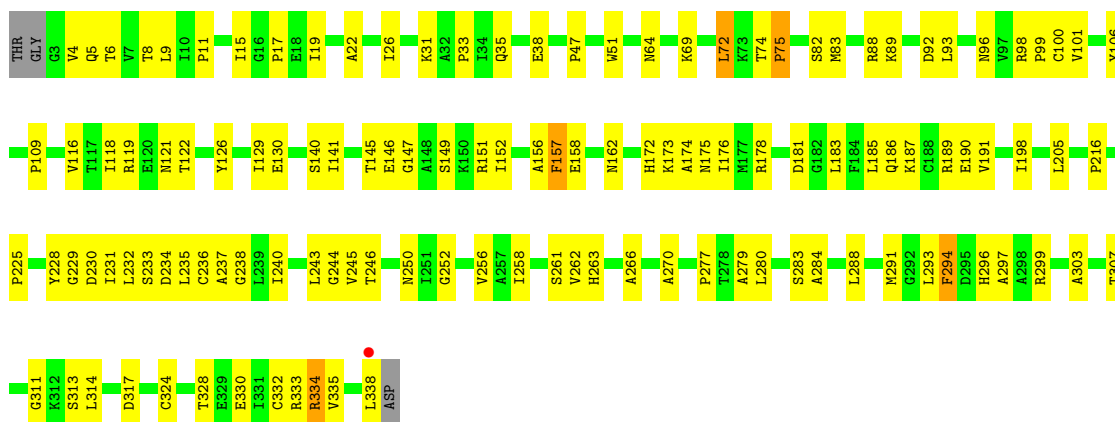
- Molecule 1: Isocitrate dehydrogenase [NAD] subunit alpha, mitochondrial





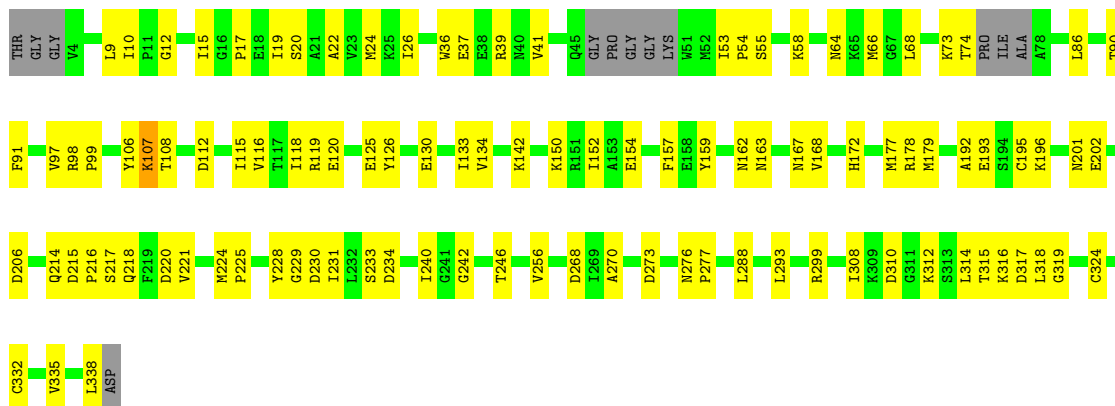
- Molecule 1: Isocitrate dehydrogenase [NAD] subunit alpha, mitochondrial

Chain E: 63% 35%



- Molecule 1: Isocitrate dehydrogenase [NAD] subunit alpha, mitochondrial

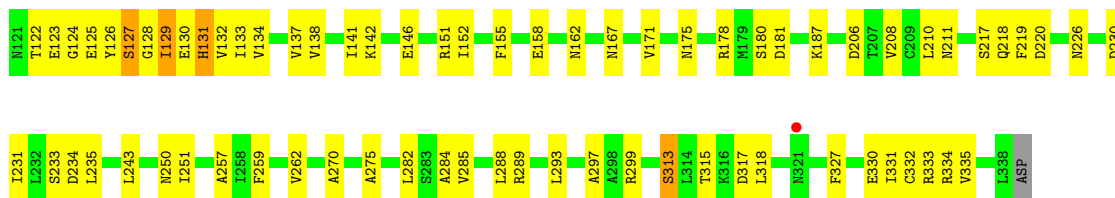
Chain K: 66% 30%



- Molecule 1: Isocitrate dehydrogenase [NAD] subunit alpha, mitochondrial

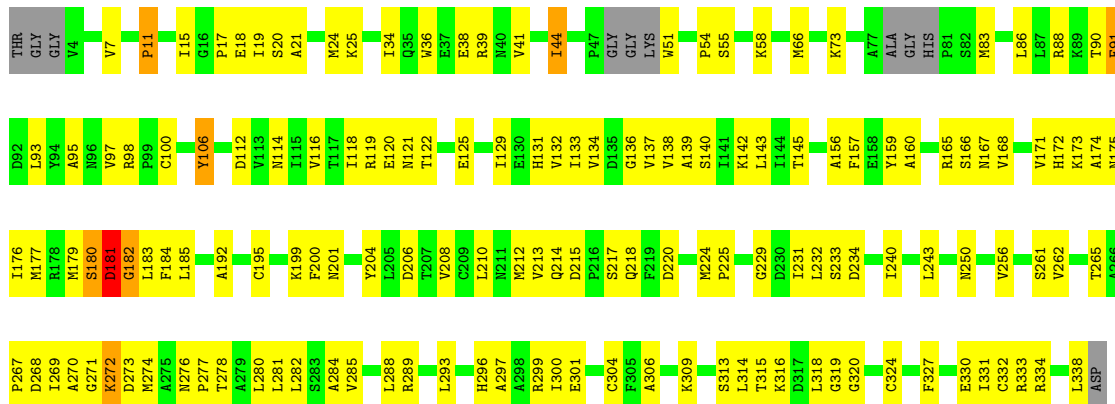
Chain I: 68% 29%





• Molecule 1: Isocitrate dehydrogenase [NAD] subunit alpha, mitochondrial

Chain O: 53% 42%



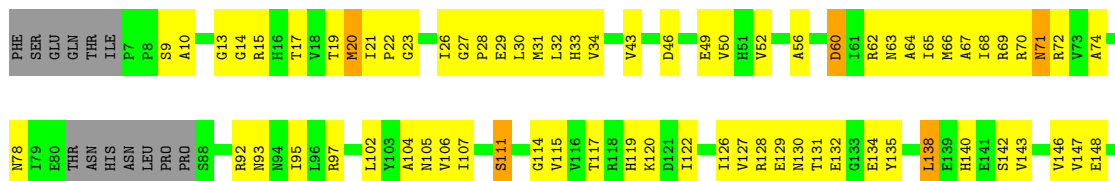
• Molecule 1: Isocitrate dehydrogenase [NAD] subunit alpha, mitochondrial

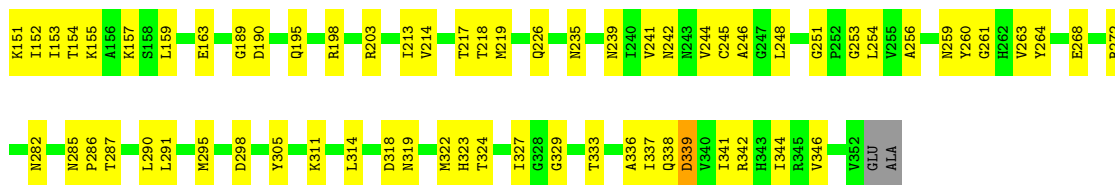
Chain M: 66% 33%



• Molecule 2: Isocitrate dehydrogenase [NAD] subunit gamma, mitochondrial

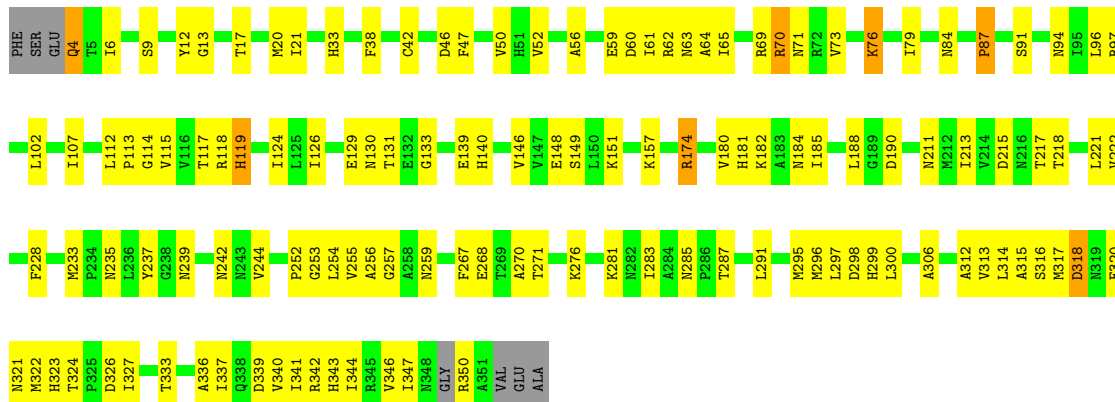
Chain D: 57% 37%





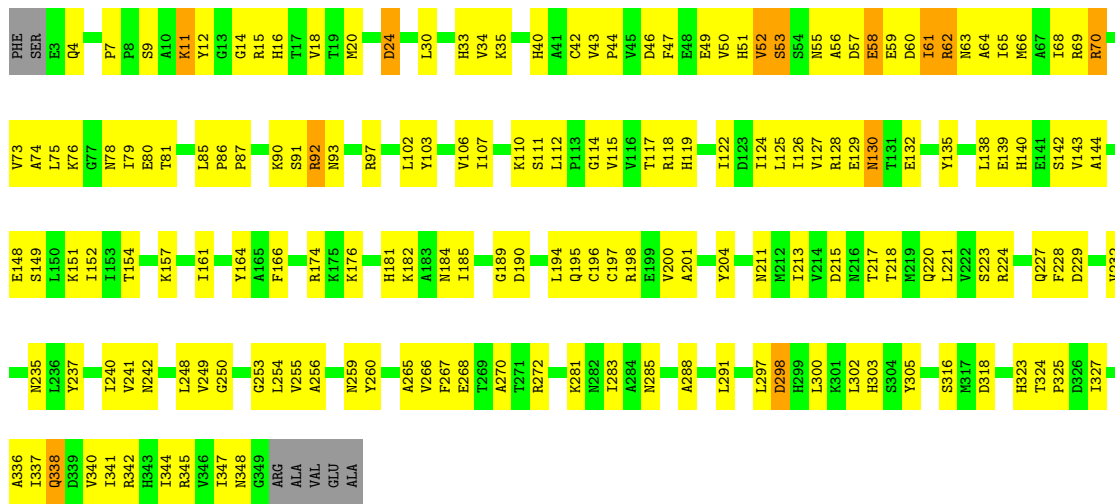
• Molecule 2: Isocitrate dehydrogenase [NAD] subunit gamma, mitochondrial

Chain H: 62% 34%



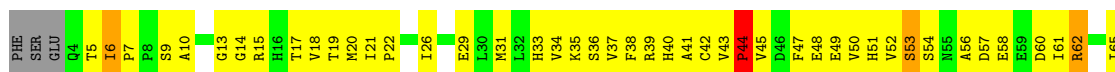
• Molecule 2: Isocitrate dehydrogenase [NAD] subunit gamma, mitochondrial

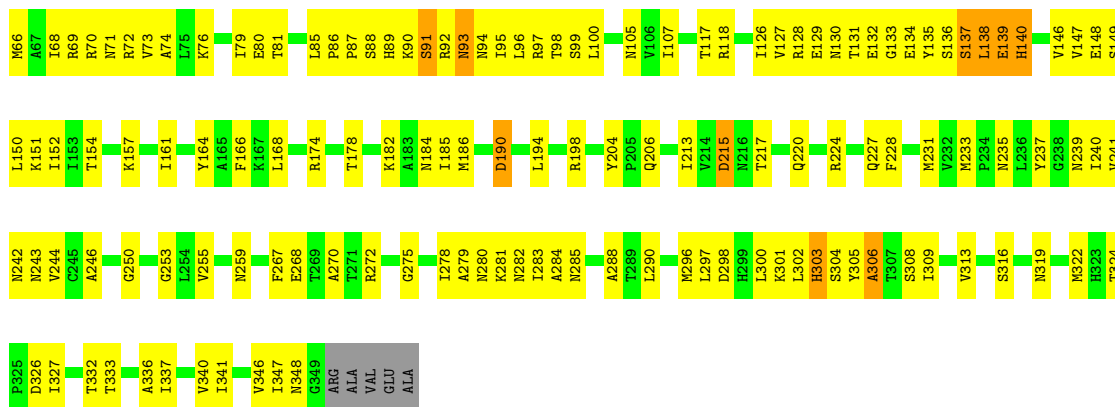
Chain L: 50% 45%



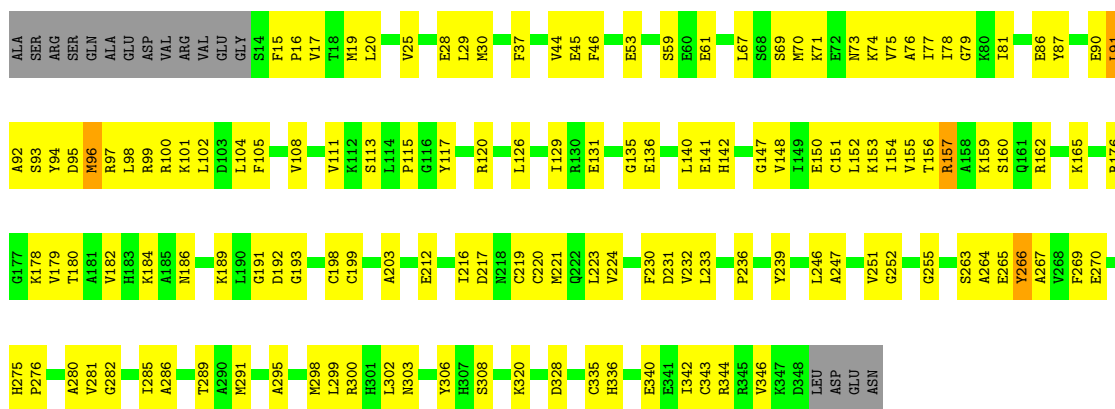
• Molecule 2: Isocitrate dehydrogenase [NAD] subunit gamma, mitochondrial

Chain P: 47% 47%

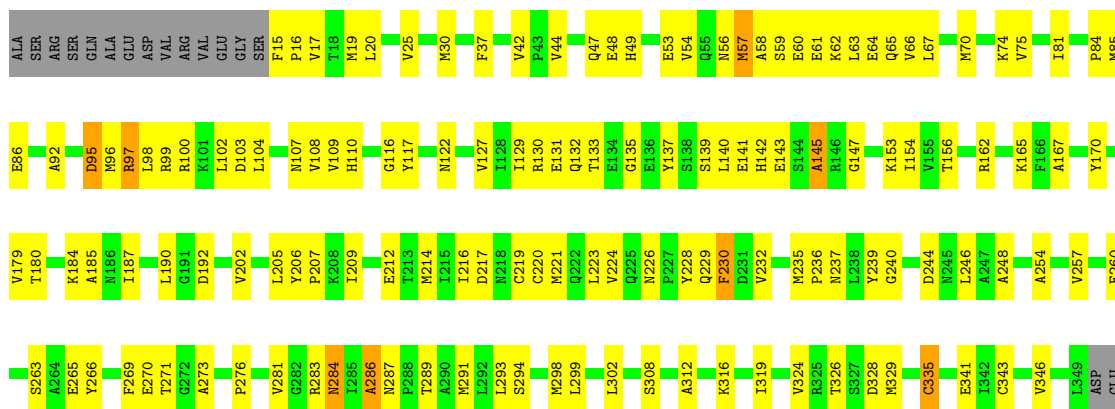




• Molecule 3: Isoform A of Isocitrate dehydrogenase [NAD] subunit beta, mitochondrial

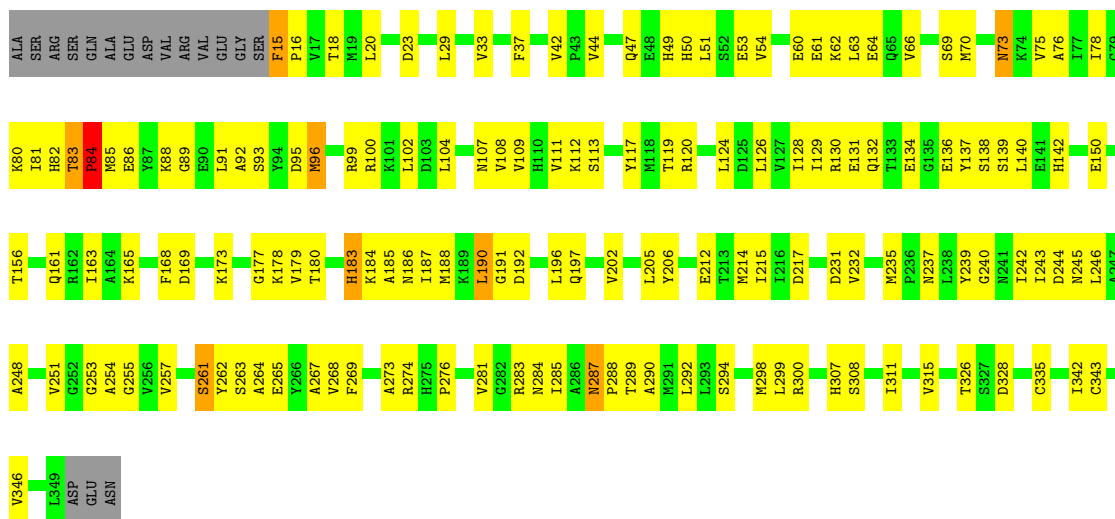


• Molecule 3: Isoform A of Isocitrate dehydrogenase [NAD] subunit beta, mitochondrial



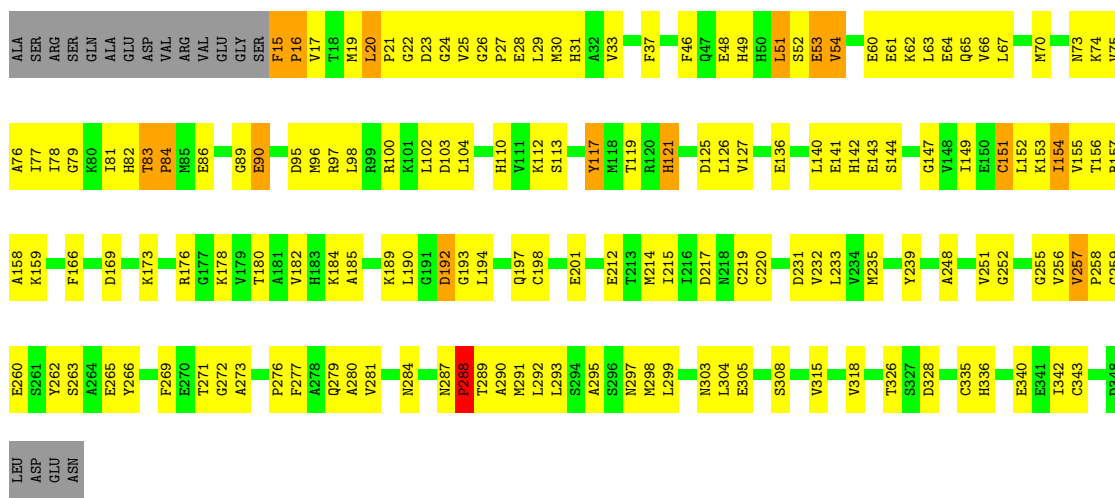
• Molecule 3: Isoform A of Isocitrate dehydrogenase [NAD] subunit beta, mitochondrial

Chain J:  53% 40% 5%



• Molecule 3: Isoform A of Isocitrate dehydrogenase [NAD] subunit beta, mitochondrial

Chain N:  50% 40% 5%



4 Data and refinement statistics

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α , β , γ	159.26Å 490.33Å 330.46Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	30.54 – 4.49 30.54 – 4.49	Depositor EDS
% Data completeness (in resolution range)	84.4 (30.54-4.49) 84.4 (30.54-4.49)	Depositor EDS
R_{merge}	0.20	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.26 (at 4.42Å)	Xtrriage
Refinement program	PHENIX 1.14_3260	Depositor
R, R_{free}	0.268 , 0.286 0.268 , 0.287	Depositor DCC
R_{free} test set	3246 reflections (4.97%)	wwPDB-VP
Wilson B-factor (Å ²)	76.0	Xtrriage
Anisotropy	0.651	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.23 , 44.1	EDS
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.28$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.82	EDS
Total number of atoms	39351	wwPDB-VP
Average B, all atoms (Å ²)	107.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.64% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.34	0/2452	0.56	3/3339 (0.1%)
1	C	0.26	0/2427	0.46	0/3295
1	E	0.44	2/2439 (0.1%)	0.54	1/3321 (0.0%)
1	G	0.25	0/2482	0.48	2/3355 (0.1%)
1	I	0.48	1/2482 (0.0%)	0.62	2/3379 (0.1%)
1	K	0.27	0/2518	0.52	1/3400 (0.0%)
1	M	0.36	0/2476	0.50	0/3366
1	O	0.34	0/2493	0.59	1/3372 (0.0%)
2	D	0.35	0/2534	0.61	1/3438 (0.0%)
2	H	0.36	0/2592	0.62	3/3516 (0.1%)
2	L	0.43	0/2609	0.75	6/3541 (0.2%)
2	P	0.48	1/2578 (0.0%)	0.78	6/3501 (0.2%)
3	B	0.46	1/2508 (0.0%)	0.77	5/3402 (0.1%)
3	F	0.38	0/2442	0.76	8/3322 (0.2%)
3	J	0.47	2/2507 (0.1%)	0.73	5/3400 (0.1%)
3	N	0.44	1/2447 (0.0%)	0.72	5/3324 (0.2%)
All	All	0.39	8/39986 (0.0%)	0.64	49/54271 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	E	0	1
2	H	0	1
3	B	0	1
3	F	0	1
All	All	0	4

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	I	81	PRO	N-CD	-14.24	1.27	1.47
1	E	75	PRO	N-CD	-13.11	1.29	1.47
2	P	44	PRO	N-CD	6.10	1.56	1.47
1	E	109	PRO	N-CD	6.06	1.56	1.47
3	J	261	SER	CA-CB	-5.88	1.44	1.52
3	B	91	LEU	CA-C	5.25	1.66	1.52
3	J	84	PRO	N-CD	-5.24	1.40	1.47
3	N	288	PRO	N-CD	-5.14	1.40	1.47

All (49) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	F	230	PHE	CB-CA-C	-21.91	66.59	110.40
3	B	252	GLY	N-CA-C	-13.39	79.63	113.10
3	B	92	ALA	N-CA-C	-10.75	81.97	111.00
2	P	302	LEU	CB-CA-C	-10.58	90.10	110.20
2	P	44	PRO	CA-N-CD	-9.81	97.76	111.50
2	L	70	ARG	N-CA-C	9.51	136.67	111.00
3	N	53	GLU	N-CA-CB	-9.08	94.25	110.60
1	A	312	LYS	N-CA-C	8.93	135.10	111.00
2	L	70	ARG	CB-CA-C	-8.44	93.51	110.40
1	A	312	LYS	CB-CA-C	-8.35	93.71	110.40
3	F	145	ALA	CB-CA-C	8.27	122.51	110.10
3	F	230	PHE	C-N-CA	8.11	141.97	121.70
1	I	124	GLY	N-CA-C	-8.02	93.06	113.10
1	K	134	VAL	CB-CA-C	7.92	126.46	111.40
3	F	84	PRO	N-CA-CB	-7.84	93.89	103.30
2	P	44	PRO	N-CD-CG	-7.43	92.06	103.20
3	J	276	PRO	N-CA-C	-7.35	92.99	112.10
2	P	306	ALA	CB-CA-C	-7.20	99.30	110.10
3	B	157	ARG	CB-CA-C	-7.18	96.04	110.40
3	J	188	MET	N-CA-C	-7.00	92.10	111.00
1	O	181	ASP	C-N-CA	-6.52	108.61	122.30
3	B	53	GLU	CB-CA-C	-6.43	97.54	110.40
2	L	58	GLU	N-CA-C	6.34	128.12	111.00
2	P	303	HIS	N-CA-CB	-6.29	99.28	110.60
2	H	318	ASP	CB-CA-C	6.22	122.84	110.40
1	E	176	ILE	CB-CA-C	-6.21	99.18	111.60
3	N	154	ILE	CB-CA-C	-6.08	99.44	111.60
3	J	190	LEU	CA-CB-CG	-6.06	101.36	115.30
2	P	302	LEU	CA-CB-CG	-6.05	101.38	115.30
2	L	61	ILE	CB-CA-C	-6.03	99.55	111.60
2	H	70	ARG	CB-CA-C	-5.99	98.43	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	N	271	THR	N-CA-C	-5.95	94.94	111.00
3	F	276	PRO	N-CA-C	-5.92	96.72	112.10
1	G	315	THR	CB-CA-C	-5.83	95.85	111.60
1	A	176	ILE	CB-CA-C	-5.64	100.33	111.60
3	J	262	TYR	CB-CA-C	-5.57	99.26	110.40
2	L	81	THR	N-CA-C	-5.49	96.18	111.00
1	G	10	ILE	CB-CA-C	-5.44	100.72	111.60
2	D	70	ARG	CB-CA-C	-5.38	99.65	110.40
1	I	127	SER	N-CA-C	-5.35	96.56	111.00
3	N	20	LEU	C-N-CD	-5.22	109.11	120.60
3	N	288	PRO	CB-CA-C	-5.22	98.95	112.00
3	B	91	LEU	CA-C-N	-5.14	105.89	117.20
3	F	97	ARG	C-N-CA	-5.11	108.93	121.70
2	H	76	LYS	CB-CA-C	-5.08	100.24	110.40
3	F	286	ALA	C-N-CA	5.08	134.40	121.70
3	F	84	PRO	N-CA-C	5.06	125.26	112.10
2	L	7	PRO	N-CA-C	-5.01	99.06	112.10
3	J	274	ARG	CB-CA-C	-5.01	100.38	110.40

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	B	59	SER	Mainchain
1	E	72	LEU	Mainchain
3	F	230	PHE	Peptide
2	H	4	GLN	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2412	0	2284	108	0
1	C	2389	0	2310	76	0
1	E	2400	0	2277	124	0
1	G	2444	0	2435	62	0
1	I	2439	0	2329	130	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	K	2480	0	2498	94	0
1	M	2436	0	2329	126	0
1	O	2454	0	2436	199	0
2	D	2496	0	2451	171	0
2	H	2555	0	2508	169	0
2	L	2569	0	2526	236	0
2	P	2539	0	2498	328	0
3	B	2466	0	2365	181	1
3	F	2400	0	2236	174	0
3	J	2465	0	2376	195	1
3	N	2407	0	2245	242	0
All	All	39351	0	38103	2346	1

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 30.

