



Full wwPDB X-ray Structure Validation Report

Feb 27, 2014 – 05:03 AM GMT

PDB ID : 4KMU
Title : X-ray crystal structure of the Escherichia coli RNA polymerase in complex with Rifampin
Authors : Murakami, K.S.
Deposited on : 2013-05-08
Resolution : 3.85 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

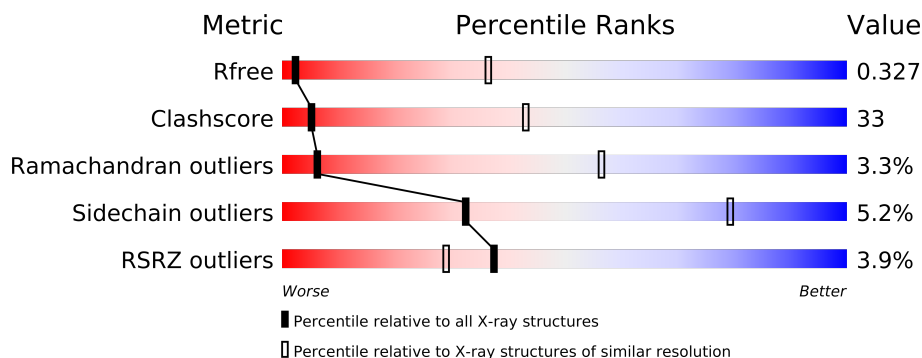
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.15 2013
Xtriage (Phenix) : dev-1323
EDS : stable22639
Percentile statistics : 21963
Refmac : 5.8.0049
CCP4 : 6.3.0 (Settle)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable22683

1 Overall quality at a glance

The reported resolution of this entry is 3.85 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	66092	1013 (4.30-3.42)
Clashscore	79885	1145 (4.22-3.50)
Ramachandran outliers	78287	1091 (4.22-3.50)
Sidechain outliers	78261	1081 (4.22-3.50)
RSRZ outliers	66119	1014 (4.30-3.42)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	A	329	
1	B	329	
1	F	329	
1	G	329	
2	C	1342	
2	H	1342	
3	D	1407	
3	I	1407	
4	E	91	
4	J	91	
5	X	613	
5	Y	613	

The following table lists non-polymeric compounds that are outliers for geometric or electron-

density-fit criteria:

Mol	Type	Chain	Res	Geometry	Electron density
8	MG	I	1503	-	X

2 Entry composition

There are 8 unique types of molecules in this entry. The entry contains 56315 atoms, of which 116 are hydrogens and 0 are deuterium.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	323	Total	C	N	O	S	0	0	0
			2514	1571	443	492	8			
1	B	221	Total	C	N	O	S	0	0	0
			1706	1065	300	335	6			
1	F	229	Total	C	N	O	S	0	0	0
			1775	1106	313	350	6			
1	G	217	Total	C	N	O	S	0	0	0
			1671	1045	293	327	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	C	1335	Total	C	N	O	S	0	0	0
			10523	6601	1836	2043	43			
2	H	1335	Total	C	N	O	S	0	0	0
			10523	6601	1836	2043	43			

- Molecule 3 is a protein called DNA-directed RNA polymerase subunit beta'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	D	1160	Total	C	N	O	S	0	0	0
			9060	5695	1621	1697	47			
3	I	1160	Total	C	N	O	S	0	0	0
			9060	5695	1621	1697	47			

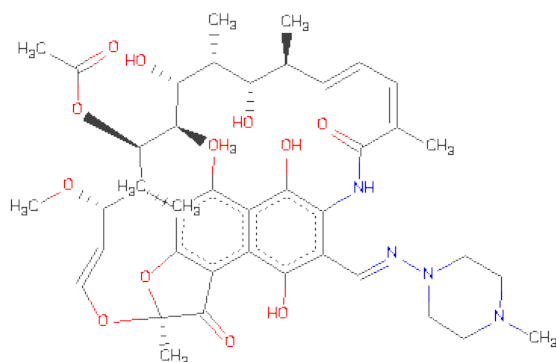
- Molecule 4 is a protein called DNA-directed RNA polymerase subunit omega.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	E	90	Total	C	N	O	S	0	0	0
			708	430	136	141	1			
4	J	76	Total	C	N	O	S	0	0	0
			605	368	115	121	1			

- Molecule 5 is a protein called RNA polymerase sigma factor RpoD.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	X	517	Total	C	N	O	S	0	0	0
			4198	2621	745	806	26			
5	Y	458	Total	C	N	O	S	0	0	0
			3732	2335	671	703	23			

- Molecule 6 is RIFAMPICIN (three-letter code: RFP) (formula: $C_{43}H_{58}N_4O_{12}$).



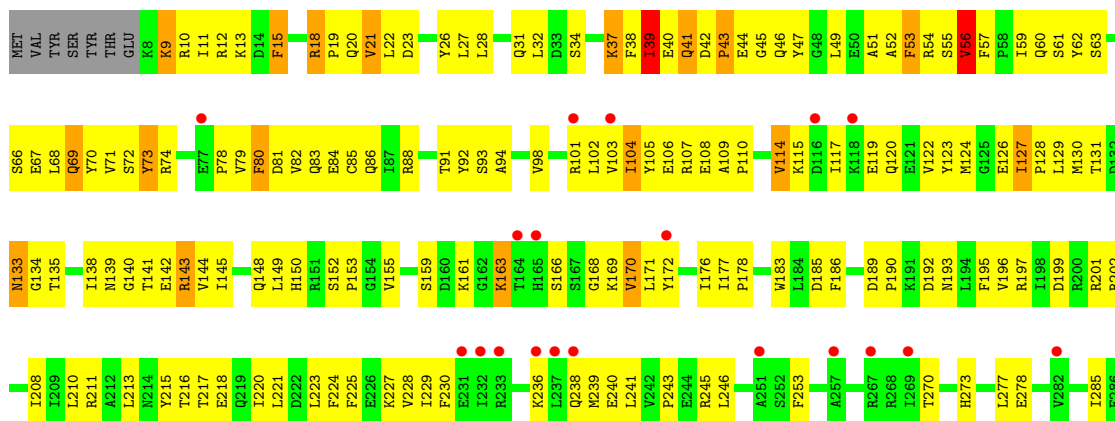
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
6	C	1	Total	C	H	N	O	0	0
			117	43	58	4	12		
6	H	1	Total	C	H	N	O	0	0
			117	43	58	4	12		

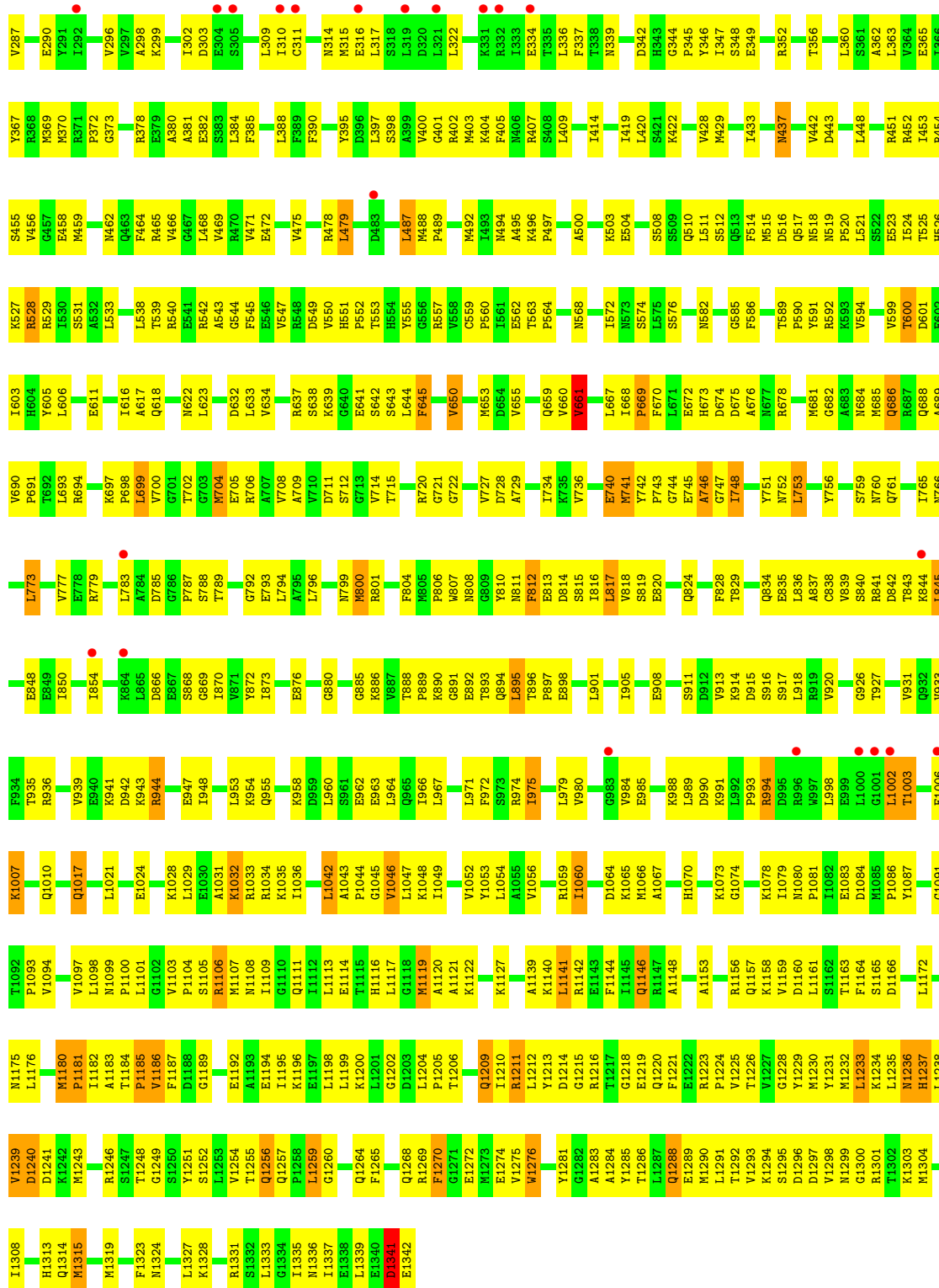
- Molecule 7 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	I	2	Total	Zn	0	0
			2	2		
7	D	2	Total	Zn	0	0
			2	2		

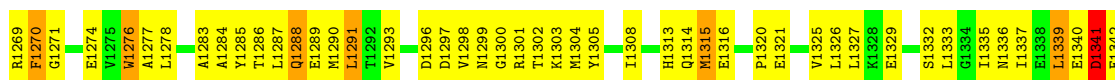
- Molecule 8 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
8	I	1	Total 1	Mg 1	0	0
8	D	1	Total 1	Mg 1	0	0



