



Full wwPDB/EMDatabank EM Map/Model Validation Report ⓘ

Aug 27, 2017 – 10:18 AM EDT

PDB ID : 5N60
EMDB ID: : EMD-3592
Title : Cryo-EM structure of RNA polymerase I in complex with Rrn3 and Core Factor (Orientation I)
Authors : Engel, C.; Gubbey, T.; Neyer, S.; Sainsbury, S.; Oberthuer, C.; Baejen, C.; Bernecky, C.; Cramer, P.
Deposited on : unknown
Resolution : 7.70 Å(reported)

This is a Full wwPDB/EMDatabank EM Map/Model Validation Report
for a publicly released PDB/EMDB entry.

We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<http://wwpdb.org/validation/2016/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

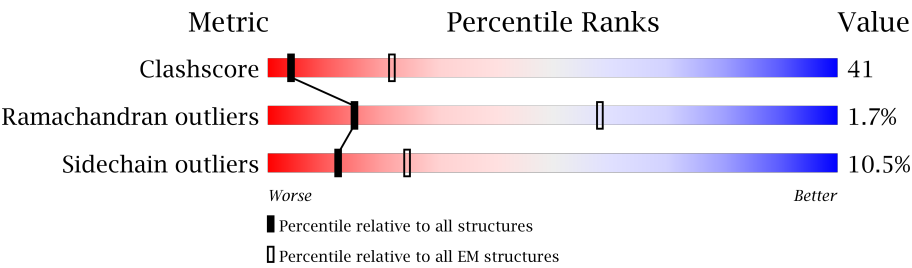
MolProbity : 4.02b-467
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20029824

1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 7.70 Å.

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




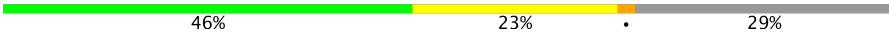


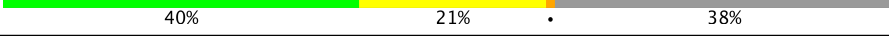
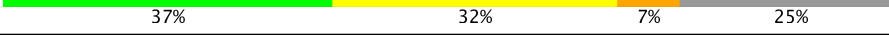
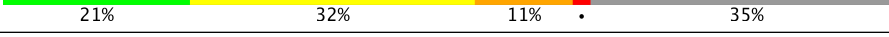
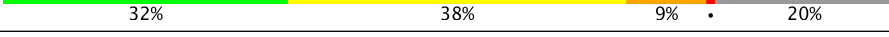

Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	125131	1336
Ramachandran outliers	121729	1120
Sidechain outliers	121581	1026

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

Mol	Chain	Length	Quality of chain
1	A	1664	<div><div>61%23%•12%</div></div>
2	B	1203	<div><div>63%30%••</div></div>
3	C	335	<div><div>67%22%••9%</div></div>
4	D	137	<div><div>31%9%••58%</div></div>
5	E	215	<div><div>78%17%••</div></div>
6	F	155	<div><div>48%14%•35%</div></div>
7	G	326	<div><div>42%16%•41%</div></div>
8	H	146	<div><div>68%21%•10%</div></div>
9	I	125	<div><div>52%26%•21%</div></div>

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Mol	Chain	Length	Quality of chain
10	J	70	
11	K	142	
12	L	70	
13	M	415	
14	N	233	
15	O	627	
16	P	894	
17	Q	514	
18	R	507	

2 Entry composition

There are 19 unique types of molecules in this entry. The entry contains 48004 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called DNA-directed RNA polymerase I subunit RPA190.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1467	Total	C	N	O	S	0	0
			11598	7327	2017	2193	61		

- Molecule 2 is a protein called DNA-directed RNA polymerase I subunit RPA135.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	1172	Total	C	N	O	S	0	0
			9312	5891	1633	1738	50		

- Molecule 3 is a protein called DNA-directed RNA polymerases I and III subunit RPAC1.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	305	Total	C	N	O	S	0	0
			2423	1539	416	460	8		

- Molecule 4 is a protein called DNA-directed RNA polymerase I subunit RPA14.

Mol	Chain	Residues	Atoms				AltConf	Trace
4	D	58	Total	C	N	O	0	0
			459	289	78	92		

- Molecule 5 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC1.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	212	Total	C	N	O	S	0	0
			1735	1102	306	316	11		

- Molecule 6 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC2.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	100	Total	C	N	O	S	0	0
			823	522	144	154	3		

- Molecule 7 is a protein called DNA-directed RNA polymerase I subunit RPA43.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	193	Total	C	N	O	S	0	0
			1526	985	262	274	5		

- Molecule 8 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC3.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	131	Total	C	N	O	S	0	0
			1052	664	176	208	4		

- Molecule 9 is a protein called DNA-directed RNA polymerase I subunit RPA12.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	99	Total	C	N	O	S	0	0
			755	472	125	149	9		

- Molecule 10 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC5.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	J	69	Total	C	N	O	S	0	0
			569	362	101	100	6		

- Molecule 11 is a protein called DNA-directed RNA polymerases I and III subunit RPAC2.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	K	101	Total	C	N	O	S	0	0
			793	496	130	162	5		

- Molecule 12 is a protein called DNA-directed RNA polymerases I, II, and III subunit RPABC4.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	L	44	Total	C	N	O	S	0	0
			352	217	70	61	4		

- Molecule 13 is a protein called DNA-directed RNA polymerase I subunit RPA49.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	M	108	Total	C	N	O		0	0
			856	543	142	171			

- Molecule 14 is a protein called DNA-directed RNA polymerase I subunit RPA34.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	N	145	Total	C	N	O	S	0	0
			1151	735	188	224	4		

- Molecule 15 is a protein called RNA polymerase I-specific transcription initiation factor RRN3.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	O	473	Total	C	N	O	S	0	0
			3907	2533	642	711	21		

- Molecule 16 is a protein called RNA polymerase I-specific transcription initiation factor RRN6.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	P	583	Total	C	N	O	S	0	0
			4729	3010	803	905	11		

- Molecule 17 is a protein called RNA polymerase I-specific transcription initiation factor RRN7.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	Q	410	Total	C	N	O	S	0	0
			3421	2219	579	603	20		

- Molecule 18 is a protein called RNA polymerase I-specific transcription initiation factor RRN11.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	R	303	Total	C	N	O	S	0	0
			2535	1634	456	434	11		

- Molecule 19 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
19	J	1	Total	Zn	0
			1	1	
19	Q	1	Total	Zn	0
			1	1	
19	B	1	Total	Zn	0
			1	1	
19	I	2	Total	Zn	0
			2	2	

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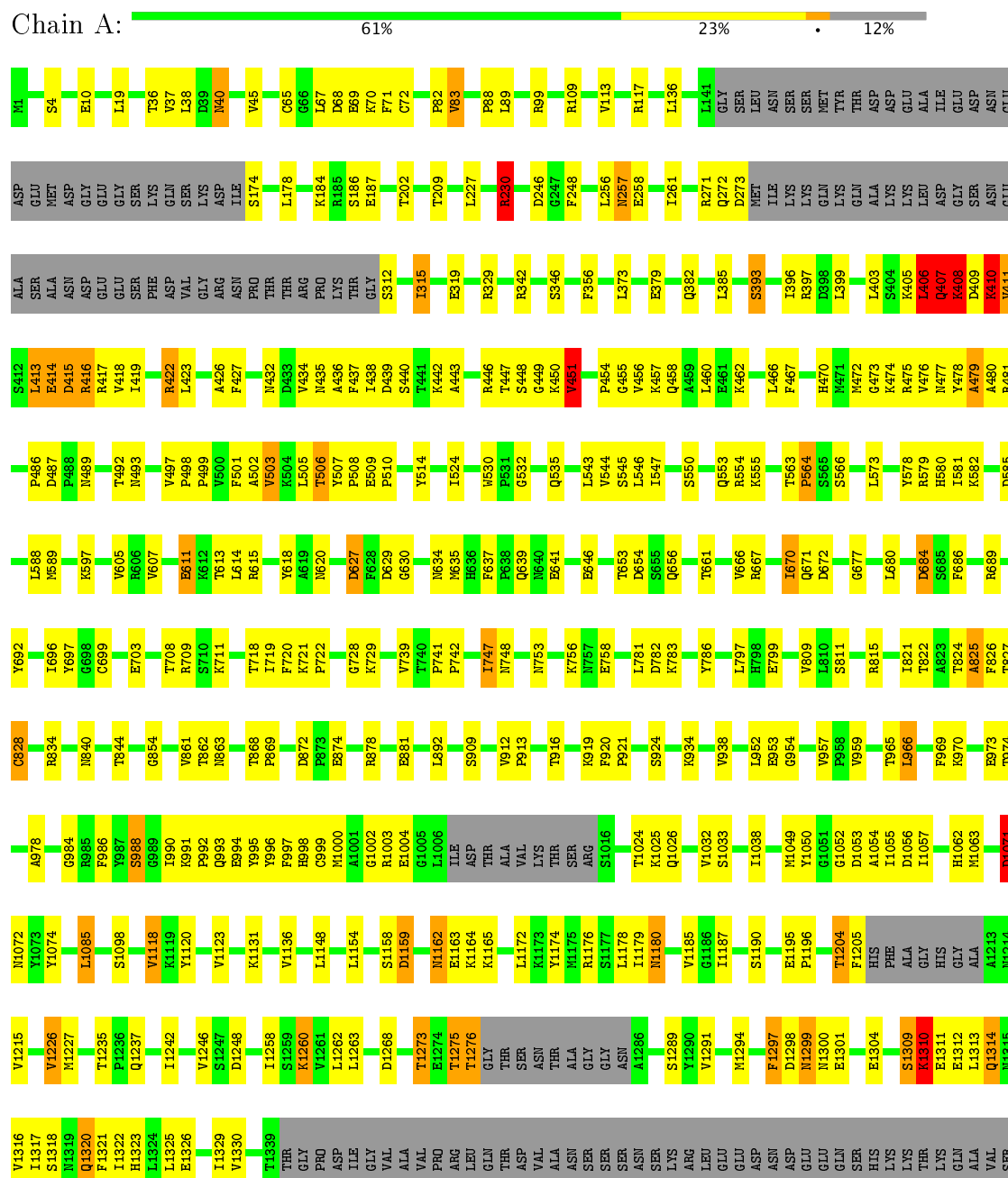
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Mol	Chain	Residues	Atoms		AltConf
19	A	2	Total 2	Zn 2	0
19	L	1	Total 1	Zn 1	0

3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: DNA-directed RNA polymerase I subunit RPA190



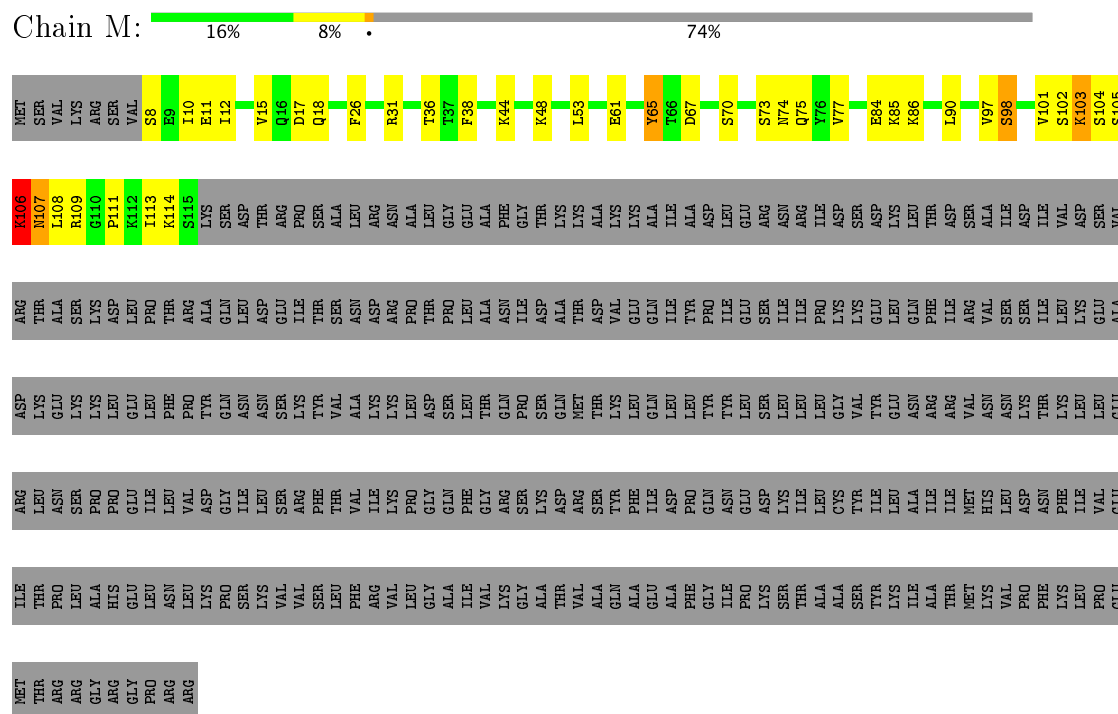
TYR	R1446	
ASP	I1450	
GLU	H1453	
PRO	H1454	
ASP	H1455	
GLU	F1456	
ILE	I1457	
GLU	E1460	
THR	S1460	
MET	M1461	
ARG	F1462	
GLU	D1463	
ALA	D1464	
GLU	M1612	
LYS	M1613	
SER	G1467	
SER	K1468	
ASP	M1469	
GLU	K1473	
GLU	T1474	
GLY	L1474	
ILE	E1475	
ASP	F1621	
SER	L1622	
ASP	L1483	
LYS	L1484	
GLU	M1487	
SER	I1497	
ASP	I1498	
SER	R1499	
GLU	Q1500	
ASP	I1501	
GLU	H1509	
ASP	P1512	
VAL	S1653	
MET	F1654	
ASN	R1517	
GLN	D1531	
ILE	Q1532	
ASN	E1533	
LYS	T1536	
SER	D1537	
ILE	V1538	
VAL	M1544	
GLU	G1554	
ALA	V1555	
ASN	E1556	
ASN	S1571	
MET	R1572	
	F74	
	Y1573	

A1574	
I1575	
L1596	
R1600	
Q1601	
M1602	
M1603	
E1604	
T1605	
S1606	
S1609	
F1610	
M1611	
M1612	
M1613	
S1614	
Y1615	
E1616	
T1617	
T1618	
F1621	
L1622	
E1632	
Q1633	
L1634	
D1635	
I1641	
K1645	
V1649	
G1650	
T1651	
G1652	
S1653	
F1654	
D1655	
V1656	
L1657	
A1658	
K1659	
V1660	
P1661	
M1662	
ALA	
ALA	

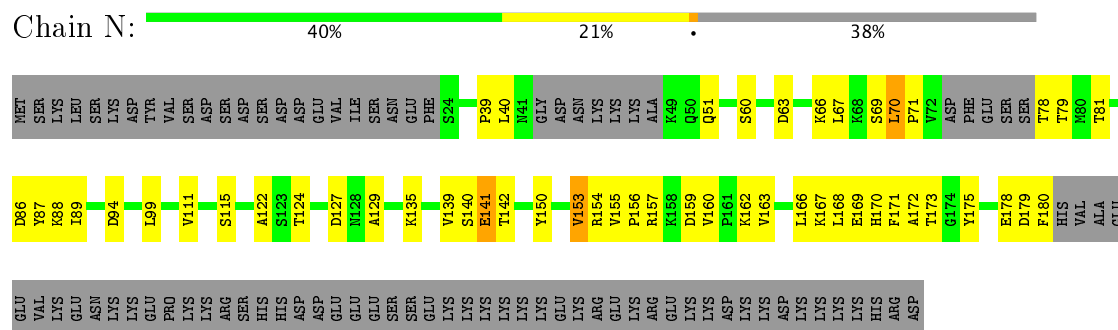
- Molecule 2: DNA-directed RNA polymerase I subunit RPA135

Chain B:  63% 30%

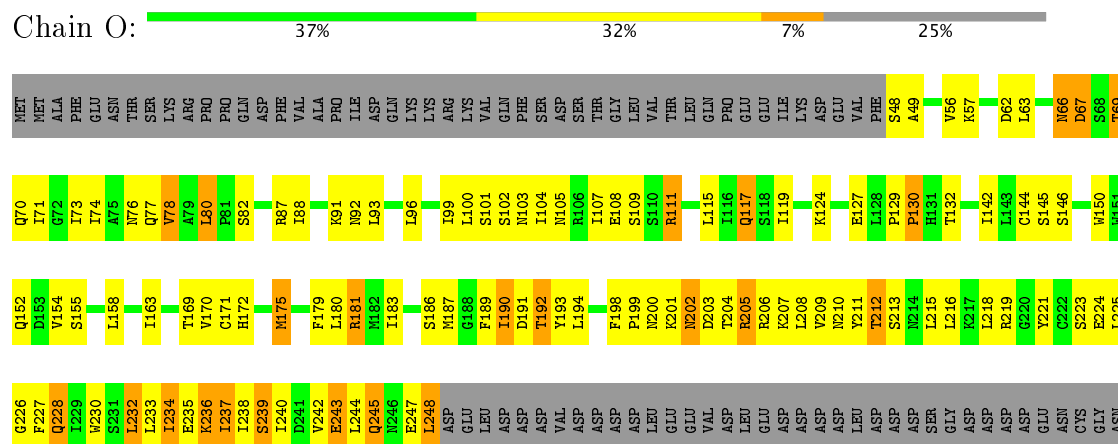
K1064	G949	D738	I622	F493	E401	G291	E186	G76
N1165	T850	M739	D623	Y494	V402	I292	S187	K77
K1166	H975	K740	L624	H405	L403	I293		P78
F1167	I858		E625	F496	L404	G294	I190	L79
G1068	C959	K743		I497	G405		G191	N80
I1069			K634	S498	F407		G192	S81
I1070	I871	K783		H466		S300		
V1071	K372		H646	F500		F301	GLU	ASP
G1072	E988	A774	S647			L302	F194	GLY
E1073	E878	V775	K648	V503	K414	D304	I195	ILE
M1074	D990	I776	N649		E415	R305	V196	GLN
E1075	E983	S777	L650	R518	K416	E307		SER
K1076				K519	I417	L308	E200	
	D994		L656	L520	D418		K201	
	Y995	Y781	P657				I203	
L1079	E998	D782	L658	E626	L421	R311		V102
I1080	G989	M783		F827			K204	S103
G1081	D890	D784					M205	F16
H1082		D785	P666				L206	R17
G1083	N893	A786	P667				L207	T18
T1084	K1002	M787		P630	A426	K315		
E1085	F895	I788	P678	V631	G427	Y317	V208	E20
F1086	G096		D679	H632	V428		Q209	D11
L1087	E897	D789	E680	T833	R429	L320	R210	G112
L1088	L898	E785	T681	P834		Q321	R211	
		R796	Q682	D835	R434	N322	N212	F25
G1089		G799	N683	S837	M439	Q325	R219	L26
D1090	Y901	Y800		P638	F440	V326	P220	N27
K1091			V689		K441	L327	S221	P28
L1092	Y1014	Y800			D442	Q328		P29
L1093	S1015			L542	K443		R225	K30
M1094	L1022	V809	K695			F338		D31
S1095	T910	L811	L696	F545	M446	Q339	S228	
L1096	G912	A812	S698	A546	A340	S341		L38
D1097	D1025	L813	L699	H547	R448		H231	V42
Y1098	I1026	M814	L700	K548		P542		
V1103	Y1027	R815	A701	C549	R482	D943	I236	H45
		M816	M702	R550		Q944	R237	I46
I1120	Y1033	G817	L703	I551	E455	S345	N151	G47
G1121		R818				D946	L152	S48
		D819	P820	Q654	S459			F49
T1125	K1037	E820	D708	Q655		V353	D242	N50
	MET	I821		S663	L485		Q243	
E1136	VAL	K823	Q711	S663		T357		T53
K1140	ASP	H824	S712	Y566	M469	H561	Y252	E54
L1141	K1043		P713	S667	V471		L253	D57
LEU	F1044	M829	M715		S472	F371	R261	
THR	Q1045		M716	S674	Q473	K372	P262	L61
LYS	L1046	P883	Q720	A579	S474	M373		M62
SER	K1047	E835			G475	L374	R265	L63
GLU	L1048	E836			L476	L375	K266	G64
ASP	T1049	M836	K723	L583		F376		V65
GLY	G1050		Q724	C584	S482	K377	A279	
GLU		K839	T725	C585		L378	L280	I68
		L840			V486	R379	C281	
		D841	V731	V595	V487			P177
		E842		V596	A488	T397	S284	Y178
		D843	H735			Q398		Q182
			R736	Y610	I491	H399	E287	H183
			E738		M493	D400		K184
		L848						E185

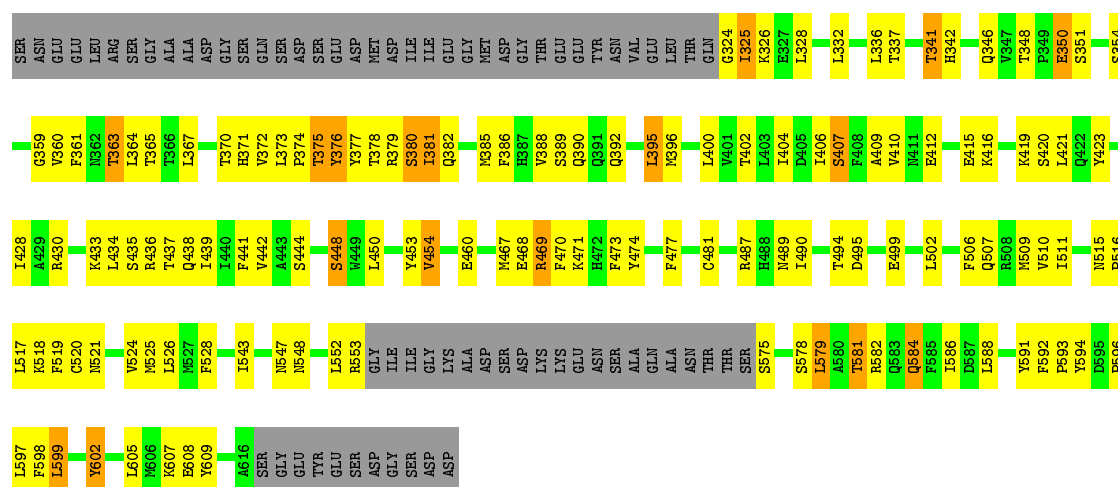


- Molecule 14: DNA-directed RNA polymerase I subunit RPA34



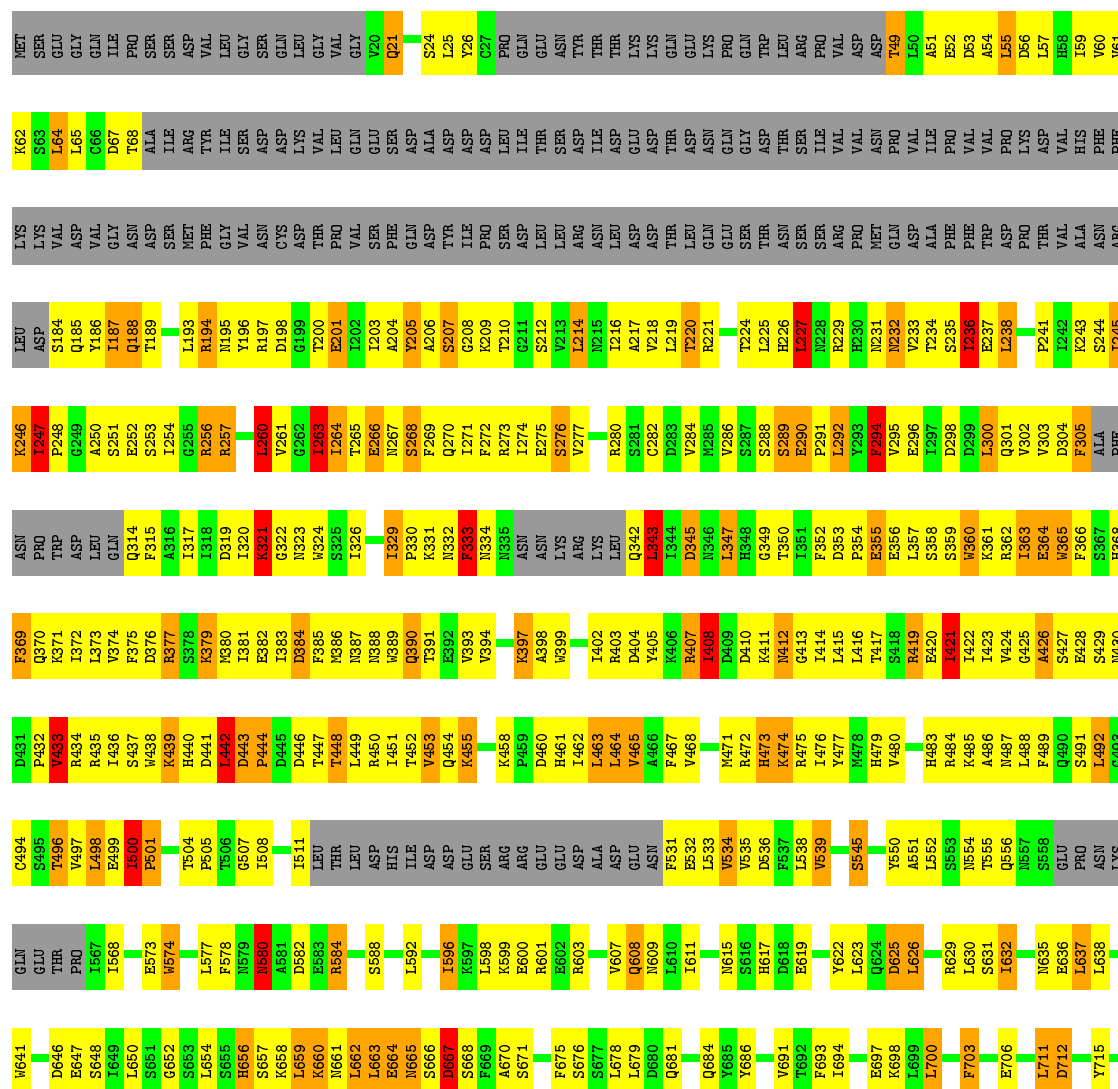
- Molecule 15: RNA polymerase I-specific transcription initiation factor RRN3

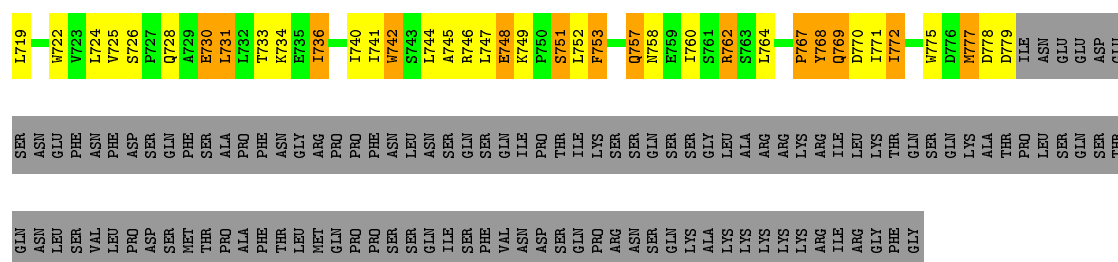




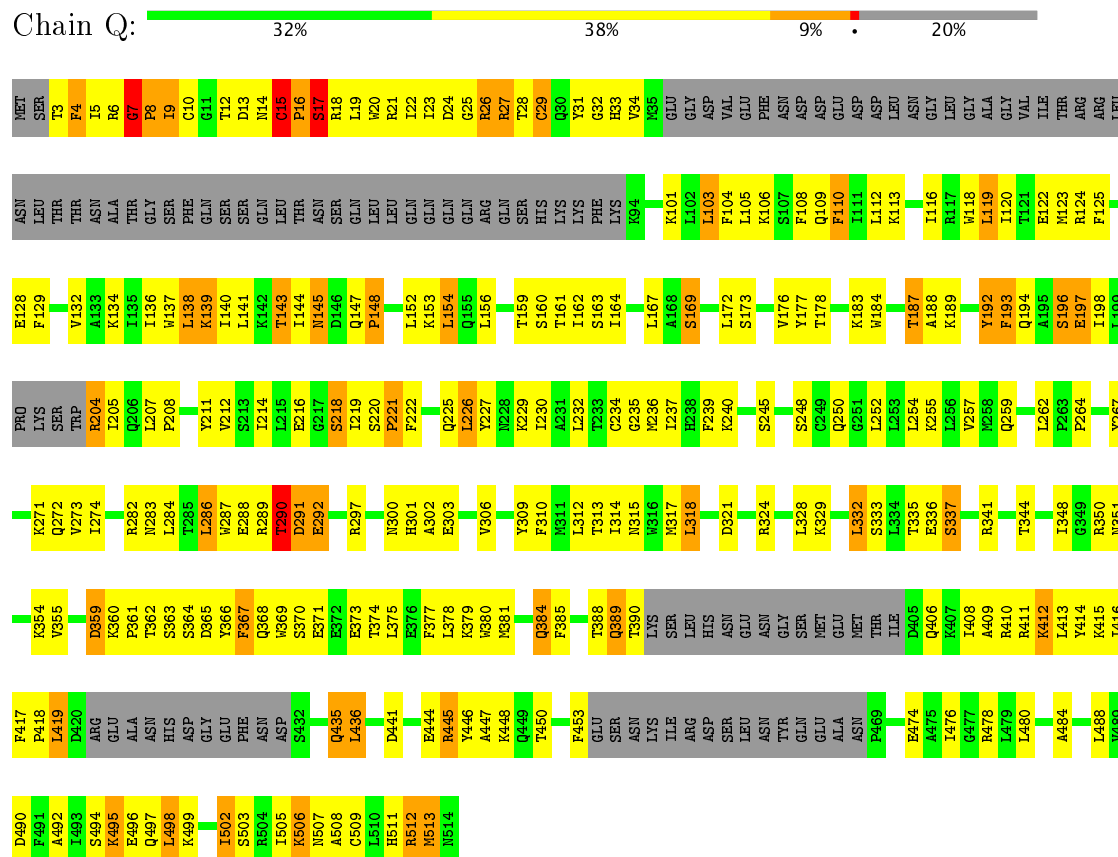
• Molecule 16: RNA polymerase I-specific transcription initiation factor RRN6

Chain P: 21% 32% 11% 35%

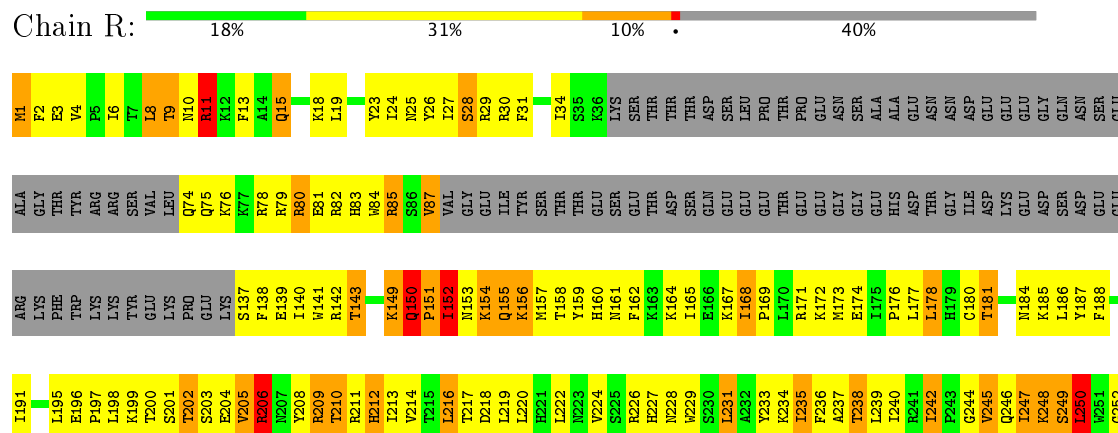




• Molecule 17: RNA polymerase I-specific transcription initiation factor RRN7



• Molecule 18: RNA polymerase I-specific transcription initiation factor RRN11



GLU	SER	I318	I253
ARG	ARG	N319	Q254
ASP	GLN	C320	V255
VAL	PHE	Q321	E256
ALA	VAL	K322	I257
ASN	ASN	S323	L258
VAL	ASP	N324	D259
TYR	ASN	PRO	N260
ASP	LYS	SER	N263
SER	ASN	SER	S264
ILE	ASN	SER	S265
ASN	ASP	ASN	S266
ASN	LEU	ILE	S267
SER	ILE	ILE	L268
SER	GLY	ASP	D269
VAL	SER	LYS	F270
GLU	ASP	PRO	L271
ASN	ARG	PHE	D272
SER	ASP	ASP	Q272
PHE	ILE	THR	N273
GLY	LYS	GLU	1277
ASP	N401	ASN	Y278
VAL	N402	ASP	S279
TYR	I405	LEU	
GLU	K406	LEU	S282
THR		GLN	ARG
ASN	H409	GLU	PHE
ALA	Y410	L345	VAL
GLU	PHE	D347	GLN
LEU	V411	K348	ASN
ASP	R412	I349	ILE
THR	T413	S350	ASN
GLN	F414	E351	TYR
LEU	1417	W352	R291
LEU	C418	V353	S292
ASP	L419	L354	
LEU	D420	T355	P295
SER	K421	P356	F296
PHO	G422	P357	F297
GLU		F358	Q298
ASP	A425	M359	T299
ASN	V426	E360	G300
GLY	P427	D361	S301
LEU	S428	A362	R302
ASP	K436	E363	T303
GLU		V364	H304
MET		W365	T305
HIS	E439	F366	A306
TYR	S440	I367	K307
SER	ARG	Y368	F308
ASP	LEU	A369	A309
GLU	TYR		I310
ASP	GLY	H372	T311
SER	GLU	L373	Y312
SER	ALA	L374	I313
SER	GLN		W314
GLU	ASP	D377	S315
	ILE	THR	S316
	GLN	LEU	L317

4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of particles used	8317	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	40	Depositor
Minimum defocus (nm)	Not provided	Depositor
Maximum defocus (nm)	Not provided	Depositor
Magnification	Not provided	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: ZN

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 >2	RMSZ	# Z >2
1	A	0.49	0/11809	0.72	20/15943 (0.1%)
10	J	0.57	1/578 (0.2%)	0.59	0/775
11	K	0.46	0/804	0.78	3/1083 (0.3%)
12	L	0.42	0/354	0.60	0/468
13	M	0.40	0/872	0.55	0/1170
14	N	0.40	0/1172	0.54	0/1580
15	O	0.35	0/3996	0.54	0/5401
16	P	0.41	0/4822	0.68	4/6525 (0.1%)
17	Q	0.39	0/3502	0.64	2/4727 (0.0%)
18	R	0.36	0/2591	0.65	6/3483 (0.2%)
2	B	0.50	2/9518 (0.0%)	0.78	26/12863 (0.2%)
3	C	0.42	0/2475	0.67	3/3354 (0.1%)
4	D	0.40	0/465	0.59	0/630
5	E	0.40	0/1771	0.66	3/2383 (0.1%)
6	F	0.45	0/838	0.58	0/1129
7	G	0.37	0/1563	0.66	3/2124 (0.1%)
8	H	0.42	0/1070	0.61	0/1449
9	I	0.44	0/765	0.58	0/1030
All	All	0.44	3/48965 (0.0%)	0.68	70/66117 (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	A	0	15
12	L	0	2
13	M	0	3
14	N	0	1
15	O	0	4

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Mol	Chain	#Chirality outliers	#Planarity outliers
16	P	0	26
17	Q	0	8
18	R	0	8
2	B	0	4
3	C	0	1
6	F	0	1
All	All	0	73

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	J	10	CYS	CB-SG	7.64	1.95	1.82
2	B	281	CYS	CB-SG	-6.94	1.70	1.82
2	B	859	CYS	CB-SG	-6.10	1.71	1.82

All (70) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	Q	7	GLY	C-N-CD	-15.26	87.03	120.60
2	B	1023	ARG	NE-CZ-NH2	-13.71	113.44	120.30
2	B	452	ARG	NE-CZ-NH2	-13.22	113.69	120.30
1	A	397	ARG	NE-CZ-NH1	13.09	126.85	120.30
2	B	448	ARG	NE-CZ-NH2	-13.08	113.76	120.30
1	A	329	ARG	NE-CZ-NH2	-12.92	113.84	120.30
1	A	329	ARG	NE-CZ-NH1	12.81	126.71	120.30
2	B	429	ARG	NE-CZ-NH2	-12.72	113.94	120.30
1	A	416	ARG	NE-CZ-NH2	-12.69	113.95	120.30
2	B	261	ARG	NE-CZ-NH1	12.63	126.62	120.30
2	B	448	ARG	NE-CZ-NH1	12.47	126.54	120.30
5	E	167	ARG	NE-CZ-NH2	-12.47	114.06	120.30
5	E	167	ARG	NE-CZ-NH1	12.38	126.49	120.30
11	K	44	ARG	NE-CZ-NH2	-12.17	114.22	120.30
2	B	452	ARG	NE-CZ-NH1	12.15	126.38	120.30
2	B	261	ARG	NE-CZ-NH2	-12.13	114.23	120.30
2	B	634	ARG	NE-CZ-NH2	-12.07	114.26	120.30
2	B	429	ARG	NE-CZ-NH1	12.02	126.31	120.30
11	K	44	ARG	NE-CZ-NH1	11.95	126.28	120.30
7	G	241	ARG	NE-CZ-NH2	-11.80	114.40	120.30
7	G	241	ARG	NE-CZ-NH1	11.75	126.17	120.30
1	A	397	ARG	NE-CZ-NH2	-11.65	114.48	120.30
1	A	422	ARG	NE-CZ-NH2	-11.51	114.55	120.30
3	C	142	ARG	NE-CZ-NH2	-11.47	114.56	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	142	ARG	NE-CZ-NH1	11.36	125.98	120.30
1	A	422	ARG	NE-CZ-NH1	11.28	125.94	120.30
1	A	416	ARG	NE-CZ-NH1	11.22	125.91	120.30
1	A	342	ARG	NE-CZ-NH2	-11.21	114.69	120.30
2	B	634	ARG	NE-CZ-NH1	10.99	125.80	120.30
2	B	550	ARG	NE-CZ-NH2	-10.86	114.87	120.30
18	R	150	GLN	C-N-CD	-10.85	96.73	120.60
1	A	230	ARG	NE-CZ-NH1	10.72	125.66	120.30
2	B	648	ARG	NE-CZ-NH2	-10.66	114.97	120.30
1	A	230	ARG	NE-CZ-NH2	-10.61	115.00	120.30
2	B	550	ARG	NE-CZ-NH1	10.07	125.34	120.30
2	B	1023	ARG	NE-CZ-NH1	9.44	125.02	120.30
1	A	342	ARG	NE-CZ-NH1	9.14	124.87	120.30
2	B	648	ARG	NE-CZ-NH1	9.08	124.84	120.30
18	R	250	LEU	CA-CB-CG	8.90	135.78	115.30
1	A	397	ARG	CD-NE-CZ	6.98	133.37	123.60
2	B	261	ARG	CD-NE-CZ	6.85	133.20	123.60
2	B	452	ARG	CD-NE-CZ	6.58	132.82	123.60
1	A	329	ARG	CD-NE-CZ	6.43	132.60	123.60
2	B	405	GLY	N-CA-C	-6.37	97.18	113.10
18	R	205	VAL	N-CA-C	6.36	128.18	111.00
2	B	448	ARG	CD-NE-CZ	6.31	132.43	123.60
11	K	44	ARG	CD-NE-CZ	6.25	132.35	123.60
2	B	634	ARG	CD-NE-CZ	6.24	132.34	123.60
1	A	422	ARG	CD-NE-CZ	6.22	132.31	123.60
17	Q	119	LEU	CA-CB-CG	6.18	129.52	115.30
2	B	429	ARG	CD-NE-CZ	6.17	132.23	123.60
1	A	416	ARG	CD-NE-CZ	6.16	132.23	123.60
16	P	463	LEU	CA-CB-CG	6.15	129.44	115.30
16	P	227	LEU	CA-CB-CG	6.11	129.35	115.30
3	C	142	ARG	CD-NE-CZ	6.00	132.00	123.60
7	G	241	ARG	CD-NE-CZ	5.96	131.94	123.60
5	E	167	ARG	CD-NE-CZ	5.96	131.94	123.60
1	A	356	PHE	O-C-N	-5.91	113.25	122.70
18	R	206	ARG	N-CA-C	5.74	126.49	111.00
1	A	342	ARG	CD-NE-CZ	5.71	131.59	123.60
2	B	1103	VAL	CB-CA-C	-5.63	100.70	111.40
18	R	245	VAL	N-CA-C	5.47	125.77	111.00
2	B	550	ARG	CD-NE-CZ	5.38	131.13	123.60
2	B	648	ARG	CD-NE-CZ	5.36	131.10	123.60
2	B	1023	ARG	CD-NE-CZ	5.27	130.98	123.60
1	A	230	ARG	CD-NE-CZ	5.22	130.91	123.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	P	343	LEU	CA-CB-CG	5.20	127.26	115.30
18	R	178	LEU	CA-CB-CG	5.09	127.00	115.30
16	P	663	LEU	CA-CB-CG	5.06	126.94	115.30
1	A	1071	ASP	N-CA-C	-5.01	97.47	111.00

There are no chirality outliers.

All (73) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1180	ASN	Peptide
1	A	1260	LYS	Peptide
1	A	1297	PHE	Peptide
1	A	1309	SER	Peptide
1	A	1310	LYS	Peptide
1	A	1649	VAL	Peptide
1	A	405	LYS	Peptide
1	A	406	LEU	Peptide
1	A	407	GLN	Peptide
1	A	410	LYS	Peptide
1	A	411	VAL	Peptide
1	A	506	THR	Peptide
1	A	781	LEU	Peptide
1	A	825	ALA	Peptide
1	A	828	CYS	Peptide
2	B	1049	THR	Peptide
2	B	1068	GLY	Peptide
2	B	404	LEU	Peptide
2	B	550	ARG	Peptide
3	C	294	VAL	Peptide
6	F	73	ALA	Peptide
12	L	59	ALA	Peptide
12	L	60	ARG	Peptide
13	M	103	LYS	Peptide
13	M	106	LYS	Peptide
13	M	107	ASN	Peptide
14	N	141	GLU	Peptide
15	O	236	LYS	Peptide
15	O	243	GLU	Peptide
15	O	375	THR	Peptide
15	O	380	SER	Peptide
16	P	216	ILE	Peptide
16	P	236	ILE	Peptide

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Mol	Chain	Res	Type	Group
16	P	238	LEU	Peptide
16	P	247	ILE	Peptide
16	P	256	ARG	Peptide
16	P	260	LEU	Peptide
16	P	263	ILE	Peptide
16	P	270	GLN	Peptide
16	P	289	SER	Peptide
16	P	294	PHE	Peptide
16	P	295	VAL	Peptide
16	P	333	PHE	Peptide
16	P	365	TRP	Peptide
16	P	393	VAL	Peptide
16	P	408	ILE	Peptide
16	P	433	VAL	Peptide
16	P	442	LEU	Peptide
16	P	485	LYS	Peptide
16	P	500	ILE	Peptide
16	P	51	ALA	Peptide
16	P	52	GLU	Peptide
16	P	580	ASN	Peptide
16	P	661	ASN	Peptide
16	P	667	ASP	Peptide
16	P	767	PRO	Peptide
16	P	769	GLN	Peptide
17	Q	148	PRO	Peptide
17	Q	15	CYS	Peptide
17	Q	17	SER	Peptide
17	Q	221	PRO	Peptide
17	Q	25	GLY	Peptide
17	Q	29	CYS	Peptide
17	Q	290	THR	Peptide
17	Q	4	PHE	Peptide
18	R	154	LYS	Peptide
18	R	263	ASN	Peptide
18	R	265	SER	Peptide
18	R	303	THR	Peptide
18	R	304	HIS	Peptide
18	R	422	GLY	Peptide
18	R	425	ALA	Peptide
18	R	9	THR	Peptide

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	11598	0	11666	1134	0
2	B	9312	0	9200	973	0
3	C	2423	0	2412	140	0
4	D	459	0	462	7	0
5	E	1735	0	1764	30	0
6	F	823	0	839	91	0
7	G	1526	0	1534	148	0
8	H	1052	0	1021	54	0
9	I	755	0	728	103	0
10	J	569	0	584	53	0
11	K	793	0	790	55	0
12	L	352	0	371	59	0
13	M	856	0	852	58	0
14	N	1151	0	1168	168	0
15	O	3907	0	3902	406	0
16	P	4729	0	4675	620	0
17	Q	3421	0	3463	519	0
18	R	2535	0	2600	729	0
19	A	2	0	0	1	0
19	B	1	0	0	0	0
19	I	2	0	0	0	0
19	J	1	0	0	0	0
19	L	1	0	0	0	0
19	Q	1	0	0	0	0
All	All	48004	0	48031	3895	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 41.