All (2346) 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)
3:N:29:LEU:CD1	3:N:288:PRO:HB3	1.24	1.65
3:J:20:LEU:CB	3:J:78:ILE:HG21	1.20	1.61
3:J:20:LEU:HB2	3:J:78:ILE:CG2	1.26	1.61
2:P:138:LEU:HD23	1:M:131:HIS:CD2	1.15	1.61
2:D:50:VAL:CG2	2:D:64:ALA:HB1	1.20	1.60
3:N:30:MET:CE	3:N:291:MET:HB3	1.31	1.55
3:F:254:ALA:HB1	3:F:273:ALA:CB	1.32	1.52
3:N:30:MET:HE3	3:N:291:MET:SD	1.49	1.52
2:P:138:LEU:CD2	1:M:131:HIS:CD2	1.92	1.52
2:D:50:VAL:CG2	2:D:64:ALA:CB	1.85	1.51
2:P:66:MET:CA	2:P:69:ARG:HG3	1.04	1.50
3:N:29:LEU:HD11	3:N:288:PRO:CB	1.37	1.50
2:P:66:MET:HA	2:P:69:ARG:CG	1.05	1.49
2:L:253:GLY:O	2:L:288:ALA:CB	1.67	1.43
1:O:175:ASN:ND2	1:O:204:TYR:CE1	1.82	1.42
3:N:30:MET:CE	3:N:291:MET:CB	1.96	1.42
3:N:30:MET:HE2	3:N:291:MET:CB	1.46	1.41
2:P:233:MET:SD	2:P:241:VAL:HG21	1.63	1.37
2:H:255:VAL:CB	2:H:270:ALA:CB	2.04	1.36
3:N:30:MET:CE	3:N:291:MET:SD	2.14	1.36
3:F:254:ALA:CB	3:F:273:ALA:HB3	1.56	1.35
2:L:111:SER:HA	2:L:249:VAL:CG1	1.54	1.35