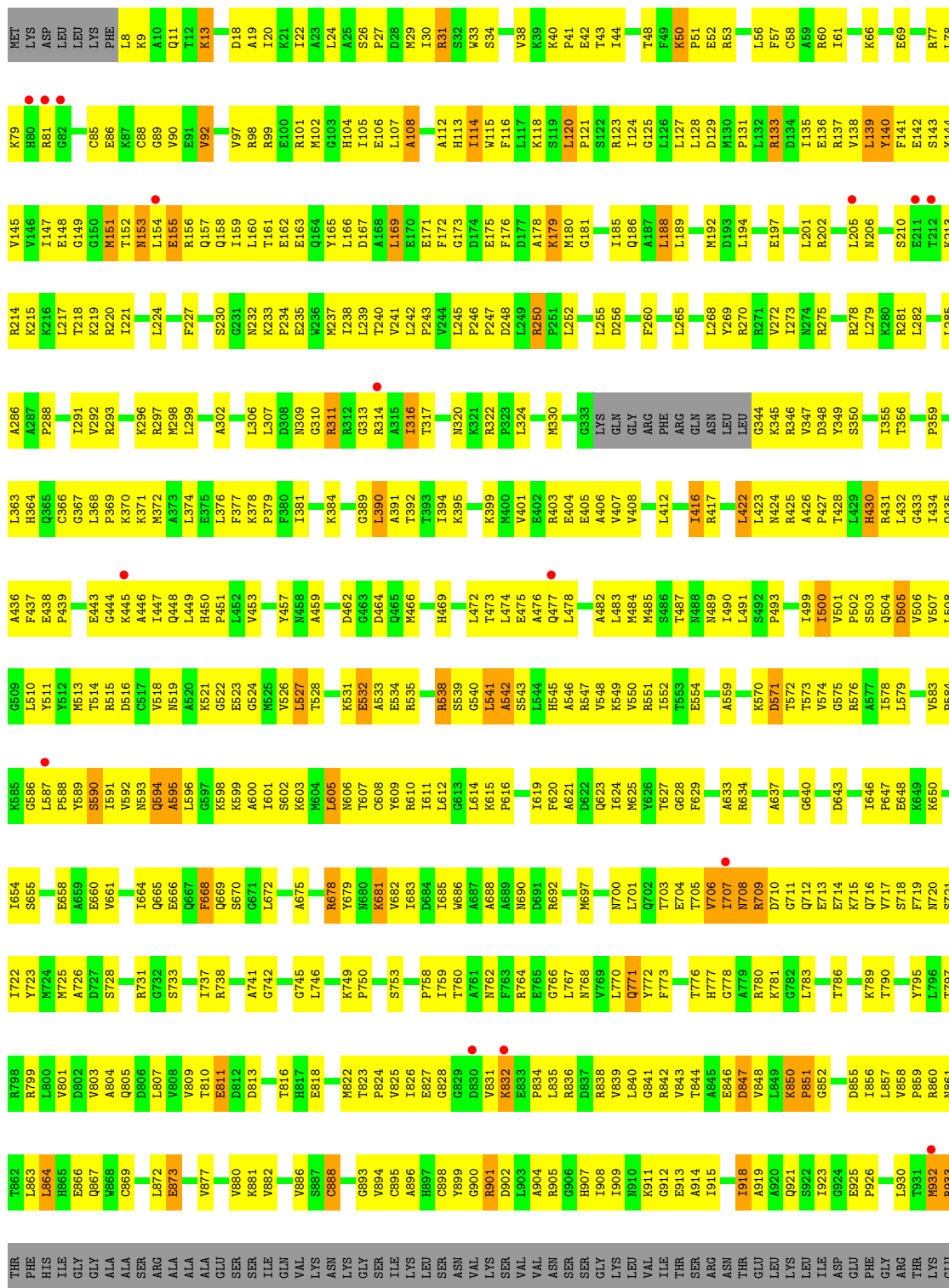


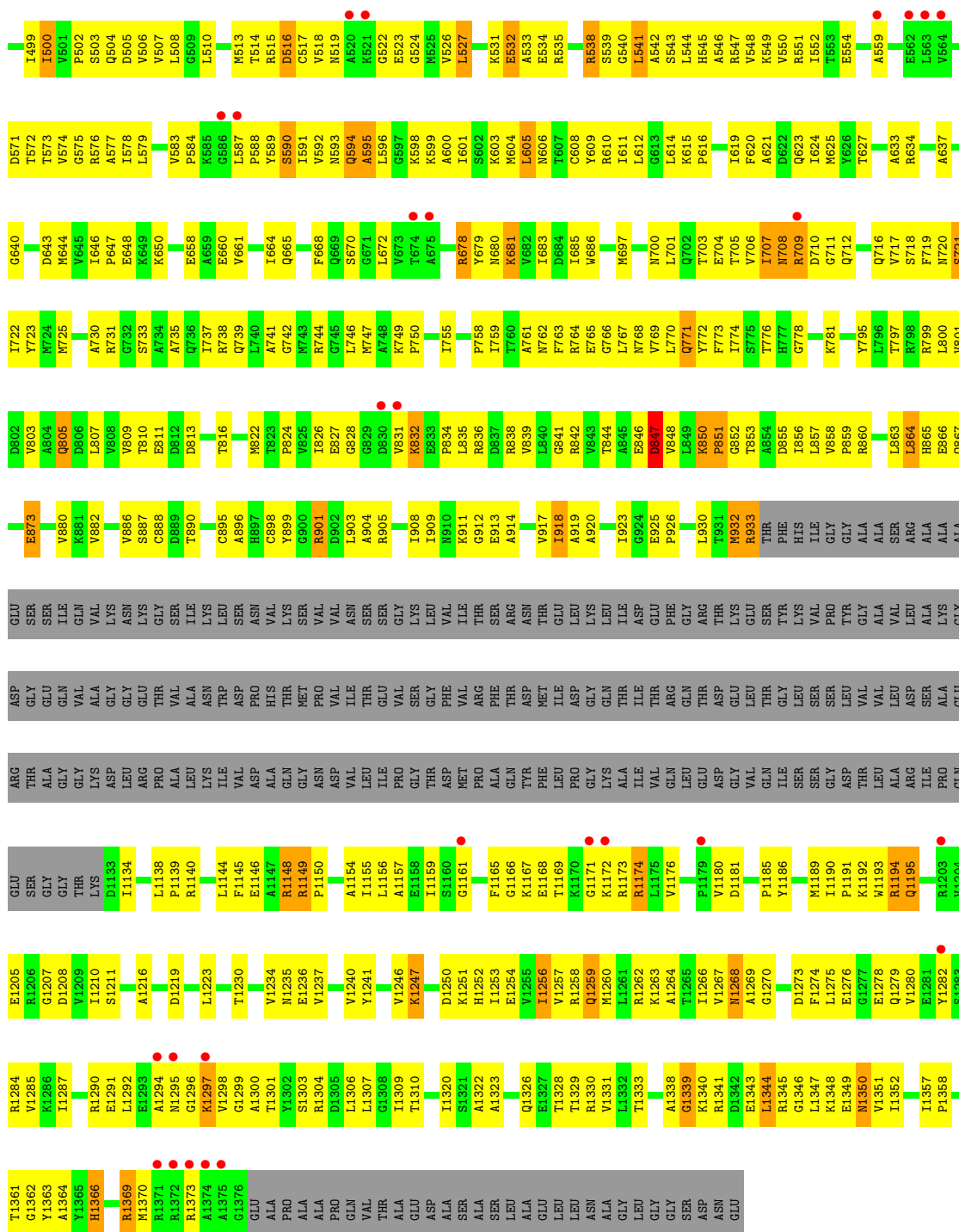
G1189	H1116	L1042	L967	E892	Y726	V654	N573	A495	T426	E334	R211	I138	L68
L1199	M1119	A1043	E966	T893	V727	V655	S574	K496	D427	F337	T216	M139	Q89
L1200	M1120	P1044	A969	Q894	D728	Q658	L575	P497	L576	T338	T217	G140	Y70
L1201	K1122	G1045	G970	L896	A729	Q659	S576	A500	M429	T339	M428	T141	S72
G1202	L1047	V1046	L971	T896	Y810	V660	Y577	E504	D342	D342	E218	E142	Y73
D1203	K1127	P1043	L975	E898	Y811	V661	A579	E505	K430	H843	Q219	R143	R74
L1204	M1128	A1054	A976	E913	Y734	S622	Q580	F506	L432	G344	I220	V144	
L1205	M1129	A1055	A977	L901	K735	V662	T881	F507	L433	G345	L223	I145	P78
L1206	V1056	V1057	Y978	L902	V736	G664	N582	S508	D434	Y346	L223	V146	P79
S1207	L1132	K1057	L979	T897	Y816	A665	G585	S509	L435	I347	L223	S147	F80
G1208	K1133	R1058	Y980	L905	D739	S666	F586	L511	K436	L351	F230	Q148	D81
Q1209	R1059	T1060	Y981	E908	E740	L687	F587	S512	M437	L352	F231	L149	V82
I1210	R1211	E983	G982	E909	M741	I688	L587	Q513	G436	T356	I232	H150	
L1212	A1140	Y984	Y984	A910	Y742	F670	T589	F514	K439	L356	K236	R151	Q86
Y1213	L1141	E985	E985	S911	P743	L671	T590	M515	L360	I67	L237	S152	I87
Y1214	R1142	D912	D912	S911	E742	E672	Y591	D516	L361	S361	L237	P153	R88
G1215	E1143	Y913	Y913	Y913	G747	H673	R592	Q517	A362	A362	Q238	F156	
R1216	F1144	F628	F628	F628	I748	R678	V599	N518	D446		L241	F157	T91
T1217	Q1145	T629	T629	T629	D749	A679	T600	N519	H447	E365	R245	D158	Y92
G1218	Q1146	T830	T830	T830	N752	L680	D601	P520	L448	I366	R245	S159	A94
E1219	R1147	L831	L831	L831	L753	N681	E602	L521		Y367	L246	D160	P95
	A1148	C638	C638	C638	Y756		I603	E523	R452	R368		K181	L96
R1223	G1152	G639	G639	G639			S807	I524	R454	M369	A251	G162	R97
P1224	A1153	R923	R923	R923			E610	H526	E458	G374	S252	K183	Y98
V1225	L1154	R941	R941	R941	S759	Q686	E616	H526	E458	E374	F253	T164	K99
T1226	R1156	D842	D842	D842	N760	R687	Q618	L538	V466	D254	I255	H165	L100
G1228	Q1157	T843	T843	T843	T763	Q688	E611	R528	Q467	P376		S166	R101
Y1229	K1158	K844	K844	K844	T764	A689	A619	R529	M462	T377	M258	G168	L102
M1230	Y1159	L845	L845	L845	T765	V690	Y614		Q463	R378		K189	V103
D1231	L1161	E948	E948	E948	I765	P691	V615	P535	P464	E379	V263	Y105	I104
M1232	S1162	E949	E949	E949	T766		A617	L538	R465	L384	E264	E106	
L1233	T1163	R850	R850	R850	Q767	K697	Q618	T539	V466	L384	I269	Y172	R107
K1234	F1164	T850	T850	T850	M768	P698	A619		L468	M173		A174	E108
L1235	S1165	T854	T854	T854	P769	L699		A543	V469	A174	H273	R175	A109
M1236	D1166	K941	K941	K941	G770	V700	L623		R470	L388		I176	P110
H1237	E1167	D942	D942	D942	V771	G701		V547	V471		V287	I177	V114
V1239	E1168	K943	K943	K943	S772	T702	H628	R548	E472	E392	I292	P178	
D1240	L1171	A945	A945	A945	G773	G703	F629	D549	V475	D393		S182	I117
M1242	K1242	L946	L946	L946	E775	E705	D632	H550	K476	R394	V287	E183	K118
M1243	A1173	E947	E947	E947	L783	A707	L633	H551	E477	Y395	A298	L184	E119
	T1248	Q1013	Q1013	Q1013	A784		V634	P552	R478	V400	K299	F186	Q120
S1252	L1174	A1015	A1015	A1015	D785		H554	H554	L479	M403	D303	Y122	D121
L1253	M1175	E1016	E1016	E1016	G786	V710	R637	Y555	S480	K404	E304	M124	Y123
G1254	R1177	Y872	Y872	Y872	P787	D711	R638	G556	L484	F405		D189	G125
V1254	K1178	E876	E876	E876	S788	G713	K639	R557	D485	N406	L309	E126	E126
T1255	M1180	V877	V877	V877	E793	T714	S643	V558	T486	R407	I310	L194	I127
Q1256	P1181	L883	L883	L883	L794	A716	L644	C559	L487	S408	C311	L194	I127
Q1257	I1182	V884	V884	V884	A795	V717	F645	E562	N488			R197	P128
P1258	R1183	E961	E961	E961	L796	A718	S646	T563	K476	E488	L317	E129	M130
L1259	T1184	X886	X886	X886	Y799	K719	R647	P564	Q490	R411	L317	L204	M130
	P1185	X887	X887	X887	M800	R720	R647	P564	D491	E412	L321	L204	D132
Q1264	V1186	T888	T888	T888	R799	R720	R647	P564	D491	E412	L321	L204	D132
	F1187	P889	P889	P889	M800	R720	R647	P564	D491	E412	L321	L204	D132
	D1188				R801	R724	V650	N568	M492	E413	L321	L204	D132
					V802	Q725	M653	I572	M494	I414	R332	L207	N133
													T135



• Molecule 3: DNA-directed RNA polymerase subunit beta'

Chain D:





- Molecule 4: DNA-directed RNA polymerase subunit omega

Chain E:



- Chain J:

Amino Acid	Count
MET	1
A2	2
R3	3
GLU	4
GLY	5
V4	4
T5	3
V6	2
Q7	1
V10	3
E11	2
K12	1
N15	4
R16	3
F17	2
D18	1
L19	1
V20	2
L21	1
V22	1
R25	4
R26	3
A27	2
R28	1
Q29	1
M30	1
Q31	1
K35	1
L38	4
V39	3
P40	2
T46	3
T47	2
V48	1
R52	1
L58	4
I59	2
N61	1
Q62	1
I63	1
L64	1
D65	1
V66	1
A77	1
A78	1
GLU	1
LEU	1
GLN	1
ALA	1
VAL	1
THR	1
A79	1

- Chain X:

L607	D521	S442	Q345	M271	GLU	S133	LEU
R608	F522	I443	Q346		ASP	V134	ALA
S609	T523	A444			ASP	A135	GLN
PHE	E524	D445	E350	R275	ASP	E136	ASN
LEU	D525	Q446		R276	GLU	Y137	THR
ASP		A447	L353	M277	ASP	P138	ALA
ASP	L528	R448	T354		ASP	E139	ASP
	E529	T449	I355	D278	GLY	A140	GLU
	L530	I450	E356	R279	ASP	I141	ASP
		R451	Q357	V280	ASP	T142	ALA
	T536	I452	V358		ASP	Y143	ALA
		P453	K359	M288	SER	L144	GLU
	L540	V454	D360	K289	ALA	L145	ALA
R541	H455			L289	ASP	A146	ALA
A542	H456	R363		C291	ASP	Q147	K17
A543	A543	I457	R364	E292	ASP	Q147	ALA
T544	E458	E458	M365	E293	ASN	Y148	GLN
H545	T459	T459	S366	D294	SER	V151	VAL
B546	I460	I460	I367	C285	T212	E152	LEU
V547	M461	M461	G368	K286	D213	A153	SER
		K462	E369	M297		E154	VAL
L551		L463		P298	L216	GLU	GLU
A556		R374		K299	A217	ALA	SER
		R465		K300	R218	ARG	GLU
		I466		N301		LEU	I1E
R560			K377	F302	L224	ASP	GLY
M561		M470	E378	I303	R225	SER	ARG
R562		L471	M379	T304	A226	LEU	THR
F563			V380	L305	Q227	I1E	T95
G564		R476	L384	F306	V228	THR	D96
		E477		T307	V229	GLY	P97
P566		P478	V387	G308		PHE	D34
M567			I388	N309	A237	VAL	R99
N568		A484	S389	E310	K238	ASP	M100
F569		E485	I390	T311	G239	PRG	Y101
D570		R486		S312	R240	ASN	
T571		M487	T395	S313	S241	ALA	D39
T572				T314	H242	GLU	M105
V576		P490	Q400	W315	A243	GLU	
		E491	F401	F316	T244	V108	D43
		R495	L402	N317	A245	E109	R44
F580			D403	A318	Q246	LEU	I45
D581		I500	L404	A319	E247	L111	Q46
V582			I405		E248	R113	M47
T583		E503	Q406	M322	T249	E114	T48
R584		P504	G408	K324	K251	A115	N49
		M507	N409	P325	L252	F116	D50
T587			I410			H15	M51
						VAL	G52
A592		I511	Y421	V333	V255	G118	S53
L595		G512	R422	S334	F256	SER	Q54
R596		D513	R423	E336	K257	A120	V55
K597		D514	G424	V337	Q258	LEU	M56
L598		E515	Y425		F259		E57
R599		D516				GLN	E58
H600		S517	I435	A340	V262	GLU	A59
P601		H518		Q342	P263	ASP	P60
S602		L519	I439	K343	K264	LEU	D64
		G520		L344	E265	ASP	M67

- Chain Y:

[illegible]



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	184.52Å 203.87Å 307.87Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.97 – 3.85 30.75 – 3.81	Depositor EDS
% Data completeness (in resolution range)	92.4 (29.97-3.85) 85.5 (30.75-3.81)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.25 (at 3.75Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.2_1309)	Depositor
R, R_{free}	0.264 , 0.321 0.270 , 0.327	Depositor DCC
R_{free} test set	4853 reflections (4.98%)	DCC
Wilson B-factor (Å ²)	112.9	Xtriage
Anisotropy	0.299	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.27 , -7.1	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.38$, $\langle L^2 \rangle = 0.20$	Xtriage
Outliers	0 of 103271 reflections	Xtriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	56315	wwPDB-VP
Average B, all atoms (Å ²)	81.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.67% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	A	0.19	0/2548	0.38	0/3454
1	B	0.20	0/1725	0.42	0/2337
1	F	0.20	0/1797	0.41	0/2436
1	G	0.20	0/1690	0.41	0/2290
2	C	0.21	0/10690	0.42	0/14423
2	H	0.22	0/10690	0.42	0/14423
3	D	0.20	0/9198	0.42	0/12413
3	I	0.20	0/9198	0.42	0/12413
4	E	0.19	0/710	0.38	0/956
4	J	0.19	0/607	0.39	0/817
5	X	0.20	0/4253	0.39	0/5719
5	Y	0.20	0/3783	0.39	0/5083
All	All	0.21	0/56889	0.41	0/76764

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2514	0	2566	170	0
1	B	1706	0	1738	108	0
1	F	1775	0	1800	77	0
1	G	1671	0	1706	92	0
2	C	10523	0	10546	800	0
2	H	10523	0	10546	701	0
3	D	9060	0	9257	808	0
3	I	9060	0	9257	751	0
4	E	708	0	719	51	0
4	J	605	0	612	44	0
5	X	4198	0	4250	243	0
5	Y	3732	0	3809	211	0
6	C	59	58	0	6	0
6	H	59	58	0	12	0
7	D	2	0	0	0	0
7	I	2	0	0	0	0
8	D	1	0	0	0	0
8	I	1	0	0	0	0
All	All	56199	116	56806	3749	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 33.

All (3749) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:1119:MET:HG2	2:H:1228:GLY:HA2	1.20	1.17
3:D:1173:ARG:HA	3:D:1174:ARG:HB2	1.26	1.14
3:I:610:ARG:HG3	3:I:864:LEU:HD13	1.29	1.14
2:C:700:VAL:HG11	2:C:1114:GLU:HG3	1.30	1.12
3:I:1173:ARG:HA	3:I:1174:ARG:HB2	1.28	1.12
2:H:54:ARG:H	2:H:55:SER:HB2	1.16	1.10
2:C:1119:MET:HG2	2:C:1228:GLY:HA2	1.34	1.09
3:D:610:ARG:HG3	3:D:864:LEU:HD13	1.34	1.09
1:A:13:LEU:HD21	1:A:16:ILE:HD11	1.27	1.08
2:C:42:ASP:HB3	2:C:43:PRO:HD2	1.34	1.08
2:C:1269:ARG:HG2	3:D:346:ARG:HG2	1.36	1.07
2:H:488:MET:HB2	2:H:490:GLN:H	1.13	1.07
3:I:1263:LYS:HA	3:I:1279:GLN:HA	1.33	1.06
3:D:310:GLY:HA3	3:D:311:ARG:HB2	1.15	1.05
2:H:1269:ARG:HG3	3:I:346:ARG:HG2	1.38	1.05
3:I:850:LYS:HD2	3:I:851:PRO:HD2	1.32	1.05
2:H:700:VAL:HG11	2:H:1114:GLU:HG3	1.41	1.02
2:H:1185:PRO:HD2	2:H:1189:GLY:HA2	1.41	1.02