All (3895) 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)
17:Q:20:TRP:CZ3	17:Q:22:ILE:CG2	1.76	1.69
17:Q:381:MET:SD	18:R:212:HIS:HB3	1.26	1.68
3:C:272:LYS:HA	14:N:175:TYR:CE1	1.16	1.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:995:TYR:CD2	2:B:708:ASP:HA	1.29	1.62
1:A:545:SER:HB2	17:Q:34:VAL:CG2	1.13	1.61
15:O:248:LEU:HD12	15:O:598:PHE:CD2	1.32	1.61
17:Q:12:THR:CG2	17:Q:33:HIS:HE1	1.10	1.60
1:A:990:ILE:CB	1:A:994:GLU:HB2	1.19	1.59
17:Q:12:THR:HG21	17:Q:33:HIS:CE1	1.12	1.59
16:P:488:LEU:HD23	18:R:138:PHE:CD2	1.27	1.59
17:Q:389:GLN:HB2	18:R:209:ARG:CZ	1.15	1.58
17:Q:416:ILE:CG2	18:R:265:SER:HB2	1.30	1.56
6:F:72:LYS:HB3	6:F:142:SER:CA	1.30	1.56
1:A:1484:LEU:HD13	2:B:305:ARG:CZ	1.24	1.55
1:A:547:ILE:CD1	17:Q:26:ARG:NH1	1.68	1.55
1:A:1322:ILE:HG22	1:A:1454:HIS:CD2	1.38	1.54
7:G:143:SER:CB	15:O:104:ILE:HG22	1.33	1.54
15:O:200:ASN:CB	17:Q:14:ASN:HB2	1.07	1.53
18:R:236:PHE:CZ	18:R:253:ILE:HD11	1.02	1.53
15:O:200:ASN:HB2	17:Q:14:ASN:CB	1.34	1.53
3:C:272:LYS:CA	14:N:175:TYR:CE1	1.92	1.53
16:P:436:ILE:HB	18:R:143:THR:CG2	1.06	1.52
17:Q:20:TRP:HZ3	17:Q:22:ILE:CG2	1.10	1.52
7:G:143:SER:HB2	15:O:104:ILE:CG2	1.36	1.51
15:O:248:LEU:CD1	15:O:598:PHE:CE2	1.93	1.51
13:M:102:SER:HB3	13:M:105:SER:CB	1.28	1.51
2:B:152:LEU:HB3	2:B:443:LYS:CE	1.34	1.51
15:O:200:ASN:CG	17:Q:14:ASN:HB2	1.30	1.51
17:Q:375:LEU:HD21	18:R:231:LEU:CD1	1.40	1.50
1:A:990:ILE:HB	1:A:994:GLU:CB	1.06	1.50
2:B:152:LEU:CB	2:B:443:LYS:HE3	1.37	1.50
16:P:436:ILE:CB	18:R:143:THR:HG23	1.04	1.50
16:P:187:ILE:HG23	18:R:195:LEU:CD2	1.42	1.50
1:A:1575:ILE:CG1	9:I:122:ARG:NH1	1.68	1.49
2:B:207:ILE:HG13	2:B:503:VAL:CG2	1.41	1.49
15:O:248:LEU:CD1	15:O:598:PHE:CD2	1.92	1.49
15:O:248:LEU:HD12	15:O:598:PHE:CE2	0.97	1.49
16:P:443:ASP:CB	18:R:3:GLU:HB2	1.40	1.48
16:P:443:ASP:HB3	18:R:3:GLU:CB	1.40	1.48
16:P:488:LEU:HD23	18:R:138:PHE:CG	1.49	1.48
17:Q:389:GLN:CB	18:R:209:ARG:NH1	1.73	1.47
16:P:352:PHE:CE1	18:R:157:MET:HG2	1.49	1.47
2:B:143:TRP:HB2	2:B:446:MET:CE	1.43	1.47
3:C:253:PRO:HD2	14:N:180:PHE:CB	1.31	1.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:527:PHE:CZ	2:B:666:PRO:HA	1.49	1.47
16:P:496:THR:HG21	18:R:2:PHE:CZ	1.50	1.46
2:B:679:GLN:CG	14:N:157:ARG:N	1.75	1.46
1:A:545:SER:CB	17:Q:34:VAL:HG21	1.01	1.46
1:A:547:ILE:HD11	17:Q:26:ARG:NH1	1.18	1.46
2:B:527:PHE:CD1	2:B:666:PRO:HG3	1.47	1.46
2:B:1089:GLN:CG	2:B:1093:LEU:HD22	1.46	1.46
6:F:72:LYS:CD	6:F:142:SER:HB3	1.43	1.45
1:A:1049:MET:HG2	1:A:1052:GLY:C	1.30	1.45
2:B:68:ILE:HG21	2:B:71:LYS:NZ	1.32	1.45
1:A:756:LYS:CD	9:I:85:LYS:NZ	1.79	1.44
16:P:187:ILE:CG2	18:R:195:LEU:CD2	1.93	1.44
17:Q:374:THR:CG2	18:R:219:LEU:CD2	1.93	1.44
18:R:236:PHE:CZ	18:R:253:ILE:CD1	1.95	1.44
1:A:878:ARG:HB3	9:I:67:VAL:CG1	1.48	1.44
7:G:141:SER:HB3	15:O:142:ILE:CD1	1.46	1.44
3:C:58:ASN:HA	3:C:296:ASN:ND2	1.18	1.43
1:A:597:LYS:HB2	2:B:1082:HIS:NE2	1.23	1.43
2:B:848:ILE:CB	12:L:60:ARG:HD2	1.46	1.43
18:R:236:PHE:CE1	18:R:253:ILE:HD11	1.52	1.43
1:A:1297:PHE:CE2	1:A:1301:GLU:OE1	1.70	1.42
17:Q:194:GLN:HG3	18:R:209:ARG:NH1	1.27	1.42
6:F:72:LYS:CB	6:F:142:SER:HA	1.50	1.41
14:N:87:TYR:CA	14:N:141:GLU:HA	1.48	1.41
16:P:399:TRP:NE1	18:R:87:VAL:C	1.74	1.41
17:Q:381:MET:HE1	18:R:212:HIS:CG	1.54	1.41
3:C:272:LYS:HA	14:N:175:TYR:CZ	1.51	1.40
17:Q:374:THR:CG2	18:R:219:LEU:CD1	1.97	1.40
2:B:207:ILE:CG1	2:B:503:VAL:HG21	1.49	1.40
17:Q:374:THR:HG21	18:R:219:LEU:CD2	1.47	1.39
3:C:253:PRO:CD	14:N:180:PHE:HB3	1.09	1.39
15:O:240:ILE:HG22	15:O:380:SER:CB	1.48	1.39
16:P:187:ILE:CG2	18:R:195:LEU:HD23	1.52	1.39
1:A:629:ASP:C	2:B:926:VAL:HG21	1.42	1.39
1:A:597:LYS:HB2	2:B:1082:HIS:CD2	1.58	1.38
17:Q:414:TYR:CE1	18:R:240:ILE:HG23	1.56	1.38
1:A:1326:GLU:CD	1:A:1455:ARG:N	1.76	1.38
2:B:679:GLN:CG	14:N:156:PRO:C	1.92	1.38
17:Q:385:PHE:CD2	18:R:212:HIS:CD2	2.12	1.38
6:F:74:ILE:O	7:G:95:LEU:CD1	1.69	1.38
17:Q:381:MET:SD	18:R:212:HIS:CB	2.09	1.38

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:143:TRP:CE3	2:B:446:MET:HG3	1.57	1.37
1:A:999:CYS:HA	2:B:712:SER:CB	1.54	1.37
7:G:159:LYS:H	15:O:105:ASN:ND2	0.91	1.37
18:R:236:PHE:CE1	18:R:253:ILE:CD1	2.06	1.36
7:G:159:LYS:N	15:O:105:ASN:ND2	1.70	1.36
1:A:547:ILE:HD12	17:Q:26:ARG:CZ	1.53	1.36
2:B:322:ASN:ND2	13:M:108:LEU:O	1.57	1.36
18:R:229:TRP:CZ2	18:R:259:ASP:HB3	1.61	1.36
1:A:1322:ILE:HD12	1:A:1457:ILE:CD1	1.53	1.35
1:A:1482:LYS:CE	2:B:304:ASP:OD1	1.74	1.35
7:G:141:SER:CB	15:O:142:ILE:HD12	1.54	1.35
17:Q:351:ASN:HB3	17:Q:369:TRP:CH2	1.61	1.35
1:A:545:SER:CB	17:Q:34:VAL:CG2	1.77	1.35
15:O:234:ILE:CG2	15:O:237:ILE:HG12	1.41	1.35
1:A:503:VAL:HA	1:A:580:HIS:CD2	1.61	1.35
1:A:1322:ILE:CG2	1:A:1454:HIS:CG	2.08	1.34
2:B:848:ILE:HB	12:L:60:ARG:CD	1.56	1.34
1:A:1322:ILE:HG22	1:A:1454:HIS:CG	1.62	1.34
1:A:1297:PHE:CD2	1:A:1301:GLU:OE1	1.81	1.34
2:B:68:ILE:CG2	2:B:71:LYS:NZ	1.91	1.34
16:P:488:LEU:CD2	18:R:138:PHE:CD2	2.11	1.34
17:Q:418:PRO:CD	18:R:233:TYR:OH	1.73	1.34
1:A:535:GLN:NE2	17:Q:26:ARG:HD3	1.43	1.34
2:B:143:TRP:CG	2:B:446:MET:SD	2.20	1.33
1:A:1326:GLU:OE2	1:A:1455:ARG:N	1.60	1.33
2:B:743:ARG:NH2	10:J:60:PHE:CZ	1.96	1.33
16:P:198:ASP:HB2	16:P:205:TYR:O	1.27	1.33
7:G:24:VAL:O	7:G:128:GLN:HB2	1.17	1.33
3:C:272:LYS:HA	14:N:175:TYR:CD1	1.63	1.33
2:B:796:ARG:NE	10:J:8:PHE:O	1.58	1.33
16:P:438:TRP:NE1	18:R:297:PHE:HZ	0.85	1.33
16:P:488:LEU:CD2	18:R:138:PHE:CG	2.07	1.33
1:A:1299:ASN:OD1	1:A:1467:GLY:CA	1.71	1.32
18:R:229:TRP:CH2	18:R:259:ASP:HB3	1.63	1.32
16:P:354:PRO:HG3	18:R:31:PHE:CG	1.64	1.32
17:Q:374:THR:HG22	18:R:219:LEU:CD1	1.57	1.31
1:A:547:ILE:CD1	17:Q:26:ARG:CZ	2.08	1.31
1:A:990:ILE:HA	1:A:994:GLU:OE1	1.30	1.31
2:B:19:LEU:CD1	10:J:26:GLN:OE1	1.78	1.31
17:Q:375:LEU:CD2	18:R:231:LEU:HD11	1.57	1.31
13:M:102:SER:CB	13:M:105:SER:HB3	1.13	1.31

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:389:GLN:HB2	18:R:209:ARG:NH1	1.02	1.31
15:O:200:ASN:CB	17:Q:14:ASN:CB	1.94	1.31
7:G:159:LYS:CB	15:O:105:ASN:HD22	1.43	1.31
18:R:229:TRP:CH2	18:R:259:ASP:CB	2.13	1.30
2:B:143:TRP:CD2	2:B:446:MET:HG3	1.65	1.30
16:P:198:ASP:CB	16:P:205:TYR:O	1.79	1.30
17:Q:26:ARG:HB3	17:Q:34:VAL:CG1	1.61	1.30
1:A:1276:THR:OG1	9:I:45:LEU:CD1	1.79	1.30
7:G:141:SER:CB	15:O:142:ILE:CD1	2.06	1.30
18:R:177:LEU:O	18:R:185:LYS:HE2	1.13	1.30
18:R:15:GLN:OE1	18:R:184:ASN:ND2	1.63	1.29
18:R:199:LYS:HE2	18:R:204:GLU:CA	1.61	1.29
1:A:990:ILE:HG13	1:A:995:TYR:N	1.47	1.29
18:R:301:SER:O	18:R:358:PHE:CE1	1.85	1.29
2:B:549:CYS:SG	2:B:649:MET:HG2	1.70	1.29
1:A:995:TYR:OH	2:B:707:SER:CB	1.79	1.29
2:B:682:GLN:CA	14:N:154:ARG:HH21	1.46	1.29
2:B:679:GLN:HG2	14:N:157:ARG:N	0.96	1.29
18:R:236:PHE:HE1	18:R:253:ILE:CG1	1.44	1.29
18:R:303:THR:CG2	18:R:360:GLU:OE1	1.81	1.29
18:R:279:SER:HA	18:R:301:SER:OG	1.28	1.29
2:B:527:PHE:CZ	2:B:666:PRO:CA	2.13	1.29
17:Q:381:MET:CE	18:R:212:HIS:CG	2.15	1.28
2:B:1002:LYS:HD3	14:N:166:LEU:O	1.17	1.28
1:A:756:LYS:HD3	9:I:85:LYS:NZ	0.98	1.28
17:Q:375:LEU:CD2	18:R:231:LEU:HD21	1.64	1.28
17:Q:389:GLN:CG	18:R:209:ARG:HH12	1.47	1.28
1:A:1276:THR:OG1	9:I:45:LEU:HD12	1.22	1.28
2:B:890:ASP:O	12:L:54:ARG:HD3	1.24	1.27
2:B:1003:ALA:O	14:N:170:HIS:N	1.66	1.27
1:A:1180:ASN:OD1	6:F:87:LYS:HD3	1.33	1.27
3:C:253:PRO:HD2	14:N:180:PHE:CG	1.68	1.27
2:B:75:ASP:HB3	2:B:440:PHE:CE2	1.67	1.27
2:B:207:ILE:CG1	2:B:503:VAL:CG2	2.07	1.27
17:Q:416:ILE:CG2	18:R:265:SER:CB	2.10	1.27
17:Q:188:ALA:HB2	18:R:208:TYR:OH	1.18	1.27
16:P:399:TRP:HE1	18:R:87:VAL:C	1.35	1.27
13:M:102:SER:O	13:M:106:LYS:N	1.66	1.26
1:A:435:ASN:HB3	1:A:442:LYS:CB	1.64	1.26
2:B:143:TRP:CB	2:B:446:MET:CE	2.13	1.26
1:A:547:ILE:HD12	17:Q:26:ARG:NH2	1.45	1.26