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:17:THR:HG22	2:D:71:ASN:ND2	1.35	1.35
1:O:173:LYS:NZ	2:P:239:ASN:CG	1.76	1.35
2:P:21:ILE:HG23	2:P:52:VAL:CG1	1.54	1.35
3:J:20:LEU:H	3:J:78:ILE:CG2	1.38	1.35
3:J:20:LEU:CA	3:J:78:ILE:HG22	1.54	1.35
2:P:138:LEU:HD23	1:M:131:HIS:NE2	1.34	1.35
2:H:342:ARG:HE	3:N:305:GLU:CB	1.39	1.34
2:P:21:ILE:CG2	2:P:52:VAL:CG1	2.05	1.34
3:N:30:MET:HE3	3:N:291:MET:CE	1.57	1.31
2:H:342:ARG:NE	3:N:305:GLU:CB	1.90	1.31
1:K:179:MET:CE	2:L:139:GLU:CB	2.08	1.31
3:B:153:LYS:NZ	3:B:192:ASP:OD1	1.61	1.31
2:H:259:ASN:ND2	2:H:268:GLU:OE1	1.64	1.31
1:K:142:LYS:CD	2:L:135:TYR:CE2	2.13	1.30
3:J:20:LEU:N	3:J:78:ILE:CG2	1.92	1.30
2:P:129:GLU:CG	2:P:132:GLU:CB	2.08	1.29
3:N:30:MET:CE	3:N:291:MET:CG	2.12	1.28
3:B:81:ILE:HD11	3:B:95:ASP:CB	1.64	1.27
3:F:92:ALA:HA	3:F:139:SER:CB	1.61	1.26
3:B:28:GLU:OE2	3:B:282:GLY:HA2	1.34	1.25
2:H:267:PHE:CZ	2:H:296:MET:HA	1.71	1.25
2:H:252:PRO:HB3	2:H:271:THR:CB	1.66	1.24
3:B:91:LEU:HD12	3:B:91:LEU:O	1.12	1.23
3:J:20:LEU:CA	3:J:78:ILE:CG2	2.12	1.23
1:O:175:ASN:ND2	1:O:204:TYR:CD1	2.08	1.22
2:L:97:ARG:CD	2:L:130:ASN:OD1	1.86	1.21
2:L:140:HIS:NE2	3:J:150:GLU:OE2	1.73	1.21
3:B:93:SER:CB	3:B:96:MET:SD	2.29	1.21
1:K:133:ILE:HG13	1:I:133:ILE:CD1	1.69	1.21
2:D:148:GLU:OE2	3:B:150:GLU:OE1	1.58	1.21
1:O:18:GLU:OE2	1:O:273:ASP:HA	1.39	1.20
1:K:142:LYS:HD2	2:L:135:TYR:CZ	1.75	1.20
1:K:177:MET:SD	2:L:135:TYR:HD2	1.64	1.19
2:L:140:HIS:CD2	3:J:150:GLU:OE2	1.95	1.19
2:D:17:THR:CG2	2:D:71:ASN:HD21	1.53	1.19
1:K:142:LYS:HD3	2:L:135:TYR:CE2	1.77	1.18
1:I:178:ARG:CB	3:J:91:LEU:HD12	1.71	1.18
2:D:50:VAL:HG21	2:D:64:ALA:CB	1.56	1.18
2:L:253:GLY:O	2:L:288:ALA:HB2	1.02	1.18
3:J:20:LEU:N	3:J:78:ILE:HG22	1.53	1.18
2:H:252:PRO:CB	2:H:271:THR:CB	2.22	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:129:GLU:CD	2:P:132:GLU:CB	2.06	1.17
3:F:59:SER:CB	3:F:62:LYS:CB	2.22	1.17
2:L:253:GLY:C	2:L:288:ALA:HB2	1.65	1.17
2:P:17:THR:O	2:P:71:ASN:ND2	1.76	1.17
3:N:255:GLY:O	3:N:290:ALA:N	1.77	1.17
1:K:214:GLN:NE2	2:L:250:GLY:O	1.78	1.17
1:E:244:GLY:O	1:E:279:ALA:HB2	1.45	1.16
1:M:178:ARG:HD3	3:N:86:GLU:HA	1.28	1.16
2:D:129:GLU:CD	2:D:132:GLU:H	1.48	1.16
2:L:111:SER:CA	2:L:249:VAL:CG1	2.24	1.16
2:P:21:ILE:CG2	2:P:52:VAL:HG11	1.69	1.15
3:N:104:LEU:HD23	3:N:263:SER:CB	1.75	1.15
2:D:20:MET:O	2:D:49:GLU:HA	1.47	1.15
2:L:111:SER:CA	2:L:249:VAL:HG12	1.75	1.15
2:P:21:ILE:HG21	2:P:52:VAL:HG11	1.17	1.15
3:B:300:ARG:HG3	3:B:308:SER:OG	1.47	1.15
2:L:138:LEU:HA	1:I:131:HIS:CE1	1.82	1.14
3:B:81:ILE:HD11	3:B:95:ASP:CA	1.78	1.14
1:M:134:VAL:HG22	1:M:137:VAL:HB	1.14	1.14
3:N:82:HIS:O	3:N:83:THR:HG22	1.46	1.13
2:P:129:GLU:HG3	2:P:132:GLU:CB	1.72	1.12
3:N:30:MET:HE1	3:N:291:MET:CB	1.77	1.12
3:F:254:ALA:CB	3:F:273:ALA:CB	2.19	1.12
2:L:9:SER:CB	2:L:70:ARG:O	1.98	1.12
2:L:24:ASP:OD2	2:L:79:ILE:HA	1.45	1.12
3:N:20:LEU:HB3	3:N:78:ILE:HG22	1.26	1.12
2:D:19:THR:OG1	2:D:74:ALA:CB	1.98	1.11
3:J:20:LEU:CB	3:J:78:ILE:CG2	1.93	1.11
2:D:129:GLU:OE2	2:D:132:GLU:N	1.83	1.11
1:O:175:ASN:ND2	1:O:204:TYR:CZ	1.95	1.11
3:N:104:LEU:CD2	3:N:263:SER:HB2	1.79	1.11
2:D:14:GLY:N	3:F:265:GLU:HA	1.66	1.10
1:K:179:MET:HE3	2:L:139:GLU:CB	1.79	1.10
1:M:178:ARG:HD3	3:N:86:GLU:CA	1.79	1.10
2:H:267:PHE:CD2	2:H:296:MET:HG3	1.86	1.10
3:F:284:ASN:O	3:F:335:CYS:HB3	1.51	1.10
2:D:50:VAL:HG22	2:D:64:ALA:CB	1.77	1.10
3:N:20:LEU:HD11	3:N:51:LEU:CA	1.82	1.10
2:L:56:ALA:HA	2:L:92:ARG:NH2	1.67	1.09
2:P:38:PHE:HA	2:P:41:ALA:HB2	1.35	1.09
2:P:43:VAL:HG22	2:P:44:PRO:HG2	1.18	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:20:LEU:CD1	3:N:51:LEU:HA	1.81	1.09
3:N:30:MET:HE1	3:N:291:MET:HB3	1.26	1.09
1:O:142:LYS:HB2	2:P:135:TYR:OH	1.50	1.09
3:N:26:GLY:HA2	3:N:29:LEU:HB3	1.16	1.09
3:N:29:LEU:HD12	3:N:288:PRO:HB3	1.32	1.09
3:B:77:ILE:CG2	3:B:298:MET:SD	2.40	1.08
3:J:264:ALA:O	2:P:13:GLY:N	1.86	1.08
3:B:91:LEU:O	3:B:91:LEU:CD1	2.00	1.08
2:H:324:THR:OG1	2:H:326:ASP:OD1	1.69	1.08
3:J:20:LEU:H	3:J:78:ILE:HG23	1.08	1.08
2:L:97:ARG:HD3	2:L:130:ASN:OD1	0.90	1.08
1:M:178:ARG:CD	3:N:86:GLU:HA	1.82	1.08
1:K:142:LYS:HD2	2:L:135:TYR:OH	1.53	1.07
2:P:140:HIS:HB2	1:M:129:ILE:HD13	1.10	1.07
3:B:81:ILE:HD11	3:B:95:ASP:HB2	1.12	1.07
3:F:63:LEU:O	3:F:67:LEU:N	1.87	1.07
2:D:19:THR:OG1	2:D:74:ALA:HB2	1.53	1.07
1:K:179:MET:HE1	2:L:139:GLU:CB	1.83	1.07
2:L:253:GLY:O	2:L:288:ALA:CA	2.00	1.07
3:J:15:PHE:HB3	3:J:16:PRO:HD3	1.36	1.07
1:E:244:GLY:O	1:E:279:ALA:CB	2.02	1.07
1:O:172:HIS:CD2	1:O:185:LEU:HD13	1.88	1.07
1:O:315:THR:O	1:O:320:GLY:N	1.88	1.07
1:I:43:ALA:HB3	1:I:80:HIS:HE1	1.16	1.06
1:K:142:LYS:HD2	2:L:135:TYR:CE2	1.81	1.06
3:F:59:SER:CB	3:F:62:LYS:CA	2.32	1.06
2:P:91:SER:HB3	2:P:94:ASN:CG	1.76	1.06
1:I:126:TYR:HD2	1:I:226:ASN:CG	1.59	1.06
3:B:95:ASP:OD1	3:B:99:ARG:NH1	1.89	1.05
2:H:255:VAL:CB	2:H:270:ALA:HB3	1.87	1.05
1:E:175:ASN:HA	3:F:85:MET:HA	1.07	1.05
1:I:43:ALA:CB	1:I:80:HIS:HE1	1.70	1.05
3:N:20:LEU:CB	3:N:78:ILE:HG22	1.85	1.05
1:K:125:GLU:OE2	2:L:135:TYR:OH	1.73	1.04
2:L:61:ILE:CD1	2:L:64:ALA:HB3	1.87	1.04
2:P:21:ILE:HG23	2:P:52:VAL:HG12	1.09	1.04
1:K:177:MET:SD	2:L:135:TYR:CD2	2.50	1.04
2:L:140:HIS:CE1	2:L:148:GLU:OE1	2.07	1.04
3:N:103:ASP:C	3:N:263:SER:OG	1.96	1.04
2:H:61:ILE:O	2:H:64:ALA:HB3	1.55	1.04
2:P:15:ARG:NH2	2:P:45:VAL:O	1.90	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:21:PRO:CD	3:N:51:LEU:CB	2.35	1.03
3:N:184:LYS:N	3:N:192:ASP:OD2	1.90	1.03
3:N:29:LEU:HD11	3:N:288:PRO:CA	1.88	1.03
3:F:62:LYS:O	3:F:66:VAL:N	1.91	1.03
2:D:50:VAL:HG22	2:D:64:ALA:HB1	1.31	1.02
2:L:111:SER:N	2:L:249:VAL:HG11	1.74	1.02
1:M:134:VAL:CG2	1:M:137:VAL:HB	1.88	1.02
2:L:64:ALA:O	2:L:68:ILE:HD12	1.59	1.02
3:J:20:LEU:C	3:J:78:ILE:HG22	1.79	1.01
3:N:21:PRO:HD2	3:N:51:LEU:CB	1.88	1.01
2:D:13:GLY:CA	3:F:265:GLU:HA	1.89	1.01
1:O:18:GLU:OE2	1:O:273:ASP:CA	2.08	1.01
2:D:138:LEU:CB	1:A:131:HIS:CE1	2.44	1.01
3:B:81:ILE:CD1	3:B:95:ASP:HB2	1.89	1.01
1:O:181:ASP:O	1:O:183:LEU:N	1.92	1.01
1:I:80:HIS:CG	1:I:81:PRO:CD	2.44	1.01
3:N:26:GLY:O	3:N:30:MET:N	1.91	1.01
2:L:52:VAL:HG12	2:L:53:SER:H	1.26	1.00
2:L:61:ILE:HD12	2:L:64:ALA:CB	1.91	1.00
1:O:206:ASP:HB3	2:P:243:ASN:ND2	1.75	1.00
3:B:96:MET:HA	3:B:99:ARG:HB2	1.41	1.00
2:H:285:ASN:HA	2:H:324:THR:HG21	1.43	1.00
2:P:347:ILE:O	2:P:348:ASN:OD1	1.78	0.99
3:B:95:ASP:O	3:B:99:ARG:N	1.94	0.99
3:B:90:GLU:O	3:B:91:LEU:HG	1.60	0.99
1:E:244:GLY:HA2	1:E:263:HIS:CB	1.92	0.99
1:K:142:LYS:CD	2:L:135:TYR:HE2	1.72	0.99
3:N:82:HIS:O	3:N:83:THR:CG2	2.11	0.99
1:O:172:HIS:HD2	1:O:185:LEU:HD13	1.18	0.98
3:F:61:GLU:HB2	3:F:64:GLU:HG2	1.41	0.98
1:I:126:TYR:HD2	1:I:226:ASN:ND2	1.62	0.98
1:O:173:LYS:NZ	2:P:239:ASN:OD1	1.93	0.98
2:D:23:GLY:HA2	2:D:52:VAL:HG21	1.42	0.98
2:D:50:VAL:CG2	2:D:64:ALA:HB2	1.88	0.98
3:N:63:LEU:HD23	3:N:64:GLU:H	1.27	0.98
1:E:175:ASN:CA	3:F:85:MET:HA	1.94	0.97
1:I:137:VAL:HG22	3:J:156:THR:HG22	1.46	0.97
3:J:54:VAL:CB	3:J:88:LYS:NZ	2.27	0.97
1:O:142:LYS:HD2	2:P:135:TYR:HE2	1.26	0.97
2:L:142:SER:OG	3:J:150:GLU:OE2	1.82	0.97
2:L:138:LEU:CA	1:I:131:HIS:CE1	2.46	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:255:VAL:CB	2:H:270:ALA:HB2	1.94	0.97
1:O:175:ASN:ND2	1:O:204:TYR:CE2	2.31	0.97
2:D:17:THR:HG22	2:D:71:ASN:HD21	0.90	0.96
2:P:138:LEU:CD2	1:M:131:HIS:CG	2.47	0.96
1:I:80:HIS:CG	1:I:81:PRO:HD2	2.00	0.96
3:J:83:THR:OG1	3:J:84:PRO:HD3	1.66	0.96
1:M:178:ARG:HD3	3:N:86:GLU:CB	1.95	0.96
2:P:80:GLU:O	2:P:81:THR:HB	1.65	0.96
2:P:35:LYS:O	2:P:39:ARG:N	1.98	0.96
2:P:36:SER:HA	2:P:39:ARG:NH1	1.80	0.96
3:F:131:GLU:OE2	3:F:133:THR:CG2	2.14	0.96
2:L:50:VAL:HG21	2:L:64:ALA:HA	1.47	0.96
1:E:243:LEU:HB3	1:E:262:VAL:HG23	1.49	0.95
1:O:173:LYS:NZ	2:P:239:ASN:ND2	2.14	0.95
2:P:33:HIS:O	2:P:37:VAL:HG23	1.64	0.95
2:L:111:SER:HA	2:L:249:VAL:HG12	0.99	0.95
1:I:126:TYR:CD2	1:I:226:ASN:CG	2.40	0.95
2:P:66:MET:HA	2:P:69:ARG:CD	1.97	0.95
3:J:91:LEU:O	3:J:139:SER:OG	1.84	0.95
2:P:43:VAL:CG2	2:P:44:PRO:HG2	1.96	0.95
1:M:179:MET:HG2	3:N:149:ILE:HG12	1.48	0.95
1:K:178:ARG:NH1	2:L:86:PRO:O	1.98	0.95
3:J:15:PHE:HB3	3:J:16:PRO:CD	1.97	0.95
3:J:75:VAL:HG22	3:J:267:ALA:HB3	1.49	0.95
3:B:77:ILE:HG21	3:B:298:MET:CE	1.97	0.95
1:I:43:ALA:HB3	1:I:80:HIS:CE1	2.03	0.94
2:P:43:VAL:HG22	2:P:44:PRO:CG	1.97	0.94
1:E:88:ARG:HD3	1:E:122:THR:HG22	1.49	0.94
1:E:88:ARG:NH1	1:E:122:THR:HB	1.83	0.94
2:P:152:ILE:HG13	1:M:133:ILE:HG23	1.47	0.94
1:M:134:VAL:HG22	1:M:137:VAL:CB	1.96	0.94
2:L:61:ILE:CD1	2:L:64:ALA:CB	2.46	0.94
1:E:240:ILE:HD12	1:E:246:THR:CG2	1.98	0.93
3:N:29:LEU:CD1	3:N:288:PRO:CB	2.16	0.93
1:E:100:CYS:HB3	1:E:240:ILE:CG2	1.99	0.93
1:O:131:HIS:O	1:O:138:VAL:CG2	2.16	0.93
2:D:17:THR:CG2	2:D:71:ASN:ND2	2.21	0.93
2:P:40:HIS:O	2:P:40:HIS:ND1	2.00	0.93
1:O:269:ILE:HD11	1:O:274:MET:O	1.67	0.93
3:N:104:LEU:HD23	3:N:263:SER:HB2	0.95	0.93
3:N:255:GLY:O	3:N:290:ALA:HB2	1.67	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:105:GLY:HA3	1:A:308:ILE:HG22	1.48	0.93
3:F:63:LEU:HA	3:F:66:VAL:HB	1.48	0.93
1:O:15:ILE:HG22	1:O:270:ALA:HA	1.48	0.93
1:O:131:HIS:NE2	3:N:140:LEU:HA	1.84	0.93
2:P:38:PHE:HA	2:P:41:ALA:CB	1.97	0.93
3:N:23:ASP:OD2	3:N:54:VAL:CB	2.17	0.93
3:F:131:GLU:OE2	3:F:133:THR:HG22	1.69	0.93
2:L:74:ALA:O	2:L:266:VAL:HA	1.69	0.93
2:P:233:MET:SD	2:P:241:VAL:CG2	2.56	0.93
3:N:255:GLY:O	3:N:290:ALA:CA	2.17	0.93
2:P:140:HIS:CE1	2:P:148:GLU:HB2	2.03	0.93
1:O:15:ILE:CG2	1:O:270:ALA:HA	1.98	0.93
2:P:52:VAL:O	2:P:52:VAL:HG13	1.68	0.92
3:N:104:LEU:N	3:N:263:SER:OG	2.02	0.92
2:L:50:VAL:HG21	2:L:64:ALA:CA	1.99	0.92
1:O:181:ASP:O	1:O:182:GLY:C	2.00	0.92
2:D:14:GLY:H	3:F:265:GLU:HA	1.28	0.92
1:O:269:ILE:CD1	1:O:274:MET:O	2.17	0.91
3:N:20:LEU:HD11	3:N:51:LEU:HA	0.94	0.91
1:O:313:SER:OG	1:O:330:GLU:OE1	1.87	0.91
2:P:29:GLU:OE2	2:P:280:ASN:HA	1.70	0.91
1:A:53:ILE:HG23	1:A:54:PRO:HD2	1.50	0.91
2:P:66:MET:C	2:P:69:ARG:HG3	1.89	0.91
2:H:267:PHE:CE2	2:H:296:MET:HG3	2.06	0.91
1:O:132:VAL:HA	1:O:138:VAL:HG23	1.52	0.91
3:N:30:MET:HE2	3:N:291:MET:HB3	0.98	0.91
2:P:20:MET:O	2:P:50:VAL:HG22	1.71	0.90
3:N:255:GLY:O	3:N:290:ALA:CB	2.19	0.90
3:N:26:GLY:CA	3:N:29:LEU:HB3	2.00	0.90
3:N:184:LYS:C	3:N:192:ASP:OD2	2.10	0.90
1:I:80:HIS:CG	1:I:81:PRO:HD3	2.06	0.90
2:P:135:TYR:CE1	2:P:151:LYS:HB2	2.07	0.90
2:D:50:VAL:HG23	2:D:64:ALA:CB	2.02	0.90
2:H:267:PHE:CE1	2:H:296:MET:HA	2.06	0.90
2:H:342:ARG:CD	3:N:305:GLU:CB	2.49	0.90
1:O:173:LYS:HZ2	2:P:239:ASN:CG	1.54	0.89
1:A:178:ARG:CB	3:B:91:LEU:HD21	2.02	0.89
2:L:56:ALA:HA	2:L:92:ARG:HH22	1.30	0.89
2:L:110:LYS:C	2:L:249:VAL:HG11	1.92	0.89
3:F:59:SER:CB	3:F:62:LYS:N	2.34	0.89
2:L:97:ARG:HD3	2:L:130:ASN:CG	1.92	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:100:CYS:CA	1:E:240:ILE:HG21	2.02	0.89
2:P:90:LYS:CB	2:P:95:ILE:HD11	2.03	0.89
3:N:30:MET:HE2	3:N:291:MET:CG	1.88	0.89
1:I:83:MET:HE2	1:I:83:MET:HA	1.55	0.88
3:J:60:GLU:O	3:J:63:LEU:HB3	1.73	0.88
3:B:99:ARG:NH2	3:B:270:GLU:OE1	2.06	0.88
1:I:130:GLU:O	1:I:131:HIS:CD2	2.27	0.88
1:K:133:ILE:HG13	1:I:133:ILE:HD12	1.53	0.88
2:L:111:SER:HA	2:L:249:VAL:HG11	1.55	0.88
3:B:140:LEU:HB3	3:B:152:LEU:HD12	1.56	0.87
3:F:53:GLU:HA	3:F:57:MET:O	1.73	0.87
2:L:111:SER:CA	2:L:249:VAL:HG11	1.98	0.87
1:I:126:TYR:CD2	1:I:226:ASN:ND2	2.42	0.87
1:O:131:HIS:O	1:O:138:VAL:HG23	1.74	0.87
3:N:19:MET:CE	3:N:48:GLU:OE2	2.22	0.87
1:K:19:ILE:HB	1:K:277:PRO:HB3	1.55	0.87
2:H:255:VAL:CB	2:H:270:ALA:HB1	2.03	0.87
1:I:130:GLU:O	1:I:131:HIS:HD2	1.57	0.87
3:N:277:PHE:O	3:N:280:ALA:HB2	1.72	0.87
1:K:133:ILE:HG13	1:I:133:ILE:HD13	1.54	0.87
1:M:43:ALA:CB	1:M:80:HIS:NE2	2.38	0.87
2:D:13:GLY:C	3:F:265:GLU:HA	1.94	0.87
2:H:61:ILE:O	2:H:64:ALA:CB	2.22	0.87
2:P:139:GLU:CB	2:P:148:GLU:O	2.22	0.87
3:F:19:MET:SD	3:F:30:MET:HB3	2.14	0.87
1:O:173:LYS:HZ3	2:P:239:ASN:ND2	1.73	0.87
2:P:91:SER:HB3	2:P:94:ASN:CB	2.04	0.87
3:J:20:LEU:HB2	3:J:78:ILE:CB	2.05	0.86
2:P:138:LEU:HD21	1:M:131:HIS:CD2	2.10	0.86
1:M:43:ALA:HB3	1:M:80:HIS:NE2	1.89	0.86
2:D:140:HIS:HB3	1:A:129:ILE:HD12	1.57	0.86
1:E:240:ILE:CD1	1:E:246:THR:HG21	2.06	0.86
2:L:50:VAL:HG21	2:L:64:ALA:CB	2.05	0.86
2:P:140:HIS:CB	1:M:129:ILE:HD13	2.02	0.86
1:O:175:ASN:ND2	1:O:204:TYR:CG	2.44	0.86
1:O:318:LEU:N	1:O:319:GLY:HA2	1.89	0.86
1:I:80:HIS:CD2	1:I:81:PRO:HD3	2.10	0.86
2:H:320:GLU:OE1	3:N:112:LYS:HE2	1.76	0.86
2:P:150:LEU:HD11	1:M:131:HIS:ND1	1.91	0.86
3:B:81:ILE:HD11	3:B:95:ASP:HA	1.57	0.85
2:L:24:ASP:OD2	2:L:79:ILE:CA	2.25	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:73:LYS:HD3	1:O:265:THR:CG2	2.06	0.85
3:B:28:GLU:OE2	3:B:282:GLY:CA	2.22	0.85
2:L:253:GLY:O	2:L:288:ALA:N	2.08	0.85
1:C:19:ILE:HB	1:C:277:PRO:HB3	1.57	0.85
1:I:43:ALA:CB	1:I:80:HIS:CE1	2.58	0.85
2:P:136:SER:O	2:P:137:SER:OG	1.94	0.85
3:N:257:VAL:HG11	3:N:273:ALA:N	1.92	0.85
2:P:21:ILE:HG21	2:P:52:VAL:CG1	1.85	0.84
2:H:267:PHE:CE2	2:H:296:MET:CG	2.60	0.84
1:O:73:LYS:CE	1:O:265:THR:OG1	2.25	0.84
3:B:77:ILE:HG21	3:B:298:MET:SD	2.17	0.84
1:M:178:ARG:NE	3:N:86:GLU:HA	1.91	0.84
2:P:20:MET:O	2:P:50:VAL:CG2	2.25	0.84
2:P:140:HIS:HB2	1:M:129:ILE:CD1	2.03	0.84
3:N:257:VAL:CG1	3:N:273:ALA:N	2.40	0.84
3:N:63:LEU:O	3:N:66:VAL:HB	1.78	0.84
3:F:135:GLY:N	3:F:154:ILE:O	2.11	0.84
2:P:133:GLY:HA2	2:P:235:ASN:H	1.42	0.84
1:E:243:LEU:HD22	1:E:262:VAL:HG21	1.60	0.83
1:E:126:TYR:HA	3:F:187:ILE:HG21	1.58	0.83
1:I:80:HIS:ND1	1:I:81:PRO:HD2	1.93	0.83
1:O:173:LYS:HZ2	2:P:239:ASN:CB	1.91	0.83
2:P:53:SER:O	2:P:56:ALA:HB2	1.79	0.83
1:O:138:VAL:HG22	1:O:139:ALA:H	1.42	0.83
2:L:61:ILE:HD11	2:L:64:ALA:HB3	1.61	0.83
1:I:178:ARG:CB	3:J:91:LEU:CD1	2.57	0.83
2:L:61:ILE:HD12	2:L:64:ALA:HB2	1.59	0.83
3:J:75:VAL:HA	3:J:267:ALA:O	1.79	0.83
3:N:20:LEU:CD1	3:N:51:LEU:CB	2.56	0.83
1:G:206:ASP:OD1	2:H:239:ASN:HB3	1.79	0.83
2:P:19:THR:HG21	2:P:68:ILE:HG12	1.60	0.83
2:P:37:VAL:O	2:P:41:ALA:N	2.12	0.83
2:D:13:GLY:HA2	3:F:265:GLU:HA	1.59	0.82
3:B:96:MET:O	3:B:100:ARG:N	2.11	0.82
3:N:184:LYS:CA	3:N:192:ASP:OD2	2.27	0.82
3:N:20:LEU:HD12	3:N:51:LEU:CB	2.09	0.82
3:J:254:ALA:CB	3:J:273:ALA:HB1	2.10	0.82
3:F:70:MET:O	3:F:266:TYR:HE1	1.63	0.82
1:K:299:ARG:HD3	1:K:338:LEU:HD13	1.59	0.82
3:J:183:HIS:ND1	3:J:185:ALA:HB2	1.95	0.82
1:O:173:LYS:HZ3	2:P:239:ASN:CG	1.83	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:129:GLU:CD	2:D:132:GLU:N	2.29	0.82
3:J:20:LEU:CG	3:J:78:ILE:HG21	2.09	0.82
3:N:77:ILE:CG2	3:N:298:MET:SD	2.68	0.81
3:B:157:ARG:HG3	3:B:157:ARG:O	1.81	0.81
3:B:299:LEU:HB2	3:B:308:SER:HB2	1.61	0.81
2:H:255:VAL:C	2:H:270:ALA:HB2	2.00	0.81
3:F:137:TYR:HD2	3:F:237:ASN:CG	1.83	0.81
2:L:40:HIS:NE2	2:L:344:ILE:CB	2.44	0.81
1:I:175:ASN:HB2	3:J:84:PRO:HD2	1.60	0.81
2:P:53:SER:OG	2:P:54:SER:N	2.09	0.81
2:P:152:ILE:HG13	1:M:133:ILE:CG2	2.09	0.81
1:E:88:ARG:HH11	1:E:122:THR:HB	1.42	0.81
1:M:19:ILE:HB	1:M:277:PRO:HB3	1.63	0.81
2:D:10:ALA:HB2	3:F:165:LYS:NZ	1.96	0.81
3:F:236:PRO:HD2	3:F:239:TYR:HD2	1.46	0.81
1:A:231:ILE:HA	3:B:217:ASP:HB3	1.60	0.81
3:B:93:SER:O	3:B:96:MET:HG2	1.79	0.81
3:N:20:LEU:CD1	3:N:51:LEU:CA	2.51	0.81
2:D:129:GLU:OE2	2:D:131:THR:N	2.14	0.81
3:N:24:GLY:O	3:N:27:PRO:HD2	1.79	0.81
2:D:14:GLY:N	3:F:265:GLU:CA	2.44	0.80
2:L:11:LYS:HD3	2:L:11:LYS:H	1.45	0.80
1:E:307:THR:HG23	1:E:330:GLU:OE1	1.82	0.80
2:L:61:ILE:HD12	2:L:64:ALA:HB3	1.54	0.80
3:J:264:ALA:O	2:P:13:GLY:CA	2.29	0.80
1:E:100:CYS:CB	1:E:240:ILE:HG21	2.11	0.80
1:E:240:ILE:HD12	1:E:246:THR:HG22	1.61	0.80
3:N:28:GLU:OE2	3:N:284:ASN:HA	1.80	0.80
1:G:315:THR:O	1:G:319:GLY:HA2	1.81	0.80
3:B:94:TYR:O	3:B:98:LEU:N	2.11	0.80
1:I:146:GLU:HG3	1:I:187:LYS:HE3	1.63	0.80
3:J:20:LEU:O	3:J:78:ILE:HG22	1.82	0.80
2:D:14:GLY:H	3:F:265:GLU:CA	1.94	0.80
3:F:15:PHE:HB3	3:F:16:PRO:HD3	1.63	0.80
3:J:78:ILE:O	3:J:78:ILE:HD12	1.81	0.80
2:D:138:LEU:CB	1:A:131:HIS:HE1	1.91	0.80
3:F:61:GLU:O	3:F:64:GLU:N	2.14	0.80
1:O:138:VAL:HG22	1:O:139:ALA:N	1.95	0.80
1:O:175:ASN:CG	1:O:204:TYR:CE1	2.55	0.80
3:B:67:LEU:O	3:B:70:MET:N	2.14	0.79
1:E:100:CYS:HB3	1:E:240:ILE:HG21	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:19:MET:CE	3:F:48:GLU:OE1	2.30	0.79
2:P:151:LYS:NZ	2:P:190:ASP:OD1	2.14	0.79
2:H:113:PRO:HD2	2:H:314:LEU:HD13	1.62	0.79
2:H:259:ASN:ND2	2:H:268:GLU:CD	2.35	0.79
2:P:15:ARG:HG2	2:P:44:PRO:HD3	1.65	0.79
2:H:61:ILE:O	2:H:64:ALA:N	2.16	0.79
1:E:19:ILE:HB	1:E:277:PRO:HB3	1.64	0.79
3:N:103:ASP:C	3:N:263:SER:HG	1.81	0.79
3:B:17:VAL:HG13	3:B:46:PHE:CE1	2.16	0.79
2:H:285:ASN:CA	2:H:324:THR:HG21	2.13	0.79
1:O:314:LEU:O	1:O:320:GLY:HA3	1.82	0.79
2:P:58:GLU:O	2:P:61:ILE:HG22	1.82	0.79
1:M:46:GLY:H	1:M:50:LYS:HA	1.46	0.79
1:A:105:GLY:CA	1:A:308:ILE:HG22	2.12	0.79
1:O:73:LYS:HE3	1:O:265:THR:OG1	1.83	0.79
1:O:181:ASP:O	1:O:184:PHE:N	2.16	0.79
3:B:77:ILE:HG22	3:B:298:MET:SD	2.20	0.78
3:B:81:ILE:CD1	3:B:95:ASP:CA	2.60	0.78
1:M:180:SER:HA	3:N:149:ILE:HG21	1.65	0.78
3:N:20:LEU:HB3	3:N:78:ILE:CG2	2.12	0.78
1:K:142:LYS:CD	2:L:135:TYR:CZ	2.52	0.78
2:L:148:GLU:OE2	3:J:142:HIS:NE2	2.17	0.78
3:N:152:LEU:HD13	3:N:154:ILE:HD11	1.66	0.78
3:N:63:LEU:HA	3:N:66:VAL:HB	1.65	0.78
3:F:19:MET:O	3:F:48:GLU:HB2	1.84	0.78
2:L:129:GLU:O	2:L:235:ASN:CB	2.31	0.78
3:F:74:LYS:HA	3:F:266:TYR:HD1	1.48	0.78
1:M:175:ASN:HB2	3:N:83:THR:HG21	1.64	0.78
3:N:30:MET:CE	3:N:291:MET:CE	2.52	0.78
1:A:6:THR:HG23	1:A:35:GLN:HG2	1.64	0.78
1:G:142:LYS:HB3	2:H:149:SER:HB3	1.63	0.78
2:L:338:GLN:HA	2:L:341:ILE:HB	1.66	0.78
1:I:125:GLU:OE2	1:I:142:LYS:NZ	2.16	0.78
2:H:255:VAL:O	2:H:270:ALA:CB	2.32	0.78
3:N:257:VAL:HG12	3:N:273:ALA:H	1.49	0.78
2:P:140:HIS:HE1	2:P:148:GLU:CB	1.96	0.78
2:H:347:ILE:HD12	2:H:347:ILE:O	1.83	0.77
2:L:164:TYR:OH	2:L:260:TYR:CD2	2.37	0.77
1:O:180:SER:OG	1:O:181:ASP:N	2.14	0.77
2:P:138:LEU:CD2	1:M:131:HIS:NE2	2.24	0.77
1:M:43:ALA:HB3	1:M:80:HIS:CE1	2.19	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:257:VAL:CG1	3:N:273:ALA:H	1.97	0.77
1:E:83:MET:HA	1:E:83:MET:CE	2.13	0.77
2:H:60:ASP:OD1	2:H:61:ILE:N	2.16	0.77
2:L:138:LEU:CA	1:I:131:HIS:HE1	1.96	0.77
1:O:175:ASN:ND2	1:O:204:TYR:CD2	2.52	0.77
1:O:175:ASN:OD1	1:O:176:ILE:N	2.18	0.77
1:E:96:ASN:HB3	1:E:119:ARG:HB3	1.65	0.77
1:O:18:GLU:CD	1:O:273:ASP:HA	2.04	0.77
1:A:175:ASN:O	3:B:91:LEU:HD13	1.84	0.77
2:L:4:GLN:OE1	2:L:4:GLN:N	2.14	0.77
1:O:131:HIS:NE2	3:N:140:LEU:CB	2.48	0.77
3:B:96:MET:CA	3:B:99:ARG:HB2	2.15	0.77
3:F:74:LYS:HA	3:F:266:TYR:CD1	2.20	0.77
3:J:184:LYS:C	3:J:192:ASP:OD2	2.23	0.77
3:N:82:HIS:C	3:N:83:THR:HG22	2.05	0.77
2:L:97:ARG:HA	2:L:102:LEU:HD12	1.65	0.77
2:L:129:GLU:O	2:L:235:ASN:HB2	1.84	0.77
1:O:131:HIS:NE2	3:N:140:LEU:CA	2.48	0.77
3:N:29:LEU:HD11	3:N:288:PRO:HB3	0.77	0.76
2:D:19:THR:HG1	2:D:74:ALA:HB2	1.51	0.76
2:L:61:ILE:O	2:L:62:ARG:C	2.21	0.76
2:L:111:SER:N	2:L:249:VAL:CG1	2.45	0.76
3:J:104:LEU:CD1	3:J:268:VAL:HG21	2.15	0.76
3:N:30:MET:HE3	3:N:291:MET:HE1	1.67	0.76
1:O:132:VAL:CA	1:O:138:VAL:HG23	2.16	0.76
1:O:129:ILE:HD13	3:N:142:HIS:HB2	1.67	0.76
3:J:107:ASN:HB3	3:J:130:ARG:HB3	1.67	0.76
2:L:33:HIS:HB3	2:L:337:ILE:HG12	1.66	0.76
1:O:131:HIS:O	1:O:138:VAL:HG22	1.85	0.76
2:P:61:ILE:O	2:P:65:ILE:HG13	1.86	0.76
1:I:85:LEU:O	1:I:88:ARG:N	2.17	0.76
1:O:106:TYR:CE1	1:O:318:LEU:CD1	2.68	0.76
2:D:148:GLU:CD	3:B:150:GLU:OE1	2.24	0.76
2:H:323:HIS:ND1	2:H:327:ILE:HD11	1.99	0.76
2:P:259:ASN:ND2	2:P:268:GLU:OE1	2.19	0.76
3:N:77:ILE:HG21	3:N:298:MET:SD	2.26	0.76
2:D:13:GLY:CA	3:F:265:GLU:CA	2.64	0.76
1:O:19:ILE:HB	1:O:277:PRO:HB3	1.67	0.75
1:A:4:VAL:HA	1:A:33:PRO:HB2	1.67	0.75
2:L:90:LYS:O	2:L:91:SER:C	2.24	0.75
3:N:113:SER:HA	3:N:251:VAL:HG13	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:64:GLU:HB2	3:F:65:GLN:NE2	2.01	0.75
1:O:18:GLU:OE2	1:O:273:ASP:N	2.19	0.75
3:N:255:GLY:C	3:N:290:ALA:HB2	2.05	0.75
3:N:30:MET:HE2	3:N:291:MET:SD	2.06	0.75
1:O:86:LEU:O	1:O:90:THR:OG1	2.05	0.75
3:B:28:GLU:CD	3:B:282:GLY:HA2	2.07	0.75
2:P:255:VAL:HB	2:P:270:ALA:HB2	1.67	0.75
1:A:15:ILE:HG22	1:A:270:ALA:HA	1.69	0.75
2:L:140:HIS:NE2	3:J:150:GLU:CD	2.40	0.75
2:H:60:ASP:O	2:H:61:ILE:C	2.21	0.74
3:J:136:GLU:OE1	3:J:136:GLU:N	2.20	0.74
3:F:137:TYR:HD2	3:F:237:ASN:OD1	1.69	0.74
3:N:63:LEU:HD23	3:N:64:GLU:N	2.02	0.74
2:D:151:LYS:NZ	2:D:190:ASP:OD1	2.20	0.74
3:F:131:GLU:OE2	3:F:133:THR:HG23	1.85	0.74
3:J:54:VAL:CB	3:J:88:LYS:HZ2	1.98	0.74
3:F:206:TYR:HB3	3:F:209:ILE:HD13	1.68	0.74
1:O:206:ASP:HB3	2:P:243:ASN:HD22	1.49	0.74
2:P:66:MET:CB	2:P:69:ARG:HG3	2.13	0.74
2:D:50:VAL:HG21	2:D:64:ALA:HB1	0.74	0.74
2:H:255:VAL:O	2:H:270:ALA:N	2.20	0.74
2:H:320:GLU:OE1	3:N:112:LYS:CE	2.35	0.74
2:D:78:ASN:OD1	2:D:272:ARG:NH2	2.20	0.74
2:H:76:LYS:NZ	2:H:268:GLU:HB3	2.02	0.74
2:H:151:LYS:NZ	2:H:190:ASP:OD1	2.20	0.74
3:F:104:LEU:HA	3:F:263:SER:CB	2.17	0.74
3:F:17:VAL:O	3:F:47:GLN:N	2.21	0.74
3:J:169:ASP:OD1	3:J:206:TYR:OH	2.06	0.74
2:P:57:ASP:CB	2:P:60:ASP:HB2	2.18	0.74
2:P:128:ARG:HH11	2:P:235:ASN:HB2	1.53	0.74
3:F:137:TYR:CD2	3:F:237:ASN:OD1	2.41	0.74
1:O:142:LYS:HB2	2:P:135:TYR:HH	1.50	0.74
1:O:288:LEU:HB2	1:O:297:ALA:HB2	1.69	0.74
2:H:62:ARG:HA	2:H:65:ILE:HD13	1.69	0.73
3:N:141:GLU:HG2	3:N:151:CYS:HB2	1.68	0.73
2:D:17:THR:HG22	2:D:71:ASN:HD22	1.46	0.73
2:D:148:GLU:OE2	3:B:150:GLU:CD	2.26	0.73
3:F:70:MET:O	3:F:266:TYR:CE1	2.42	0.73
1:A:93:LEU:HD11	1:A:258:ILE:HD12	1.70	0.73
1:E:240:ILE:CD1	1:E:246:THR:CG2	2.66	0.73
1:A:53:ILE:CG2	1:A:54:PRO:HD2	2.18	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:59:SER:CB	3:F:62:LYS:H	2.00	0.73
2:L:56:ALA:CA	2:L:92:ARG:HH22	2.02	0.73
3:J:254:ALA:HA	3:J:273:ALA:HB2	1.69	0.73
1:E:100:CYS:HB3	1:E:240:ILE:HG23	1.68	0.73
3:J:49:HIS:CD2	3:J:66:VAL:HG22	2.23	0.73
1:A:5:GLN:O	1:A:35:GLN:N	2.19	0.73
3:J:83:THR:HG23	3:J:84:PRO:CD	2.18	0.73
3:N:62:LYS:O	3:N:65:GLN:HB3	1.88	0.73
2:D:23:GLY:HA2	2:D:52:VAL:CG2	2.18	0.72
2:P:68:ILE:O	2:P:71:ASN:O	2.06	0.72
3:B:97:ARG:HG2	3:B:97:ARG:HH11	1.53	0.72
1:M:98:ARG:NH2	1:M:234:ASP:OD1	2.19	0.72
1:C:53:ILE:HD11	1:C:58:LYS:HB2	1.69	0.72
2:D:129:GLU:OE2	2:D:130:ASN:N	2.22	0.72
3:B:94:TYR:O	3:B:97:ARG:HB3	1.90	0.72
1:E:231:ILE:HA	3:F:217:ASP:HB3	1.69	0.72
2:D:50:VAL:HG21	2:D:64:ALA:CA	2.19	0.72
2:D:319:ASN:HD22	2:D:322:MET:HG2	1.54	0.72
1:A:315:THR:OG1	1:A:318:LEU:HG	1.89	0.72
2:H:346:VAL:HG13	2:H:350:ARG:HB2	1.69	0.72
3:J:104:LEU:HA	3:J:263:SER:HB2	1.71	0.72
1:A:140:SER:HB2	3:B:153:LYS:HB3	1.70	0.72
1:O:134:VAL:HG23	1:O:136:GLY:O	1.89	0.72
2:P:91:SER:HB3	2:P:94:ASN:HB3	1.70	0.72
3:N:63:LEU:O	3:N:66:VAL:N	2.22	0.72
2:H:317:MET:HE2	2:H:317:MET:HA	1.72	0.72
2:P:129:GLU:CB	2:P:132:GLU:CB	2.67	0.72
2:D:19:THR:OG1	2:D:74:ALA:CA	2.37	0.72
2:D:27:GLY:O	2:D:31:MET:N	2.19	0.72
3:B:157:ARG:CD	3:B:198:CYS:SG	2.78	0.72
2:L:24:ASP:OD2	2:L:80:GLU:N	2.22	0.72
1:M:15:ILE:HG22	1:M:270:ALA:HA	1.72	0.72
2:P:20:MET:SD	2:P:47:PHE:HD2	2.13	0.71
2:L:138:LEU:C	1:I:131:HIS:HE1	1.93	0.71
1:O:175:ASN:HB3	1:O:204:TYR:CE1	2.26	0.71
3:B:81:ILE:CD1	3:B:95:ASP:HA	2.18	0.71
1:E:93:LEU:O	1:E:121:ASN:HB3	1.90	0.71
1:I:130:GLU:OE2	3:J:190:LEU:N	2.22	0.71
3:F:140:LEU:C	3:F:141:GLU:HG3	2.11	0.71
2:L:138:LEU:HA	1:I:131:HIS:NE2	2.04	0.71
2:P:43:VAL:HG21	2:P:305:TYR:CD2	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:44:ILE:HD11	1:C:52:MET:HG3	1.72	0.71
1:E:6:THR:HA	1:E:35:GLN:HB3	1.72	0.71
2:P:140:HIS:HE1	2:P:148:GLU:HB2	1.51	0.71
2:P:140:HIS:CE1	2:P:148:GLU:CB	2.73	0.71
2:D:140:HIS:CB	1:A:129:ILE:HD12	2.20	0.71
2:H:91:SER:HB3	2:H:94:ASN:CB	2.21	0.71
1:O:179:MET:O	2:P:147:VAL:HG11	1.90	0.71
2:H:315:ALA:C	2:H:343:HIS:CE1	2.64	0.71
2:H:320:GLU:OE1	3:N:112:LYS:NZ	2.24	0.71
3:F:62:LYS:O	3:F:66:VAL:HG23	1.90	0.71
2:P:80:GLU:O	2:P:81:THR:CB	2.35	0.71
1:A:109:PRO:O	3:B:120:ARG:NH1	2.22	0.71
3:N:104:LEU:CA	3:N:263:SER:OG	2.39	0.71
3:N:303:ASN:C	3:N:304:LEU:HD23	2.11	0.71
2:L:24:ASP:CG	2:L:79:ILE:HA	2.10	0.70
1:O:131:HIS:C	1:O:138:VAL:HG23	2.10	0.70
1:O:289:ARG:NH2	1:O:301:GLU:OE1	2.23	0.70
1:E:74:THR:CB	1:E:75:PRO:CD	2.69	0.70
3:F:59:SER:N	3:F:60:GLU:HA	2.07	0.70
3:F:96:MET:O	3:F:99:ARG:HB2	1.91	0.70
2:P:150:LEU:CD1	1:M:131:HIS:ND1	2.54	0.70
2:P:282:ASN:HB2	2:P:332:THR:OG1	1.92	0.70
1:C:142:LYS:HD2	2:D:135:TYR:OH	1.91	0.70
2:H:50:VAL:O	2:H:50:VAL:HG13	1.90	0.70
3:F:283:ARG:O	3:F:284:ASN:ND2	2.24	0.70
1:E:240:ILE:CG1	1:E:246:THR:HG21	2.21	0.70
2:L:52:VAL:HG12	2:L:53:SER:N	2.01	0.70
3:J:265:GLU:HA	2:P:14:GLY:N	2.07	0.70
3:B:152:LEU:HB3	3:B:154:ILE:HD11	1.73	0.70
3:B:16:PRO:HA	3:B:45:GLU:O	1.91	0.70
1:O:175:ASN:OD1	1:O:176:ILE:HG12	1.91	0.70
2:P:17:THR:C	2:P:71:ASN:ND2	2.45	0.70
2:P:36:SER:HA	2:P:39:ARG:HH12	1.53	0.70
2:D:151:LYS:HE2	2:D:153:ILE:HD11	1.73	0.70
2:H:297:LEU:HB2	2:H:306:ALA:HB2	1.73	0.70
2:H:267:PHE:CZ	2:H:296:MET:CA	2.65	0.69
3:N:21:PRO:HD3	3:N:51:LEU:CB	2.19	0.69
1:K:98:ARG:NH1	1:K:234:ASP:OD1	2.25	0.69
1:K:142:LYS:CE	2:L:135:TYR:HE2	2.04	0.69
1:I:230:ASP:OD2	3:J:184:LYS:NZ	2.24	0.69
2:P:66:MET:O	2:P:69:ARG:HB2	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:135:TYR:HE1	2:P:151:LYS:HB2	1.56	0.69
2:D:295:MET:HA	2:D:298:ASP:HB2	1.72	0.69
3:B:156:THR:OG1	3:B:159:LYS:HB2	1.92	0.69
3:F:66:VAL:HG11	3:F:98:LEU:HD11	1.73	0.69
2:P:94:ASN:HA	2:P:97:ARG:HG2	1.75	0.69
1:G:173:LYS:NZ	1:G:206:ASP:OD2	2.26	0.69
1:O:269:ILE:HD12	1:O:274:MET:O	1.92	0.69