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:858:VAL:HB	3:I:859:PRO:HD3	1.40	1.02
1:B:83:LEU:HD11	3:D:527:LEU:HA	1.41	1.02
3:D:858:VAL:HB	3:D:859:PRO:HD3	1.42	1.02
2:H:876:GLU:HG3	2:H:927:THR:HG22	1.41	1.02
2:C:303:ASP:HB2	2:C:310:ILE:HD11	1.43	0.99
3:I:186:GLN:HB2	3:I:238:ILE:HD11	1.43	0.99
2:C:524:ILE:HD11	2:C:712:SER:HB2	1.41	0.99
1:B:153:VAL:HB	1:B:175:ALA:HB3	1.45	0.98
3:D:746:LEU:HD13	3:D:758:PRO:HG3	1.45	0.98
2:H:732:ILE:HD11	2:H:769:PRO:HB3	1.46	0.97
2:C:840:SER:HB3	2:C:850:ILE:HD11	1.45	0.97
2:C:1101:LEU:HD13	3:D:504:GLN:HB2	1.44	0.97
2:C:705:GLU:HB2	2:C:794:LEU:HB3	1.43	0.96
2:C:1140:LYS:HE2	2:C:1166:ASP:HB3	1.47	0.96
3:I:20:ILE:HD11	3:I:1320:ILE:HD11	1.46	0.96
3:I:842:ARG:HD2	3:I:882:VAL:HG21	1.45	0.96
1:A:45:ARG:HG3	2:C:1083:GLU:HB2	1.44	0.96
1:A:18:GLN:HE22	1:A:213:PRO:HG2	1.27	0.96
2:C:54:ARG:H	2:C:55:SER:HB2	1.29	0.95
1:G:192:VAL:HG21	1:G:198:LEU:HD12	1.47	0.95
3:D:1263:LYS:HA	3:D:1279:GLN:HA	1.49	0.95
3:I:749:LYS:HG3	3:I:750:PRO:HD2	1.50	0.94
2:C:816:ILE:HG13	2:C:1098:LEU:HD22	1.49	0.94
2:H:255:ILE:HD12	2:H:263:VAL:HB	1.50	0.93
1:A:45:ARG:HH22	2:C:1216:ARG:HA	1.33	0.93
2:H:303:ASP:HB2	2:H:310:ILE:HD11	1.49	0.93
3:D:230:SER:HB2	3:D:1339:GLY:H	1.33	0.93
3:D:1301:THR:HG23	3:I:1301:THR:HG23	1.47	0.93
2:H:487:LEU:HB3	2:H:488:MET:HA	1.48	0.93
2:H:845:LEU:HD23	2:H:889:PRO:HG2	1.50	0.93
5:X:139:GLU:HA	5:X:142:THR:HG22	1.51	0.93
2:C:372:PRO:HB2	5:X:34:ASP:HB3	1.50	0.93
1:B:192:VAL:HG21	1:B:198:LEU:HD12	1.49	0.93
3:I:746:LEU:HD13	3:I:758:PRO:HG3	1.51	0.92
2:H:926:GLY:HA3	2:H:1056:VAL:HG12	1.49	0.92
3:D:803:VAL:HG13	3:D:1259:GLN:HE22	1.34	0.92
2:C:876:GLU:HG3	2:C:927:THR:HG22	1.51	0.92
3:I:905:ARG:HH22	4:J:10:VAL:HG11	1.33	0.92
3:I:546:ALA:H	3:I:547:ARG:HA	1.34	0.92
2:H:908:GLU:HG2	2:H:909:LYS:H	1.34	0.92
3:I:145:VAL:HG13	3:I:180:MET:HB3	1.52	0.91
2:H:55:SER:HB3	2:H:56:VAL:HG13	1.52	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:27:LEU:HD13	2:H:528:ARG:HH21	1.35	0.91
1:G:124:VAL:HG11	1:G:209:GLY:HA3	1.51	0.91
2:C:91:THR:HG21	2:C:503:LYS:HE3	1.53	0.91
3:D:310:GLY:CA	3:D:311:ARG:HB2	2.01	0.90
2:H:131:THR:HG23	2:H:133:ASN:H	1.35	0.90
1:A:100:LEU:HD21	1:A:121:VAL:HG21	1.52	0.90
2:H:487:LEU:CB	2:H:488:MET:HA	2.00	0.90
4:E:10:VAL:HG21	4:E:16:ARG:HG2	1.54	0.90
2:H:489:PRO:HB2	2:H:492:MET:HB3	1.53	0.90
2:C:1185:PRO:HD2	2:C:1189:GLY:HA2	1.51	0.90
2:H:488:MET:HB2	2:H:490:GLN:N	1.86	0.90
3:D:1247:LYS:HD3	3:D:1247:LYS:H	1.36	0.89
3:D:186:GLN:HB2	3:D:238:ILE:HD11	1.52	0.89
2:H:660:VAL:HG13	2:H:661:VAL:HG13	1.51	0.89
3:D:600:ALA:HA	3:D:603:LYS:HB3	1.52	0.89
4:E:38:LEU:HD13	4:E:58:LEU:HD23	1.53	0.89
4:J:5:THR:HA	4:J:6:VAL:CB	2.03	0.89
4:E:5:THR:HA	4:E:6:VAL:CB	2.03	0.88
3:I:1247:LYS:HD3	3:I:1247:LYS:H	1.38	0.88
3:D:546:ALA:H	3:D:547:ARG:HA	1.37	0.88
3:D:1225:GLY:HA2	3:I:1294:ALA:HA	1.52	0.88
5:X:390:ILE:HD11	5:X:435:ILE:HG22	1.56	0.88
3:I:598:LYS:HG3	3:I:599:LYS:HG3	1.56	0.88
3:D:1268:ASN:HB3	3:D:1300:ALA:HB1	1.56	0.88
3:D:310:GLY:HA3	3:D:311:ARG:CB	2.01	0.87
5:X:564:GLY:HA3	5:X:570:ASP:HB3	1.55	0.87
1:B:12:ARG:H	1:B:30:PRO:HG2	1.37	0.87
2:C:133:ASN:O	2:C:527:LYS:NZ	2.08	0.87
3:D:1167:LYS:HE3	3:D:1173:ARG:HH12	1.39	0.87
1:A:163:GLU:HB3	1:A:166:ARG:HB3	1.57	0.86
2:H:933:VAL:HG12	2:H:948:ILE:HD11	1.57	0.86
2:C:55:SER:HB3	2:C:56:VAL:HG22	1.57	0.86
3:I:759:ILE:HG23	3:I:771:GLN:HG3	1.56	0.86
2:C:59:ILE:HD13	2:C:479:LEU:HD22	1.54	0.86
3:I:349:TYR:HE2	3:I:379:PRO:HG2	1.41	0.86
5:Y:546:ASP:HB3	5:Y:603:ARG:HH22	1.37	0.86
3:D:759:ILE:HG23	3:D:771:GLN:HG3	1.55	0.86
3:D:154:LEU:HD21	3:D:160:LEU:HD21	1.55	0.86
3:I:864:LEU:HD11	3:I:901:ARG:HH12	1.41	0.86
2:C:933:VAL:HG12	2:C:948:ILE:HD11	1.56	0.86
3:D:320:ASN:HB3	3:D:322:ARG:HG2	1.58	0.86
2:C:524:ILE:HD11	2:C:712:SER:CB	2.05	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:259:ARG:HH21	5:Y:504:PRO:HB2	1.41	0.85
2:C:660:VAL:HG13	2:C:661:VAL:HG13	1.57	0.85
1:F:231:PHE:HZ	1:G:39:LEU:HD13	1.39	0.85
3:D:1280:VAL:HG11	3:D:1304:ARG:HE	1.40	0.85
2:H:898:GLU:HB2	5:Y:540:LEU:HD21	1.57	0.85
3:D:584:PRO:HG2	3:D:587:LEU:HD13	1.55	0.85
2:H:794:LEU:HD21	2:H:796:LEU:HG	1.57	0.85
3:I:600:ALA:HA	3:I:603:LYS:HB3	1.57	0.85
3:D:501:VAL:HG21	3:D:602:SER:HB2	1.57	0.85
2:H:705:GLU:HB2	2:H:794:LEU:HB3	1.58	0.85
2:C:520:PRO:HB3	2:C:714:VAL:HG11	1.59	0.85
3:D:205:LEU:HD22	3:D:217:LEU:HD22	1.58	0.85
5:X:240:ARG:HD3	5:X:244:THR:HB	1.57	0.85
5:Y:262:VAL:HG13	5:Y:263:PRO:HD2	1.58	0.85
2:H:13:LYS:HD3	2:H:1181:PRO:HG2	1.58	0.85
5:X:471:LEU:HB3	5:X:478:PRO:HD3	1.58	0.85
3:I:423:LEU:HD21	3:I:447:ILE:HD11	1.59	0.84
2:H:808:ASN:H	3:I:633:ALA:HB2	1.42	0.84
3:I:474:LEU:HA	3:I:477:GLN:HE21	1.42	0.84
2:H:131:THR:HG21	2:H:135:THR:HG22	1.59	0.84
4:J:38:LEU:HD13	4:J:58:LEU:HD23	1.59	0.84
2:H:1073:LYS:HD3	3:I:462:ASP:HB3	1.60	0.84
2:H:828:PHE:HB2	2:H:1060:ILE:HD13	1.59	0.84
3:I:128:LEU:HD21	3:I:188:LEU:HD13	1.59	0.84
3:D:145:VAL:HG13	3:D:180:MET:HB3	1.60	0.84
3:I:824:PRO:HB3	3:I:836:ARG:HD3	1.57	0.84
3:D:842:ARG:HD2	3:D:882:VAL:HG21	1.60	0.84
3:D:828:GLY:HA2	3:D:832:LYS:H	1.43	0.84
1:A:323:PRO:HB2	1:A:324:ALA:HB2	1.58	0.84
2:C:49:LEU:HD11	2:C:464:PHE:HB3	1.59	0.84
2:C:454:ARG:HD3	2:C:459:MET:HG2	1.60	0.84
2:C:816:ILE:HD13	2:C:1074:GLY:HA3	1.59	0.83
3:I:392:THR:HB	5:Y:606:VAL:HG21	1.59	0.83
2:H:488:MET:CB	2:H:490:GLN:H	1.91	0.83
3:D:1173:ARG:HA	3:D:1174:ARG:CB	2.04	0.83
4:J:10:VAL:HG21	4:J:16:ARG:HG2	1.61	0.83
2:C:745:GLU:HB2	2:C:1017:GLN:HG3	1.59	0.83
5:Y:402:LEU:HD13	5:Y:405:ILE:HD11	1.61	0.83
2:C:170:VAL:HG23	2:C:171:LEU:H	1.42	0.83
2:C:400:VAL:HG12	2:C:404:LYS:HE2	1.61	0.83
4:J:31:GLN:HB2	4:J:46:THR:HG21	1.61	0.82
2:H:562:GLU:HG2	2:H:574:SER:HB2	1.61	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:664:ILE:HD12	3:D:681:LYS:HE3	1.61	0.82
2:H:564:PRO:HA	2:H:684:ASN:HD21	1.44	0.82
1:F:100:LEU:HD21	1:F:121:VAL:HG21	1.60	0.82
2:H:54:ARG:N	2:H:55:SER:HB2	1.93	0.82
3:D:925:GLU:HB3	3:D:926:PRO:HD3	1.60	0.82
2:H:1105:SER:HB2	3:I:731:ARG:HB2	1.61	0.82
3:D:1155:ILE:HG13	3:D:1210:ILE:HG23	1.60	0.82
2:C:55:SER:HB3	2:C:56:VAL:HG13	1.60	0.82
3:I:1280:VAL:HG11	3:I:1304:ARG:HE	1.45	0.82
2:C:590:PRO:HB2	2:C:655:VAL:HG21	1.60	0.82
2:H:49:LEU:HD11	2:H:464:PHE:HB3	1.59	0.82
2:H:1335:ILE:HD11	3:I:22:ILE:HD11	1.61	0.82
2:H:131:THR:CG2	2:H:135:THR:HG22	2.10	0.81
2:H:1101:LEU:HD13	3:I:504:GLN:HB2	1.62	0.81
2:C:403:MET:HG3	2:C:414:ILE:HB	1.62	0.81
1:B:11:PRO:HA	1:B:30:PRO:HB2	1.62	0.81
2:C:131:THR:CG2	2:C:135:THR:HG22	2.11	0.81
3:D:107:LEU:HD23	3:D:299:LEU:HD21	1.62	0.81
5:Y:469:GLN:HE21	5:Y:473:GLU:HG3	1.46	0.81
1:B:49:SER:HA	1:B:151:GLY:HA2	1.62	0.81
3:I:1149:ARG:HD3	3:I:1149:ARG:H	1.42	0.81
3:I:803:VAL:HG13	3:I:1259:GLN:HE22	1.45	0.81
4:J:5:THR:HA	4:J:6:VAL:HB	1.62	0.81
2:C:131:THR:HG21	2:C:135:THR:HG22	1.61	0.81
2:C:131:THR:HG23	2:C:133:ASN:H	1.45	0.81
3:I:205:LEU:HD22	3:I:217:LEU:HD22	1.62	0.81
2:H:55:SER:HB3	2:H:56:VAL:HG22	1.63	0.80
4:E:5:THR:HA	4:E:6:VAL:CG1	2.11	0.80
2:H:28:LEU:HD22	2:H:527:LYS:HD2	1.62	0.80
3:I:145:VAL:HG22	3:I:180:MET:SD	2.21	0.80
1:F:163:GLU:HG3	1:F:170:ARG:HH12	1.44	0.80
3:I:120:LEU:HB2	3:I:121:PRO:HD3	1.64	0.80
2:C:487:LEU:HB2	2:C:489:PRO:HD3	1.63	0.80
3:D:518:VAL:HG12	3:D:519:ASN:HD22	1.47	0.80
3:D:128:LEU:HD11	3:D:188:LEU:HD22	1.63	0.80
1:B:124:VAL:HG11	1:B:209:GLY:HA3	1.63	0.80
3:D:572:THR:HG22	3:D:594:GLN:HE22	1.47	0.80
3:I:533:ALA:HB2	3:I:578:ILE:HD13	1.63	0.80
4:J:5:THR:HA	4:J:6:VAL:CG1	2.11	0.80
3:D:749:LYS:HG3	3:D:750:PRO:HD2	1.63	0.79
5:Y:137:TYR:CE2	5:Y:139:GLU:HB2	2.17	0.79