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:527:PHE:CE1	2:B:666:PRO:HG3	1.69	1.26
2:B:68:ILE:CG2	2:B:71:LYS:HZ3	1.47	1.26
2:B:1072:GLY:C	2:B:1075:GLU:HG2	1.55	1.26
2:B:683:ASN:N	14:N:154:ARG:NH2	1.84	1.26
18:R:199:LYS:HE2	18:R:204:GLU:CB	1.64	1.26
1:A:1322:ILE:CG2	1:A:1454:HIS:CD2	2.19	1.26
15:O:376:TYR:CE2	15:O:377:TYR:CE2	2.24	1.26
17:Q:194:GLN:CG	18:R:209:ARG:HH11	1.48	1.25
18:R:301:SER:C	18:R:358:PHE:CE1	2.09	1.25
14:N:86:ASP:O	14:N:141:GLU:HG3	1.37	1.25
1:A:878:ARG:CG	9:I:66:VAL:HG23	1.65	1.25
15:O:247:GLU:OE1	15:O:325:ILE:CG1	1.85	1.25
1:A:1326:GLU:OE2	1:A:1454:HIS:HB3	1.26	1.25
7:G:159:LYS:HD2	15:O:103:ASN:OD1	1.09	1.24
18:R:199:LYS:CE	18:R:204:GLU:HB3	1.65	1.24
2:B:143:TRP:CB	2:B:446:MET:HE3	1.68	1.24
2:B:682:GLN:C	14:N:154:ARG:NH2	1.91	1.24
2:B:1072:GLY:O	2:B:1075:GLU:HG2	1.26	1.24
2:B:682:GLN:C	14:N:154:ARG:HH21	1.37	1.24
1:A:1330:VAL:HG21	1:A:1455:ARG:CZ	1.66	1.24
14:N:86:ASP:C	14:N:141:GLU:HG3	1.58	1.24
16:P:21:GLN:HB2	18:R:139:GLU:OE1	1.30	1.24
17:Q:20:TRP:CZ3	17:Q:22:ILE:HG23	1.48	1.24
17:Q:351:ASN:CB	17:Q:369:TRP:CH2	2.20	1.24
2:B:1089:GLN:HG3	2:B:1093:LEU:CG	1.65	1.23
17:Q:12:THR:CG2	17:Q:33:HIS:CE1	1.94	1.23
16:P:357:LEU:CD2	18:R:23:TYR:HE1	1.51	1.23
1:A:403:LEU:HD11	1:A:419:ILE:CG2	1.68	1.23
1:A:1484:LEU:CD1	2:B:305:ARG:CZ	2.17	1.23
17:Q:418:PRO:HD2	18:R:233:TYR:OH	1.07	1.23
2:B:19:LEU:HD13	10:J:26:GLN:OE1	1.30	1.23
15:O:200:ASN:CG	17:Q:14:ASN:CB	2.05	1.22
17:Q:374:THR:CG2	18:R:219:LEU:HD13	1.65	1.22
18:R:271:LEU:CD2	18:R:308:PHE:HB2	1.67	1.22
7:G:144:HIS:CG	15:O:146:SER:OG	1.92	1.22
1:A:478:TYR:HA	2:B:1048:SER:O	1.38	1.22
17:Q:389:GLN:CB	18:R:209:ARG:CZ	2.05	1.22
16:P:21:GLN:HB2	18:R:139:GLU:CD	1.60	1.22
1:A:1326:GLU:CD	1:A:1454:HIS:HB3	1.57	1.22
14:N:87:TYR:HA	14:N:141:GLU:CA	1.69	1.22
1:A:1329:ILE:HG21	1:A:1456:PHE:CE2	1.76	1.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:496:THR:OG1	18:R:1:MET:CE	1.87	1.21
18:R:301:SER:C	18:R:358:PHE:HE1	1.39	1.21
16:P:496:THR:CG2	18:R:2:PHE:HZ	1.53	1.21
2:B:1072:GLY:N	2:B:1075:GLU:CG	2.04	1.21
6:F:72:LYS:HD2	6:F:142:SER:CB	1.69	1.21
1:A:1575:ILE:HG13	9:I:122:ARG:CZ	1.70	1.21
1:A:1650:GLY:O	1:A:1652:GLY:N	1.73	1.21
1:A:991:LYS:CB	1:A:993:GLN:HB2	1.71	1.21
2:B:182:GLN:NE2	10:J:69:ARG:HB3	1.55	1.21
1:A:1003:ARG:NH2	2:B:530:PRO:O	1.74	1.20
1:A:1322:ILE:HG21	1:A:1454:HIS:ND1	1.54	1.20
1:A:474:LYS:NZ	2:B:1096:SER:OG	1.74	1.20
3:C:274:THR:CA	14:N:172:ALA:HB2	1.72	1.20
16:P:391:THR:CG2	18:R:149:LYS:HG2	1.71	1.20
1:A:474:LYS:NZ	2:B:1092:LEU:HD23	1.55	1.20
3:C:296:ASN:O	3:C:298:PHE:CD1	1.94	1.20
18:R:301:SER:O	18:R:358:PHE:HE1	1.19	1.20
1:A:458:GLN:O	1:A:462:LYS:HB2	1.36	1.20
14:N:86:ASP:O	14:N:141:GLU:CG	1.88	1.20
1:A:995:TYR:CD2	2:B:708:ASP:CA	2.23	1.20
1:A:545:SER:CA	17:Q:34:VAL:HG21	1.70	1.20
3:C:253:PRO:O	14:N:179:ASP:O	1.58	1.20
18:R:199:LYS:HE3	18:R:203:SER:O	1.41	1.20
16:P:488:LEU:HD22	18:R:138:PHE:CD1	1.75	1.19
1:A:1326:GLU:OE2	1:A:1454:HIS:CB	1.90	1.19
17:Q:416:ILE:HG23	18:R:265:SER:CB	1.71	1.19
2:B:943:ILE:HD12	10:J:44:TYR:CZ	1.78	1.19
13:M:61:GLU:OE2	13:M:106:LYS:CD	1.88	1.19
1:A:991:LYS:N	1:A:994:GLU:HG3	1.54	1.19
2:B:566:TYR:HD2	13:M:73:SER:OG	1.23	1.19
3:C:58:ASN:CA	3:C:296:ASN:ND2	2.06	1.18
7:G:241:ARG:HH11	15:O:189:PHE:CB	1.55	1.18
17:Q:385:PHE:HZ	18:R:208:TYR:C	1.35	1.18
7:G:24:VAL:O	7:G:128:GLN:CB	1.91	1.18
1:A:438:ILE:O	1:A:457:LYS:HD2	1.42	1.18
1:A:1322:ILE:HB	1:A:1454:HIS:CE1	1.79	1.18
2:B:894:LYS:HD3	12:L:47:ARG:CZ	1.74	1.18
16:P:443:ASP:OD2	18:R:3:GLU:OE2	1.61	1.18
18:R:82:ARG:HH12	18:R:291:ARG:CA	1.57	1.18
1:A:477:ASN:O	2:B:1047:ARG:HD3	1.43	1.18
1:A:878:ARG:CG	9:I:67:VAL:HG13	1.73	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:61:GLU:OE2	13:M:106:LYS:HD3	1.44	1.18
2:B:207:ILE:CD1	2:B:503:VAL:HG21	1.72	1.17
1:A:1314:GLN:NE2	1:A:1446:ARG:NH1	1.89	1.17
1:A:1313:LEU:HG	1:A:1462:PHE:CE1	1.79	1.17
2:B:152:LEU:HD22	2:B:443:LYS:HD2	1.24	1.17
2:B:849:GLY:CA	12:L:60:ARG:HH22	1.57	1.17
16:P:496:THR:OG1	18:R:1:MET:HE1	1.43	1.17
2:B:683:ASN:N	14:N:154:ARG:HH22	1.37	1.17
1:A:1050:TYR:CZ	1:A:1179:ILE:HG12	1.79	1.17
1:A:878:ARG:CD	9:I:66:VAL:CG2	2.21	1.17
6:F:72:LYS:CA	6:F:142:SER:HB2	1.75	1.17
15:O:200:ASN:HB2	17:Q:14:ASN:CA	1.73	1.16
16:P:399:TRP:CD1	18:R:87:VAL:C	2.17	1.16
16:P:324:TRP:CZ2	18:R:152:ILE:HD11	1.78	1.16
1:A:1657:LEU:HD22	7:G:104:LEU:CD1	1.74	1.16
3:C:274:THR:HA	14:N:172:ALA:CB	1.75	1.16
15:O:374:PRO:C	15:O:376:TYR:HB3	1.64	1.16
2:B:894:LYS:CG	12:L:54:ARG:NH2	1.92	1.16
1:A:474:LYS:CE	2:B:1092:LEU:HD23	1.73	1.16
2:B:1120:ILE:HD12	15:O:117:GLN:NE2	1.58	1.16
17:Q:194:GLN:CG	18:R:209:ARG:NH1	2.04	1.16
1:A:435:ASN:O	1:A:439:ASP:O	1.61	1.16
2:B:1072:GLY:H	2:B:1075:GLU:CG	1.59	1.16
2:B:143:TRP:CD2	2:B:446:MET:CG	2.26	1.16
2:B:679:GLN:HG3	14:N:156:PRO:CA	1.75	1.16
1:A:474:LYS:HZ2	2:B:1092:LEU:HA	1.10	1.16
17:Q:378:LEU:HD23	18:R:216:LEU:HD23	1.23	1.16
18:R:233:TYR:CE1	18:R:264:SER:OG	1.99	1.16
1:A:991:LYS:H	1:A:994:GLU:CG	1.60	1.15
1:A:1657:LEU:O	6:F:133:VAL:N	1.76	1.15
1:A:952:LEU:HD22	1:A:1004:GLU:HG3	1.15	1.15
7:G:241:ARG:HH11	15:O:189:PHE:HB2	1.10	1.15
2:B:1089:GLN:CG	2:B:1093:LEU:CD2	2.24	1.15
1:A:436:ALA:O	1:A:440:SER:N	1.77	1.15
2:B:266:LYS:HE3	2:B:473:GLN:O	1.46	1.15
16:P:390:GLN:HB2	18:R:152:ILE:H	1.00	1.15
18:R:250:LEU:CD1	18:R:298:GLN:HG2	1.76	1.15
18:R:25:ASN:HB2	18:R:81:GLU:OE2	1.44	1.15
1:A:566:SER:CB	15:O:235:GLU:CD	2.15	1.15
2:B:985:ILE:O	14:N:160:VAL:HG23	1.46	1.15
17:Q:374:THR:CG2	18:R:219:LEU:HD22	1.61	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:545:SER:H	17:Q:34:VAL:HG23	1.08	1.15
16:P:185:GLN:HB3	18:R:195:LEU:HB2	1.25	1.15
17:Q:375:LEU:HD22	18:R:231:LEU:HD21	1.29	1.15
1:A:1326:GLU:OE1	1:A:1454:HIS:HA	1.44	1.15
2:B:679:GLN:HG3	14:N:156:PRO:C	1.55	1.14
1:A:547:ILE:CD1	17:Q:26:ARG:NH2	2.07	1.14
2:B:145:VAL:HG11	2:B:441:LYS:HG2	1.24	1.14
1:A:953:GLU:HA	1:A:1205:PHE:CD2	1.81	1.14
1:A:438:ILE:O	1:A:457:LYS:CD	1.94	1.14
1:A:990:ILE:CA	1:A:994:GLU:HB2	1.78	1.14
1:A:990:ILE:HD11	1:A:995:TYR:HA	1.24	1.14
2:B:266:LYS:HG3	2:B:473:GLN:O	1.45	1.14
2:B:149:GLU:OE1	2:B:441:LYS:NZ	1.80	1.14
15:O:248:LEU:HD11	15:O:598:PHE:HD2	1.05	1.14
1:A:824:THR:HB	2:B:1023:ARG:HB2	1.22	1.14
1:A:403:LEU:CD1	1:A:419:ILE:HG21	1.78	1.14
2:B:894:LYS:CG	12:L:54:ARG:HH22	1.52	1.13
1:A:1276:THR:N	9:I:45:LEU:O	1.80	1.13
2:B:1093:LEU:HG	2:B:1094:ASN:OD1	1.45	1.13
1:A:1482:LYS:HE2	2:B:304:ASP:OD1	0.96	1.13
1:A:1657:LEU:HD22	7:G:104:LEU:HD13	1.14	1.13
1:A:474:LYS:NZ	2:B:1092:LEU:CD2	2.11	1.13
15:O:240:ILE:CG2	15:O:380:SER:HB3	1.77	1.13
17:Q:385:PHE:CZ	18:R:208:TYR:O	2.01	1.13
1:A:566:SER:CB	15:O:235:GLU:OE2	1.96	1.13
17:Q:134:LYS:O	17:Q:138:LEU:HB2	1.47	1.13
1:A:878:ARG:CB	9:I:67:VAL:CG1	2.27	1.13
1:A:1329:ILE:CG2	1:A:1456:PHE:CE2	2.31	1.13
18:R:233:TYR:CE1	18:R:263:ASN:HB2	1.84	1.13
1:A:422:ARG:HH12	18:R:412:ARG:HD3	1.01	1.13
1:A:878:ARG:CD	9:I:66:VAL:HG23	1.68	1.12
2:B:894:LYS:HD3	12:L:47:ARG:NE	1.63	1.12
17:Q:22:ILE:CD1	17:Q:24:ASP:OD2	1.96	1.12
16:P:438:TRP:HB2	18:R:141:TRP:NE1	1.63	1.12
18:R:303:THR:HG23	18:R:360:GLU:OE1	1.41	1.12
15:O:376:TYR:CZ	15:O:377:TYR:CE2	2.37	1.12
1:A:503:VAL:HG23	1:A:530:TRP:HB2	1.29	1.12
1:A:435:ASN:O	1:A:439:ASP:HB3	1.49	1.12
16:P:186:TYR:CD1	18:R:196:GLU:O	2.02	1.12
14:N:87:TYR:CZ	14:N:141:GLU:OE1	2.01	1.12
17:Q:194:GLN:HG3	18:R:209:ARG:CZ	1.79	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:72:LYS:CD	6:F:142:SER:CB	2.28	1.12
17:Q:381:MET:CE	18:R:212:HIS:CB	2.27	1.12
17:Q:389:GLN:HG3	18:R:209:ARG:HH12	1.01	1.12
16:P:357:LEU:HD22	18:R:23:TYR:HE1	1.05	1.11
3:C:230:LEU:HD12	3:C:231:PRO:HD2	1.22	1.11
3:C:334:THR:HG21	11:K:44:ARG:HB3	1.30	1.11
2:B:1072:GLY:N	2:B:1075:GLU:HG3	1.59	1.11
18:R:82:ARG:HH12	18:R:291:ARG:HA	1.04	1.11
7:G:143:SER:O	15:O:105:ASN:ND2	1.82	1.11
16:P:186:TYR:CE1	18:R:196:GLU:HB2	1.86	1.11
15:O:234:ILE:HG22	15:O:237:ILE:HG12	1.25	1.11
17:Q:381:MET:HE1	18:R:212:HIS:CB	1.81	1.11
1:A:878:ARG:HB3	9:I:67:VAL:HG11	1.16	1.10
1:A:954:GLY:HA3	1:A:1205:PHE:HB3	1.27	1.10
1:A:1556:GLU:OE2	5:E:212:ARG:NH1	1.82	1.10
15:O:373:LEU:O	15:O:376:TYR:HB2	1.51	1.10
15:O:376:TYR:CE2	15:O:377:TYR:HE2	1.66	1.10
1:A:995:TYR:HD2	2:B:708:ASP:CA	1.59	1.10
18:R:313:LEU:HD11	18:R:353:VAL:HG22	1.29	1.10
1:A:1049:MET:CG	1:A:1052:GLY:C	2.18	1.10
1:A:472:MET:HB3	2:B:1073:GLU:CB	1.80	1.10
1:A:1049:MET:HG2	1:A:1053:ASP:N	1.66	1.10
17:Q:385:PHE:CE2	18:R:212:HIS:CD2	2.38	1.10
17:Q:416:ILE:HG21	18:R:265:SER:HB2	1.15	1.10
1:A:474:LYS:O	2:B:1070:ARG:CB	2.00	1.10
1:A:1600:ARG:NH2	1:A:1617:THR:OG1	1.83	1.10
17:Q:188:ALA:HB3	17:Q:384:GLN:CG	1.82	1.10
1:A:1314:GLN:NE2	1:A:1446:ARG:HD2	1.67	1.10
1:A:436:ALA:HB2	1:A:443:ALA:HB2	1.15	1.10
6:F:75:PRO:HG2	6:F:78:GLN:HB2	1.13	1.10
1:A:503:VAL:CA	1:A:580:HIS:CD2	2.23	1.10
6:F:74:ILE:O	7:G:95:LEU:HD11	1.43	1.10
1:A:1314:GLN:NE2	1:A:1446:ARG:HH11	1.48	1.10
2:B:1002:LYS:CD	14:N:166:LEU:O	1.99	1.10
16:P:391:THR:HG23	18:R:149:LYS:CG	1.79	1.10
18:R:236:PHE:CE1	18:R:253:ILE:HG13	1.86	1.10
1:A:476:VAL:HG22	2:B:1070:ARG:H	1.15	1.09
16:P:472:ARG:HD2	18:R:198:LEU:O	1.51	1.09
1:A:1482:LYS:O	2:B:308:LEU:HD21	1.50	1.09
18:R:313:LEU:HD11	18:R:353:VAL:CG2	1.82	1.09
1:A:475:ARG:CZ	2:B:1061:LYS:HB2	1.81	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:474:LYS:HE3	2:B:1092:LEU:CD2	1.81	1.09
16:P:185:GLN:HB3	18:R:195:LEU:CB	1.82	1.09
18:R:236:PHE:HE1	18:R:253:ILE:HG13	0.96	1.09
18:R:250:LEU:HD13	18:R:298:GLN:CG	1.82	1.09
2:B:527:PHE:CE1	2:B:666:PRO:CG	2.35	1.09
18:R:224:VAL:HG21	18:R:256:GLU:OE2	1.50	1.09
7:G:141:SER:HB2	15:O:142:ILE:HD12	1.20	1.09
3:C:253:PRO:N	14:N:180:PHE:CD1	2.19	1.09
6:F:72:LYS:HA	6:F:142:SER:HB2	1.21	1.09
1:A:564:PRO:HG2	15:O:370:THR:O	1.53	1.09
18:R:236:PHE:CE1	18:R:253:ILE:CG1	2.27	1.09
17:Q:375:LEU:HD21	18:R:231:LEU:CG	1.80	1.09
1:A:506:THR:HG22	1:A:579:ARG:C	1.74	1.08
2:B:1089:GLN:HG3	2:B:1093:LEU:CB	1.82	1.08
16:P:324:TRP:HZ2	18:R:152:ILE:HD11	0.95	1.08
17:Q:378:LEU:HD13	18:R:235:ILE:CD1	1.83	1.08
2:B:1003:ALA:HA	14:N:169:GLU:H	1.04	1.08
17:Q:20:TRP:CZ3	17:Q:22:ILE:HG22	1.58	1.08
17:Q:416:ILE:HG23	18:R:265:SER:OG	1.53	1.08
1:A:486:PRO:O	2:B:781:TYR:CD2	2.06	1.08
2:B:985:ILE:HB	14:N:160:VAL:CG2	1.82	1.08
17:Q:9:ILE:HG13	17:Q:10:CYS:H	1.06	1.08
7:G:159:LYS:HD2	15:O:103:ASN:CG	1.72	1.08
7:G:159:LYS:CD	15:O:103:ASN:OD1	2.02	1.08
1:A:1299:ASN:OD1	1:A:1467:GLY:HA3	1.39	1.08
16:P:357:LEU:CD2	18:R:23:TYR:CE1	2.37	1.08
1:A:1322:ILE:CD1	1:A:1457:ILE:HD11	1.83	1.08
2:B:943:ILE:HD12	10:J:44:TYR:CE1	1.87	1.08
15:O:579:LEU:HA	15:O:582:ARG:HB3	1.24	1.08
16:P:55:LEU:HD21	18:R:227:HIS:NE2	1.69	1.08
1:A:88:PRO:CG	1:A:438:ILE:HD12	1.83	1.08
1:A:474:LYS:CE	2:B:1092:LEU:CD2	2.32	1.08
6:F:74:ILE:CG1	6:F:75:PRO:HD2	1.83	1.08
16:P:472:ARG:NH2	18:R:199:LYS:HA	1.67	1.08
1:A:834:ARG:NH2	2:B:994:ASP:OD1	1.87	1.07
1:A:991:LYS:HB2	1:A:993:GLN:HB2	1.35	1.07
17:Q:351:ASN:HB3	17:Q:369:TRP:CZ3	1.89	1.07
16:P:472:ARG:NH1	18:R:203:SER:HB2	1.66	1.07
1:A:422:ARG:NH1	18:R:412:ARG:HD3	1.69	1.07
3:C:58:ASN:CA	3:C:296:ASN:HD21	1.65	1.07
1:A:1575:ILE:N	9:I:122:ARG:NH1	2.00	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:438:TRP:CD1	18:R:141:TRP:CZ2	2.41	1.07
16:P:390:GLN:HG3	18:R:152:ILE:HA	1.32	1.07
3:C:272:LYS:HG2	14:N:175:TYR:CD1	1.88	1.07
2:B:527:PHE:CE2	2:B:666:PRO:HA	1.89	1.07
1:A:1049:MET:HB3	1:A:1052:GLY:CA	1.84	1.07
1:A:1575:ILE:HG13	9:I:122:ARG:NH1	0.74	1.07
17:Q:385:PHE:CZ	18:R:208:TYR:C	2.13	1.07
2:B:551:ILE:HG21	2:B:647:SER:HA	1.29	1.07
2:B:849:GLY:C	12:L:60:ARG:HH22	1.58	1.07
1:A:1660:VAL:O	7:G:102:GLU:HG2	1.54	1.07
16:P:498:LEU:HD11	17:Q:364:SER:OG	1.55	1.06
1:A:597:LYS:CB	2:B:1082:HIS:NE2	2.17	1.06
17:Q:26:ARG:HB3	17:Q:34:VAL:HG13	1.12	1.06
1:A:1313:LEU:HG	1:A:1462:PHE:CZ	1.90	1.06
1:A:597:LYS:CB	2:B:1082:HIS:CD2	2.38	1.06
7:G:143:SER:HB3	15:O:104:ILE:H	0.90	1.06
16:P:438:TRP:HD1	18:R:141:TRP:CZ2	1.72	1.06
1:A:1322:ILE:HB	1:A:1454:HIS:NE2	1.68	1.06
17:Q:17:SER:O	17:Q:29:CYS:HB2	1.55	1.06
1:A:1314:GLN:HE21	1:A:1446:ARG:NH1	1.46	1.06
15:O:374:PRO:O	15:O:376:TYR:HB3	1.53	1.06
16:P:438:TRP:CZ2	18:R:297:PHE:CE1	2.44	1.06
1:A:1326:GLU:OE2	1:A:1454:HIS:C	1.93	1.06
1:A:506:THR:HG22	1:A:579:ARG:O	1.53	1.06
1:A:990:ILE:HB	1:A:994:GLU:HB3	1.17	1.06
18:R:229:TRP:CH2	18:R:259:ASP:HB2	1.86	1.06
2:B:1089:GLN:HG2	2:B:1093:LEU:HD22	1.07	1.06
16:P:197:ARG:NE	16:P:261:VAL:H	1.54	1.06
15:O:200:ASN:ND2	17:Q:14:ASN:O	1.86	1.05
16:P:186:TYR:CZ	18:R:196:GLU:HB2	1.91	1.05
1:A:1317:ILE:CG2	1:A:1460:TYR:HE1	1.69	1.05
2:B:889:GLY:HA3	12:L:54:ARG:O	1.56	1.05
16:P:187:ILE:HG23	18:R:195:LEU:HD21	1.15	1.05
17:Q:385:PHE:CE2	18:R:212:HIS:CG	2.44	1.05
2:B:49:PHE:HB2	2:B:164:MET:CE	1.84	1.05
1:A:878:ARG:HG2	9:I:66:VAL:HG23	1.38	1.05
15:O:234:ILE:HG23	15:O:237:ILE:HG12	1.37	1.05
17:Q:389:GLN:CG	18:R:209:ARG:NH1	2.08	1.05
16:P:398:ALA:HB1	18:R:87:VAL:HA	1.10	1.05
1:A:566:SER:HB2	15:O:235:GLU:CD	1.77	1.05
16:P:349:GLY:HA2	18:R:154:LYS:HA	1.32	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:354:PRO:HG3	18:R:31:PHE:CD2	1.91	1.05
17:Q:15:CYS:HB3	17:Q:17:SER:N	1.70	1.05
1:A:545:SER:N	17:Q:34:VAL:CG2	2.18	1.05
17:Q:374:THR:HG23	18:R:219:LEU:HD11	1.32	1.05
18:R:271:LEU:HD21	18:R:308:PHE:HB2	1.36	1.05
1:A:999:CYS:HA	2:B:712:SER:HB2	1.32	1.05
7:G:141:SER:HB3	15:O:142:ILE:HD13	1.35	1.05
16:P:350:THR:HB	18:R:155:GLN:HA	1.08	1.05
1:A:1326:GLU:OE1	1:A:1454:HIS:CA	2.03	1.05
16:P:622:TYR:O	16:P:626:LEU:HB2	1.53	1.05
1:A:1050:TYR:CE1	1:A:1179:ILE:HG12	1.90	1.05
16:P:350:THR:CB	18:R:155:GLN:HA	1.86	1.05
17:Q:374:THR:HG23	18:R:219:LEU:HD21	1.37	1.05
3:C:296:ASN:O	3:C:298:PHE:CE1	2.10	1.05
15:O:240:ILE:HG22	15:O:380:SER:HB3	1.06	1.04
16:P:274:ILE:O	16:P:289:SER:HB2	1.57	1.04
16:P:488:LEU:HD22	18:R:138:PHE:CE1	1.91	1.04
1:A:1298:ASP:OD1	1:A:1468:LYS:NZ	1.90	1.04
1:A:566:SER:HB3	15:O:235:GLU:OE2	1.56	1.04
16:P:436:ILE:HG22	18:R:143:THR:N	1.72	1.04
1:A:1600:ARG:CD	1:A:1616:GLU:OE1	2.05	1.04
15:O:379:ARG:HA	15:O:379:ARG:HH11	1.22	1.04
2:B:143:TRP:CD2	2:B:446:MET:SD	2.49	1.04
6:F:72:LYS:HB3	6:F:142:SER:CB	1.87	1.04
16:P:55:LEU:HD21	18:R:227:HIS:CD2	1.93	1.04
16:P:436:ILE:CG2	18:R:143:THR:HG23	1.86	1.04
17:Q:188:ALA:CB	17:Q:384:GLN:CG	2.36	1.04
1:A:721:LYS:O	8:H:96:VAL:N	1.91	1.04
1:A:878:ARG:HG2	9:I:67:VAL:HG13	1.09	1.04
2:B:1072:GLY:H	2:B:1075:GLU:HG3	1.08	1.04
1:A:1049:MET:CB	1:A:1052:GLY:HA2	1.88	1.04
2:B:566:TYR:CD2	13:M:73:SER:OG	2.11	1.03
16:P:438:TRP:CZ2	18:R:297:PHE:HE1	1.73	1.03
17:Q:374:THR:CG2	18:R:219:LEU:CG	2.35	1.03
1:A:1049:MET:CG	1:A:1053:ASP:N	2.21	1.03
1:A:1326:GLU:CD	1:A:1454:HIS:CB	2.26	1.03
1:A:878:ARG:CG	9:I:66:VAL:CG2	2.36	1.03
17:Q:5:ILE:O	17:Q:19:LEU:O	1.74	1.03
1:A:503:VAL:CG2	1:A:530:TRP:HB2	1.88	1.03
2:B:527:PHE:CD1	2:B:666:PRO:CG	2.40	1.03
1:A:1657:LEU:CD2	7:G:104:LEU:HD13	1.88	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1317:ILE:HG21	1:A:1460:TYR:HE1	1.22	1.03
1:A:1322:ILE:CB	1:A:1454:HIS:CE1	2.40	1.03
1:A:477:ASN:O	2:B:1047:ARG:CD	2.06	1.03
1:A:615:ARG:NH1	2:B:929:ARG:HE	1.54	1.03
17:Q:414:TYR:CD1	18:R:240:ILE:HG23	1.93	1.03
1:A:938:VAL:HG22	9:I:82:ILE:CD1	1.88	1.03
15:O:517:LEU:HA	15:O:525:MET:HE2	1.34	1.03
1:A:1322:ILE:CG2	1:A:1454:HIS:CE1	2.41	1.03
2:B:1089:GLN:HG3	2:B:1093:LEU:CD1	1.88	1.03
2:B:49:PHE:HB2	2:B:164:MET:HE1	1.04	1.03
7:G:144:HIS:CD2	15:O:146:SER:CA	2.42	1.03
1:A:566:SER:HB3	15:O:235:GLU:CD	1.77	1.03
16:P:472:ARG:HH12	18:R:203:SER:CB	1.69	1.03
18:R:199:LYS:HE2	18:R:204:GLU:HB3	1.22	1.03
7:G:144:HIS:CD2	15:O:146:SER:HA	1.93	1.03
16:P:357:LEU:HD22	18:R:23:TYR:CE1	1.94	1.03
17:Q:374:THR:HG23	18:R:219:LEU:CD1	1.69	1.03
16:P:436:ILE:N	18:R:143:THR:OG1	1.90	1.03
16:P:352:PHE:CD1	18:R:157:MET:HG2	1.93	1.03
1:A:1322:ILE:HG21	1:A:1454:HIS:CG	1.82	1.03
3:C:228:ARG:NH1	14:N:173:THR:O	1.90	1.03
6:F:72:LYS:CB	6:F:142:SER:CB	2.37	1.02
17:Q:374:THR:HG23	18:R:219:LEU:CD2	1.74	1.02
2:B:207:ILE:CD1	2:B:503:VAL:CG2	2.34	1.02
2:B:1092:LEU:HA	2:B:1096:SER:HB2	1.35	1.02
15:O:243:GLU:OE1	15:O:328:LEU:HD23	1.58	1.02
1:A:476:VAL:O	2:B:1068:GLY:HA3	1.57	1.02
3:C:253:PRO:CD	14:N:180:PHE:CD1	2.43	1.02
1:A:1003:ARG:HH21	2:B:530:PRO:C	1.62	1.02
1:A:472:MET:CB	2:B:1073:GLU:HB2	1.89	1.02
18:R:199:LYS:CE	18:R:204:GLU:CA	2.37	1.02
17:Q:375:LEU:CD2	18:R:231:LEU:CD2	2.38	1.02
1:A:1310:LYS:HG2	1:A:1311:GLU:CD	1.77	1.02
2:B:1089:GLN:HG3	2:B:1093:LEU:HB2	1.41	1.01
2:B:143:TRP:CB	2:B:446:MET:SD	2.48	1.01
3:C:229:LEU:HD22	3:C:295:ARG:O	1.61	1.01
16:P:438:TRP:HB2	18:R:141:TRP:CE2	1.95	1.01
2:B:1071:VAL:HG21	2:B:1091:ARG:HG3	1.41	1.01
18:R:316:SER:HB3	18:R:349:ILE:CD1	1.90	1.01
18:R:301:SER:CA	18:R:358:PHE:CE1	2.43	1.01
7:G:159:LYS:HB2	15:O:105:ASN:HD22	1.24	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:399:TRP:CH2	18:R:291:ARG:N	2.27	1.01
1:A:990:ILE:CG1	1:A:995:TYR:N	2.24	1.01
1:A:1297:PHE:CE2	1:A:1301:GLU:CD	2.34	1.01
1:A:88:PRO:HG2	1:A:438:ILE:CD1	1.91	1.01
2:B:551:ILE:HG23	2:B:648:ARG:N	1.73	1.01
18:R:246:GLN:NE2	18:R:278:TYR:OH	1.93	1.01
1:A:566:SER:HB2	15:O:235:GLU:OE1	1.61	1.01
1:A:954:GLY:CA	1:A:1205:PHE:HB3	1.89	1.01
15:O:348:THR:HG22	15:O:351:SER:HB3	1.42	1.01
17:Q:378:LEU:HD21	18:R:219:LEU:HB2	1.42	1.01
1:A:486:PRO:HD2	2:B:928:SER:OG	1.60	1.01
2:B:19:LEU:HD11	10:J:26:GLN:OE1	1.61	1.00
3:C:272:LYS:CA	14:N:175:TYR:CZ	2.16	1.00
16:P:472:ARG:NH1	18:R:203:SER:CB	2.21	1.00
2:B:75:ASP:HB3	2:B:440:PHE:CZ	1.96	1.00
1:A:995:TYR:OH	2:B:707:SER:HB2	0.83	1.00
2:B:894:LYS:HG3	12:L:54:ARG:NH2	1.41	1.00
7:G:143:SER:CB	15:O:104:ILE:H	1.74	1.00
1:A:995:TYR:CZ	2:B:715:ASN:ND2	2.29	1.00
2:B:1092:LEU:O	2:B:1096:SER:HB3	1.59	1.00
2:B:143:TRP:CE2	2:B:446:MET:HB2	1.96	1.00
1:A:1322:ILE:HD12	1:A:1457:ILE:HD11	1.04	1.00
16:P:399:TRP:HH2	18:R:291:ARG:N	1.50	1.00
18:R:177:LEU:O	18:R:185:LYS:CE	2.08	1.00
1:A:1050:TYR:CG	1:A:1179:ILE:HG21	1.96	1.00
2:B:681:ILE:HB	14:N:154:ARG:HG3	1.40	1.00
17:Q:418:PRO:CG	18:R:233:TYR:OH	2.09	1.00
7:G:143:SER:HB3	15:O:104:ILE:N	1.75	1.00
1:A:545:SER:HB2	17:Q:34:VAL:HG22	1.41	1.00
1:A:909:SER:HA	9:I:83:LYS:NZ	1.75	1.00
17:Q:351:ASN:CA	17:Q:369:TRP:CH2	2.45	1.00
2:B:1072:GLY:O	2:B:1075:GLU:CG	2.09	1.00
3:C:253:PRO:HD2	14:N:180:PHE:CD1	1.95	1.00
17:Q:374:THR:CG2	18:R:219:LEU:HD21	1.86	1.00
17:Q:385:PHE:CD2	18:R:212:HIS:HD2	1.76	1.00
17:Q:9:ILE:HB	17:Q:16:PRO:HB2	1.44	1.00
1:A:408:LYS:CB	1:A:411:VAL:HB	1.92	0.99
2:B:697:LEU:HB2	2:B:702:ASN:ND2	1.77	0.99
1:A:615:ARG:HH22	2:B:929:ARG:HG2	1.26	0.99
15:O:332:LEU:HD11	15:O:380:SER:OG	1.61	0.99
17:Q:378:LEU:HD13	18:R:235:ILE:HD13	1.44	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:159:LYS:CB	15:O:105:ASN:ND2	2.23	0.99
15:O:234:ILE:CG2	15:O:237:ILE:CG1	2.31	0.99
1:A:547:ILE:CD1	17:Q:26:ARG:HH22	1.71	0.99
17:Q:381:MET:SD	18:R:212:HIS:CG	2.52	0.99
1:A:756:LYS:HD3	9:I:85:LYS:HZ3	1.18	0.99
1:A:990:ILE:CB	1:A:994:GLU:CB	1.98	0.99
2:B:679:GLN:HG2	14:N:156:PRO:C	1.67	0.99
15:O:376:TYR:CE1	15:O:588:LEU:CD2	2.45	0.99
16:P:352:PHE:CE1	18:R:157:MET:CG	2.46	0.99
1:A:480:ALA:CB	2:B:1046:VAL:HG23	1.93	0.99
17:Q:12:THR:CB	17:Q:33:HIS:CE1	2.44	0.99
1:A:1317:ILE:CG2	1:A:1460:TYR:CE1	2.45	0.99
2:B:143:TRP:CZ3	2:B:446:MET:HG3	1.96	0.99
1:A:995:TYR:CZ	2:B:707:SER:HB2	1.98	0.99
6:F:74:ILE:HG12	6:F:75:PRO:CD	1.91	0.99
17:Q:22:ILE:CD1	17:Q:26:ARG:NE	2.25	0.99
13:M:102:SER:O	13:M:105:SER:CA	2.11	0.99
13:M:102:SER:O	13:M:105:SER:N	1.95	0.99
16:P:354:PRO:HG3	18:R:31:PHE:CB	1.91	0.99
16:P:398:ALA:HB1	18:R:87:VAL:CA	1.93	0.99
17:Q:381:MET:HE1	18:R:212:HIS:CA	1.93	0.99
16:P:391:THR:HG23	18:R:149:LYS:HG2	1.01	0.99
1:A:953:GLU:CA	1:A:1205:PHE:CD2	2.46	0.98
1:A:995:TYR:CE2	2:B:708:ASP:HA	1.97	0.98
7:G:144:HIS:NE2	15:O:145:SER:HB3	1.78	0.98
14:N:86:ASP:O	14:N:142:THR:N	1.94	0.98
17:Q:188:ALA:CB	18:R:208:TYR:OH	2.09	0.98
1:A:435:ASN:HB3	1:A:442:LYS:HB3	1.43	0.98
1:A:991:LYS:H	1:A:994:GLU:HG3	0.82	0.98
1:A:1003:ARG:NH2	2:B:530:PRO:C	2.14	0.98
3:C:293:ARG:H	3:C:295:ARG:CZ	1.74	0.98
1:A:684:ASP:CG	8:H:20:TYR:HB3	1.83	0.98
2:B:682:GLN:CA	14:N:154:ARG:NH2	2.22	0.98
1:A:1314:GLN:NE2	1:A:1446:ARG:CD	2.25	0.98
2:B:1003:ALA:HA	14:N:169:GLU:N	1.78	0.98
2:B:1151:ILE:HG12	7:G:21:LYS:HZ2	1.29	0.98
1:A:998:HIS:NE2	2:B:711:GLN:HG3	1.75	0.98
2:B:68:ILE:CG2	2:B:71:LYS:HZ2	1.68	0.98
1:A:435:ASN:HB3	1:A:442:LYS:HB2	1.40	0.98
1:A:629:ASP:C	2:B:926:VAL:CG2	2.31	0.98
2:B:1072:GLY:CA	2:B:1075:GLU:HG2	1.94	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:24:VAL:HA	7:G:25:THR:HA	1.44	0.98
1:A:1330:VAL:CG2	1:A:1455:ARG:CZ	2.41	0.98
2:B:1089:GLN:HG2	2:B:1093:LEU:CD2	1.90	0.98
2:B:207:ILE:HD11	2:B:503:VAL:HG21	1.42	0.98
1:A:1276:THR:CB	9:I:45:LEU:HD12	1.93	0.98
1:A:535:GLN:HE22	17:Q:26:ARG:CD	1.77	0.98
15:O:240:ILE:O	15:O:380:SER:OG	1.80	0.98
16:P:186:TYR:OH	18:R:196:GLU:OE1	1.82	0.98
1:A:1049:MET:HB3	1:A:1052:GLY:N	1.79	0.97
1:A:953:GLU:HG2	1:A:1205:PHE:CE2	1.99	0.97
1:A:478:TYR:CA	2:B:1048:SER:O	2.10	0.97
2:B:943:ILE:CD1	10:J:44:TYR:CE1	2.46	0.97
15:O:247:GLU:OE1	15:O:325:ILE:HG12	1.10	0.97
2:B:75:ASP:CB	2:B:440:PHE:CE2	2.47	0.97
2:B:143:TRP:CE3	2:B:446:MET:CG	2.46	0.97
1:A:545:SER:H	17:Q:34:VAL:CG2	1.74	0.97
1:A:474:LYS:O	2:B:1070:ARG:HA	1.65	0.97
1:A:909:SER:HA	9:I:83:LYS:CE	1.93	0.97
16:P:390:GLN:HB2	18:R:152:ILE:N	1.79	0.97
16:P:438:TRP:CD1	18:R:141:TRP:HZ2	1.80	0.97
17:Q:381:MET:HE1	18:R:212:HIS:HA	1.45	0.97
18:R:316:SER:CB	18:R:349:ILE:HD13	1.94	0.97
16:P:398:ALA:CB	18:R:87:VAL:HA	1.94	0.97
1:A:1484:LEU:HD13	2:B:305:ARG:NH1	1.80	0.97
1:A:474:LYS:HZ1	2:B:1092:LEU:CD2	1.75	0.97
3:C:41:GLU:OE2	11:K:138:LYS:HE3	1.64	0.97
15:O:376:TYR:HE1	15:O:588:LEU:CD2	1.77	0.97
2:B:1089:GLN:HG3	2:B:1093:LEU:CD2	1.90	0.97
2:B:550:ARG:HB2	2:B:650:LEU:HB2	1.47	0.97
17:Q:188:ALA:HB3	17:Q:384:GLN:HG2	1.43	0.97
1:A:991:LYS:HB3	1:A:993:GLN:OE1	1.64	0.97
17:Q:15:CYS:SG	17:Q:17:SER:HB2	2.05	0.97
16:P:187:ILE:HG22	18:R:195:LEU:HD23	0.98	0.97
1:A:999:CYS:CA	2:B:712:SER:CB	2.43	0.97
17:Q:375:LEU:HD21	18:R:231:LEU:CD2	1.93	0.97
17:Q:385:PHE:HZ	18:R:208:TYR:O	1.36	0.97
1:A:438:ILE:O	1:A:457:LYS:CB	2.12	0.97
1:A:436:ALA:C	1:A:439:ASP:C	2.22	0.97
2:B:679:GLN:HG3	14:N:155:VAL:O	1.64	0.97
1:A:721:LYS:NZ	8:H:90:ALA:O	1.97	0.97
15:O:202:ASN:HB3	17:Q:31:TYR:OH	1.62	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:824:HIS:ND1	2:B:897:GLU:OE1	1.90	0.96
17:Q:378:LEU:HG	18:R:219:LEU:HD12	1.47	0.96
2:B:145:VAL:HG21	2:B:441:LYS:HA	1.47	0.96
18:R:199:LYS:CE	18:R:203:SER:O	2.13	0.96
1:A:88:PRO:HG2	1:A:438:ILE:HD12	0.97	0.96
6:F:66:ARG:NH2	7:G:90:LEU:CD1	2.29	0.96
13:M:102:SER:OG	13:M:105:SER:N	1.96	0.96
1:A:472:MET:HB3	2:B:1073:GLU:HB2	0.99	0.96
16:P:187:ILE:CG2	18:R:195:LEU:HD21	1.73	0.96
1:A:991:LYS:HB3	1:A:993:GLN:CD	1.84	0.96
1:A:862:THR:CB	9:I:67:VAL:HG12	1.95	0.96
1:A:1050:TYR:CD1	1:A:1179:ILE:HG21	1.99	0.96
1:A:1314:GLN:CD	1:A:1446:ARG:HD2	1.84	0.96
2:B:152:LEU:HD22	2:B:443:LYS:CD	1.94	0.96
15:O:376:TYR:OH	15:O:588:LEU:HD21	1.65	0.96
2:B:68:ILE:HG23	2:B:71:LYS:HZ2	1.25	0.96
1:A:588:LEU:HD21	2:B:1087:LEU:HD13	1.48	0.95
2:B:1089:GLN:CG	2:B:1093:LEU:HD13	1.96	0.95
6:F:75:PRO:CG	6:F:78:GLN:HB2	1.96	0.95
16:P:438:TRP:HZ2	18:R:297:PHE:CE1	1.80	0.95
1:A:1322:ILE:CG2	1:A:1454:HIS:ND1	2.24	0.95
2:B:202:LEU:HD22	2:B:488:ALA:HB2	1.46	0.95
2:B:207:ILE:HG13	2:B:503:VAL:HG23	1.48	0.95
16:P:488:LEU:CD2	18:R:138:PHE:CD1	2.40	0.95
18:R:303:THR:HG21	18:R:360:GLU:OE1	1.64	0.95
1:A:1049:MET:CB	1:A:1052:GLY:CA	2.44	0.95
1:A:474:LYS:NZ	2:B:1092:LEU:HA	1.80	0.95
16:P:405:TYR:HE1	16:P:414:ILE:HG23	1.31	0.95
1:A:1049:MET:HB3	1:A:1052:GLY:HA2	1.42	0.95
1:A:1484:LEU:HD13	2:B:305:ARG:NE	1.81	0.95
2:B:49:PHE:CB	2:B:164:MET:HE1	1.94	0.95
2:B:796:ARG:CZ	10:J:8:PHE:O	2.14	0.95
15:O:243:GLU:HB3	15:O:332:LEU:HD13	1.48	0.95
1:A:1322:ILE:CD1	1:A:1457:ILE:CD1	2.43	0.95
17:Q:414:TYR:HD1	18:R:240:ILE:HG13	1.29	0.95
2:B:182:GLN:HE22	10:J:69:ARG:HB3	1.23	0.95
18:R:199:LYS:HE2	18:R:204:GLU:N	1.82	0.95
1:A:474:LYS:O	2:B:1070:ARG:CA	2.14	0.95
2:B:205:MET:HE1	2:B:500:PHE:O	1.65	0.95
17:Q:9:ILE:HG13	17:Q:10:CYS:N	1.77	0.95
17:Q:378:LEU:CD2	18:R:216:LEU:HD23	1.96	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:199:LYS:CE	18:R:204:GLU:CB	2.32	0.95
1:A:1317:ILE:HG21	1:A:1460:TYR:CE1	2.01	0.94
2:B:207:ILE:HG13	2:B:503:VAL:HG22	1.47	0.94
15:O:63:LEU:HD12	15:O:71:ILE:HG13	1.47	0.94
18:R:250:LEU:HD13	18:R:298:GLN:HG2	0.97	0.94
2:B:1003:ALA:CA	14:N:169:GLU:H	1.80	0.94
2:B:152:LEU:CA	2:B:443:LYS:HE3	1.96	0.94
16:P:436:ILE:HB	18:R:143:THR:HG21	1.48	0.94
1:A:1322:ILE:CB	1:A:1454:HIS:NE2	2.30	0.94
1:A:545:SER:N	17:Q:34:VAL:HG23	1.77	0.94
1:A:1484:LEU:HD13	2:B:305:ARG:NH2	1.82	0.94
16:P:390:GLN:CG	18:R:152:ILE:HA	1.97	0.94
1:A:545:SER:HB3	17:Q:34:VAL:CG2	1.96	0.94
1:A:953:GLU:C	1:A:1205:PHE:CG	2.40	0.94
1:A:990:ILE:CD1	1:A:995:TYR:HA	1.96	0.94
16:P:197:ARG:HE	16:P:261:VAL:H	1.16	0.94
17:Q:22:ILE:HD11	17:Q:26:ARG:NE	1.81	0.94
1:A:474:LYS:HZ1	2:B:1092:LEU:HD22	1.30	0.94
1:A:543:LEU:HB2	17:Q:34:VAL:O	1.67	0.94
17:Q:341:ARG:NH1	17:Q:369:TRP:HE1	1.65	0.94
18:R:15:GLN:CD	18:R:184:ASN:HD22	1.69	0.94
17:Q:193:PHE:HD2	18:R:208:TYR:CG	1.84	0.94
17:Q:388:THR:HA	18:R:209:ARG:CG	1.98	0.94
1:A:991:LYS:HB3	1:A:993:GLN:HB2	1.49	0.94
2:B:71:LYS:HD3	2:B:421:LEU:HD13	1.46	0.94
1:A:506:THR:CG2	1:A:579:ARG:O	2.15	0.94
2:B:152:LEU:HB3	2:B:443:LYS:HE2	1.50	0.94
17:Q:341:ARG:NH1	17:Q:369:TRP:NE1	2.16	0.94
18:R:271:LEU:HD13	18:R:312:TYR:HB3	1.49	0.94
2:B:182:GLN:NE2	10:J:69:ARG:CB	2.32	0.93
15:O:233:LEU:O	15:O:237:ILE:HD12	1.65	0.93
15:O:376:TYR:CD1	15:O:419:LYS:HE2	2.02	0.93
16:P:187:ILE:HG22	18:R:195:LEU:CD2	1.77	0.93
17:Q:188:ALA:HB3	17:Q:384:GLN:CB	1.98	0.93
17:Q:193:PHE:CD2	18:R:208:TYR:HB2	2.03	0.93
18:R:250:LEU:HD21	18:R:308:PHE:CD2	2.02	0.93
1:A:613:THR:HG21	2:B:913:ILE:CG2	1.98	0.93
1:A:720:PHE:CE2	8:H:141:TYR:HE2	1.85	0.93
16:P:438:TRP:HB2	18:R:141:TRP:HE1	1.20	0.93
1:A:756:LYS:CD	9:I:85:LYS:HZ1	1.53	0.93
16:P:488:LEU:CD2	18:R:138:PHE:CE2	2.51	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:416:ILE:HG22	18:R:265:SER:HB2	1.50	0.93
2:B:890:ASP:O	12:L:54:ARG:CD	2.15	0.93
1:A:1600:ARG:HD2	1:A:1616:GLU:OE1	1.67	0.93
2:B:1093:LEU:O	2:B:1098:TYR:HB2	1.67	0.93
16:P:486:ALA:CB	18:R:137:SER:OG	2.16	0.93
1:A:672:ASP:OD2	2:B:777:SER:HB3	1.67	0.93
1:A:1314:GLN:HE22	1:A:1446:ARG:HD2	1.28	0.93
1:A:938:VAL:HG22	9:I:82:ILE:HD13	1.49	0.93
1:A:474:LYS:O	2:B:1070:ARG:HB2	1.66	0.93
1:A:436:ALA:HA	1:A:439:ASP:O	1.68	0.93
1:A:506:THR:CB	1:A:579:ARG:O	2.16	0.93
17:Q:15:CYS:CB	17:Q:16:PRO:HA	1.98	0.93
17:Q:385:PHE:HD2	18:R:212:HIS:CD2	1.82	0.93
1:A:1482:LYS:HE2	2:B:304:ASP:CG	1.86	0.93
1:A:995:TYR:HH	2:B:707:SER:HB2	1.20	0.93
15:O:376:TYR:CZ	15:O:588:LEU:HD21	2.03	0.93
18:R:236:PHE:HZ	18:R:253:ILE:CD1	1.47	0.93
1:A:684:ASP:OD2	8:H:20:TYR:HB3	1.69	0.92
18:R:301:SER:CA	18:R:358:PHE:HE1	1.79	0.92
17:Q:26:ARG:CB	17:Q:34:VAL:HG13	1.99	0.92
1:A:506:THR:HA	1:A:579:ARG:O	1.67	0.92
1:A:630:GLY:N	2:B:926:VAL:HG21	1.85	0.92
2:B:202:LEU:HD23	2:B:202:LEU:H	1.34	0.92
2:B:266:LYS:CG	2:B:473:GLN:O	2.18	0.92
14:N:87:TYR:CB	14:N:141:GLU:HA	1.93	0.92
18:R:82:ARG:NH1	18:R:291:ARG:HA	1.83	0.92
1:A:1326:GLU:CD	1:A:1454:HIS:CA	2.38	0.92
2:B:209:GLN:HG2	2:B:210:ARG:H	1.31	0.92
16:P:354:PRO:CG	18:R:31:PHE:CG	2.52	0.92
1:A:545:SER:CA	17:Q:34:VAL:CG2	2.36	0.92
1:A:403:LEU:O	1:A:406:LEU:HG	1.70	0.92
2:B:75:ASP:N	2:B:440:PHE:HE2	1.65	0.92
17:Q:22:ILE:HD12	17:Q:24:ASP:OD2	1.68	0.92
1:A:407:GLN:HE21	1:A:407:GLN:H	0.94	0.91
2:B:1002:LYS:HD2	14:N:166:LEU:HB2	1.51	0.91
3:C:294:VAL:O	3:C:297:HIS:HB3	1.70	0.91
17:Q:414:TYR:CE1	18:R:240:ILE:CG2	2.51	0.91
16:P:24:SER:HB2	18:R:318:ILE:HD11	1.50	0.91
2:B:64:GLY:HA2	2:B:242:ASP:CB	2.00	0.91
1:A:1049:MET:HB3	1:A:1052:GLY:H	1.35	0.91
1:A:1314:GLN:HE22	1:A:1446:ARG:CD	1.83	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:247:GLU:OE1	15:O:325:ILE:HA	1.70	0.91
17:Q:15:CYS:HB3	17:Q:16:PRO:CA	2.00	0.91
18:R:199:LYS:CD	18:R:204:GLU:HB3	2.00	0.91
1:A:507:TYR:CE1	1:A:508:PRO:O	2.24	0.91
16:P:357:LEU:HD21	18:R:23:TYR:CE1	2.05	0.91
1:A:1310:LYS:CG	1:A:1311:GLU:CD	2.26	0.91
1:A:634:ASN:ND2	2:B:1069:ILE:HG21	1.85	0.91
17:Q:381:MET:HE1	18:R:212:HIS:ND1	1.85	0.91
2:B:849:GLY:CA	12:L:60:ARG:NH2	2.17	0.91
16:P:436:ILE:HG22	18:R:143:THR:CA	1.99	0.91
18:R:224:VAL:CG2	18:R:256:GLU:OE2	2.18	0.91
1:A:436:ALA:CB	1:A:443:ALA:HB2	2.00	0.91
1:A:878:ARG:CD	9:I:66:VAL:HG21	2.00	0.91
2:B:548:LYS:HE3	2:B:695:ASN:OD1	1.70	0.91
16:P:438:TRP:CE2	18:R:297:PHE:CZ	2.57	0.91
1:A:670:ILE:HG12	2:B:783:MET:CE	2.01	0.91
1:A:995:TYR:OH	2:B:715:ASN:ND2	2.04	0.91
17:Q:3:THR:HG22	17:Q:20:TRP:HB2	1.53	0.91
18:R:247:ILE:H	18:R:247:ILE:HD13	1.35	0.91
1:A:1604:GLU:O	1:A:1612:LYS:HE2	1.70	0.91
1:A:470:HIS:HD2	2:B:1058:GLN:OE1	1.54	0.91
1:A:862:THR:HB	9:I:67:VAL:HG12	1.50	0.91
17:Q:9:ILE:CG1	17:Q:10:CYS:H	1.79	0.91
2:B:266:LYS:CE	2:B:473:GLN:O	2.19	0.91
1:A:1326:GLU:OE1	1:A:1455:ARG:N	2.03	0.90
2:B:549:CYS:SG	2:B:649:MET:CG	2.57	0.90
6:F:70:LYS:CD	7:G:95:LEU:HD23	2.01	0.90
3:C:272:LYS:CG	14:N:175:TYR:CE1	2.54	0.90
7:G:159:LYS:HB3	15:O:105:ASN:HD22	1.34	0.90
16:P:472:ARG:NE	18:R:200:THR:HG23	1.87	0.90
1:A:472:MET:HA	1:A:472:MET:HE2	1.52	0.90
3:C:272:LYS:HG2	14:N:175:TYR:HD1	1.28	0.90
1:A:990:ILE:HD12	1:A:994:GLU:C	1.92	0.90
17:Q:385:PHE:CD2	18:R:212:HIS:CG	2.60	0.90
16:P:443:ASP:CB	18:R:3:GLU:CB	2.19	0.90
6:F:66:ARG:NH2	7:G:90:LEU:HD12	1.85	0.90
7:G:241:ARG:NH1	15:O:189:PHE:CB	2.35	0.90
17:Q:19:LEU:HD11	17:Q:27:ARG:HB3	1.54	0.90
1:A:1484:LEU:CD1	2:B:305:ARG:NE	2.34	0.90
1:A:403:LEU:CD1	1:A:419:ILE:CG2	2.45	0.90
18:R:202:THR:HA	18:R:205:VAL:CG2	2.02	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:435:ASN:CB	1:A:442:LYS:CB	2.49	0.90
7:G:144:HIS:NE2	15:O:145:SER:CB	2.34	0.90
1:A:826:PHE:CD1	2:B:777:SER:HB2	2.07	0.90
2:B:1092:LEU:CA	2:B:1096:SER:HB2	2.02	0.90
1:A:486:PRO:O	2:B:781:TYR:CE2	2.25	0.90
18:R:229:TRP:HH2	18:R:259:ASP:CB	1.81	0.90
1:A:1313:LEU:CG	1:A:1462:PHE:CZ	2.54	0.89
1:A:436:ALA:HB2	1:A:443:ALA:CB	2.01	0.89
2:B:548:LYS:HE3	2:B:695:ASN:CG	1.92	0.89
17:Q:351:ASN:CG	17:Q:369:TRP:CZ2	2.45	0.89
1:A:408:LYS:CA	1:A:411:VAL:HB	2.02	0.89
15:O:376:TYR:CE1	15:O:588:LEU:HD21	2.07	0.89
18:R:229:TRP:CE3	18:R:260:ASN:HA	2.08	0.89
1:A:1314:GLN:OE1	1:A:1446:ARG:HD2	1.73	0.89
2:B:64:GLY:HA2	2:B:242:ASP:HB3	1.54	0.89
1:A:878:ARG:HD2	9:I:66:VAL:HG21	1.54	0.89
17:Q:381:MET:CE	18:R:212:HIS:CA	2.49	0.89
17:Q:375:LEU:CG	18:R:231:LEU:HD11	2.01	0.89
1:A:1053:ASP:O	1:A:1055:ILE:HG12	1.73	0.89
1:A:581:ILE:HG13	1:A:585:ASP:OD2	1.71	0.89
1:A:634:ASN:HD21	2:B:1069:ILE:HG21	1.37	0.89
1:A:1276:THR:HG1	9:I:45:LEU:HD12	1.10	0.89
2:B:894:LYS:HG3	12:L:54:ARG:HH22	0.74	0.89
15:O:373:LEU:O	15:O:376:TYR:CB	2.21	0.89
6:F:74:ILE:HG12	6:F:75:PRO:HD2	0.95	0.89
17:Q:20:TRP:CZ3	17:Q:22:ILE:HG21	2.08	0.89
18:R:201:SER:O	18:R:205:VAL:CG2	2.20	0.89
1:A:990:ILE:HG13	1:A:995:TYR:H	1.35	0.89
1:A:579:ARG:HH12	1:A:581:ILE:HA	1.34	0.88
3:C:272:LYS:CG	14:N:175:TYR:CD1	2.56	0.88
16:P:399:TRP:CZ2	18:R:87:VAL:HG23	2.08	0.88
1:A:579:ARG:NH1	1:A:581:ILE:HA	1.88	0.88
2:B:551:ILE:CG2	2:B:647:SER:HA	2.02	0.88
18:R:202:THR:HA	18:R:205:VAL:HG21	1.52	0.88
1:A:535:GLN:HE22	17:Q:26:ARG:HD3	1.06	0.88
6:F:70:LYS:HD3	7:G:95:LEU:HD23	1.53	0.88
17:Q:341:ARG:CZ	17:Q:369:TRP:HE1	1.85	0.88
3:C:274:THR:HA	14:N:172:ALA:HB2	0.90	0.88
2:B:534:PRO:HA	2:B:720:GLN:OE1	1.73	0.88
2:B:743:ARG:NH2	10:J:60:PHE:HZ	1.71	0.88
15:O:240:ILE:CG2	15:O:380:SER:CB	2.42	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:20:TRP:CH2	17:Q:22:ILE:CG2	2.56	0.88
1:A:878:ARG:CB	9:I:67:VAL:HG13	1.97	0.88
2:B:26:ILE:O	10:J:62:ARG:NH1	2.05	0.88
3:C:230:LEU:HD12	3:C:231:PRO:CD	2.04	0.88
1:A:435:ASN:O	1:A:439:ASP:CB	2.20	0.88
2:B:1089:GLN:HG3	2:B:1093:LEU:HD13	1.50	0.88
2:B:75:ASP:N	2:B:440:PHE:CE2	2.41	0.88
1:A:1263:LEU:HA	1:A:1498:ILE:HD11	1.54	0.88
1:A:1313:LEU:HD23	1:A:1462:PHE:HZ	1.38	0.88
1:A:438:ILE:O	1:A:457:LYS:HB2	1.72	0.88
1:A:953:GLU:C	1:A:1205:PHE:CB	2.43	0.88
1:A:966:LEU:HD21	1:A:997:PHE:CE1	2.09	0.88
16:P:248:PRO:HD2	16:P:267:ASN:HB3	1.54	0.88
18:R:233:TYR:HE1	18:R:264:SER:OG	1.49	0.88
1:A:954:GLY:N	1:A:1205:PHE:CB	2.37	0.88
1:A:1322:ILE:CG2	1:A:1454:HIS:NE2	2.37	0.88
1:A:1660:VAL:O	7:G:102:GLU:HA	1.74	0.88
17:Q:388:THR:HA	18:R:209:ARG:HG2	1.55	0.88
18:R:199:LYS:CE	18:R:204:GLU:HA	2.03	0.88
1:A:954:GLY:N	1:A:1205:PHE:HB2	1.90	0.87
1:A:627:ASP:O	2:B:784:ASP:HB3	1.73	0.87
1:A:756:LYS:CG	9:I:85:LYS:HZ2	1.87	0.87
17:Q:12:THR:CB	17:Q:33:HIS:ND1	2.37	0.87
17:Q:188:ALA:HB3	17:Q:384:GLN:HB3	1.55	0.87
1:A:543:LEU:O	17:Q:34:VAL:O	1.92	0.87
16:P:21:GLN:CB	18:R:139:GLU:CD	2.42	0.87
18:R:250:LEU:CD2	18:R:308:PHE:CD2	2.57	0.87
3:C:229:LEU:O	3:C:293:ARG:NH1	2.07	0.87
1:A:436:ALA:O	1:A:439:ASP:C	2.11	0.87
14:N:86:ASP:O	14:N:141:GLU:HG2	1.71	0.87
18:R:250:LEU:CD2	18:R:308:PHE:HD2	1.86	0.87
16:P:350:THR:HG21	18:R:156:LYS:N	1.88	0.87
1:A:1313:LEU:CD2	1:A:1462:PHE:HZ	1.88	0.87
2:B:1002:LYS:HD3	14:N:166:LEU:C	1.93	0.87
1:A:1482:LYS:CD	2:B:304:ASP:OD1	2.22	0.87
15:O:376:TYR:CZ	15:O:377:TYR:CZ	2.63	0.87
15:O:376:TYR:HE1	15:O:588:LEU:HD22	1.38	0.87
18:R:173:MET:HG3	18:R:188:PHE:HZ	1.36	0.87
16:P:185:GLN:O	18:R:195:LEU:HD13	1.75	0.87
16:P:186:TYR:HD1	18:R:196:GLU:O	1.53	0.87
18:R:247:ILE:HB	18:R:249:SER:OG	1.75	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:399:TRP:CZ2	18:R:87:VAL:CG2	2.57	0.87
1:A:1484:LEU:HD23	2:B:304:ASP:HB3	1.56	0.87
16:P:694:ILE:HB	16:P:746:ARG:HD3	1.54	0.87
17:Q:375:LEU:HD21	18:R:231:LEU:HD11	0.88	0.87
16:P:197:ARG:HD2	16:P:261:VAL:N	1.89	0.87
16:P:438:TRP:HB2	18:R:141:TRP:CZ2	2.09	0.87
17:Q:29:CYS:SG	17:Q:33:HIS:HB2	2.15	0.87
2:B:143:TRP:CE2	2:B:446:MET:CB	2.58	0.87
2:B:800:TYR:OH	2:B:908:ARG:NH2	2.07	0.87
2:B:679:GLN:CG	14:N:156:PRO:CA	2.43	0.87
16:P:475:ARG:HH22	17:Q:360:LYS:HD2	1.38	0.87
1:A:1056:ASP:HA	1:A:1179:ILE:HD13	1.57	0.86
1:A:413:LEU:O	1:A:416:ARG:HG2	1.73	0.86
2:B:1072:GLY:N	2:B:1075:GLU:HG2	1.80	0.86
2:B:1151:ILE:HG12	7:G:21:LYS:NZ	1.88	0.86
2:B:149:GLU:OE1	2:B:441:LYS:CE	2.23	0.86
1:A:1085:LEU:HD22	6:F:84:TYR:OH	1.74	0.86
11:K:66:VAL:HG12	11:K:67:GLU:HG2	1.57	0.86
15:O:243:GLU:OE1	15:O:328:LEU:CD2	2.08	0.86
1:A:547:ILE:CG1	17:Q:26:ARG:HH22	1.87	0.86
15:O:181:ARG:HB2	15:O:181:ARG:HH11	1.41	0.86
1:A:1322:ILE:HD12	1:A:1457:ILE:HD12	1.58	0.86
2:B:145:VAL:CG1	2:B:441:LYS:HG2	2.04	0.86
1:A:756:LYS:CG	9:I:85:LYS:NZ	2.38	0.86
1:A:1317:ILE:HG22	1:A:1460:TYR:CE1	2.09	0.86
15:O:238:ILE:O	15:O:242:VAL:HG23	1.75	0.86
1:A:477:ASN:ND2	2:B:1049:THR:OG1	2.09	0.86
17:Q:381:MET:CE	18:R:212:HIS:HA	2.06	0.86
18:R:301:SER:C	18:R:358:PHE:CZ	2.48	0.86
1:A:478:TYR:CD1	2:B:1048:SER:O	2.29	0.86
15:O:248:LEU:HD11	15:O:598:PHE:CD2	1.86	0.86
16:P:186:TYR:O	18:R:195:LEU:HA	1.75	0.86
17:Q:409:ALA:O	17:Q:413:LEU:HB2	1.74	0.86
18:R:310:ILE:HB	18:R:363:GLU:OE2	1.73	0.86
1:A:1314:GLN:NE2	1:A:1446:ARG:CZ	2.38	0.86
15:O:247:GLU:OE1	15:O:325:ILE:CB	2.20	0.86
1:A:436:ALA:CA	1:A:439:ASP:O	2.24	0.86
17:Q:194:GLN:HG2	18:R:209:ARG:HH11	1.40	0.86
16:P:438:TRP:NE1	18:R:297:PHE:CZ	1.75	0.86
1:A:1326:GLU:OE2	1:A:1454:HIS:CA	2.24	0.85
1:A:998:HIS:O	2:B:712:SER:OG	1.92	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:143:TRP:CE2	2:B:446:MET:CG	2.58	0.85
15:O:200:ASN:HB2	17:Q:14:ASN:HA	1.58	0.85
1:A:613:THR:HG21	2:B:913:ILE:HG21	1.57	0.85
2:B:849:GLY:HA3	12:L:60:ARG:NH2	1.89	0.85
7:G:241:ARG:HH11	15:O:189:PHE:HB3	1.40	0.85
1:A:1262:LEU:CD2	1:A:1497:ILE:HG12	2.06	0.85
2:B:207:ILE:HD11	2:B:503:VAL:CG2	2.03	0.85
3:C:293:ARG:N	3:C:295:ARG:NH1	2.23	0.85
7:G:159:LYS:CA	15:O:105:ASN:ND2	2.38	0.85
3:C:293:ARG:H	3:C:295:ARG:NH1	1.72	0.85
3:C:37:LYS:O	11:K:134:LYS:NZ	2.09	0.85
1:A:1032:VAL:HG21	1:A:1050:TYR:CD1	2.11	0.85
1:A:1330:VAL:HG21	1:A:1455:ARG:NE	1.91	0.85
15:O:240:ILE:HG22	15:O:380:SER:HB2	1.58	0.85
15:O:200:ASN:HB2	17:Q:14:ASN:HB2	0.96	0.85
3:C:58:ASN:HA	3:C:296:ASN:HD22	1.38	0.85
2:B:894:LYS:CD	12:L:47:ARG:NE	2.40	0.85
2:B:985:ILE:HB	14:N:160:VAL:HG22	1.59	0.85
3:C:272:LYS:N	14:N:175:TYR:CE1	2.35	0.85
17:Q:101:LYS:HG2	17:Q:152:LEU:HD11	1.58	0.85
1:A:1650:GLY:C	1:A:1652:GLY:H	1.79	0.85
1:A:408:LYS:HA	1:A:411:VAL:HB	1.55	0.85
6:F:74:ILE:O	7:G:95:LEU:HD13	1.72	0.85
13:M:102:SER:CB	13:M:105:SER:CB	2.02	0.85
15:O:200:ASN:CG	17:Q:14:ASN:CG	2.34	0.85
17:Q:414:TYR:HE1	18:R:240:ILE:CG2	1.89	0.85
18:R:224:VAL:HG21	18:R:256:GLU:HG3	1.57	0.85
1:A:564:PRO:CG	15:O:370:THR:O	2.25	0.85
2:B:143:TRP:CE2	2:B:446:MET:HG3	2.11	0.85
7:G:144:HIS:ND1	15:O:146:SER:OG	2.10	0.85
18:R:201:SER:O	18:R:205:VAL:HG23	1.75	0.85
1:A:399:LEU:HD21	1:A:423:LEU:HG	1.59	0.85
17:Q:414:TYR:CD1	18:R:240:ILE:HG13	2.11	0.85
1:A:422:ARG:HH12	18:R:412:ARG:CD	1.87	0.84
2:B:1069:ILE:O	2:B:1070:ARG:HB3	1.76	0.84
15:O:181:ARG:HH11	15:O:181:ARG:CB	1.89	0.84
1:A:475:ARG:CZ	2:B:1061:LYS:CB	2.56	0.84
1:A:474:LYS:HZ2	2:B:1092:LEU:HD23	1.40	0.84
1:A:990:ILE:HD12	1:A:994:GLU:O	1.77	0.84
15:O:247:GLU:OE1	15:O:325:ILE:CA	2.25	0.84
1:A:938:VAL:CG2	9:I:82:ILE:HD13	2.07	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:623:ASP:O	2:B:648:ARG:NH1	2.10	0.84
16:P:438:TRP:CB	18:R:141:TRP:CZ2	2.60	0.84
7:G:141:SER:HB3	15:O:142:ILE:HD11	1.58	0.84
15:O:248:LEU:CD1	15:O:598:PHE:HE2	1.54	0.84
3:C:322:LYS:HE3	11:K:129:ASP:OD1	1.77	0.84
6:F:72:LYS:CB	6:F:142:SER:HB2	2.05	0.84
1:A:878:ARG:CG	9:I:67:VAL:CG1	2.55	0.84
2:B:346:ASP:OD1	13:M:113:ILE:HG23	1.76	0.84
1:A:475:ARG:NH2	2:B:1061:LYS:HB2	1.92	0.84
13:M:102:SER:CB	13:M:105:SER:H	1.90	0.84
2:B:1089:GLN:CG	2:B:1093:LEU:HB2	2.06	0.84
2:B:848:ILE:CA	12:L:60:ARG:HD2	2.08	0.84
2:B:346:ASP:H	13:M:113:ILE:HG12	1.40	0.84
1:A:1032:VAL:HG21	1:A:1050:TYR:CE1	2.12	0.84
2:B:894:LYS:CG	12:L:54:ARG:CZ	2.56	0.84
7:G:241:ARG:NH1	15:O:189:PHE:HB3	1.92	0.84
16:P:391:THR:CG2	18:R:149:LYS:CG	2.48	0.84
18:R:168:ILE:HG23	18:R:169:PRO:HD3	1.58	0.84
18:R:229:TRP:CE2	18:R:259:ASP:O	2.31	0.84
2:B:399:HIS:O	2:B:400:GLN:HG2	1.77	0.83
1:A:1276:THR:C	9:I:44:ASN:HA	1.99	0.83
17:Q:374:THR:HG23	18:R:219:LEU:CG	2.00	0.83
1:A:475:ARG:HB3	2:B:1059:PRO:HB2	1.57	0.83
2:B:1089:GLN:CB	2:B:1093:LEU:HD22	2.09	0.83
16:P:389:TRP:CZ3	18:R:149:LYS:O	2.32	0.83
1:A:544:VAL:HG13	17:Q:32:GLY:O	1.79	0.83
17:Q:375:LEU:CD2	18:R:231:LEU:CD1	2.33	0.83
1:A:629:ASP:OD1	2:B:926:VAL:HG23	1.79	0.83
2:B:119:ARG:CZ	12:L:53:HIS:CE1	2.61	0.83
3:C:59:ILE:O	3:C:296:ASN:HB2	1.78	0.83
7:G:144:HIS:NE2	15:O:145:SER:C	2.31	0.83
15:O:245:GLN:NE2	15:O:379:ARG:HB2	1.93	0.83
18:R:199:LYS:NZ	18:R:204:GLU:HA	1.93	0.83
17:Q:194:GLN:HE21	18:R:209:ARG:NE	1.76	0.83
1:A:506:THR:CA	1:A:579:ARG:O	2.26	0.83
1:A:672:ASP:OD1	2:B:777:SER:OG	1.96	0.83
18:R:362:ALA:HB2	18:R:421:LYS:HB3	1.59	0.83
1:A:407:GLN:HB3	1:A:409:ASP:H	1.43	0.83
1:A:435:ASN:CB	1:A:442:LYS:HB3	2.08	0.83
16:P:475:ARG:HH22	17:Q:360:LYS:CD	1.91	0.83
18:R:82:ARG:NH1	18:R:291:ARG:CA	2.39	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:159:LYS:H	15:O:105:ASN:CG	1.82	0.83
2:B:1002:LYS:HD2	14:N:166:LEU:CB	2.09	0.83
1:A:566:SER:HB2	15:O:235:GLU:OE2	1.74	0.83
1:A:422:ARG:NH1	18:R:412:ARG:CD	2.42	0.83
1:A:478:TYR:O	1:A:479:ALA:HB2	1.79	0.83
6:F:74:ILE:O	7:G:95:LEU:HD12	1.79	0.83
1:A:966:LEU:CD2	1:A:997:PHE:CE1	2.61	0.82
2:B:1049:THR:HG23	2:B:1050:GLY:N	1.92	0.82
1:A:1655:ASP:HB2	6:F:135:ARG:HB3	1.58	0.82
7:G:24:VAL:HG11	7:G:126:GLN:NE2	1.95	0.82
16:P:323:ASN:HA	16:P:350:THR:HA	1.61	0.82
1:A:824:THR:O	2:B:1023:ARG:N	2.12	0.82
2:B:25:PHE:CE1	10:J:59:LYS:HD2	2.13	0.82
2:B:566:TYR:HB3	13:M:74:ASN:OD1	1.79	0.82
16:P:186:TYR:C	18:R:195:LEU:HD22	2.00	0.82
1:A:999:CYS:HA	2:B:712:SER:HB3	1.57	0.82
1:A:1297:PHE:CE2	9:I:60:LEU:HD22	2.13	0.82
17:Q:20:TRP:CE3	17:Q:22:ILE:HG23	2.15	0.82
1:A:670:ILE:CG1	2:B:783:MET:HE2	2.09	0.82
2:B:550:ARG:O	2:B:649:MET:HA	1.79	0.82
15:O:376:TYR:CE1	15:O:419:LYS:HE2	2.15	0.82
17:Q:15:CYS:HB3	17:Q:16:PRO:HA	1.60	0.82
1:A:535:GLN:HE21	17:Q:26:ARG:HD3	1.44	0.82
16:P:486:ALA:HB1	18:R:137:SER:OG	1.79	0.82
18:R:252:GLY:O	18:R:256:GLU:HB2	1.79	0.82
1:A:1276:THR:OG1	9:I:45:LEU:HD13	1.78	0.82
1:A:1322:ILE:HG21	1:A:1454:HIS:CE1	2.08	0.82
1:A:473:GLY:HA2	2:B:1072:GLY:HA2	1.60	0.82
3:C:253:PRO:CD	14:N:180:PHE:CB	1.85	0.82
1:A:719:ILE:HG12	8:H:97:MET:HG2	1.62	0.82
18:R:426:VAL:HG12	18:R:428:SER:H	1.45	0.82
1:A:478:TYR:CG	2:B:1048:SER:O	2.33	0.82
2:B:49:PHE:CE2	2:B:194:PHE:CZ	2.68	0.82
13:M:102:SER:O	13:M:105:SER:C	2.17	0.82
2:B:679:GLN:CD	14:N:157:ARG:CA	2.48	0.82
1:A:718:THR:O	8:H:98:TYR:N	2.11	0.82
2:B:1092:LEU:HA	2:B:1096:SER:CB	2.09	0.82
2:B:985:ILE:HB	14:N:160:VAL:HG21	1.59	0.82
2:B:566:TYR:HD2	13:M:73:SER:HG	1.20	0.82
16:P:186:TYR:CE1	18:R:196:GLU:O	2.32	0.82
1:A:966:LEU:CD2	1:A:997:PHE:CZ	2.62	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:828:CYS:HB3	2:B:1027:TYR:HB2	1.60	0.82
2:B:610:TYR:HE1	2:B:658:LEU:HD11	1.44	0.82
2:B:889:GLY:CA	12:L:54:ARG:O	2.28	0.82
3:C:103:LEU:O	10:J:6:ARG:NE	2.11	0.82
6:F:70:LYS:HG2	7:G:95:LEU:HG	1.62	0.82
7:G:159:LYS:N	15:O:105:ASN:HD21	1.50	0.82
15:O:584:GLN:OE1	15:O:584:GLN:N	2.11	0.82
17:Q:15:CYS:HB3	17:Q:16:PRO:C	1.98	0.82
16:P:438:TRP:CG	18:R:141:TRP:HZ2	1.97	0.82
18:R:15:GLN:CD	18:R:184:ASN:ND2	2.29	0.82
2:B:145:VAL:HG11	2:B:441:LYS:CG	2.09	0.81
2:B:679:GLN:CD	14:N:157:ARG:HA	1.99	0.81
16:P:436:ILE:CG2	18:R:143:THR:CA	2.57	0.81
18:R:229:TRP:HH2	18:R:259:ASP:HB2	1.33	0.81
13:M:61:GLU:OE2	13:M:106:LYS:CE	2.13	0.81
17:Q:188:ALA:HB1	17:Q:384:GLN:HG3	1.61	0.81
18:R:82:ARG:NH1	18:R:291:ARG:N	2.27	0.81
1:A:995:TYR:CE2	2:B:708:ASP:CA	2.56	0.81
1:A:615:ARG:NH1	2:B:929:ARG:NE	2.28	0.81
6:F:74:ILE:C	7:G:95:LEU:HD11	2.01	0.81
16:P:355:GLU:O	18:R:24:ILE:HD12	1.80	0.81
18:R:25:ASN:CB	18:R:81:GLU:OE2	2.26	0.81
2:B:207:ILE:HG12	2:B:503:VAL:HG21	1.61	0.81
2:B:682:GLN:HA	14:N:154:ARG:NH2	1.92	0.81
18:R:233:TYR:CZ	18:R:263:ASN:HB2	2.14	0.81
1:A:1603:MET:HE2	1:A:1615:TYR:CD2	2.15	0.81
1:A:474:LYS:HZ3	2:B:1096:SER:CB	1.93	0.81
2:B:1093:LEU:CG	2:B:1094:ASN:OD1	2.29	0.81
2:B:266:LYS:HE3	2:B:473:GLN:C	1.99	0.81
2:B:776:ILE:HB	2:B:1026:ILE:HD13	1.60	0.81
3:C:334:THR:CG2	11:K:44:ARG:HB3	2.09	0.81
1:A:721:LYS:NZ	8:H:91:ASP:HA	1.96	0.81