3:N:19:MET:HE1	3:N:48:GLU:OE2	1.93	0.69
3:B:90:GLU:O	3:B:91:LEU:CG	2.39	0.69
2:L:75:LEU:HD12	2:L:267:PHE:O	1.93	0.69
3:N:185:ALA:HA	3:N:192:ASP:CB	2.22	0.69
1:C:30:ALA:O	1:C:299:ARG:NH1	2.25	0.69
1:A:115:ILE:HD12	1:A:219:PHE:HB2	1.75	0.69
3:F:143:GLU:CD	3:F:145:ALA:O	2.31	0.69
2:L:20:MET:HB2	2:L:47:PHE:HD2	1.56	0.69
2:L:57:ASP:CB	2:L:60:ASP:HA	2.22	0.69
1:I:98:ARG:HD2	1:I:233:SER:HB2	1.72	0.69
3:B:157:ARG:HD2	3:B:198:CYS:SG	2.32	0.69
2:H:182:LYS:HE3	2:H:185:ILE:HD13	1.74	0.69
1:E:240:ILE:HG13	1:E:246:THR:HG21	1.73	0.69
3:F:140:LEU:O	3:F:141:GLU:HG3	1.93	0.69
2:L:60:ASP:OD1	2:L:61:ILE:N	2.25	0.69
2:L:254:LEU:HD21	2:L:285:ASN:HD21	1.56	0.69
3:J:49:HIS:O	3:J:50:HIS:C	2.25	0.69
1:M:231:ILE:HA	3:N:217:ASP:HB3	1.75	0.69
2:H:255:VAL:O	2:H:270:ALA:HB2	1.93	0.69
3:F:110:HIS:O	3:F:257:VAL:HG13	1.92	0.69
2:L:61:ILE:HD11	2:L:64:ALA:CB	2.21	0.69
3:J:54:VAL:CB	3:J:88:LYS:HZ1	2.02	0.69
3:J:183:HIS:ND1	3:J:185:ALA:CB	2.55	0.69
1:O:131:HIS:CE1	3:N:140:LEU:HA	2.28	0.69
2:D:10:ALA:HB2	3:F:165:LYS:CE	2.22	0.68
1:A:146:GLU:HG3	1:A:187:LYS:HE3	1.74	0.68
2:H:113:PRO:HB2	2:H:318:ASP:OD2	1.93	0.68
3:F:153:LYS:NZ	3:F:192:ASP:OD1	2.25	0.68
3:N:156:THR:O	3:N:157:ARG:C	2.27	0.68
3:B:93:SER:C	3:B:96:MET:SD	2.71	0.68
1:E:311:GLY:HA2	1:E:314:LEU:HD11	1.75	0.68
3:F:92:ALA:CA	3:F:139:SER:CB	2.56	0.68
3:J:83:THR:HG23	3:J:84:PRO:N	2.09	0.68
2:P:237:TYR:O	2:P:241:VAL:HG23	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:30:MET:O	3:N:33:VAL:N	2.25	0.68
3:N:110:HIS:NE2	3:N:260:GLU:OE2	2.24	0.68
1:O:174:ALA:HA	1:O:181:ASP:OD1	1.93	0.68
3:F:143:GLU:CG	3:F:145:ALA:O	2.42	0.68
1:K:142:LYS:HZ2	2:L:135:TYR:HE2	1.40	0.68
2:L:73:VAL:HA	2:L:265:ALA:O	1.94	0.68
2:H:21:ILE:HG13	2:H:50:VAL:CG1	2.24	0.68
1:E:175:ASN:HA	3:F:85:MET:CA	2.03	0.68
2:L:50:VAL:HG21	2:L:64:ALA:HB2	1.76	0.68
2:D:19:THR:OG1	2:D:74:ALA:HA	1.94	0.68
3:B:77:ILE:HG21	3:B:298:MET:HE2	1.76	0.68
3:J:23:ASP:OD2	3:J:53:GLU:CB	2.42	0.68
3:N:288:PRO:HD2	3:N:289:THR:N	2.09	0.68
3:B:81:ILE:CG1	3:B:95:ASP:HB2	2.23	0.67
2:L:111:SER:CB	2:L:249:VAL:HG12	2.24	0.67
2:D:10:ALA:HB2	3:F:165:LYS:HE2	1.76	0.67
2:H:76:LYS:NZ	2:H:268:GLU:OE2	2.26	0.67
2:P:36:SER:HA	2:P:39:ARG:HH11	1.59	0.67
3:N:63:LEU:CA	3:N:66:VAL:HB	2.24	0.67
3:B:17:VAL:HG13	3:B:46:PHE:CD1	2.29	0.67
2:P:283:ILE:O	2:P:284:ALA:C	2.29	0.67
3:J:108:VAL:HG22	3:J:129:ILE:HG12	1.76	0.67
3:N:25:VAL:O	3:N:29:LEU:N	2.22	0.67
2:H:342:ARG:HD3	3:N:305:GLU:CB	2.25	0.67
1:I:130:GLU:OE1	3:J:191:GLY:N	2.28	0.67
2:D:15:ARG:HG3	2:D:15:ARG:O	1.93	0.67
2:H:76:LYS:NZ	2:H:268:GLU:CB	2.57	0.67
1:O:73:LYS:HD3	1:O:265:THR:OG1	1.95	0.67
1:K:142:LYS:NZ	2:L:135:TYR:HE2	1.91	0.67
1:O:142:LYS:HB3	2:P:149:SER:HB2	1.77	0.67
2:L:55:ASN:O	2:L:56:ALA:HB3	1.95	0.67
1:O:140:SER:HB2	2:P:151:LYS:HB3	1.76	0.67
3:N:21:PRO:CD	3:N:22:GLY:H	2.08	0.67
3:N:276:PRO:O	3:N:280:ALA:N	2.24	0.67
2:L:151:LYS:NZ	2:L:190:ASP:OD1	2.24	0.66
2:L:164:TYR:OH	2:L:260:TYR:HD2	1.75	0.66
2:P:57:ASP:CA	2:P:60:ASP:HB2	2.25	0.66
1:A:44:ILE:HG12	1:A:52:MET:O	1.95	0.66
3:F:299:LEU:HD23	3:F:302:LEU:HD12	1.77	0.66
3:J:15:PHE:CB	3:J:16:PRO:CD	2.73	0.66
1:O:142:LYS:HB2	2:P:135:TYR:CZ	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:130:ARG:HG3	3:J:240:GLY:HA3	1.77	0.66
1:M:134:VAL:CG2	1:M:137:VAL:CB	2.67	0.66
3:N:61:GLU:HA	3:N:63:LEU:CD2	2.24	0.66
3:B:94:TYR:HA	3:B:97:ARG:HB3	1.76	0.66
1:I:120:GLU:OE1	1:I:122:THR:OG1	2.12	0.66
2:P:133:GLY:O	2:P:134:GLU:CB	2.43	0.66
2:P:137:SER:O	2:P:138:LEU:HB2	1.96	0.66
1:G:214:GLN:O	2:H:118:ARG:NH2	2.23	0.66
2:H:252:PRO:CA	2:H:271:THR:CB	2.73	0.66
1:A:41:VAL:HA	1:A:54:PRO:HG2	1.77	0.66
2:H:184:ASN:C	2:H:185:ILE:HD12	2.16	0.66
3:J:131:GLU:OE1	3:J:237:ASN:ND2	2.28	0.66
1:I:128:GLY:O	1:I:130:GLU:HG3	1.95	0.66
3:J:54:VAL:CB	3:J:88:LYS:CE	2.74	0.66
2:P:281:LYS:CB	2:P:283:ILE:HG12	2.26	0.66
1:M:179:MET:HG2	3:N:149:ILE:CG1	2.24	0.66
1:I:129:ILE:O	1:I:141:ILE:HB	1.95	0.66
1:O:173:LYS:NZ	2:P:239:ASN:CB	2.56	0.66
2:H:316:SER:HA	2:H:343:HIS:CE1	2.31	0.66
1:I:115:ILE:HD12	1:I:219:PHE:HB2	1.78	0.66
2:P:21:ILE:CG2	2:P:52:VAL:HG13	2.21	0.66
2:P:61:ILE:HG23	2:P:62:ARG:N	2.10	0.66
1:A:237:ALA:HB1	1:A:246:THR:HG21	1.77	0.65
2:L:128:ARG:NH1	2:L:235:ASN:OD1	2.29	0.65
3:N:21:PRO:HD2	3:N:22:GLY:H	1.61	0.65
2:L:50:VAL:CG2	2:L:64:ALA:HB2	2.26	0.65
2:L:14:GLY:H	3:N:265:GLU:HA	1.61	0.65
2:L:130:ASN:O	2:L:130:ASN:ND2	2.27	0.65
3:B:69:SER:O	3:B:73:ASN:ND2	2.29	0.65
2:H:76:LYS:HZ2	2:H:268:GLU:CB	2.10	0.65
2:P:140:HIS:H	2:P:140:HIS:HD1	1.45	0.65
3:B:157:ARG:O	3:B:157:ARG:CG	2.44	0.65
1:G:130:GLU:HB2	2:H:188:LEU:HD12	1.79	0.65
3:J:86:GLU:HA	3:J:91:LEU:HD11	1.77	0.65
1:E:238:GLY:HA3	3:F:224:VAL:CG2	2.26	0.65
3:F:59:SER:CB	3:F:62:LYS:HA	2.24	0.65
1:O:34:ILE:HG22	1:O:36:TRP:CE2	2.31	0.65
2:P:38:PHE:C	2:P:41:ALA:H	2.00	0.65
2:P:93:ASN:CG	2:P:97:ARG:HH21	2.01	0.65
2:P:150:LEU:HD11	1:M:131:HIS:CE1	2.32	0.65
2:D:120:LYS:O	2:D:226:GLN:NE2	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:129:GLU:CD	2:D:132:GLU:CB	2.66	0.64
1:M:178:ARG:HE	3:N:86:GLU:HA	1.59	0.64
1:C:80:HIS:N	1:C:81:PRO:HD2	2.12	0.64
2:H:107:ILE:HD11	2:H:126:ILE:HD12	1.78	0.64
1:O:181:ASP:C	1:O:183:LEU:N	2.50	0.64
3:B:90:GLU:C	3:B:91:LEU:HG	2.17	0.64
1:E:100:CYS:HA	1:E:240:ILE:HG21	1.77	0.64
2:L:126:ILE:HG21	2:L:242:ASN:ND2	2.12	0.64
1:I:129:ILE:CB	1:I:141:ILE:HB	2.27	0.64
1:O:316:LYS:O	1:O:319:GLY:HA3	1.97	0.64
2:P:20:MET:SD	2:P:47:PHE:CD2	2.90	0.64
1:G:177:MET:HB3	1:G:180:SER:HB3	1.80	0.64
3:J:104:LEU:HD13	3:J:268:VAL:CG2	2.26	0.64
3:J:254:ALA:CB	3:J:273:ALA:CB	2.75	0.64
2:P:138:LEU:HD23	1:M:131:HIS:CE1	2.25	0.64
3:F:127:VAL:HG21	3:F:170:TYR:HE2	1.63	0.64
3:J:254:ALA:HA	3:J:273:ALA:CB	2.27	0.64
3:B:96:MET:HA	3:B:99:ARG:CB	2.24	0.64
3:F:97:ARG:O	3:F:98:LEU:C	2.35	0.64
1:C:129:ILE:HD13	3:B:142:HIS:HB2	1.79	0.64
1:E:88:ARG:CZ	1:E:122:THR:HA	2.28	0.64
3:F:143:GLU:OE2	3:F:145:ALA:O	2.15	0.64
2:L:138:LEU:HB3	1:I:131:HIS:CE1	2.33	0.64
1:O:44:ILE:HA	1:O:51:TRP:CZ3	2.33	0.64
1:O:142:LYS:HD2	2:P:135:TYR:CE2	2.19	0.64
2:P:90:LYS:CA	2:P:95:ILE:HD11	2.27	0.64
1:C:157:PHE:HE2	1:C:192:ALA:HA	1.62	0.64
3:J:254:ALA:HB1	3:J:273:ALA:HB1	1.80	0.64
2:L:61:ILE:O	2:L:64:ALA:N	2.30	0.64
1:I:83:MET:HA	1:I:83:MET:CE	2.21	0.64
3:B:140:LEU:HB2	3:B:152:LEU:HB2	1.80	0.64
2:L:57:ASP:O	2:L:60:ASP:HA	1.97	0.64
1:I:85:LEU:O	1:I:86:LEU:C	2.36	0.64
1:I:125:GLU:O	1:I:127:SER:O	2.16	0.64
1:O:313:SER:O	1:O:327:PHE:HD2	1.81	0.64
1:M:41:VAL:HA	1:M:54:PRO:HG2	1.80	0.64
1:A:103:ILE:CG2	1:A:308:ILE:HG21	2.28	0.63
3:B:102:LEU:HB2	3:B:104:LEU:HG	1.80	0.63
2:L:11:LYS:H	2:L:11:LYS:CD	2.11	0.63
1:I:231:ILE:HA	3:J:217:ASP:HB3	1.78	0.63
3:J:183:HIS:CE1	3:J:185:ALA:HB3	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:270:ALA:O	2:P:272:ARG:NH1	2.31	0.63
3:N:20:LEU:HB2	3:N:78:ILE:HG22	1.74	0.63
3:N:185:ALA:CA	3:N:192:ASP:HB3	2.27	0.63
1:I:11:PRO:HB2	1:I:17:PRO:HG3	1.78	0.63
3:J:265:GLU:O	2:P:13:GLY:C	2.37	0.63
3:N:104:LEU:HA	3:N:263:SER:OG	1.96	0.63
3:N:185:ALA:HB2	3:N:192:ASP:HB3	1.80	0.63
1:K:179:MET:SD	2:L:139:GLU:CB	2.86	0.63
2:L:50:VAL:HG13	2:L:50:VAL:O	1.97	0.63
3:J:49:HIS:HD2	3:J:66:VAL:HG22	1.62	0.63
1:O:15:ILE:HG22	1:O:270:ALA:CA	2.25	0.63
1:O:316:LYS:HA	1:O:320:GLY:O	1.98	0.63
2:P:138:LEU:HB3	1:M:131:HIS:NE2	2.13	0.63
1:M:45:GLN:HA	1:M:50:LYS:HA	1.81	0.63
1:G:288:LEU:HD22	1:G:293:LEU:HD12	1.78	0.63
3:J:104:LEU:HD11	3:J:268:VAL:HG21	1.80	0.63
2:P:66:MET:O	2:P:69:ARG:CB	2.47	0.63
2:P:275:GLY:O	2:P:278:ILE:N	2.30	0.63
2:H:9:SER:HB3	2:H:70:ARG:O	1.98	0.63
1:O:106:TYR:CZ	1:O:318:LEU:HD11	2.34	0.63
3:B:91:LEU:HD12	3:B:91:LEU:C	2.09	0.63
1:K:231:ILE:HG21	2:L:240:ILE:HD13	1.81	0.63
2:P:300:LEU:C	2:P:301:LYS:HG3	2.18	0.63
1:A:130:GLU:OE1	3:B:191:GLY:N	2.32	0.63
2:H:313:VAL:O	2:H:317:MET:HG2	1.99	0.63
2:P:152:ILE:CD1	1:M:133:ILE:HG21	2.29	0.63
1:A:53:ILE:HG23	1:A:54:PRO:CD	2.25	0.63
2:H:133:GLY:HA3	2:H:235:ASN:H	1.63	0.62
2:D:117:THR:OG1	2:D:119:HIS:O	2.15	0.62
2:H:60:ASP:O	2:H:62:ARG:N	2.32	0.62
2:P:135:TYR:CE1	2:P:151:LYS:CB	2.82	0.62
3:N:63:LEU:O	3:N:66:VAL:CB	2.47	0.62
2:D:50:VAL:CG2	2:D:64:ALA:CA	2.75	0.62
3:B:93:SER:O	3:B:96:MET:CG	2.47	0.62
3:B:115:PRO:HB2	3:B:320:LYS:HB2	1.80	0.62
1:K:99:PRO:HB3	1:K:116:VAL:HG22	1.80	0.62
1:K:157:PHE:HE2	1:K:192:ALA:HA	1.65	0.62
2:P:86:PRO:N	2:P:87:PRO:HA	2.14	0.62
2:L:15:ARG:NH1	2:L:46:ASP:HB2	2.14	0.62
2:L:129:GLU:OE2	2:L:132:GLU:N	2.31	0.62
1:I:126:TYR:CE2	1:I:226:ASN:OD1	2.52	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:175:ASN:CB	1:O:204:TYR:CE1	2.82	0.62
2:P:105:ASN:HB2	2:P:130:ASN:HD21	1.65	0.62
1:A:289:ARG:NH2	1:A:301:GLU:OE1	2.32	0.62
1:G:315:THR:O	1:G:319:GLY:CA	2.47	0.62
2:H:184:ASN:OD1	2:H:185:ILE:HD13	1.99	0.62
2:L:14:GLY:N	3:N:265:GLU:HA	2.14	0.62
2:L:66:MET:HA	2:L:69:ARG:HB2	1.81	0.62
2:L:107:ILE:HG13	2:L:126:ILE:HB	1.81	0.62
1:O:112:ASP:HB3	1:O:217:SER:HB3	1.80	0.62
1:O:172:HIS:CE1	1:O:174:ALA:HB3	2.35	0.62
2:P:35:LYS:NZ	2:P:49:GLU:OE2	2.29	0.62
1:M:250:ASN:HB2	1:M:258:ILE:HB	1.81	0.62
3:B:157:ARG:HG3	3:B:198:CYS:SG	2.40	0.62
3:N:30:MET:O	3:N:33:VAL:HB	2.00	0.62
2:D:50:VAL:HG22	2:D:64:ALA:HB2	1.63	0.62
2:H:267:PHE:CD2	2:H:296:MET:CG	2.74	0.62
2:L:56:ALA:HA	2:L:92:ARG:HH21	1.63	0.62
2:L:60:ASP:OD1	2:L:61:ILE:HG22	2.00	0.62
1:I:282:LEU:HA	1:I:285:VAL:HB	1.82	0.62
3:N:30:MET:HE1	3:N:291:MET:CG	2.12	0.62
1:E:118:ILE:HG21	1:E:156:ALA:HB2	1.80	0.62
3:F:103:ASP:OD2	3:F:162:ARG:NH1	2.31	0.62
1:O:73:LYS:CD	1:O:265:THR:OG1	2.47	0.62
1:O:133:ILE:HG22	1:O:133:ILE:O	1.99	0.62
2:P:66:MET:HA	2:P:69:ARG:HG2	1.58	0.62
2:P:91:SER:N	2:P:94:ASN:OD1	2.31	0.62
1:M:46:GLY:HA3	1:M:52:MET:HG2	1.81	0.62
2:D:50:VAL:HG23	2:D:64:ALA:HB2	1.73	0.62
1:O:73:LYS:HD3	1:O:265:THR:HG23	1.82	0.62
2:P:347:ILE:O	2:P:348:ASN:CG	2.38	0.62
3:N:83:THR:HG23	3:N:84:PRO:N	2.15	0.62
1:C:281:LEU:O	1:C:285:VAL:N	2.28	0.61
1:A:103:ILE:CG2	1:A:308:ILE:HD13	2.30	0.61
3:B:19:MET:SD	3:B:30:MET:HB3	2.40	0.61
2:H:267:PHE:CE1	2:H:296:MET:CA	2.80	0.61
2:L:182:LYS:NZ	2:L:215:ASP:OD2	2.32	0.61
1:I:122:THR:OG1	1:I:123:GLU:N	2.33	0.61
2:P:39:ARG:HH11	2:P:39:ARG:HB3	1.65	0.61
3:B:157:ARG:HA	3:B:160:SER:OG	2.00	0.61
1:O:106:TYR:CZ	1:O:318:LEU:CD1	2.83	0.61
2:P:41:ALA:O	2:P:42:CYS:HB3	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:104:ALA:HB3	2:D:260:TYR:HB2	1.81	0.61
2:L:79:ILE:HD12	2:L:92:ARG:HB2	1.81	0.61
1:M:80:HIS:HD2	1:M:81:PRO:HD2	1.64	0.61
3:N:30:MET:HE3	3:N:291:MET:HE2	1.73	0.61
1:E:145:THR:O	1:E:149:SER:OG	2.14	0.61
3:F:254:ALA:HB1	3:F:273:ALA:HB2	1.65	0.61
3:J:20:LEU:CD2	3:J:78:ILE:HG21	2.31	0.61
1:O:142:LYS:CD	2:P:135:TYR:HE2	2.06	0.61
2:D:22:PRO:HB2	2:D:28:PRO:HG3	1.83	0.61
1:I:235:LEU:HD11	3:J:246:LEU:HD21	1.81	0.61
2:P:94:ASN:OD1	2:P:95:ILE:N	2.34	0.61
2:P:133:GLY:HA2	2:P:235:ASN:N	2.13	0.61
2:D:21:ILE:CB	2:D:50:VAL:CG1	2.79	0.61
1:G:173:LYS:HE3	1:G:176:ILE:HG13	1.81	0.61
1:I:98:ARG:NH1	1:I:234:ASP:OD1	2.33	0.61
3:J:104:LEU:HD13	3:J:268:VAL:HG21	1.80	0.61
2:P:90:LYS:HA	2:P:95:ILE:HD11	1.83	0.61
2:P:281:LYS:CB	2:P:283:ILE:HD11	2.31	0.61
1:C:10:ILE:HG12	1:C:41:VAL:HG11	1.83	0.61
1:G:313:SER:OG	1:G:330:GLU:OE1	2.15	0.61
2:H:113:PRO:HD2	2:H:314:LEU:CD1	2.31	0.61
1:O:157:PHE:HE2	1:O:192:ALA:HA	1.66	0.61
3:N:335:CYS:SG	3:N:336:HIS:N	2.73	0.61
2:H:317:MET:HA	2:H:317:MET:CE	2.29	0.61
1:E:313:SER:C	1:E:314:LEU:HD12	2.21	0.61
3:F:129:ILE:HD12	3:F:167:ALA:HA	1.82	0.61
1:I:138:VAL:HG11	3:J:191:GLY:HA2	1.82	0.61
2:P:17:THR:C	2:P:71:ASN:HD22	1.99	0.61
1:C:140:SER:HB2	2:D:151:LYS:HB3	1.82	0.61
2:H:285:ASN:CB	2:H:324:THR:HG21	2.30	0.61
1:O:318:LEU:N	1:O:318:LEU:HD22	2.15	0.61
2:P:135:TYR:HE1	2:P:151:LYS:CB	2.13	0.61
3:N:28:GLU:OE2	3:N:284:ASN:CA	2.49	0.60
2:D:105:ASN:HB2	2:D:130:ASN:HD21	1.66	0.60
1:E:15:ILE:HG22	1:E:270:ALA:HA	1.82	0.60
3:N:61:GLU:HA	3:N:63:LEU:HD21	1.82	0.60
3:B:97:ARG:HG2	3:B:97:ARG:NH1	2.16	0.60
3:B:285:ILE:HG23	3:B:285:ILE:O	1.99	0.60
2:H:61:ILE:O	2:H:64:ALA:CA	2.48	0.60
2:H:346:VAL:HG12	2:H:346:VAL:O	2.01	0.60
1:M:95:ALA:HB3	1:M:251:ILE:HB	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:117:TYR:OH	3:N:328:ASP:O	2.19	0.60
1:G:19:ILE:HB	1:G:277:PRO:HB3	1.83	0.60
1:O:174:ALA:HB2	1:O:181:ASP:CG	2.22	0.60
2:P:91:SER:CB	2:P:94:ASN:HB3	2.31	0.60
1:M:46:GLY:HA3	1:M:52:MET:CG	2.32	0.60
3:B:99:ARG:HD3	3:B:104:LEU:HB2	1.83	0.60
2:L:181:HIS:HE2	2:L:211:ASN:HB2	1.65	0.60
2:P:300:LEU:O	2:P:301:LYS:HG3	2.01	0.60
1:M:140:SER:HB2	3:N:153:LYS:HG2	1.83	0.60
3:N:293:LEU:O	3:N:297:ASN:ND2	2.32	0.60
3:B:300:ARG:HG3	3:B:308:SER:HG	1.60	0.60
2:H:180:VAL:HB	2:H:233:MET:HB3	1.84	0.60
1:E:83:MET:HA	1:E:83:MET:HE1	1.82	0.60
2:P:62:ARG:HA	2:P:65:ILE:HG13	1.84	0.60
1:M:115:ILE:HD12	1:M:219:PHE:HB2	1.83	0.60
2:H:76:LYS:HZ2	2:H:268:GLU:HB2	1.66	0.60
1:E:330:GLU:HA	1:E:333:ARG:HG2	1.83	0.60
1:I:126:TYR:CE1	3:J:187:ILE:HG21	2.37	0.60
3:J:70:MET:HG3	3:J:102:LEU:HD11	1.82	0.60
3:J:179:VAL:HG12	3:J:232:VAL:HB	1.84	0.60
1:O:133:ILE:HG23	3:N:154:ILE:HG13	1.84	0.60
1:M:93:LEU:HD11	1:M:258:ILE:HD12	1.83	0.60
1:C:249:GLY:HA2	1:C:259:PHE:HA	1.83	0.60
1:A:69:LYS:NZ	1:A:260:GLU:OE1	2.30	0.60
1:K:91:PHE:HB3	1:K:256:VAL:HG11	1.83	0.60
1:K:125:GLU:OE1	1:K:125:GLU:N	2.35	0.60
3:N:257:VAL:HG12	3:N:273:ALA:N	2.09	0.60
3:N:279:GLN:O	3:N:281:VAL:N	2.30	0.60
2:D:21:ILE:CB	2:D:50:VAL:HG12	2.31	0.60
1:I:110:TYR:CE1	3:J:120:ARG:HD3	2.37	0.60
2:L:138:LEU:CB	1:I:131:HIS:CE1	2.84	0.60
2:P:38:PHE:O	2:P:41:ALA:HB3	2.02	0.59
2:D:13:GLY:HA2	3:F:265:GLU:CA	2.31	0.59
2:H:323:HIS:ND1	2:H:327:ILE:CD1	2.65	0.59
1:E:88:ARG:HD3	1:E:122:THR:CG2	2.28	0.59
1:I:126:TYR:HE1	3:J:187:ILE:HG21	1.67	0.59
3:J:49:HIS:CE1	3:J:69:SER:HG	2.20	0.59
1:C:69:LYS:HD2	1:C:72:LEU:HD11	1.83	0.59
3:B:142:HIS:NE2	3:B:150:GLU:OE1	2.35	0.59
2:P:152:ILE:CG1	1:M:133:ILE:HG23	2.28	0.59
2:H:257:GLY:CA	2:H:268:GLU:O	2.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:178:ARG:HH12	2:L:86:PRO:C	2.00	0.59
3:J:255:GLY:O	3:J:290:ALA:N	2.33	0.59
3:N:154:ILE:HG22	3:N:155:VAL:N	2.15	0.59
3:N:257:VAL:HG12	3:N:257:VAL:O	2.02	0.59
2:D:60:ASP:N	2:D:60:ASP:OD1	2.35	0.59
2:H:112:LEU:HB2	2:H:115:VAL:HB	1.84	0.59
1:O:98:ARG:CZ	1:O:233:SER:HB2	2.31	0.59
2:P:127:VAL:HG12	2:P:161:ILE:HD11	1.83	0.59
2:P:152:ILE:HD12	1:M:133:ILE:HG21	1.85	0.59
3:B:153:LYS:C	3:B:154:ILE:HD13	2.23	0.59
1:E:178:ARG:CB	3:F:86:GLU:CB	2.81	0.59
3:F:226:ASN:O	3:F:229:GLN:NE2	2.27	0.59
1:I:103:ILE:HG22	1:I:105:GLY:H	1.67	0.59
3:N:185:ALA:HA	3:N:192:ASP:HB2	1.83	0.59
2:H:17:THR:O	2:H:71:ASN:ND2	2.36	0.59
2:H:60:ASP:CG	2:H:61:ILE:N	2.56	0.59
1:O:131:HIS:C	1:O:138:VAL:CG2	2.70	0.59
1:O:157:PHE:HE1	1:O:168:VAL:HG11	1.67	0.59
3:N:104:LEU:HA	3:N:263:SER:CB	2.32	0.59
1:E:238:GLY:HA3	3:F:224:VAL:HG21	1.85	0.59
3:F:19:MET:HB3	3:F:48:GLU:CB	2.33	0.59
3:F:42:VAL:HG12	3:F:44:VAL:HG22	1.85	0.59
3:F:104:LEU:CA	3:F:263:SER:CB	2.81	0.59
2:P:47:PHE:O	2:P:48:GLU:C	2.37	0.59
2:P:285:ASN:HA	2:P:324:THR:HG21	1.85	0.59
1:M:161:ARG:NH1	1:M:195:CYS:SG	2.76	0.59
1:O:133:ILE:O	1:O:134:VAL:HG13	2.03	0.59
1:A:145:THR:HG22	3:B:148:VAL:HG13	1.84	0.59
1:E:100:CYS:CB	1:E:240:ILE:CG2	2.74	0.59
3:F:67:LEU:HD23	3:F:67:LEU:C	2.23	0.59
1:E:183:LEU:HA	1:E:186:GLN:HG2	1.85	0.58
1:O:73:LYS:HE2	1:O:265:THR:H	1.67	0.58
1:M:132:VAL:HG23	1:M:132:VAL:O	2.03	0.58
3:B:140:LEU:CB	3:B:152:LEU:HD12	2.31	0.58
1:O:137:VAL:O	1:O:137:VAL:HG12	2.01	0.58
2:P:39:ARG:NH1	2:P:39:ARG:HB3	2.18	0.58
2:D:17:THR:HG21	2:D:71:ASN:HD21	1.61	0.58
1:A:129:ILE:HB	1:A:141:ILE:HB	1.85	0.58
2:L:114:GLY:HA3	2:L:318:ASP:HA	1.85	0.58
2:L:254:LEU:CD2	2:L:285:ASN:HD21	2.16	0.58
1:I:132:VAL:O	1:I:132:VAL:HG12	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:156:THR:HG21	3:B:159:LYS:HE3	1.84	0.58
3:F:254:ALA:HB1	3:F:273:ALA:HB3	0.60	0.58
1:K:133:ILE:CG1	1:I:133:ILE:CD1	2.63	0.58
2:L:78:ASN:OD1	2:L:272:ARG:NH2	2.37	0.58
1:I:5:GLN:O	1:I:35:GLN:N	2.29	0.58
1:M:91:PHE:CD2	1:M:256:VAL:HG11	2.38	0.58
1:M:172:HIS:O	1:M:204:TYR:HA	2.03	0.58
3:N:63:LEU:HD23	3:N:63:LEU:N	2.19	0.58
1:A:53:ILE:CG2	1:A:54:PRO:CD	2.81	0.58
1:E:9:LEU:HD23	1:E:38:GLU:HG2	1.85	0.58
1:K:108:THR:HG21	1:K:240:ILE:HA	1.84	0.58
1:K:142:LYS:HD2	2:L:135:TYR:HH	1.67	0.58
2:L:56:ALA:CB	2:L:92:ARG:HH22	2.16	0.58
2:P:57:ASP:O	2:P:60:ASP:HB2	2.03	0.58
1:C:171:VAL:HB	1:C:224:MET:HB3	1.84	0.58
1:A:293:LEU:O	1:A:297:ALA:N	2.34	0.58
1:I:126:TYR:CD2	1:I:226:ASN:OD1	2.55	0.58
3:J:138:SER:O	3:J:140:LEU:HG	2.02	0.58
1:O:276:ASN:HB2	1:O:315:THR:HG21	1.86	0.58
2:P:22:PRO:HA	2:P:31:MET:HG3	1.84	0.58
1:E:146:GLU:N	3:F:147:GLY:O	2.36	0.58
2:P:52:VAL:CG1	2:P:52:VAL:O	2.39	0.58
3:N:28:GLU:OE2	3:N:284:ASN:CB	2.51	0.58
3:N:70:MET:HG3	3:N:266:TYR:HD2	1.68	0.58
2:H:107:ILE:HG12	2:H:126:ILE:HB	1.86	0.58
1:K:242:GLY:O	1:K:246:THR:OG1	2.22	0.58
3:J:138:SER:C	3:J:140:LEU:HG	2.24	0.58
1:G:209:CYS:HB3	2:H:244:VAL:HG23	1.86	0.58
2:L:52:VAL:CG1	2:L:53:SER:H	2.09	0.58
2:L:56:ALA:CA	2:L:92:ARG:NH2	2.55	0.58
2:P:9:SER:H	2:P:72:ARG:NH1	2.02	0.58
2:P:98:THR:O	2:P:100:LEU:N	2.37	0.58
3:N:63:LEU:O	3:N:66:VAL:CA	2.52	0.58
3:N:89:GLY:O	3:N:90:GLU:CB	2.51	0.58
1:A:103:ILE:HG22	1:A:308:ILE:HG21	1.86	0.58
1:G:206:ASP:OD1	2:H:239:ASN:CB	2.51	0.58
2:P:297:LEU:HB2	2:P:306:ALA:HB2	1.85	0.58
2:D:10:ALA:HB2	3:F:165:LYS:HZ3	1.69	0.57
3:B:108:VAL:HG22	3:B:129:ILE:HG12	1.86	0.57
3:F:58:ALA:O	3:F:59:SER:C	2.42	0.57
2:P:140:HIS:HD1	2:P:140:HIS:N	2.02	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:66:MET:HE3	1:C:287:MET:HG3	1.86	0.57
3:B:17:VAL:CG1	3:B:46:PHE:CE1	2.87	0.57
2:L:220:GLN:OE1	2:L:227:GLN:NE2	2.38	0.57
3:J:138:SER:CB	3:J:140:LEU:HG	2.34	0.57
3:J:173:LYS:HE2	2:P:15:ARG:NH1	2.18	0.57
2:P:45:VAL:O	2:P:45:VAL:HG23	2.04	0.57
2:D:9:SER:HB3	2:D:72:ARG:NE	2.19	0.57
2:P:26:ILE:HG21	2:P:284:ALA:HB2	1.85	0.57
1:M:77:ALA:HB3	1:M:80:HIS:HB2	1.86	0.57
3:N:63:LEU:CD2	3:N:64:GLU:H	2.10	0.57
3:B:275:HIS:CB	3:B:276:PRO:HD2	2.34	0.57
3:J:60:GLU:O	3:J:63:LEU:CB	2.49	0.57
2:P:107:ILE:HD11	2:P:242:ASN:HD22	1.69	0.57
2:D:143:VAL:HG22	2:D:146:VAL:HB	1.86	0.57
3:B:300:ARG:CG	3:B:308:SER:OG	2.39	0.57
2:H:252:PRO:HB2	2:H:271:THR:CB	2.25	0.57
1:O:138:VAL:CG2	1:O:139:ALA:N	2.67	0.57
3:B:15:PHE:O	3:B:44:VAL:HA	2.04	0.57
3:F:185:ALA:HB2	3:F:192:ASP:HB2	1.85	0.57
3:N:63:LEU:O	3:N:67:LEU:N	2.37	0.57
3:N:315:VAL:HG22	3:N:342:ILE:HD12	1.86	0.57
1:O:41:VAL:HA	1:O:54:PRO:HG2	1.87	0.57
2:P:57:ASP:N	2:P:60:ASP:HB2	2.20	0.57
1:M:175:ASN:CB	3:N:83:THR:HG21	2.35	0.57
3:N:185:ALA:CB	3:N:192:ASP:HB3	2.35	0.57
2:D:56:ALA:HB1	2:D:60:ASP:HB2	1.87	0.57
1:E:69:LYS:HD2	1:E:72:LEU:HD11	1.87	0.57
3:F:47:GLN:O	3:F:49:HIS:CD2	2.57	0.57
1:I:210:LEU:HB2	3:J:245:ASN:HB3	1.86	0.57
3:J:269:PHE:CZ	3:J:298:MET:HA	2.40	0.57
1:O:174:ALA:N	1:O:181:ASP:OD2	2.37	0.57
2:P:38:PHE:HB3	2:P:45:VAL:HG12	1.85	0.57
3:B:17:VAL:O	3:B:46:PHE:HD1	1.87	0.57
2:L:61:ILE:C	2:L:63:ASN:N	2.57	0.57
3:B:67:LEU:HA	3:B:70:MET:HB2	1.86	0.57
3:B:155:VAL:O	3:B:155:VAL:HG13	2.05	0.57
2:P:282:ASN:CB	2:P:333:THR:HG23	2.29	0.57
3:B:281:VAL:O	3:B:281:VAL:HG12	2.04	0.56
2:H:59:GLU:O	2:H:62:ARG:HB2	2.05	0.56
1:E:100:CYS:C	1:E:240:ILE:HG21	2.25	0.56
1:E:261:SER:HB3	1:E:280:LEU:HB2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:61:GLU:HB2	3:F:64:GLU:CG	2.26	0.56
3:F:95:ASP:OD1	3:F:99:ARG:NH1	2.38	0.56
1:E:126:TYR:HA	3:F:187:ILE:CG2	2.33	0.56
1:E:299:ARG:HG2	1:E:338:LEU:HD13	1.87	0.56
2:P:129:GLU:OE2	2:P:130:ASN:N	2.37	0.56
2:P:182:LYS:N	2:P:190:ASP:OD2	2.35	0.56
1:M:118:ILE:HG22	1:M:152:ILE:HD11	1.87	0.56
2:D:19:THR:HG21	2:D:68:ILE:HA	1.87	0.56
2:D:114:GLY:HA2	2:D:318:ASP:HA	1.86	0.56
1:A:125:GLU:HG2	1:A:142:LYS:HB2	1.87	0.56
3:B:29:LEU:HB3	3:B:291:MET:HG3	1.87	0.56
2:L:283:ILE:HD12	2:L:325:PRO:HG2	1.87	0.56
1:O:91:PHE:HB3	1:O:256:VAL:HG11	1.86	0.56
2:P:279:ALA:C	2:P:280:ASN:HD22	2.09	0.56
3:N:61:GLU:HA	3:N:61:GLU:OE1	2.06	0.56
1:C:209:CYS:HB3	2:D:244:VAL:HG23	1.85	0.56
2:H:312:ALA:O	2:H:315:ALA:N	2.38	0.56
2:L:140:HIS:NE2	2:L:148:GLU:OE1	2.37	0.56
3:J:20:LEU:N	3:J:78:ILE:HG23	1.83	0.56
3:J:254:ALA:HB2	3:J:273:ALA:HB1	1.87	0.56
2:L:140:HIS:NE2	2:L:142:SER:OG	2.39	0.56
3:N:257:VAL:HG11	3:N:273:ALA:CA	2.36	0.56
1:C:145:THR:HG22	2:D:146:VAL:HG22	1.86	0.56
1:E:88:ARG:NH1	1:E:122:THR:CB	2.66	0.56
1:E:225:PRO:HD2	1:E:228:TYR:HD2	1.69	0.56
1:O:34:ILE:HG22	1:O:36:TRP:NE1	2.21	0.56
2:P:152:ILE:CG1	1:M:133:ILE:CG2	2.82	0.56
3:N:288:PRO:CD	3:N:289:THR:N	2.64	0.56
2:D:33:HIS:ND1	2:D:337:ILE:HD13	2.21	0.56
2:D:129:GLU:CD	2:D:130:ASN:H	2.08	0.56
1:A:229:GLY:O	1:A:233:SER:OG	2.19	0.56
1:E:92:ASP:OD2	1:E:151:ARG:NH1	2.39	0.56
2:L:117:THR:OG1	2:L:119:HIS:O	2.23	0.56
3:N:193:GLY:O	3:N:194:LEU:C	2.39	0.56
1:G:120:GLU:OE2	1:G:122:THR:OG1	2.14	0.56
2:L:154:THR:OG1	2:L:157:LYS:HB2	2.06	0.56
1:O:224:MET:SD	1:O:232:LEU:HD12	2.46	0.56
2:P:126:ILE:HG21	2:P:242:ASN:ND2	2.21	0.56
1:A:288:LEU:HA	1:A:291:MET:HE2	1.87	0.56
3:B:141:GLU:HG3	3:B:151:CYS:SG	2.46	0.56
2:H:139:GLU:HA	2:H:148:GLU:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:281:LYS:CB	2:P:283:ILE:CG1	2.83	0.56
2:P:300:LEU:C	2:P:301:LYS:CG	2.72	0.56
3:N:30:MET:HE3	3:N:291:MET:CG	2.05	0.56
3:N:127:VAL:HG13	3:N:232:VAL:HG13	1.87	0.56
2:D:20:MET:O	2:D:49:GLU:CA	2.37	0.56
3:B:67:LEU:O	3:B:71:LYS:N	2.39	0.56
2:L:103:TYR:O	2:L:130:ASN:N	2.34	0.56
1:I:43:ALA:HB1	1:I:80:HIS:CE1	2.41	0.56
3:J:83:THR:HG23	3:J:84:PRO:HD2	1.88	0.56
2:P:152:ILE:CD1	1:M:133:ILE:CG2	2.84	0.56
3:J:61:GLU:O	3:J:62:LYS:C	2.44	0.55
3:J:113:SER:HA	3:J:251:VAL:HG13	1.86	0.55
1:O:143:LEU:HD21	3:N:144:SER:O	2.06	0.55
3:N:102:LEU:HB2	3:N:104:LEU:HG	1.86	0.55
3:N:217:ASP:N	3:N:217:ASP:OD1	2.37	0.55
2:L:110:LYS:HA	2:L:122:ILE:O	2.07	0.55
1:O:181:ASP:N	1:O:181:ASP:OD1	2.35	0.55
1:O:261:SER:HB3	1:O:280:LEU:HD13	1.88	0.55
3:N:63:LEU:C	3:N:66:VAL:HB	2.26	0.55
3:N:96:MET:O	3:N:100:ARG:N	2.39	0.55
3:N:185:ALA:HA	3:N:192:ASP:HB3	1.85	0.55
3:B:96:MET:SD	3:B:96:MET:N	2.66	0.55
2:P:57:ASP:O	2:P:61:ILE:N	2.38	0.55
2:P:300:LEU:O	2:P:301:LYS:CB	2.53	0.55
1:K:157:PHE:HE1	1:K:168:VAL:HG11	1.72	0.55
1:K:162:ASN:O	1:K:163:ASN:ND2	2.37	0.55
1:K:315:THR:OG1	1:K:317:ASP:OD1	2.23	0.55
2:L:285:ASN:HA	2:L:324:THR:HG21	1.89	0.55
3:J:299:LEU:HB2	3:J:308:SER:HB2	1.88	0.55
1:O:214:GLN:O	2:P:118:ARG:NH2	2.40	0.55
2:P:138:LEU:CD2	1:M:131:HIS:CE1	2.87	0.55
1:E:173:LYS:HG3	1:E:205:LEU:HB3	1.88	0.55
2:P:62:ARG:O	2:P:65:ILE:HB	2.06	0.55
3:N:77:ILE:HG21	3:N:298:MET:CE	2.37	0.55
2:P:53:SER:O	2:P:56:ALA:CB	2.53	0.55
3:N:136:GLU:OE1	3:N:136:GLU:N	2.39	0.55
2:D:26:ILE:O	2:D:26:ILE:HG13	2.07	0.55
3:B:20:LEU:O	3:B:79:GLY:N	2.37	0.55
2:H:117:THR:OG1	2:H:119:HIS:O	2.25	0.55
2:H:317:MET:CE	2:H:317:MET:CA	2.85	0.55
2:L:57:ASP:C	2:L:60:ASP:HA	2.27	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:15:ILE:HG22	1:I:270:ALA:HA	1.89	0.55
3:J:138:SER:CB	3:J:140:LEU:CD1	2.85	0.55
1:O:269:ILE:O	1:O:269:ILE:HG13	2.05	0.55
2:P:57:ASP:CB	2:P:60:ASP:CB	2.85	0.55
1:M:37:GLU:OE1	1:M:64:ASN:ND2	2.34	0.55
3:N:248:ALA:HB2	3:N:257:VAL:HG21	1.88	0.55
2:D:33:HIS:CG	2:D:337:ILE:HD13	2.42	0.55
1:K:115:ILE:HD11	1:K:216:PRO:O	2.07	0.55
1:M:277:PRO:O	1:M:280:LEU:N	2.39	0.55
3:B:264:ALA:O	2:H:13:GLY:N	2.40	0.55
1:G:119:ARG:HG3	1:G:229:GLY:HA3	1.89	0.55
2:P:93:ASN:HD22	2:P:93:ASN:C	2.06	0.55
1:M:134:VAL:CG2	1:M:137:VAL:CG2	2.85	0.55
3:N:52:SER:CB	3:N:81:ILE:HD12	2.37	0.55
3:N:61:GLU:C	3:N:63:LEU:HD23	2.27	0.55
1:C:177:MET:SD	2:D:135:TYR:CE1	3.00	0.55
2:D:129:GLU:CG	2:D:132:GLU:CB	2.85	0.55
1:A:244:GLY:O	1:A:279:ALA:HB2	2.06	0.55
1:G:315:THR:OG1	1:G:317:ASP:OD1	2.24	0.55
1:M:119:ARG:HG3	1:M:229:GLY:HA3	1.88	0.55
3:N:60:GLU:O	3:N:61:GLU:HB2	2.07	0.55
3:N:70:MET:HG3	3:N:266:TYR:CD2	2.42	0.55
1:A:69:LYS:HD2	1:A:72:LEU:HD11	1.88	0.54
1:G:11:PRO:HB2	1:G:17:PRO:HG3	1.88	0.54
2:L:248:LEU:N	2:L:248:LEU:HD23	2.22	0.54
1:M:46:GLY:N	1:M:49:GLY:O	2.40	0.54
1:E:99:PRO:HB3	1:E:116:VAL:HG22	1.89	0.54
3:F:116:GLY:HA3	3:F:319:ILE:HG22	1.88	0.54
1:I:315:THR:OG1	1:I:317:ASP:OD1	2.25	0.54
1:M:137:VAL:O	1:M:137:VAL:HG12	2.06	0.54
2:P:40:HIS:HE1	2:P:346:VAL:CG2	2.20	0.54
1:M:288:LEU:HA	1:M:291:MET:HE2	1.89	0.54
2:D:128:ARG:HB2	2:D:235:ASN:HA	1.88	0.54
2:H:91:SER:CB	2:H:94:ASN:CB	2.86	0.54
3:F:47:GLN:O	3:F:49:HIS:HD2	1.89	0.54
2:L:58:GLU:CB	2:L:59:GLU:CB	2.85	0.54
2:P:243:ASN:O	2:P:246:ALA:HB3	2.06	0.54
1:C:206:ASP:N	1:C:206:ASP:OD1	2.40	0.54
2:D:93:ASN:OD1	2:D:97:ARG:NH2	2.33	0.54
1:A:103:ILE:HG21	1:A:308:ILE:HD13	1.89	0.54
3:B:75:VAL:HG22	3:B:267:ALA:HB3	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:157:ARG:HA	3:B:160:SER:HG	1.70	0.54
1:E:119:ARG:HG3	1:E:229:GLY:HA3	1.89	0.54
2:L:61:ILE:O	2:L:63:ASN:N	2.40	0.54
3:J:254:ALA:HB1	3:J:273:ALA:CB	2.35	0.54
1:O:314:LEU:C	1:O:320:GLY:HA3	2.27	0.54
1:A:314:LEU:HD23	1:A:318:LEU:HB3	1.90	0.54
2:L:129:GLU:OE1	2:L:157:LYS:HG2	2.08	0.54
2:L:138:LEU:C	1:I:131:HIS:CE1	2.77	0.54
1:O:106:TYR:CE1	1:O:318:LEU:HD11	2.41	0.54
2:P:68:ILE:HG23	2:P:74:ALA:HB2	1.89	0.54
2:D:126:ILE:HD13	2:D:241:VAL:HG12	1.90	0.54
3:B:335:CYS:SG	3:B:336:HIS:N	2.81	0.54
2:H:257:GLY:N	2:H:268:GLU:O	2.41	0.54
3:J:202:VAL:HA	3:J:205:LEU:HD12	1.90	0.54