3:D:112:ALA:HA	3:D:238:ILE:HG22	1.62	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:1042:LEU:H	2:H:1042:LEU:HD13	1.46	0.79
2:C:800:MET:HE2	2:C:800:MET:HA	1.65	0.79
5:Y:470:MET:HB2	5:Y:478:PRO:HB3	1.63	0.79
5:X:59:ALA:HB3	5:X:60:PRO:HD3	1.65	0.79
2:H:645:PHE:CE1	2:H:650:VAL:HB	2.17	0.79
5:Y:507:MET:HB3	5:Y:520:GLY:HA3	1.62	0.79
4:E:5:THR:HA	4:E:6:VAL:HB	1.62	0.79
2:C:1335:ILE:HD11	3:D:22:ILE:HD11	1.63	0.79
2:H:700:VAL:HG11	2:H:1114:GLU:CG	2.13	0.79
1:B:29:GLU:HB3	1:B:30:PRO:HD3	1.64	0.79
3:D:573:THR:HG22	3:D:576:ARG:HG3	1.65	0.79
2:C:309:LEU:HD23	2:C:309:LEU:H	1.48	0.78
1:G:192:VAL:HG12	1:G:194:GLN:HG2	1.64	0.78
4:J:5:THR:HA	4:J:6:VAL:HG12	1.64	0.78
2:C:13:LYS:CD	2:C:1181:PRO:HG2	2.13	0.78
3:D:426:ALA:HB3	3:D:427:PRO:HD3	1.65	0.78
3:I:535:ARG:HB3	3:I:541:LEU:HD11	1.63	0.78
2:C:515:MET:HE3	2:C:527:LYS:HE2	1.63	0.78
2:C:564:PRO:HA	2:C:684:ASN:HD21	1.49	0.78
3:I:584:PRO:HG2	3:I:587:LEU:HD13	1.65	0.78
3:D:535:ARG:HB3	3:D:541:LEU:HD21	1.66	0.78
1:G:29:GLU:HB3	1:G:30:PRO:HD3	1.64	0.78
3:D:810:THR:HG22	3:D:893:GLY:HA3	1.64	0.78
2:H:742:TYR:HB3	2:H:743:PRO:HD3	1.63	0.78
5:X:35:ILE:HG13	5:X:36:VAL:H	1.46	0.78
3:D:128:LEU:HD12	3:D:192:MET:HE3	1.65	0.78
3:I:1145:PHE:HB3	3:I:1309:ILE:HD13	1.66	0.78
2:H:1255:THR:HG22	2:H:1257:GLN:HG3	1.65	0.78
2:C:54:ARG:HG2	2:C:55:SER:HB2	1.64	0.78
5:Y:98:VAL:HB	5:Y:402:LEU:HD21	1.65	0.78
5:X:262:VAL:HG13	5:X:263:PRO:HD2	1.66	0.78
3:I:1173:ARG:HA	3:I:1174:ARG:CB	2.07	0.78
3:D:850:LYS:HD2	3:D:851:PRO:HD2	1.65	0.78
2:C:342:ASP:HA	2:C:437:ASN:HB3	1.64	0.78
2:H:487:LEU:HB3	2:H:488:MET:CA	2.14	0.78
3:D:128:LEU:HA	3:D:192:MET:HE3	1.66	0.77
2:H:816:ILE:HG13	2:H:1098:LEU:HD22	1.64	0.77
2:C:617:ALA:HB2	2:C:650:VAL:HG21	1.64	0.77
2:H:1223:ARG:HD2	3:I:637:ALA:HA	1.66	0.77
2:C:189:ASP:OD1	2:C:193:ASN:N	2.16	0.77
3:I:1347:LEU:HD23	3:I:1358:PRO:HG2	1.65	0.77
3:D:1254:GLU:O	3:D:1257:VAL:HG12	1.84	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:426:ALA:HB3	3:I:427:PRO:HD3	1.66	0.77
2:C:736:VAL:HG11	2:C:740:GLU:HA	1.65	0.77
2:H:21:VAL:HG21	2:H:592:ARG:HD3	1.67	0.77
3:D:545:HIS:HB2	3:D:546:ALA:HB2	1.67	0.77
2:C:1081:PRO:HB2	2:C:1083:GLU:HG2	1.66	0.77
3:D:275:ARG:HD2	3:D:302:ALA:HB2	1.65	0.77
3:D:1347:LEU:HD23	3:D:1358:PRO:HG2	1.67	0.77
2:C:27:LEU:O	2:C:528:ARG:NH1	2.18	0.77
4:E:5:THR:HA	4:E:6:VAL:HG12	1.64	0.77
2:C:1117:LEU:HD11	2:C:1182:ILE:HD13	1.66	0.77
3:I:828:GLY:HA2	3:I:832:LYS:H	1.48	0.77
2:C:562:GLU:HG2	2:C:574:SER:CB	2.15	0.77
2:C:178:PRO:HA	2:C:397:LEU:HD23	1.65	0.77
3:I:925:GLU:HB3	3:I:926:PRO:HD3	1.65	0.76
2:C:39:ILE:HG22	2:C:40:GLU:HG2	1.67	0.76
1:G:45:ARG:O	3:I:538:ARG:NH2	2.18	0.76
2:C:645:PHE:CE1	2:C:650:VAL:HB	2.20	0.76
3:D:1149:ARG:HD3	3:D:1149:ARG:H	1.49	0.76
3:D:151:MET:N	3:D:151:MET:SD	2.59	0.76
2:C:742:TYR:HB3	2:C:743:PRO:HD3	1.65	0.76
3:I:1343:GLU:HA	3:I:1344:LEU:HB2	1.68	0.76
3:D:1155:ILE:HG12	3:D:1211:SER:HB2	1.66	0.76
3:I:1155:ILE:HG12	3:I:1211:SER:HB2	1.68	0.76
3:I:518:VAL:HG12	3:I:519:ASN:HD22	1.51	0.76
3:I:546:ALA:N	3:I:547:ARG:HA	2.00	0.76
2:C:526:HIS:HA	2:C:529:ARG:NH1	2.00	0.76
2:H:562:GLU:HG2	2:H:574:SER:CB	2.15	0.76
2:H:309:LEU:HD23	2:H:309:LEU:H	1.50	0.76
3:I:1291:GLU:HB2	3:I:1292:LEU:HD12	1.67	0.76
2:H:13:LYS:CD	2:H:1181:PRO:HG2	2.16	0.76
2:C:634:VAL:HG22	2:C:645:PHE:CE2	2.21	0.76
2:C:926:GLY:HA3	2:C:1056:VAL:HG12	1.67	0.76
2:H:1288:GLN:HA	2:H:1288:GLN:HE21	1.51	0.76
3:D:822:MET:SD	3:D:838:ARG:NH1	2.58	0.76
3:D:905:ARG:HH22	4:E:10:VAL:HG11	1.50	0.76
1:B:29:GLU:HA	1:B:200:LYS:CB	2.16	0.75
2:H:146:VAL:HG13	2:H:513:GLN:HG3	1.67	0.75
2:H:800:MET:HE2	2:H:800:MET:HA	1.67	0.75
1:A:224:LEU:HD23	1:B:228:LEU:HD22	1.67	0.75
2:C:660:VAL:HG22	2:C:661:VAL:H	1.52	0.75
1:B:29:GLU:HA	1:B:200:LYS:HB2	1.67	0.75
3:D:598:LYS:HG3	3:D:599:LYS:HG3	1.68	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:405:GLU:O	3:D:407:VAL:N	2.19	0.75
3:D:30:ILE:HG23	3:D:243:PRO:HB3	1.66	0.75
3:D:140:TYR:HA	3:D:181:GLY:HA2	1.68	0.75
3:D:664:ILE:HG21	3:D:681:LYS:HD2	1.66	0.75
3:D:108:ALA:HB3	3:D:279:LEU:HD12	1.68	0.75
2:H:142:GLU:HG2	2:H:515:MET:SD	2.27	0.75
3:I:1155:ILE:HG13	3:I:1210:ILE:HG23	1.69	0.75
2:C:143:ARG:NH1	2:C:512:SER:O	2.20	0.75
5:Y:145:LEU:HD21	5:Y:225:ARG:HH21	1.51	0.75
3:D:1269:ALA:H	3:D:1300:ALA:HB2	1.49	0.75
1:A:44:ARG:HG3	1:A:183:ILE:HG22	1.69	0.75
2:C:92:TYR:CD1	2:C:129:LEU:HB2	2.22	0.75
2:H:1284:ALA:HA	3:I:1357:ILE:HD13	1.69	0.75
2:H:1256:GLN:HB3	2:H:1301:ARG:HH22	1.51	0.75
2:C:13:LYS:HD3	2:C:1181:PRO:HG2	1.67	0.75
3:I:850:LYS:O	3:I:852:GLY:N	2.18	0.75
3:I:761:ALA:HB3	3:I:767:LEU:HD13	1.68	0.75
2:C:829:THR:HG22	2:C:1059:ARG:HG2	1.67	0.75
5:X:290:LEU:HB3	5:X:333:VAL:HG21	1.69	0.74
3:I:886:VAL:CG1	3:I:1230:THR:HG21	2.17	0.74
3:D:1280:VAL:HG11	3:D:1304:ARG:NE	2.00	0.74
2:C:645:PHE:HE1	2:C:650:VAL:HB	1.52	0.74
3:D:291:ILE:HD11	5:X:384:LEU:HD21	1.70	0.74
2:H:21:VAL:HG13	2:H:22:LEU:H	1.51	0.74
2:C:197:ARG:NH1	5:X:29:ASP:OD1	2.21	0.74
2:C:727:VAL:HG22	2:C:773:LEU:HB3	1.70	0.74
2:C:1284:ALA:HB3	3:D:1361:THR:HB	1.69	0.74
3:D:546:ALA:H	3:D:547:ARG:CA	2.01	0.74
3:D:932:MET:SD	3:D:932:MET:N	2.59	0.74
5:Y:453:PRO:HD2	5:Y:456:MET:HB2	1.68	0.74
4:J:10:VAL:CG2	4:J:16:ARG:HG2	2.18	0.74
2:C:134:GLY:O	2:C:527:LYS:NZ	2.18	0.74
1:G:65:LEU:HD23	1:G:65:LEU:H	1.53	0.74
5:Y:264:LYS:HD2	5:Y:264:LYS:H	1.53	0.74
1:G:37:HIS:CD2	2:H:1216:ARG:HB3	2.23	0.74
2:C:245:ARG:HB3	2:C:337:PHE:CZ	2.22	0.73
2:C:241:LEU:HD11	2:C:246:LEU:HD11	1.69	0.73
2:C:562:GLU:HG2	2:C:574:SER:HB2	1.69	0.73
2:C:538:LEU:HD21	2:C:547:VAL:HG11	1.70	0.73
3:I:1173:ARG:HB3	3:I:1174:ARG:O	1.88	0.73
2:H:519:ASN:HB2	2:H:520:PRO:HD2	1.69	0.73
2:C:1042:LEU:H	2:C:1042:LEU:HD13	1.53	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:505:ASP:HB3	3:D:629:PHE:HE2	1.54	0.73
3:I:828:GLY:HA2	3:I:832:LYS:N	2.03	0.73
2:C:397:LEU:HB3	2:C:401:GLY:HA3	1.70	0.73
3:D:1297:LYS:HE3	3:I:1267:VAL:HB	1.69	0.73
3:I:20:ILE:CD1	3:I:1320:ILE:HD11	2.17	0.73
5:X:511:ILE:HG23	5:X:512:GLY:H	1.52	0.73
2:C:700:VAL:CG1	2:C:1114:GLU:HG3	2.13	0.73
3:I:186:GLN:CB	3:I:238:ILE:HD11	2.18	0.73
1:F:234:LEU:HD22	1:G:214:GLU:OE2	1.88	0.73
2:H:664:GLY:O	2:H:686:GLN:NE2	2.21	0.73
3:I:770:LEU:HD13	3:I:774:ILE:HD13	1.70	0.73
2:C:104:ILE:HD11	2:C:115:LYS:HB2	1.69	0.73
1:F:102:LEU:HG	1:F:115:ILE:HG12	1.70	0.73
2:C:765:ILE:HG13	2:C:787:PRO:HG2	1.70	0.73
2:H:59:ILE:HD13	2:H:479:LEU:HD12	1.70	0.73
1:F:158:ARG:HH11	1:F:172:LEU:HD11	1.52	0.73
3:D:1320:ILE:HG22	3:D:1352:ILE:HD11	1.69	0.73
2:C:1140:LYS:CE	2:C:1166:ASP:HB3	2.19	0.73
5:X:264:LYS:H	5:X:264:LYS:HD2	1.54	0.73
1:B:33:ARG:NH1	2:C:820:GLU:OE2	2.22	0.73
2:H:1252:SER:OG	2:H:1255:THR:O	2.07	0.72
3:D:828:GLY:HA2	3:D:832:LYS:N	2.04	0.72
3:D:33:TRP:HB3	3:D:102:MET:HG3	1.68	0.72
5:Y:108:VAL:HG23	5:Y:109:GLU:H	1.54	0.72
3:I:610:ARG:CG	3:I:864:LEU:HD13	2.16	0.72
2:H:55:SER:HB3	2:H:56:VAL:CG1	2.18	0.72
3:I:546:ALA:H	3:I:547:ARG:CA	2.02	0.72
3:D:930:LEU:HD12	3:D:1138:LEU:HD13	1.72	0.72
2:H:971:LEU:HD21	2:H:1017:GLN:HE21	1.54	0.72
2:H:347:ILE:HD11	2:H:433:ILE:HD11	1.70	0.72
5:X:137:TYR:CE2	5:X:139:GLU:HB2	2.24	0.72
3:I:128:LEU:HD12	3:I:192:MET:HE3	1.72	0.72
2:C:49:LEU:HD11	2:C:464:PHE:CB	2.18	0.72
3:I:385:LEU:HD21	3:I:411:ILE:HG13	1.71	0.72
2:H:163:LYS:HD3	2:H:163:LYS:H	1.54	0.72
3:D:56:LEU:O	3:D:250:ARG:NH2	2.21	0.72
3:I:367:GLY:HA3	3:I:448:GLN:HB2	1.70	0.72
3:I:230:SER:HB2	3:I:1339:GLY:H	1.52	0.72
3:I:120:LEU:CB	3:I:121:PRO:HD3	2.19	0.72
2:C:700:VAL:HG11	2:C:1114:GLU:CG	2.17	0.72
2:C:521:LEU:O	2:C:525:THR:HG22	1.88	0.72