16:P:198:ASP:HB3	16:P:205:TYR:O	1.79	0.81
17:Q:414:TYR:HD1	18:R:240:ILE:CG1	1.92	0.81
1:A:615:ARG:NH2	2:B:929:ARG:HG2	1.94	0.81
1:A:480:ALA:HB2	2:B:1046:VAL:HG23	1.60	0.81
2:B:894:LYS:O	2:B:896:GLN:N	2.11	0.81
3:C:272:LYS:CB	14:N:175:TYR:CE1	2.64	0.81
7:G:144:HIS:HD2	15:O:146:SER:HA	1.42	0.81
17:Q:351:ASN:CB	17:Q:369:TRP:CZ2	2.62	0.81
1:A:1180:ASN:OD1	6:F:87:LYS:CD	2.25	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1575:ILE:CA	9:I:122:ARG:NH1	2.43	0.81
1:A:756:LYS:CD	9:I:85:LYS:HZ3	1.69	0.81
13:M:102:SER:HB3	13:M:105:SER:CA	2.09	0.81
15:O:342:HIS:CE1	15:O:346:GLN:HE21	1.98	0.81
17:Q:20:TRP:HZ3	17:Q:22:ILE:HG22	0.65	0.81
17:Q:374:THR:HG22	18:R:219:LEU:HD13	0.83	0.81
17:Q:198:ILE:HG21	17:Q:388:THR:CG2	2.11	0.81
17:Q:188:ALA:CB	17:Q:384:GLN:HB3	2.10	0.81
17:Q:414:TYR:HE1	18:R:240:ILE:HG23	1.03	0.81
1:A:545:SER:CB	17:Q:34:VAL:HG23	2.08	0.81
2:B:1003:ALA:O	14:N:170:HIS:CA	2.29	0.81
6:F:73:ALA:HA	6:F:143:PHE:O	1.80	0.81
2:B:850:THR:N	12:L:60:ARG:HH22	1.78	0.81
14:N:87:TYR:CE2	14:N:141:GLU:OE1	2.34	0.81
17:Q:389:GLN:HG3	18:R:209:ARG:NH1	1.85	0.81
2:B:75:ASP:HB3	2:B:440:PHE:CD2	2.15	0.81
1:A:862:THR:HG22	9:I:67:VAL:CG1	2.10	0.81
18:R:304:HIS:CD2	18:R:361:ASP:OD1	2.34	0.81
1:A:984:GLY:N	1:A:994:GLU:OE2	2.13	0.80
18:R:250:LEU:CD1	18:R:298:GLN:CG	2.49	0.80
1:A:1330:VAL:CG2	1:A:1455:ARG:NE	2.44	0.80
1:A:477:ASN:HA	2:B:1047:ARG:NH1	1.95	0.80
2:B:208:VAL:HG23	2:B:401:GLU:HG2	1.64	0.80
16:P:321:LYS:HD3	16:P:321:LYS:H	1.46	0.80
17:Q:378:LEU:CD1	18:R:235:ILE:CD1	2.60	0.80
18:R:224:VAL:HG21	18:R:256:GLU:CG	2.10	0.80
1:A:1329:ILE:CG2	1:A:1456:PHE:CZ	2.64	0.80
1:A:1657:LEU:HB2	6:F:133:VAL:HB	1.62	0.80
1:A:990:ILE:O	1:A:992:PRO:N	2.14	0.80
2:B:975:HIS:ND1	14:N:169:GLU:HG3	1.96	0.80
18:R:206:ARG:H	18:R:206:ARG:HE	1.26	0.80
2:B:551:ILE:HA	2:B:648:ARG:O	1.82	0.80
2:B:794:ASP:OD1	2:B:911:PRO:HD2	1.81	0.80
1:A:1575:ILE:CB	9:I:122:ARG:NH1	2.44	0.80
1:A:1049:MET:HG3	1:A:1053:ASP:N	1.97	0.80
1:A:1326:GLU:CD	1:A:1454:HIS:C	2.39	0.80
1:A:1120:TYR:O	5:E:207:ARG:NH2	2.12	0.80
1:A:477:ASN:C	2:B:1047:ARG:HD3	2.01	0.80
2:B:143:TRP:HB2	2:B:446:MET:HE3	0.82	0.80
2:B:68:ILE:HG23	2:B:71:LYS:NZ	1.84	0.80
2:B:681:ILE:HB	14:N:154:ARG:CG	2.12	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:347:ASP:O	18:R:351:GLU:HB2	1.81	0.80
1:A:990:ILE:CD1	1:A:995:TYR:CA	2.60	0.80
1:A:476:VAL:HG22	2:B:1070:ARG:N	1.97	0.80
1:A:581:ILE:HD12	1:A:637:PHE:CE1	2.17	0.80
2:B:29:PRO:HB2	2:B:177:PRO:HG2	1.62	0.80
2:B:567:SER:O	14:N:140:SER:HB3	1.81	0.80
17:Q:351:ASN:CA	17:Q:369:TRP:HH2	1.92	0.80
1:A:954:GLY:CA	1:A:1205:PHE:CB	2.59	0.80
12:L:34:CYS:HB3	12:L:51:CYS:SG	2.21	0.80
17:Q:378:LEU:HD23	18:R:216:LEU:CD2	2.08	0.80
16:P:357:LEU:HD11	18:R:23:TYR:HD1	1.45	0.80
1:A:1038:ILE:HD11	1:A:1050:TYR:HA	1.64	0.80
1:A:458:GLN:O	1:A:462:LYS:CB	2.26	0.80
16:P:438:TRP:CB	18:R:141:TRP:HZ2	1.94	0.80
1:A:478:TYR:O	1:A:479:ALA:CB	2.29	0.79
15:O:235:GLU:O	15:O:238:ILE:HD12	1.81	0.79
3:C:272:LYS:HA	14:N:175:TYR:CE2	2.14	0.79
18:R:224:VAL:HG21	18:R:256:GLU:CD	2.02	0.79
17:Q:418:PRO:HG2	18:R:233:TYR:OH	1.83	0.79
16:P:498:LEU:CD1	17:Q:364:SER:OG	2.28	0.79
16:P:775:TRP:H	17:Q:109:GLN:HE22	1.28	0.79
16:P:472:ARG:CD	18:R:198:LEU:O	2.29	0.79
1:A:952:LEU:CD2	1:A:1004:GLU:HG3	2.07	0.79
1:A:535:GLN:NE2	17:Q:26:ARG:CD	2.34	0.79
1:A:721:LYS:HB3	8:H:96:VAL:HB	1.64	0.79
2:B:796:ARG:HD2	10:J:8:PHE:HA	1.61	0.79
15:O:579:LEU:CA	15:O:582:ARG:HB3	2.11	0.79
1:A:435:ASN:O	1:A:439:ASP:C	2.21	0.79
15:O:234:ILE:HG23	15:O:237:ILE:CG1	2.06	0.79
1:A:1049:MET:HG2	1:A:1052:GLY:CA	2.13	0.79
1:A:1310:LYS:HD3	1:A:1310:LYS:H	1.45	0.79
1:A:671:GLN:OE1	2:B:952:HIS:HB2	1.83	0.79
14:N:87:TYR:HA	14:N:141:GLU:HA	0.81	0.79
1:A:403:LEU:HD11	1:A:419:ILE:HG21	0.85	0.79
1:A:862:THR:HA	9:I:67:VAL:HA	1.65	0.79
6:F:66:ARG:HH22	7:G:90:LEU:CD1	1.94	0.79
13:M:102:SER:C	13:M:105:SER:H	1.86	0.79
16:P:438:TRP:CB	18:R:141:TRP:HE1	1.94	0.79
17:Q:188:ALA:HB2	18:R:208:TYR:CZ	2.17	0.79
1:A:991:LYS:N	1:A:994:GLU:CG	2.30	0.79
1:A:407:GLN:CB	1:A:409:ASP:H	1.94	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:527:PHE:HZ	2:B:666:PRO:HA	1.39	0.78
17:Q:378:LEU:CD2	18:R:216:LEU:CD2	2.60	0.78
1:A:399:LEU:HD23	1:A:423:LEU:HD23	1.63	0.78
1:A:472:MET:HG3	2:B:1073:GLU:OE1	1.82	0.78
1:A:1482:LYS:HD2	2:B:307:GLU:OE1	1.81	0.78
2:B:551:ILE:HG23	2:B:648:ARG:H	1.48	0.78
2:B:697:LEU:HB2	2:B:702:ASN:CG	2.03	0.78
18:R:316:SER:HB3	18:R:349:ILE:HD11	1.66	0.78
1:A:532:GLY:C	1:A:580:HIS:HD1	1.86	0.78
17:Q:389:GLN:CB	18:R:209:ARG:NH2	2.47	0.78
2:B:75:ASP:CB	2:B:440:PHE:CZ	2.66	0.78
1:A:862:THR:HA	9:I:67:VAL:CA	2.13	0.78
14:N:88:LYS:N	14:N:140:SER:O	2.15	0.78
1:A:83:VAL:HG11	1:A:427:PHE:CZ	2.19	0.78
1:A:990:ILE:HG13	1:A:995:TYR:CA	2.14	0.78
2:B:49:PHE:CE2	2:B:194:PHE:HZ	2.01	0.78
18:R:313:LEU:CD1	18:R:353:VAL:CG2	2.62	0.78
2:B:143:TRP:CZ2	2:B:446:MET:HA	2.18	0.78
1:A:878:ARG:CB	9:I:67:VAL:HG11	2.05	0.78
15:O:201:LYS:HD2	15:O:239:SER:OG	1.82	0.78
1:A:1049:MET:CG	1:A:1052:GLY:CA	2.62	0.78
2:B:532:HIS:NE2	2:B:723:LYS:NZ	2.31	0.78
6:F:66:ARG:NH2	7:G:90:LEU:HD13	1.98	0.78
1:A:862:THR:HA	9:I:67:VAL:CB	2.12	0.78
16:P:187:ILE:HG23	18:R:195:LEU:HD22	1.62	0.78
1:A:996:TYR:CE2	2:B:530:PRO:HG3	2.19	0.78
3:C:253:PRO:CD	14:N:180:PHE:HD1	1.90	0.78
1:A:1600:ARG:NE	1:A:1616:GLU:OE1	2.16	0.78
2:B:143:TRP:CH2	2:B:446:MET:HA	2.19	0.78
7:G:159:LYS:H	15:O:105:ASN:HD21	0.80	0.78
15:O:186:SER:O	15:O:190:ILE:HG22	1.84	0.78
15:O:435:SER:OG	15:O:438:GLN:HG3	1.84	0.78
17:Q:26:ARG:CB	17:Q:34:VAL:CG1	2.53	0.78
18:R:301:SER:HA	18:R:358:PHE:CE1	2.18	0.78
18:R:414:PHE:HA	18:R:417:ILE:HG22	1.66	0.78
2:B:25:PHE:O	10:J:62:ARG:HD2	1.83	0.77
2:B:207:ILE:HD11	2:B:503:VAL:HG11	1.66	0.77
17:Q:351:ASN:HA	17:Q:369:TRP:CH2	2.19	0.77
1:A:1032:VAL:CG2	1:A:1050:TYR:CD1	2.67	0.77
1:A:88:PRO:HG3	1:A:434:VAL:HG12	1.65	0.77
15:O:155:SER:HA	15:O:158:LEU:HD12	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:24:SER:CB	18:R:318:ILE:HD11	2.14	0.77
17:Q:12:THR:OG1	17:Q:33:HIS:ND1	2.17	0.77
1:A:435:ASN:CB	1:A:442:LYS:HB2	2.11	0.77
2:B:527:PHE:CD2	2:B:666:PRO:HB3	2.19	0.77
2:B:679:GLN:CG	14:N:155:VAL:O	2.32	0.77
7:G:143:SER:CB	15:O:104:ILE:CG2	2.17	0.77
16:P:245:ILE:HG12	16:P:269:PHE:HB2	1.66	0.77
16:P:475:ARG:HH22	17:Q:360:LYS:CE	1.96	0.77
16:P:352:PHE:CD1	18:R:157:MET:CG	2.66	0.77
18:R:199:LYS:CE	18:R:203:SER:C	2.52	0.77
2:B:878:GLU:OE2	2:B:909:ARG:NH1	2.17	0.77
2:B:46:ILE:HA	2:B:164:MET:SD	2.25	0.77
2:B:202:LEU:HD11	2:B:499:HIS:HB3	1.67	0.77
2:B:184:LYS:HB3	2:B:735:HIS:ND1	1.99	0.77
3:C:315:PHE:CE2	11:K:139:ILE:HD12	2.20	0.77
1:A:1484:LEU:CD2	2:B:304:ASP:HB3	2.14	0.77
16:P:200:THR:HG21	16:P:280:ARG:NH1	1.99	0.77
16:P:438:TRP:CE2	18:R:297:PHE:CE1	2.73	0.77
16:P:698:LYS:HE2	17:Q:124:ARG:HH21	1.50	0.77
17:Q:378:LEU:CG	18:R:219:LEU:HD12	2.13	0.77
1:A:1657:LEU:HD23	7:G:104:LEU:HB3	1.65	0.77
1:A:620:ASN:OD1	1:A:667:ARG:NH2	2.17	0.77
1:A:1484:LEU:HD23	2:B:304:ASP:CB	2.15	0.77
2:B:743:ARG:NH2	10:J:60:PHE:CE2	2.52	0.77
17:Q:17:SER:O	17:Q:29:CYS:CB	2.30	0.77
1:A:1204:THR:HG21	9:I:97:HIS:HB3	1.66	0.77
1:A:953:GLU:O	1:A:1205:PHE:CG	2.38	0.77
2:B:1096:SER:O	2:B:1097:ASP:HB3	1.84	0.77
2:B:346:ASP:N	13:M:113:ILE:HG12	1.99	0.77
2:B:73:ILE:HD12	2:B:425:ILE:HG23	1.67	0.77
7:G:144:HIS:CD2	15:O:146:SER:OG	2.37	0.77
17:Q:418:PRO:HD2	18:R:233:TYR:HH	0.94	0.77
2:B:679:GLN:CG	14:N:156:PRO:HA	2.14	0.77
2:B:894:LYS:HG3	12:L:54:ARG:CZ	2.15	0.77
3:C:142:ARG:CZ	10:J:67:GLU:OE2	2.33	0.77
15:O:376:TYR:CG	15:O:419:LYS:HE2	2.19	0.77
18:R:250:LEU:HD23	18:R:308:PHE:HD2	1.49	0.77
16:P:475:ARG:HH11	18:R:1:MET:HB3	1.50	0.76
17:Q:381:MET:SD	18:R:212:HIS:CD2	2.78	0.76
16:P:447:THR:HG21	18:R:197:PRO:HD2	1.64	0.76
18:R:316:SER:HB2	18:R:349:ILE:HD13	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1089:GLN:CG	2:B:1093:LEU:CD1	2.59	0.76
2:B:119:ARG:NH2	12:L:53:HIS:CE1	2.52	0.76
1:A:409:ASP:OD1	1:A:410:LYS:N	2.19	0.76
16:P:475:ARG:NH2	17:Q:360:LYS:HD2	1.99	0.76
1:A:547:ILE:HG13	17:Q:26:ARG:HH22	1.48	0.76
1:A:999:CYS:HA	2:B:712:SER:OG	1.86	0.76
1:A:672:ASP:CG	2:B:777:SER:HB3	2.04	0.76
2:B:563:SER:CB	13:M:73:SER:HB3	2.16	0.76
16:P:405:TYR:CE1	16:P:414:ILE:HG23	2.19	0.76
1:A:422:ARG:HE	18:R:409:HIS:CE1	2.02	0.76
2:B:415:GLU:OE2	2:B:474:SER:OG	2.02	0.76
6:F:72:LYS:HD3	6:F:142:SER:HB3	1.61	0.76
16:P:186:TYR:CE1	18:R:196:GLU:CB	2.66	0.76
17:Q:371:GLU:OE2	18:R:228:ASN:ND2	2.18	0.76
15:O:248:LEU:CD1	15:O:598:PHE:HD2	1.52	0.76
17:Q:15:CYS:CB	17:Q:16:PRO:CA	2.62	0.76
17:Q:389:GLN:HB2	18:R:209:ARG:NH2	1.95	0.76
17:Q:188:ALA:CB	17:Q:384:GLN:HG3	2.12	0.76
18:R:177:LEU:HD22	18:R:185:LYS:HG2	1.66	0.76
1:A:474:LYS:NZ	2:B:1096:SER:CB	2.49	0.76
1:A:1657:LEU:N	6:F:133:VAL:O	2.17	0.76
1:A:953:GLU:CG	1:A:1205:PHE:CE2	2.69	0.76
1:A:493:ASN:HB3	1:A:654:ASP:OD1	1.85	0.76
2:B:679:GLN:CD	14:N:157:ARG:N	2.39	0.76
15:O:379:ARG:HA	15:O:379:ARG:NH1	1.99	0.76
1:A:472:MET:HA	1:A:472:MET:CE	2.16	0.75
2:B:1003:ALA:O	14:N:170:HIS:HB3	1.85	0.75
15:O:235:GLU:O	15:O:238:ILE:CD1	2.33	0.75
1:A:1313:LEU:CG	1:A:1462:PHE:HZ	1.99	0.75
8:H:80:ARG:HG3	11:K:108:TYR:CZ	2.21	0.75
7:G:144:HIS:CG	15:O:146:SER:CB	2.69	0.75
15:O:376:TYR:OH	15:O:588:LEU:CD2	2.35	0.75
18:R:180:CYS:O	18:R:185:LYS:HE3	1.86	0.75
15:O:245:GLN:HE21	15:O:245:GLN:HA	1.51	0.75
17:Q:414:TYR:CD1	18:R:240:ILE:CG2	2.70	0.75
1:A:408:LYS:HB2	1:A:411:VAL:HB	1.68	0.75
7:G:143:SER:HB2	15:O:104:ILE:CB	2.15	0.75
16:P:197:ARG:CD	16:P:261:VAL:N	2.49	0.75
1:A:1050:TYR:HB3	1:A:1054:ALA:HA	1.69	0.75
2:B:1089:GLN:CD	2:B:1093:LEU:HD13	2.07	0.75
1:A:382:GLN:HE21	1:A:456:VAL:HG22	1.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:475:ARG:NH2	2:B:1061:LYS:CG	2.49	0.75
16:P:324:TRP:HZ2	18:R:152:ILE:CD1	1.90	0.75
17:Q:22:ILE:CG1	17:Q:24:ASP:OD2	2.34	0.75
17:Q:188:ALA:CB	17:Q:384:GLN:HG2	2.09	0.75
1:A:921:PRO:HD3	8:H:19:ARG:HG2	1.68	0.75
16:P:480:VAL:HB	16:P:492:LEU:HD21	1.68	0.75
17:Q:22:ILE:HD11	17:Q:24:ASP:OD2	1.86	0.75
17:Q:410:ARG:HA	17:Q:413:LEU:HB3	1.69	0.75
1:A:670:ILE:CG1	2:B:783:MET:CE	2.65	0.75
6:F:72:LYS:O	6:F:143:PHE:N	2.20	0.75
16:P:598:LEU:HD23	16:P:601:ARG:HD2	1.68	0.75
17:Q:374:THR:CG2	18:R:219:LEU:HD11	1.93	0.75
1:A:1603:MET:CE	1:A:1615:TYR:CD2	2.69	0.74
3:C:100:ARG:NH2	10:J:3:VAL:O	2.20	0.74
17:Q:22:ILE:CD1	17:Q:26:ARG:CZ	2.65	0.74
18:R:82:ARG:HH12	18:R:291:ARG:N	1.83	0.74
6:F:72:LYS:HD2	6:F:142:SER:HB3	0.77	0.74
7:G:144:HIS:CD2	15:O:146:SER:N	2.55	0.74
1:A:403:LEU:CD1	1:A:419:ILE:HD13	2.17	0.74
1:A:581:ILE:HD12	1:A:637:PHE:CZ	2.21	0.74
1:A:990:ILE:CG1	1:A:994:GLU:HB2	2.16	0.74
15:O:243:GLU:CB	15:O:332:LEU:HD13	2.17	0.74
17:Q:3:THR:O	17:Q:20:TRP:HB3	1.87	0.74
1:A:406:LEU:HB3	1:A:408:LYS:H	1.53	0.74
3:C:322:LYS:CE	11:K:129:ASP:OD1	2.35	0.74
7:G:142:ALA:CB	15:O:102:SER:O	2.35	0.74
16:P:436:ILE:CG2	18:R:143:THR:HA	2.15	0.74
17:Q:374:THR:HG21	18:R:219:LEU:HD22	0.78	0.74
2:B:345:SER:HA	13:M:113:ILE:CG1	2.17	0.74
17:Q:188:ALA:CB	17:Q:384:GLN:CB	2.64	0.74
2:B:1092:LEU:O	2:B:1096:SER:CB	2.36	0.74
2:B:497:ILE:HG12	2:B:699:ILE:HD13	1.68	0.74
15:O:62:ASP:HB3	15:O:67:ASP:OD2	1.86	0.74
1:A:1049:MET:HG2	1:A:1052:GLY:O	1.84	0.74
1:A:1204:THR:CG2	9:I:97:HIS:HB3	2.17	0.74
1:A:1298:ASP:O	1:A:1301:GLU:N	2.20	0.74
1:A:474:LYS:H	2:B:1070:ARG:HG3	1.51	0.74
1:A:615:ARG:HH21	2:B:781:TYR:HD2	1.36	0.74
2:B:25:PHE:O	10:J:62:ARG:CD	2.35	0.74
2:B:527:PHE:CZ	2:B:666:PRO:CB	2.70	0.74
2:B:527:PHE:CZ	2:B:666:PRO:N	2.54	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:373:LEU:HD12	18:R:411:VAL:HG21	1.70	0.74
1:A:1262:LEU:HD21	1:A:1497:ILE:HG12	1.69	0.74
1:A:1329:ILE:HG22	1:A:1456:PHE:CZ	2.22	0.74
1:A:547:ILE:HD11	17:Q:26:ARG:CZ	1.90	0.74
2:B:401:GLU:HG3	2:B:402:VAL:N	2.03	0.74
6:F:70:LYS:O	6:F:74:ILE:N	2.19	0.74
15:O:200:ASN:CB	17:Q:14:ASN:CA	2.53	0.74
1:A:1487:ASN:OD1	2:B:305:ARG:NH2	2.21	0.74
16:P:384:ASP:HB3	16:P:389:TRP:HB3	1.69	0.74
1:A:481:ARG:O	2:B:1045:GLN:O	2.06	0.73
2:B:73:ILE:HB	2:B:425:ILE:HD12	1.70	0.73
7:G:159:LYS:HB2	15:O:105:ASN:ND2	1.95	0.73
16:P:472:ARG:HH21	18:R:199:LYS:HA	1.51	0.73
1:A:984:GLY:HA3	1:A:994:GLU:CD	2.09	0.73
2:B:1005:TYR:CE2	14:N:170:HIS:CG	2.75	0.73
2:B:26:ILE:O	10:J:62:ARG:CZ	2.36	0.73
2:B:346:ASP:CG	13:M:113:ILE:HG23	2.07	0.73
2:B:1003:ALA:O	14:N:170:HIS:CB	2.36	0.73
1:A:474:LYS:HZ2	2:B:1092:LEU:CA	1.98	0.73
1:A:984:GLY:CA	1:A:994:GLU:OE2	2.36	0.73
2:B:146:ASN:HD22	2:B:441:LYS:HE3	1.53	0.73
2:B:399:HIS:O	2:B:400:GLN:CG	2.35	0.73
2:B:518:ARG:NH2	2:B:537:SER:O	2.21	0.73
6:F:72:LYS:C	6:F:143:PHE:H	1.91	0.73
1:A:407:GLN:NE2	1:A:407:GLN:H	1.79	0.73
2:B:1151:ILE:HG23	7:G:21:LYS:HG3	1.70	0.73
2:B:566:TYR:CE2	13:M:70:SER:HA	2.23	0.73
1:A:629:ASP:O	2:B:926:VAL:HG21	1.87	0.73
1:A:1329:ILE:HG21	1:A:1456:PHE:CZ	2.24	0.73
1:A:1658:ALA:HA	6:F:131:PRO:O	1.88	0.73
13:M:102:SER:C	13:M:105:SER:N	2.40	0.73
7:G:241:ARG:NH1	15:O:189:PHE:HB2	1.95	0.73
1:A:984:GLY:HA3	1:A:994:GLU:OE2	1.89	0.73
17:Q:288:GLU:O	17:Q:290:THR:OG1	2.06	0.73
16:P:436:ILE:HG21	18:R:143:THR:HA	1.69	0.73
16:P:398:ALA:CB	18:R:87:VAL:CA	2.60	0.73
16:P:446:ASP:OD2	16:P:448:THR:HG22	1.89	0.73
18:R:271:LEU:HD21	18:R:308:PHE:CB	2.18	0.73
1:A:1298:ASP:HA	1:A:1468:LYS:HZ3	1.52	0.73
1:A:953:GLU:HG2	1:A:1205:PHE:HE2	1.54	0.73
1:A:824:THR:CB	2:B:1023:ARG:HB2	2.11	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:436:ILE:CG1	18:R:143:THR:HG23	2.14	0.73
18:R:199:LYS:HE3	18:R:203:SER:C	2.08	0.73
1:A:399:LEU:CD2	1:A:423:LEU:HD23	2.19	0.73
1:A:998:HIS:NE2	2:B:711:GLN:CG	2.50	0.73
3:C:253:PRO:HD2	14:N:180:PHE:HB3	0.78	0.73
17:Q:198:ILE:HG21	17:Q:388:THR:HG23	1.69	0.73
17:Q:417:PHE:HB3	18:R:264:SER:OG	1.86	0.73
1:A:399:LEU:CD2	1:A:423:LEU:CD2	2.67	0.72
1:A:990:ILE:CD1	1:A:994:GLU:C	2.57	0.72
1:A:588:LEU:CD2	2:B:1087:LEU:HD13	2.18	0.72
1:A:618:TYR:CE1	2:B:783:MET:HB2	2.24	0.72
1:A:629:ASP:CA	2:B:926:VAL:HG21	2.19	0.72
7:G:143:SER:CB	15:O:104:ILE:CB	2.66	0.72
17:Q:12:THR:OG1	17:Q:33:HIS:CE1	2.42	0.72
1:A:436:ALA:O	1:A:440:SER:CA	2.37	0.72
1:A:999:CYS:CA	2:B:712:SER:HB3	2.15	0.72
2:B:25:PHE:CD2	10:J:59:LYS:HG3	2.24	0.72
17:Q:351:ASN:HA	17:Q:369:TRP:CZ2	2.25	0.72
1:A:1313:LEU:HG	1:A:1462:PHE:HE1	1.49	0.72
13:M:102:SER:O	13:M:105:SER:OG	2.08	0.72
15:O:396:MET:HE3	15:O:433:LYS:HB2	1.70	0.72
16:P:662:LEU:HB3	16:P:665:ASN:ND2	2.05	0.72
17:Q:381:MET:CE	18:R:212:HIS:CD2	2.71	0.72
1:A:478:TYR:HA	2:B:1048:SER:C	2.10	0.72
1:A:878:ARG:HB3	9:I:67:VAL:HG12	1.68	0.72
15:O:373:LEU:HB3	15:O:374:PRO:HD3	1.69	0.72
17:Q:416:ILE:HG21	18:R:265:SER:CB	1.96	0.72
2:B:152:LEU:HB3	2:B:443:LYS:HE3	0.73	0.72
2:B:182:GLN:O	10:J:69:ARG:NE	2.23	0.72
3:C:231:PRO:HB2	3:C:270:ALA:HB1	1.72	0.72
16:P:197:ARG:NE	16:P:261:VAL:N	2.34	0.72
1:A:1310:LYS:HB3	1:A:1464:ASP:O	1.88	0.72
13:M:102:SER:CB	13:M:105:SER:N	2.49	0.72
16:P:399:TRP:HZ2	18:R:87:VAL:CG2	2.03	0.72
2:B:143:TRP:HB3	2:B:446:MET:SD	2.29	0.72
2:B:527:PHE:CE1	2:B:666:PRO:CD	2.73	0.72
16:P:292:LEU:HD11	16:P:343:LEU:HG	1.72	0.72
2:B:679:GLN:HG2	14:N:157:ARG:CA	2.14	0.72
1:A:1314:GLN:CD	1:A:1446:ARG:CD	2.56	0.72
1:A:1299:ASN:OD1	1:A:1467:GLY:C	2.28	0.72
1:A:1554:GLY:HA2	5:E:183:PRO:HD2	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:2:SER:HB2	9:I:11:LEU:HD21	1.72	0.72
16:P:658:LYS:HB3	16:P:660:LYS:H	1.55	0.72
17:Q:194:GLN:HE21	18:R:209:ARG:HE	1.35	0.72
18:R:201:SER:O	18:R:205:VAL:HG22	1.90	0.72
1:A:1309:SER:HB2	1:A:1310:LYS:HD3	1.71	0.71
16:P:200:THR:HG21	16:P:280:ARG:HH11	1.54	0.71
16:P:214:LEU:HB3	16:P:220:THR:HB	1.71	0.71
17:Q:183:LYS:O	17:Q:187:THR:OG1	2.08	0.71
1:A:953:GLU:O	1:A:1205:PHE:CD1	2.43	0.71
2:B:527:PHE:CE1	2:B:666:PRO:N	2.58	0.71
3:C:296:ASN:OD1	3:C:297:HIS:N	2.24	0.71
16:P:656:HIS:H	16:P:656:HIS:CD2	2.06	0.71
1:A:435:ASN:O	1:A:439:ASP:CA	2.37	0.71
2:B:404:LEU:O	2:B:407:PHE:N	2.23	0.71
16:P:186:TYR:O	18:R:195:LEU:CA	2.38	0.71
17:Q:375:LEU:CD2	18:R:231:LEU:CG	2.65	0.71
2:B:346:ASP:OD2	13:M:114:LYS:N	2.22	0.71
14:N:87:TYR:CB	14:N:141:GLU:CA	2.65	0.71
16:P:375:PHE:CE1	16:P:380:MET:HG3	2.26	0.71
1:A:990:ILE:CD1	1:A:995:TYR:N	2.52	0.71
15:O:216:LEU:HD13	15:O:342:HIS:CG	2.25	0.71
1:A:435:ASN:C	1:A:439:ASP:O	2.27	0.71
1:A:953:GLU:HA	1:A:1205:PHE:HD2	1.52	0.71
1:A:991:LYS:CB	1:A:993:GLN:CB	2.61	0.71
2:B:1089:GLN:NE2	2:B:1093:LEU:HD13	2.05	0.71
2:B:30:LYS:C	2:B:176:SER:HB2	2.11	0.71
2:B:207:ILE:CD1	2:B:503:VAL:HG22	2.21	0.71
6:F:72:LYS:CB	6:F:142:SER:CA	2.24	0.71
1:A:547:ILE:HD13	17:Q:26:ARG:NH1	1.98	0.71
1:A:83:VAL:CG1	1:A:427:PHE:CZ	2.73	0.71
2:B:898:LEU:N	12:L:46:VAL:HG21	2.06	0.71
2:B:1121:GLY:O	15:O:152:GLN:NE2	2.23	0.71
16:P:659:LEU:HD13	16:P:659:LEU:H	1.55	0.71
1:A:1310:LYS:HD3	1:A:1310:LYS:N	2.05	0.71
1:A:407:GLN:HE21	1:A:407:GLN:N	1.78	0.71
1:A:524:ILE:O	1:A:554:ARG:NH1	2.24	0.71
1:A:862:THR:CA	9:I:67:VAL:HA	2.21	0.71
2:B:184:LYS:HD3	2:B:735:HIS:NE2	2.04	0.71
2:B:207:ILE:HD11	2:B:503:VAL:CG1	2.20	0.71
18:R:248:LYS:HD3	18:R:248:LYS:O	1.90	0.71
1:A:399:LEU:HD23	1:A:423:LEU:CD2	2.21	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:503:VAL:CA	1:A:580:HIS:HD2	1.69	0.71
6:F:75:PRO:HG3	6:F:78:GLN:CD	2.11	0.71
2:B:1069:ILE:HD12	2:B:1069:ILE:N	2.06	0.71
2:B:1165:ASN:OD1	2:B:1165:ASN:N	2.24	0.71
17:Q:341:ARG:CZ	17:Q:369:TRP:NE1	2.54	0.71
1:A:952:LEU:HD22	1:A:1004:GLU:CG	2.09	0.70
15:O:248:LEU:CG	15:O:598:PHE:CE2	2.74	0.70
1:A:629:ASP:HA	2:B:926:VAL:CG2	2.21	0.70
1:A:921:PRO:HD2	8:H:19:ARG:HG3	1.73	0.70
16:P:391:THR:OG1	18:R:149:LYS:CB	2.39	0.70
18:R:250:LEU:HD21	18:R:308:PHE:CE2	2.25	0.70
2:B:527:PHE:CE1	2:B:666:PRO:CA	2.72	0.70
1:A:613:THR:CG2	2:B:913:ILE:HG21	2.21	0.70
16:P:324:TRP:CZ2	18:R:152:ILE:CD1	2.69	0.70
16:P:364:GLU:O	16:P:373:LEU:HB2	1.91	0.70
1:A:507:TYR:HE1	1:A:509:GLU:HA	1.56	0.70
1:A:721:LYS:HZ3	8:H:90:ALA:C	1.94	0.70
2:B:184:LYS:HD3	2:B:735:HIS:CD2	2.25	0.70
1:A:921:PRO:CD	8:H:19:ARG:HG2	2.22	0.70
2:B:843:ASP:OD2	12:L:58:LYS:NZ	2.23	0.70
17:Q:193:PHE:CD2	18:R:208:TYR:CB	2.74	0.70
1:A:436:ALA:C	1:A:439:ASP:N	2.32	0.70
1:A:862:THR:CG2	9:I:67:VAL:HG12	2.21	0.70
1:A:686:PHE:HZ	8:H:121:LEU:HD11	1.56	0.70
15:O:66:ASN:N	15:O:66:ASN:HD22	1.89	0.70
16:P:345:ASP:N	16:P:345:ASP:OD1	2.23	0.70
17:Q:288:GLU:HG3	17:Q:297:ARG:HH12	1.55	0.70
1:A:1329:ILE:HB	1:A:1456:PHE:HE2	1.54	0.70
2:B:143:TRP:CD1	2:B:446:MET:SD	2.83	0.70
3:C:272:LYS:CA	14:N:175:TYR:CD1	2.44	0.70
7:G:141:SER:HB2	15:O:142:ILE:CD1	1.95	0.70
16:P:391:THR:HG23	18:R:149:LYS:CB	2.21	0.70
1:A:543:LEU:CB	17:Q:34:VAL:O	2.38	0.70
18:R:224:VAL:CG2	18:R:256:GLU:HG3	2.22	0.70
18:R:278:TYR:O	18:R:301:SER:OG	2.09	0.70
1:A:1246:VAL:O	1:A:1517:ARG:NH2	2.24	0.70
1:A:475:ARG:NE	2:B:1061:LYS:HB2	2.06	0.70
2:B:291:GLY:HA3	2:B:375:LEU:HD13	1.74	0.70
3:C:31:TRP:CH2	11:K:127:LEU:HD12	2.26	0.70
16:P:197:ARG:CD	16:P:261:VAL:H	2.04	0.70
18:R:229:TRP:CZ2	18:R:259:ASP:CB	2.52	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:828:CYS:CB	2:B:1027:TYR:HB2	2.21	0.70
2:B:1069:ILE:HD12	2:B:1069:ILE:H	1.57	0.70
2:B:475:GLY:O	2:B:476:LEU:HB2	1.92	0.70
3:C:230:LEU:HD13	3:C:299:ILE:HD11	1.72	0.70
3:C:230:LEU:CD1	3:C:231:PRO:HD2	2.13	0.70
7:G:142:ALA:HB3	15:O:102:SER:O	1.92	0.70
16:P:584:ARG:O	16:P:588:SER:HB2	1.91	0.70
2:B:143:TRP:CG	2:B:446:MET:HE3	2.24	0.70
2:B:683:ASN:H	14:N:154:ARG:NH2	1.86	0.70
15:O:200:ASN:HD22	17:Q:14:ASN:C	1.92	0.70
16:P:185:GLN:HB3	18:R:195:LEU:HB3	1.72	0.70
17:Q:193:PHE:CD2	18:R:208:TYR:CG	2.74	0.70
17:Q:22:ILE:HG13	17:Q:24:ASP:OD2	1.92	0.70
1:A:862:THR:O	9:I:66:VAL:O	2.10	0.70
2:B:345:SER:HA	13:M:113:ILE:HD11	1.72	0.70
2:B:152:LEU:CD2	2:B:443:LYS:HD2	2.15	0.70
2:B:894:LYS:HG2	12:L:47:ARG:NE	2.07	0.70
15:O:233:LEU:O	15:O:237:ILE:CD1	2.36	0.70
16:P:532:GLU:HA	16:P:554:ASN:HD22	1.55	0.70
16:P:438:TRP:HD1	18:R:141:TRP:CH2	2.10	0.70
16:P:352:PHE:CD1	18:R:157:MET:CB	2.75	0.70
16:P:184:SER:CB	18:R:198:LEU:HD23	2.21	0.70
1:A:1482:LYS:HD3	2:B:304:ASP:OD1	1.90	0.69
1:A:1657:LEU:HD22	7:G:104:LEU:HD12	1.70	0.69
13:M:38:PHE:HB3	13:M:53:LEU:HD11	1.73	0.69
15:O:376:TYR:CD1	15:O:419:LYS:CE	2.74	0.69
1:A:507:TYR:CE1	1:A:509:GLU:HA	2.26	0.69
1:A:474:LYS:O	2:B:1070:ARG:CG	2.39	0.69
2:B:143:TRP:HB2	2:B:446:MET:HE1	1.64	0.69
17:Q:22:ILE:HD12	17:Q:24:ASP:CG	2.11	0.69
1:A:1032:VAL:CG2	1:A:1050:TYR:HD1	2.05	0.69
1:A:99:ARG:O	1:A:109:ARG:NH2	2.24	0.69
2:B:203:ILE:CG2	2:B:405:GLY:CA	2.71	0.69
2:B:848:ILE:HG22	12:L:60:ARG:NH1	2.07	0.69
15:O:376:TYR:CD1	15:O:419:LYS:CD	2.76	0.69
1:A:466:LEU:HD11	2:B:1181:VAL:HG21	1.73	0.69
2:B:65:VAL:HG23	2:B:417:ILE:HD12	1.74	0.69
2:B:894:LYS:HA	12:L:54:ARG:NE	2.06	0.69
1:A:1655:ASP:OD2	6:F:137:TYR:OH	2.10	0.69
1:A:65:CYS:SG	19:A:2001:ZN:ZN	1.81	0.69
1:A:991:LYS:HB3	1:A:993:GLN:CB	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:70:LYS:CG	7:G:95:LEU:HG	2.22	0.69
17:Q:351:ASN:C	17:Q:369:TRP:HH2	1.95	0.69
18:R:233:TYR:CZ	18:R:264:SER:OG	2.43	0.69
16:P:301:GLN:HG3	16:P:361:LYS:H	1.57	0.69
16:P:488:LEU:HD22	18:R:138:PHE:CZ	2.28	0.69
1:A:489:ASN:HB2	11:K:95:HIS:CD2	2.27	0.69
1:A:475:ARG:NH2	2:B:1061:LYS:HG3	2.06	0.69
1:A:646:GLU:OE2	2:B:1086:PHE:HD2	1.75	0.69
2:B:75:ASP:CA	2:B:440:PHE:CE2	2.74	0.69
3:C:31:TRP:HH2	11:K:127:LEU:HD12	1.58	0.69
1:A:566:SER:CB	15:O:235:GLU:OE1	2.28	0.69
16:P:405:TYR:HB2	16:P:416:LEU:HD12	1.73	0.69
18:R:271:LEU:HD23	18:R:308:PHE:HB2	1.70	0.69
1:A:953:GLU:CB	1:A:1205:PHE:CE2	2.75	0.69
1:A:1330:VAL:CG2	1:A:1455:ARG:NH1	2.56	0.69
1:A:862:THR:C	9:I:67:VAL:HA	2.13	0.69
2:B:1049:THR:HG23	2:B:1050:GLY:H	1.56	0.69
2:B:999:GLN:HG2	14:N:166:LEU:HD13	1.73	0.69
15:O:237:ILE:N	15:O:237:ILE:HD12	2.08	0.69
18:R:199:LYS:HZ1	18:R:204:GLU:HA	1.56	0.69
1:A:502:ALA:O	1:A:580:HIS:HB3	1.93	0.69
2:B:143:TRP:CZ2	2:B:446:MET:CB	2.75	0.69
2:B:548:LYS:CE	2:B:695:ASN:OD1	2.40	0.69
2:B:850:THR:N	12:L:60:ARG:NH2	2.40	0.69
2:B:887:LEU:HB2	12:L:56:LEU:O	1.93	0.69
16:P:322:GLY:O	16:P:350:THR:OG1	2.07	0.69
17:Q:8:PRO:HG2	17:Q:19:LEU:HD23	1.75	0.69
2:B:266:LYS:CD	2:B:473:GLN:O	2.40	0.69
2:B:985:ILE:CB	14:N:160:VAL:CG2	2.67	0.69
1:A:1314:GLN:HE22	1:A:1446:ARG:NE	1.91	0.68
1:A:1660:VAL:O	7:G:102:GLU:CG	2.38	0.68
6:F:66:ARG:HH21	7:G:90:LEU:CD1	2.06	0.68
2:B:679:GLN:HG2	14:N:157:ARG:H	0.87	0.68
16:P:352:PHE:CD1	18:R:157:MET:HB2	2.28	0.68
16:P:357:LEU:HD11	18:R:23:TYR:CD1	2.26	0.68
2:B:551:ILE:CG2	2:B:647:SER:CA	2.72	0.68
17:Q:385:PHE:HD2	18:R:212:HIS:HD2	1.23	0.68
17:Q:388:THR:HA	18:R:209:ARG:HG3	1.73	0.68
1:A:1313:LEU:CD2	1:A:1462:PHE:CZ	2.73	0.68
1:A:1660:VAL:HG22	7:G:103:LYS:O	1.93	0.68
1:A:543:LEU:C	17:Q:34:VAL:O	2.30	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:99:LEU:HB3	4:D:100:PRO:CD	2.23	0.68
17:Q:378:LEU:HD22	18:R:235:ILE:HG23	1.74	0.68
1:A:990:ILE:C	1:A:994:GLU:HB2	2.12	0.68
2:B:62:ASN:OD1	2:B:102:VAL:HG23	1.93	0.68
1:A:1298:ASP:CG	1:A:1468:LYS:NZ	2.46	0.68
2:B:212:ASN:ND2	2:B:361:HIS:HB2	2.08	0.68
17:Q:22:ILE:CD1	17:Q:26:ARG:HE	2.04	0.68
18:R:199:LYS:HE2	18:R:203:SER:C	2.11	0.68
2:B:49:PHE:CB	2:B:164:MET:CE	2.62	0.68
2:B:212:ASN:HD21	2:B:361:HIS:HB2	1.56	0.68
1:A:629:ASP:CA	2:B:926:VAL:CG2	2.72	0.68
15:O:248:LEU:HD12	15:O:598:PHE:HE2	0.87	0.68
16:P:428:GLU:HB2	16:P:435:ARG:HH12	1.58	0.68
17:Q:196:SER:HB3	17:Q:204:ARG:HG2	1.76	0.68
16:P:354:PRO:CG	18:R:31:PHE:CB	2.71	0.68
1:A:472:MET:CE	2:B:1076:ARG:HD3	2.24	0.68
1:A:480:ALA:HB1	2:B:1046:VAL:HG23	1.74	0.68
2:B:143:TRP:CZ2	2:B:446:MET:HB2	2.28	0.68
1:A:671:GLN:OE1	2:B:952:HIS:CB	2.42	0.68
2:B:985:ILE:C	14:N:160:VAL:HG23	2.14	0.68
16:P:412:ASN:N	16:P:412:ASN:OD1	2.24	0.68
1:A:824:THR:HB	2:B:1023:ARG:CB	2.13	0.68
16:P:353:ASP:OD1	16:P:379:LYS:NZ	2.27	0.68
18:R:303:THR:HG23	18:R:360:GLU:CD	2.12	0.68
16:P:354:PRO:CG	18:R:31:PHE:CD2	2.72	0.68
1:A:406:LEU:HB2	1:A:408:LYS:HZ2	1.58	0.68
3:C:127:THR:H	3:C:130:ASN:HB2	1.59	0.68
16:P:232:ASN:OD1	16:P:232:ASN:N	2.26	0.68
16:P:354:PRO:O	18:R:27:ILE:HG21	1.93	0.68
1:A:475:ARG:CB	2:B:1059:PRO:HB2	2.24	0.68
2:B:990:ASP:OD1	14:N:162:LYS:NZ	2.23	0.68
3:C:272:LYS:HA	14:N:175:TYR:CG	2.24	0.68
15:O:468:GLU:O	15:O:471:LYS:HG3	1.94	0.68
5:E:76:GLY:HA3	5:E:106:GLN:HB2	1.76	0.67
15:O:348:THR:CG2	15:O:351:SER:HB3	2.19	0.67
16:P:218:VAL:HG13	16:P:246:LYS:H	1.58	0.67
16:P:355:GLU:HG2	18:R:28:SER:HB3	1.75	0.67
16:P:302:VAL:HG11	16:P:362:ARG:HH11	1.57	0.67
18:R:18:LYS:HG2	18:R:78:ARG:HD3	1.73	0.67
1:A:403:LEU:HD12	1:A:419:ILE:HD13	1.76	0.67
1:A:988:SER:HB2	2:B:988:GLU:HG2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:355:GLU:HB3	18:R:28:SER:HB3	1.76	0.67
15:O:202:ASN:CB	17:Q:31:TYR:OH	2.34	0.67
18:R:359:MET:N	18:R:359:MET:SD	2.67	0.67
2:B:527:PHE:CE2	2:B:666:PRO:HB3	2.29	0.67
16:P:24:SER:OG	18:R:318:ILE:HG13	1.94	0.67
1:A:1482:LYS:O	2:B:308:LEU:CD2	2.38	0.67
2:B:527:PHE:CE2	2:B:666:PRO:CA	2.62	0.67
7:G:242:VAL:HG21	15:O:183:ILE:HG23	1.74	0.67
16:P:193:LEU:HD12	16:P:251:SER:H	1.59	0.67
16:P:197:ARG:CG	16:P:261:VAL:O	2.42	0.67
16:P:302:VAL:HG21	16:P:362:ARG:HD2	1.75	0.67
17:Q:218:SER:OG	17:Q:218:SER:O	2.11	0.67
17:Q:380:TRP:CZ2	18:R:208:TYR:OH	2.44	0.67
1:A:1330:VAL:CG2	1:A:1455:ARG:CD	2.73	0.67
1:A:1656:VAL:HA	6:F:133:VAL:O	1.95	0.67
16:P:458:LYS:HD3	16:P:461:HIS:HE1	1.60	0.67
17:Q:388:THR:CA	18:R:209:ARG:HG2	2.25	0.67
18:R:253:ILE:HA	18:R:256:GLU:HB3	1.76	0.67
18:R:301:SER:HA	18:R:358:PHE:CZ	2.29	0.67
1:A:909:SER:HA	9:I:83:LYS:HZ3	1.57	0.67
1:A:990:ILE:HA	1:A:994:GLU:CD	2.15	0.67
2:B:209:GLN:HG2	2:B:210:ARG:N	2.07	0.67
2:B:531:VAL:O	2:B:716:MET:HG3	1.95	0.67
16:P:487:ASN:O	18:R:138:PHE:CZ	2.46	0.67
16:P:53:ASP:OD2	16:P:54:ALA:N	2.27	0.67
18:R:199:LYS:HD3	18:R:204:GLU:HB3	1.76	0.67
1:A:1276:THR:CB	9:I:45:LEU:CD1	2.63	0.67
16:P:622:TYR:CZ	16:P:668:SER:HB3	2.30	0.67
18:R:248:LYS:HD3	18:R:250:LEU:HD13	1.76	0.67
3:C:253:PRO:CD	14:N:180:PHE:CG	2.46	0.67
15:O:237:ILE:H	15:O:237:ILE:HD12	1.59	0.67
1:A:671:GLN:HB3	2:B:952:HIS:CD2	2.30	0.67
6:F:70:LYS:HG2	7:G:95:LEU:CD2	2.23	0.67
1:A:799:GLU:HG3	1:A:1062:HIS:CE1	2.29	0.67
2:B:796:ARG:O	10:J:8:PHE:CE1	2.49	0.67
3:C:125:LYS:O	3:C:130:ASN:ND2	2.27	0.67
17:Q:208:PRO:HG2	17:Q:211:TYR:HD2	1.59	0.67
17:Q:139:LYS:HG2	17:Q:237:ILE:HG12	1.76	0.67
1:A:399:LEU:HD21	1:A:423:LEU:CG	2.25	0.66
1:A:406:LEU:HD23	1:A:406:LEU:N	2.10	0.66
1:A:408:LYS:HA	1:A:411:VAL:CB	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:102:SER:O	13:M:105:SER:CB	2.42	0.66
15:O:233:LEU:O	15:O:236:LYS:HB2	1.94	0.66
1:A:1330:VAL:HG23	1:A:1455:ARG:NH1	2.10	0.66
2:B:143:TRP:CG	2:B:446:MET:CE	2.65	0.66
16:P:775:TRP:HE1	16:P:778:ASP:HA	1.60	0.66
17:Q:418:PRO:CD	18:R:233:TYR:HH	1.82	0.66
1:A:581:ILE:HG13	1:A:585:ASP:CG	2.15	0.66
1:A:477:ASN:HA	2:B:1047:ARG:HD3	1.77	0.66
7:G:144:HIS:CD2	15:O:146:SER:CB	2.77	0.66
16:P:448:THR:CG2	16:P:471:MET:H	2.08	0.66
2:B:679:GLN:CG	14:N:157:ARG:CA	2.70	0.66
18:R:173:MET:HG3	18:R:188:PHE:CZ	2.25	0.66
16:P:472:ARG:HE	18:R:200:THR:HG23	1.61	0.66
1:A:83:VAL:CG1	1:A:427:PHE:CE2	2.77	0.66
15:O:373:LEU:HD12	15:O:423:TYR:CE2	2.30	0.66
15:O:200:ASN:CA	17:Q:14:ASN:HB2	2.15	0.66
18:R:266:SER:O	18:R:269:ASP:N	2.28	0.66
1:A:1310:LYS:CD	1:A:1310:LYS:H	2.08	0.66
1:A:467:PHE:CE2	1:A:1614:SER:HB3	2.31	0.66
1:A:1484:LEU:CD2	2:B:304:ASP:CB	2.73	0.66
2:B:848:ILE:HB	12:L:60:ARG:HD2	0.71	0.66
1:A:472:MET:HE2	2:B:1076:ARG:HD3	1.77	0.66
2:B:469:ASN:OD1	2:B:482:SER:HB3	1.95	0.66
17:Q:15:CYS:SG	17:Q:17:SER:CB	2.83	0.66
1:A:113:VAL:HG21	1:A:178:LEU:HD13	1.77	0.66
1:A:475:ARG:NH2	2:B:1061:LYS:CB	2.57	0.66
1:A:470:HIS:CD2	2:B:1058:GLN:OE1	2.43	0.66
2:B:209:GLN:O	2:B:401:GLU:N	2.27	0.66
6:F:70:LYS:HG2	7:G:95:LEU:CG	2.26	0.66
1:A:722:PRO:HD3	8:H:95:TYR:HA	1.76	0.66
2:B:985:ILE:CB	14:N:160:VAL:HG21	2.24	0.66
3:C:272:LYS:CB	14:N:175:TYR:CD1	2.78	0.66
15:O:245:GLN:CD	15:O:379:ARG:HB2	2.16	0.66
18:R:161:ASN:HA	18:R:164:LYS:HD2	1.76	0.66
15:O:240:ILE:HG23	15:O:332:LEU:HG	1.78	0.66
16:P:350:THR:CG2	18:R:155:GLN:HA	2.25	0.66
1:A:1032:VAL:CG2	1:A:1050:TYR:CE1	2.79	0.66
16:P:321:LYS:HA	16:P:361:LYS:HD3	1.78	0.66
17:Q:198:ILE:HD13	17:Q:390:THR:O	1.95	0.66
18:R:202:THR:CA	18:R:205:VAL:HG23	2.26	0.66
18:R:313:LEU:HD11	18:R:353:VAL:HG21	1.73	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:109:ARG:NH1	1:A:230:ARG:O	2.29	0.65
1:A:615:ARG:NH2	2:B:781:TYR:CD2	2.64	0.65
1:A:986:PHE:HE2	2:B:958:MET:HE1	1.60	0.65
1:A:611:GLU:OE2	2:B:929:ARG:NH2	2.29	0.65
17:Q:378:LEU:HD21	18:R:219:LEU:CB	2.21	0.65
16:P:486:ALA:HB3	18:R:137:SER:OG	1.96	0.65
1:A:684:ASP:OD2	8:H:20:TYR:CB	2.45	0.65
1:A:921:PRO:CD	8:H:19:ARG:CG	2.74	0.65
1:A:998:HIS:CE1	2:B:711:GLN:HG3	2.31	0.65
2:B:1072:GLY:CA	2:B:1075:GLU:CG	2.63	0.65
2:B:212:ASN:ND2	2:B:361:HIS:CB	2.59	0.65
2:B:328:GLN:NE2	13:M:111:PRO:O	2.29	0.65
2:B:894:LYS:HG2	12:L:47:ARG:HE	1.61	0.65
2:B:345:SER:HA	13:M:113:ILE:CD1	2.27	0.65
2:B:64:GLY:CA	2:B:242:ASP:CB	2.74	0.65
15:O:238:ILE:H	15:O:238:ILE:HD12	1.61	0.65
16:P:479:HIS:NE2	16:P:491:SER:OG	2.24	0.65
17:Q:283:ASN:OD1	17:Q:284:LEU:N	2.27	0.65
18:R:248:LYS:C	18:R:248:LYS:HD3	2.17	0.65
1:A:435:ASN:CG	1:A:442:LYS:HB3	2.16	0.65
1:A:990:ILE:CG1	1:A:995:TYR:CA	2.72	0.65
2:B:711:GLN:HG2	2:B:713:PRO:HD2	1.78	0.65
3:C:328:LEU:HD23	11:K:121:LEU:HD21	1.79	0.65
3:C:41:GLU:OE2	11:K:138:LYS:CE	2.41	0.65
15:O:439:ILE:HD13	15:O:487:ARG:HD3	1.76	0.65
17:Q:290:THR:HB	17:Q:292:GLU:H	1.61	0.65
16:P:350:THR:HG22	18:R:154:LYS:C	2.15	0.65
2:B:1090:ASP:O	2:B:1094:ASN:HB2	1.96	0.65
2:B:527:PHE:CE1	2:B:666:PRO:CB	2.79	0.65
7:G:144:HIS:CE1	15:O:145:SER:CB	2.79	0.65
7:G:144:HIS:CD2	15:O:145:SER:C	2.69	0.65
18:R:186:LEU:HD13	18:R:186:LEU:O	1.95	0.65
1:A:1326:GLU:OE1	1:A:1454:HIS:C	2.34	0.65
6:F:72:LYS:HA	6:F:142:SER:CB	2.13	0.65
6:F:75:PRO:HG2	6:F:78:GLN:CB	2.08	0.65
13:M:102:SER:CB	13:M:105:SER:CA	2.70	0.65
1:A:1273:THR:HG23	9:I:48:VAL:HG22	1.79	0.65
1:A:627:ASP:O	2:B:784:ASP:O	2.15	0.65
2:B:679:GLN:HG3	14:N:155:VAL:C	2.16	0.65
15:O:108:GLU:O	15:O:108:GLU:HG3	1.96	0.65
16:P:405:TYR:OH	16:P:414:ILE:HG12	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:625:ASP:O	16:P:629:ARG:CB	2.45	0.65
18:R:186:LEU:HD13	18:R:186:LEU:C	2.17	0.65
1:A:824:THR:O	2:B:1023:ARG:CB	2.44	0.65
2:B:49:PHE:CD2	2:B:194:PHE:HZ	2.14	0.65
2:B:341:SER:OG	2:B:343:ASP:OD1	2.13	0.65
15:O:428:ILE:HD11	15:O:442:VAL:HG21	1.79	0.65
18:R:247:ILE:N	18:R:247:ILE:HD13	2.08	0.65
1:A:862:THR:HA	9:I:67:VAL:HB	1.77	0.65
15:O:240:ILE:HA	15:O:332:LEU:HD12	1.79	0.65
15:O:510:VAL:HG13	15:O:517:LEU:HD11	1.79	0.65
16:P:263:ILE:HG22	16:P:264:ILE:HG22	1.79	0.65
16:P:443:ASP:CB	18:R:3:GLU:HB3	2.25	0.65
17:Q:189:LYS:HA	17:Q:384:GLN:HE21	1.62	0.65
16:P:391:THR:OG1	18:R:149:LYS:HB3	1.97	0.65
18:R:199:LYS:NZ	18:R:204:GLU:CB	2.60	0.65
1:A:1054:ALA:O	1:A:1179:ILE:HG22	1.97	0.65
2:B:1072:GLY:O	2:B:1075:GLU:N	2.29	0.65
16:P:447:THR:OG1	18:R:196:GLU:HB3	1.97	0.65
17:Q:15:CYS:HB2	17:Q:16:PRO:HA	1.77	0.65
2:B:1072:GLY:O	2:B:1075:GLU:CA	2.45	0.64
2:B:923:GLN:NE2	2:B:953:ALA:O	2.30	0.64
4:D:99:LEU:HB3	4:D:100:PRO:HD3	1.78	0.64
1:A:718:THR:HG23	8:H:118:PHE:HB3	1.78	0.64
16:P:769:GLN:HA	16:P:772:ILE:HB	1.79	0.64
17:Q:15:CYS:HB3	17:Q:17:SER:H	1.62	0.64
18:R:202:THR:O	18:R:205:VAL:HG23	1.97	0.64
18:R:229:TRP:CD2	18:R:260:ASN:HA	2.32	0.64
1:A:671:GLN:HB3	2:B:952:HIS:CG	2.32	0.64
16:P:454:GLN:HA	16:P:455:LYS:HE2	1.79	0.64
16:P:656:HIS:HB2	16:P:747:LEU:O	1.97	0.64
16:P:697:GLU:N	16:P:697:GLU:OE1	2.30	0.64
16:P:21:GLN:CB	18:R:139:GLU:OE1	2.25	0.64
2:B:399:HIS:C	2:B:400:GLN:CG	2.65	0.64
3:C:293:ARG:HB2	3:C:295:ARG:HD3	1.80	0.64
16:P:197:ARG:HE	16:P:261:VAL:HG22	1.62	0.64
1:A:1329:ILE:CG2	1:A:1456:PHE:HE2	2.05	0.64
1:A:825:ALA:O	2:B:1023:ARG:NH1	2.30	0.64
15:O:392:GLN:HB2	15:O:395:LEU:HD22	1.79	0.64
16:P:662:LEU:O	16:P:665:ASN:ND2	2.31	0.64
17:Q:208:PRO:HG2	17:Q:211:TYR:CD2	2.32	0.64
5:E:20:LYS:HE2	5:E:34:GLU:HG2	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:641:GLU:HB2	6:F:99:LEU:HD13	1.78	0.64
7:G:144:HIS:NE2	15:O:146:SER:N	2.46	0.64
15:O:376:TYR:CG	15:O:419:LYS:CE	2.80	0.64
16:P:775:TRP:H	17:Q:109:GLN:NE2	1.95	0.64
18:R:202:THR:CA	18:R:205:VAL:CG2	2.76	0.64
1:A:507:TYR:CD1	1:A:508:PRO:C	2.70	0.64
3:C:292:GLY:HA3	3:C:295:ARG:NH2	2.12	0.64
16:P:390:GLN:HG3	18:R:152:ILE:CA	2.18	0.64
3:C:229:LEU:CD2	3:C:295:ARG:O	2.42	0.64
15:O:219:ARG:NH2	15:O:360:VAL:HG22	2.12	0.64
15:O:374:PRO:O	15:O:376:TYR:CB	2.39	0.64
1:A:438:ILE:O	1:A:457:LYS:HD3	1.96	0.64
1:A:486:PRO:HG2	2:B:781:TYR:HA	1.78	0.64
2:B:202:LEU:HD23	2:B:202:LEU:N	2.11	0.64
16:P:675:PHE:HE2	16:P:741:ILE:HG21	1.63	0.64
1:A:1263:LEU:HA	1:A:1498:ILE:CD1	2.25	0.64
2:B:1079:LEU:O	2:B:1083:GLY:N	2.31	0.64
15:O:224:GLU:N	15:O:224:GLU:OE1	2.23	0.64
16:P:186:TYR:O	18:R:195:LEU:CD2	2.46	0.64
17:Q:104:PHE:CZ	17:Q:156:LEU:HB2	2.33	0.64
17:Q:19:LEU:HD11	17:Q:27:ARG:CB	2.27	0.64
18:R:308:PHE:HD1	18:R:309:ALA:H	1.46	0.64
18:R:316:SER:CB	18:R:349:ILE:CD1	2.59	0.64
2:B:45:HIS:NE2	2:B:500:PHE:HB3	2.13	0.64
1:A:406:LEU:HB3	1:A:408:LYS:HD3	1.80	0.63
1:A:475:ARG:O	2:B:1059:PRO:HG2	1.99	0.63
1:A:991:LYS:CB	1:A:993:GLN:OE1	2.44	0.63
1:A:460:LEU:HD21	2:B:1188:GLU:HG3	1.80	0.63
1:A:878:ARG:HG3	9:I:66:VAL:CG2	2.27	0.63
14:N:87:TYR:OH	14:N:141:GLU:OE1	2.16	0.63
2:B:531:VAL:HG13	2:B:716:MET:HA	1.77	0.63
17:Q:245:SER:HB3	17:Q:284:LEU:HB2	1.80	0.63
18:R:305:THR:HB	18:R:308:PHE:HE1	1.64	0.63
1:A:432:ASN:OD1	1:A:443:ALA:HA	1.99	0.63
1:A:966:LEU:HD21	1:A:997:PHE:HE1	1.62	0.63
1:A:1659:LYS:HG2	7:G:102:GLU:OE1	1.98	0.63
8:H:44:VAL:HG22	8:H:48:PRO:HA	1.80	0.63
16:P:488:LEU:CD2	18:R:138:PHE:CZ	2.80	0.63
18:R:180:CYS:SG	18:R:185:LYS:HG2	2.38	0.63
1:A:1329:ILE:CB	1:A:1456:PHE:HE2	2.12	0.63
1:A:472:MET:CG	2:B:1073:GLU:OE1	2.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1005:TYR:CD2	14:N:170:HIS:ND1	2.66	0.63
6:F:72:LYS:CG	6:F:142:SER:CB	2.77	0.63
6:F:73:ALA:HA	6:F:143:PHE:CG	2.32	0.63
2:B:897:GLU:HA	12:L:46:VAL:HG23	1.80	0.63
7:G:241:ARG:CZ	15:O:189:PHE:HB3	2.29	0.63
17:Q:8:PRO:HB2	17:Q:19:LEU:HD23	1.80	0.63
1:A:436:ALA:HA	1:A:440:SER:HA	1.80	0.63
1:A:476:VAL:CA	2:B:1059:PRO:HG2	2.28	0.63
2:B:547:HIS:HB2	2:B:698:SER:HA	1.81	0.63
2:B:294:GLY:HA3	2:B:579:ALA:HB3	1.80	0.63
5:E:197:LYS:HD3	5:E:199:ILE:HD11	1.79	0.63
15:O:181:ARG:HB2	15:O:181:ARG:NH1	2.12	0.63
17:Q:385:PHE:CE2	18:R:208:TYR:CE2	2.86	0.63
2:B:64:GLY:CA	2:B:242:ASP:HB3	2.28	0.63
2:B:527:PHE:CE2	2:B:666:PRO:CB	2.82	0.63
1:A:581:ILE:HD11	1:A:585:ASP:HB3	1.81	0.63
1:A:998:HIS:CD2	2:B:711:GLN:HA	2.33	0.63
3:C:294:VAL:O	3:C:297:HIS:CB	2.44	0.63
3:C:326:GLU:HG3	11:K:125:MET:HE1	1.79	0.63
16:P:436:ILE:HG22	18:R:142:ARG:C	2.18	0.63
1:A:1657:LEU:HB3	7:G:104:LEU:HD22	1.81	0.63
1:A:476:VAL:HG13	2:B:1070:ARG:HA	1.81	0.63
1:A:878:ARG:HG2	9:I:67:VAL:CG1	2.05	0.63
2:B:697:LEU:CB	2:B:702:ASN:ND2	2.59	0.63
18:R:202:THR:C	18:R:205:VAL:HG23	2.19	0.63
18:R:1:MET:HE3	18:R:2:PHE:CE1	2.34	0.63
18:R:303:THR:HG22	18:R:304:HIS:H	1.62	0.63
1:A:477:ASN:CA	2:B:1047:ARG:HD3	2.29	0.63
6:F:74:ILE:HG21	6:F:144:GLU:HG2	1.81	0.63
1:A:938:VAL:CG2	9:I:82:ILE:CD1	2.68	0.63
16:P:475:ARG:NH1	18:R:1:MET:HB3	2.12	0.63
1:A:799:GLU:HG3	1:A:1062:HIS:ND1	2.14	0.62
1:A:1276:THR:HG1	9:I:45:LEU:CD1	1.86	0.62
1:A:436:ALA:CA	1:A:439:ASP:C	2.66	0.62
2:B:1072:GLY:C	2:B:1075:GLU:H	2.02	0.62
2:B:1072:GLY:O	2:B:1075:GLU:CB	2.47	0.62
2:B:50:ASN:OD1	2:B:167:SER:HB2	1.99	0.62
6:F:69:LEU:O	6:F:143:PHE:CE2	2.52	0.62
15:O:227:PHE:HD1	15:O:363:THR:HB	1.62	0.62
16:P:197:ARG:NE	16:P:261:VAL:HG22	2.14	0.62
16:P:357:LEU:CD1	18:R:23:TYR:CD1	2.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:700:LEU:HD12	16:P:703:PHE:HD2	1.62	0.62
16:P:352:PHE:HE1	18:R:157:MET:HG2	1.48	0.62
18:R:75:GLN:HA	18:R:78:ARG:HE	1.64	0.62
1:A:1329:ILE:CB	1:A:1456:PHE:CE2	2.82	0.62
2:B:143:TRP:CE3	2:B:446:MET:CE	2.82	0.62
1:A:995:TYR:CZ	2:B:707:SER:CB	2.72	0.62
6:F:70:LYS:CE	7:G:95:LEU:HD23	2.26	0.62
2:B:681:ILE:CB	14:N:154:ARG:HG3	2.23	0.62
2:B:1002:LYS:CD	14:N:166:LEU:C	2.60	0.62
18:R:247:ILE:CG1	18:R:249:SER:HB2	2.29	0.62
1:A:472:MET:HB3	2:B:1073:GLU:CG	2.29	0.62
15:O:376:TYR:HB2	15:O:419:LYS:HD3	1.79	0.62
17:Q:212:VAL:O	17:Q:216:GLU:HG2	1.98	0.62
16:P:438:TRP:CG	18:R:141:TRP:CZ2	2.79	0.62
18:R:152:ILE:HG23	18:R:153:ASN:N	2.13	0.62
1:A:83:VAL:HG13	1:A:427:PHE:CE2	2.34	0.62
1:A:506:THR:HG21	1:A:578:TYR:O	1.98	0.62
2:B:1096:SER:O	2:B:1097:ASP:CB	2.47	0.62
2:B:399:HIS:C	2:B:400:GLN:HG3	2.20	0.62
7:G:144:HIS:CE1	15:O:145:SER:HB2	2.34	0.62
1:A:921:PRO:HD2	8:H:19:ARG:CG	2.28	0.62
15:O:100:LEU:HD22	15:O:107:ILE:HD11	1.81	0.62
16:P:383:ILE:HG12	16:P:390:GLN:HG2	1.82	0.62
16:P:67:ASP:OD1	16:P:545:SER:OG	2.15	0.62
18:R:157:MET:HG3	18:R:162:PHE:HB2	1.81	0.62
15:O:450:LEU:O	15:O:454:VAL:HG12	1.99	0.62
15:O:67:ASP:OD1	15:O:69:THR:HB	2.00	0.62
16:P:625:ASP:O	16:P:629:ARG:HB3	2.00	0.62
1:A:1314:GLN:HE22	1:A:1446:ARG:CZ	2.11	0.62
1:A:720:PHE:CE2	8:H:141:TYR:CE2	2.78	0.62
1:A:825:ALA:HB3	2:B:1022:LEU:HB3	1.82	0.62
1:A:966:LEU:CD2	1:A:997:PHE:HZ	2.11	0.62
7:G:158:LYS:HB3	15:O:105:ASN:OD1	1.99	0.62
15:O:376:TYR:CD1	15:O:419:LYS:HD3	2.34	0.62
16:P:391:THR:OG1	18:R:149:LYS:HB2	1.99	0.62
17:Q:198:ILE:HG21	17:Q:388:THR:HG22	1.82	0.62
17:Q:22:ILE:HD11	17:Q:26:ARG:HE	1.62	0.62
2:B:1072:GLY:O	2:B:1076:ARG:N	2.31	0.62
2:B:68:ILE:HG21	2:B:71:LYS:HZ3	0.57	0.62
15:O:181:ARG:HH11	15:O:181:ARG:CG	2.12	0.62
15:O:332:LEU:HD11	15:O:380:SER:CB	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:184:SER:HA	18:R:198:LEU:HD23	1.82	0.62
1:A:966:LEU:CD2	1:A:997:PHE:HE1	2.09	0.62
15:O:56:VAL:HG21	15:O:99:ILE:HD12	1.82	0.62
17:Q:10:CYS:CB	17:Q:17:SER:H	2.13	0.62
17:Q:378:LEU:HD22	18:R:216:LEU:CD2	2.30	0.62
18:R:173:MET:CG	18:R:188:PHE:HZ	2.11	0.62
18:R:304:HIS:NE2	18:R:361:ASP:OD1	2.33	0.62
2:B:897:GLU:HA	12:L:46:VAL:CG2	2.29	0.62
1:A:684:ASP:OD1	8:H:20:TYR:HB3	1.97	0.62
15:O:245:GLN:HA	15:O:245:GLN:NE2	2.14	0.62
15:O:581:THR:HA	15:O:584:GLN:NE2	2.15	0.62
16:P:189:THR:O	16:P:450:ARG:NH2	2.33	0.62
16:P:484:ARG:O	16:P:486:ALA:N	2.32	0.62
17:Q:291:ASP:OD2	17:Q:291:ASP:N	2.32	0.62
17:Q:6:ARG:O	17:Q:7:GLY:O	2.17	0.62
17:Q:385:PHE:CZ	18:R:212:HIS:HB2	2.35	0.62
18:R:412:ARG:NH2	18:R:439:GLU:OE2	2.31	0.62
1:A:1055:ILE:HD13	1:A:1178:LEU:HD23	1.80	0.62
1:A:545:SER:N	17:Q:34:VAL:CB	2.63	0.62
17:Q:351:ASN:O	17:Q:369:TRP:HH2	1.82	0.62
18:R:171:ARG:O	18:R:174:GLU:N	2.33	0.62
1:A:467:PHE:CD2	1:A:1614:SER:HB2	2.34	0.61
6:F:70:LYS:HA	6:F:73:ALA:HB3	1.82	0.61
7:G:24:VAL:HA	7:G:25:THR:CA	2.25	0.61
3:C:272:LYS:HG3	14:N:175:TYR:HE1	1.65	0.61
16:P:368:HIS:HB3	16:P:411:LYS:HZ2	1.65	0.61
16:P:724:LEU:HD13	17:Q:447:ALA:HB2	1.81	0.61
17:Q:9:ILE:HB	17:Q:16:PRO:CB	2.26	0.61
1:A:1318:SER:OG	1:A:1450:ILE:HD11	2.00	0.61
1:A:438:ILE:O	1:A:457:LYS:CG	2.48	0.61
1:A:493:ASN:CB	1:A:654:ASP:OD1	2.47	0.61
2:B:894:LYS:CG	12:L:47:ARG:NE	2.62	0.61
15:O:467:MET:CG	15:O:575:SER:HA	2.30	0.61
17:Q:193:PHE:HD2	18:R:208:TYR:CB	2.12	0.61
16:P:736:ILE:HD11	17:Q:254:LEU:HD13	1.80	0.61
17:Q:503:SER:O	17:Q:507:ASN:ND2	2.33	0.61
18:R:206:ARG:N	18:R:206:ARG:HE	1.97	0.61
1:A:729:LYS:HD2	8:H:120:GLY:HA3	1.82	0.61
1:A:826:PHE:CD1	2:B:777:SER:CB	2.83	0.61
1:A:827:THR:CG2	1:A:924:SER:HB3	2.30	0.61
16:P:473:HIS:CD2	16:P:475:ARG:HD2	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:389:TRP:HH2	18:R:149:LYS:H	1.45	0.61
18:R:301:SER:HB2	18:R:358:PHE:CE1	2.35	0.61
2:B:200:GLU:OE2	2:B:736:ARG:NH2	2.34	0.61
2:B:152:LEU:CB	2:B:443:LYS:CE	2.23	0.61
16:P:532:GLU:HB2	16:P:554:ASN:HB3	1.81	0.61
16:P:775:TRP:O	17:Q:113:LYS:NZ	2.33	0.61
17:Q:385:PHE:CE1	18:R:212:HIS:HB2	2.34	0.61
16:P:355:GLU:CG	18:R:28:SER:HB3	2.29	0.61
1:A:1050:TYR:CE1	1:A:1185:VAL:HG11	2.35	0.61
1:A:1606:SER:CB	1:A:1611:MET:CE	2.79	0.61
1:A:414:GLU:O	1:A:417:ARG:N	2.33	0.61
1:A:472:MET:SD	2:B:1073:GLU:CD	2.79	0.61
1:A:990:ILE:CG1	1:A:994:GLU:C	2.69	0.61
2:B:1079:LEU:HD22	2:B:1084:THR:OG1	2.00	0.61
15:O:375:THR:C	15:O:377:TYR:H	2.03	0.61
15:O:373:LEU:CD1	15:O:423:TYR:CD2	2.84	0.61
16:P:365:TRP:HB2	16:P:371:LYS:O	2.00	0.61
2:B:184:LYS:HB3	2:B:735:HIS:CG	2.35	0.61
6:F:66:ARG:HH21	7:G:90:LEU:HD13	1.64	0.61
15:O:361:PHE:O	15:O:365:THR:HG23	1.99	0.61
15:O:510:VAL:CG1	15:O:543:ILE:HD12	2.30	0.61
1:A:1050:TYR:CE1	1:A:1179:ILE:CG1	2.76	0.61
1:A:475:ARG:C	2:B:1059:PRO:HG2	2.21	0.61
2:B:1069:ILE:O	2:B:1070:ARG:CB	2.45	0.61
2:B:202:LEU:HD22	2:B:488:ALA:CB	2.25	0.61
2:B:152:LEU:CG	2:B:443:LYS:HE3	2.27	0.61
2:B:923:GLN:NE2	2:B:957:ARG:HD2	2.16	0.61
18:R:26:TYR:HB3	18:R:169:PRO:HB3	1.81	0.61
1:A:1330:VAL:CG2	1:A:1455:ARG:HD2	2.31	0.61
1:A:862:THR:HG22	9:I:67:VAL:HG11	1.83	0.61
1:A:966:LEU:HD22	1:A:997:PHE:CE1	2.36	0.61
2:B:1091:ARG:O	2:B:1096:SER:HB2	2.01	0.61
2:B:203:ILE:HB	2:B:405:GLY:HA3	1.82	0.61
8:H:25:ARG:NH1	8:H:27:GLU:OE2	2.34	0.61
15:O:515:ASN:HD21	15:O:547:ASN:HD21	1.47	0.61
1:A:1226:VAL:HG12	1:A:1227:MET:HG2	1.83	0.60
1:A:1329:ILE:HG22	1:A:1456:PHE:CE2	2.30	0.60
1:A:399:LEU:HD21	1:A:423:LEU:CD2	2.30	0.60
1:A:545:SER:CB	17:Q:34:VAL:HG22	2.10	0.60
2:B:796:ARG:O	10:J:8:PHE:HE1	1.83	0.60
16:P:362:ARG:HB3	16:P:375:PHE:HB2	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:422:ILE:O	16:P:439:LYS:HB2	2.01	0.60
16:P:641:TRP:HZ2	16:P:656:HIS:HB3	1.67	0.60
1:A:1314:GLN:NE2	1:A:1446:ARG:NE	2.49	0.60
1:A:1600:ARG:CG	1:A:1616:GLU:OE1	2.49	0.60
2:B:146:ASN:ND2	2:B:441:LYS:HE3	2.15	0.60
16:P:185:GLN:C	18:R:195:LEU:HB3	2.21	0.60
1:A:422:ARG:NE	18:R:409:HIS:CE1	2.69	0.60
1:A:467:PHE:CD2	1:A:1614:SER:CB	2.84	0.60
1:A:474:LYS:O	2:B:1070:ARG:HG3	2.01	0.60
13:M:101:VAL:HG12	13:M:105:SER:OG	2.01	0.60
16:P:55:LEU:HD11	18:R:227:HIS:NE2	2.16	0.60
1:A:1049:MET:HB2	1:A:1052:GLY:HA2	1.80	0.60
2:B:1005:TYR:CZ	14:N:170:HIS:CE1	2.89	0.60
2:B:143:TRP:CZ2	2:B:446:MET:CA	2.84	0.60
1:A:986:PHE:CD2	2:B:958:MET:HE2	2.36	0.60
5:E:93:MET:HG3	5:E:120:ALA:HB1	1.82	0.60
15:O:602:TYR:HD2	15:O:605:LEU:HD23	1.66	0.60
17:Q:9:ILE:CG1	17:Q:10:CYS:N	2.50	0.60
17:Q:193:PHE:HD2	18:R:208:TYR:CD1	2.20	0.60
17:Q:3:THR:HG22	17:Q:20:TRP:CB	2.29	0.60
1:A:486:PRO:HG2	2:B:781:TYR:CA	2.29	0.60
2:B:497:ILE:CG1	2:B:699:ILE:CD1	2.79	0.60
15:O:375:THR:O	15:O:377:TYR:N	2.35	0.60
17:Q:441:ASP:O	17:Q:445:ARG:HG2	2.02	0.60
18:R:149:LYS:O	18:R:150:GLN:O	2.18	0.60
18:R:220:LEU:CD1	18:R:256:GLU:OE2	2.49	0.60
18:R:301:SER:CB	18:R:358:PHE:HE1	2.14	0.60
1:A:1003:ARG:NH2	2:B:530:PRO:CA	2.65	0.60
16:P:667:ASP:OD1	16:P:667:ASP:N	2.33	0.60