1:O:157:PHE:CE2	1:O:192:ALA:HA	2.43	0.54
1:C:173:LYS:HD2	1:C:205:LEU:HD23	1.90	0.54
2:D:19:THR:OG1	2:D:19:THR:O	2.25	0.54
1:A:7:VAL:CG2	1:A:34:ILE:HG23	2.37	0.54
1:G:318:LEU:HB2	1:G:319:GLY:HA2	1.89	0.54
2:H:255:VAL:CA	2:H:270:ALA:HB2	2.38	0.54
1:E:93:LEU:HD11	1:E:258:ILE:HD12	1.89	0.54
2:P:85:LEU:C	2:P:87:PRO:HA	2.29	0.54
1:M:99:PRO:HD2	1:M:247:PRO:HG2	1.90	0.54
1:A:49:GLY:HA3	1:A:51:TRP:CZ3	2.43	0.54
2:H:129:GLU:OE2	2:H:131:THR:N	2.41	0.54
2:H:182:LYS:HE3	2:H:185:ILE:CD1	2.38	0.54
3:F:19:MET:HB3	3:F:48:GLU:HB2	1.90	0.54
2:P:190:ASP:OD2	2:P:237:TYR:HE2	1.91	0.54
2:P:282:ASN:HB3	2:P:333:THR:HG23	1.89	0.54
1:M:11:PRO:HB2	1:M:17:PRO:HG3	1.88	0.54
3:N:61:GLU:CA	3:N:63:LEU:CD2	2.85	0.54
2:D:259:ASN:ND2	2:D:268:GLU:OE1	2.39	0.54
1:K:53:ILE:HG22	1:K:86:LEU:HD13	1.90	0.54
1:K:288:LEU:HD22	1:K:293:LEU:HD12	1.90	0.54
1:I:125:GLU:CD	1:I:142:LYS:NZ	2.61	0.54
3:N:19:MET:HE3	3:N:48:GLU:OE2	2.05	0.54
1:G:110:TYR:CZ	2:H:118:ARG:HD2	2.43	0.53
1:E:231:ILE:HG22	3:F:217:ASP:HB3	1.90	0.53
2:P:253:GLY:C	2:P:288:ALA:HB2	2.28	0.53
1:M:46:GLY:CA	1:M:52:MET:CG	2.85	0.53
2:D:106:VAL:HG13	2:D:127:VAL:HG22	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:217:ASP:N	3:F:217:ASP:OD1	2.39	0.53
2:L:194:LEU:HD21	2:L:198:ARG:HH11	1.73	0.53
2:L:254:LEU:HD21	2:L:285:ASN:ND2	2.24	0.53
1:I:331:ILE:O	1:I:335:VAL:HG13	2.07	0.53
3:J:109:VAL:HG21	3:J:244:ASP:OD1	2.08	0.53
3:J:184:LYS:N	3:J:192:ASP:OD2	2.38	0.53
2:H:181:HIS:NE2	2:H:211:ASN:HB2	2.24	0.53
2:H:255:VAL:C	2:H:270:ALA:CB	2.70	0.53
1:E:26:ILE:HG12	1:E:332:CYS:SG	2.48	0.53
3:F:25:VAL:HG13	3:F:281:VAL:O	2.09	0.53
3:F:61:GLU:O	3:F:62:LYS:C	2.47	0.53
1:O:88:ARG:HD2	1:O:121:ASN:O	2.09	0.53
1:O:166:SER:OG	1:O:220:ASP:OD2	2.19	0.53
1:M:229:GLY:O	1:M:233:SER:OG	2.23	0.53
3:N:287:ASN:HB2	3:N:326:THR:OG1	2.07	0.53
2:D:142:SER:OG	1:A:143:LEU:HD22	2.08	0.53
2:D:213:ILE:O	2:D:217:THR:OG1	2.25	0.53
3:F:62:LYS:C	3:F:66:VAL:HG23	2.28	0.53
2:L:143:VAL:HG22	2:L:144:ALA:N	2.24	0.53
1:I:175:ASN:HB3	3:J:84:PRO:O	2.08	0.53
3:J:283:ARG:O	3:J:285:ILE:HG22	2.08	0.53
1:O:73:LYS:HD3	1:O:265:THR:HG21	1.89	0.53
2:P:29:GLU:OE2	2:P:280:ASN:CA	2.52	0.53
1:A:213:VAL:HG21	3:B:246:LEU:HD23	1.91	0.53
1:K:26:ILE:HG12	1:K:332:CYS:SG	2.49	0.53
3:J:134:GLU:OE2	3:J:156:THR:OG1	2.10	0.53
1:O:34:ILE:CG2	1:O:36:TRP:CE2	2.92	0.53
2:P:66:MET:CA	2:P:69:ARG:CG	1.99	0.53
2:P:86:PRO:N	2:P:87:PRO:CA	2.71	0.53
2:D:63:ASN:HB3	3:F:207:PRO:HG3	1.89	0.53
2:H:213:ILE:O	2:H:217:THR:OG1	2.23	0.53
3:F:102:LEU:O	3:F:263:SER:CB	2.56	0.53
1:E:157:PHE:HE1	1:E:198:ILE:HB	1.74	0.53
1:I:92:ASP:OD2	1:I:151:ARG:NH1	2.32	0.53
2:P:35:LYS:HA	2:P:38:PHE:HB2	1.91	0.53
3:N:119:THR:OG1	3:N:121:HIS:O	2.27	0.53
3:N:299:LEU:HB2	3:N:308:SER:HB2	1.91	0.53
3:B:105:PHE:O	3:B:131:GLU:HA	2.09	0.53
2:H:96:LEU:N	2:H:96:LEU:HD23	2.23	0.53
2:H:316:SER:HB3	2:H:340:VAL:HG22	1.91	0.53
1:K:150:LYS:O	1:K:154:GLU:HG3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:223:SER:OG	2:L:224:ARG:N	2.42	0.53
2:L:253:GLY:CA	2:L:288:ALA:HB2	2.35	0.53
3:J:138:SER:CB	3:J:140:LEU:HD12	2.38	0.53
2:P:148:GLU:OE2	3:N:142:HIS:NE2	2.35	0.53
3:B:217:ASP:OD1	3:B:217:ASP:N	2.40	0.53
1:G:243:LEU:HB3	1:G:262:VAL:HG23	1.91	0.53
1:I:85:LEU:O	1:I:87:LEU:N	2.41	0.53
1:O:145:THR:HG22	2:P:146:VAL:HG22	1.91	0.53
2:P:129:GLU:OE2	2:P:131:THR:N	2.41	0.53
2:P:319:ASN:ND2	2:P:322:MET:HG2	2.24	0.53
1:A:80:HIS:CG	1:A:81:PRO:HD2	2.43	0.53
2:L:90:LYS:O	2:L:92:ARG:N	2.42	0.53
1:O:7:VAL:HG22	1:O:66:MET:HB2	1.91	0.53
1:O:167:ASN:O	1:O:220:ASP:HB3	2.09	0.53
2:P:6:ILE:HD12	2:P:7:PRO:HD2	1.91	0.53
3:J:76:ALA:HB3	3:J:268:VAL:HG12	1.91	0.52
1:O:132:VAL:HG23	1:O:132:VAL:O	2.09	0.52
2:P:17:THR:HB	2:P:71:ASN:HD21	1.74	0.52
2:P:98:THR:O	2:P:99:SER:C	2.45	0.52
2:P:150:LEU:CD1	1:M:131:HIS:CE1	2.92	0.52
1:A:244:GLY:C	1:A:279:ALA:HB2	2.29	0.52
2:H:21:ILE:HG13	2:H:50:VAL:HG13	1.92	0.52
3:F:25:VAL:HG21	3:F:286:ALA:CB	2.40	0.52
1:M:98:ARG:NH1	1:M:233:SER:HB2	2.24	0.52
1:E:235:LEU:HD21	3:F:246:LEU:HD11	1.91	0.52
3:F:254:ALA:CB	3:F:273:ALA:HB2	2.29	0.52
1:I:50:LYS:CB	1:I:80:HIS:CD2	2.92	0.52
1:I:118:ILE:HG22	1:I:152:ILE:HD11	1.91	0.52
3:J:20:LEU:O	3:J:78:ILE:CG2	2.54	0.52
3:J:254:ALA:CA	3:J:273:ALA:CB	2.87	0.52
1:O:175:ASN:HB3	1:O:204:TYR:HE1	1.74	0.52
2:P:33:HIS:O	2:P:37:VAL:N	2.31	0.52
2:P:57:ASP:O	2:P:60:ASP:N	2.43	0.52
2:P:135:TYR:HD1	2:P:151:LYS:HA	1.73	0.52
2:P:206:GLN:OE1	2:P:206:GLN:N	2.42	0.52
2:P:279:ALA:O	2:P:280:ASN:HB2	2.09	0.52
3:N:257:VAL:CB	3:N:273:ALA:HB2	2.40	0.52
3:B:15:PHE:HZ	2:H:350:ARG:N	2.07	0.52
3:J:83:THR:CG2	3:J:84:PRO:CD	2.87	0.52
3:J:83:THR:CB	3:J:84:PRO:HD3	2.39	0.52
3:J:215:ILE:H	3:J:215:ILE:HD12	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:91:SER:HB3	2:P:94:ASN:OD1	2.08	0.52
2:P:138:LEU:HD22	1:M:131:HIS:CG	2.38	0.52
2:H:336:ALA:O	2:H:340:VAL:HG23	2.09	0.52
1:I:125:GLU:OE2	1:I:142:LYS:HG3	2.09	0.52
2:P:128:ARG:NE	2:P:242:ASN:OD1	2.43	0.52
1:C:69:LYS:NZ	1:C:260:GLU:OE2	2.30	0.52
2:D:115:VAL:HG22	2:D:323:HIS:CE1	2.45	0.52
2:H:312:ALA:O	2:H:315:ALA:HB3	2.10	0.52
2:L:213:ILE:O	2:L:217:THR:OG1	2.15	0.52
3:J:178:LYS:O	3:J:231:ASP:HB3	2.09	0.52
2:P:9:SER:OG	2:P:10:ALA:N	2.42	0.52
2:P:61:ILE:CG2	2:P:62:ARG:N	2.72	0.52
1:M:178:ARG:CD	3:N:86:GLU:CB	2.80	0.52
1:I:130:GLU:CD	3:J:190:LEU:HB2	2.30	0.52
3:J:183:HIS:CE1	3:J:185:ALA:CB	2.92	0.52
1:O:34:ILE:HG21	1:O:36:TRP:CZ2	2.45	0.52
1:O:137:VAL:HG11	1:M:134:VAL:HG11	1.92	0.52
2:P:39:ARG:NH1	2:P:39:ARG:CB	2.73	0.52
3:N:17:VAL:HG13	3:N:76:ALA:HA	1.91	0.52
1:C:85:LEU:HD12	1:C:88:ARG:HD3	1.92	0.52
2:L:51:HIS:C	2:L:52:VAL:HG23	2.29	0.52
2:P:66:MET:CB	2:P:69:ARG:CG	2.83	0.52
3:N:52:SER:HB2	3:N:81:ILE:HD12	1.92	0.52
3:J:82:HIS:O	3:J:83:THR:HG22	2.09	0.52
3:B:67:LEU:O	3:B:70:MET:CA	2.58	0.52
3:B:95:ASP:OD1	3:B:99:ARG:CZ	2.58	0.52
1:G:91:PHE:HB3	1:G:256:VAL:HG11	1.90	0.52
1:I:125:GLU:OE1	1:I:142:LYS:NZ	2.43	0.52
3:J:315:VAL:HA	3:J:342:ILE:HD11	1.91	0.52
2:P:129:GLU:HB3	2:P:132:GLU:CB	2.40	0.52
1:K:133:ILE:CG1	1:I:133:ILE:HD12	2.33	0.51
3:J:96:MET:O	3:J:100:ARG:N	2.42	0.51
1:O:208:VAL:O	1:O:212:MET:N	2.40	0.51
3:N:30:MET:HE1	3:N:291:MET:CA	2.39	0.51
1:A:95:ALA:HB3	1:A:251:ILE:HB	1.91	0.51
2:H:256:ALA:HB2	2:H:291:LEU:HB3	1.92	0.51
1:K:268:ASP:OD1	1:K:268:ASP:N	2.42	0.51
2:L:197:CYS:O	2:L:201:ALA:N	2.42	0.51
2:P:336:ALA:O	2:P:340:VAL:HG23	2.10	0.51
3:N:21:PRO:CG	3:N:22:GLY:N	2.73	0.51
3:N:63:LEU:CD2	3:N:63:LEU:N	2.72	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:280:LEU:HD12	1:E:283:SER:HB2	1.92	0.51
3:J:265:GLU:HA	2:P:14:GLY:CA	2.40	0.51
1:O:138:VAL:CG2	1:O:139:ALA:H	2.16	0.51
2:P:66:MET:CB	2:P:69:ARG:HD3	2.41	0.51
2:P:66:MET:O	2:P:70:ARG:N	2.43	0.51
2:D:19:THR:HG1	2:D:74:ALA:CB	2.13	0.51
3:F:59:SER:N	3:F:60:GLU:CA	2.73	0.51
3:F:248:ALA:HB1	3:F:254:ALA:HA	1.91	0.51
1:I:80:HIS:CD2	1:I:81:PRO:CD	2.82	0.51
3:J:49:HIS:NE2	3:J:69:SER:OG	2.43	0.51
3:J:60:GLU:O	3:J:63:LEU:N	2.44	0.51
2:D:28:PRO:O	2:D:32:LEU:HG	2.10	0.51
1:A:173:LYS:NZ	1:A:206:ASP:OD2	2.44	0.51
1:E:293:LEU:O	1:E:297:ALA:N	2.42	0.51
3:F:19:MET:HE3	3:F:48:GLU:CD	2.31	0.51
3:F:140:LEU:O	3:F:141:GLU:CG	2.59	0.51
2:L:64:ALA:C	2:L:68:ILE:HD12	2.29	0.51
1:I:288:LEU:HB3	1:I:293:LEU:HB2	1.91	0.51
2:P:38:PHE:HA	2:P:41:ALA:HB3	1.90	0.51
2:P:90:LYS:HA	2:P:95:ILE:CD1	2.41	0.51
1:C:153:ALA:HB1	1:C:191:VAL:HG11	1.92	0.51
3:F:122:ASN:O	3:F:228:TYR:OH	2.13	0.51
3:F:179:VAL:HG12	3:F:232:VAL:HB	1.93	0.51
1:K:15:ILE:HG22	1:K:270:ALA:HA	1.93	0.51
2:L:55:ASN:O	2:L:56:ALA:CB	2.59	0.51
1:I:68:LEU:HD12	1:I:259:PHE:O	2.10	0.51
3:N:176:ARG:HD2	3:N:231:ASP:OD1	2.10	0.51
1:A:227:LEU:O	1:A:231:ILE:HG12	2.11	0.51
3:B:265:GLU:CA	2:H:13:GLY:HA2	2.40	0.51
3:F:271:THR:HG22	3:F:291:MET:HG2	1.92	0.51
1:K:308:ILE:HA	1:K:314:LEU:HD21	1.92	0.51
1:I:137:VAL:HG12	1:I:137:VAL:O	2.11	0.51
1:O:132:VAL:HG12	1:O:138:VAL:CG2	2.40	0.51
2:P:129:GLU:CD	2:P:130:ASN:H	2.13	0.51
1:M:46:GLY:HA2	1:M:52:MET:SD	2.50	0.51
3:N:215:ILE:HD12	3:N:215:ILE:H	1.75	0.51
1:C:206:ASP:HB3	2:D:239:ASN:HB3	1.93	0.51
2:D:319:ASN:ND2	2:D:322:MET:HG2	2.25	0.51
3:F:289:THR:O	3:F:293:LEU:HG	2.11	0.51
1:K:116:VAL:HG11	1:K:159:TYR:CE2	2.46	0.51
1:O:134:VAL:CG2	1:O:137:VAL:HB	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:318:LEU:N	1:O:318:LEU:CD2	2.74	0.51
2:P:126:ILE:HG21	2:P:242:ASN:HD21	1.76	0.51
1:M:61:MET:HE1	1:M:67:GLY:HA3	1.92	0.51
2:D:140:HIS:CG	1:A:129:ILE:HG21	2.46	0.51
1:G:129:ILE:HD13	3:F:142:HIS:HB2	1.93	0.51
3:F:214:MET:HG2	3:F:219:CYS:HB2	1.92	0.51
2:P:38:PHE:O	2:P:41:ALA:N	2.43	0.51
2:P:49:GLU:O	2:P:50:VAL:HG13	2.11	0.51
2:P:90:LYS:HA	2:P:95:ILE:CG1	2.41	0.51
2:P:94:ASN:O	2:P:97:ARG:HG2	2.11	0.51
2:P:135:TYR:CE1	2:P:151:LYS:N	2.79	0.51
1:M:265:THR:HG23	1:M:267:PRO:HD3	1.93	0.51
3:B:157:ARG:CG	3:B:198:CYS:SG	2.98	0.51
3:F:19:MET:HE2	3:F:48:GLU:OE1	2.11	0.51
2:L:91:SER:O	2:L:91:SER:OG	2.29	0.51
2:L:255:VAL:HB	2:L:270:ALA:CB	2.40	0.51
3:J:165:LYS:HD2	2:P:7:PRO:HG3	1.93	0.51
2:D:30:LEU:O	2:D:34:VAL:HG23	2.10	0.50
3:B:67:LEU:O	3:B:70:MET:HB2	2.11	0.50
3:B:263:SER:O	2:H:13:GLY:N	2.44	0.50
1:C:9:LEU:HD12	1:C:10:ILE:H	1.77	0.50
1:E:31:LYS:O	1:E:296:HIS:NE2	2.44	0.50
1:O:21:ALA:HA	1:O:24:MET:HE2	1.92	0.50
1:O:180:SER:HG	1:O:181:ASP:H	1.52	0.50
1:O:215:ASP:O	1:O:218:GLN:HG2	2.11	0.50
2:P:275:GLY:O	2:P:278:ILE:HB	2.10	0.50
3:N:21:PRO:CD	3:N:22:GLY:N	2.73	0.50
3:N:256:VAL:O	3:N:258:PRO:HD3	2.10	0.50
1:O:299:ARG:HD3	1:O:338:LEU:HD22	1.93	0.50
1:M:88:ARG:HA	1:M:93:LEU:HB2	1.92	0.50
2:D:338:GLN:OE1	2:D:342:ARG:NH2	2.44	0.50
2:H:255:VAL:CA	2:H:270:ALA:CB	2.84	0.50
1:E:225:PRO:HD2	1:E:228:TYR:CD2	2.45	0.50
1:O:288:LEU:HD12	1:O:297:ALA:HA	1.94	0.50
2:P:281:LYS:CB	2:P:283:ILE:CD1	2.89	0.50
1:E:173:LYS:HE2	3:F:137:TYR:OH	2.12	0.50
3:F:220:CYS:HA	3:F:223:LEU:HD12	1.93	0.50
1:I:50:LYS:CB	1:I:80:HIS:HD2	2.25	0.50
3:J:54:VAL:CB	3:J:88:LYS:HE3	2.41	0.50
3:J:60:GLU:O	3:J:64:GLU:N	2.41	0.50
2:P:53:SER:O	2:P:56:ALA:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:94:ASN:HA	2:P:97:ARG:CG	2.40	0.50
1:C:15:ILE:HG22	1:C:270:ALA:HA	1.93	0.50
1:C:15:ILE:HD12	1:C:275:ALA:HB1	1.93	0.50
1:A:172:HIS:NE2	1:A:202:GLU:OE1	2.44	0.50
3:B:93:SER:O	3:B:96:MET:SD	2.70	0.50
2:H:316:SER:N	2:H:343:HIS:ND1	2.59	0.50
1:E:99:PRO:HA	1:E:116:VAL:HA	1.93	0.50
1:K:97:VAL:HG22	1:K:118:ILE:HG12	1.93	0.50
1:K:130:GLU:OE1	2:L:189:GLY:N	2.35	0.50
1:K:318:LEU:HB2	1:K:319:GLY:HA2	1.93	0.50
3:J:180:THR:HG23	3:J:212:GLU:HB2	1.93	0.50
1:O:118:ILE:HD13	1:O:156:ALA:HA	1.92	0.50
3:N:63:LEU:CD2	3:N:64:GLU:N	2.73	0.50
2:D:115:VAL:HG21	2:D:327:ILE:HD12	1.94	0.50
2:D:336:ALA:HA	2:D:339:ASP:HB3	1.93	0.50
1:G:32:ALA:O	1:G:34:ILE:N	2.45	0.50
1:E:244:GLY:CA	1:E:263:HIS:CB	2.80	0.50
1:E:303:ALA:HB1	1:E:334:ARG:HB3	1.92	0.50
3:F:19:MET:SD	3:F:30:MET:CB	2.96	0.50
2:L:106:VAL:HG22	2:L:127:VAL:HG22	1.94	0.50
2:L:298:ASP:OD1	2:L:303:HIS:ND1	2.45	0.50
3:J:20:LEU:HB2	3:J:78:ILE:HG21	0.52	0.50
3:J:83:THR:CB	3:J:84:PRO:CD	2.90	0.50
3:B:180:THR:HG23	3:B:212:GLU:HB2	1.94	0.50
3:B:219:CYS:O	3:B:223:LEU:HG	2.12	0.50
3:B:300:ARG:HG3	3:B:308:SER:CB	2.37	0.50
1:E:74:THR:CB	1:E:75:PRO:HD2	2.40	0.50
1:E:240:ILE:CG1	1:E:246:THR:CG2	2.88	0.50
1:K:119:ARG:HB2	1:K:229:GLY:HA3	1.94	0.50
2:L:347:ILE:O	2:L:348:ASN:C	2.48	0.50
3:J:328:ASP:OD1	3:J:328:ASP:N	2.45	0.50
1:O:281:LEU:HD11	1:O:300:ILE:HG21	1.94	0.50
1:M:125:GLU:HA	1:M:142:LYS:HA	1.93	0.50
1:C:288:LEU:HD22	1:C:293:LEU:HD12	1.92	0.50
1:C:324:CYS:O	1:C:328:THR:OG1	2.19	0.50
1:G:56:GLU:O	1:G:60:SER:OG	2.25	0.50
2:H:76:LYS:CE	2:H:268:GLU:HB3	2.42	0.50
1:E:98:ARG:NH1	1:E:243:LEU:CD2	2.75	0.50
1:K:125:GLU:CD	2:L:135:TYR:OH	2.46	0.50
1:O:173:LYS:HZ2	2:P:239:ASN:ND2	1.91	0.50
2:P:233:MET:CE	2:P:241:VAL:HG21	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:189:LYS:C	3:N:190:LEU:HD23	2.33	0.50
1:C:99:PRO:HA	1:C:116:VAL:HA	1.94	0.49
1:C:106:TYR:HE2	1:C:241:GLY:HA3	1.77	0.49
2:D:140:HIS:CE1	1:A:131:HIS:CD2	3.00	0.49
1:A:127:SER:OG	1:A:129:ILE:HG12	2.12	0.49
3:B:269:PHE:CZ	3:B:298:MET:HA	2.47	0.49
1:E:174:ALA:O	1:E:178:ARG:HA	2.12	0.49
1:C:317:ASP:N	1:C:317:ASP:OD1	2.45	0.49
3:B:141:GLU:CG	3:B:151:CYS:SG	3.00	0.49
2:H:267:PHE:CE2	2:H:296:MET:HG2	2.44	0.49
3:J:70:MET:SD	3:J:76:ALA:HB2	2.52	0.49
3:N:74:LYS:O	3:N:266:TYR:HA	2.12	0.49
1:C:122:THR:OG1	1:C:123:GLU:N	2.43	0.49
1:A:175:ASN:HB3	1:A:204:TYR:HE2	1.78	0.49
1:K:206:ASP:N	1:K:206:ASP:OD1	2.46	0.49
1:I:129:ILE:CB	1:I:141:ILE:CG2	2.90	0.49
1:O:229:GLY:O	1:O:233:SER:OG	2.18	0.49
1:O:330:GLU:HA	1:O:333:ARG:HD3	1.94	0.49
3:B:74:LYS:O	3:B:266:TYR:HA	2.13	0.49
1:K:9:LEU:HD12	1:K:10:ILE:H	1.77	0.49
2:L:255:VAL:O	2:L:270:ALA:HB2	2.13	0.49
1:O:171:VAL:HG13	1:O:208:VAL:HG21	1.94	0.49
1:M:64:ASN:O	1:M:66:MET:N	2.40	0.49
3:N:340:GLU:HA	3:N:343:CYS:HB2	1.93	0.49
2:D:60:ASP:HA	2:D:63:ASN:OD1	2.12	0.49
1:A:330:GLU:HA	1:A:333:ARG:HG2	1.94	0.49
3:B:77:ILE:HG23	3:B:298:MET:SD	2.43	0.49
1:G:237:ALA:O	1:G:240:ILE:HG12	2.13	0.49
2:H:181:HIS:HA	2:H:237:TYR:HE2	1.78	0.49
1:E:235:LEU:HG	3:F:220:CYS:HB3	1.94	0.49
3:F:326:THR:OG1	3:F:328:ASP:OD1	2.23	0.49
2:L:140:HIS:HD2	3:J:150:GLU:OE2	1.81	0.49
2:L:259:ASN:ND2	2:L:268:GLU:OE1	2.44	0.49
1:I:206:ASP:N	1:I:206:ASP:OD1	2.45	0.49
3:J:136:GLU:O	3:J:138:SER:N	2.45	0.49
1:M:8:THR:HA	1:M:37:GLU:HB3	1.95	0.49
1:C:86:LEU:O	1:C:90:THR:OG1	2.22	0.49
1:C:144:ILE:O	2:D:147:VAL:HG12	2.12	0.49
2:D:19:THR:CB	2:D:74:ALA:HB2	2.42	0.49
3:B:300:ARG:HB3	3:B:300:ARG:NH1	2.28	0.49
1:E:130:GLU:HB2	3:F:190:LEU:HD12	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:104:LEU:N	3:F:263:SER:CB	2.76	0.49
1:K:53:ILE:HD13	1:K:90:THR:HG21	1.95	0.49
2:L:30:LEU:O	2:L:34:VAL:HG23	2.12	0.49
1:O:215:ASP:OD1	1:O:217:SER:OG	2.29	0.49
3:N:79:GLY:HA2	3:N:291:MET:HE3	1.94	0.49
2:D:163:GLU:OE1	2:D:203:ARG:NH2	2.45	0.49
1:A:37:GLU:OE1	1:A:60:SER:OG	2.31	0.49
2:H:33:HIS:HB3	2:H:337:ILE:HG12	1.95	0.49
1:E:237:ALA:O	1:E:240:ILE:HG13	2.13	0.49
1:K:41:VAL:HA	1:K:54:PRO:HG2	1.95	0.49
2:L:62:ARG:HA	2:L:65:ILE:CD1	2.43	0.49
2:P:21:ILE:HD13	2:P:76:LYS:HB3	1.94	0.49
2:P:43:VAL:CG2	2:P:44:PRO:CG	2.75	0.49
2:P:76:LYS:NZ	2:P:268:GLU:OE2	2.39	0.49
1:M:96:ASN:HB3	1:M:119:ARG:HB3	1.94	0.49
1:A:7:VAL:CG2	1:A:34:ILE:HD12	2.42	0.49
2:H:140:HIS:CD2	1:E:129:ILE:HG21	2.47	0.49
1:M:227:LEU:O	1:M:231:ILE:HG12	2.12	0.49
1:M:228:TYR:HA	1:M:231:ILE:HD11	1.95	0.49
2:D:286:PRO:O	2:D:290:LEU:HG	2.12	0.49
3:B:165:LYS:HG3	2:H:12:TYR:OH	2.13	0.49
3:B:199:CYS:O	3:B:203:ALA:N	2.36	0.49
1:G:93:LEU:HD11	1:G:258:ILE:HD12	1.94	0.49
2:L:52:VAL:HG22	2:L:61:ILE:HD13	1.94	0.49
1:O:137:VAL:HG11	1:M:134:VAL:CG1	2.43	0.49
1:O:278:THR:HG23	1:O:304:CYS:SG	2.52	0.49
1:M:58:LYS:O	1:M:62:ASP:N	2.43	0.49
3:N:25:VAL:HG12	3:N:29:LEU:HB2	1.95	0.49
1:C:299:ARG:HD3	1:C:338:LEU:HD22	1.94	0.49
1:A:228:TYR:N	1:A:228:TYR:CD1	2.81	0.49
1:K:119:ARG:NH1	1:K:230:ASP:OD1	2.46	0.49
2:L:124:ILE:HD11	2:L:228:PHE:HB2	1.95	0.49
2:L:126:ILE:HG21	2:L:242:ASN:HD21	1.78	0.49
2:P:319:ASN:HD22	2:P:322:MET:HG2	1.77	0.49
3:N:63:LEU:HA	3:N:66:VAL:CB	2.39	0.49
1:E:245:VAL:HA	1:E:279:ALA:HB2	1.95	0.48
3:F:61:GLU:C	3:F:63:LEU:N	2.64	0.48
2:L:20:MET:HB2	2:L:47:PHE:CD2	2.43	0.48
1:O:214:GLN:NE2	2:P:250:GLY:O	2.42	0.48
2:P:98:THR:C	2:P:100:LEU:N	2.65	0.48
3:F:63:LEU:CA	3:F:66:VAL:HB	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:253:GLY:O	3:J:257:VAL:HG23	2.13	0.48
2:P:18:VAL:O	2:P:47:PHE:HA	2.13	0.48
2:P:117:THR:HG23	2:P:118:ARG:H	1.78	0.48
2:P:194:LEU:O	2:P:198:ARG:HG3	2.13	0.48
2:P:309:ILE:O	2:P:313:VAL:HG13	2.13	0.48
3:N:17:VAL:O	3:N:46:PHE:HA	2.14	0.48
3:N:288:PRO:HD2	3:N:289:THR:H	1.77	0.48
2:H:316:SER:N	2:H:343:HIS:CE1	2.81	0.48
2:H:323:HIS:CG	2:H:327:ILE:HD11	2.47	0.48
3:F:236:PRO:HD2	3:F:239:TYR:CD2	2.37	0.48
1:I:171:VAL:HG22	1:I:208:VAL:HG21	1.95	0.48
2:P:140:HIS:N	2:P:140:HIS:ND1	2.59	0.48
2:P:166:PHE:HB3	2:P:204:TYR:CD2	2.48	0.48
3:N:180:THR:HB	3:N:233:LEU:HD13	1.95	0.48
2:D:43:VAL:HG22	2:D:305:TYR:HD2	1.78	0.48
2:D:261:GLY:N	2:D:264:TYR:O	2.47	0.48
3:B:328:ASP:OD1	3:B:328:ASP:N	2.44	0.48
1:G:26:ILE:HG12	1:G:332:CYS:SG	2.54	0.48
1:K:332:CYS:HA	1:K:335:VAL:HG12	1.96	0.48
1:I:25:LYS:O	1:I:29:ALA:N	2.47	0.48
1:I:119:ARG:CZ	1:I:230:ASP:HB2	2.43	0.48
2:H:253:GLY:O	2:H:285:ASN:ND2	2.46	0.48
2:L:57:ASP:CB	2:L:60:ASP:CA	2.90	0.48
2:L:143:VAL:CG2	2:L:144:ALA:H	2.27	0.48
2:L:184:ASN:ND2	2:L:213:ILE:HD13	2.28	0.48
1:O:231:ILE:HG21	2:P:240:ILE:HD13	1.96	0.48
1:M:72:LEU:HD13	1:M:83:MET:HG2	1.94	0.48
1:K:112:ASP:HB3	1:K:217:SER:HB3	1.94	0.48
1:K:229:GLY:O	1:K:233:SER:OG	2.18	0.48
1:K:315:THR:OG1	1:K:316:LYS:N	2.43	0.48
1:I:155:PHE:CE2	1:I:251:ILE:HG13	2.47	0.48
3:J:49:HIS:O	3:J:51:LEU:N	2.47	0.48
2:P:93:ASN:CG	2:P:97:ARG:NH2	2.67	0.48
1:A:21:ALA:HA	1:A:24:MET:SD	2.54	0.48
3:B:77:ILE:HG13	3:B:77:ILE:O	2.12	0.48
1:G:277:PRO:O	1:G:280:LEU:N	2.46	0.48
2:L:15:ARG:HG2	2:L:44:PRO:HA	1.96	0.48
1:I:106:TYR:CE2	1:I:318:LEU:HD22	2.49	0.48
1:O:91:PHE:CB	1:O:256:VAL:HG11	2.44	0.48
2:P:20:MET:O	2:P:50:VAL:HG23	2.09	0.48
2:P:213:ILE:O	2:P:217:THR:OG1	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:10:ALA:CB	3:F:165:LYS:HE2	2.41	0.48
2:D:111:SER:HB2	2:D:122:ILE:H	1.79	0.48
1:K:193:GLU:HA	1:K:196:LYS:HG2	1.94	0.48
2:L:68:ILE:HD12	2:L:68:ILE:H	1.78	0.48
2:L:117:THR:OG1	2:L:118:ARG:N	2.46	0.48
3:J:92:ALA:O	3:J:93:SER:CB	2.62	0.48
1:O:20:SER:O	1:O:24:MET:HG3	2.13	0.48
1:O:132:VAL:N	1:O:138:VAL:HG23	2.28	0.48
2:P:90:LYS:CB	2:P:95:ILE:CD1	2.86	0.48
2:L:127:VAL:O	2:L:232:VAL:HA	2.14	0.48
2:P:73:VAL:HG21	2:P:300:LEU:HD21	1.95	0.48
1:E:243:LEU:HB3	1:E:262:VAL:CG2	2.33	0.48
3:F:48:GLU:HG2	3:F:48:GLU:O	2.13	0.48
2:L:143:VAL:CG2	2:L:144:ALA:N	2.77	0.48
1:I:30:ALA:HB1	1:I:299:ARG:HH21	1.79	0.48
2:P:224:ARG:O	2:P:227:GLN:HG2	2.14	0.48
2:P:233:MET:CE	2:P:241:VAL:HG11	2.43	0.48
1:C:88:ARG:HA	1:C:93:LEU:HB2	1.95	0.47
1:C:225:PRO:HD2	1:C:228:TYR:CD2	2.49	0.47
1:A:89:LYS:HE2	1:A:89:LYS:HB3	1.75	0.47
3:B:93:SER:CA	3:B:96:MET:SD	3.01	0.47
2:H:185:ILE:HD12	2:H:185:ILE:N	2.29	0.47
1:O:116:VAL:HG11	1:O:159:TYR:CE2	2.49	0.47
1:M:178:ARG:CD	3:N:86:GLU:CA	2.59	0.47
1:C:150:LYS:HB2	1:C:187:LYS:HE2	1.96	0.47
1:A:34:ILE:HG22	1:A:34:ILE:O	2.13	0.47
3:B:104:LEU:HD23	3:B:263:SER:HB3	1.95	0.47
3:B:184:LYS:HD3	3:B:216:ILE:HG22	1.96	0.47
1:E:98:ARG:HH12	1:E:243:LEU:HD21	1.79	0.47
1:I:327:PHE:CE2	1:I:331:ILE:HD11	2.50	0.47
3:J:69:SER:O	3:J:73:ASN:ND2	2.47	0.47
3:N:214:MET:HG2	3:N:219:CYS:HB2	1.96	0.47
2:D:14:GLY:H	3:F:265:GLU:CB	2.27	0.47
3:F:202:VAL:HA	3:F:205:LEU:HD12	1.96	0.47
3:J:284:ASN:OD1	3:J:335:CYS:N	2.39	0.47
1:O:327:PHE:CE1	1:O:331:ILE:HD11	2.49	0.47
1:M:8:THR:OG1	1:M:64:ASN:ND2	2.42	0.47
3:N:33:VAL:HG22	3:N:292:LEU:HD23	1.97	0.47
1:C:83:MET:HA	1:C:86:LEU:HB2	1.96	0.47
1:A:281:LEU:HD11	1:A:300:ILE:HG21	1.95	0.47
1:G:73:LYS:HG3	1:G:74:THR:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:58:ALA:C	3:F:60:GLU:HA	2.35	0.47
3:J:186:ASN:OD1	3:J:187:ILE:N	2.47	0.47
3:N:102:LEU:HD12	3:N:104:LEU:HD11	1.96	0.47
1:A:110:TYR:CE1	3:B:120:ARG:HD3	2.49	0.47
3:B:94:TYR:HA	3:B:97:ARG:CB	2.44	0.47
3:B:179:VAL:HG12	3:B:232:VAL:HB	1.97	0.47
3:B:192:ASP:OD2	3:B:239:TYR:OH	2.23	0.47
2:H:62:ARG:C	2:H:64:ALA:N	2.67	0.47
2:L:57:ASP:CB	2:L:60:ASP:C	2.83	0.47
2:L:61:ILE:HG23	2:L:62:ARG:N	2.29	0.47
2:L:218:THR:HA	2:L:221:LEU:HD12	1.96	0.47
2:P:79:ILE:HG21	2:P:92:ARG:CB	2.44	0.47
2:D:62:ARG:O	2:D:66:MET:N	2.38	0.47
2:D:66:MET:SD	3:F:205:LEU:HA	2.55	0.47
2:D:253:GLY:O	2:D:287:THR:HB	2.15	0.47
3:F:127:VAL:HG21	3:F:170:TYR:CE2	2.46	0.47
1:O:120:GLU:OE2	1:O:122:THR:OG1	2.27	0.47
1:O:168:VAL:O	1:O:200:PHE:HA	2.15	0.47
2:P:185:ILE:HG22	2:P:186:MET:HG3	1.97	0.47
3:N:73:ASN:O	3:N:75:VAL:N	2.43	0.47
2:D:338:GLN:HA	2:D:341:ILE:HD12	1.97	0.47
1:A:148:ALA:O	1:A:152:ILE:HG22	2.15	0.47
1:E:140:SER:HB2	3:F:153:LYS:HB3	1.96	0.47
1:E:243:LEU:HD22	1:E:262:VAL:CG2	2.39	0.47
3:F:103:ASP:C	3:F:263:SER:CB	2.82	0.47
1:K:9:LEU:HD13	1:K:68:LEU:HB3	1.96	0.47
2:L:57:ASP:CB	2:L:61:ILE:N	2.78	0.47
3:J:287:ASN:HB2	3:J:326:THR:OG1	2.15	0.47
1:O:125:GLU:CD	1:O:125:GLU:H	2.15	0.47
1:O:284:ALA:O	1:O:288:LEU:HG	2.15	0.47
2:P:135:TYR:CD1	2:P:151:LYS:HB2	2.49	0.47
3:N:15:PHE:HB3	3:N:16:PRO:HD3	1.97	0.47
3:N:21:PRO:CG	3:N:22:GLY:H	2.27	0.47
3:N:79:GLY:HA2	3:N:291:MET:CE	2.45	0.47
2:D:27:GLY:N	2:D:28:PRO:CD	2.78	0.47
1:A:99:PRO:HG2	1:A:247:PRO:HG2	1.97	0.47
1:O:267:PRO:HA	1:O:270:ALA:HB2	1.97	0.47
1:C:73:LYS:HA	1:C:73:LYS:HD2	1.66	0.47
1:A:231:ILE:HG22	3:B:217:ASP:HB3	1.97	0.47
1:E:118:ILE:HG22	1:E:152:ILE:HD11	1.97	0.47
1:E:186:GLN:O	1:E:190:GLU:HG3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:232:LEU:HA	1:E:235:LEU:HB2	1.96	0.47
2:D:323:HIS:HB2	2:D:329:GLY:HA3	1.96	0.47
3:B:178:LYS:O	3:B:231:ASP:HB3	2.14	0.47
2:H:129:GLU:CD	2:H:130:ASN:H	2.16	0.47
1:K:64:ASN:O	1:K:66:MET:N	2.40	0.47
1:O:174:ALA:HA	1:O:181:ASP:CG	2.35	0.47
3:N:119:THR:HG21	3:N:251:VAL:O	2.15	0.47
1:C:99:PRO:HB3	1:C:116:VAL:HG22	1.96	0.46
1:A:303:ALA:HB2	1:A:338:LEU:HD11	1.96	0.46
1:G:122:THR:OG1	1:G:123:GLU:N	2.47	0.46
2:L:58:GLU:CA	2:L:59:GLU:CB	2.93	0.46
3:J:81:ILE:O	3:J:81:ILE:HG22	2.15	0.46
2:D:256:ALA:HB2	2:D:291:LEU:HB3	1.97	0.46
1:A:181:ASP:OD1	1:A:181:ASP:N	2.48	0.46
3:B:156:THR:HG1	3:B:159:LYS:HB2	1.78	0.46
1:E:101:VAL:N	1:E:240:ILE:HG21	2.31	0.46
2:L:35:LYS:NZ	2:L:49:GLU:OE2	2.31	0.46
3:J:37:PHE:CD1	3:J:42:VAL:HG21	2.50	0.46
3:J:88:LYS:HB3	3:J:89:GLY:H	1.40	0.46
1:A:118:ILE:HG22	1:A:152:ILE:HD11	1.98	0.46
1:E:250:ASN:O	1:E:258:ILE:N	2.46	0.46
1:M:83:MET:O	1:M:87:LEU:HG	2.16	0.46
2:D:65:ILE:HD13	2:D:65:ILE:N	2.30	0.46
3:B:265:GLU:C	2:H:13:GLY:HA2	2.36	0.46
3:F:143:GLU:HG2	3:F:145:ALA:O	2.15	0.46
1:I:27:PHE:HZ	1:I:284:ALA:HB1	1.81	0.46
1:I:80:HIS:CB	1:I:81:PRO:CD	2.86	0.46
1:I:129:ILE:CB	1:I:141:ILE:CB	2.93	0.46
1:I:129:ILE:CB	1:I:141:ILE:HG21	2.45	0.46
1:O:106:TYR:CE2	1:O:318:LEU:HD11	2.50	0.46
2:P:43:VAL:O	2:P:43:VAL:HG13	2.15	0.46
1:C:41:VAL:HA	1:C:54:PRO:HG2	1.98	0.46
2:D:245:CYS:HA	2:D:248:LEU:HB2	1.97	0.46
2:D:311:LYS:HA	2:D:314:LEU:HG	1.97	0.46
1:G:281:LEU:HD11	1:G:300:ILE:HG21	1.98	0.46
2:H:316:SER:CA	2:H:343:HIS:CE1	2.99	0.46
3:F:19:MET:CE	3:F:48:GLU:CD	2.83	0.46
1:K:201:ASN:OD1	1:K:201:ASN:N	2.49	0.46
2:L:196:CYS:O	2:L:200:VAL:HG23	2.15	0.46
3:J:18:THR:HB	3:J:76:ALA:HB2	1.98	0.46
1:O:114:ASN:ND2	1:O:165:ARG:HH12	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:178:LYS:O	3:N:231:ASP:HB3	2.15	0.46
1:A:114:ASN:OD1	1:A:165:ARG:NH2	2.47	0.46
1:A:133:ILE:HD11	1:A:139:ALA:HB3	1.97	0.46
1:A:175:ASN:OD1	1:A:175:ASN:N	2.48	0.46
1:O:114:ASN:OD1	1:O:165:ARG:NH2	2.40	0.46
2:P:154:THR:OG1	2:P:157:LYS:HB2	2.16	0.46
2:P:178:THR:O	2:P:231:MET:HA	2.15	0.46
1:M:184:PHE:CD2	1:M:225:PRO:HG3	2.51	0.46
2:H:114:GLY:HA3	2:H:318:ASP:HA	1.97	0.46
1:E:146:GLU:HG3	1:E:187:LYS:HE3	1.97	0.46
3:F:96:MET:O	3:F:99:ARG:N	2.49	0.46
3:F:324:VAL:HG21	3:F:341:GLU:HG2	1.98	0.46
1:K:86:LEU:O	1:K:90:THR:OG1	2.19	0.46
2:L:18:VAL:HG13	2:L:74:ALA:HA	1.98	0.46
3:J:37:PHE:CE1	3:J:299:LEU:HD11	2.50	0.46
3:J:80:LYS:HE3	3:J:99:ARG:HH22	1.81	0.46
3:J:269:PHE:CE1	3:J:298:MET:HA	2.50	0.46
2:P:86:PRO:CB	2:P:87:PRO:C	2.84	0.46
2:P:107:ILE:HD11	2:P:126:ILE:HD12	1.98	0.46
1:C:201:ASN:OD1	1:C:201:ASN:N	2.48	0.46
2:D:213:ILE:H	2:D:213:ILE:HG13	1.58	0.46
3:F:269:PHE:CZ	3:F:298:MET:HA	2.51	0.46
1:K:9:LEU:HD22	1:K:36:TRP:CE3	2.51	0.46
1:K:55:SER:HA	1:K:58:LYS:HB3	1.98	0.46
1:I:175:ASN:CB	3:J:84:PRO:O	2.64	0.46
1:I:180:SER:OG	1:I:181:ASP:N	2.48	0.46
1:M:45:GLN:HA	1:M:50:LYS:CB	2.45	0.46
3:N:185:ALA:N	3:N:192:ASP:OD2	2.49	0.46
2:D:56:ALA:HB1	2:D:60:ASP:CB	2.45	0.46
2:D:129:GLU:CD	2:D:131:THR:H	2.19	0.46
3:B:221:MET:O	3:B:224:VAL:HG22	2.15	0.46
3:B:303:ASN:HB3	2:H:42:CYS:SG	2.56	0.46
2:H:254:LEU:HD23	2:H:287:THR:HB	1.98	0.46
3:J:119:THR:OG1	3:J:120:ARG:N	2.49	0.46
2:P:35:LYS:O	2:P:38:PHE:N	2.49	0.46
3:N:63:LEU:CD2	3:N:63:LEU:H	2.29	0.46
1:C:177:MET:SD	2:D:135:TYR:HE1	2.39	0.46
2:D:26:ILE:O	2:D:30:LEU:N	2.40	0.46
2:D:62:ARG:HA	2:D:65:ILE:HG12	1.97	0.46
3:F:108:VAL:HB	3:F:260:GLU:HB2	1.98	0.46
2:L:255:VAL:HB	2:L:270:ALA:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:177:GLY:N	3:J:231:ASP:OD2	2.35	0.46
2:P:57:ASP:CB	2:P:60:ASP:CG	2.84	0.46
1:M:102:SER:OG	1:M:113:VAL:HG22	2.16	0.46
3:N:73:ASN:C	3:N:75:VAL:H	2.19	0.46
3:N:257:VAL:HB	3:N:273:ALA:HB2	1.98	0.46
1:C:95:ALA:HB3	1:C:251:ILE:HB	1.97	0.45
3:B:93:SER:CB	3:B:96:MET:CE	2.92	0.45
2:H:97:ARG:NH1	2:H:130:ASN:OD1	2.49	0.45
1:E:83:MET:CE	1:E:83:MET:CA	2.85	0.45
1:K:224:MET:SD	1:K:229:GLY:HA2	2.56	0.45
1:I:110:TYR:HE1	3:J:120:ARG:HD3	1.81	0.45
3:J:104:LEU:HD23	3:J:263:SER:HB3	1.99	0.45
3:J:300:ARG:HG3	3:J:308:SER:OG	2.15	0.45
2:P:96:LEU:O	2:P:96:LEU:HD22	2.16	0.45
2:P:220:GLN:OE1	2:P:227:GLN:NE2	2.49	0.45
2:P:233:MET:HE3	2:P:241:VAL:HG11	1.98	0.45
1:M:46:GLY:N	1:M:50:LYS:HA	2.21	0.45
1:M:146:GLU:HB3	3:N:147:GLY:HA3	1.97	0.45
3:N:303:ASN:O	3:N:304:LEU:HD23	2.14	0.45
1:C:139:ALA:HA	2:D:151:LYS:O	2.15	0.45
1:G:22:ALA:O	1:G:26:ILE:HG13	2.16	0.45
2:H:76:LYS:HE3	2:H:268:GLU:HB3	1.98	0.45
2:H:333:THR:O	2:H:337:ILE:HD12	2.17	0.45