2:H:59:ILE:HG21	2:H:479:LEU:HB3	1.69	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:X:108:VAL:HG23	5:X:109:GLU:H	1.53	0.72
3:D:120:LEU:CB	3:D:121:PRO:HD3	2.20	0.72
3:D:1311:LYS:NZ	5:X:50:ASP:O	2.23	0.72
2:C:1211:ARG:O	2:C:1211:ARG:NE	2.22	0.72
2:C:55:SER:CB	2:C:56:VAL:HG22	2.20	0.72
2:H:143:ARG:NH1	2:H:512:SER:O	2.23	0.72
3:D:368:LEU:HD12	3:D:369:PRO:HD2	1.71	0.72
3:I:222:LYS:NZ	3:I:1276:GLU:HB2	2.04	0.72
3:D:546:ALA:N	3:D:547:ARG:HA	2.03	0.72
3:D:50:LYS:HG2	3:D:51:PRO:HD2	1.72	0.72
5:Y:585:GLU:HB3	5:Y:589:GLN:HE22	1.53	0.72
2:C:302:ILE:HA	2:C:309:LEU:HA	1.71	0.71
3:D:746:LEU:CD1	3:D:758:PRO:HG3	2.20	0.71
2:C:54:ARG:N	2:C:55:SER:HB2	2.04	0.71
1:F:41:ASN:OD1	2:H:1218:GLY:HA3	1.89	0.71
3:D:720:ASN:O	3:D:722:ILE:N	2.23	0.71
2:H:94:ALA:HB2	2:H:129:LEU:HD11	1.70	0.71
1:F:44:ARG:HG3	1:F:183:ILE:HG22	1.72	0.71
2:C:514:PHE:HB2	6:C:1401:RFP:O8	1.89	0.71
3:I:903:LEU:HD11	3:I:909:ILE:HG22	1.70	0.71
2:C:842:ASP:HB2	2:C:1046:VAL:HG21	1.73	0.71
3:I:588:PRO:CG	3:I:591:ILE:HD11	2.20	0.71
3:I:647:PRO:HG3	3:I:697:MET:HA	1.71	0.71
3:D:863:LEU:HB2	3:D:866:GLU:HB2	1.72	0.71
3:D:142:GLU:HA	3:D:180:MET:HE2	1.73	0.71
2:H:590:PRO:O	2:H:659:GLN:NE2	2.23	0.71
1:A:231:PHE:CZ	1:B:39:LEU:HD13	2.24	0.71
2:C:402:ARG:NH2	2:C:419:ILE:O	2.24	0.71
1:G:14:VAL:HG22	1:G:28:LEU:HD22	1.71	0.71
3:I:1344:LEU:H	3:I:1345:ARG:HG3	1.56	0.71
2:C:28:LEU:HD21	2:C:524:ILE:HG23	1.71	0.71
3:I:378:LYS:HB3	3:I:379:PRO:HD3	1.72	0.71
2:C:838:CYS:HB2	2:C:918:LEU:HB2	1.71	0.71
5:X:457:ILE:O	5:X:461:ASN:ND2	2.23	0.71
2:C:1153:ALA:HB2	2:C:1194:GLU:HG2	1.73	0.71
3:D:614:LEU:HG	4:E:7:GLN:HG3	1.71	0.71
2:C:1180:MET:HB3	2:C:1181:PRO:CA	2.21	0.71
2:H:592:ARG:HB2	2:H:653:MET:HB3	1.73	0.71
5:X:448:ARG:HD2	5:X:452:ILE:HD12	1.72	0.71
3:D:450:HIS:CD2	3:D:451:PRO:HD2	2.26	0.71
3:I:160:LEU:HA	3:I:164:GLN:NE2	2.05	0.71
2:H:170:VAL:HG23	2:H:171:LEU:H	1.56	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:211:ILE:HD11	1:F:215:GLU:HG3	1.72	0.71
2:H:1239:VAL:HG12	2:H:1240:ASP:H	1.55	0.71
1:G:227:GLN:C	1:G:228:LEU:HD23	2.12	0.71
3:D:128:LEU:HD21	3:D:188:LEU:HD22	1.73	0.70
2:H:54:ARG:H	2:H:55:SER:CB	2.00	0.70
2:C:524:ILE:CD1	2:C:712:SER:HB2	2.18	0.70
5:Y:139:GLU:HA	5:Y:142:THR:HG22	1.72	0.70
3:I:514:THR:HG23	3:I:576:ARG:HE	1.56	0.70
1:F:231:PHE:CZ	1:G:39:LEU:HD13	2.26	0.70
1:A:323:PRO:CB	1:A:324:ALA:HB2	2.20	0.70
2:C:674:ASP:OD2	2:C:1070:HIS:ND1	2.21	0.70
3:I:38:VAL:HG11	3:I:56:LEU:HD13	1.72	0.70
3:I:385:LEU:CD2	3:I:411:ILE:HG13	2.21	0.70
5:Y:573:LEU:HD21	5:Y:588:ARG:HD3	1.73	0.70
1:A:45:ARG:HH12	2:C:1084:ASP:HB3	1.57	0.70
2:H:817:LEU:HB3	2:H:1097:VAL:HG13	1.72	0.70
5:X:145:LEU:HD11	5:X:225:ARG:NH2	2.06	0.70
3:D:850:LYS:O	3:D:852:GLY:N	2.23	0.70
5:X:12:LEU:HD23	5:X:27:VAL:HG21	1.74	0.70
5:Y:511:ILE:CG2	5:Y:517:SER:HB2	2.22	0.70
3:D:378:LYS:HB3	3:D:379:PRO:HD3	1.73	0.70
3:D:316:ILE:HG23	3:D:317:THR:H	1.56	0.70
3:D:1291:GLU:HB2	3:D:1292:LEU:HD12	1.74	0.69
2:C:130:MET:CG	2:C:134:GLY:HA2	2.21	0.69
3:D:105:ILE:HD13	3:D:273:ILE:HD11	1.74	0.69
3:I:436:ALA:HB3	3:I:485:MET:HA	1.72	0.69
1:A:42:ALA:O	1:A:46:ILE:HG12	1.92	0.69
3:D:145:VAL:HG22	3:D:180:MET:SD	2.32	0.69
6:C:1401:RFP:O9	6:C:1401:RFP:O10	2.02	0.69
3:I:298:MET:CE	5:Y:402:LEU:HB3	2.22	0.69
3:D:1362:GLY:O	3:D:1364:ALA:N	2.25	0.69
2:H:127:ILE:HD13	2:H:127:ILE:H	1.58	0.69
3:D:522:GLY:HA2	3:D:545:HIS:CG	2.27	0.69
2:C:933:VAL:HG12	2:C:948:ILE:CD1	2.23	0.69
3:I:473:THR:HB	3:I:476:ALA:CB	2.22	0.69
5:Y:152:GLU:OE2	5:Y:218:ARG:NH1	2.25	0.69
5:Y:119:ILE:HD12	5:Y:122:ARG:HH21	1.56	0.69
3:D:389:GLY:O	3:D:391:ALA:N	2.26	0.69
2:H:28:LEU:HD22	2:H:527:LYS:CD	2.22	0.69
3:D:120:LEU:HG	5:X:46:GLN:HB2	1.74	0.69
2:C:1255:THR:HG22	2:C:1257:GLN:HG3	1.72	0.69
2:C:794:LEU:HD21	2:C:796:LEU:HG	1.74	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:55:SER:HB3	2:C:56:VAL:CG2	2.22	0.69
2:H:660:VAL:HG22	2:H:661:VAL:H	1.57	0.69
3:D:1268:ASN:HB3	3:D:1300:ALA:CB	2.22	0.69
3:I:886:VAL:HG11	3:I:1230:THR:HG21	1.74	0.69
5:Y:120:ALA:HA	5:Y:123:ILE:HD12	1.74	0.69
1:A:263:THR:HG23	1:A:266:SER:H	1.58	0.69
2:C:221:LEU:HD21	2:C:314:ASN:HD22	1.57	0.69
3:D:381:ILE:HD11	3:D:412:LEU:HD13	1.74	0.69
5:X:298:PRO:HB2	5:X:301:ASN:HD22	1.56	0.69
3:I:112:ALA:HA	3:I:238:ILE:HG22	1.73	0.69
2:H:62:TYR:HD2	2:H:480:SER:HB3	1.58	0.69
3:D:349:TYR:CD1	3:D:472:LEU:HD11	2.28	0.69
2:H:600:THR:HG22	2:H:601:ASP:H	1.57	0.69
2:C:611:GLU:CG	2:C:616:ILE:HD11	2.23	0.69
1:F:45:ARG:HH12	2:H:1216:ARG:HA	1.58	0.69
4:J:39:VAL:HG13	4:J:40:PRO:HD2	1.75	0.69
5:Y:561:MET:HA	5:Y:567:MET:SD	2.33	0.69
2:H:736:VAL:HG11	2:H:740:GLU:HB3	1.75	0.68
2:C:669:PRO:HG2	2:C:1070:HIS:CE1	2.28	0.68
3:I:155:GLU:CG	3:I:158:GLN:HB2	2.22	0.68
3:D:864:LEU:HD11	3:D:901:ARG:HH12	1.57	0.68
3:D:1225:GLY:CA	3:I:1294:ALA:HA	2.23	0.68
2:C:11:ILE:HD13	2:C:697:LYS:NZ	2.08	0.68
5:X:27:VAL:HA	5:X:30:HIS:HD2	1.57	0.68
2:C:1239:VAL:HG12	2:C:1240:ASP:H	1.57	0.68
2:C:1335:ILE:HD11	3:D:22:ILE:CD1	2.24	0.68
3:D:824:PRO:HB3	3:D:836:ARG:HD3	1.75	0.68
5:Y:556:ALA:O	5:Y:560:ARG:HB2	1.93	0.68
2:H:1283:ALA:HB1	2:H:1286:THR:HB	1.74	0.68
1:G:49:SER:OG	3:I:538:ARG:NH2	2.26	0.68
2:C:105:TYR:CG	2:C:114:VAL:HG13	2.29	0.68
2:H:1046:VAL:HG22	2:H:1047:LEU:HD13	1.75	0.68
1:B:42:ALA:O	1:B:46:ILE:HG12	1.93	0.68
1:A:45:ARG:CG	2:C:1083:GLU:HB2	2.22	0.68
1:B:27:THR:HG22	1:B:202:VAL:HG22	1.76	0.68
3:D:473:THR:HB	3:D:476:ALA:CB	2.24	0.68
2:H:727:VAL:HG22	2:H:773:LEU:HB3	1.73	0.68
1:B:47:LEU:HD13	1:B:205:MET:HE2	1.76	0.68
3:I:588:PRO:HG2	3:I:591:ILE:HD11	1.75	0.68
5:Y:448:ARG:HD3	5:Y:450:ILE:HG13	1.76	0.68
3:D:131:PRO:HG2	3:D:135:ILE:HD13	1.75	0.68
3:I:1274:PHE:CD2	3:I:1275:LEU:HG	2.28	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:1261:LEU:HD21	3:D:1306:LEU:HD22	1.75	0.68
3:D:230:SER:HB2	3:D:1339:GLY:N	2.07	0.68
2:C:400:VAL:HG12	2:C:404:LYS:CE	2.23	0.68
2:C:11:ILE:HD13	2:C:697:LYS:HZ1	1.57	0.68
5:Y:108:VAL:HB	5:Y:110:LEU:HG	1.75	0.68
2:C:1212:LEU:HD12	2:C:1225:VAL:HG21	1.76	0.68
3:I:185:ILE:HG22	3:I:238:ILE:HD13	1.75	0.68
3:D:213:LYS:O	3:D:217:LEU:HG	1.93	0.68
3:D:822:MET:HG2	3:D:839:VAL:HG23	1.76	0.68
3:D:425:ARG:HD2	3:D:459:ALA:HB2	1.76	0.68
3:D:1171:GLY:HA3	3:D:1172:LYS:HB2	1.76	0.68
3:I:1287:ILE:HG22	3:I:1290:ARG:HE	1.59	0.68
3:I:744:ARG:HB2	3:I:759:ILE:HB	1.74	0.68
3:I:298:MET:HE3	5:Y:402:LEU:HB3	1.75	0.68
3:D:932:MET:O	3:D:933:ARG:HG3	1.93	0.68
3:D:20:ILE:CD1	3:D:1320:ILE:HD11	2.24	0.68
2:C:1119:MET:HG2	2:C:1228:GLY:CA	2.19	0.67
3:I:473:THR:HB	3:I:476:ALA:HB2	1.75	0.67
3:I:800:LEU:HB3	3:I:920:ALA:HB1	1.74	0.67
3:D:711:GLY:O	3:D:712:GLN:HG2	1.92	0.67
2:H:735:LYS:HA	2:H:748:ILE:HA	1.76	0.67
1:A:110:VAL:HB	1:A:131:CYS:HB2	1.77	0.67
3:I:288:PRO:HB2	3:I:291:ILE:HG12	1.76	0.67
3:D:510:LEU:HD12	3:D:601:ILE:HD11	1.75	0.67
3:D:473:THR:HB	3:D:476:ALA:HB2	1.76	0.67
3:I:827:GLU:O	3:I:831:VAL:HG12	1.93	0.67
1:A:50:SER:HB3	1:B:8:PHE:HZ	1.57	0.67
5:Y:138:PRO:HG3	5:Y:353:LEU:HD21	1.77	0.67
3:D:647:PRO:HG3	3:D:697:MET:HA	1.74	0.67
2:C:42:ASP:CB	2:C:43:PRO:HD2	2.13	0.67
2:C:20:GLN:O	2:C:22:LEU:N	2.28	0.67
3:D:573:THR:HG22	3:D:576:ARG:CG	2.24	0.67
1:F:45:ARG:NH2	2:H:1216:ARG:O	2.27	0.67
1:A:279:GLY:HA3	1:A:321:TRP:CZ2	2.30	0.67
1:A:80:GLU:HB2	2:C:694:ARG:HH22	1.60	0.67
3:I:621:ALA:HA	3:I:624:ILE:HG12	1.75	0.67
1:B:37:HIS:CD2	2:C:1216:ARG:HB3	2.29	0.67
2:C:55:SER:HB3	2:C:56:VAL:CG1	2.24	0.67
2:H:699:LEU:HB2	2:H:799:ASN:ND2	2.10	0.67
3:I:824:PRO:CB	3:I:836:ARG:HD3	2.25	0.67
2:C:487:LEU:CD1	2:C:488:MET:H	2.07	0.67