18:R:271:LEU:HD13	18:R:312:TYR:CB	2.28	0.60
2:B:29:PRO:O	2:B:178:TYR:N	2.29	0.60
1:A:489:ASN:CB	11:K:95:HIS:CD2	2.85	0.60
2:B:563:SER:HA	13:M:73:SER:CB	2.31	0.60
2:B:995:TYR:OH	14:N:163:VAL:HG23	2.01	0.60
1:A:1298:ASP:CA	1:A:1468:LYS:HZ3	2.15	0.60
1:A:629:ASP:HA	2:B:926:VAL:HG23	1.84	0.60
2:B:207:ILE:O	2:B:207:ILE:HG22	2.02	0.60
2:B:143:TRP:CH2	2:B:446:MET:HG3	2.37	0.60
15:O:438:GLN:O	15:O:441:PHE:HB3	2.02	0.60
15:O:582:ARG:O	15:O:586:ILE:HG13	2.02	0.60
2:B:228:SER:HB2	2:B:253:LEU:HD23	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:563:SER:HB3	13:M:73:SER:HB3	1.82	0.60
2:B:65:VAL:CG2	2:B:417:ILE:HD12	2.32	0.60
2:B:679:GLN:CA	14:N:155:VAL:O	2.50	0.60
16:P:355:GLU:CD	18:R:85:ARG:HH21	2.06	0.60
17:Q:26:ARG:HB3	17:Q:34:VAL:HG11	1.75	0.60
1:A:1314:GLN:OE1	1:A:1446:ARG:CD	2.48	0.60
1:A:1606:SER:CB	1:A:1611:MET:HE3	2.32	0.60
3:C:272:LYS:CG	14:N:175:TYR:HE1	2.14	0.60
16:P:197:ARG:HG3	16:P:261:VAL:O	2.01	0.60
16:P:437:SER:HA	18:R:140:ILE:HG23	1.84	0.60
18:R:250:LEU:HB2	18:R:270:PHE:HE2	1.67	0.60
18:R:301:SER:CB	18:R:358:PHE:CE1	2.84	0.60
1:A:995:TYR:OH	2:B:715:ASN:CG	2.39	0.59
6:F:70:LYS:CD	7:G:95:LEU:CD2	2.79	0.59
2:B:345:SER:HA	13:M:113:ILE:HG12	1.83	0.59
17:Q:10:CYS:HB2	17:Q:17:SER:H	1.67	0.59
17:Q:436:LEU:H	17:Q:436:LEU:HD12	1.67	0.59
18:R:229:TRP:CZ2	18:R:259:ASP:O	2.55	0.59
18:R:279:SER:CA	18:R:301:SER:OG	2.24	0.59
1:A:246:ASP:HB3	1:A:248:PHE:H	1.66	0.59
2:B:1090:ASP:O	2:B:1094:ASN:N	2.33	0.59
2:B:143:TRP:CE3	2:B:446:MET:HE3	2.36	0.59
1:A:613:THR:HG21	2:B:913:ILE:HG22	1.81	0.59
3:C:272:LYS:HG3	14:N:175:TYR:CE1	2.36	0.59
15:O:370:THR:OG1	15:O:371:HIS:HD2	1.84	0.59
16:P:319:ASP:HB2	16:P:363:ILE:HG12	1.83	0.59
18:R:250:LEU:HB2	18:R:270:PHE:CE2	2.37	0.59
16:P:496:THR:HG21	18:R:2:PHE:HZ	0.60	0.59
2:B:497:ILE:HG12	2:B:699:ILE:CD1	2.33	0.59
1:A:1003:ARG:NH2	2:B:530:PRO:HA	2.17	0.59
2:B:551:ILE:CG2	2:B:648:ARG:N	2.58	0.59
2:B:848:ILE:CA	12:L:60:ARG:CD	2.72	0.59
17:Q:193:PHE:CD2	18:R:208:TYR:CD1	2.90	0.59
1:A:1650:GLY:O	1:A:1653:SER:N	2.36	0.59
1:A:618:TYR:HE1	2:B:783:MET:HB2	1.67	0.59
1:A:670:ILE:HG13	2:B:783:MET:HE2	1.84	0.59
2:B:531:VAL:CG1	2:B:716:MET:HA	2.33	0.59
3:C:293:ARG:N	3:C:295:ARG:CZ	2.55	0.59
3:C:314:PHE:CD2	11:K:135:PHE:CZ	2.89	0.59
15:O:240:ILE:HG23	15:O:332:LEU:CD1	2.33	0.59
1:A:954:GLY:N	1:A:1205:PHE:HB3	2.10	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:80:ARG:HG3	11:K:108:TYR:OH	2.02	0.59
16:P:317:ILE:HG22	16:P:363:ILE:HD13	1.84	0.59
2:B:1069:ILE:CD1	2:B:1069:ILE:H	2.16	0.59
2:B:143:TRP:NE1	2:B:446:MET:HB2	2.18	0.59
5:E:55:ARG:NH2	5:E:113:GLN:OE1	2.36	0.59
16:P:354:PRO:HG3	18:R:31:PHE:HB3	1.79	0.59
16:P:384:ASP:OD2	16:P:387:ASN:HB2	2.03	0.59
17:Q:378:LEU:HD23	18:R:216:LEU:HA	1.84	0.59
16:P:573:GLU:HB2	17:Q:499:LYS:HZ3	1.68	0.59
16:P:436:ILE:HG22	18:R:143:THR:CB	2.33	0.59
1:A:1187:ILE:HG13	2:B:1080:ILE:HG22	1.85	0.59
1:A:1484:LEU:HD11	2:B:305:ARG:NE	2.14	0.59
1:A:435:ASN:HB3	1:A:442:LYS:CA	2.32	0.59
1:A:477:ASN:O	2:B:1047:ARG:CG	2.51	0.59
1:A:699:CYS:O	1:A:815:ARG:NH1	2.35	0.59
2:B:1120:ILE:HD12	15:O:117:GLN:HE21	1.61	0.59
3:C:45:SER:HB2	3:C:271:ARG:NH2	2.18	0.59
3:C:58:ASN:HA	3:C:296:ASN:HD21	0.78	0.59
6:F:72:LYS:CA	6:F:142:SER:CB	2.59	0.59
6:F:74:ILE:C	7:G:95:LEU:CD1	2.62	0.59
7:G:242:VAL:HG21	15:O:183:ILE:CG2	2.32	0.59
15:O:376:TYR:CZ	15:O:419:LYS:HE2	2.38	0.59
15:O:376:TYR:HE2	15:O:377:TYR:HE2	1.44	0.59
1:A:1298:ASP:CG	1:A:1468:LYS:HZ3	2.06	0.59
1:A:415:ASP:HA	1:A:418:VAL:HG12	1.84	0.59
1:A:998:HIS:CD2	2:B:712:SER:H	2.20	0.59
3:C:228:ARG:HD3	14:N:173:THR:OG1	2.02	0.59
15:O:227:PHE:CD1	15:O:363:THR:HB	2.38	0.59
16:P:197:ARG:HE	16:P:261:VAL:N	1.93	0.59
17:Q:24:ASP:OD1	17:Q:26:ARG:NH1	2.31	0.59
17:Q:369:TRP:HB3	17:Q:373:GLU:OE2	2.02	0.59
16:P:391:THR:CG2	18:R:149:LYS:CB	2.80	0.59
16:P:472:ARG:CZ	18:R:200:THR:HG23	2.32	0.59
16:P:399:TRP:CE2	18:R:87:VAL:HG23	2.37	0.59
1:A:474:LYS:HE3	2:B:1092:LEU:HD21	1.77	0.59
1:A:953:GLU:CA	1:A:1205:PHE:CG	2.85	0.59
1:A:478:TYR:CB	2:B:1048:SER:O	2.50	0.59
2:B:143:TRP:CD2	2:B:446:MET:CE	2.85	0.59
2:B:143:TRP:HB3	2:B:446:MET:CE	2.25	0.59
2:B:75:ASP:CA	2:B:440:PHE:CZ	2.86	0.59
7:G:241:ARG:HG2	15:O:152:GLN:OE1	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:200:ASN:ND2	17:Q:14:ASN:OD1	2.36	0.59
16:P:626:LEU:HD11	16:P:665:ASN:HB2	1.84	0.59
17:Q:22:ILE:HD11	17:Q:26:ARG:CD	2.33	0.59
17:Q:369:TRP:CB	17:Q:373:GLU:OE2	2.51	0.59
1:A:1313:LEU:HD23	1:A:1462:PHE:CZ	2.29	0.59
1:A:4:SER:HB2	1:A:573:LEU:HD22	1.85	0.59
1:A:909:SER:HA	9:I:83:LYS:HE3	1.84	0.59
1:A:990:ILE:CA	1:A:994:GLU:CB	2.64	0.59
3:C:322:LYS:NZ	11:K:129:ASP:OD1	2.35	0.59
16:P:484:ARG:HD2	16:P:488:LEU:HD12	1.85	0.59
16:P:496:THR:OG1	18:R:1:MET:HE3	1.93	0.59
16:P:496:THR:CB	18:R:1:MET:HE1	2.31	0.59
17:Q:385:PHE:CE2	18:R:208:TYR:CD2	2.91	0.59
1:A:953:GLU:HB3	1:A:1205:PHE:CE2	2.37	0.58
1:A:449:GLY:O	1:A:451:VAL:N	2.34	0.58
12:L:38:LEU:HD12	12:L:49:LYS:HG3	1.85	0.58
16:P:436:ILE:CG2	18:R:143:THR:CG2	2.64	0.58
18:R:220:LEU:HD21	18:R:256:GLU:OE1	2.02	0.58
16:P:496:THR:CG2	18:R:2:PHE:CZ	2.45	0.58
18:R:301:SER:CA	18:R:358:PHE:CZ	2.85	0.58
16:P:443:ASP:HB2	18:R:3:GLU:H	1.66	0.58
1:A:1074:TYR:HE2	1:A:1159:ASP:HB3	1.69	0.58
1:A:83:VAL:HG11	1:A:427:PHE:CE2	2.37	0.58
2:B:1005:TYR:HH	10:J:44:TYR:HD2	1.44	0.58
2:B:110:ASN:O	2:B:112:GLY:N	2.35	0.58
2:B:28:PRO:HD3	10:J:62:ARG:NE	2.17	0.58
2:B:156:ARG:NH2	2:B:455:GLU:OE1	2.24	0.58
15:O:607:LYS:HG3	15:O:608:GLU:N	2.17	0.58
16:P:659:LEU:HD12	16:P:742:TRP:CD1	2.39	0.58
16:P:675:PHE:CZ	16:P:742:TRP:HZ3	2.21	0.58
18:R:242:ILE:HG23	18:R:244:GLY:N	2.18	0.58
18:R:350:SER:O	18:R:354:LEU:HB2	2.03	0.58
1:A:408:LYS:HE3	1:A:416:ARG:NH1	2.19	0.58
1:A:475:ARG:HH22	2:B:1061:LYS:HG3	1.67	0.58
2:B:202:LEU:H	2:B:202:LEU:CD2	2.13	0.58
2:B:209:GLN:O	2:B:401:GLU:HG2	2.03	0.58
2:B:829:ASN:N	2:B:829:ASN:OD1	2.36	0.58
7:G:30:GLU:HA	7:G:32:ASN:N	2.18	0.58
18:R:229:TRP:HB3	18:R:260:ASN:OD1	2.02	0.58
2:B:538:PRO:HB2	2:B:542:LEU:HG	1.84	0.58
2:B:923:GLN:HG2	2:B:949:ILE:HD11	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:201:LYS:CD	15:O:239:SER:OG	2.49	0.58
17:Q:152:LEU:HB3	17:Q:154:LEU:HD22	1.85	0.58
16:P:725:VAL:HG21	17:Q:446:TYR:CD1	2.38	0.58
1:A:1260:LYS:HE2	1:A:1262:LEU:CD2	2.33	0.58
1:A:1606:SER:HB2	1:A:1611:MET:CE	2.33	0.58
1:A:408:LYS:HE3	1:A:416:ARG:HH12	1.67	0.58
1:A:476:VAL:HG22	2:B:1069:ILE:N	2.18	0.58
1:A:615:ARG:HH12	2:B:929:ARG:CD	2.17	0.58
15:O:219:ARG:CZ	15:O:360:VAL:HG22	2.34	0.58
16:P:715:TYR:CE1	16:P:733:THR:HG23	2.38	0.58
1:A:1050:TYR:CB	1:A:1054:ALA:HA	2.33	0.58
1:A:1330:VAL:HG22	1:A:1455:ARG:CD	2.34	0.58
1:A:408:LYS:HA	1:A:411:VAL:CG2	2.34	0.58
1:A:953:GLU:CB	1:A:1205:PHE:CD2	2.86	0.58
7:G:142:ALA:HB1	15:O:102:SER:O	2.03	0.58
7:G:143:SER:OG	15:O:104:ILE:CG2	2.51	0.58
7:G:143:SER:OG	15:O:104:ILE:HG22	2.01	0.58
2:B:30:LYS:C	2:B:176:SER:CB	2.72	0.58
17:Q:354:LYS:HD2	17:Q:369:TRP:HZ2	1.69	0.58
18:R:313:LEU:CD1	18:R:353:VAL:HG21	2.33	0.58
1:A:984:GLY:HA3	1:A:994:GLU:OE1	2.02	0.58
3:C:272:LYS:HG2	14:N:175:TYR:CE1	2.30	0.58
11:K:68:GLU:HG2	11:K:72:LEU:HD23	1.86	0.58
7:G:143:SER:CB	15:O:104:ILE:N	2.49	0.58
15:O:219:ARG:NH2	15:O:360:VAL:CG2	2.67	0.58
1:A:718:THR:CG2	8:H:118:PHE:HB3	2.34	0.58
1:A:828:CYS:SG	2:B:1027:TYR:CB	2.92	0.58
14:N:69:SER:OG	14:N:70:LEU:N	2.37	0.58
15:O:510:VAL:HG12	15:O:543:ILE:HD12	1.86	0.58
16:P:389:TRP:HA	18:R:151:PRO:HA	1.84	0.58
16:P:420:GLU:HA	16:P:442:LEU:O	2.03	0.58
16:P:422:ILE:HG12	16:P:442:LEU:CD1	2.34	0.58
16:P:631:SER:O	16:P:686:TYR:OH	2.20	0.58
17:Q:20:TRP:CE2	17:Q:28:THR:HB	2.39	0.58
16:P:599:LYS:HE3	17:Q:272:GLN:HE22	1.69	0.58
16:P:186:TYR:O	18:R:195:LEU:CB	2.52	0.58
16:P:399:TRP:CE2	18:R:87:VAL:CG2	2.87	0.58
2:B:203:ILE:HG21	2:B:405:GLY:CA	2.33	0.58
3:C:42:VAL:HB	11:K:138:LYS:HG3	1.86	0.58
16:P:719:LEU:HD13	16:P:733:THR:HG21	1.85	0.58
1:A:991:LYS:N	1:A:994:GLU:CB	2.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:146:ASN:HD22	2:B:441:LYS:CE	2.15	0.57
1:A:986:PHE:CE2	2:B:958:MET:HE1	2.38	0.57
12:L:33:GLU:HG3	12:L:53:HIS:CE1	2.39	0.57
16:P:473:HIS:ND1	16:P:473:HIS:O	2.37	0.57
16:P:55:LEU:CD2	18:R:227:HIS:CD2	2.81	0.57
1:A:470:HIS:HB3	2:B:1058:GLN:HE22	1.68	0.57
1:A:921:PRO:HD3	8:H:19:ARG:CG	2.33	0.57
15:O:348:THR:HG23	15:O:351:SER:H	1.68	0.57
16:P:268:SER:OG	16:P:269:PHE:N	2.36	0.57
16:P:473:HIS:C	16:P:504:THR:HG23	2.24	0.57
17:Q:20:TRP:CH2	17:Q:22:ILE:HG21	2.30	0.57
18:R:248:LYS:O	18:R:250:LEU:HD13	2.04	0.57
2:B:683:ASN:HA	14:N:150:TYR:CE2	2.39	0.57
2:B:683:ASN:CA	14:N:154:ARG:HH22	2.14	0.57
14:N:89:ILE:HG12	14:N:139:VAL:HG22	1.85	0.57
15:O:240:ILE:HG22	15:O:380:SER:OG	2.04	0.57
1:A:545:SER:N	17:Q:34:VAL:HB	2.19	0.57
18:R:9:THR:HB	18:R:205:VAL:HG13	1.86	0.57
1:A:581:ILE:HB	1:A:637:PHE:CE2	2.38	0.57
13:M:10:ILE:HB	14:N:70:LEU:HB3	1.86	0.57
17:Q:162:ILE:HG21	17:Q:226:LEU:HD11	1.85	0.57
18:R:233:TYR:CZ	18:R:263:ASN:CB	2.87	0.57
1:A:1204:THR:HG21	9:I:97:HIS:CB	2.33	0.57
2:B:567:SER:O	14:N:140:SER:CB	2.52	0.57
2:B:743:ARG:CZ	10:J:60:PHE:CZ	2.84	0.57
1:A:535:GLN:HE22	17:Q:26:ARG:CG	2.17	0.57
17:Q:8:PRO:O	17:Q:9:ILE:C	2.42	0.57
1:A:1032:VAL:HG21	1:A:1050:TYR:HE1	1.68	0.57
1:A:1298:ASP:HA	1:A:1468:LYS:NZ	2.20	0.57
1:A:1655:ASP:O	6:F:135:ARG:N	2.23	0.57
15:O:190:ILE:HA	15:O:193:TYR:CD2	2.39	0.57
16:P:354:PRO:CB	18:R:31:PHE:HB2	2.34	0.57
17:Q:362:THR:O	17:Q:365:ASP:HB2	2.04	0.57
17:Q:418:PRO:HG2	18:R:233:TYR:CZ	2.38	0.57
1:A:396:ILE:HD11	1:A:426:ALA:HB1	1.85	0.57
1:A:588:LEU:HD21	2:B:1087:LEU:CD1	2.31	0.57
15:O:205:ARG:O	15:O:209:VAL:HG12	2.05	0.57
16:P:462:ILE:HB	16:P:483:HIS:HB3	1.87	0.57
17:Q:222:PHE:HA	17:Q:492:ALA:HB1	1.85	0.57
18:R:181:THR:O	18:R:185:LYS:HG3	2.04	0.57
16:P:357:LEU:CD1	18:R:23:TYR:HD1	2.17	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:338:PHE:HZ	2:B:357:ILE:HD12	1.70	0.57
16:P:389:TRP:CH2	18:R:149:LYS:O	2.57	0.57
2:B:1013:MET:SD	2:B:1026:ILE:HG12	2.45	0.57
16:P:365:TRP:HB3	16:P:372:ILE:HG22	1.86	0.57
16:P:407:ARG:HH22	16:P:411:LYS:HA	1.70	0.57
17:Q:410:ARG:HE	17:Q:413:LEU:HD13	1.69	0.57
18:R:314:TRP:NE1	18:R:363:GLU:OE2	2.38	0.57
2:B:49:PHE:CE2	2:B:194:PHE:CE2	2.93	0.57
2:B:833:PRO:HG2	2:B:836:TRP:CE2	2.40	0.57
1:A:1118:VAL:HG11	5:E:199:ILE:HG13	1.87	0.57
1:A:1660:VAL:C	7:G:102:GLU:HG2	2.22	0.57
2:B:943:ILE:CD1	10:J:44:TYR:CZ	2.68	0.57
7:G:144:HIS:CE1	15:O:145:SER:HB3	2.38	0.57
16:P:301:GLN:N	16:P:319:ASP:O	2.37	0.57
16:P:355:GLU:HB3	18:R:28:SER:CB	2.34	0.57
17:Q:337:SER:HB2	17:Q:448:LYS:HD3	1.86	0.57
18:R:199:LYS:NZ	18:R:204:GLU:CA	2.62	0.57
1:A:1235:THR:O	1:A:1544:ASN:ND2	2.38	0.56
1:A:413:LEU:O	1:A:416:ARG:CG	2.49	0.56
1:A:615:ARG:CZ	2:B:929:ARG:HE	2.16	0.56
3:C:315:PHE:HE2	11:K:139:ILE:HD12	1.70	0.56
2:B:681:ILE:HB	14:N:154:ARG:CB	2.34	0.56
15:O:109:SER:OG	15:O:111:ARG:HG3	2.05	0.56
1:A:1484:LEU:HD11	2:B:305:ARG:CD	2.35	0.56
15:O:376:TYR:CE1	15:O:588:LEU:HD22	2.25	0.56
16:P:662:LEU:HB3	16:P:665:ASN:HD21	1.67	0.56
17:Q:211:TYR:O	17:Q:214:ILE:HG22	2.05	0.56
17:Q:411:ARG:O	17:Q:415:LYS:HB2	2.05	0.56
16:P:349:GLY:CA	18:R:154:LYS:HA	2.21	0.56
1:A:1032:VAL:HG22	1:A:1050:TYR:CD1	2.39	0.56
5:E:90:VAL:HG13	5:E:120:ALA:HA	1.88	0.56
7:G:56:ASN:HB3	7:G:59:GLN:HB3	1.87	0.56
16:P:390:GLN:O	18:R:150:GLN:HB2	2.04	0.56
17:Q:418:PRO:HG2	18:R:233:TYR:CE2	2.39	0.56
16:P:436:ILE:CB	18:R:143:THR:CG2	1.99	0.56
18:R:173:MET:CG	18:R:188:PHE:CZ	2.87	0.56
1:A:472:MET:CG	2:B:1073:GLU:CD	2.73	0.56
2:B:679:GLN:HG3	14:N:156:PRO:N	2.18	0.56
6:F:72:LYS:HD3	6:F:142:SER:CB	2.28	0.56
16:P:608:GLN:HA	16:P:611:ILE:HD12	1.87	0.56
17:Q:22:ILE:HD12	17:Q:26:ARG:NE	2.18	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:12:THR:HB	17:Q:33:HIS:ND1	2.18	0.56
18:R:180:CYS:SG	18:R:185:LYS:CG	2.94	0.56
18:R:236:PHE:O	18:R:240:ILE:HG22	2.05	0.56
1:A:615:ARG:HH12	2:B:929:ARG:HD3	1.71	0.56
2:B:796:ARG:NH2	10:J:8:PHE:O	2.37	0.56
15:O:234:ILE:CG1	15:O:367:LEU:HD13	2.36	0.56
17:Q:22:ILE:HD12	17:Q:24:ASP:OD1	2.04	0.56
18:R:6:ILE:HD11	18:R:214:VAL:HG23	1.87	0.56
1:A:1657:LEU:CB	7:G:104:LEU:HD13	2.35	0.56
1:A:672:ASP:OD1	2:B:777:SER:CB	2.53	0.56
13:M:15:VAL:HG22	13:M:90:LEU:HB2	1.88	0.56
15:O:376:TYR:CD2	15:O:419:LYS:HE2	2.40	0.56
15:O:63:LEU:HD23	15:O:111:ARG:HD2	1.87	0.56
18:R:310:ILE:HG21	18:R:363:GLU:OE1	2.05	0.56
1:A:407:GLN:O	1:A:408:LYS:NZ	2.38	0.56
2:B:236:ILE:HD13	2:B:377:MET:HE1	1.86	0.56
3:C:86:PHE:HE2	3:C:205:LYS:HG3	1.69	0.56
6:F:66:ARG:HH22	7:G:90:LEU:CB	2.19	0.56
16:P:233:VAL:HG12	16:P:234:THR:H	1.71	0.56
18:R:83:HIS:O	18:R:85:ARG:N	2.39	0.56
1:A:1499:ARG:O	1:A:1500:GLN:HB2	2.05	0.56
1:A:476:VAL:HA	2:B:1059:PRO:HG2	1.88	0.56
2:B:54:GLU:HG3	2:B:168:ASN:HD21	1.71	0.56
2:B:208:VAL:HG23	2:B:401:GLU:CG	2.35	0.56
2:B:30:LYS:O	2:B:176:SER:CB	2.54	0.56
2:B:184:LYS:CD	2:B:735:HIS:CD2	2.89	0.56
16:P:187:ILE:HB	16:P:188:GLN:CD	2.25	0.56
15:O:200:ASN:ND2	17:Q:14:ASN:C	2.53	0.56
1:A:503:VAL:HG23	1:A:530:TRP:CB	2.19	0.56
11:K:49:LEU:HD23	11:K:51:THR:HG23	1.86	0.56
15:O:359:GLY:O	15:O:363:THR:CG2	2.53	0.56
16:P:317:ILE:HG13	16:P:326:ILE:HD13	1.86	0.56
16:P:712:ASP:OD1	16:P:712:ASP:N	2.38	0.56
17:Q:194:GLN:HG3	18:R:209:ARG:NE	2.18	0.56
17:Q:287:TRP:NE1	17:Q:289:ARG:HB3	2.21	0.56
1:A:797:LEU:HD13	1:A:809:VAL:HG21	1.87	0.56
1:A:986:PHE:CE2	2:B:958:MET:CE	2.88	0.56
15:O:376:TYR:CZ	15:O:588:LEU:CD2	2.76	0.56
15:O:332:LEU:CD2	15:O:599:LEU:HD21	2.36	0.56
1:A:1187:ILE:HG13	2:B:1080:ILE:CG2	2.36	0.56
3:C:314:PHE:CE2	11:K:135:PHE:CE1	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:578:SER:O	15:O:579:LEU:HB2	2.06	0.56
17:Q:274:ILE:HG23	17:Q:282:ARG:HH22	1.71	0.56
17:Q:318:LEU:HB3	17:Q:476:ILE:HD12	1.87	0.56
18:R:308:PHE:HD1	18:R:309:ALA:N	2.04	0.56
16:P:399:TRP:CZ2	18:R:87:VAL:HG22	2.40	0.56
1:A:966:LEU:HD22	1:A:997:PHE:CZ	2.40	0.55
2:B:1047:ARG:HG2	2:B:1049:THR:N	2.21	0.55
2:B:1090:ASP:HA	2:B:1094:ASN:CG	2.27	0.55
2:B:401:GLU:HG3	2:B:402:VAL:H	1.69	0.55
2:B:563:SER:HA	13:M:73:SER:OG	2.06	0.55
3:C:292:GLY:HA3	3:C:295:ARG:HH22	1.71	0.55
2:B:1005:TYR:CE1	14:N:170:HIS:CE1	2.93	0.55
15:O:376:TYR:CE2	15:O:377:TYR:CD2	2.93	0.55
15:O:66:ASN:N	15:O:66:ASN:ND2	2.53	0.55
16:P:184:SER:CA	18:R:198:LEU:HD23	2.36	0.55
1:A:403:LEU:HD11	1:A:419:ILE:HD13	1.88	0.55
1:A:436:ALA:CA	1:A:440:SER:HA	2.37	0.55
1:A:670:ILE:HG12	2:B:783:MET:HE3	1.85	0.55
1:A:999:CYS:CA	2:B:712:SER:HB2	2.21	0.55
6:F:66:ARG:HH22	7:G:90:LEU:HD12	1.57	0.55
15:O:243:GLU:CB	15:O:332:LEU:CD1	2.84	0.55
15:O:602:TYR:CD2	15:O:605:LEU:HD23	2.40	0.55
16:P:665:ASN:OD1	16:P:665:ASN:N	2.31	0.55
17:Q:103:LEU:HD21	17:Q:205:ILE:HG21	1.88	0.55
17:Q:341:ARG:NH2	17:Q:369:TRP:HE1	2.05	0.55
2:B:30:LYS:HG2	2:B:178:TYR:CB	2.35	0.55
2:B:985:ILE:CG1	14:N:160:VAL:HG21	2.37	0.55
3:C:223:SER:HB3	10:J:12:LYS:HB2	1.87	0.55
15:O:223:SER:O	15:O:226:GLY:N	2.35	0.55
15:O:219:ARG:NE	15:O:230:TRP:HE1	2.05	0.55
16:P:194:ARG:HA	16:P:209:LYS:O	2.07	0.55
16:P:362:ARG:HH22	16:P:364:GLU:HG3	1.71	0.55
16:P:358:SER:HB3	16:P:377:ARG:HD3	1.87	0.55
15:O:200:ASN:ND2	17:Q:14:ASN:CB	2.65	0.55
18:R:320:CYS:O	18:R:323:SER:N	2.40	0.55
2:B:203:ILE:CG2	2:B:405:GLY:HA3	2.35	0.55
5:E:145:THR:C	5:E:147:HIS:H	2.10	0.55
5:E:159:ASP:OD1	5:E:162:ARG:NH1	2.38	0.55
8:H:80:ARG:NH1	11:K:108:TYR:CD1	2.74	0.55
7:G:144:HIS:CE1	15:O:146:SER:OG	2.60	0.55
15:O:412:GLU:OE1	15:O:416:LYS:HD3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:350:THR:CG2	18:R:155:GLN:CA	2.84	0.55
16:P:399:TRP:HE1	18:R:87:VAL:HG22	1.70	0.55
16:P:426:ALA:C	16:P:433:VAL:HG11	2.27	0.55
16:P:592:LEU:O	16:P:596:ILE:HG22	2.06	0.55
17:Q:163:SER:HA	17:Q:230:ILE:HG22	1.88	0.55
16:P:186:TYR:O	18:R:195:LEU:HD22	2.05	0.55
18:R:229:TRP:CE3	18:R:260:ASN:CA	2.86	0.55
18:R:353:VAL:CG1	18:R:364:VAL:HB	2.36	0.55
18:R:369:ALA:HB1	18:R:411:VAL:HG23	1.86	0.55
2:B:322:ASN:HB3	2:B:325:GLN:H	1.71	0.55
3:C:65:ASN:O	3:C:69:ARG:HG3	2.07	0.55
16:P:475:ARG:HH22	17:Q:360:LYS:HE3	1.70	0.55
16:P:623:LEU:HG	16:P:678:LEU:HD12	1.88	0.55
17:Q:290:THR:HB	17:Q:292:GLU:N	2.22	0.55
17:Q:389:GLN:HB3	18:R:209:ARG:NH2	2.19	0.55
1:A:1260:LYS:HE2	1:A:1262:LEU:HG	1.89	0.55
1:A:821:ILE:O	1:A:825:ALA:N	2.40	0.55
2:B:859:CYS:HB3	2:B:872:LYS:HB2	1.88	0.55
2:B:119:ARG:CZ	12:L:53:HIS:HE1	2.17	0.55
15:O:200:ASN:ND2	17:Q:14:ASN:CG	2.60	0.55
16:P:534:VAL:HA	16:P:552:LEU:O	2.06	0.55
1:A:953:GLU:HB3	1:A:1205:PHE:CZ	2.41	0.55
2:B:205:MET:CE	2:B:500:PHE:O	2.47	0.55
2:B:679:GLN:OE1	14:N:157:ARG:HB2	2.06	0.55
2:B:848:ILE:CB	12:L:60:ARG:CD	2.39	0.55
5:E:145:THR:O	5:E:147:HIS:N	2.38	0.55
15:O:169:THR:HA	15:O:172:HIS:ND1	2.22	0.55
18:R:236:PHE:HZ	18:R:253:ILE:HD11	0.74	0.55
1:A:502:ALA:HB1	1:A:530:TRP:NE1	2.21	0.55
1:A:508:PRO:CD	1:A:639:GLN:HG3	2.37	0.55
1:A:721:LYS:HE2	8:H:93:TYR:O	2.07	0.55
1:A:916:THR:O	1:A:919:LYS:NZ	2.40	0.55
2:B:373:MET:O	2:B:377:MET:HG3	2.07	0.55
2:B:625:GLU:OE1	2:B:667:PHE:HB3	2.07	0.55
2:B:549:CYS:HG	2:B:649:MET:HG2	1.68	0.55
15:O:191:ASP:O	15:O:194:LEU:HB2	2.06	0.55
16:P:472:ARG:CG	18:R:198:LEU:O	2.55	0.55
1:A:1049:MET:CB	1:A:1052:GLY:N	2.64	0.55
1:A:408:LYS:H	1:A:408:LYS:HD3	1.70	0.55
2:B:203:ILE:CG2	2:B:405:GLY:HA2	2.37	0.55
1:A:998:HIS:NE2	2:B:711:GLN:HA	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:909:SER:CA	9:I:83:LYS:NZ	2.61	0.55
15:O:69:THR:O	15:O:73:ILE:HG13	2.07	0.55
16:P:198:ASP:CG	16:P:205:TYR:O	2.44	0.55
16:P:352:PHE:CE2	18:R:157:MET:HE3	2.42	0.55
17:Q:335:THR:HG21	17:Q:478:ARG:HG3	1.88	0.55
1:A:1162:ASN:HD21	1:A:1164:LYS:HB2	1.71	0.55
1:A:506:THR:HB	1:A:579:ARG:O	2.03	0.55
1:A:827:THR:HG21	1:A:924:SER:HB3	1.89	0.55
1:A:1641:ILE:HG23	2:B:1092:LEU:HD13	1.88	0.55
3:C:139:LYS:HG2	3:C:201:GLU:HB3	1.89	0.55
7:G:141:SER:CB	15:O:142:ILE:HD11	2.20	0.55
16:P:375:PHE:HD1	16:P:402:ILE:HD13	1.69	0.55
18:R:187:TYR:O	18:R:191:ILE:HG23	2.06	0.55
16:P:472:ARG:HG2	18:R:198:LEU:O	2.07	0.55
16:P:355:GLU:CB	18:R:28:SER:HB3	2.37	0.55
1:A:1446:ARG:O	1:A:1450:ILE:HG13	2.08	0.54
1:A:476:VAL:CG2	2:B:1070:ARG:H	2.05	0.54
15:O:348:THR:HG22	15:O:351:SER:CB	2.26	0.54
16:P:468:VAL:HG22	16:P:477:TYR:HB3	1.89	0.54
16:P:475:ARG:HD3	18:R:1:MET:CG	2.37	0.54
16:P:474:LYS:O	16:P:499:GLU:HB2	2.07	0.54
16:P:488:LEU:CG	18:R:138:PHE:CD2	2.90	0.54
18:R:161:ASN:O	18:R:164:LYS:HB2	2.07	0.54
18:R:199:LYS:HZ3	18:R:204:GLU:CB	2.20	0.54
18:R:6:ILE:CD1	18:R:214:VAL:HG23	2.37	0.54
18:R:229:TRP:CD2	18:R:259:ASP:O	2.60	0.54
1:A:1658:ALA:HA	6:F:132:LEU:HA	1.87	0.54
1:A:408:LYS:HB2	1:A:411:VAL:O	2.08	0.54
2:B:1072:GLY:C	2:B:1075:GLU:CG	2.51	0.54
2:B:212:ASN:OD1	2:B:238:SER:HA	2.08	0.54
2:B:284:SER:OG	2:B:287:GLU:HG3	2.07	0.54
2:B:48:SER:HB3	2:B:404:LEU:HD13	1.88	0.54
2:B:548:LYS:O	2:B:550:ARG:CZ	2.56	0.54
15:O:163:ILE:HD12	15:O:207:LYS:HE3	1.89	0.54
16:P:472:ARG:HH11	18:R:203:SER:HB2	1.64	0.54
1:A:1310:LYS:HG2	1:A:1311:GLU:CG	2.38	0.54
1:A:506:THR:CG2	1:A:579:ARG:C	2.59	0.54
2:B:64:GLY:CA	2:B:242:ASP:HB2	2.38	0.54
3:C:315:PHE:CE2	11:K:139:ILE:CD1	2.88	0.54
7:G:20:HIS:O	7:G:20:HIS:ND1	2.38	0.54
10:J:10:CYS:HB3	10:J:43:ARG:NH1	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:87:TYR:HA	14:N:141:GLU:C	2.27	0.54
15:O:359:GLY:O	15:O:363:THR:HG22	2.08	0.54
16:P:436:ILE:CG2	18:R:143:THR:CB	2.85	0.54
16:P:448:THR:HG23	16:P:471:MET:H	1.71	0.54
16:P:504:THR:HG22	16:P:505:PRO:HD2	1.88	0.54
17:Q:227:TYR:O	17:Q:230:ILE:HG13	2.06	0.54
1:A:1487:ASN:CG	2:B:305:ARG:HH22	2.11	0.54
6:F:72:LYS:NZ	6:F:140:ASP:OD2	2.21	0.54
16:P:218:VAL:HG22	16:P:246:LYS:HB3	1.89	0.54
16:P:722:TRP:CD1	17:Q:264:PRO:HD3	2.42	0.54
17:Q:8:PRO:HB2	17:Q:19:LEU:CD2	2.36	0.54
1:A:721:LYS:NZ	8:H:91:ASP:CA	2.68	0.54
2:B:679:GLN:CD	14:N:156:PRO:C	2.65	0.54
16:P:320:ILE:HG13	16:P:323:ASN:OD1	2.07	0.54
1:A:589:MET:HE1	1:A:614:LEU:HD13	1.89	0.54
1:A:67:LEU:HD13	1:A:71:PHE:O	2.08	0.54
16:P:221:ARG:HH12	16:P:266:GLU:HB3	1.73	0.54
16:P:315:PHE:HB3	16:P:317:ILE:CD1	2.37	0.54
17:Q:101:LYS:O	17:Q:105:LEU:HG	2.07	0.54
16:P:21:GLN:HB3	18:R:139:GLU:HB2	1.88	0.54
16:P:399:TRP:NE1	18:R:87:VAL:O	2.16	0.54
1:A:1025:LYS:NZ	2:B:1076:ARG:NH1	2.56	0.54
2:B:203:ILE:HG22	2:B:405:GLY:HA2	1.90	0.54
2:B:550:ARG:O	2:B:648:ARG:O	2.26	0.54
1:A:671:GLN:CB	2:B:952:HIS:CD2	2.90	0.54
15:O:235:GLU:O	15:O:238:ILE:HD13	2.08	0.54
15:O:243:GLU:HB3	15:O:332:LEU:CD1	2.30	0.54
16:P:350:THR:HG21	18:R:156:LYS:H	1.71	0.54
16:P:492:LEU:H	16:P:492:LEU:HD22	1.73	0.54
17:Q:378:LEU:HG	18:R:219:LEU:CD1	2.30	0.54
1:A:581:ILE:HG12	1:A:582:LYS:N	2.21	0.54
1:A:719:ILE:HA	8:H:97:MET:HA	1.89	0.54
3:C:230:LEU:HD22	3:C:297:HIS:CE1	2.43	0.54
6:F:72:LYS:HB3	6:F:142:SER:HA	0.59	0.54
1:A:1657:LEU:CD2	7:G:104:LEU:CD1	2.61	0.54
7:G:229:LEU:HD12	7:G:230:ARG:H	1.72	0.54
16:P:659:LEU:HD12	16:P:742:TRP:NE1	2.23	0.54
17:Q:196:SER:CB	17:Q:204:ARG:HG2	2.37	0.54
17:Q:333:SER:HA	17:Q:336:GLU:HG2	1.89	0.54
17:Q:6:ARG:HA	17:Q:18:ARG:HD2	1.88	0.54
1:A:492:THR:HG23	1:A:811:SER:OG	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:21:ARG:NH1	2:B:22:GLU:OE1	2.40	0.54
2:B:42:VAL:HG21	2:B:190:ILE:HD12	1.89	0.54
2:B:550:ARG:N	2:B:650:LEU:O	2.40	0.54
2:B:574:SER:O	13:M:97:VAL:HG22	2.07	0.54
3:C:97:LEU:HD11	3:C:202:ILE:HD13	1.90	0.54
16:P:711:LEU:HD21	16:P:741:ILE:HD13	1.90	0.54
1:A:436:ALA:C	1:A:439:ASP:CA	2.76	0.54
3:C:45:SER:CB	3:C:271:ARG:NH2	2.71	0.54
16:P:273:ARG:HG2	16:P:291:PRO:HB3	1.90	0.54
16:P:444:PRO:HG2	16:P:449:LEU:HD11	1.89	0.54
18:R:158:THR:HG23	18:R:161:ASN:H	1.72	0.54
18:R:26:TYR:CB	18:R:169:PRO:HB3	2.37	0.54
1:A:1162:ASN:HD22	1:A:1165:LYS:HG3	1.71	0.53
2:B:1073:GLU:HA	2:B:1076:ARG:CB	2.38	0.53
2:B:894:LYS:HG2	12:L:47:ARG:CD	2.38	0.53
13:M:12:ILE:HD12	14:N:67:LEU:HB2	1.90	0.53
15:O:467:MET:HG2	15:O:575:SER:HA	1.89	0.53
16:P:443:ASP:HB2	18:R:3:GLU:CB	2.31	0.53
1:A:1298:ASP:O	1:A:1299:ASN:C	2.46	0.53
1:A:1298:ASP:CB	1:A:1468:LYS:HZ3	2.21	0.53
1:A:953:GLU:C	1:A:1205:PHE:HB3	2.27	0.53
1:A:475:ARG:HD2	2:B:1059:PRO:O	2.07	0.53
2:B:317:TYR:HB3	2:B:320:LEU:HD12	1.89	0.53
7:G:132:VAL:HG22	7:G:232:THR:HG22	1.90	0.53
2:B:25:PHE:O	10:J:62:ARG:HD3	2.08	0.53
3:C:315:PHE:CZ	11:K:139:ILE:HD12	2.42	0.53
11:K:48:LYS:HE2	11:K:64:GLN:NE2	2.23	0.53
16:P:394:VAL:HG22	16:P:434:ARG:HH11	1.73	0.53
17:Q:162:ILE:HG22	17:Q:226:LEU:HD21	1.90	0.53
18:R:273:TRP:O	18:R:277:ILE:HG22	2.08	0.53
2:B:788:ILE:HB	2:B:948:ILE:HB	1.89	0.53
1:A:615:ARG:HH12	2:B:929:ARG:NE	2.02	0.53
1:A:1657:LEU:CD2	7:G:104:LEU:HB3	2.38	0.53
1:A:1297:PHE:CD2	9:I:60:LEU:HD13	2.43	0.53
3:C:33:VAL:CG1	11:K:130:VAL:HG21	2.38	0.53
1:A:1136:VAL:HG22	1:A:1174:TYR:CG	2.44	0.53
2:B:25:PHE:CZ	10:J:59:LYS:HD2	2.44	0.53
13:M:11:GLU:N	13:M:86:LYS:O	2.36	0.53
15:O:189:PHE:CD1	15:O:190:ILE:N	2.76	0.53
1:A:544:VAL:HA	17:Q:34:VAL:H	1.74	0.53
1:A:1262:LEU:HD23	1:A:1497:ILE:HA	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:824:THR:O	2:B:1023:ARG:HB2	2.08	0.53
2:B:1065:ARG:O	2:B:1065:ARG:HG3	2.08	0.53
2:B:38:LEU:HD11	2:B:493:PHE:CZ	2.43	0.53
3:C:142:ARG:NH2	10:J:67:GLU:OE2	2.42	0.53
2:B:16:PHE:HD2	10:J:32:GLU:OE2	1.90	0.53
15:O:245:GLN:HG3	15:O:377:TYR:O	2.09	0.53
2:B:38:LEU:HD11	2:B:493:PHE:HZ	1.74	0.53
1:A:1574:ALA:C	9:I:122:ARG:NH1	2.62	0.53
13:M:75:GLN:HB2	14:N:60:SER:HA	1.91	0.53
15:O:373:LEU:HD12	15:O:423:TYR:CD2	2.43	0.53
16:P:197:ARG:HB3	16:P:261:VAL:O	2.08	0.53
1:A:474:LYS:CE	2:B:1092:LEU:HD22	2.33	0.53
1:A:966:LEU:HD21	1:A:997:PHE:CZ	2.36	0.53
1:A:1002:GLY:HA3	2:B:713:PRO:HD3	1.91	0.53
3:C:272:LYS:HA	14:N:175:TYR:CD2	2.43	0.53
3:C:326:GLU:HB2	11:K:125:MET:HE3	1.90	0.53
3:C:67:PHE:O	3:C:71:MET:HG3	2.08	0.53
1:A:209:THR:HG21	5:E:173:SER:OG	2.09	0.53
1:A:1654:PHE:CD2	6:F:134:ILE:HG23	2.44	0.53
2:B:894:LYS:HG2	12:L:47:ARG:HD2	1.90	0.53
16:P:650:LEU:HD13	16:P:652:GLY:H	1.74	0.53
18:R:152:ILE:HD13	18:R:153:ASN:O	2.08	0.53
1:A:1317:ILE:HA	1:A:1321:PHE:HB3	1.90	0.53
2:B:134:ARG:HD2	2:B:160:GLY:HA3	1.91	0.53
3:C:33:VAL:HG12	11:K:130:VAL:HG21	1.90	0.53
15:O:243:GLU:HA	15:O:328:LEU:HD23	1.90	0.53
16:P:365:TRP:HE3	16:P:372:ILE:HG22	1.73	0.53
16:P:408:ILE:HB	16:P:453:VAL:HG21	1.91	0.53
18:R:213:ILE:HG12	18:R:242:ILE:HD13	1.90	0.53
2:B:404:LEU:O	2:B:405:GLY:C	2.47	0.53
2:B:679:GLN:N	14:N:155:VAL:O	2.41	0.53
2:B:699:ILE:O	2:B:703:LEU:HG	2.08	0.53
1:A:878:ARG:NH2	9:I:66:VAL:O	2.37	0.53
15:O:473:PHE:HE2	15:O:516:PRO:HG3	1.73	0.53
17:Q:361:PRO:O	17:Q:364:SER:N	2.42	0.53
18:R:168:ILE:HD11	18:R:172:LYS:HE2	1.90	0.53
18:R:247:ILE:HB	18:R:249:SER:CB	2.38	0.53
18:R:352:TRP:O	18:R:356:PRO:HD3	2.08	0.53
2:B:527:PHE:CG	2:B:666:PRO:HB3	2.44	0.53
7:G:30:GLU:HA	7:G:32:ASN:H	1.74	0.53
1:A:862:THR:CA	9:I:67:VAL:HG12	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:96:TYR:HA	9:I:111:PHE:O	2.09	0.53
15:O:552:LEU:O	15:O:553:ARG:C	2.46	0.53
15:O:63:LEU:CD2	15:O:111:ARG:HD2	2.38	0.53
16:P:292:LEU:CD1	16:P:343:LEU:HG	2.39	0.53
17:Q:370:SER:O	17:Q:373:GLU:N	2.42	0.53
16:P:391:THR:HG21	18:R:149:LYS:CG	2.39	0.53
1:A:1322:ILE:C	1:A:1454:HIS:CD2	2.82	0.52
1:A:1484:LEU:CD1	2:B:305:ARG:NH1	2.56	0.52
1:A:481:ARG:HB3	2:B:1045:GLN:O	2.09	0.52
1:A:969:PHE:CE2	1:A:978:ALA:HA	2.44	0.52
2:B:1092:LEU:CA	2:B:1096:SER:CB	2.79	0.52
2:B:143:TRP:CD2	2:B:446:MET:HE3	2.43	0.52
15:O:337:THR:O	15:O:341:THR:OG1	2.27	0.52
16:P:436:ILE:CB	18:R:143:THR:CB	2.84	0.52
17:Q:15:CYS:CB	17:Q:17:SER:N	2.59	0.52
18:R:202:THR:HA	18:R:205:VAL:HG23	1.82	0.52
18:R:252:GLY:O	18:R:256:GLU:CB	2.56	0.52
18:R:220:LEU:HD11	18:R:256:GLU:CD	2.30	0.52
16:P:399:TRP:NE1	18:R:87:VAL:HG22	2.24	0.52
1:A:1289:SER:HB3	1:A:1475:GLU:HG2	1.91	0.52
1:A:477:ASN:CA	2:B:1047:ARG:NH1	2.69	0.52
2:B:1091:ARG:CZ	2:B:1095:SER:OG	2.56	0.52
18:R:305:THR:HB	18:R:308:PHE:CE1	2.43	0.52
1:A:672:ASP:CG	2:B:777:SER:CB	2.77	0.52
1:A:686:PHE:CZ	8:H:121:LEU:HD11	2.40	0.52
2:B:679:GLN:HA	14:N:155:VAL:O	2.09	0.52
15:O:100:LEU:HD22	15:O:107:ILE:CD1	2.37	0.52
16:P:265:THR:HG23	16:P:274:ILE:HG12	1.90	0.52
17:Q:321:ASP:O	17:Q:324:ARG:N	2.27	0.52
18:R:171:ARG:O	18:R:174:GLU:HB3	2.09	0.52
18:R:199:LYS:NZ	18:R:204:GLU:HB3	2.23	0.52
15:O:206:ARG:HA	15:O:209:VAL:HG12	1.91	0.52
15:O:240:ILE:N	15:O:240:ILE:HD13	2.23	0.52
15:O:499:GLU:O	15:O:502:LEU:HG	2.09	0.52
16:P:448:THR:HG21	16:P:471:MET:H	1.74	0.52
17:Q:22:ILE:HD12	17:Q:26:ARG:NH1	2.24	0.52
15:O:467:MET:HG3	15:O:519:PHE:CZ	2.45	0.52
16:P:426:ALA:O	16:P:433:VAL:HG11	2.10	0.52
17:Q:447:ALA:HA	17:Q:450:THR:HB	1.92	0.52
17:Q:505:ILE:HA	17:Q:508:ALA:HB3	1.90	0.52
17:Q:8:PRO:CB	17:Q:19:LEU:HD23	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:833:PRO:O	2:B:834:LYS:HB3	2.10	0.52
2:B:796:ARG:HB3	10:J:8:PHE:HD1	1.75	0.52
4:D:80:THR:OG1	15:O:228:GLN:HG2	2.10	0.52
16:P:302:VAL:O	16:P:363:ILE:HD11	2.09	0.52
16:P:473:HIS:CD2	18:R:1:MET:HB2	2.44	0.52
16:P:354:PRO:HB3	18:R:31:PHE:HB2	1.92	0.52
1:A:1050:TYR:CD1	1:A:1179:ILE:CG2	2.85	0.52
1:A:435:ASN:HB3	1:A:442:LYS:C	2.30	0.52
16:P:384:ASP:HB3	16:P:389:TRP:CD1	2.45	0.52
16:P:473:HIS:HD2	16:P:475:ARG:HH11	1.58	0.52
18:R:361:ASP:O	18:R:363:GLU:N	2.40	0.52
1:A:1482:LYS:CE	2:B:304:ASP:CG	2.63	0.52
2:B:1090:ASP:OD1	2:B:1094:ASN:ND2	2.43	0.52
2:B:112:GLY:HA3	2:B:893:ASN:HB3	1.91	0.52
2:B:497:ILE:HG13	2:B:699:ILE:CD1	2.40	0.52
18:R:206:ARG:NE	18:R:206:ARG:H	2.03	0.52
16:P:354:PRO:O	18:R:27:ILE:CG2	2.58	0.52
1:A:1606:SER:HB2	1:A:1611:MET:HE2	1.92	0.52
1:A:408:LYS:N	1:A:408:LYS:CD	2.73	0.52
2:B:1072:GLY:H	2:B:1075:GLU:CD	2.13	0.52
2:B:16:PHE:CD2	10:J:32:GLU:OE2	2.63	0.52
3:C:326:GLU:HG3	11:K:125:MET:CE	2.40	0.52
15:O:248:LEU:HD23	15:O:248:LEU:O	2.10	0.52
15:O:402:THR:O	15:O:406:ILE:HG13	2.09	0.52
18:R:247:ILE:N	18:R:247:ILE:CD1	2.73	0.52
1:A:1032:VAL:HG22	1:A:1050:TYR:HD1	1.75	0.52
1:A:1318:SER:HA	1:A:1450:ILE:CD1	2.39	0.52
1:A:991:LYS:N	1:A:994:GLU:N	2.58	0.52
1:A:1657:LEU:CG	7:G:104:LEU:HD13	2.39	0.52
15:O:200:ASN:OD1	17:Q:14:ASN:CG	2.47	0.52
16:P:452:THR:HG21	16:P:508:ILE:HG22	1.92	0.52
17:Q:116:ILE:O	17:Q:120:ILE:HG12	2.09	0.52
16:P:438:TRP:CA	18:R:141:TRP:CZ2	2.93	0.52
18:R:350:SER:HA	18:R:353:VAL:HB	1.90	0.52
1:A:472:MET:CA	1:A:472:MET:CE	2.86	0.51
1:A:472:MET:CE	2:B:1076:ARG:CD	2.88	0.51
1:A:475:ARG:O	2:B:1059:PRO:HD2	2.10	0.51
2:B:307:GLU:OE2	2:B:311:ARG:NH1	2.43	0.51
1:A:613:THR:CG2	2:B:913:ILE:CG2	2.79	0.51
3:C:47:LEU:HD23	3:C:48:ASP:N	2.25	0.51
1:A:1654:PHE:CZ	6:F:89:GLU:HA	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:414:ILE:HB	16:P:425:GLY:O	2.11	0.51
1:A:697:TYR:CE2	11:K:92:SER:OG	2.58	0.51
1:A:1482:LYS:HD3	2:B:304:ASP:CG	2.29	0.51
2:B:497:ILE:CG1	2:B:699:ILE:HD13	2.38	0.51
3:C:272:LYS:HD3	14:N:179:ASP:HB3	1.91	0.51
3:C:37:LYS:HG3	11:K:134:LYS:HZ2	1.75	0.51
17:Q:351:ASN:CG	17:Q:369:TRP:CE2	2.83	0.51
2:B:1069:ILE:CD1	2:B:1069:ILE:N	2.73	0.51
2:B:22:GLU:O	2:B:26:ILE:HG13	2.10	0.51
4:D:48:GLU:OE2	4:D:90:LYS:NZ	2.43	0.51
12:L:28:LYS:O	12:L:59:ALA:N	2.40	0.51
2:B:1005:TYR:CD2	14:N:170:HIS:CG	2.98	0.51
16:P:350:THR:HG21	18:R:155:GLN:C	2.30	0.51
16:P:420:GLU:HA	16:P:442:LEU:HD22	1.93	0.51
16:P:391:THR:HG23	18:R:149:LYS:HB3	1.92	0.51
18:R:269:ASP:N	18:R:269:ASP:OD2	2.43	0.51
1:A:1573:TYR:HA	9:I:111:PHE:HE2	1.76	0.51
1:A:828:CYS:HG	2:B:1027:TYR:CB	2.23	0.51
2:B:819:ASP:CG	2:B:820:PRO:HD2	2.31	0.51
3:C:58:ASN:N	3:C:296:ASN:ND2	2.58	0.51
15:O:240:ILE:HG23	15:O:332:LEU:CG	2.41	0.51
15:O:376:TYR:CG	15:O:419:LYS:HD3	2.44	0.51
15:O:396:MET:HE1	15:O:433:LYS:C	2.31	0.51
2:B:1010:ASN:HB3	2:B:1025:ASP:HB3	1.93	0.51
2:B:548:LYS:O	2:B:549:CYS:C	2.47	0.51
1:A:1657:LEU:O	6:F:132:LEU:HA	2.09	0.51
15:O:518:LYS:HD3	15:O:519:PHE:CZ	2.45	0.51
17:Q:22:ILE:HD12	17:Q:26:ARG:CZ	2.40	0.51
2:B:551:ILE:CG2	2:B:648:ARG:H	2.22	0.51
2:B:943:ILE:CD1	10:J:44:TYR:CD1	2.93	0.51
5:E:131:THR:HG21	5:E:191:LYS:HE2	1.91	0.51
7:G:159:LYS:CD	15:O:103:ASN:CG	2.63	0.51
16:P:274:ILE:O	16:P:289:SER:CB	2.43	0.51
16:P:422:ILE:HG12	16:P:442:LEU:HD12	1.93	0.51
1:A:1050:TYR:CE1	1:A:1185:VAL:CG1	2.93	0.51
1:A:822:THR:O	2:B:1015:SER:HB2	2.09	0.51
1:A:476:VAL:CG2	2:B:1069:ILE:N	2.73	0.51
2:B:532:HIS:NE2	2:B:723:LYS:CE	2.73	0.51
2:B:682:GLN:N	14:N:154:ARG:HH21	2.03	0.51
15:O:378:THR:O	15:O:379:ARG:NH1	2.44	0.51
16:P:382:GLU:OE2	16:P:432:PRO:HG2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:10:CYS:HB2	17:Q:17:SER:N	2.25	0.51
18:R:177:LEU:HD22	18:R:185:LYS:CG	2.37	0.51
1:A:497:VAL:HG21	1:A:605:VAL:HG13	1.92	0.51
2:B:894:LYS:HG2	12:L:54:ARG:CZ	2.38	0.51
15:O:235:GLU:CA	15:O:237:ILE:HB	2.40	0.51
17:Q:303:GLU:O	17:Q:306:VAL:N	2.44	0.51
17:Q:188:ALA:HB1	17:Q:384:GLN:CG	2.20	0.51
18:R:220:LEU:HG	18:R:256:GLU:OE2	2.11	0.51
1:A:403:LEU:CD1	1:A:419:ILE:HG23	2.35	0.51
1:A:840:ASN:O	1:A:844:THR:HG23	2.11	0.51
2:B:678:PRO:O	14:N:154:ARG:HA	2.10	0.51
15:O:144:CYS:HB2	15:O:179:PHE:CZ	2.46	0.51
15:O:374:PRO:O	15:O:376:TYR:CD2	2.64	0.51
16:P:217:ALA:O	16:P:219:LEU:N	2.43	0.51
17:Q:313:THR:O	17:Q:317:MET:HB2	2.11	0.51
16:P:390:GLN:CB	18:R:152:ILE:HA	2.40	0.51
1:A:824:THR:C	2:B:1023:ARG:H	2.08	0.51
16:P:186:TYR:C	18:R:195:LEU:CD2	2.75	0.51
16:P:274:ILE:HD13	16:P:305:PHE:HZ	1.76	0.51
16:P:573:GLU:HB3	17:Q:499:LYS:HD3	1.93	0.51
17:Q:414:TYR:CE2	17:Q:419:LEU:HB3	2.46	0.51
16:P:436:ILE:CG2	18:R:142:ARG:C	2.78	0.51
18:R:410:TYR:O	18:R:413:THR:OG1	2.20	0.51
1:A:1606:SER:CB	1:A:1611:MET:HE2	2.41	0.50
1:A:1603:MET:HE1	1:A:1615:TYR:CD2	2.46	0.50
1:A:507:TYR:HD1	1:A:509:GLU:HG2	1.76	0.50
1:A:597:LYS:HD2	2:B:1082:HIS:CE1	2.47	0.50
1:A:477:ASN:CG	2:B:1047:ARG:NH1	2.56	0.50
2:B:475:GLY:O	2:B:476:LEU:CB	2.59	0.50
2:B:535:ASP:N	2:B:720:GLN:OE1	2.43	0.50
16:P:225:LEU:HD11	16:P:235:SER:HB3	1.93	0.50
1:A:970:LYS:HG2	1:A:973:GLU:HG2	1.92	0.50
2:B:1005:TYR:CE2	14:N:170:HIS:CD2	2.99	0.50
3:C:37:LYS:HG3	11:K:134:LYS:NZ	2.27	0.50
15:O:379:ARG:CA	15:O:379:ARG:HH11	2.09	0.50
16:P:184:SER:HB3	18:R:198:LEU:HD23	1.93	0.50
16:P:317:ILE:HD11	16:P:326:ILE:HG23	1.92	0.50
17:Q:8:PRO:CG	17:Q:19:LEU:HD23	2.40	0.50
18:R:361:ASP:C	18:R:363:GLU:H	2.14	0.50
1:A:827:THR:CG2	1:A:924:SER:CB	2.90	0.50
2:B:209:GLN:CG	2:B:210:ARG:H	2.08	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:324:GLY:O	15:O:326:LYS:N	2.44	0.50
16:P:272:PHE:HE1	16:P:303:VAL:HB	1.75	0.50
17:Q:118:TRP:CZ2	17:Q:189:LYS:HB3	2.47	0.50
1:A:507:TYR:CD1	1:A:508:PRO:O	2.65	0.50
2:B:293:ILE:HG12	2:B:306:LEU:HD13	1.94	0.50
2:B:550:ARG:HG2	2:B:650:LEU:O	2.12	0.50
15:O:202:ASN:HB3	17:Q:31:TYR:HH	1.73	0.50
15:O:468:GLU:C	15:O:470:PHE:H	2.15	0.50
16:P:442:LEU:N	16:P:442:LEU:HD13	2.26	0.50
16:P:681:GLN:HA	16:P:684:GLN:HB2	1.93	0.50
17:Q:194:GLN:NE2	18:R:209:ARG:NE	2.54	0.50
1:A:1323:HIS:N	1:A:1454:HIS:NE2	2.60	0.50
2:B:212:ASN:ND2	2:B:361:HIS:CG	2.79	0.50
2:B:68:ILE:HD13	2:B:418:ASP:OD1	2.12	0.50
2:B:858:ILE:HD13	2:B:872:LYS:O	2.11	0.50
1:A:689:ARG:HD2	8:H:79:TRP:HZ3	1.76	0.50
16:P:194:ARG:NH2	16:P:208:GLY:HA3	2.27	0.50
17:Q:12:THR:HG1	17:Q:33:HIS:CE1	2.22	0.50
17:Q:137:TRP:O	17:Q:141:LEU:HB2	2.12	0.50
17:Q:351:ASN:ND2	17:Q:373:GLU:OE1	2.41	0.50
1:A:438:ILE:O	1:A:457:LYS:HB3	2.04	0.50
3:C:47:LEU:HD23	3:C:48:ASP:H	1.77	0.50
2:B:743:ARG:CZ	10:J:60:PHE:HZ	2.23	0.50
15:O:216:LEU:HD13	15:O:342:HIS:CB	2.41	0.50
17:Q:24:ASP:CG	17:Q:26:ARG:HE	2.14	0.50
1:A:437:PHE:HA	1:A:455:GLY:HA3	1.94	0.50
1:A:507:TYR:HE1	1:A:510:PRO:HD3	1.77	0.50
1:A:563:THR:HG22	15:O:375:THR:CG2	2.42	0.50
1:A:1484:LEU:HD22	2:B:305:ARG:HH21	1.76	0.50
7:G:24:VAL:N	7:G:128:GLN:CD	2.28	0.50
15:O:240:ILE:CG2	15:O:332:LEU:HD11	2.41	0.50
15:O:591:TYR:CE2	15:O:593:PRO:HG3	2.46	0.50
16:P:441:ASP:HA	16:P:442:LEU:HD13	1.94	0.50
16:P:603:ARG:O	16:P:607:VAL:HG23	2.12	0.50
16:P:662:LEU:HB3	16:P:665:ASN:CG	2.33	0.50
1:A:1450:ILE:HD12	1:A:1460:TYR:CD2	2.46	0.50
1:A:597:LYS:HD2	2:B:1082:HIS:CG	2.46	0.50
2:B:29:PRO:O	2:B:177:PRO:HB2	2.11	0.50
1:A:1658:ALA:CA	6:F:131:PRO:O	2.58	0.50
9:I:91:ASN:OD1	9:I:92:GLU:N	2.45	0.50
15:O:236:LYS:N	15:O:237:ILE:CD1	2.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:248:LEU:HB2	15:O:598:PHE:CE2	2.47	0.50
16:P:24:SER:CB	18:R:318:ILE:CD1	2.89	0.50
16:P:365:TRP:CB	16:P:372:ILE:HA	2.42	0.50
16:P:656:HIS:CE1	16:P:748:GLU:HG3	2.47	0.50
18:R:231:LEU:O	18:R:235:ILE:HG12	2.12	0.50
18:R:364:VAL:HA	18:R:367:ILE:HB	1.93	0.50
1:A:1148:LEU:HD22	1:A:1163:GLU:HG3	1.93	0.50
2:B:545:PHE:CE1	2:B:649:MET:SD	3.04	0.50
10:J:1:MET:HG2	10:J:57:ILE:HB	1.93	0.50
13:M:103:LYS:HA	13:M:106:LYS:HB2	1.93	0.50
16:P:383:ILE:HG23	18:R:152:ILE:HG13	1.92	0.50
17:Q:188:ALA:O	17:Q:384:GLN:HG3	2.11	0.50
1:A:477:ASN:HA	2:B:1047:ARG:CD	2.42	0.49
1:A:721:LYS:HB3	8:H:96:VAL:CB	2.40	0.49
2:B:1090:ASP:CA	2:B:1093:LEU:HB3	2.36	0.49
15:O:515:ASN:HD21	15:O:547:ASN:ND2	2.10	0.49
16:P:625:ASP:O	16:P:629:ARG:HB2	2.11	0.49
16:P:768:TYR:O	16:P:771:ILE:HB	2.12	0.49
16:P:391:THR:HG21	18:R:149:LYS:HG2	1.81	0.49
16:P:354:PRO:HB2	18:R:27:ILE:HG22	1.93	0.49
1:A:1650:GLY:C	1:A:1652:GLY:N	2.38	0.49
1:A:408:LYS:N	1:A:408:LYS:CE	2.75	0.49
1:A:671:GLN:HB3	2:B:952:HIS:CE1	2.48	0.49
2:B:1073:GLU:HA	2:B:1076:ARG:HB2	1.95	0.49
2:B:551:ILE:HG23	2:B:647:SER:C	2.29	0.49
7:G:47:VAL:HB	7:G:65:HIS:CD2	2.47	0.49
8:H:26:ILE:HD12	8:H:42:ILE:HD12	1.93	0.49
15:O:428:ILE:CD1	15:O:442:VAL:HG21	2.42	0.49
15:O:507:GLN:O	15:O:511:ILE:HG23	2.12	0.49
15:O:591:TYR:HE2	15:O:593:PRO:HG3	1.77	0.49
16:P:414:ILE:HB	16:P:425:GLY:C	2.32	0.49
16:P:658:LYS:CB	16:P:660:LYS:H	2.24	0.49
16:P:767:PRO:O	16:P:771:ILE:HG12	2.11	0.49
17:Q:152:LEU:HD12	17:Q:154:LEU:HD11	1.95	0.49
18:R:361:ASP:HB3	18:R:364:VAL:HG13	1.94	0.49
1:A:436:ALA:HA	1:A:439:ASP:C	2.28	0.49
1:A:597:LYS:HD3	2:B:1082:HIS:N	2.27	0.49
2:B:203:ILE:HG22	2:B:405:GLY:CA	2.42	0.49
2:B:338:PHE:CE1	2:B:353:VAL:HG22	2.47	0.49
2:B:679:GLN:NE2	14:N:155:VAL:O	2.45	0.49
15:O:208:LEU:O	15:O:212:THR:HG23	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:475:ARG:HD3	18:R:1:MET:CB	2.42	0.49
17:Q:367:PHE:HZ	18:R:2:PHE:HE1	1.60	0.49
17:Q:385:PHE:CZ	18:R:208:TYR:CG	3.00	0.49
1:A:1025:LYS:NZ	2:B:1076:ARG:HH12	2.09	0.49
1:A:435:ASN:CA	1:A:442:LYS:HB2	2.42	0.49
1:A:720:PHE:CE1	8:H:98:TYR:HB2	2.47	0.49
2:B:1089:GLN:HB3	2:B:1093:LEU:HD22	1.91	0.49
1:A:1575:ILE:CD1	9:I:122:ARG:NH1	2.64	0.49
15:O:468:GLU:C	15:O:470:PHE:N	2.65	0.49
17:Q:108:PHE:CZ	17:Q:156:LEU:HD22	2.47	0.49
2:B:434:ARG:HG3	18:R:324:MET:O	2.12	0.49
18:R:372:HIS:CD2	18:R:410:TYR:HB3	2.47	0.49
2:B:225:ARG:NH2	2:B:261:ARG:HD3	2.27	0.49
2:B:531:VAL:HG13	2:B:716:MET:CA	2.41	0.49
15:O:436:ARG:HG3	15:O:490:ILE:HG23	1.95	0.49
16:P:264:ILE:HG12	16:P:265:THR:N	2.27	0.49
16:P:498:LEU:HD23	16:P:499:GLU:H	1.75	0.49
17:Q:10:CYS:HB3	17:Q:16:PRO:HA	1.93	0.49
16:P:599:LYS:HG2	17:Q:272:GLN:OE1	2.13	0.49
18:R:177:LEU:CD2	18:R:185:LYS:HA	2.43	0.49
2:B:25:PHE:CG	10:J:59:LYS:CG	2.96	0.49
2:B:143:TRP:CZ2	2:B:446:MET:HG3	2.47	0.49
2:B:202:LEU:CD1	2:B:499:HIS:HB3	2.40	0.49
12:L:45:ALA:O	12:L:47:ARG:N	2.46	0.49
15:O:376:TYR:CB	15:O:419:LYS:HD3	2.43	0.49
16:P:197:ARG:HD2	16:P:261:VAL:O	2.12	0.49
16:P:420:GLU:HG2	16:P:441:ASP:HB2	1.95	0.49
1:A:545:SER:HB2	17:Q:34:VAL:HG21	0.50	0.49
16:P:390:GLN:HG3	18:R:152:ILE:HG12	1.94	0.49
1:A:861:VAL:HG21	1:A:892:LEU:HA	1.93	0.49
2:B:1071:VAL:C	2:B:1075:GLU:HG3	2.27	0.49
2:B:152:LEU:HD22	2:B:443:LYS:CE	2.43	0.49
2:B:30:LYS:O	2:B:176:SER:HB3	2.13	0.49
2:B:49:PHE:CD2	2:B:194:PHE:CZ	2.95	0.49
3:C:230:LEU:HD22	3:C:297:HIS:NE2	2.28	0.49
5:E:145:THR:C	5:E:147:HIS:N	2.65	0.49
15:O:336:LEU:HD13	15:O:602:TYR:CE1	2.48	0.49
16:P:253:SER:HA	16:P:261:VAL:HG11	1.94	0.49
16:P:294:PHE:HB2	16:P:296:GLU:H	1.75	0.49
17:Q:161:THR:OG1	17:Q:162:ILE:N	2.46	0.49
18:R:162:PHE:HA	18:R:165:ILE:HD12	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1312:GLU:O	1:A:1316:VAL:HG23	2.13	0.49
1:A:474:LYS:HZ2	2:B:1096:SER:HB2	1.77	0.49
2:B:262:PHE:CD1	2:B:357:ILE:HD13	2.47	0.49
1:A:1275:THR:C	9:I:45:LEU:O	2.48	0.49
15:O:474:TYR:HB3	15:O:520:CYS:SG	2.53	0.49
18:R:85:ARG:HG2	18:R:85:ARG:HH11	1.77	0.49
1:A:514:TYR:O	6:F:115:THR:HG22	2.12	0.49
1:A:747:ILE:HD13	1:A:748:ASN:H	1.77	0.49
2:B:656:LEU:HD22	14:N:153:VAL:CG2	2.42	0.49
15:O:518:LYS:NZ	15:O:575:SER:HB2	2.27	0.49
16:P:363:ILE:HG22	16:P:374:VAL:HG22	1.93	0.49
18:R:198:LEU:HD12	18:R:199:LYS:HB2	1.95	0.49
17:Q:385:PHE:CE2	18:R:208:TYR:CZ	3.00	0.49
18:R:220:LEU:HD11	18:R:256:GLU:OE2	2.12	0.49
1:A:1657:LEU:O	6:F:132:LEU:C	2.49	0.49
1:A:410:LYS:CB	1:A:411:VAL:CG2	2.91	0.49
1:A:826:PHE:CE1	2:B:777:SER:OG	2.66	0.49
15:O:198:PHE:CZ	15:O:236:LYS:HG3	2.48	0.49
15:O:361:PHE:CE2	15:O:365:THR:HG21	2.48	0.49
16:P:762:ARG:HG3	17:Q:139:LYS:HE3	1.95	0.49
17:Q:375:LEU:CD1	18:R:231:LEU:HD11	2.43	0.49
1:A:1329:ILE:HG21	1:A:1456:PHE:CD2	2.40	0.48
1:A:40:ASN:OD1	1:A:40:ASN:N	2.44	0.48
2:B:1047:ARG:CD	2:B:1049:THR:O	2.60	0.48
2:B:1092:LEU:C	2:B:1096:SER:CB	2.82	0.48
2:B:68:ILE:HD13	2:B:71:LYS:NZ	2.28	0.48
1:A:1655:ASP:CB	6:F:135:ARG:HB3	2.38	0.48
2:B:679:GLN:OE1	14:N:157:ARG:CB	2.61	0.48
16:P:315:PHE:HB2	16:P:365:TRP:HH2	1.78	0.48
16:P:438:TRP:HA	18:R:141:TRP:CZ2	2.48	0.48
2:B:1066:HIS:NE2	17:Q:23:ILE:HD13	2.27	0.48
17:Q:309:TYR:O	17:Q:313:THR:OG1	2.20	0.48
16:P:350:THR:CG2	18:R:156:LYS:N	2.70	0.48
1:A:509:GLU:CG	1:A:579:ARG:HE	2.26	0.48
3:C:157:TYR:HB2	3:C:160:ALA:HB2	1.94	0.48
2:B:28:PRO:CD	10:J:62:ARG:NE	2.76	0.48
16:P:59:ILE:HG22	16:P:60:VAL:H	1.78	0.48
17:Q:22:ILE:HD11	17:Q:26:ARG:CG	2.44	0.48
17:Q:413:LEU:HA	17:Q:416:ILE:HD12	1.94	0.48
18:R:6:ILE:HD13	18:R:210:THR:HG22	1.95	0.48
1:A:1055:ILE:HD11	1:A:1174:TYR:CE1	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:68:ASP:O	1:A:70:LYS:N	2.46	0.48
1:A:990:ILE:CB	1:A:994:GLU:HB3	2.06	0.48
1:A:1482:LYS:CD	2:B:304:ASP:CG	2.81	0.48
2:B:415:GLU:OE2	2:B:472:SER:HB2	2.13	0.48
2:B:62:ASN:OD1	2:B:102:VAL:CG2	2.60	0.48
1:A:999:CYS:N	2:B:712:SER:HB3	2.28	0.48
10:J:6:ARG:HD2	10:J:11:GLY:O	2.13	0.48
15:O:199:PRO:HB2	15:O:208:LEU:HD23	1.95	0.48
16:P:193:LEU:CD1	16:P:251:SER:H	2.23	0.48
16:P:770:ASP:HB2	17:Q:145:ASN:OD1	2.14	0.48
16:P:489:PHE:N	18:R:138:PHE:CE1	2.81	0.48
1:A:1317:ILE:HB	1:A:1460:TYR:OH	2.13	0.48
1:A:719:ILE:HG12	8:H:97:MET:CG	2.40	0.48
2:B:584:CYS:HB3	2:B:596:VAL:HG23	1.95	0.48
8:H:112:ILE:HD12	8:H:129:TYR:HB2	1.93	0.48
15:O:124:LYS:HD3	15:O:127:GLU:OE2	2.14	0.48
15:O:521:ASN:O	15:O:525:MET:HG2	2.12	0.48
16:P:226:HIS:CE1	16:P:234:THR:HG22	2.48	0.48
16:P:368:HIS:CB	16:P:411:LYS:HZ2	2.24	0.48
17:Q:104:PHE:HZ	17:Q:156:LEU:HB2	1.78	0.48
18:R:247:ILE:HG12	18:R:249:SER:HB2	1.96	0.48
18:R:248:LYS:HG2	18:R:298:GLN:HB3	1.37	0.48
18:R:347:ASP:O	18:R:351:GLU:CB	2.56	0.48
1:A:959:VAL:HG22	1:A:965:THR:HG22	1.95	0.48
5:E:61:GLN:HE21	5:E:105:PHE:HE1	1.62	0.48
16:P:757:GLN:HE21	16:P:758:ASN:N	2.10	0.48
18:R:250:LEU:HD11	18:R:298:GLN:CG	2.38	0.48
1:A:1297:PHE:HD2	9:I:60:LEU:HD13	1.75	0.48
1:A:467:PHE:CD2	1:A:1614:SER:HB3	2.46	0.48
1:A:1655:ASP:N	6:F:135:ARG:O	2.36	0.48
2:B:1003:ALA:C	14:N:169:GLU:H	2.15	0.48
15:O:386:PHE:HB2	15:O:594:TYR:CE2	2.48	0.48
16:P:277:VAL:HG23	16:P:286:VAL:HG12	1.95	0.48
16:P:733:THR:HA	16:P:736:ILE:HG22	1.95	0.48
17:Q:10:CYS:SG	17:Q:29:CYS:SG	3.07	0.48
1:A:1055:ILE:CD1	1:A:1178:LEU:HD23	2.44	0.48
1:A:1603:MET:SD	1:A:1612:LYS:HA	2.54	0.48
1:A:436:ALA:HA	1:A:440:SER:CA	2.44	0.48
1:A:828:CYS:SG	2:B:1027:TYR:HB2	2.53	0.48
2:B:64:GLY:HA2	2:B:242:ASP:HB2	1.90	0.48
6:F:70:LYS:CG	7:G:95:LEU:CD2	2.90	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:718:THR:HG21	8:H:118:PHE:O	2.14	0.48
15:O:342:HIS:HE1	15:O:346:GLN:HE21	1.58	0.48
16:P:480:VAL:HB	16:P:492:LEU:CD2	2.40	0.48
1:A:410:LYS:CB	1:A:411:VAL:HG23	2.43	0.48
1:A:456:VAL:HG13	2:B:1188:GLU:OE1	2.14	0.48
1:A:826:PHE:CD2	1:A:827:THR:N	2.82	0.48
1:A:474:LYS:HE3	2:B:1092:LEU:HD23	1.50	0.48
2:B:162:PRO:HG2	2:B:465:LEU:HD12	1.95	0.48
2:B:623:ASP:OD2	2:B:648:ARG:NH2	2.40	0.48
6:F:66:ARG:HH22	7:G:90:LEU:HB3	1.77	0.48
13:M:65:TYR:CE1	13:M:97:VAL:HB	2.48	0.48
16:P:227:LEU:H	16:P:227:LEU:HD13	1.78	0.48
16:P:49:THR:OG1	16:P:49:THR:O	2.27	0.48
18:R:15:GLN:OE1	18:R:181:THR:HG23	2.14	0.48
18:R:236:PHE:CZ	18:R:253:ILE:HD12	2.29	0.48
1:A:741:PRO:HA	1:A:742:PRO:HD3	1.68	0.48
1:A:990:ILE:CA	1:A:994:GLU:OE1	2.26	0.48
2:B:413:LEU:O	2:B:417:ILE:HG13	2.14	0.48
1:A:1538:VAL:HG21	5:E:142:VAL:CG2	2.43	0.48
7:G:23:GLN:O	7:G:25:THR:N	2.46	0.48
15:O:91:LYS:HG3	15:O:92:ASN:N	2.28	0.48
16:P:675:PHE:HZ	16:P:742:TRP:HZ3	1.61	0.48
1:A:544:VAL:CG1	17:Q:32:GLY:O	2.57	0.48
18:R:206:ARG:NE	18:R:206:ARG:N	2.60	0.48