1:E:187:LYS:O	1:E:191:VAL:HG23	2.16	0.45
2:L:12:TYR:CZ	3:N:166:PHE:HA	2.51	0.45
2:L:79:ILE:HD11	2:L:93:ASN:CA	2.45	0.45
1:I:84:ASN:OD1	1:I:84:ASN:N	2.44	0.45
1:O:91:PHE:HD2	1:O:93:LEU:HD21	1.82	0.45
2:P:66:MET:CB	2:P:69:ARG:CD	2.94	0.45
2:P:92:ARG:O	2:P:96:LEU:HB2	2.16	0.45
1:M:236:CYS:HA	1:M:239:LEU:HG	1.98	0.45
1:A:141:ILE:HD13	3:B:152:LEU:HD23	1.97	0.45
3:B:30:MET:HE3	3:B:77:ILE:HG13	1.98	0.45
3:F:130:ARG:HG3	3:F:240:GLY:HA3	1.98	0.45
3:F:184:LYS:HD3	3:F:216:ILE:HG22	1.98	0.45
1:I:313:SER:HB2	1:I:330:GLU:OE1	2.17	0.45
3:J:168:PHE:HB3	3:J:206:TYR:CD2	2.51	0.45
3:N:269:PHE:CZ	3:N:298:MET:HA	2.51	0.45
1:C:157:PHE:CE2	1:C:192:ALA:HA	2.46	0.45
2:D:344:ILE:HG22	2:D:346:VAL:HG23	1.97	0.45
1:A:50:LYS:CB	1:A:80:HIS:CE1	3.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:24:ASP:OD2	2:L:79:ILE:C	2.53	0.45
3:J:112:LYS:HA	3:J:124:LEU:O	2.17	0.45
3:J:265:GLU:O	2:P:13:GLY:O	2.34	0.45
2:P:90:LYS:HA	2:P:95:ILE:HG13	1.97	0.45
2:D:9:SER:HB3	2:D:72:ARG:CZ	2.47	0.45
1:A:125:GLU:OE1	1:A:227:LEU:HD22	2.17	0.45
3:B:95:ASP:O	3:B:99:ARG:HG2	2.17	0.45
1:K:12:GLY:O	1:K:17:PRO:HD3	2.15	0.45
2:L:129:GLU:HA	2:L:161:ILE:HD13	1.99	0.45
3:J:111:VAL:HG23	3:J:126:LEU:HB2	1.99	0.45
1:O:119:ARG:HG3	1:O:229:GLY:HA3	1.97	0.45
2:D:263:VAL:HG13	2:D:264:TYR:CD2	2.52	0.45
3:B:153:LYS:O	3:B:154:ILE:HD13	2.16	0.45
3:F:104:LEU:O	3:F:132:GLN:NE2	2.45	0.45
3:J:96:MET:O	3:J:100:ARG:HB2	2.16	0.45
2:P:164:TYR:HE1	2:P:168:LEU:HD22	1.81	0.45
2:P:298:ASP:OD1	2:P:303:HIS:CB	2.65	0.45
1:M:45:GLN:HA	1:M:50:LYS:CA	2.46	0.45
2:D:268:GLU:HB2	2:D:272:ARG:NH2	2.31	0.45
3:B:96:MET:O	3:B:99:ARG:N	2.50	0.45
2:H:129:GLU:OE1	2:H:157:LYS:HD3	2.16	0.45
2:H:322:MET:N	2:H:322:MET:SD	2.89	0.45
3:F:59:SER:CB	3:F:60:GLU:C	2.85	0.45
2:L:342:ARG:C	2:L:344:ILE:H	2.19	0.45
3:J:184:LYS:HG3	3:J:186:ASN:OD1	2.15	0.45
1:O:174:ALA:CA	1:O:181:ASP:CG	2.85	0.45
1:O:175:ASN:HD22	1:O:204:TYR:CE2	1.75	0.45
1:M:148:ALA:O	1:M:152:ILE:HG22	2.16	0.45
1:M:235:LEU:HD12	3:N:220:CYS:HB3	1.99	0.45
2:D:65:ILE:O	2:D:66:MET:C	2.52	0.45
3:B:135:GLY:N	3:B:154:ILE:O	2.43	0.45
3:B:291:MET:O	3:B:295:ALA:N	2.43	0.45
3:B:340:GLU:O	3:B:344:ARG:N	2.40	0.45
2:H:79:ILE:N	2:H:79:ILE:HD12	2.32	0.45
1:E:324:CYS:O	1:E:328:THR:OG1	2.28	0.45
1:O:97:VAL:HG22	1:O:118:ILE:HG12	1.99	0.45
2:P:76:LYS:NZ	2:P:93:ASN:OD1	2.49	0.45
2:P:300:LEU:O	2:P:301:LYS:CG	2.64	0.45
3:N:16:PRO:HB2	3:N:73:ASN:OD1	2.16	0.45
1:A:301:GLU:HG2	1:A:305:PHE:CE2	2.52	0.45
3:B:216:ILE:HD13	3:B:239:TYR:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:62:ARG:O	2:H:64:ALA:N	2.50	0.45
1:K:116:VAL:HG11	1:K:159:TYR:HE2	1.82	0.45
1:I:27:PHE:CZ	1:I:284:ALA:HB1	2.51	0.45
1:I:66:MET:SD	1:I:257:ALA:HB3	2.56	0.45
1:I:134:VAL:HG22	1:I:137:VAL:HB	1.98	0.45
3:J:49:HIS:NE2	3:J:69:SER:CB	2.80	0.45
1:C:80:HIS:N	1:C:81:PRO:CD	2.79	0.45
1:C:98:ARG:NH1	1:C:234:ASP:OD1	2.50	0.45
1:C:114:ASN:OD1	1:C:165:ARG:NH1	2.50	0.45
3:B:37:PHE:CE1	3:B:299:LEU:HD11	2.52	0.45
1:E:83:MET:C	1:E:83:MET:SD	2.94	0.45
2:P:305:TYR:O	2:P:308:SER:HB3	2.17	0.45
1:M:80:HIS:CD2	1:M:81:PRO:HD2	2.50	0.45
1:M:313:SER:O	1:M:314:LEU:HD12	2.17	0.45
3:N:48:GLU:O	3:N:49:HIS:CD2	2.70	0.45
3:B:86:GLU:H	3:B:91:LEU:HD22	1.82	0.44
2:H:73:VAL:HG21	2:H:300:LEU:HD21	1.99	0.44
3:F:107:ASN:HB3	3:F:130:ARG:HB3	2.00	0.44
3:F:109:VAL:HG21	3:F:244:ASP:OD1	2.18	0.44
1:I:128:GLY:O	1:I:130:GLU:CG	2.63	0.44
1:O:277:PRO:O	1:O:280:LEU:N	2.50	0.44
2:P:227:GLN:HG3	2:P:228:PHE:CD1	2.52	0.44
1:M:231:ILE:HG13	1:M:232:LEU:H	1.82	0.44
1:G:284:ALA:O	1:G:288:LEU:N	2.38	0.44
1:E:8:THR:OG1	1:E:64:ASN:ND2	2.50	0.44
1:E:74:THR:CB	1:E:75:PRO:HD3	2.46	0.44
3:F:81:ILE:HG12	3:F:95:ASP:OD2	2.17	0.44
3:F:298:MET:O	3:F:302:LEU:HG	2.17	0.44
3:F:343:CYS:HA	3:F:346:VAL:HB	1.98	0.44
2:L:62:ARG:HA	2:L:65:ILE:HD12	1.99	0.44
2:L:111:SER:HB3	2:L:249:VAL:HG12	1.97	0.44
1:O:73:LYS:HD3	1:O:265:THR:CB	2.45	0.44
2:P:38:PHE:CZ	2:P:297:LEU:HD21	2.52	0.44
2:P:313:VAL:HG12	2:P:340:VAL:HG11	1.99	0.44
3:N:143:GLU:HA	3:N:149:ILE:HD12	1.98	0.44
3:N:180:THR:HG23	3:N:212:GLU:HB3	1.98	0.44
1:A:120:GLU:OE1	1:A:122:THR:N	2.49	0.44
1:A:247:PRO:HD3	1:A:282:LEU:CD1	2.47	0.44
3:B:78:ILE:HG12	3:B:270:GLU:HB3	1.99	0.44
3:F:60:GLU:O	3:F:61:GLU:HG2	2.18	0.44
1:K:318:LEU:H	1:K:319:GLY:HA3	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L:58:GLU:N	2:L:59:GLU:C	2.71	0.44
3:J:136:GLU:C	3:J:138:SER:H	2.21	0.44
3:J:288:PRO:O	3:J:292:LEU:HG	2.16	0.44
2:P:91:SER:O	2:P:94:ASN:OD1	2.35	0.44
1:M:24:MET:HG2	1:M:36:TRP:CD2	2.52	0.44
1:M:330:GLU:O	1:M:334:ARG:HB2	2.17	0.44
1:G:27:PHE:CE2	1:G:288:LEU:HD21	2.53	0.44
1:G:234:ASP:OD2	2:H:215:ASP:HB3	2.18	0.44
1:E:335:VAL:HA	1:E:338:LEU:HD12	1.99	0.44
1:K:142:LYS:HB3	2:L:149:SER:HB3	2.00	0.44
2:L:140:HIS:O	2:L:140:HIS:CG	2.70	0.44
1:I:88:ARG:HA	1:I:93:LEU:HB2	1.98	0.44
3:J:83:THR:OG1	3:J:84:PRO:CD	2.52	0.44
2:P:43:VAL:CG2	2:P:44:PRO:CD	2.96	0.44
1:A:53:ILE:HG22	1:A:54:PRO:N	2.33	0.44
1:A:140:SER:HB2	3:B:153:LYS:HD3	2.00	0.44
3:B:236:PRO:HD2	3:B:239:TYR:CD2	2.53	0.44
1:G:94:TYR:CE2	1:G:151:ARG:HG2	2.53	0.44
2:H:62:ARG:O	2:H:63:ASN:C	2.54	0.44
2:L:51:HIS:C	2:L:52:VAL:CG2	2.85	0.44
1:I:83:MET:C	1:I:83:MET:SD	2.95	0.44
2:P:29:GLU:CD	2:P:280:ASN:HA	2.35	0.44
2:P:94:ASN:CA	2:P:97:ARG:HG2	2.46	0.44
3:N:82:HIS:O	3:N:83:THR:HG23	2.10	0.44
1:A:7:VAL:HG23	1:A:34:ILE:HG23	2.00	0.44
2:H:38:PHE:HD2	2:H:47:PHE:HE2	1.64	0.44
1:E:98:ARG:HH12	1:E:243:LEU:CD2	2.31	0.44
3:F:270:GLU:HG3	3:F:271:THR:O	2.18	0.44
1:K:276:ASN:ND2	1:K:318:LEU:HD21	2.32	0.44
2:P:296:MET:HE2	2:P:297:LEU:HD23	2.00	0.44
1:A:160:ALA:HA	1:A:165:ARG:HG2	1.99	0.44
1:A:166:SER:OG	1:A:220:ASP:OD2	2.33	0.44
3:B:230:PHE:CD2	3:B:233:LEU:HD11	2.52	0.44
1:K:133:ILE:HG21	1:I:133:ILE:HD12	1.99	0.44
1:K:172:HIS:HE2	1:K:202:GLU:HG2	1.83	0.44
2:L:4:GLN:H	2:L:4:GLN:CD	2.14	0.44
2:L:115:VAL:HG12	2:L:117:THR:HG22	2.00	0.44
2:L:300:LEU:HB2	2:L:302:LEU:HG	2.00	0.44
2:P:33:HIS:O	2:P:37:VAL:CG2	2.52	0.44
2:P:40:HIS:CE1	2:P:346:VAL:HG21	2.51	0.44
3:N:95:ASP:O	3:N:98:LEU:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:190:LEU:HD23	3:N:190:LEU:N	2.32	0.44
2:D:27:GLY:O	2:D:31:MET:HG2	2.18	0.44
2:H:285:ASN:HA	2:H:324:THR:CG2	2.31	0.44
1:I:330:GLU:HA	1:I:333:ARG:HG2	1.99	0.44
3:J:83:THR:CG2	3:J:84:PRO:N	2.80	0.44
3:J:136:GLU:C	3:J:138:SER:N	2.71	0.44
1:O:38:GLU:O	1:O:39:ARG:HB2	2.17	0.44
3:N:104:LEU:HA	3:N:263:SER:HA	2.00	0.44
1:C:224:MET:SD	1:C:232:LEU:HD12	2.58	0.44
1:A:146:GLU:N	3:B:147:GLY:O	2.39	0.44
3:B:25:VAL:HG11	3:B:286:ALA:HB2	2.00	0.44
3:B:280:ALA:HB1	3:B:285:ILE:HG22	1.99	0.44
2:H:50:VAL:HG21	2:H:64:ALA:HB1	2.00	0.44
3:F:299:LEU:HB2	3:F:308:SER:HB2	1.99	0.44
1:K:20:SER:O	1:K:24:MET:HG3	2.17	0.44
2:L:18:VAL:HG13	2:L:73:VAL:O	2.17	0.44
1:O:204:TYR:O	1:O:208:VAL:HG23	2.18	0.44
2:P:15:ARG:HH22	2:P:45:VAL:HG23	1.83	0.44
1:M:119:ARG:CZ	1:M:230:ASP:HB2	2.47	0.44
1:M:120:GLU:OE1	1:M:122:THR:N	2.49	0.44
2:D:154:THR:OG1	2:D:157:LYS:HB2	2.18	0.43
1:A:16:GLY:O	1:A:20:SER:OG	2.18	0.43
3:B:275:HIS:CB	3:B:276:PRO:CD	2.95	0.43
2:H:174:ARG:HA	2:H:174:ARG:HD2	1.81	0.43
1:E:22:ALA:O	1:E:26:ILE:HG13	2.17	0.43
3:F:19:MET:HB3	3:F:48:GLU:HB3	1.98	0.43
2:P:38:PHE:HD1	2:P:41:ALA:HB2	1.82	0.43
1:C:175:ASN:OD1	1:C:176:ILE:HG12	2.18	0.43
1:G:134:VAL:HG11	3:F:156:THR:HG21	2.00	0.43
1:G:144:ILE:HD13	1:G:144:ILE:HA	1.91	0.43
3:F:74:LYS:O	3:F:266:TYR:HA	2.18	0.43
1:K:167:ASN:O	1:K:220:ASP:HB3	2.19	0.43
2:L:126:ILE:HD11	2:L:241:VAL:HG12	1.99	0.43
1:O:234:ASP:OD2	2:P:215:ASP:HB3	2.18	0.43
1:O:315:THR:OG1	1:O:316:LYS:N	2.52	0.43
3:N:20:LEU:HD12	3:N:20:LEU:HA	1.74	0.43
3:N:257:VAL:HG11	3:N:273:ALA:HB2	1.99	0.43
2:D:129:GLU:OE1	2:D:132:GLU:N	2.47	0.43
2:D:140:HIS:CD2	1:A:129:ILE:HG21	2.54	0.43
2:D:155:LYS:O	2:D:159:LEU:HG	2.17	0.43
3:B:77:ILE:O	3:B:77:ILE:CG1	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:315:THR:OG1	1:G:316:LYS:N	2.45	0.43
2:H:62:ARG:O	2:H:65:ILE:N	2.51	0.43
2:H:339:ASP:O	2:H:342:ARG:HB2	2.18	0.43
3:F:19:MET:O	3:F:48:GLU:CB	2.62	0.43
3:F:20:LEU:HD12	3:F:20:LEU:HA	1.69	0.43
1:K:37:GLU:HG2	1:K:39:ARG:NH1	2.33	0.43
2:L:254:LEU:CD2	2:L:285:ASN:ND2	2.79	0.43
1:O:100:CYS:HB3	1:O:240:ILE:HD13	2.00	0.43
2:P:267:PHE:CZ	2:P:296:MET:HA	2.54	0.43
2:D:21:ILE:CB	2:D:50:VAL:HG13	2.48	0.43
1:A:168:VAL:O	1:A:200:PHE:HA	2.18	0.43
3:B:255:GLY:O	3:B:289:THR:HB	2.17	0.43
1:E:185:LEU:HD22	1:E:189:ARG:CZ	2.49	0.43
3:F:15:PHE:HB3	3:F:16:PRO:CD	2.43	0.43
1:I:81:PRO:HG2	1:I:86:LEU:HD11	2.00	0.43
1:I:83:MET:SD	1:I:83:MET:O	2.76	0.43
1:I:155:PHE:CZ	1:I:251:ILE:HG13	2.52	0.43
3:J:284:ASN:O	3:J:284:ASN:CG	2.56	0.43
1:O:132:VAL:C	1:O:133:ILE:HD13	2.39	0.43
1:O:268:ASP:OD1	1:O:268:ASP:N	2.50	0.43
2:P:138:LEU:HB3	1:M:131:HIS:CE1	2.52	0.43
2:D:151:LYS:O	2:D:152:ILE:HD13	2.19	0.43
3:B:17:VAL:CG2	3:B:76:ALA:HA	2.48	0.43
3:B:295:ALA:O	3:B:298:MET:HB3	2.18	0.43
1:G:9:LEU:HG	1:G:10:ILE:N	2.34	0.43
3:F:61:GLU:O	3:F:63:LEU:N	2.52	0.43
2:L:61:ILE:O	2:L:61:ILE:HG13	2.18	0.43
2:L:93:ASN:OD1	2:L:97:ARG:NH2	2.42	0.43
2:L:140:HIS:CD2	3:J:150:GLU:CD	2.84	0.43
2:P:151:LYS:NZ	2:P:237:TYR:OH	2.52	0.43
2:P:253:GLY:O	2:P:285:ASN:ND2	2.51	0.43
1:C:142:LYS:CD	2:D:135:TYR:OH	2.65	0.43
2:D:50:VAL:HG13	2:D:50:VAL:O	2.19	0.43
1:A:159:TYR:O	1:A:163:ASN:ND2	2.48	0.43
3:B:113:SER:HA	3:B:251:VAL:HG13	1.99	0.43
1:E:98:ARG:CZ	1:E:233:SER:HB2	2.48	0.43
1:O:174:ALA:CB	1:O:181:ASP:CG	2.86	0.43
2:P:62:ARG:HA	2:P:65:ILE:CG1	2.47	0.43
3:N:156:THR:HG1	3:N:159:LYS:H	1.66	0.43
2:D:19:THR:OG1	2:D:74:ALA:HB1	2.05	0.43
1:G:287:MET:O	1:G:291:MET:HG2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:5:GLN:O	1:E:35:GLN:N	2.48	0.43
1:E:147:GLY:O	1:E:151:ARG:N	2.50	0.43
1:E:294:PHE:HA	1:E:297:ALA:HB3	2.01	0.43
3:F:48:GLU:O	3:F:48:GLU:CG	2.66	0.43
1:I:125:GLU:HG3	1:I:142:LYS:HB2	2.01	0.43
1:C:289:ARG:NH2	1:C:301:GLU:OE1	2.34	0.43
3:B:189:LYS:O	3:B:193:GLY:HA3	2.19	0.43
1:G:130:GLU:C	1:G:131:HIS:HD1	2.22	0.43
1:G:224:MET:SD	1:G:232:LEU:HD12	2.58	0.43
1:G:268:ASP:N	1:G:268:ASP:OD1	2.52	0.43
2:H:4:GLN:HB2	2:H:6:ILE:HG23	2.00	0.43
1:E:174:ALA:HA	1:E:181:ASP:HB2	2.00	0.43
1:I:125:GLU:HA	1:I:142:LYS:HA	2.00	0.43
3:J:261:SER:HB2	3:J:268:VAL:HG23	2.00	0.43
1:O:172:HIS:ND1	1:O:172:HIS:C	2.72	0.43
1:M:69:LYS:NZ	1:M:260:GLU:OE1	2.33	0.43
1:A:221:VAL:O	1:A:222:LEU:HD23	2.19	0.43
1:A:302:ALA:O	1:A:306:ALA:N	2.49	0.43
3:F:75:VAL:HG11	3:F:302:LEU:HD21	2.01	0.43
1:O:165:ARG:HD3	1:O:165:ARG:HA	1.85	0.43
2:P:21:ILE:HB	2:P:76:LYS:HB2	2.01	0.43
2:P:184:ASN:OD1	2:P:184:ASN:N	2.52	0.43
1:C:8:THR:OG1	1:C:64:ASN:ND2	2.42	0.43
1:C:110:TYR:HD2	1:C:216:PRO:HG3	1.83	0.43
1:A:303:ALA:HB1	1:A:334:ARG:HB3	2.01	0.43
3:B:19:MET:HG3	3:B:30:MET:HE3	2.00	0.43
2:L:110:LYS:O	2:L:249:VAL:HG11	2.16	0.43
2:L:184:ASN:OD1	2:L:185:ILE:N	2.52	0.43
1:I:83:MET:CE	1:I:83:MET:CA	2.85	0.43
2:P:40:HIS:HE1	2:P:346:VAL:HG22	1.83	0.43
2:P:66:MET:CA	2:P:69:ARG:CD	2.75	0.43
2:D:337:ILE:O	2:D:341:ILE:HG13	2.19	0.42
1:G:289:ARG:NH2	1:G:301:GLU:OE1	2.51	0.42
1:E:284:ALA:O	1:E:288:LEU:HG	2.19	0.42
3:J:217:ASP:OD1	3:J:217:ASP:N	2.52	0.42
2:P:42:CYS:O	2:P:42:CYS:SG	2.77	0.42
2:P:135:TYR:CD1	2:P:151:LYS:HA	2.53	0.42
2:P:190:ASP:OD2	2:P:237:TYR:CE2	2.71	0.42
3:B:111:VAL:HG11	3:B:247:ALA:HB1	2.01	0.42
3:B:265:GLU:HA	2:H:13:GLY:HA2	2.01	0.42
3:B:336:HIS:HD2	3:B:340:GLU:OE2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:343:CYS:O	3:B:346:VAL:HG12	2.18	0.42
2:L:42:CYS:HB3	3:N:303:ASN:HD22	1.84	0.42
2:L:143:VAL:HG22	2:L:144:ALA:H	1.84	0.42
2:L:336:ALA:O	2:L:340:VAL:HG23	2.19	0.42
3:J:23:ASP:OD1	3:J:53:GLU:CB	2.67	0.42
3:J:93:SER:C	3:J:95:ASP:H	2.22	0.42
3:J:104:LEU:CD1	3:J:268:VAL:CG2	2.88	0.42
1:O:95:ALA:O	1:O:250:ASN:HA	2.19	0.42
2:P:40:HIS:HE1	2:P:346:VAL:HG21	1.82	0.42
3:N:262:TYR:N	3:N:262:TYR:CD1	2.87	0.42
3:N:318:VAL:HG21	3:N:342:ILE:HD13	2.01	0.42
2:D:246:ALA:O	2:D:251:GLY:N	2.52	0.42
1:G:98:ARG:HE	1:G:98:ARG:HB2	1.51	0.42
2:H:267:PHE:CE2	2:H:296:MET:HA	2.40	0.42
1:K:168:VAL:HG22	1:K:221:VAL:HB	2.00	0.42
3:J:235:MET:SD	3:J:243:ILE:HG13	2.59	0.42
1:O:201:ASN:N	1:O:201:ASN:OD1	2.52	0.42
1:O:282:LEU:HA	1:O:285:VAL:HB	2.02	0.42
1:A:185:LEU:HD22	1:A:189:ARG:NH1	2.33	0.42
3:B:96:MET:O	3:B:99:ARG:HB2	2.20	0.42
3:F:180:THR:HG23	3:F:212:GLU:HB2	2.01	0.42
3:F:235:MET:HB2	3:F:239:TYR:HB2	2.01	0.42
1:K:126:TYR:CD2	2:L:185:ILE:HG12	2.55	0.42
2:L:195:GLN:HA	2:L:198:ARG:HD2	2.02	0.42
1:I:95:ALA:O	1:I:250:ASN:HA	2.20	0.42
1:I:288:LEU:HB2	1:I:297:ALA:HB2	2.01	0.42
3:J:86:GLU:CA	3:J:91:LEU:HD11	2.48	0.42
3:J:307:HIS:O	3:J:311:ILE:HG13	2.20	0.42
2:P:5:THR:O	2:P:6:ILE:HG23	2.20	0.42
2:P:135:TYR:CD1	2:P:151:LYS:CA	3.02	0.42
1:C:13:ASP:O	1:C:71:PRO:HG2	2.19	0.42
1:C:69:LYS:HE2	1:C:260:GLU:HB2	2.02	0.42
2:D:140:HIS:ND1	1:A:131:HIS:NE2	2.61	0.42
1:E:4:VAL:HA	1:E:33:PRO:HB2	2.00	0.42
2:L:194:LEU:HD21	2:L:198:ARG:NH1	2.35	0.42
1:I:91:PHE:HB2	1:I:93:LEU:HG	2.01	0.42
1:I:210:LEU:HA	3:J:245:ASN:O	2.20	0.42
3:J:23:ASP:CG	3:J:53:GLU:CB	2.88	0.42
3:J:49:HIS:CE1	3:J:69:SER:OG	2.73	0.42
2:P:43:VAL:HG23	2:P:44:PRO:HD2	2.01	0.42
3:N:63:LEU:CG	3:N:64:GLU:N	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:169:ASP:O	3:N:173:LYS:HB2	2.18	0.42
1:C:108:THR:OG1	1:C:110:TYR:O	2.37	0.42
2:D:107:ILE:HD11	2:D:242:ASN:ND2	2.34	0.42
3:B:220:CYS:HA	3:B:223:LEU:HD12	2.00	0.42
1:G:173:LYS:HD2	1:G:205:LEU:HD23	2.00	0.42
1:G:285:VAL:HG11	1:G:301:GLU:HG3	2.01	0.42
3:J:190:LEU:HD23	3:J:190:LEU:HA	1.85	0.42
1:O:25:LYS:HG2	1:O:332:CYS:SG	2.60	0.42
1:O:330:GLU:O	1:O:334:ARG:HG3	2.19	0.42
2:P:304:SER:OG	2:P:305:TYR:N	2.52	0.42
1:C:130:GLU:OE1	1:C:140:SER:OG	2.35	0.42
1:C:234:ASP:O	2:D:219:MET:HB2	2.20	0.42
1:A:247:PRO:HD3	1:A:282:LEU:HD12	2.00	0.42
2:H:97:ARG:HB2	2:H:102:LEU:HB2	2.00	0.42
2:H:185:ILE:CD1	2:H:185:ILE:N	2.81	0.42
1:E:288:LEU:HA	1:E:291:MET:HE2	2.02	0.42
3:F:137:TYR:CD2	3:F:237:ASN:CG	2.75	0.42
2:L:57:ASP:CB	2:L:59:GLU:O	2.68	0.42
1:O:136:GLY:O	1:O:137:VAL:HB	2.20	0.42
2:P:85:LEU:CB	2:P:87:PRO:HA	2.50	0.42
2:D:64:ALA:O	2:D:67:ALA:HB3	2.19	0.42
2:D:214:VAL:O	2:D:218:THR:HG23	2.19	0.42
1:A:285:VAL:O	1:A:289:ARG:HG3	2.20	0.42
3:B:105:PHE:CE2	3:B:162:ARG:HD3	2.55	0.42
2:H:267:PHE:HZ	2:H:299:HIS:HB3	1.85	0.42
1:K:74:THR:O	1:K:74:THR:OG1	2.35	0.42
2:L:66:MET:O	2:L:70:ARG:N	2.42	0.42
2:L:73:VAL:HG22	2:L:265:ALA:HB3	2.01	0.42
2:L:174:ARG:HB3	2:L:229:ASP:OD2	2.19	0.42
1:I:81:PRO:CD	1:I:81:PRO:O	2.66	0.42
1:I:285:VAL:O	1:I:289:ARG:HG3	2.19	0.42
3:J:183:HIS:ND1	3:J:196:LEU:HD13	2.33	0.42
3:J:235:MET:HG3	3:J:239:TYR:HB2	2.02	0.42
2:P:290:LEU:HD23	2:P:290:LEU:HA	1.88	0.42
1:M:19:ILE:O	1:M:23:VAL:HG23	2.19	0.42
1:M:231:ILE:HG22	3:N:217:ASP:HB3	2.01	0.42
1:C:130:GLU:OE1	2:D:189:GLY:N	2.42	0.42
1:C:247:PRO:HB3	1:C:282:LEU:HB3	2.02	0.42
2:D:92:ARG:O	2:D:95:ILE:HG22	2.20	0.42
2:D:254:LEU:HD23	2:D:285:ASN:HD21	1.85	0.42
1:A:123:GLU:HB2	1:A:124:GLY:H	1.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:331:ILE:O	1:A:335:VAL:HG13	2.19	0.42
3:B:136:GLU:OE1	3:B:153:LYS:HG3	2.20	0.42
2:H:21:ILE:CG2	2:H:52:VAL:CB	2.98	0.42
1:E:240:ILE:HG13	1:E:246:THR:CG2	2.47	0.42
3:F:37:PHE:CE1	3:F:299:LEU:HD11	2.55	0.42
2:L:76:LYS:NZ	2:L:93:ASN:HD21	2.17	0.42
2:L:140:HIS:NE2	3:J:150:GLU:OE1	2.52	0.42
3:J:248:ALA:HA	3:J:257:VAL:HG21	2.02	0.42
1:O:55:SER:HA	1:O:58:LYS:HB3	2.02	0.42
1:O:318:LEU:HA	1:O:318:LEU:HD13	1.87	0.42
2:P:57:ASP:C	2:P:60:ASP:HB2	2.40	0.42
2:P:88:SER:O	2:P:89:HIS:CB	2.66	0.42
1:M:119:ARG:HD2	1:M:230:ASP:N	2.35	0.42
3:N:156:THR:O	3:N:158:ALA:N	2.53	0.42
3:N:260:GLU:OE1	3:N:262:TYR:HE1	2.03	0.42
2:D:97:ARG:HB2	2:D:102:LEU:HB2	2.01	0.42
2:D:195:GLN:HA	2:D:198:ARG:HB2	2.02	0.42
3:B:342:ILE:HD13	3:B:342:ILE:HA	1.85	0.42
1:G:235:LEU:HD13	2:H:218:THR:HB	2.01	0.42
1:G:239:LEU:HD23	2:H:222:VAL:HG21	2.02	0.42
3:F:287:ASN:ND2	3:F:329:MET:SD	2.93	0.42
1:K:22:ALA:O	1:K:26:ILE:HG13	2.19	0.42
2:L:24:ASP:OD1	2:L:53:SER:HA	2.19	0.42
2:L:112:LEU:HB2	2:L:115:VAL:HB	2.02	0.42
2:L:316:SER:HB3	2:L:340:VAL:HG22	2.02	0.42
1:I:167:ASN:O	1:I:220:ASP:HB3	2.19	0.42
1:O:184:PHE:CE2	1:O:225:PRO:HD3	2.55	0.42
1:O:293:LEU:HB3	1:O:296:HIS:HB2	2.01	0.42
2:P:5:THR:O	2:P:6:ILE:CG2	2.68	0.42
2:D:140:HIS:CE1	1:A:131:HIS:HD2	2.38	0.41
2:D:140:HIS:NE2	2:D:148:GLU:OE1	2.53	0.41
2:H:285:ASN:OD1	2:H:324:THR:HG21	2.20	0.41
2:H:340:VAL:O	2:H:344:ILE:N	2.53	0.41
3:F:135:GLY:CA	3:F:154:ILE:O	2.68	0.41
1:K:64:ASN:C	1:K:66:MET:H	2.23	0.41
2:L:152:ILE:HD12	1:I:133:ILE:HG23	2.01	0.41
2:L:297:LEU:HD22	2:L:302:LEU:HD12	2.01	0.41
1:O:98:ARG:HE	1:O:98:ARG:HB2	1.38	0.41
2:P:284:ALA:O	2:P:333:THR:HG22	2.20	0.41
1:M:167:ASN:O	1:M:220:ASP:HB3	2.20	0.41
1:M:189:ARG:NH2	1:M:202:GLU:OE2	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:64:ASN:C	1:C:66:MET:H	2.24	0.41
2:D:129:GLU:HG3	2:D:132:GLU:CB	2.50	0.41
3:B:78:ILE:O	3:B:78:ILE:HG13	2.13	0.41
3:B:157:ARG:CA	3:B:160:SER:HG	2.33	0.41
3:B:182:VAL:CG1	3:B:216:ILE:HA	2.50	0.41
1:G:225:PRO:HD2	1:G:228:TYR:CD2	2.55	0.41
2:H:126:ILE:HG21	2:H:242:ASN:OD1	2.20	0.41
1:E:172:HIS:O	1:E:205:LEU:N	2.52	0.41
1:E:175:ASN:CB	3:F:85:MET:HA	2.48	0.41
1:K:98:ARG:NE	1:K:233:SER:HB2	2.36	0.41
1:K:120:GLU:HG2	1:K:152:ILE:HD13	2.02	0.41
1:K:231:ILE:HG12	2:L:215:ASP:OD1	2.20	0.41
2:L:65:ILE:O	2:L:69:ARG:N	2.35	0.41
1:I:327:PHE:O	1:I:331:ILE:HG13	2.20	0.41
3:J:287:ASN:OD1	3:J:289:THR:HB	2.21	0.41
1:O:306:ALA:HA	1:O:309:LYS:HB3	2.02	0.41
2:P:140:HIS:HB3	1:M:129:ILE:HG23	2.02	0.41
2:P:300:LEU:O	2:P:301:LYS:HB2	2.19	0.41
1:M:289:ARG:NH2	1:M:301:GLU:OE1	2.53	0.41
1:C:195:CYS:C	1:C:197:ASP:H	2.23	0.41
1:C:281:LEU:HD12	1:C:284:ALA:HB3	2.03	0.41
1:C:291:MET:HB2	1:C:293:LEU:HG	2.01	0.41
2:D:65:ILE:O	2:D:69:ARG:N	2.50	0.41
1:A:103:ILE:HG23	1:A:308:ILE:HD13	2.01	0.41
2:H:252:PRO:HA	2:H:271:THR:CB	2.49	0.41
1:K:73:LYS:HA	1:K:73:LYS:HD2	1.49	0.41
2:L:190:ASP:OD2	2:L:237:TYR:OH	2.25	0.41
3:J:84:PRO:HD2	3:J:84:PRO:O	2.20	0.41
1:O:133:ILE:CG2	3:N:154:ILE:HG13	2.49	0.41
1:O:210:LEU:O	1:O:214:GLN:HG3	2.20	0.41
1:O:213:VAL:HG11	2:P:244:VAL:HG13	2.02	0.41
2:P:326:ASP:OD1	2:P:327:ILE:HG23	2.20	0.41
1:M:243:LEU:O	1:M:263:HIS:HB3	2.21	0.41
3:N:256:VAL:O	3:N:258:PRO:CD	2.68	0.41
1:G:145:THR:HG22	2:H:146:VAL:HG22	2.01	0.41
1:E:11:PRO:HB3	1:E:17:PRO:HA	2.02	0.41
1:E:47:PRO:HD2	1:E:51:TRP:HE1	1.86	0.41
1:E:158:GLU:O	1:E:162:ASN:HB2	2.20	0.41
2:L:61:ILE:CD1	2:L:64:ALA:HB2	2.31	0.41
2:L:256:ALA:HB2	2:L:291:LEU:HB3	2.02	0.41
3:J:99:ARG:HD3	3:J:132:GLN:HG2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:137:TYR:C	3:J:139:SER:N	2.73	0.41
1:O:157:PHE:CE1	1:O:168:VAL:HG11	2.52	0.41
1:O:172:HIS:ND1	1:O:174:ALA:N	2.60	0.41
1:O:243:LEU:HB3	1:O:262:VAL:HG23	2.03	0.41
2:P:243:ASN:O	2:P:244:VAL:C	2.57	0.41
3:N:125:ASP:O	3:N:126:LEU:HD23	2.20	0.41
2:D:63:ASN:HB3	3:F:207:PRO:CG	2.49	0.41
2:D:190:ASP:OD1	2:D:190:ASP:N	2.54	0.41
3:B:93:SER:CB	3:B:96:MET:CG	2.98	0.41
1:G:314:LEU:HB2	1:G:320:GLY:H	1.85	0.41
1:E:119:ARG:CZ	1:E:230:ASP:HB2	2.50	0.41
1:K:273:ASP:OD1	1:K:324:CYS:HB3	2.20	0.41
2:L:43:VAL:HG22	2:L:305:TYR:HD2	1.85	0.41
2:L:166:PHE:HD2	2:L:204:TYR:HB2	1.85	0.41
3:J:184:LYS:CA	3:J:192:ASP:OD2	2.68	0.41
1:O:114:ASN:CG	1:O:165:ARG:HH12	2.24	0.41
1:O:160:ALA:HA	1:O:165:ARG:HB2	2.03	0.41
2:P:135:TYR:HE1	2:P:151:LYS:N	2.19	0.41
1:M:125:GLU:CD	1:M:227:LEU:HD22	2.40	0.41
3:N:304:LEU:HD23	3:N:304:LEU:N	2.34	0.41
1:C:115:ILE:HD11	1:C:216:PRO:O	2.21	0.41
2:D:15:ARG:NH1	2:D:46:ASP:OD2	2.53	0.41
2:D:285:ASN:HA	2:D:324:THR:HG21	2.02	0.41
2:H:60:ASP:C	2:H:62:ARG:N	2.72	0.41
2:H:237:TYR:N	2:H:237:TYR:CD1	2.87	0.41
3:J:80:LYS:HD2	3:J:80:LYS:HA	1.90	0.41
3:J:343:CYS:HA	3:J:346:VAL:HG12	2.03	0.41
1:M:37:GLU:OE1	1:M:60:SER:OG	2.35	0.41
3:N:259:GLY:HA3	3:N:272:GLY:CA	2.51	0.41
1:C:88:ARG:HD2	1:C:121:ASN:O	2.20	0.41
2:D:19:THR:HG23	2:D:71:ASN:HB2	2.01	0.41
2:D:282:ASN:C	2:D:333:THR:HG23	2.40	0.41
1:E:234:ASP:N	1:E:234:ASP:OD1	2.53	0.41
3:F:312:ALA:O	3:F:316:LYS:HG3	2.20	0.41
1:K:225:PRO:HD2	1:K:228:TYR:CD2	2.56	0.41
2:L:138:LEU:HD23	2:L:138:LEU:N	2.36	0.41
2:L:176:LYS:O	2:L:229:ASP:HB3	2.20	0.41
1:I:119:ARG:NH2	1:I:230:ASP:OD1	2.54	0.41
3:J:29:LEU:O	3:J:33:VAL:HG23	2.20	0.41
3:J:163:ILE:HD12	3:J:163:ILE:HA	1.93	0.41
3:J:342:ILE:HA	3:J:342:ILE:HD13	1.75	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:167:ASN:OD1	1:O:199:LYS:HB3	2.20	0.41
2:P:301:LYS:C	2:P:303:HIS:H	2.23	0.41
3:N:248:ALA:CB	3:N:257:VAL:HG21	2.50	0.41
2:H:20:MET:HB2	2:H:47:PHE:CD1	2.56	0.41
3:F:56:ASN:O	3:F:57:MET:CB	2.69	0.41
3:F:60:GLU:C	3:F:62:LYS:N	2.71	0.41
3:J:108:VAL:HA	3:J:128:ILE:O	2.20	0.41
1:M:178:ARG:HG2	3:N:86:GLU:CB	2.51	0.41
3:N:29:LEU:HD11	3:N:288:PRO:HA	1.93	0.41
3:N:153:LYS:C	3:N:154:ILE:HD13	2.41	0.41
1:C:15:ILE:O	1:C:19:ILE:HG12	2.21	0.41
1:C:143:LEU:HA	2:D:147:VAL:O	2.20	0.41
1:A:68:LEU:HD12	1:A:259:PHE:O	2.21	0.41
3:B:111:VAL:CG2	3:B:126:LEU:HB2	2.51	0.41
3:B:302:LEU:HD23	3:B:302:LEU:HA	1.85	0.41
1:G:160:ALA:HA	1:G:165:ARG:HB2	2.02	0.41
1:G:196:LYS:HE2	1:G:196:LYS:HB3	1.86	0.41
1:G:285:VAL:HG13	1:G:297:ALA:HB1	2.02	0.41
2:H:337:ILE:O	2:H:341:ILE:HG13	2.21	0.41
1:E:15:ILE:HD13	1:E:266:ALA:HB3	2.03	0.41
1:K:107:LYS:HB3	1:K:107:LYS:HZ1	1.86	0.41
2:L:195:GLN:O	2:L:195:GLN:HG2	2.21	0.41
2:L:281:LYS:O	2:L:283:ILE:HG12	2.21	0.41
1:I:187:LYS:HD3	1:I:187:LYS:HA	1.71	0.41
3:J:183:HIS:HD2	3:J:214:MET:O	2.03	0.41
1:O:180:SER:OG	1:O:181:ASP:OD1	2.38	0.41
3:N:182:VAL:HB	3:N:235:MET:HB3	2.02	0.41
1:C:21:ALA:HA	1:C:24:MET:HE2	2.02	0.41
3:B:61:GLU:OE2	3:B:97:ARG:NH2	2.54	0.41
3:B:81:ILE:HG13	3:B:81:ILE:O	2.21	0.41
3:B:87:TYR:O	3:B:91:LEU:HB3	2.21	0.41
1:E:129:ILE:O	1:E:141:ILE:HB	2.21	0.41
2:L:74:ALA:O	2:L:266:VAL:CA	2.55	0.41
2:L:323:HIS:CG	2:L:327:ILE:HD11	2.56	0.41
2:L:344:ILE:O	2:L:345:ARG:CB	2.69	0.41
1:I:332:CYS:O	1:I:335:VAL:HG22	2.20	0.41
3:J:15:PHE:O	3:J:44:VAL:HA	2.21	0.41
1:O:11:PRO:HB2	1:O:17:PRO:HG3	2.03	0.41
2:P:33:HIS:C	2:P:37:VAL:HG23	2.36	0.41
2:P:36:SER:CA	2:P:39:ARG:HH12	2.29	0.41
2:P:66:MET:HB2	2:P:69:ARG:HD3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:53:ILE:CG2	1:M:86:LEU:HD13	2.51	0.41
1:C:125:GLU:OE1	1:C:125:GLU:N	2.36	0.40
1:A:276:ASN:CG	1:A:278:THR:HG22	2.42	0.40
3:B:37:PHE:CZ	3:B:299:LEU:HD21	2.56	0.40
3:B:95:ASP:O	3:B:98:LEU:HB3	2.20	0.40
1:G:224:MET:SD	1:G:229:GLY:HA2	2.61	0.40
2:H:124:ILE:HD11	2:H:228:PHE:HB2	2.03	0.40
2:H:285:ASN:OD1	2:H:324:THR:CG2	2.69	0.40
2:L:140:HIS:NE2	2:L:148:GLU:CD	2.54	0.40
1:I:211:ASN:HB3	1:I:218:GLN:OE1	2.21	0.40
1:O:271:GLY:O	1:O:272:LYS:CB	2.70	0.40
2:P:161:ILE:HA	2:P:161:ILE:HD12	1.85	0.40
2:P:281:LYS:O	2:P:282:ASN:CB	2.69	0.40
2:H:56:ALA:O	2:H:60:ASP:OD1	2.39	0.40
2:H:76:LYS:NZ	2:H:268:GLU:HB2	2.31	0.40
3:F:19:MET:O	3:F:48:GLU:HA	2.22	0.40
3:F:60:GLU:O	3:F:61:GLU:CG	2.69	0.40
1:K:310:ASP:CG	1:K:312:LYS:HE2	2.41	0.40
1:I:15:ILE:HD12	1:I:275:ALA:HB1	2.01	0.40
1:I:243:LEU:HB3	1:I:262:VAL:HG23	2.03	0.40
3:J:60:GLU:O	3:J:63:LEU:CA	2.69	0.40
2:P:40:HIS:CE1	2:P:346:VAL:CG2	3.02	0.40
2:P:135:TYR:CE1	2:P:151:LYS:CA	3.03	0.40
1:M:308:ILE:HG12	1:M:327:PHE:HZ	1.86	0.40
3:N:295:ALA:O	3:N:298:MET:HB3	2.20	0.40
1:C:47:PRO:HG3	1:C:51:TRP:N	2.37	0.40
2:D:159:LEU:O	2:D:163:GLU:HG2	2.21	0.40
1:A:15:ILE:HG23	1:A:265:THR:O	2.22	0.40
3:B:176:ARG:HD2	3:B:231:ASP:OD1	2.21	0.40
1:G:259:PHE:HE2	1:G:286:MET:HG2	1.86	0.40
1:G:291:MET:HG2	1:G:291:MET:H	1.67	0.40
1:E:89:LYS:HE2	1:E:89:LYS:HB3	1.83	0.40
3:F:137:TYR:HD2	3:F:237:ASN:ND2	2.18	0.40
3:F:221:MET:O	3:F:224:VAL:HG22	2.21	0.40
1:K:215:ASP:O	1:K:218:GLN:HG2	2.22	0.40
3:J:239:TYR:HA	3:J:242:ILE:HG12	2.03	0.40
2:P:34:VAL:HA	2:P:37:VAL:HG23	2.03	0.40
1:M:183:LEU:HA	1:M:186:GLN:HG2	2.02	0.40
3:N:198:CYS:O	3:N:201:GLU:HB2	2.21	0.40
2:D:134:GLU:O	2:D:135:TYR:CB	2.69	0.40
1:A:91:PHE:CD2	1:A:256:VAL:HG11	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:205:LEU:HD22	1:A:228:TYR:CD2	2.56	0.40
1:A:237:ALA:CB	1:A:246:THR:HG21	2.48	0.40
3:B:184:LYS:HD2	3:B:186:ASN:OD1	2.21	0.40
3:B:265:GLU:O	2:H:13:GLY:HA2	2.21	0.40
1:G:281:LEU:HD11	1:G:300:ILE:CG2	2.51	0.40
2:H:84:ASN:O	2:H:87:PRO:CB	2.70	0.40
2:H:281:LYS:O	2:H:283:ILE:HG12	2.22	0.40
2:H:295:MET:HA	2:H:298:ASP:HB2	2.03	0.40
2:H:316:SER:CB	2:H:340:VAL:HG22	2.51	0.40
1:E:83:MET:SD	1:E:83:MET:O	2.79	0.40
1:E:252:GLY:N	1:E:256:VAL:O	2.50	0.40
2:L:125:LEU:HG	2:L:174:ARG:NH2	2.36	0.40
1:I:158:GLU:O	1:I:162:ASN:N	2.44	0.40
3:J:49:HIS:NE2	3:J:69:SER:HB2	2.37	0.40
3:J:187:ILE:HD12	3:J:187:ILE:HA	1.89	0.40
2:P:337:ILE:O	2:P:341:ILE:HG13	2.21	0.40
3:N:239:TYR:N	3:N:239:TYR:CD1	2.88	0.40
3:N:288:PRO:CD	3:N:289:THR:H	2.33	0.40
1:C:66:MET:SD	1:C:257:ALA:HB3	2.62	0.40
2:D:29:GLU:H	2:D:29:GLU:HG3	1.70	0.40
1:A:53:ILE:CG2	1:A:54:PRO:N	2.84	0.40
1:G:94:TYR:HA	1:G:122:THR:HG23	2.02	0.40
2:H:217:THR:O	2:H:221:LEU:HG	2.22	0.40
1:E:101:VAL:N	1:E:240:ILE:CG2	2.85	0.40
1:E:236:CYS:O	1:E:240:ILE:HG12	2.22	0.40
3:J:185:ALA:HA	3:J:192:ASP:HB2	2.03	0.40
2:P:140:HIS:CD2	1:M:129:ILE:HG21	2.57	0.40
3:N:184:LYS:HB3	3:N:239:TYR:OH	2.22	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:282:GLY:O	3:J:85:MET:CB[8_545]	1.48	0.72