3:I:66:LYS:HB2	3:I:69:GLU:HG2	1.76	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:181:GLU:HG2	3:D:531:LYS:HD3	1.77	0.67
5:Y:546:ASP:HB3	5:Y:603:ARG:NH2	2.07	0.67
3:D:572:THR:HG22	3:D:594:GLN:NE2	2.09	0.67
2:H:816:ILE:HD13	2:H:1074:GLY:HA3	1.76	0.67
2:H:971:LEU:HD21	2:H:1017:GLN:NE2	2.10	0.67
1:F:29:GLU:HB3	1:F:30:PRO:HD3	1.77	0.67
1:F:10:LYS:HE3	1:G:226:GLU:HB3	1.75	0.67
1:F:52:PRO:HG2	1:F:219:ARG:HH21	1.59	0.67
3:I:1159:ILE:HD12	3:I:1186:TYR:HE2	1.58	0.67
3:D:156:ARG:NH1	3:D:157:GLN:OE1	2.28	0.67
2:C:488:MET:N	2:C:489:PRO:HD3	2.10	0.67
3:I:1297:LYS:HZ3	3:I:1297:LYS:HA	1.59	0.67
3:I:1207:GLY:HA2	3:I:1223:LEU:HD21	1.77	0.67
3:I:579:LEU:HD23	3:I:627:THR:HG21	1.75	0.67
3:D:1280:VAL:HA	3:D:1283:SER:HB2	1.77	0.67
3:I:590:SER:HB3	3:I:594:GLN:HE22	1.60	0.67
2:C:600:THR:HG22	2:C:601:ASP:H	1.59	0.67
2:C:519:ASN:HB2	2:C:520:PRO:HD2	1.77	0.67
2:C:841:ARG:NH1	3:D:256:ASP:HB3	2.09	0.67
1:B:192:VAL:HG12	1:B:194:GLN:HG2	1.76	0.67
3:D:124:ILE:HD11	3:D:189:LEU:HD11	1.76	0.67
3:D:147:ILE:HA	3:D:178:ALA:HB1	1.76	0.67
2:C:808:ASN:H	3:D:633:ALA:HB2	1.59	0.67
5:X:442:SER:OG	5:X:446:GLN:NE2	2.28	0.67
3:D:643:ASP:O	3:D:720:ASN:ND2	2.15	0.67
2:H:817:LEU:HB3	2:H:1097:VAL:CG1	2.24	0.67
3:D:528:THR:HG22	3:D:551:ARG:HB2	1.76	0.67
3:D:606:ASN:OD1	3:D:610:ARG:NH1	2.27	0.67
3:I:541:LEU:HD23	3:I:541:LEU:H	1.60	0.67
3:D:478:LEU:CD1	4:E:47:THR:HG23	2.25	0.67
3:D:120:LEU:HB2	3:D:121:PRO:HD3	1.76	0.67
2:C:1237:HIS:O	2:C:1238:LEU:HG	1.95	0.67
3:D:1145:PHE:HB3	3:D:1309:ILE:HD13	1.77	0.67
3:D:147:ILE:HA	3:D:178:ALA:CB	2.25	0.67
3:I:720:ASN:O	3:I:722:ILE:N	2.28	0.67
2:H:1210:ILE:HG23	2:H:1211:ARG:NH1	2.10	0.67
2:H:452:ARG:NH2	2:H:458:GLU:OE1	2.28	0.67
3:I:545:HIS:HB2	3:I:546:ALA:HB2	1.76	0.66
1:B:179:PRO:HB3	1:B:210:THR:HB	1.76	0.66
2:H:152:SER:HG	2:H:404:LYS:HZ2	1.42	0.66
1:A:158:ARG:HH11	1:A:172:LEU:HD11	1.60	0.66
2:H:230:PHE:HB2	2:H:333:ILE:HB	1.77	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:484:LEU:H	2:H:484:LEU:HD22	1.60	0.66
2:H:1087:TYR:HE2	2:H:1215:GLY:HA2	1.60	0.66
2:C:448:LEU:HB2	2:C:553:THR:CG2	2.24	0.66
4:J:5:THR:CA	4:J:6:VAL:HB	2.25	0.66
3:D:38:VAL:HG11	3:D:56:LEU:HD13	1.76	0.66
1:F:11:PRO:HB3	1:F:31:LEU:HD21	1.77	0.66
2:C:972:PHE:HA	2:C:975:ILE:HG22	1.77	0.66
5:Y:496:LYS:HE3	5:Y:499:LYS:HD3	1.76	0.66
3:D:147:ILE:HD12	3:D:178:ALA:HB2	1.77	0.66
5:X:476:ARG:H	5:X:476:ARG:HD2	1.59	0.66
1:F:228:LEU:HD21	1:G:224:LEU:HD23	1.77	0.66
2:C:845:LEU:H	2:C:845:LEU:HD13	1.59	0.66
3:D:848:VAL:HG11	3:D:880:VAL:HA	1.77	0.66
2:H:241:LEU:HD11	2:H:246:LEU:HD11	1.78	0.66
3:I:1171:GLY:HA3	3:I:1172:LYS:HB2	1.77	0.66
2:H:628:HIS:HB3	2:H:647:ARG:NH2	2.09	0.66
3:D:524:GLY:HA2	3:D:548:VAL:HG23	1.78	0.66
2:H:55:SER:HB3	2:H:56:VAL:CG2	2.25	0.66
5:Y:511:ILE:HG23	5:Y:512:GLY:H	1.60	0.66
3:I:320:ASN:HB3	3:I:322:ARG:HG2	1.78	0.66
2:H:360:LEU:HD13	2:H:378:ARG:HH11	1.60	0.66
2:H:843:THR:HB	2:H:845:LEU:CD2	2.26	0.66
2:H:505:PHE:O	2:H:512:SER:OG	2.12	0.66
3:D:124:ILE:CD1	3:D:189:LEU:HD11	2.25	0.66
2:H:1335:ILE:HD11	3:I:22:ILE:CD1	2.24	0.66
3:I:711:GLY:O	3:I:712:GLN:HG2	1.95	0.66
1:F:68:TYR:CD1	1:F:79:LEU:HD11	2.31	0.66
3:I:1266:ILE:HG13	3:I:1274:PHE:O	1.96	0.66
2:C:452:ARG:NH2	2:C:458:GLU:OE1	2.29	0.66
2:H:576:SER:HB3	2:H:579:ALA:HB2	1.78	0.66
2:H:699:LEU:HD11	2:H:1179:GLY:HA3	1.78	0.66
5:X:152:GLU:OE2	5:X:218:ARG:NH1	2.26	0.66
3:D:270:ARG:HE	5:X:449:THR:HG22	1.61	0.66
3:D:77:ARG:HG3	3:D:78:LEU:H	1.58	0.66
3:D:423:LEU:HB3	3:D:466:MET:CE	2.26	0.66
2:H:55:SER:CB	2:H:56:VAL:HG22	2.25	0.66
1:A:45:ARG:NE	1:B:38:THR:OG1	2.25	0.66
3:I:491:LEU:HB2	3:I:904:ALA:HA	1.77	0.66
3:I:828:GLY:HA2	3:I:832:LYS:CA	2.25	0.66
2:H:208:ILE:HD11	2:H:365:GLU:HB3	1.77	0.66
5:X:138:PRO:HD2	5:X:353:LEU:HD11	1.77	0.66
2:C:94:ALA:N	2:C:126:GLU:OE2	2.21	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:645:PHE:HE1	2:H:650:VAL:HB	1.59	0.66
5:X:407:GLU:HA	5:X:410:ILE:HG22	1.77	0.66
4:E:39:VAL:HG13	4:E:40:PRO:HD2	1.78	0.66
3:I:305:ALA:O	3:I:309:ASN:ND2	2.29	0.66
3:D:610:ARG:CG	3:D:864:LEU:HD13	2.19	0.66
2:H:49:LEU:HD11	2:H:464:PHE:CB	2.26	0.66
2:H:524:ILE:HA	2:H:527:LYS:HD2	1.76	0.66
2:C:681:MET:HE3	2:C:1073:LYS:HE3	1.75	0.66
3:D:697:MET:SD	3:D:741:ALA:HB3	2.36	0.66
2:C:1002:LEU:HD13	2:C:1003:THR:H	1.60	0.66
3:D:491:LEU:HB2	3:D:904:ALA:HA	1.78	0.66
5:X:139:GLU:HA	5:X:142:THR:CG2	2.26	0.65
2:H:908:GLU:HG2	2:H:909:LYS:N	2.11	0.65
3:I:382:TYR:HE1	3:I:401:VAL:HG21	1.62	0.65
3:D:759:ILE:CG2	3:D:771:GLN:HG3	2.26	0.65
3:I:828:GLY:HA2	3:I:832:LYS:HA	1.79	0.65
2:H:766:ASN:H	2:H:787:PRO:HG3	1.61	0.65
3:I:822:MET:HG2	3:I:839:VAL:CG2	2.26	0.65
2:C:1270:PHE:CZ	2:C:1290:MET:HG2	2.32	0.65
3:D:1287:ILE:HG22	3:D:1290:ARG:HE	1.61	0.65
3:D:120:LEU:CD2	5:X:46:GLN:HB2	2.26	0.65
2:H:1148:ALA:HA	2:H:1201:LEU:HD21	1.79	0.65
2:H:877:VAL:HG11	2:H:883:LEU:HD21	1.78	0.65
2:H:989:LEU:HD11	2:H:992:LEU:HD22	1.79	0.65
3:I:42:GLU:HG3	5:Y:451:ARG:NH2	2.11	0.65
1:F:190:ALA:HB2	1:F:200:LYS:HB3	1.78	0.65
5:X:466:ILE:HD12	5:X:487:MET:HE2	1.77	0.65
2:H:732:ILE:HD11	2:H:769:PRO:CB	2.25	0.65
1:B:192:VAL:CG2	1:B:198:LEU:HD12	2.24	0.65
3:D:478:LEU:HD12	4:E:47:THR:HG23	1.77	0.65
2:C:812:PHE:H	2:C:815:SER:HB2	1.58	0.65
3:I:1320:ILE:HG22	3:I:1352:ILE:HD11	1.77	0.65
2:H:1180:MET:HB3	2:H:1181:PRO:CA	2.25	0.65
3:I:222:LYS:HZ2	3:I:1276:GLU:HB2	1.60	0.65
3:I:108:ALA:CB	3:I:279:LEU:HD12	2.26	0.65
3:D:1162:ILE:HG12	3:D:1203:ARG:HG2	1.79	0.65
5:Y:449:THR:OG1	5:Y:503:GLU:O	2.15	0.65
1:A:29:GLU:HB3	1:A:30:PRO:HD3	1.77	0.65
1:F:11:PRO:HG2	1:G:228:LEU:H	1.61	0.65
3:I:1297:LYS:NZ	3:I:1297:LYS:HA	2.11	0.65
3:D:1180:VAL:HG22	3:D:1185:PRO:HA	1.77	0.65
2:H:13:LYS:HE3	2:H:1183:ALA:HB2	1.77	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:X:448:ARG:HD3	5:X:450:ILE:HG13	1.78	0.65
3:I:152:THR:O	3:I:154:LEU:N	2.29	0.65
2:H:1314:GLN:HG3	4:J:28:ARG:NH1	2.12	0.65
2:C:592:ARG:HB2	2:C:653:MET:HB3	1.79	0.65
1:F:11:PRO:CG	1:G:228:LEU:H	2.10	0.65
5:X:138:PRO:HG3	5:X:353:LEU:HD21	1.78	0.65
5:X:213:ASP:HB2	5:X:216:LEU:CB	2.27	0.65
2:C:102:LEU:HB3	2:C:117:ILE:HD11	1.78	0.65
2:C:11:ILE:HG21	2:C:697:LYS:HZ2	1.61	0.65
2:H:18:ARG:HG3	2:H:19:PRO:HD2	1.78	0.65
2:H:1269:ARG:HG3	3:I:346:ARG:CG	2.22	0.65
5:X:28:ASN:HD22	5:X:29:ASP:N	1.95	0.65
2:C:845:LEU:HD23	2:C:889:PRO:HG2	1.77	0.65
2:C:1200:LYS:O	2:C:1202:GLY:N	2.29	0.65
2:C:854:ILE:HD11	2:C:885:GLY:HA2	1.79	0.65
3:I:1145:PHE:HB3	3:I:1309:ILE:CD1	2.27	0.65
2:H:1122:LYS:HG2	2:H:1229:TYR:CE2	2.32	0.65
2:H:496:LYS:HE2	5:Y:471:LEU:HD22	1.78	0.64
2:C:1254:VAL:HG23	2:C:1255:THR:H	1.62	0.64
3:D:19:ALA:CB	3:D:1343:GLU:HB3	2.27	0.64
2:H:894:GLN:HE21	3:I:77:ARG:HH11	1.45	0.64
2:H:1127:LYS:HG2	2:H:1144:PHE:CZ	2.32	0.64
2:C:816:ILE:HG13	2:C:1098:LEU:CD2	2.24	0.64
2:H:459:MET:SD	2:H:511:LEU:HD22	2.37	0.64
3:D:589:TYR:O	3:D:591:ILE:N	2.28	0.64
3:D:425:ARG:NH2	3:D:464:ASP:OD2	2.29	0.64
3:I:601:ILE:HD12	3:I:604:MET:HE2	1.78	0.64
3:D:1237:VAL:O	3:D:1240:VAL:HG22	1.97	0.64
2:C:842:ASP:CB	2:C:1046:VAL:HG21	2.27	0.64
2:H:843:THR:HB	2:H:845:LEU:HD22	1.78	0.64
2:C:660:VAL:O	2:C:661:VAL:HG22	1.98	0.64
3:D:930:LEU:CD2	3:D:1244:GLN:HG3	2.28	0.64
1:A:253:LEU:HB3	1:A:321:TRP:CH2	2.33	0.64
5:Y:279:ARG:NH2	5:Y:350:GLU:OE1	2.29	0.64
3:D:1284:ARG:HA	3:D:1287:ILE:HG12	1.79	0.64
2:C:59:ILE:HG21	2:C:479:LEU:HD22	1.79	0.64
5:Y:139:GLU:HG3	5:Y:351:THR:HA	1.78	0.64
3:I:554:GLU:HA	3:I:589:TYR:HD2	1.63	0.64
1:A:50:SER:HB3	1:B:8:PHE:CZ	2.32	0.64
1:B:61:ILE:HB	1:B:64:VAL:HB	1.80	0.64
3:I:381:ILE:HD11	3:I:412:LEU:HD13	1.80	0.64