1:A:1260:LYS:CE	1:A:1262:LEU:HD21	2.44	0.48
1:A:505:LEU:O	1:A:580:HIS:HA	2.14	0.48
1:A:869:PRO:HG2	1:A:872:ASP:HB2	1.96	0.48
3:C:215:ASP:CG	12:L:70:ARG:HH22	2.17	0.48
3:C:272:LYS:CA	14:N:175:TYR:CE2	2.83	0.48
7:G:156:SER:OG	15:O:146:SER:HA	2.13	0.48
14:N:111:VAL:HG13	14:N:122:ALA:HB2	1.95	0.48
16:P:381:ILE:HA	16:P:391:THR:O	2.14	0.48
16:P:499:GLU:HA	16:P:499:GLU:OE1	2.13	0.48
17:Q:113:LYS:HG3	17:Q:134:LYS:HZ1	1.78	0.48
1:A:410:LYS:HB3	1:A:411:VAL:HG22	1.95	0.47
1:A:466:LEU:HD11	2:B:1181:VAL:CG2	2.40	0.47
1:A:747:ILE:HD13	1:A:748:ASN:N	2.29	0.47
2:B:397:THR:HA	2:B:400:GLN:OE1	2.14	0.47
1:A:629:ASP:O	2:B:926:VAL:CG2	2.55	0.47
7:G:158:LYS:CB	15:O:105:ASN:OD1	2.61	0.47
7:G:137:ILE:HG13	7:G:227:GLY:O	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:234:ILE:HD13	15:O:234:ILE:HA	1.74	0.47
17:Q:274:ILE:HG23	17:Q:282:ARG:NH2	2.29	0.47
17:Q:194:GLN:CB	18:R:209:ARG:NH1	2.73	0.47
1:A:1310:LYS:CD	1:A:1310:LYS:N	2.73	0.47
1:A:19:LEU:HD11	2:B:1190:SER:HB2	1.96	0.47
1:A:478:TYR:CE1	2:B:1049:THR:HB	2.49	0.47
1:A:508:PRO:HD2	1:A:639:GLN:HG3	1.95	0.47
2:B:25:PHE:CE2	10:J:59:LYS:HG3	2.48	0.47
2:B:54:GLU:HG3	2:B:168:ASN:ND2	2.29	0.47
2:B:812:ALA:HA	2:B:815:ARG:HD3	1.95	0.47
15:O:234:ILE:HG21	15:O:367:LEU:HB3	1.96	0.47
1:A:563:THR:HG22	15:O:375:THR:HG22	1.95	0.47
16:P:68:THR:HG23	16:P:214:LEU:HA	1.95	0.47
16:P:323:ASN:CB	18:R:155:GLN:HB2	2.44	0.47
17:Q:385:PHE:CZ	18:R:208:TYR:CD2	3.03	0.47
17:Q:197:GLU:HG3	17:Q:388:THR:O	2.14	0.47
1:A:414:GLU:C	1:A:416:ARG:N	2.67	0.47
1:A:999:CYS:SG	2:B:712:SER:HB3	2.54	0.47
7:G:139:ILE:HD13	15:O:145:SER:OG	2.14	0.47
15:O:206:ARG:HA	15:O:209:VAL:CG1	2.45	0.47
15:O:409:ALA:HB3	15:O:412:GLU:HG3	1.96	0.47
16:P:421:ILE:CG2	16:P:423:ILE:HG13	2.44	0.47
16:P:56:ASP:OD1	16:P:554:ASN:ND2	2.48	0.47
17:Q:250:GLN:OE1	17:Q:271:LYS:HD2	2.15	0.47
17:Q:414:TYR:HE2	17:Q:419:LEU:HB3	1.78	0.47
1:A:1276:THR:H	9:I:45:LEU:C	2.11	0.47
1:A:1298:ASP:O	1:A:1300:ASN:N	2.47	0.47
13:M:102:SER:CA	13:M:105:SER:H	2.28	0.47
15:O:477:PHE:CE2	15:O:481:CYS:SG	3.07	0.47
18:R:82:ARG:HD2	18:R:82:ARG:O	2.14	0.47
1:A:720:PHE:N	8:H:96:VAL:O	2.46	0.47
1:A:474:LYS:NZ	2:B:1092:LEU:HD22	1.97	0.47
2:B:207:ILE:CG1	2:B:503:VAL:HG22	2.13	0.47
5:E:48:ASP:OD1	5:E:50:MET:HB3	2.13	0.47
1:A:1662:ASN:C	7:G:101:SER:HB2	2.35	0.47
2:B:1005:TYR:CE2	14:N:170:HIS:ND1	2.82	0.47
16:P:244:SER:CB	16:P:268:SER:HG	2.27	0.47
16:P:476:ILE:HD12	16:P:508:ILE:HD11	1.96	0.47
17:Q:250:GLN:HB3	17:Q:267:TYR:OH	2.15	0.47
1:A:1317:ILE:CG2	1:A:1460:TYR:CZ	2.96	0.47
2:B:985:ILE:C	14:N:160:VAL:CG2	2.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:292:GLY:CA	3:C:295:ARG:HH22	2.27	0.47
6:F:72:LYS:CG	6:F:142:SER:CA	2.91	0.47
15:O:379:ARG:CA	15:O:379:ARG:NH1	2.73	0.47
16:P:390:GLN:HB2	18:R:152:ILE:CA	2.44	0.47
16:P:496:THR:HG1	18:R:1:MET:CE	2.17	0.47
1:A:1118:VAL:CG1	5:E:199:ILE:HG13	2.44	0.47
1:A:1574:ALA:HB1	9:I:121:PHE:HA	1.95	0.47
1:A:507:TYR:CE1	1:A:508:PRO:C	2.87	0.47
1:A:641:GLU:HB2	6:F:99:LEU:CD1	2.44	0.47
2:B:53:THR:HG21	2:B:104:ILE:HD12	1.95	0.47
2:B:841:ASP:OD1	2:B:842:GLU:N	2.40	0.47
3:C:228:ARG:HH22	14:N:175:TYR:HE2	1.62	0.47
16:P:333:PHE:CD2	16:P:334:ASN:HB2	2.49	0.47
16:P:427:SER:HA	16:P:433:VAL:HB	1.95	0.47
17:Q:351:ASN:ND2	17:Q:369:TRP:CE2	2.83	0.47
17:Q:188:ALA:C	17:Q:384:GLN:HG2	2.35	0.47
1:A:1440:ASN:HA	1:A:1443:GLN:HB2	1.96	0.47
2:B:1047:ARG:HD3	2:B:1049:THR:O	2.14	0.47
2:B:549:CYS:SG	2:B:649:MET:CB	3.03	0.47
2:B:894:LYS:HD3	12:L:47:ARG:NH2	2.26	0.47
3:C:239:ILE:HG23	3:C:243:SER:HB3	1.96	0.47
5:E:131:THR:HG21	5:E:191:LYS:CE	2.44	0.47
15:O:236:LYS:HA	15:O:236:LYS:HD3	1.73	0.47
18:R:9:THR:O	18:R:13:PHE:HD2	1.97	0.47
18:R:30:ARG:NE	18:R:168:ILE:HD12	2.30	0.47
1:A:474:LYS:NZ	2:B:1096:SER:HB2	2.30	0.47
1:A:862:THR:O	9:I:67:VAL:HA	2.14	0.47
1:A:934:LYS:HG2	2:B:955:PRO:HG2	1.96	0.47
2:B:1103:VAL:HG22	2:B:1176:VAL:HG22	1.97	0.47
2:B:208:VAL:CG2	2:B:401:GLU:CG	2.92	0.47
2:B:407:PHE:HE2	2:B:647:SER:OG	1.98	0.47
2:B:470:LEU:HD21	2:B:476:LEU:HD12	1.97	0.47
2:B:975:HIS:CE1	14:N:169:GLU:HG3	2.49	0.47
3:C:230:LEU:CD1	3:C:299:ILE:HD11	2.44	0.47
4:D:46:GLU:OE1	4:D:47:LYS:HE2	2.15	0.47
6:F:73:ALA:CA	6:F:143:PHE:O	2.56	0.47
2:B:679:GLN:OE1	14:N:157:ARG:CA	2.63	0.47
16:P:290:GLU:OE2	16:P:291:PRO:HD2	2.15	0.47
17:Q:351:ASN:CA	17:Q:369:TRP:CZ2	2.84	0.47
16:P:436:ILE:CG2	18:R:143:THR:N	2.59	0.47
18:R:295:PRO:HB3	18:R:296:PRO:HD2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1049:MET:HG3	1:A:1053:ASP:H	1.76	0.47
1:A:1162:ASN:ND2	1:A:1165:LYS:HG3	2.29	0.47
1:A:1297:PHE:CZ	1:A:1301:GLU:OE1	2.52	0.47
1:A:258:GLU:HA	1:A:261:ILE:HD12	1.96	0.47
1:A:991:LYS:CA	1:A:994:GLU:HG3	2.39	0.47
6:F:74:ILE:N	7:G:95:LEU:HD11	2.30	0.47
15:O:376:TYR:CD1	15:O:419:LYS:HG2	2.49	0.47
17:Q:287:TRP:CE2	17:Q:289:ARG:HB3	2.50	0.47
17:Q:378:LEU:HD13	18:R:235:ILE:HD11	1.86	0.47
1:A:1053:ASP:O	1:A:1055:ILE:CG1	2.55	0.47
2:B:211:ARG:NH2	2:B:646:HIS:O	2.47	0.47
1:A:1482:LYS:HD3	2:B:304:ASP:HA	1.97	0.47
3:C:293:ARG:O	3:C:295:ARG:HD3	2.14	0.47
14:N:87:TYR:CE2	14:N:141:GLU:CD	2.88	0.47
15:O:407:SER:HB3	15:O:420:SER:HB2	1.96	0.47
16:P:300:LEU:HA	16:P:320:ILE:HG22	1.96	0.47
16:P:357:LEU:CD1	18:R:23:TYR:CE1	2.97	0.47
18:R:402:ASN:O	18:R:406:LYS:HG2	2.15	0.47
2:B:212:ASN:HD21	2:B:361:HIS:CB	2.20	0.46
9:I:23:VAL:O	9:I:39:LYS:NZ	2.49	0.46
7:G:144:HIS:HB3	15:O:146:SER:HB3	1.97	0.46
15:O:240:ILE:HG22	15:O:332:LEU:HD11	1.96	0.46
16:P:61:VAL:HB	16:P:551:ALA:HB3	1.97	0.46
17:Q:359:ASP:N	17:Q:359:ASP:OD2	2.47	0.46
1:A:990:ILE:C	1:A:994:GLU:CB	2.82	0.46
1:A:991:LYS:HA	1:A:992:PRO:N	2.29	0.46
2:B:535:ASP:CG	2:B:720:GLN:HE22	2.17	0.46
16:P:197:ARG:CB	16:P:261:VAL:O	2.63	0.46
16:P:246:LYS:HB3	16:P:246:LYS:HE3	1.59	0.46
18:R:177:LEU:HD21	18:R:185:LYS:HA	1.98	0.46
1:A:581:ILE:CD1	1:A:637:PHE:CZ	2.97	0.46
1:A:476:VAL:HG11	2:B:1071:VAL:HG23	1.96	0.46
2:B:265:ARG:NH2	2:B:339:GLN:OE1	2.48	0.46
2:B:985:ILE:O	14:N:160:VAL:CG2	2.38	0.46
6:F:75:PRO:CG	6:F:78:GLN:CB	2.82	0.46
16:P:254:ILE:HG21	16:P:368:HIS:CE1	2.51	0.46
16:P:257:ARG:HG3	16:P:411:LYS:HZ3	1.80	0.46
16:P:422:ILE:HG12	16:P:442:LEU:HD11	1.96	0.46
16:P:408:ILE:HD12	16:P:464:LEU:HD13	1.98	0.46
16:P:770:ASP:HB2	17:Q:145:ASN:CG	2.36	0.46
17:Q:235:GLY:HA3	17:Q:287:TRP:CD1	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:55:LEU:CD2	18:R:227:HIS:NE2	2.60	0.46
18:R:365:TRP:HB3	18:R:418:CYS:HB2	1.98	0.46
2:B:1045:GLN:HB3	2:B:1063:ARG:HG3	1.97	0.46
2:B:25:PHE:CG	10:J:59:LYS:HG2	2.51	0.46
15:O:388:VAL:HG13	15:O:389:SER:N	2.30	0.46
16:P:290:GLU:HG3	16:P:291:PRO:O	2.14	0.46
16:P:330:PRO:HG3	16:P:342:GLN:CG	2.45	0.46
18:R:233:TYR:CE1	18:R:263:ASN:CB	2.77	0.46
18:R:257:ILE:HG21	18:R:266:SER:HA	1.96	0.46
1:A:472:MET:CB	2:B:1073:GLU:OE1	2.64	0.46
1:A:472:MET:HG3	2:B:1073:GLU:CD	2.34	0.46
3:C:222:VAL:HB	3:C:224:THR:H	1.81	0.46
4:D:33:THR:HG23	4:D:96:PHE:HD1	1.80	0.46
9:I:89:CYS:SG	9:I:91:ASN:HB2	2.56	0.46
15:O:243:GLU:HG2	15:O:332:LEU:HB2	1.97	0.46
18:R:362:ALA:CB	18:R:421:LYS:HB3	2.39	0.46
1:A:466:LEU:HD21	2:B:1181:VAL:HG22	1.98	0.46
1:A:507:TYR:CD1	1:A:509:GLU:HG2	2.50	0.46
6:F:69:LEU:HG	6:F:143:PHE:HE2	1.80	0.46
16:P:302:VAL:HG11	16:P:362:ARG:NH1	2.30	0.46
16:P:331:LYS:HD3	16:P:331:LYS:HA	1.72	0.46
16:P:596:ILE:HD12	16:P:596:ILE:O	2.16	0.46
2:B:404:LEU:C	2:B:406:GLY:N	2.66	0.46
3:C:247:PHE:HE1	3:C:289:VAL:HG21	1.80	0.46
10:J:36:LEU:HD13	10:J:47:ARG:HB3	1.98	0.46
15:O:93:LEU:HD23	15:O:132:THR:CG2	2.46	0.46
15:O:240:ILE:CG2	15:O:332:LEU:CD1	2.93	0.46
15:O:468:GLU:O	15:O:470:PHE:N	2.49	0.46
16:P:184:SER:CB	18:R:198:LEU:CD2	2.94	0.46
16:P:641:TRP:CZ2	16:P:656:HIS:HB3	2.50	0.46
16:P:389:TRP:CE3	18:R:149:LYS:O	2.67	0.46
16:P:185:GLN:CB	18:R:195:LEU:HB3	2.44	0.46
18:R:323:SER:OG	18:R:324:MET:N	2.46	0.46
2:B:554:GLN:O	2:B:555:GLN:C	2.54	0.46
16:P:186:TYR:O	18:R:195:LEU:HB3	2.15	0.46
16:P:321:LYS:HB2	16:P:321:LYS:NZ	2.31	0.46
16:P:574:TRP:CH2	17:Q:495:LYS:HD2	2.51	0.46
18:R:301:SER:HB2	18:R:358:PHE:HE1	1.78	0.46
16:P:397:LYS:HZ3	18:R:85:ARG:HG2	1.81	0.46
2:B:54:GLU:OE2	2:B:168:ASN:ND2	2.46	0.46
2:B:736:ARG:HD3	2:B:738:ASP:OD2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:756:LYS:HD2	9:I:85:LYS:HZ3	1.69	0.46
2:B:894:LYS:CG	12:L:47:ARG:CD	2.94	0.46
2:B:990:ASP:OD2	14:N:159:ASP:HB3	2.16	0.46
15:O:181:ARG:NH1	15:O:181:ARG:CG	2.77	0.46
15:O:248:LEU:CG	15:O:598:PHE:CD2	2.90	0.46
16:P:399:TRP:NE1	18:R:87:VAL:CG2	2.79	0.46
16:P:366:PHE:HE2	16:P:433:VAL:H	1.64	0.46
1:A:1025:LYS:HZ2	2:B:1076:ARG:NH1	2.14	0.46
1:A:184:LYS:HA	1:A:187:GLU:HG2	1.98	0.46
1:A:454:PRO:HG2	1:A:462:LYS:HZ2	1.81	0.46
1:A:597:LYS:HB3	2:B:1082:HIS:CD2	2.42	0.46
2:B:292:ILE:HB	2:B:306:LEU:HD11	1.98	0.46
3:C:293:ARG:O	3:C:295:ARG:CD	2.64	0.46
15:O:190:ILE:C	15:O:190:ILE:HD13	2.37	0.46
15:O:390:GLN:NE2	15:O:433:LYS:H	2.13	0.46
15:O:467:MET:HE1	15:O:470:PHE:HE2	1.81	0.46
16:P:272:PHE:HB2	16:P:300:LEU:HD11	1.97	0.46
18:R:1:MET:HG3	18:R:2:PHE:CD1	2.51	0.46
1:A:498:PRO:HA	1:A:499:PRO:HD3	1.81	0.45
2:B:49:PHE:HE2	2:B:194:PHE:CZ	2.30	0.45
3:C:176:SER:O	3:C:180:ALA:HB2	2.16	0.45
11:K:80:ILE:HD13	11:K:105:ILE:HD11	1.98	0.45
15:O:376:TYR:CE2	15:O:419:LYS:HE2	2.50	0.45
15:O:74:ILE:O	15:O:78:VAL:HG13	2.16	0.45
16:P:225:LEU:H	16:P:225:LEU:HG	1.60	0.45
16:P:326:ILE:HG21	16:P:385:PHE:CE1	2.51	0.45
16:P:728:GLN:HB3	16:P:731:LEU:HB3	1.97	0.45
17:Q:310:PHE:O	17:Q:314:ILE:HG13	2.16	0.45
17:Q:385:PHE:CD2	18:R:212:HIS:CB	2.99	0.45
16:P:447:THR:HG1	18:R:196:GLU:HB3	1.81	0.45
18:R:222:LEU:HD23	18:R:226:ARG:NH2	2.31	0.45
1:A:1323:HIS:HE1	1:A:1453:HIS:HB3	1.81	0.45
1:A:1600:ARG:HB2	1:A:1616:GLU:OE2	2.17	0.45
1:A:89:LEU:HD11	2:B:1192:MET:HB3	1.97	0.45
1:A:597:LYS:HD3	2:B:1081:GLY:C	2.36	0.45
2:B:293:ILE:CD1	2:B:302:LEU:HB3	2.46	0.45
5:E:93:MET:CG	5:E:120:ALA:HB1	2.46	0.45
11:K:49:LEU:HG	11:K:54:THR:HG21	1.98	0.45
15:O:169:THR:O	15:O:170:VAL:C	2.54	0.45
16:P:296:GLU:HB3	16:P:298:ASP:OD1	2.16	0.45
16:P:384:ASP:CB	16:P:389:TRP:HB3	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:56:ASP:O	16:P:57:LEU:HD13	2.16	0.45
17:Q:137:TRP:CH2	17:Q:141:LEU:HD13	2.51	0.45
18:R:242:ILE:HG23	18:R:244:GLY:H	1.81	0.45
18:R:248:LYS:HE2	18:R:297:PHE:O	2.17	0.45
1:A:582:LYS:O	1:A:585:ASP:HB2	2.16	0.45
2:B:1047:ARG:HG2	2:B:1049:THR:H	1.81	0.45
2:B:202:LEU:CD2	2:B:202:LEU:N	2.76	0.45
2:B:822:THR:HB	2:B:823:GLN:HG3	1.98	0.45
3:C:326:GLU:CB	11:K:125:MET:HE3	2.45	0.45
1:A:514:TYR:CD1	6:F:115:THR:O	2.70	0.45
7:G:159:LYS:HD2	15:O:103:ASN:ND2	2.28	0.45
15:O:521:ASN:HD22	15:O:524:VAL:H	1.63	0.45
16:P:196:TYR:HA	16:P:207:SER:O	2.16	0.45
16:P:198:ASP:OD1	16:P:204:ALA:CB	2.64	0.45
16:P:224:THR:HG21	16:P:237:GLU:HA	1.99	0.45
16:P:323:ASN:HB3	16:P:350:THR:HB	1.98	0.45
16:P:446:ASP:OD2	16:P:448:THR:N	2.40	0.45
16:P:475:ARG:HH12	17:Q:360:LYS:HE3	1.81	0.45
16:P:660:LYS:HA	16:P:660:LYS:HD3	1.69	0.45
16:P:778:ASP:CG	16:P:779:ASP:H	2.19	0.45
17:Q:193:PHE:HA	17:Q:219:ILE:HD11	1.97	0.45
16:P:580:ASN:HB2	17:Q:506:LYS:HE2	1.98	0.45
16:P:186:TYR:CE1	18:R:196:GLU:C	2.89	0.45
16:P:399:TRP:CE2	18:R:87:VAL:HG22	2.52	0.45
1:A:1050:TYR:HB3	1:A:1054:ALA:CA	2.43	0.45
1:A:1258:ILE:HB	1:A:1501:ILE:HD12	1.97	0.45
1:A:1484:LEU:HD11	2:B:305:ARG:HD3	1.97	0.45
1:A:1237:GLN:H	1:A:1544:ASN:HB2	1.81	0.45
1:A:403:LEU:HD13	1:A:419:ILE:HG23	1.99	0.45
1:A:407:GLN:HB3	1:A:409:ASP:N	2.23	0.45
1:A:1484:LEU:CD2	2:B:304:ASP:HB2	2.46	0.45
2:B:203:ILE:CB	2:B:405:GLY:HA3	2.46	0.45
1:A:826:PHE:CG	2:B:777:SER:HB2	2.51	0.45
2:B:890:ASP:HB3	2:B:896:GLN:OE1	2.16	0.45
1:A:1574:ALA:HB3	9:I:122:ARG:HG2	1.97	0.45
13:M:26:PHE:CE1	13:M:98:SER:HB2	2.51	0.45
17:Q:22:ILE:HD13	17:Q:26:ARG:CZ	2.45	0.45
18:R:353:VAL:HG13	18:R:364:VAL:HB	1.98	0.45
2:B:1158:ILE:HA	2:B:1167:PHE:O	2.17	0.45
3:C:117:ASP:OD1	3:C:119:ASN:ND2	2.44	0.45
14:N:87:TYR:CE2	14:N:141:GLU:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:517:LEU:HD23	15:O:525:MET:CE	2.46	0.45
16:P:198:ASP:HB2	16:P:206:ALA:HA	1.99	0.45
16:P:198:ASP:OD1	16:P:204:ALA:HB1	2.17	0.45
16:P:362:ARG:NH2	16:P:364:GLU:HG3	2.31	0.45
17:Q:378:LEU:CD2	18:R:219:LEU:HD12	2.46	0.45
16:P:355:GLU:HB2	18:R:24:ILE:HG23	1.98	0.45
1:A:1154:LEU:O	1:A:1158:SER:HB2	2.17	0.45
1:A:475:ARG:HD3	2:B:1060:VAL:O	2.16	0.45
3:C:228:ARG:HG3	3:C:299:ILE:HB	1.98	0.45
15:O:243:GLU:OE1	15:O:243:GLU:HA	2.17	0.45
15:O:578:SER:O	15:O:579:LEU:CB	2.64	0.45
16:P:632:ILE:O	16:P:636:GLU:HG3	2.17	0.45
17:Q:385:PHE:CE2	18:R:212:HIS:CB	2.97	0.45
17:Q:494:SER:HB2	17:Q:497:GLN:H	1.82	0.45
17:Q:502:ILE:HA	17:Q:505:ILE:HG22	1.99	0.45
1:A:413:LEU:HD22	1:A:413:LEU:HA	1.78	0.45
1:A:382:GLN:NE2	1:A:456:VAL:HG22	2.24	0.45
2:B:585:CYS:HB2	2:B:595:TRP:CZ3	2.52	0.45
13:M:65:TYR:HE1	13:M:97:VAL:HB	1.81	0.45
15:O:245:GLN:O	15:O:248:LEU:N	2.40	0.45
16:P:189:THR:HB	16:P:247:ILE:HG23	1.98	0.45
16:P:444:PRO:CG	16:P:449:LEU:HD11	2.46	0.45
16:P:770:ASP:OD2	17:Q:141:LEU:HG	2.15	0.45
18:R:76:LYS:O	18:R:80:ARG:HG3	2.17	0.45
1:A:535:GLN:HE22	17:Q:26:ARG:HG2	1.81	0.45
1:A:991:LYS:HB3	1:A:993:GLN:CG	2.46	0.45
2:B:338:PHE:CZ	2:B:357:ILE:HD12	2.49	0.45
2:B:894:LYS:CG	12:L:47:ARG:HD2	2.47	0.45
1:A:1297:PHE:CD2	9:I:60:LEU:HD22	2.51	0.45
15:O:200:ASN:HB2	17:Q:14:ASN:HB3	1.70	0.45
16:P:193:LEU:HD12	16:P:250:ALA:HA	1.99	0.45
16:P:54:ALA:HA	16:P:55:LEU:HD12	1.98	0.45
1:A:545:SER:CA	17:Q:34:VAL:HG23	2.29	0.45
16:P:397:LYS:HG3	18:R:85:ARG:HD3	1.99	0.45
1:A:1606:SER:HB3	1:A:1611:MET:HE3	1.98	0.45
2:B:774:ALA:HB1	2:B:1026:ILE:HD11	1.97	0.45
1:A:996:TYR:CE1	2:B:525:TRP:CE3	3.05	0.45
2:B:550:ARG:HB2	2:B:650:LEU:CB	2.34	0.45
1:A:721:LYS:NZ	8:H:90:ALA:C	2.60	0.45
16:P:210:THR:HB	16:P:226:HIS:NE2	2.32	0.45
16:P:290:GLU:HB3	16:P:342:GLN:HG2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:425:GLY:O	16:P:426:ALA:HB2	2.17	0.45
17:Q:105:LEU:HD13	17:Q:141:LEU:HD11	1.99	0.45
17:Q:378:LEU:HD11	18:R:219:LEU:HD13	1.98	0.45
17:Q:385:PHE:CE1	18:R:208:TYR:O	2.61	0.45
18:R:271:LEU:CD1	18:R:312:TYR:HB3	2.34	0.45
1:A:406:LEU:CB	1:A:408:LYS:HZ2	2.27	0.45
1:A:720:PHE:HB2	8:H:96:VAL:HG12	1.97	0.45
1:A:863:ASN:HB2	9:I:66:VAL:O	2.17	0.45
2:B:252:TYR:OH	2:B:305:ARG:NH1	2.44	0.45
1:A:486:PRO:CD	2:B:928:SER:OG	2.49	0.45
1:A:1575:ILE:CD1	9:I:122:ARG:CZ	2.95	0.45
15:O:69:THR:HG22	15:O:70:GLN:N	2.31	0.45
16:P:198:ASP:N	16:P:206:ALA:HA	2.32	0.45
16:P:197:ARG:CD	16:P:261:VAL:O	2.64	0.45
16:P:417:THR:OG1	16:P:451:ILE:HB	2.16	0.45
16:P:577:LEU:O	17:Q:506:LYS:NZ	2.47	0.45
16:P:355:GLU:HB3	18:R:28:SER:HG	1.82	0.45
1:A:1310:LYS:HG2	1:A:1311:GLU:OE1	2.07	0.44
1:A:653:THR:OG1	1:A:654:ASP:OD1	2.35	0.44
1:A:476:VAL:N	2:B:1059:PRO:HG2	2.31	0.44
1:A:1574:ALA:HB3	9:I:122:ARG:HB3	1.99	0.44
2:B:943:ILE:HD13	10:J:44:TYR:CE1	2.47	0.44
3:C:228:ARG:CD	14:N:173:THR:OG1	2.64	0.44
15:O:390:GLN:HG2	15:O:396:MET:HE2	1.98	0.44
16:P:413:GLY:HA2	16:P:426:ALA:HB2	1.99	0.44
16:P:498:LEU:HD23	16:P:499:GLU:O	2.16	0.44
16:P:686:TYR:O	16:P:691:VAL:HG11	2.17	0.44
17:Q:484:ALA:O	17:Q:488:LEU:HG	2.17	0.44
16:P:438:TRP:CA	18:R:141:TRP:HZ2	2.29	0.44
18:R:299:THR:CG2	18:R:305:THR:HA	2.46	0.44
1:A:1660:VAL:HG23	7:G:103:LYS:H	1.82	0.44
1:A:37:VAL:HG12	1:A:38:LEU:HG	2.00	0.44
1:A:615:ARG:HH22	2:B:929:ARG:CG	2.14	0.44
2:B:243:GLN:CD	2:B:646:HIS:HE2	2.20	0.44
1:A:489:ASN:CB	11:K:95:HIS:HD2	2.29	0.44
17:Q:381:MET:SD	18:R:212:HIS:CA	2.95	0.44
18:R:141:TRP:HD1	18:R:141:TRP:H	1.62	0.44
18:R:19:LEU:HB3	18:R:188:PHE:CD1	2.52	0.44
18:R:248:LYS:C	18:R:248:LYS:CD	2.86	0.44
1:A:1463:ASP:HB2	1:A:1469:TRP:CE2	2.52	0.44
1:A:1596:LEU:HD22	1:A:1602:GLY:HA2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:477:ASN:C	2:B:1049:THR:HA	2.38	0.44
2:B:145:VAL:CG2	2:B:440:PHE:O	2.65	0.44
2:B:699:ILE:HG22	2:B:700:LEU:HD12	1.98	0.44
2:B:77:LYS:NZ	2:B:439:ASN:HA	2.33	0.44
5:E:78:LEU:HD13	5:E:107:THR:HB	1.98	0.44
15:O:200:ASN:CB	17:Q:14:ASN:O	2.65	0.44
16:P:229:ARG:HG3	16:P:231:ASN:H	1.82	0.44
16:P:363:ILE:O	16:P:363:ILE:HD12	2.18	0.44
16:P:454:GLN:HE22	16:P:536:ASP:H	1.65	0.44
17:Q:128:GLU:O	17:Q:132:VAL:HG23	2.17	0.44
18:R:187:TYR:CE2	18:R:191:ILE:HG21	2.52	0.44
1:A:410:LYS:HB2	1:A:410:LYS:HE3	1.87	0.44
1:A:920:PHE:CD1	1:A:921:PRO:HA	2.52	0.44
2:B:119:ARG:CZ	12:L:53:HIS:NE2	2.79	0.44
2:B:833:PRO:HG2	2:B:836:TRP:CZ2	2.52	0.44
2:B:786:ALA:HB1	2:B:928:SER:HB2	1.98	0.44
2:B:954:PHE:H	2:B:955:PRO:HD2	1.83	0.44
5:E:177:ARG:HD3	5:E:215:MET:HB2	2.00	0.44
5:E:7:ARG:O	5:E:11:ARG:HG3	2.17	0.44
7:G:163:PRO:HG2	7:G:166:TRP:CD1	2.52	0.44
15:O:107:ILE:O	15:O:109:SER:N	2.47	0.44
16:P:496:THR:CB	18:R:1:MET:CE	2.89	0.44
18:R:234:LYS:O	18:R:238:THR:OG1	2.33	0.44
18:R:312:TYR:O	18:R:316:SER:OG	2.22	0.44
1:A:1313:LEU:O	1:A:1317:ILE:HD12	2.18	0.44
1:A:1291:VAL:HG22	1:A:1473:LYS:HG3	1.98	0.44
1:A:1655:ASP:O	6:F:134:ILE:HA	2.17	0.44
1:A:257:ASN:OD1	1:A:258:GLU:N	2.51	0.44
2:B:1090:ASP:O	2:B:1094:ASN:CB	2.64	0.44
2:B:190:ILE:HG13	2:B:191:GLY:N	2.32	0.44
2:B:46:ILE:HG13	2:B:192:GLY:HA2	1.99	0.44
2:B:682:GLN:HA	14:N:154:ARG:CZ	2.46	0.44
6:F:73:ALA:CA	6:F:143:PHE:CG	2.91	0.44
15:O:376:TYR:O	15:O:376:TYR:CG	2.70	0.44
15:O:515:ASN:N	15:O:516:PRO:HD3	2.33	0.44
16:P:274:ILE:HD13	16:P:305:PHE:CZ	2.53	0.44
16:P:366:PHE:HZ	16:P:433:VAL:HG12	1.82	0.44
16:P:62:LYS:HE2	16:P:550:TYR:OH	2.17	0.44
17:Q:19:LEU:CD1	17:Q:27:ARG:CB	2.94	0.44
17:Q:286:LEU:CD2	17:Q:300:ASN:HB3	2.47	0.44
18:R:313:LEU:CD1	18:R:353:VAL:HG22	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:107:PRO:HG2	2:B:133:TYR:CZ	2.52	0.44
2:B:548:LYS:O	2:B:550:ARG:NH1	2.50	0.44
1:A:697:TYR:OH	11:K:102:ASN:HB3	2.17	0.44
2:B:679:GLN:OE1	14:N:157:ARG:HA	2.17	0.44
18:R:186:LEU:C	18:R:186:LEU:CD1	2.86	0.44
18:R:313:LEU:HD21	18:R:364:VAL:HG12	1.98	0.44
16:P:369:PHE:O	16:P:369:PHE:HD1	2.01	0.44
17:Q:137:TRP:HE3	17:Q:140:ILE:HD11	1.82	0.44
1:A:545:SER:OG	17:Q:26:ARG:NH2	2.50	0.44
17:Q:234:CYS:SG	17:Q:284:LEU:HB3	2.58	0.44
16:P:350:THR:CB	18:R:156:LYS:H	2.31	0.44
18:R:224:VAL:HG23	18:R:256:GLU:OE2	2.14	0.44
1:A:1050:TYR:CE2	1:A:1179:ILE:HG12	2.46	0.44
1:A:1330:VAL:HG23	1:A:1455:ARG:HD2	2.00	0.44
1:A:629:ASP:O	2:B:916:LYS:HE2	2.17	0.44
2:B:548:LYS:HG2	2:B:695:ASN:O	2.18	0.44
1:A:684:ASP:OD2	8:H:20:TYR:CA	2.66	0.44
15:O:376:TYR:O	15:O:376:TYR:CD1	2.70	0.44
15:O:444:SER:O	15:O:448:SER:HB3	2.18	0.44
15:O:506:PHE:CG	15:O:528:PHE:HZ	2.35	0.44
15:O:581:THR:HA	15:O:584:GLN:CD	2.38	0.44
17:Q:137:TRP:CE3	17:Q:140:ILE:HD11	2.53	0.44
17:Q:255:LYS:O	17:Q:259:GLN:HB2	2.18	0.44
17:Q:351:ASN:OD1	17:Q:369:TRP:CZ2	2.69	0.44
1:A:407:GLN:CB	1:A:409:ASP:N	2.73	0.44
1:A:721:LYS:HD2	8:H:90:ALA:HB1	2.00	0.44
1:A:756:LYS:HD3	9:I:85:LYS:HZ1	0.61	0.44
2:B:75:ASP:HA	2:B:440:PHE:CZ	2.53	0.44
2:B:894:LYS:CA	12:L:54:ARG:HE	2.18	0.44
1:A:721:LYS:HZ1	8:H:91:ASP:HA	1.76	0.44
1:A:909:SER:CA	9:I:83:LYS:HZ3	2.27	0.44
15:O:473:PHE:HZ	15:O:509:MET:HE3	1.82	0.44
16:P:361:LYS:HA	16:P:375:PHE:O	2.18	0.44
16:P:399:TRP:HZ3	18:R:292:SER:CA	2.29	0.44
16:P:433:VAL:HG22	16:P:434:ARG:O	2.17	0.44
16:P:458:LYS:HD3	16:P:461:HIS:CE1	2.46	0.44
17:Q:374:THR:O	17:Q:377:PHE:HB3	2.17	0.44
18:R:217:THR:HG22	18:R:239:LEU:HD21	2.00	0.44
1:A:1260:LYS:HE2	1:A:1262:LEU:CG	2.47	0.43
1:A:530:TRP:CZ2	1:A:607:VAL:HG21	2.53	0.43
1:A:991:LYS:CB	1:A:994:GLU:HG3	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:78:PRO:O	2:B:79:LEU:HB3	2.17	0.43
15:O:396:MET:HE1	15:O:434:LEU:N	2.33	0.43
16:P:533:LEU:H	16:P:554:ASN:HB2	1.82	0.43
17:Q:406:GLN:HA	17:Q:409:ALA:HB3	2.00	0.43
16:P:323:ASN:HB2	18:R:155:GLN:HB2	1.99	0.43
1:A:1604:GLU:CD	1:A:1621:PHE:HE1	2.21	0.43
1:A:535:GLN:HA	1:A:546:LEU:HG	1.99	0.43
1:A:477:ASN:CB	2:B:1047:ARG:NH1	2.82	0.43
2:B:143:TRP:CB	2:B:446:MET:HE1	2.27	0.43
2:B:893:ASN:O	2:B:895:PHE:HD1	2.01	0.43
2:B:897:GLU:HA	12:L:46:VAL:HG21	2.01	0.43
3:C:274:THR:HG21	14:N:171:PHE:HA	1.60	0.43
1:A:921:PRO:CD	8:H:19:ARG:HG3	2.42	0.43
15:O:189:PHE:HA	15:O:192:THR:HG23	2.00	0.43
15:O:198:PHE:CD2	15:O:199:PRO:HD2	2.53	0.43
15:O:76:ASN:O	15:O:80:LEU:HD13	2.18	0.43
16:P:21:GLN:O	16:P:25:LEU:HB2	2.17	0.43
16:P:751:SER:O	16:P:753:PHE:N	2.51	0.43
17:Q:140:ILE:HG22	17:Q:236:MET:HG2	2.00	0.43
16:P:185:GLN:CB	18:R:195:LEU:CB	2.74	0.43
17:Q:194:GLN:CG	18:R:209:ARG:CZ	2.70	0.43
18:R:8:LEU:HD22	18:R:8:LEU:H	1.83	0.43
1:A:677:GLY:HA3	1:A:786:TYR:OH	2.18	0.43
1:A:1484:LEU:HB3	2:B:305:ARG:NH2	2.34	0.43
2:B:923:GLN:HG2	2:B:949:ILE:CD1	2.47	0.43
3:C:292:GLY:CA	3:C:295:ARG:NH2	2.80	0.43
1:A:1276:THR:HB	9:I:45:LEU:CD1	2.47	0.43
16:P:363:ILE:HG23	16:P:374:VAL:HG13	2.00	0.43
16:P:399:TRP:O	16:P:419:ARG:NH2	2.51	0.43
16:P:532:GLU:HB2	16:P:554:ASN:CB	2.46	0.43
16:P:675:PHE:HZ	16:P:742:TRP:CZ3	2.36	0.43
18:R:348:LYS:HE2	18:R:352:TRP:HE1	1.83	0.43
2:B:42:VAL:HG21	2:B:190:ILE:HB	2.00	0.43
1:A:721:LYS:HZ2	8:H:91:ASP:HA	1.78	0.43
15:O:453:TYR:CE2	15:O:473:PHE:HB2	2.54	0.43
16:P:194:ARG:HG2	16:P:209:LYS:O	2.18	0.43
16:P:412:ASN:O	16:P:426:ALA:HB1	2.18	0.43
16:P:472:ARG:N	16:P:504:THR:HG21	2.33	0.43
16:P:607:VAL:HB	16:P:731:LEU:HD13	2.01	0.43
16:P:760:ILE:O	16:P:764:LEU:HG	2.18	0.43
17:Q:204:ARG:HG3	17:Q:205:ILE:HG13	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:369:TRP:CA	17:Q:373:GLU:OE2	2.66	0.43
17:Q:375:LEU:HD23	17:Q:375:LEU:HA	1.88	0.43
16:P:436:ILE:CA	18:R:143:THR:CG2	2.90	0.43
18:R:299:THR:HG21	18:R:305:THR:HA	2.00	0.43
1:A:403:LEU:HA	1:A:403:LEU:HD12	1.71	0.43
1:A:408:LYS:N	1:A:408:LYS:HD3	2.33	0.43
1:A:414:GLU:O	1:A:416:ARG:N	2.52	0.43
1:A:478:TYR:CZ	2:B:1049:THR:HB	2.54	0.43
1:A:909:SER:HA	9:I:83:LYS:HZ1	1.75	0.43
1:A:912:VAL:HA	1:A:913:PRO:HA	1.84	0.43
1:A:1003:ARG:HH22	2:B:530:PRO:HA	1.84	0.43
3:C:252:PRO:HD2	3:C:255:VAL:HG21	1.99	0.43
17:Q:106:LYS:O	17:Q:110:PHE:HB3	2.18	0.43
17:Q:341:ARG:HH12	17:Q:369:TRP:HE1	1.53	0.43
16:P:472:ARG:CZ	18:R:200:THR:H	2.30	0.43
18:R:229:TRP:CH2	18:R:259:ASP:C	2.92	0.43
1:A:36:THR:HG22	1:A:45:VAL:HG21	2.00	0.43
1:A:410:LYS:HB2	1:A:411:VAL:HG23	2.01	0.43
2:B:1049:THR:CG2	2:B:1050:GLY:H	2.27	0.43
2:B:74:PHE:C	2:B:440:PHE:HE2	2.20	0.43
2:B:563:SER:CA	13:M:73:SER:HB3	2.48	0.43
2:B:57:ASP:N	2:B:57:ASP:OD1	2.52	0.43
7:G:106:LYS:HE3	7:G:106:LYS:HB2	1.82	0.43
14:N:40:LEU:HD12	14:N:40:LEU:HA	1.84	0.43
16:P:394:VAL:HG22	16:P:434:ARG:NH1	2.32	0.43
16:P:535:VAL:HG13	16:P:552:LEU:HD12	2.01	0.43
16:P:507:GLY:O	16:P:539:VAL:HA	2.19	0.43
17:Q:153:LYS:HB3	17:Q:153:LYS:HE2	1.57	0.43
17:Q:351:ASN:O	17:Q:355:VAL:HG23	2.19	0.43
17:Q:385:PHE:CD1	18:R:212:HIS:HB2	2.53	0.43
1:A:827:THR:HG21	1:A:924:SER:CB	2.49	0.43
1:A:711:LYS:HA	11:K:104:ARG:HH22	1.84	0.43
13:M:8:SER:O	14:N:71:PRO:HA	2.19	0.43
14:N:63:ASP:OD2	14:N:66:LYS:NZ	2.35	0.43
15:O:235:GLU:HA	15:O:237:ILE:HB	2.01	0.43
16:P:619:GLU:OE2	16:P:670:ALA:N	2.52	0.43
17:Q:221:PRO:HA	17:Q:225:GLN:HB2	1.99	0.43
18:R:25:ASN:O	18:R:29:ARG:HB2	2.19	0.43
18:R:302:ARG:HG2	18:R:302:ARG:H	1.49	0.43
1:A:475:ARG:CD	2:B:1059:PRO:O	2.67	0.43
1:A:697:TYR:CE2	11:K:92:SER:CB	3.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:551:ILE:CG2	2:B:647:SER:C	2.87	0.43
2:B:894:LYS:CG	12:L:54:ARG:NH1	2.81	0.43
7:G:143:SER:CB	15:O:104:ILE:HB	2.48	0.43
2:B:1001:ALA:O	14:N:168:LEU:HD23	2.17	0.43
15:O:66:ASN:CG	15:O:111:ARG:NH1	2.72	0.43
15:O:77:GLN:HG2	15:O:88:ILE:HB	2.01	0.43
16:P:366:PHE:CZ	16:P:433:VAL:HG12	2.54	0.43
16:P:473:HIS:CG	16:P:475:ARG:HD2	2.54	0.43
17:Q:120:ILE:HA	17:Q:125:PHE:HB2	2.01	0.43
17:Q:160:SER:HA	17:Q:163:SER:HB2	2.00	0.43
17:Q:414:TYR:CE1	18:R:237:ALA:O	2.72	0.43
18:R:138:PHE:CE1	18:R:140:ILE:HD11	2.53	0.43
16:P:390:GLN:HG3	18:R:152:ILE:CG1	2.49	0.43
1:A:256:LEU:HA	1:A:256:LEU:HD23	1.83	0.43
1:A:475:ARG:NH2	2:B:1061:LYS:CD	2.82	0.43
1:A:543:LEU:CA	17:Q:34:VAL:O	2.66	0.43
2:B:1005:TYR:CZ	14:N:170:HIS:NE2	2.87	0.43
7:G:29:ASP:OD1	7:G:30:GLU:N	2.52	0.43
9:I:26:SER:O	9:I:39:LYS:HB2	2.19	0.43
13:M:102:SER:HB3	13:M:105:SER:HB3	0.45	0.43
14:N:78:THR:HB	14:N:79:THR:H	1.56	0.43
15:O:48:SER:O	15:O:49:ALA:C	2.57	0.43
16:P:330:PRO:HG3	16:P:342:GLN:HG3	2.00	0.43
16:P:436:ILE:HG23	18:R:141:TRP:O	2.19	0.43
16:P:574:TRP:HB3	16:P:578:PHE:CE2	2.53	0.43
16:P:697:GLU:HG2	16:P:698:LYS:H	1.84	0.43
16:P:488:LEU:HB2	18:R:138:PHE:HE2	1.27	0.43
1:A:1172:LEU:O	1:A:1176:ARG:HG2	2.19	0.43
1:A:550:SER:OG	1:A:553:GLN:HG3	2.19	0.43
2:B:1005:TYR:HH	10:J:44:TYR:HE2	1.55	0.43
1:A:1538:VAL:HG21	5:E:142:VAL:HG22	2.01	0.43
1:A:1575:ILE:H	9:I:122:ARG:NH1	2.03	0.43
2:B:345:SER:CA	13:M:113:ILE:HG12	2.48	0.43
14:N:94:ASP:HB3	14:N:99:LEU:HG	2.00	0.43
15:O:169:THR:O	15:O:172:HIS:N	2.52	0.43
15:O:202:ASN:N	15:O:202:ASN:OD1	2.52	0.43
15:O:218:LEU:HD12	15:O:221:TYR:CZ	2.54	0.43
15:O:232:LEU:HA	15:O:232:LEU:HD12	1.74	0.43
15:O:400:LEU:O	15:O:404:ILE:HG13	2.19	0.43
16:P:475:ARG:HH11	18:R:1:MET:CB	2.26	0.43
1:A:1657:LEU:CB	7:G:104:LEU:HD22	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:146:ASN:HD22	2:B:441:LYS:HZ2	1.65	0.42
3:C:116:VAL:HG11	3:C:125:LYS:HE3	2.01	0.42
15:O:175:MET:HB2	15:O:175:MET:HE3	1.87	0.42
16:P:197:ARG:HD2	16:P:260:LEU:C	2.38	0.42
16:P:237:GLU:HG2	16:P:237:GLU:H	1.55	0.42
17:Q:172:LEU:HA	17:Q:172:LEU:HD23	1.86	0.42
17:Q:22:ILE:HD12	17:Q:26:ARG:HE	1.78	0.42
16:P:354:PRO:CB	18:R:31:PHE:CB	2.96	0.42
1:A:953:GLU:C	1:A:1205:PHE:HB2	2.24	0.42
1:A:1622:LEU:HD21	2:B:1189:LEU:HD22	2.01	0.42
1:A:4:SER:HB2	1:A:573:LEU:CD2	2.49	0.42
2:B:212:ASN:CG	2:B:361:HIS:CG	2.92	0.42
2:B:48:SER:HB3	2:B:404:LEU:CD1	2.49	0.42
2:B:697:LEU:HD13	2:B:702:ASN:HA	2.01	0.42
2:B:800:TYR:OH	2:B:908:ARG:CZ	2.65	0.42
1:A:1554:GLY:CA	5:E:183:PRO:HD2	2.46	0.42
2:B:574:SER:HB3	13:M:67:ASP:OD2	2.20	0.42
15:O:379:ARG:NH1	15:O:382:GLN:HE22	2.17	0.42
16:P:300:LEU:N	16:P:300:LEU:HD23	2.34	0.42
16:P:663:LEU:HD12	16:P:664:GLU:N	2.35	0.42
17:Q:4:PHE:HE1	17:Q:18:ARG:HH11	1.67	0.42
1:A:1053:ASP:OD2	5:E:204:THR:CG2	2.67	0.42
1:A:581:ILE:CG1	1:A:582:LYS:N	2.83	0.42
2:B:883:GLU:HG3	2:B:906:ARG:HB2	2.01	0.42
2:B:809:VAL:HG13	2:B:901:VAL:HB	2.02	0.42
2:B:799:GLY:O	2:B:911:PRO:HG3	2.20	0.42
7:G:159:LYS:HB3	15:O:105:ASN:ND2	2.12	0.42
7:G:35:SER:OG	7:G:132:VAL:N	2.46	0.42
3:C:315:PHE:HE2	11:K:139:ILE:CD1	2.30	0.42
16:P:740:ILE:O	16:P:744:LEU:HG	2.19	0.42
17:Q:15:CYS:CB	17:Q:17:SER:H	2.30	0.42
18:R:180:CYS:SG	18:R:185:LYS:HG3	2.59	0.42
2:B:1092:LEU:C	2:B:1096:SER:HB2	2.37	0.42
2:B:145:VAL:HG21	2:B:440:PHE:O	2.20	0.42
3:C:328:LEU:HD23	11:K:121:LEU:CD2	2.49	0.42
1:A:697:TYR:CD2	11:K:92:SER:HB3	2.53	0.42
16:P:65:LEU:HD21	16:P:226:HIS:CE1	2.55	0.42
16:P:238:LEU:HD22	16:P:284:VAL:H	1.84	0.42
16:P:265:THR:HG21	16:P:303:VAL:HG21	2.00	0.42
16:P:361:LYS:HG3	16:P:376:ASP:HB3	2.01	0.42
17:Q:132:VAL:O	17:Q:136:ILE:HG13	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:762:ARG:HG3	17:Q:139:LYS:NZ	2.35	0.42
17:Q:26:ARG:HD2	17:Q:34:VAL:HG11	2.02	0.42
17:Q:502:ILE:O	17:Q:506:LYS:HB2	2.20	0.42
18:R:80:ARG:O	18:R:83:HIS:HB3	2.18	0.42
1:A:1603:MET:HE1	1:A:1615:TYR:HD2	1.85	0.42
1:A:83:VAL:HG21	1:A:427:PHE:CZ	2.55	0.42
2:B:45:HIS:CD2	2:B:500:PHE:HD1	2.37	0.42
2:B:679:GLN:NE2	14:N:156:PRO:O	2.53	0.42
1:A:486:PRO:CG	2:B:781:TYR:O	2.67	0.42
3:C:61:THR:HA	3:C:298:PHE:CZ	2.55	0.42
5:E:67:GLU:CD	5:E:67:GLU:H	2.23	0.42
7:G:160:ASN:N	7:G:160:ASN:OD1	2.52	0.42
12:L:32:ALA:HB3	12:L:55:ILE:HG23	2.01	0.42
3:C:274:THR:CB	14:N:172:ALA:HB2	2.25	0.42
15:O:332:LEU:CD1	15:O:380:SER:OG	2.50	0.42
16:P:273:ARG:NH1	16:P:288:SER:OG	2.53	0.42
16:P:730:GLU:O	16:P:734:LYS:HB2	2.19	0.42
16:P:762:ARG:NE	16:P:762:ARG:HA	2.34	0.42
17:Q:239:PHE:CG	17:Q:240:LYS:N	2.87	0.42
18:R:421:LYS:HG3	18:R:422:GLY:N	2.34	0.42
1:A:436:ALA:O	1:A:440:SER:HA	2.15	0.42
3:C:296:ASN:O	3:C:298:PHE:CG	2.66	0.42
4:D:82:LEU:O	4:D:86:ILE:HG23	2.20	0.42
1:A:489:ASN:HB3	11:K:95:HIS:CD2	2.54	0.42
15:O:199:PRO:HD3	15:O:211:TYR:CG	2.54	0.42
18:R:11:ARG:HG3	18:R:11:ARG:H	1.53	0.42
17:Q:194:GLN:NE2	18:R:209:ARG:HE	2.10	0.42
18:R:436:LYS:HA	18:R:439:GLU:HB2	2.02	0.42
1:A:1657:LEU:O	6:F:132:LEU:CA	2.68	0.42
1:A:475:ARG:NH2	2:B:1061:LYS:HD2	2.34	0.42
1:A:497:VAL:HG22	1:A:635:MET:HE1	2.00	0.42
1:A:878:ARG:HG2	9:I:66:VAL:CG2	2.23	0.42
2:B:206:LEU:HA	2:B:206:LEU:HD23	1.81	0.42
2:B:656:LEU:HD21	2:B:689:VAL:HG12	2.01	0.42
2:B:683:ASN:OD1	14:N:154:ARG:NH1	2.51	0.42
2:B:848:ILE:N	12:L:60:ARG:NE	2.67	0.42
1:A:722:PRO:HD2	8:H:95:TYR:HD1	1.83	0.42
2:B:1005:TYR:CE2	14:N:170:HIS:CE1	3.08	0.42
15:O:433:LYS:HZ2	15:O:609:TYR:HE1	1.62	0.42
15:O:607:LYS:HE2	15:O:607:LYS:HB2	1.88	0.42
16:P:427:SER:HB2	16:P:429:SER:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:626:LEU:HD22	16:P:626:LEU:HA	1.59	0.42
17:Q:194:GLN:HE21	18:R:209:ARG:CD	2.33	0.42
18:R:253:ILE:HG12	18:R:257:ILE:HG13	2.02	0.42
1:A:1318:SER:HA	1:A:1450:ILE:HD13	2.00	0.42
1:A:703:GLU:HG2	11:K:50:LEU:HD13	2.02	0.42
1:A:1484:LEU:HD22	2:B:305:ARG:NH2	2.34	0.42
2:B:30:LYS:HG2	2:B:178:TYR:HB2	2.00	0.42
3:C:230:LEU:O	3:C:293:ARG:HA	2.20	0.42
3:C:71:MET:HE3	3:C:313:ILE:HG22	2.02	0.42
7:G:165:ASP:N	7:G:165:ASP:OD1	2.52	0.42
15:O:376:TYR:CG	15:O:419:LYS:CD	3.03	0.42
16:P:489:PHE:H	18:R:138:PHE:HE1	1.66	0.42
17:Q:192:TYR:CD1	17:Q:193:PHE:CD1	3.08	0.42
17:Q:177:TYR:OH	17:Q:252:LEU:N	2.52	0.42
18:R:209:ARG:HD3	18:R:209:ARG:H	1.85	0.42
1:A:1055:ILE:HD13	1:A:1178:LEU:CD2	2.48	0.42
1:A:1063:MET:HE1	1:A:1174:TYR:CD2	2.55	0.42
1:A:1263:LEU:HD12	1:A:1498:ILE:HD11	2.02	0.42
1:A:407:GLN:O	1:A:408:LYS:HE2	2.19	0.42
1:A:826:PHE:CG	1:A:827:THR:N	2.88	0.42
13:M:101:VAL:CG1	13:M:105:SER:OG	2.66	0.42
14:N:81:THR:HG22	14:N:86:ASP:HB3	2.01	0.42
16:P:347:LEU:N	16:P:347:LEU:HD12	2.35	0.42
15:O:200:ASN:OD1	17:Q:14:ASN:CB	2.61	0.42
17:Q:329:LYS:O	17:Q:332:LEU:N	2.53	0.42
16:P:360:TRP:CE3	18:R:196:GLU:OE2	2.73	0.42
18:R:361:ASP:C	18:R:363:GLU:N	2.73	0.42
1:A:1325:LEU:HD21	1:A:1474:LEU:HD11	2.00	0.42
1:A:385:LEU:HA	1:A:385:LEU:HD23	1.88	0.42
1:A:501:PHE:CD1	2:B:1046:VAL:HG21	2.55	0.42
1:A:581:ILE:HD11	1:A:585:ASP:CB	2.48	0.42
1:A:481:ARG:N	2:B:1045:GLN:O	2.53	0.42
2:B:65:VAL:CG2	2:B:417:ILE:CD1	2.98	0.42
11:K:50:LEU:O	11:K:54:THR:HG23	2.20	0.42
15:O:78:VAL:HA	15:O:88:ILE:HG22	2.00	0.42
16:P:368:HIS:HB3	16:P:411:LYS:NZ	2.34	0.42
17:Q:103:LEU:HD21	17:Q:205:ILE:HD13	2.00	0.42
17:Q:435:GLN:HG3	17:Q:435:GLN:H	1.38	0.42
17:Q:509:CYS:O	17:Q:513:MET:HB2	2.20	0.42
18:R:158:THR:OG1	18:R:159:TYR:N	2.53	0.42
17:Q:385:PHE:CE2	18:R:212:HIS:HB2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:407:GLN:C	1:A:409:ASP:H	2.23	0.41
2:B:219:ARG:HA	2:B:220:PRO:HD2	1.73	0.41
2:B:26:ILE:HD11	10:J:58:GLU:HG2	2.01	0.41
2:B:196:VAL:HG21	2:B:465:LEU:HB3	2.02	0.41
2:B:550:ARG:HD3	2:B:550:ARG:HA	1.81	0.41
2:B:681:ILE:HB	14:N:154:ARG:HB2	2.01	0.41
2:B:534:PRO:CA	2:B:720:GLN:OE1	2.57	0.41
15:O:56:VAL:CG2	15:O:99:ILE:HD12	2.48	0.41
16:P:465:VAL:HG13	16:P:480:VAL:HG13	2.01	0.41
16:P:500:ILE:HB	16:P:501:PRO:CD	2.50	0.41
16:P:596:ILE:HD13	17:Q:272:GLN:OE1	2.20	0.41
17:Q:498:LEU:O	17:Q:502:ILE:HG23	2.20	0.41
16:P:21:GLN:CB	18:R:139:GLU:HB2	2.49	0.41
1:A:1441:LYS:HB3	1:A:1441:LYS:HE2	1.75	0.41
1:A:82:PRO:HD3	1:A:393:SER:OG	2.20	0.41
8:H:105:GLU:HG2	8:H:115:TYR:HE1	1.84	0.41
15:O:468:GLU:HG2	15:O:469:ARG:N	2.34	0.41
15:O:56:VAL:HG23	15:O:57:LYS:N	2.35	0.41
16:P:280:ARG:HA	16:P:280:ARG:HD3	1.90	0.41
16:P:317:ILE:CG1	16:P:326:ILE:HD13	2.49	0.41
16:P:304:ASP:HB2	16:P:363:ILE:O	2.20	0.41
16:P:64:LEU:CD2	16:P:64:LEU:H	2.33	0.41
18:R:75:GLN:HA	18:R:78:ARG:NE	2.33	0.41
18:R:76:LYS:HA	18:R:79:ARG:HB2	2.01	0.41
1:A:1053:ASP:C	1:A:1055:ILE:HG12	2.36	0.41
1:A:1242:ILE:HG22	1:A:1536:ILE:HG22	2.01	0.41
1:A:407:GLN:C	1:A:409:ASP:N	2.74	0.41
2:B:149:GLU:OE1	2:B:441:LYS:HE2	2.15	0.41
2:B:550:ARG:H	2:B:650:LEU:H	1.67	0.41
2:B:894:LYS:HA	12:L:54:ARG:HE	1.77	0.41
3:C:105:PRO:HG3	10:J:6:ARG:CZ	2.50	0.41
9:I:2:SER:HB3	9:I:3:VAL:H	1.75	0.41
11:K:93:ILE:HA	11:K:94:PRO:HD2	1.75	0.41
15:O:210:ASN:HA	15:O:210:ASN:HD22	1.67	0.41
15:O:248:LEU:HB2	15:O:598:PHE:HE2	1.85	0.41
15:O:364:LEU:HB3	15:O:385:MET:HE3	2.01	0.41
17:Q:188:ALA:C	17:Q:384:GLN:CG	2.89	0.41
1:A:1024:THR:HG22	1:A:1190:SER:CB	2.50	0.41
1:A:711:LYS:HA	11:K:104:ARG:NH2	2.35	0.41
1:A:854:GLY:HA3	1:A:974:THR:O	2.21	0.41
2:B:49:PHE:HB3	2:B:164:MET:SD	2.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:87:PRO:HG2	9:I:119:TYR:CE2	2.56	0.41
2:B:848:ILE:CG1	12:L:60:ARG:HD2	2.36	0.41
2:B:985:ILE:HG13	14:N:160:VAL:HG21	2.02	0.41
15:O:548:ASN:O	15:O:552:LEU:HG	2.20	0.41
16:P:428:GLU:HB2	16:P:435:ARG:NH1	2.30	0.41
16:P:484:ARG:HB2	16:P:488:LEU:HB3	2.02	0.41
16:P:584:ARG:O	16:P:588:SER:CB	2.62	0.41
16:P:648:SER:HA	16:P:757:GLN:NE2	2.35	0.41
17:Q:341:ARG:NH1	17:Q:369:TRP:CD1	2.87	0.41
17:Q:194:GLN:CG	18:R:209:ARG:NE	2.83	0.41
18:R:220:LEU:CG	18:R:256:GLU:OE2	2.69	0.41
1:A:1071:ASP:O	1:A:1072:ASN:HB2	2.21	0.41
1:A:1294:MET:HE3	1:A:1294:MET:HB2	1.99	0.41
1:A:407:GLN:C	1:A:408:LYS:NZ	2.73	0.41
2:B:1060:VAL:HG22	2:B:1065:ARG:NH2	2.35	0.41
1:A:474:LYS:CE	2:B:1096:SER:OG	2.63	0.41
2:B:401:GLU:C	2:B:402:VAL:HG23	2.41	0.41
2:B:427:GLN:OE1	2:B:452:ARG:NH1	2.54	0.41
2:B:940:GLU:OE2	3:C:293:ARG:NH2	2.42	0.41
3:C:58:ASN:C	3:C:296:ASN:ND2	2.72	0.41
16:P:198:ASP:OD1	16:P:205:TYR:O	2.39	0.41
16:P:360:TRP:CZ3	18:R:196:GLU:OE2	2.72	0.41
16:P:391:THR:CB	18:R:149:LYS:HB3	2.50	0.41
16:P:421:ILE:HA	16:P:440:HIS:O	2.21	0.41
16:P:504:THR:CG2	16:P:505:PRO:HD2	2.51	0.41
17:Q:351:ASN:C	17:Q:369:TRP:CH2	2.80	0.41
18:R:220:LEU:N	18:R:235:ILE:HG21	2.36	0.41
16:P:438:TRP:HZ2	18:R:297:PHE:HE1	1.18	0.41
1:A:1056:ASP:OD2	1:A:1057:ILE:N	2.54	0.41
1:A:1074:TYR:CE2	1:A:1159:ASP:HB3	2.54	0.41
1:A:1248:ASP:OD1	1:A:1517:ARG:NH1	2.49	0.41
1:A:1499:ARG:O	1:A:1500:GLN:CB	2.68	0.41
1:A:315:ILE:HG13	1:A:319:GLU:HB2	2.03	0.41
1:A:449:GLY:C	1:A:451:VAL:H	2.22	0.41
1:A:475:ARG:O	2:B:1059:PRO:CG	2.66	0.41
1:A:507:TYR:CD1	1:A:509:GLU:N	2.89	0.41
1:A:581:ILE:CG1	1:A:585:ASP:OD2	2.56	0.41
1:A:680:LEU:O	1:A:728:GLY:HA3	2.20	0.41
1:A:874:GLU:OE2	1:A:878:ARG:HD2	2.20	0.41
2:B:152:LEU:CG	2:B:443:LYS:CE	2.94	0.41
2:B:491:ILE:HB	2:B:495:ARG:HD2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:186:GLU:OE2	2:B:731:VAL:HB	2.20	0.41
2:B:995:TYR:HE1	14:N:162:LYS:HA	1.85	0.41
15:O:66:ASN:ND2	15:O:111:ARG:CZ	2.83	0.41
15:O:244:LEU:HD23	15:O:244:LEU:O	2.20	0.41
16:P:454:GLN:HB3	16:P:465:VAL:HG23	2.02	0.41
16:P:473:HIS:CD2	16:P:475:ARG:HH11	2.38	0.41
16:P:711:LEU:CD2	16:P:741:ILE:HD13	2.51	0.41
17:Q:140:ILE:O	17:Q:143:THR:HG22	2.21	0.41
17:Q:6:ARG:HA	17:Q:18:ARG:HG3	2.02	0.41
17:Q:344:THR:HG22	17:Q:436:LEU:HD13	2.01	0.41
17:Q:408:ILE:HD11	17:Q:412:LYS:HE3	2.02	0.41
18:R:362:ALA:HA	18:R:365:TRP:HD1	1.86	0.41
18:R:402:ASN:O	18:R:405:ILE:HB	2.20	0.41
1:A:1000:MET:HG2	2:B:520:LEU:HD23	2.02	0.41
1:A:1180:ASN:HD22	1:A:1180:ASN:N	2.18	0.41
1:A:1195:GLU:HB3	1:A:1196:PRO:HD3	2.03	0.41
1:A:1314:GLN:CD	1:A:1446:ARG:HH11	2.13	0.41
1:A:990:ILE:CG1	1:A:995:TYR:HA	2.44	0.41
1:A:475:ARG:NH1	2:B:1061:LYS:HA	2.36	0.41
2:B:31:ASP:N	2:B:176:SER:HB2	2.36	0.41
2:B:152:LEU:HA	2:B:443:LYS:HE3	1.94	0.41
2:B:1002:LYS:O	14:N:168:LEU:HD23	2.21	0.41
15:O:372:VAL:HG22	15:O:381:ILE:HD13	2.03	0.41
15:O:592:PHE:HA	15:O:593:PRO:HD3	1.90	0.41
15:O:430:ARG:NH2	15:O:596:PRO:HD3	2.36	0.41
17:Q:375:LEU:HA	17:Q:378:LEU:HD12	2.01	0.41
17:Q:409:ALA:O	17:Q:413:LEU:CB	2.58	0.41
18:R:173:MET:O	18:R:176:PRO:HD2	2.20	0.41
18:R:304:HIS:CE1	18:R:306:ALA:HA	2.56	0.41
1:A:1317:ILE:O	1:A:1322:ILE:HG12	2.21	0.41
1:A:692:TYR:O	1:A:696:ILE:HG12	2.20	0.41
1:A:826:PHE:HE1	2:B:952:HIS:CE1	2.39	0.41
1:A:868:THR:HA	1:A:869:PRO:HD2	1.87	0.41
2:B:262:PHE:CE1	2:B:357:ILE:HD13	2.56	0.41
8:H:95:TYR:HD2	8:H:144:ILE:HD12	1.86	0.41
11:K:54:THR:HG22	11:K:62:SER:H	1.86	0.41
15:O:96:LEU:O	15:O:100:LEU:HG	2.20	0.41
16:P:637:LEU:HD22	16:P:637:LEU:HA	1.84	0.41
16:P:712:ASP:O	16:P:715:TYR:N	2.53	0.41
17:Q:109:GLN:CD	17:Q:137:TRP:HE1	2.24	0.41
17:Q:315:ASN:HB2	17:Q:480:LEU:HD11	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:475:ARG:HD3	18:R:1:MET:HB3	2.01	0.41
18:R:362:ALA:O	18:R:365:TRP:HB2	2.21	0.41
1:A:474:LYS:NZ	2:B:1092:LEU:CA	2.67	0.41
1:A:507:TYR:HA	1:A:508:PRO:HD2	1.87	0.41
2:B:736:ARG:NH1	2:B:738:ASP:OD1	2.54	0.41
2:B:944:GLN:HA	2:B:945:PRO:HD3	1.96	0.41
3:C:314:PHE:HD2	11:K:135:PHE:CE2	2.38	0.41
15:O:150:TRP:O	15:O:154:VAL:HG23	2.21	0.41
16:P:329:ILE:HG13	16:P:330:PRO:O	2.21	0.41
17:Q:129:PHE:HE1	17:Q:169:SER:N	2.19	0.41
17:Q:123:MET:HE1	17:Q:184:TRP:HE1	1.86	0.41
17:Q:257:VAL:HG13	17:Q:262:LEU:HB2	2.02	0.41
18:R:15:GLN:O	18:R:18:LYS:HB2	2.21	0.41
18:R:302:ARG:C	18:R:358:PHE:CZ	2.94	0.41
1:A:1268:ASP:OD1	9:I:61:ARG:NH2	2.52	0.41
1:A:1613:MET:HG2	1:A:1618:THR:HG23	2.03	0.41
1:A:422:ARG:HE	18:R:409:HIS:HE1	1.60	0.41
1:A:67:LEU:HB2	1:A:72:CYS:HB2	2.02	0.41
2:B:1072:GLY:HA3	2:B:1075:GLU:OE2	2.21	0.41
2:B:279:ALA:HB2	2:B:326:VAL:HG12	2.03	0.41
2:B:152:LEU:CD2	2:B:443:LYS:HE3	2.51	0.41
2:B:740:LYS:HE3	2:B:740:LYS:HB2	1.95	0.41
7:G:24:VAL:O	7:G:128:GLN:HB3	2.04	0.41
16:P:263:ILE:HG21	16:P:276:SER:C	2.42	0.41
16:P:319:ASP:HB2	16:P:363:ILE:CG1	2.48	0.41
16:P:321:LYS:HD3	16:P:321:LYS:N	2.25	0.41
16:P:377:ARG:HG3	16:P:377:ARG:H	1.64	0.41
17:Q:118:TRP:O	17:Q:122:GLU:HB2	2.21	0.41
17:Q:350:ARG:NH1	17:Q:490:ASP:OD2	2.40	0.41
1:A:501:PHE:CE1	2:B:1046:VAL:HB	2.56	0.41
2:B:1004:GLY:HA2	14:N:168:LEU:HD22	2.03	0.41
2:B:168:ASN:O	2:B:169:ARG:HD3	2.21	0.41
2:B:371:PHE:CE2	2:B:375:LEU:HD11	2.56	0.41
3:C:314:PHE:HE2	11:K:135:PHE:CD1	2.39	0.41
17:Q:152:LEU:HB3	17:Q:154:LEU:CD2	2.51	0.41
17:Q:22:ILE:HD12	17:Q:26:ARG:HH11	1.86	0.41
18:R:236:PHE:CE1	18:R:253:ILE:HD12	2.33	0.41
18:R:248:LYS:CE	18:R:297:PHE:O	2.69	0.41
18:R:34:ILE:HD12	18:R:34:ILE:HA	1.88	0.41
1:A:227:LEU:HA	1:A:227:LEU:HD23	1.84	0.40
1:A:487:ASP:HB2	1:A:615:ARG:HB3	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:581:ILE:CD1	1:A:637:PHE:CE1	2.98	0.40
1:A:473:GLY:CA	2:B:1072:GLY:HA2	2.43	0.40
2:B:547:HIS:CB	2:B:697:LEU:O	2.69	0.40
15:O:115:LEU:O	15:O:119:ILE:HG13	2.21	0.40
15:O:350:GLU:H	15:O:350:GLU:HG3	1.62	0.40
16:P:218:VAL:HG13	16:P:246:LYS:N	2.32	0.40
16:P:265:THR:HG1	16:P:305:PHE:HE1	1.66	0.40
16:P:390:GLN:HB2	18:R:152:ILE:HA	2.00	0.40
15:O:200:ASN:OD1	17:Q:14:ASN:HB2	2.01	0.40
17:Q:3:THR:CG2	17:Q:20:TRP:HB2	2.37	0.40
17:Q:378:LEU:CG	18:R:219:LEU:CD1	2.92	0.40
17:Q:496:GLU:HG2	17:Q:496:GLU:H	1.68	0.40
17:Q:499:LYS:HB3	17:Q:499:LYS:HE2	1.91	0.40
17:Q:309:TYR:CZ	17:Q:505:ILE:HD11	2.57	0.40
1:A:475:ARG:HB2	2:B:1059:PRO:O	2.22	0.40
1:A:597:LYS:HD2	2:B:1082:HIS:CD2	2.56	0.40
2:B:61:LEU:HD23	2:B:61:LEU:HA	1.75	0.40
3:C:246:ARG:HD2	3:C:284:GLU:OE2	2.21	0.40
7:G:144:HIS:NE2	15:O:145:SER:CA	2.84	0.40
8:H:41:ASP:HB2	8:H:121:LEU:HB3	2.02	0.40
11:K:95:HIS:HB3	11:K:98:GLU:HG2	2.03	0.40
15:O:219:ARG:CZ	15:O:360:VAL:CG2	2.98	0.40
16:P:263:ILE:HB	16:P:275:GLU:O	2.21	0.40
16:P:404:ASP:OD1	16:P:405:TYR:N	2.50	0.40
16:P:448:THR:HG21	16:P:471:MET:HB2	2.03	0.40
16:P:472:ARG:HE	18:R:200:THR:CG2	2.32	0.40
18:R:141:TRP:N	18:R:141:TRP:CD1	2.88	0.40
18:R:254:GLY:O	18:R:258:LEU:HB2	2.22	0.40
1:A:1275:THR:HA	9:I:45:LEU:O	2.21	0.40
1:A:413:LEU:HD13	1:A:416:ARG:HG3	2.03	0.40
1:A:753:ASN:HB2	1:A:782:ASP:OD2	2.21	0.40
2:B:146:ASN:ND2	2:B:441:LYS:CE	2.81	0.40
7:G:17:ILE:C	7:G:19:LYS:H	2.25	0.40
1:A:1276:THR:OG1	9:I:45:LEU:O	2.27	0.40
14:N:127:ASP:OD2	14:N:129:ALA:HB2	2.21	0.40
15:O:129:PRO:O	15:O:130:PRO:C	2.59	0.40
15:O:407:SER:CB	15:O:421:LEU:HG	2.51	0.40
16:P:56:ASP:HB2	16:P:554:ASN:OD1	2.21	0.40
17:Q:239:PHE:HB2	17:Q:245:SER:OG	2.21	0.40
17:Q:282:ARG:HG2	17:Q:302:ALA:HB1	2.02	0.40
17:Q:378:LEU:CD1	18:R:235:ILE:HD12	2.47	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:436:ALA:N	1:A:439:ASP:O	2.54	0.40
1:A:878:ARG:HH11	9:I:66:VAL:HG21	1.63	0.40
1:A:986:PHE:CD2	2:B:958:MET:CE	3.03	0.40
1:A:999:CYS:SG	2:B:712:SER:CB	3.10	0.40
7:G:166:TRP:HZ3	7:G:225:ILE:HD13	1.87	0.40
7:G:73:TYR:CZ	7:G:238:THR:HG21	2.57	0.40
8:H:7:ASP:HA	8:H:57:VAL:O	2.22	0.40
11:K:135:PHE:CE2	11:K:139:ILE:HD11	2.56	0.40
7:G:159:LYS:HB3	15:O:105:ASN:HB2	2.03	0.40
1:A:564:PRO:CD	15:O:370:THR:O	2.68	0.40
16:P:451:ILE:HA	16:P:467:PHE:O	2.21	0.40
16:P:472:ARG:NE	18:R:200:THR:CG2	2.73	0.40
16:P:607:VAL:O	16:P:611:ILE:HG13	2.21	0.40
17:Q:178:THR:HG21	17:Q:227:TYR:OH	2.22	0.40
17:Q:262:LEU:HA	17:Q:262:LEU:HD23	1.84	0.40
17:Q:512:ARG:HD3	17:Q:512:ARG:HA	1.91	0.40
17:Q:6:ARG:HA	17:Q:18:ARG:CD	2.49	0.40
1:A:1260:LYS:HE2	1:A:1262:LEU:HD21	2.01	0.40
1:A:1320:GLN:HB2	1:A:1320:GLN:HE21	1.56	0.40
1:A:382:GLN:HE21	1:A:456:VAL:CG2	2.28	0.40
1:A:477:ASN:O	2:B:1047:ARG:HG2	2.21	0.40
1:A:729:LYS:HD2	8:H:120:GLY:CA	2.50	0.40
1:A:881:GLU:OE2	9:I:65:SER:OG	2.38	0.40
1:A:634:ASN:OD1	2:B:1069:ILE:HG12	2.21	0.40
5:E:198:ILE:CD1	5:E:212:ARG:HG3	2.51	0.40
1:A:514:TYR:CE1	6:F:115:THR:O	2.74	0.40
6:F:93:ILE:HD13	6:F:93:ILE:HA	1.70	0.40
9:I:34:LYS:HA	9:I:34:LYS:HD3	1.86	0.40
12:L:33:GLU:HG3	12:L:53:HIS:ND1	2.36	0.40
14:N:141:GLU:HG2	14:N:142:THR:N	2.37	0.40
14:N:87:TYR:HA	14:N:142:THR:N	2.37	0.40
15:O:460:GLU:O	15:O:469:ARG:NH1	2.51	0.40
16:P:333:PHE:HD2	16:P:334:ASN:HB2	1.85	0.40
17:Q:378:LEU:HD22	18:R:216:LEU:HD22	2.01	0.40
17:Q:474:GLU:HB3	17:Q:478:ARG:HH11	1.86	0.40
17:Q:7:GLY:HA3	17:Q:8:PRO:HD2	1.44	0.40
18:R:173:MET:HB3	18:R:188:PHE:CZ	2.56	0.40
17:Q:414:TYR:HE1	18:R:237:ALA:O	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	1449/1664 (87%)	1375 (95%)	60 (4%)	14 (1%)	18	61
2	B	1164/1203 (97%)	1095 (94%)	51 (4%)	18 (2%)	12	53
3	C	303/335 (90%)	287 (95%)	13 (4%)	3 (1%)	18	61
4	D	54/137 (39%)	50 (93%)	2 (4%)	2 (4%)	4	33
5	E	210/215 (98%)	197 (94%)	11 (5%)	2 (1%)	18	61
6	F	98/155 (63%)	95 (97%)	2 (2%)	1 (1%)	18	61
7	G	187/326 (57%)	173 (92%)	12 (6%)	2 (1%)	17	60
8	H	127/146 (87%)	121 (95%)	6 (5%)	0	100	100
9	I	91/125 (73%)	80 (88%)	8 (9%)	3 (3%)	4	35
10	J	67/70 (96%)	63 (94%)	4 (6%)	0	100	100
11	K	99/142 (70%)	92 (93%)	7 (7%)	0	100	100
12	L	42/70 (60%)	36 (86%)	4 (10%)	2 (5%)	2	28
13	M	106/415 (26%)	96 (91%)	8 (8%)	2 (2%)	9	47
14	N	139/233 (60%)	123 (88%)	13 (9%)	3 (2%)	8	44
15	O	467/627 (74%)	426 (91%)	35 (8%)	6 (1%)	14	56
16	P	569/894 (64%)	473 (83%)	76 (13%)	20 (4%)	4	34
17	Q	398/514 (77%)	347 (87%)	41 (10%)	10 (2%)	6	41
18	R	289/507 (57%)	240 (83%)	39 (14%)	10 (4%)	4	34
All	All	5859/7778 (75%)	5369 (92%)	392 (7%)	98 (2%)	15	50