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	334/339 (98%)	292 (87%)	42 (13%)	0	100	100
1	C	322/339 (95%)	276 (86%)	46 (14%)	0	100	100
1	E	334/339 (98%)	310 (93%)	24 (7%)	0	100	100
1	G	318/339 (94%)	282 (89%)	36 (11%)	0	100	100
1	I	334/339 (98%)	291 (87%)	42 (13%)	1 (0%)	41	76
1	K	321/339 (95%)	292 (91%)	29 (9%)	0	100	100
1	M	334/339 (98%)	292 (87%)	42 (13%)	0	100	100
1	O	323/339 (95%)	287 (89%)	33 (10%)	3 (1%)	17	56
2	D	335/354 (95%)	301 (90%)	33 (10%)	1 (0%)	41	76
2	H	343/354 (97%)	300 (88%)	42 (12%)	1 (0%)	41	76
2	L	345/354 (98%)	307 (89%)	34 (10%)	4 (1%)	13	50
2	P	344/354 (97%)	296 (86%)	42 (12%)	6 (2%)	9	43
3	B	333/352 (95%)	295 (89%)	38 (11%)	0	100	100
3	F	333/352 (95%)	294 (88%)	37 (11%)	2 (1%)	25	65
3	J	333/352 (95%)	285 (86%)	45 (14%)	3 (1%)	17	56
3	N	332/352 (94%)	283 (85%)	39 (12%)	10 (3%)	4	31
All	All	5318/5536 (96%)	4683 (88%)	604 (11%)	31 (1%)	25	65