All (98) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	408	LYS
1	A	479	ALA
1	A	1651	THR
2	B	111	ASP

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Mol	Chain	Res	Type
2	B	895	PHE
2	B	1097	ASP
3	C	224	THR
4	D	99	LEU
9	I	41	GLN
15	O	237	ILE
15	O	325	ILE
16	P	188	GLN
16	P	321	LYS
16	P	332	ASN
16	P	444	PRO
16	P	500	ILE
16	P	501	PRO
17	Q	8	PRO
17	Q	9	ILE
17	Q	15	CYS
18	R	150	GLN
18	R	151	PRO
18	R	152	ILE
18	R	245	VAL
18	R	249	SER
1	A	415	ASP
1	A	448	SER
1	A	1500	GLN
1	A	1533	GLU
1	A	1606	SER
2	B	817	ARG
2	B	1049	THR
2	B	1140	LYS
4	D	98	GLY
5	E	50	MET
9	I	5	GLY
16	P	236	ILE
16	P	426	ALA
16	P	657	SER
16	P	745	ALA
16	P	752	LEU
17	Q	7	GLY
17	Q	196	SER
18	R	11	ARG
18	R	267	GLY
18	R	422	GLY

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Mol	Chain	Res	Type
1	A	69	GLU
1	A	450	LYS
2	B	78	PRO
2	B	208	VAL
2	B	209	GLN
2	B	1070	ARG
2	B	1084	THR
7	G	99	ASP
9	I	21	ASN
12	L	46	VAL
13	M	85	LYS
15	O	82	SER
15	O	469	ARG
16	P	201	GLU
16	P	241	PRO
16	P	247	ILE
16	P	666	SER
16	P	777	MET
17	Q	197	GLU
1	A	1299	ASN
2	B	834	LYS
3	C	297	HIS
7	G	100	THR
12	L	43	THR
13	M	36	THR
14	N	115	SER
15	O	130	PRO
15	O	187	MET
16	P	294	PHE
17	Q	13	ASP
1	A	451	VAL
1	A	564	PRO
2	B	80	ASN
2	B	117	VAL
2	B	1062	GLY
3	C	32	ASN
5	E	146	HIS
17	Q	16	PRO
17	Q	193	PHE
1	A	1512	PRO
2	B	1063	ARG
16	P	568	ILE

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Mol	Chain	Res	Type
17	Q	148	PRO
18	R	362	ALA
6	F	74	ILE
14	N	70	LEU
16	P	421	ILE
18	R	295	PRO
14	N	39	PRO
2	B	833	PRO
2	B	954	PHE
16	P	203	ILE

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	1297/1465 (88%)	1215 (94%)	82 (6%)	21	53
2	B	1025/1053 (97%)	960 (94%)	65 (6%)	21	53
3	C	269/296 (91%)	253 (94%)	16 (6%)	23	55
4	D	55/116 (47%)	49 (89%)	6 (11%)	7	30
5	E	194/197 (98%)	180 (93%)	14 (7%)	17	49
6	F	90/137 (66%)	86 (96%)	4 (4%)	33	63
7	G	171/291 (59%)	159 (93%)	12 (7%)	18	50
8	H	115/128 (90%)	111 (96%)	4 (4%)	41	69
9	I	89/110 (81%)	84 (94%)	5 (6%)	25	57
10	J	64/65 (98%)	57 (89%)	7 (11%)	7	30
11	K	91/130 (70%)	84 (92%)	7 (8%)	15	47
12	L	39/57 (68%)	36 (92%)	3 (8%)	15	47
13	M	98/371 (26%)	85 (87%)	13 (13%)	4	24
14	N	135/220 (61%)	129 (96%)	6 (4%)	33	63
15	O	439/576 (76%)	387 (88%)	52 (12%)	6	27
16	P	539/828 (65%)	395 (73%)	144 (27%)	0	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
17	Q	383/476 (80%)	318 (83%)	65 (17%)	2	15
18	R	286/474 (60%)	227 (79%)	59 (21%)	1	8
All	All	5379/6990 (77%)	4815 (90%)	564 (10%)	12	32

All (564) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	10	GLU
1	A	40	ASN
1	A	83	VAL
1	A	117	ARG
1	A	136	LEU
1	A	174	SER
1	A	186	SER
1	A	202	THR
1	A	230	ARG
1	A	257	ASN
1	A	271	ARG
1	A	272	GLN
1	A	273	ASP
1	A	312	SER
1	A	315	ILE
1	A	346	SER
1	A	373	LEU
1	A	379	GLU
1	A	393	SER
1	A	406	LEU
1	A	407	GLN
1	A	408	LYS
1	A	410	LYS
1	A	413	LEU
1	A	414	GLU
1	A	446	ARG
1	A	447	THR
1	A	451	VAL
1	A	503	VAL
1	A	555	LYS
1	A	611	GLU
1	A	627	ASP
1	A	656	GLN
1	A	661	THR

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Mol	Chain	Res	Type
1	A	666	VAL
1	A	670	ILE
1	A	684	ASP
1	A	708	THR
1	A	709	ARG
1	A	739	VAL
1	A	747	ILE
1	A	758	GLU
1	A	783	LYS
1	A	957	VAL
1	A	966	LEU
1	A	988	SER
1	A	1026	GLN
1	A	1033	SER
1	A	1071	ASP
1	A	1085	LEU
1	A	1098	SER
1	A	1118	VAL
1	A	1123	VAL
1	A	1131	LYS
1	A	1159	ASP
1	A	1162	ASN
1	A	1204	THR
1	A	1215	VAL
1	A	1226	VAL
1	A	1273	THR
1	A	1275	THR
1	A	1276	THR
1	A	1304	GLU
1	A	1310	LYS
1	A	1314	GLN
1	A	1320	GLN
1	A	1441	LYS
1	A	1455	ARG
1	A	1509	HIS
1	A	1531	ASP
1	A	1533	GLU
1	A	1536	ILE
1	A	1571	SER
1	A	1601	GLN
1	A	1604	GLU
1	A	1605	THR

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Mol	Chain	Res	Type
1	A	1609	SER
1	A	1611	MET
1	A	1632	GLU
1	A	1633	GLN
1	A	1635	ASP
1	A	1645	LYS
2	B	17	ARG
2	B	22	GLU
2	B	53	THR
2	B	57	ASP
2	B	65	VAL
2	B	79	LEU
2	B	81	SER
2	B	87	ASN
2	B	117	VAL
2	B	150	GLU
2	B	151	ASN
2	B	187	SER
2	B	221	SER
2	B	225	ARG
2	B	228	SER
2	B	231	HIS
2	B	239	VAL
2	B	300	SER
2	B	305	ARG
2	B	306	LEU
2	B	311	ARG
2	B	315	LYS
2	B	379	ARG
2	B	459	SER
2	B	486	VAL
2	B	537	SER
2	B	583	LEU
2	B	622	ILE
2	B	658	LEU
2	B	720	GLN
2	B	724	GLN
2	B	725	THR
2	B	731	VAL
2	B	753	LYS
2	B	782	ASP
2	B	811	LEU

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Mol	Chain	Res	Type
2	B	813	LEU
2	B	819	ASP
2	B	822	THR
2	B	829	ASN
2	B	833	PRO
2	B	835	GLU
2	B	839	LYS
2	B	858	ILE
2	B	871	ILE
2	B	883	GLU
2	B	894	LYS
2	B	897	GLU
2	B	977	ILE
2	B	998	GLU
2	B	1026	ILE
2	B	1033	TYR
2	B	1037	ARG
2	B	1038	HIS
2	B	1047	ARG
2	B	1060	VAL
2	B	1075	GLU
2	B	1091	ARG
2	B	1103	VAL
2	B	1125	THR
2	B	1136	GLU
2	B	1141	LEU
2	B	1163	GLN
2	B	1165	ASN
2	B	1174	THR
3	C	38	LYS
3	C	43	ASN
3	C	50	ARG
3	C	61	THR
3	C	77	SER
3	C	91	VAL
3	C	97	LEU
3	C	118	SER
3	C	142	ARG
3	C	181	ASP
3	C	224	THR
3	C	228	ARG
3	C	243	SER

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Mol	Chain	Res	Type
3	C	245	ARG
3	C	277	ARG
3	C	279	VAL
4	D	15	THR
4	D	29	GLN
4	D	38	GLN
4	D	46	GLU
4	D	80	THR
4	D	99	LEU
5	E	31	THR
5	E	33	GLU
5	E	41	ASP
5	E	74	ASP
5	E	77	SER
5	E	90	VAL
5	E	92	THR
5	E	93	MET
5	E	107	THR
5	E	131	THR
5	E	136	ASN
5	E	142	VAL
5	E	162	ARG
5	E	177	ARG
6	F	59	GLN
6	F	87	LYS
6	F	99	LEU
6	F	109	VAL
7	G	18	LYS
7	G	24	VAL
7	G	35	SER
7	G	39	VAL
7	G	139	ILE
7	G	147	LEU
7	G	167	THR
7	G	169	VAL
7	G	223	GLU
7	G	230	ARG
7	G	239	THR
7	G	243	VAL
8	H	3	ASN
8	H	39	THR
8	H	108	SER

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Mol	Chain	Res	Type
8	H	112	ILE
9	I	2	SER
9	I	15	ASP
9	I	45	LEU
9	I	81	THR
9	I	117	CYS
10	J	3	VAL
10	J	9	SER
10	J	10	CYS
10	J	14	VAL
10	J	27	GLU
10	J	45	CYS
10	J	48	ARG
11	K	45	GLU
11	K	51	THR
11	K	68	GLU
11	K	99	ASN
11	K	118	GLN
11	K	123	ASP
11	K	133	SER
12	L	38	LEU
12	L	55	ILE
12	L	66	GLN
13	M	17	ASP
13	M	18	GLN
13	M	31	ARG
13	M	44	LYS
13	M	48	LYS
13	M	65	TYR
13	M	77	VAL
13	M	84	GLU
13	M	98	SER
13	M	104	SER
13	M	106	LYS
13	M	107	ASN
13	M	109	ARG
14	N	51	GLN
14	N	124	THR
14	N	135	LYS
14	N	153	VAL
14	N	167	LYS
14	N	178	GLU

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Mol	Chain	Res	Type
15	O	66	ASN
15	O	67	ASP
15	O	69	THR
15	O	78	VAL
15	O	80	LEU
15	O	87	ARG
15	O	101	SER
15	O	111	ARG
15	O	117	GLN
15	O	171	CYS
15	O	175	MET
15	O	180	LEU
15	O	181	ARG
15	O	190	ILE
15	O	192	THR
15	O	202	ASN
15	O	203	ASP
15	O	204	THR
15	O	205	ARG
15	O	212	THR
15	O	213	SER
15	O	215	LEU
15	O	225	LEU
15	O	228	GLN
15	O	232	LEU
15	O	234	ILE
15	O	239	SER
15	O	245	GLN
15	O	248	LEU
15	O	341	THR
15	O	350	GLU
15	O	354	SER
15	O	363	THR
15	O	376	TYR
15	O	381	ILE
15	O	395	LEU
15	O	407	SER
15	O	410	VAL
15	O	415	GLU
15	O	437	THR
15	O	448	SER
15	O	454	VAL

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Mol	Chain	Res	Type
15	O	489	ASN
15	O	494	THR
15	O	495	ASP
15	O	526	LEU
15	O	579	LEU
15	O	581	THR
15	O	584	GLN
15	O	597	LEU
15	O	599	LEU
15	O	602	TYR
16	P	21	GLN
16	P	26	TYR
16	P	49	THR
16	P	55	LEU
16	P	64	LEU
16	P	187	ILE
16	P	194	ARG
16	P	195	ASN
16	P	201	GLU
16	P	205	TYR
16	P	207	SER
16	P	212	SER
16	P	214	LEU
16	P	220	THR
16	P	227	LEU
16	P	232	ASN
16	P	236	ILE
16	P	243	LYS
16	P	245	ILE
16	P	246	LYS
16	P	252	GLU
16	P	256	ARG
16	P	257	ARG
16	P	260	LEU
16	P	263	ILE
16	P	264	ILE
16	P	266	GLU
16	P	268	SER
16	P	271	ILE
16	P	276	SER
16	P	282	CYS
16	P	290	GLU

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Mol	Chain	Res	Type
16	P	292	LEU
16	P	300	LEU
16	P	305	PHE
16	P	314	GLN
16	P	321	LYS
16	P	329	ILE
16	P	333	PHE
16	P	343	LEU
16	P	345	ASP
16	P	347	LEU
16	P	355	GLU
16	P	356	GLU
16	P	359	SER
16	P	360	TRP
16	P	363	ILE
16	P	364	GLU
16	P	369	PHE
16	P	370	GLN
16	P	377	ARG
16	P	379	LYS
16	P	384	ASP
16	P	386	MET
16	P	388	ASN
16	P	390	GLN
16	P	397	LYS
16	P	403	ARG
16	P	407	ARG
16	P	408	ILE
16	P	410	ASP
16	P	412	ASN
16	P	415	LEU
16	P	419	ARG
16	P	421	ILE
16	P	424	VAL
16	P	430	ASN
16	P	433	VAL
16	P	439	LYS
16	P	442	LEU
16	P	443	ASP
16	P	448	THR
16	P	453	VAL
16	P	455	LYS

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Mol	Chain	Res	Type
16	P	460	ASP
16	P	463	LEU
16	P	464	LEU
16	P	465	VAL
16	P	473	HIS
16	P	474	LYS
16	P	492	LEU
16	P	494	CYS
16	P	496	THR
16	P	497	VAL
16	P	498	LEU
16	P	500	ILE
16	P	511	ILE
16	P	531	PHE
16	P	534	VAL
16	P	538	LEU
16	P	539	VAL
16	P	545	SER
16	P	555	THR
16	P	556	GLN
16	P	574	TRP
16	P	580	ASN
16	P	582	ASP
16	P	584	ARG
16	P	596	ILE
16	P	600	GLU
16	P	608	GLN
16	P	609	ASN
16	P	615	ASN
16	P	617	HIS
16	P	625	ASP
16	P	626	LEU
16	P	630	LEU
16	P	632	ILE
16	P	635	ASN
16	P	637	LEU
16	P	638	LEU
16	P	646	ASP
16	P	647	GLU
16	P	654	LEU
16	P	656	HIS
16	P	659	LEU

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Mol	Chain	Res	Type
16	P	660	LYS
16	P	662	LEU
16	P	664	GLU
16	P	665	ASN
16	P	667	ASP
16	P	671	SER
16	P	676	SER
16	P	679	LEU
16	P	693	PHE
16	P	700	LEU
16	P	703	PHE
16	P	706	GLU
16	P	711	LEU
16	P	712	ASP
16	P	726	SER
16	P	730	GLU
16	P	731	LEU
16	P	736	ILE
16	P	742	TRP
16	P	748	GLU
16	P	749	LYS
16	P	751	SER
16	P	753	PHE
16	P	757	GLN
16	P	762	ARG
16	P	768	TYR
16	P	772	ILE
16	P	777	MET
17	Q	17	SER
17	Q	21	ARG
17	Q	26	ARG
17	Q	27	ARG
17	Q	103	LEU
17	Q	110	PHE
17	Q	112	LEU
17	Q	119	LEU
17	Q	138	LEU
17	Q	139	LYS
17	Q	143	THR
17	Q	144	ILE
17	Q	145	ASN
17	Q	147	GLN

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Mol	Chain	Res	Type
17	Q	154	LEU
17	Q	159	THR
17	Q	164	ILE
17	Q	167	LEU
17	Q	169	SER
17	Q	173	SER
17	Q	176	VAL
17	Q	187	THR
17	Q	192	TYR
17	Q	204	ARG
17	Q	207	LEU
17	Q	218	SER
17	Q	220	SER
17	Q	226	LEU
17	Q	229	LYS
17	Q	232	LEU
17	Q	248	SER
17	Q	273	VAL
17	Q	286	LEU
17	Q	290	THR
17	Q	291	ASP
17	Q	292	GLU
17	Q	301	HIS
17	Q	312	LEU
17	Q	318	LEU
17	Q	328	LEU
17	Q	332	LEU
17	Q	337	SER
17	Q	348	ILE
17	Q	359	ASP
17	Q	363	SER
17	Q	366	TYR
17	Q	367	PHE
17	Q	368	GLN
17	Q	379	LYS
17	Q	384	GLN
17	Q	389	GLN
17	Q	412	LYS
17	Q	419	LEU
17	Q	435	GLN
17	Q	436	LEU
17	Q	444	GLU

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Mol	Chain	Res	Type
17	Q	445	ARG
17	Q	453	PHE
17	Q	495	LYS
17	Q	498	LEU
17	Q	502	ILE
17	Q	506	LYS
17	Q	511	HIS
17	Q	512	ARG
17	Q	513	MET
18	R	1	MET
18	R	4	VAL
18	R	8	LEU
18	R	10	ASN
18	R	11	ARG
18	R	15	GLN
18	R	28	SER
18	R	74	GLN
18	R	80	ARG
18	R	84	TRP
18	R	85	ARG
18	R	87	VAL
18	R	143	THR
18	R	149	LYS
18	R	150	GLN
18	R	152	ILE
18	R	155	GLN
18	R	156	LYS
18	R	160	HIS
18	R	167	LYS
18	R	168	ILE
18	R	178	LEU
18	R	181	THR
18	R	202	THR
18	R	206	ARG
18	R	209	ARG
18	R	210	THR
18	R	211	ARG
18	R	212	HIS
18	R	216	LEU
18	R	218	ASP
18	R	231	LEU
18	R	235	ILE

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Mol	Chain	Res	Type
18	R	238	THR
18	R	242	ILE
18	R	247	ILE
18	R	248	LYS
18	R	250	LEU
18	R	255	VAL
18	R	266	SER
18	R	269	ASP
18	R	272	GLN
18	R	298	GLN
18	R	299	THR
18	R	302	ARG
18	R	308	PHE
18	R	312	TYR
18	R	313	LEU
18	R	319	ASN
18	R	322	LYS
18	R	323	SER
18	R	345	LEU
18	R	347	ASP
18	R	364	VAL
18	R	367	ILE
18	R	373	LEU
18	R	374	LEU
18	R	410	TYR
18	R	420	ASP

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (37) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	382	GLN
1	A	407	GLN
1	A	470	HIS
1	A	535	GLN
1	A	1162	ASN
1	A	1314	GLN
1	A	1320	GLN
2	B	146	ASN
2	B	182	GLN
2	B	462	GLN
2	B	554	GLN
2	B	1163	GLN

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Mol	Chain	Res	Type
7	G	126	GLN
7	G	154	ASN
12	L	53	HIS
15	O	66	ASN
15	O	70	GLN
15	O	105	ASN
15	O	117	GLN
15	O	210	ASN
15	O	228	GLN
15	O	245	GLN
15	O	342	HIS
15	O	362	ASN
15	O	371	HIS
15	O	390	GLN
15	O	488	HIS
15	O	497	ASN
15	O	521	ASN
15	O	547	ASN
15	O	549	ASN
16	P	228	ASN
16	P	461	HIS
17	Q	194	GLN
18	R	184	ASN
18	R	246	GLN
18	R	409	HIS

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

Of 8 ligands modelled in this entry, 8 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	A	2
7	G	1
18	R	1
9	I	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	G	24:VAL	C	25:THR	N	4.53
1	R	206:ARG	C	207:ASN	N	3.86
1	I	45:LEU	C	46:LYS	N	3.17
1	A	438:ILE	C	439:ASP	N	2.97
1	A	991:LYS	C	992:PRO	N	2.86