All (31) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	H	87	PRO
3	F	57	MET
2	L	85	LEU
2	L	87	PRO
3	J	84	PRO
3	J	281	VAL

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Mol	Chain	Res	Type
2	P	44	PRO
3	N	83	THR
3	N	84	PRO
2	L	52	VAL
3	J	83	THR
1	O	44	ILE
1	O	182	GLY
2	P	139	GLU
3	N	53	GLU
3	N	90	GLU
2	D	138	LEU
2	P	137	SER
3	N	16	PRO
3	N	51	LEU
3	N	54	VAL
3	F	54	VAL
2	L	53	SER
2	P	6	ILE
2	P	53	SER
3	N	252	GLY
3	N	288	PRO
1	O	272	LYS
2	P	138	LEU
1	I	129	ILE
3	N	257	VAL

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	241/276 (87%)	235 (98%)	6 (2%)	47	68
1	C	245/276 (89%)	244 (100%)	1 (0%)	91	94
1	E	239/276 (87%)	232 (97%)	7 (3%)	42	64
1	G	263/276 (95%)	260 (99%)	3 (1%)	73	85
1	I	249/276 (90%)	240 (96%)	9 (4%)	35	60

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	K	269/276 (98%)	266 (99%)	3 (1%)	73	85
1	M	248/276 (90%)	244 (98%)	4 (2%)	62	79
1	O	260/276 (94%)	251 (96%)	9 (4%)	36	60
2	D	259/299 (87%)	254 (98%)	5 (2%)	57	75
2	H	263/299 (88%)	257 (98%)	6 (2%)	50	70
2	L	265/299 (89%)	257 (97%)	8 (3%)	41	63
2	P	261/299 (87%)	252 (97%)	9 (3%)	37	61
3	B	247/296 (83%)	242 (98%)	5 (2%)	55	73
3	F	226/296 (76%)	220 (97%)	6 (3%)	44	66
3	J	246/296 (83%)	236 (96%)	10 (4%)	30	56
3	N	231/296 (78%)	222 (96%)	9 (4%)	32	57
All	All	4012/4588 (87%)	3912 (98%)	100 (2%)	47	68

All (100) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	272	LYS
2	D	20	MET
2	D	60	ASP
2	D	71	ASN
2	D	111	SER
2	D	339	ASP
1	A	106	TYR
1	A	127	SER
1	A	181	ASP
1	A	183	LEU
1	A	211	ASN
1	A	324	CYS
3	B	96	MET
3	B	101	LYS
3	B	117	TYR
3	B	266	TYR
3	B	306	TYR
1	G	106	TYR
1	G	121	ASN
1	G	131	HIS
2	H	46	ASP
2	H	69	ARG

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Mol	Chain	Res	Type
2	H	119	HIS
2	H	174	ARG
2	H	276	LYS
2	H	321	ASN
1	E	82	SER
1	E	106	TYR
1	E	157	PHE
1	E	216	PRO
1	E	294	PHE
1	E	317	ASP
1	E	334	ARG
3	F	95	ASP
3	F	100	ARG
3	F	117	TYR
3	F	284	ASN
3	F	294	SER
3	F	335	CYS
1	K	106	TYR
1	K	107	LYS
1	K	195	CYS
2	L	11	LYS
2	L	16	HIS
2	L	24	ASP
2	L	62	ARG
2	L	92	ARG
2	L	130	ASN
2	L	298	ASP
2	L	338	GLN
1	I	51	TRP
1	I	84	ASN
1	I	86	LEU
1	I	106	TYR
1	I	120	GLU
1	I	131	HIS
1	I	217	SER
1	I	313	SER
1	I	334	ARG
3	J	15	PHE
3	J	47	GLN
3	J	73	ASN
3	J	96	MET
3	J	117	TYR

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Mol	Chain	Res	Type
3	J	161	GLN
3	J	183	HIS
3	J	197	GLN
3	J	287	ASN
3	J	294	SER
1	O	11	PRO
1	O	83	MET
1	O	91	PHE
1	O	106	TYR
1	O	177	MET
1	O	180	SER
1	O	181	ASP
1	O	195	CYS
1	O	324	CYS
2	P	51	HIS
2	P	62	ARG
2	P	91	SER
2	P	93	ASN
2	P	140	HIS
2	P	174	ARG
2	P	190	ASP
2	P	215	ASP
2	P	316	SER
1	M	40	ASN
1	M	106	TYR
1	M	193	GLU
1	M	313	SER
3	N	15	PHE
3	N	31	HIS
3	N	37	PHE
3	N	97	ARG
3	N	117	TYR
3	N	121	HIS
3	N	151	CYS
3	N	192	ASP
3	N	197	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (16) such sidechains are listed below:

Mol	Chain	Res	Type
2	D	242	ASN
2	H	235	ASN

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Mol	Chain	Res	Type
2	H	321	ASN
3	F	49	HIS
3	F	65	GLN
2	L	140	HIS
1	I	80	HIS
1	I	121	ASN
1	I	131	HIS
2	P	33	HIS
2	P	130	ASN
2	P	243	ASN
2	P	280	ASN
2	P	348	ASN
1	M	172	HIS
3	N	49	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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	336/339 (99%)	-0.40	0 100 100	44, 95, 154, 197	0
1	C	328/339 (96%)	-0.11	0 100 100	77, 153, 193, 206	0
1	E	336/339 (99%)	-0.09	1 (0%) 94 90	125, 184, 217, 231	0
1	G	324/339 (95%)	-0.08	4 (1%) 79 70	108, 167, 200, 216	0
1	I	336/339 (99%)	-0.47	1 (0%) 94 90	36, 85, 145, 184	0
1	K	327/339 (96%)	-0.36	0 100 100	35, 91, 134, 152	0
1	M	336/339 (99%)	-0.21	3 (0%) 84 77	54, 144, 180, 197	0
1	O	329/339 (97%)	-0.41	0 100 100	46, 87, 142, 156	0
2	D	339/354 (95%)	-0.32	0 100 100	76, 138, 164, 200	0
2	H	347/354 (98%)	-0.45	0 100 100	64, 104, 138, 166	0
2	L	347/354 (98%)	-0.59	0 100 100	30, 59, 99, 129	0
2	P	346/354 (97%)	-0.54	0 100 100	45, 65, 102, 145	0
3	B	335/352 (95%)	-0.64	0 100 100	40, 62, 78, 102	0
3	F	335/352 (95%)	-0.36	0 100 100	125, 149, 169, 185	0
3	J	335/352 (95%)	-0.66	0 100 100	33, 49, 75, 92	0
3	N	334/352 (94%)	-0.46	0 100 100	54, 87, 142, 226	0
All	All	5370/5536 (97%)	-0.39	9 (0%) 95 93	30, 106, 188, 231	0

All (9) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	M	78	ALA	3.5
1	I	321	ASN	3.1
1	G	338	LEU	2.5
1	G	275	ALA	2.4
1	G	313	SER	2.4

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Mol	Chain	Res	Type	RSRZ
1	M	337	ASP	2.3
1	E	338	LEU	2.1
1	G	322	ALA	2.1
1	M	77	ALA	2.1

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 monosaccharides in this entry.

6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.