3:I:704:GLU:HB2	3:I:718:SER:OG	1.97	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:54:ARG:HG2	2:H:55:SER:HB2	1.77	0.64
3:D:114:ILE:HD12	3:D:311:ARG:HD3	1.78	0.64
2:C:1087:TYR:HE2	2:C:1215:GLY:HA2	1.62	0.64
3:I:1268:ASN:HB3	3:I:1300:ALA:HB1	1.79	0.64
1:A:152:TYR:CD2	2:C:824:GLN:HG2	2.33	0.64
3:I:189:LEU:HB3	3:I:234:PRO:HB2	1.80	0.64
2:C:843:THR:HB	2:C:845:LEU:CD2	2.28	0.64
2:C:1141:LEU:H	2:C:1141:LEU:HD13	1.63	0.64
1:A:100:LEU:HD11	1:A:121:VAL:HG11	1.80	0.64
2:C:130:MET:HG3	2:C:134:GLY:HA2	1.80	0.64
5:X:240:ARG:HD3	5:X:244:THR:CB	2.28	0.64
3:I:19:ALA:HA	3:I:1344:LEU:HD12	1.79	0.64
2:C:1239:VAL:O	2:C:1241:ASP:N	2.30	0.64
2:H:1298:VAL:HG23	2:H:1299:ASN:H	1.63	0.64
3:D:1173:ARG:HB3	3:D:1174:ARG:O	1.98	0.64
4:E:10:VAL:CG2	4:E:16:ARG:HG2	2.27	0.64
2:C:1108:ASN:ND2	2:C:1111:GLN:OE1	2.30	0.64
5:Y:573:LEU:HD22	5:Y:588:ARG:HB2	1.79	0.64
5:Y:511:ILE:HG23	5:Y:517:SER:HB2	1.79	0.64
2:C:1219:GLU:OE2	3:D:634:ARG:NH1	2.29	0.64
2:H:1066:MET:HG3	2:H:1234:LYS:HA	1.80	0.64
2:C:746:ALA:HB2	2:C:971:LEU:HD23	1.80	0.64
5:X:136:GLU:OE2	5:X:364:ARG:NH2	2.31	0.64
3:I:1173:ARG:CZ	3:I:1176:VAL:HG21	2.28	0.63
3:D:767:LEU:HB3	3:D:771:GLN:HE22	1.63	0.63
2:C:800:MET:HA	2:C:800:MET:CE	2.28	0.63
1:A:48:LEU:HG	1:A:183:ILE:HB	1.79	0.63
2:C:1281:TYR:CZ	3:D:431:ARG:HG2	2.33	0.63
5:X:584:ARG:O	5:X:587:ILE:HG22	1.98	0.63
3:I:253:VAL:HG11	5:Y:523:ILE:HG21	1.80	0.63
3:I:1362:GLY:O	3:I:1364:ALA:N	2.30	0.63
2:H:660:VAL:HG13	2:H:661:VAL:CG1	2.26	0.63
3:D:522:GLY:HA2	3:D:545:HIS:CD2	2.33	0.63
2:H:1065:LYS:NZ	3:I:462:ASP:O	2.28	0.63
2:H:36:GLN:O	2:H:39:ILE:HG22	1.98	0.63
3:I:589:TYR:O	3:I:591:ILE:N	2.27	0.63
2:C:1251:TYR:O	5:X:525:ASP:N	2.30	0.63
3:D:364:HIS:HB3	3:D:487:THR:CG2	2.28	0.63
2:H:356:THR:HG21	2:H:362:ALA:HA	1.81	0.63
5:Y:571:TYR:HB3	5:Y:575:GLU:HB2	1.79	0.63
3:I:850:LYS:HD2	3:I:851:PRO:CD	2.21	0.63
2:C:145:ILE:CG2	2:C:456:VAL:HG22	2.28	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:363:LEU:HA	3:D:450:HIS:ND1	2.13	0.63
5:X:12:LEU:CD2	5:X:27:VAL:HG21	2.29	0.63
2:H:55:SER:CB	2:H:56:VAL:HG13	2.26	0.63
2:C:618:GLN:OE1	2:C:637:ARG:NH1	2.32	0.63
3:D:13:LYS:HA	3:D:13:LYS:NZ	2.13	0.63
5:Y:243:ALA:O	5:Y:247:GLU:HG3	1.99	0.63
2:H:1116:HIS:HE1	2:H:1226:THR:HG23	1.62	0.63
3:I:524:GLY:HA2	3:I:548:VAL:HG23	1.80	0.63
1:A:45:ARG:NH1	2:C:1084:ASP:HB3	2.12	0.63
5:X:240:ARG:O	5:X:242:HIS:N	2.31	0.63
2:C:517:GLN:HE21	2:C:760:ASN:H	1.45	0.63
3:I:640:GLY:N	3:I:643:ASP:OD2	2.30	0.63
3:D:1341:ARG:NH2	3:D:1343:GLU:OE1	2.32	0.63
3:I:151:MET:N	3:I:151:MET:SD	2.72	0.63
3:I:508:LEU:CD1	3:I:725:MET:HG2	2.29	0.63
3:I:242:LEU:HD12	3:I:243:PRO:HD2	1.79	0.63
2:H:1129:ASN:OD1	2:H:1177:ARG:NH1	2.31	0.63
3:D:608:CYS:O	3:D:612:LEU:HB2	1.98	0.63
2:C:21:VAL:HG21	2:C:592:ARG:HD3	1.81	0.63
3:I:510:LEU:HD12	3:I:601:ILE:HD11	1.80	0.63
1:F:60:GLU:HG3	1:F:169:GLY:O	1.98	0.63
2:C:897:PRO:HB3	5:X:564:GLY:O	1.97	0.63
2:C:92:TYR:HD1	2:C:129:LEU:HB2	1.62	0.63
2:H:519:ASN:ND2	2:H:689:ALA:O	2.31	0.63
2:H:520:PRO:HB3	2:H:714:VAL:HG11	1.80	0.63
3:D:591:ILE:HD12	3:D:592:VAL:N	2.14	0.63
2:H:1141:LEU:H	2:H:1141:LEU:HD13	1.62	0.63
2:C:213:LEU:HD13	2:C:422:LYS:CB	2.29	0.63
2:C:842:ASP:N	2:C:1046:VAL:HG11	2.14	0.63
1:G:192:VAL:CG2	1:G:198:LEU:HD12	2.24	0.63
2:C:202:ARG:NE	2:C:369:MET:HG2	2.13	0.63
3:D:349:TYR:CD2	3:D:472:LEU:HD21	2.33	0.63
2:C:448:LEU:HB2	2:C:553:THR:HG21	1.80	0.63
3:I:77:ARG:HG3	3:I:78:LEU:H	1.63	0.63
3:I:733:SER:O	3:I:737:ILE:HG12	1.99	0.63
3:D:205:LEU:HD22	3:D:217:LEU:CD2	2.28	0.63
3:I:1274:PHE:HD2	3:I:1275:LEU:HG	1.64	0.63
1:B:65:LEU:HD23	1:B:65:LEU:H	1.64	0.63
2:C:675:ASP:HB2	2:C:1107:MET:HB2	1.79	0.63
2:H:1078:LYS:HG2	2:H:1079:ILE:H	1.64	0.63
2:C:1161:LEU:HD23	2:C:1164:PHE:HD1	1.63	0.63
2:H:68:LEU:HG	2:H:100:LEU:HD23	1.80	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:767:LEU:HB3	3:I:771:GLN:NE2	2.14	0.62
3:I:392:THR:CG2	5:Y:606:VAL:HG11	2.29	0.62
3:I:213:LYS:O	3:I:217:LEU:HG	1.99	0.62
3:D:1145:PHE:CE2	3:D:1256:ILE:HD11	2.34	0.62
3:D:646:ILE:HG22	3:D:741:ALA:O	1.99	0.62
2:C:843:THR:HB	2:C:845:LEU:HD22	1.80	0.62
2:C:1223:ARG:HD2	3:D:637:ALA:HA	1.80	0.62
5:Y:457:ILE:O	5:Y:461:ASN:ND2	2.32	0.62
3:D:137:ARG:NH1	5:X:95:THR:HG23	2.13	0.62
3:I:264:ASP:HB3	3:I:324:LEU:HB3	1.80	0.62
5:X:101:TYR:OH	5:X:384:LEU:HD11	1.99	0.62
5:X:517:SER:O	5:X:518:HIS:ND1	2.32	0.62
3:D:588:PRO:CG	3:D:591:ILE:HD11	2.29	0.62
3:I:107:LEU:HD12	3:I:107:LEU:H	1.63	0.62
2:H:1239:VAL:O	2:H:1241:ASP:N	2.32	0.62
3:I:128:LEU:HD12	3:I:192:MET:CE	2.29	0.62
3:I:120:LEU:HB2	3:I:121:PRO:CD	2.28	0.62
3:D:31:ARG:NH2	3:D:106:GLU:OE2	2.29	0.62
3:I:1322:ALA:HB3	3:I:1331:VAL:HG21	1.82	0.62
4:J:15:ASN:HD22	4:J:18:ASP:H	1.47	0.62
3:D:1173:ARG:CZ	3:D:1176:VAL:HG21	2.30	0.62
2:C:54:ARG:HG2	2:C:55:SER:CB	2.28	0.62
3:D:664:ILE:HG21	3:D:681:LYS:CD	2.29	0.62
2:H:38:PHE:HE2	2:H:49:LEU:HD12	1.65	0.62
3:D:107:LEU:H	3:D:107:LEU:HD12	1.64	0.62
3:D:128:LEU:HD12	3:D:192:MET:CE	2.29	0.62
3:D:514:THR:HG23	3:D:576:ARG:HE	1.64	0.62
1:B:27:THR:HG22	1:B:202:VAL:HG13	1.79	0.62
2:C:699:LEU:HD23	2:C:799:ASN:CG	2.18	0.62
3:I:450:HIS:CD2	3:I:451:PRO:HD2	2.34	0.62
2:C:756:TYR:H	2:C:766:ASN:CB	2.12	0.62
2:H:26:TYR:CE2	2:H:28:LEU:HB2	2.35	0.62
5:X:138:PRO:CD	5:X:353:LEU:HD11	2.28	0.62
4:E:45:LYS:O	4:E:49:ILE:HG12	1.99	0.62
1:F:107:ILE:HD11	1:F:136:GLU:HG3	1.81	0.62
2:C:1268:GLN:HB2	3:D:350:SER:HB3	1.81	0.62
2:H:55:SER:HB3	2:H:56:VAL:CB	2.30	0.62
3:D:709:ARG:HD2	3:D:714:GLU:HB2	1.82	0.62
5:Y:518:HIS:HB2	5:Y:521:ASP:OD2	2.00	0.62
3:D:827:GLU:O	3:D:831:VAL:HG12	1.99	0.62
2:H:91:THR:HB	2:H:138:ILE:HD13	1.80	0.62
3:I:147:ILE:HD12	3:I:178:ALA:CB	2.30	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:1340:GLU:OE2	3:I:1341:ARG:NH1	2.33	0.62
4:E:6:VAL:HG23	4:E:51:LEU:HD13	1.81	0.62
2:C:740:GLU:HB2	2:C:741:MET:SD	2.40	0.62
3:D:824:PRO:CB	3:D:836:ARG:HD3	2.30	0.62
2:H:91:THR:HG22	2:H:139:ASN:N	2.14	0.62
2:C:594:VAL:HG22	2:C:599:VAL:HG22	1.80	0.62
3:D:113:HIS:CE1	3:D:115:TRP:HB2	2.34	0.62
1:A:13:LEU:HD11	1:A:16:ILE:HG12	1.82	0.62
3:I:128:LEU:HD13	3:I:189:LEU:HD23	1.81	0.62
3:I:591:ILE:HD12	3:I:592:VAL:N	2.14	0.62
3:I:646:ILE:HG22	3:I:741:ALA:O	2.00	0.62
2:H:660:VAL:O	2:H:661:VAL:HG22	2.00	0.62
3:D:767:LEU:HB3	3:D:771:GLN:NE2	2.14	0.62
2:C:660:VAL:HG13	2:C:661:VAL:CG1	2.28	0.62
3:D:822:MET:HG2	3:D:839:VAL:CG2	2.28	0.62
2:H:618:GLN:OE1	3:I:770:LEU:HB2	2.00	0.62
5:X:213:ASP:HB2	5:X:216:LEU:HB3	1.82	0.62
2:H:892:GLU:O	2:H:893:THR:OG1	2.17	0.62
2:H:73:TYR:HD2	2:H:74:ARG:H	1.48	0.62
2:H:448:LEU:HB2	2:H:553:THR:HG21	1.80	0.62
3:I:838:ARG:NH2	3:I:1250:ASP:OD2	2.33	0.62
2:C:55:SER:HB3	2:C:56:VAL:CB	2.30	0.62
2:C:105:TYR:CD1	2:C:114:VAL:HG13	2.35	0.62
3:I:389:GLY:O	3:I:391:ALA:N	2.33	0.62
2:C:18:ARG:HG3	2:C:19:PRO:HD2	1.82	0.62
2:H:1176:LEU:HD22	2:H:1180:MET:O	2.00	0.61
3:I:513:MET:O	3:I:575:GLY:HA3	2.00	0.61
2:C:936:ARG:HB3	2:C:939:VAL:CG2	2.30	0.61
3:D:1191:PRO:O	3:D:1193:TRP:N	2.31	0.61
3:D:527:LEU:H	3:D:550:VAL:HG12	1.65	0.61
3:D:233:LYS:HD2	3:D:234:PRO:HD2	1.82	0.61
2:H:521:LEU:O	2:H:525:THR:HG22	1.99	0.61
2:C:218:GLU:HG2	2:C:299:LYS:HA	1.81	0.61
3:I:316:ILE:HD13	3:I:316:ILE:H	1.64	0.61
3:I:88:CYS:O	3:I:90:VAL:N	2.34	0.61
3:I:701:LEU:CD2	3:I:723:TYR:HB2	2.30	0.61
3:I:527:LEU:HD13	3:I:531:LYS:CB	2.30	0.61
2:H:1254:VAL:HG23	2:H:1255:THR:H	1.64	0.61
1:F:234:LEU:HD12	1:F:234:LEU:N	2.15	0.61
2:C:678:ARG:HD3	2:C:681:MET:HG3	1.81	0.61
2:H:1336:ASN:HB2	3:I:33:TRP:HH2	1.65	0.61
2:C:868:SER:OG	2:C:942:ASP:OD1	2.15	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:5:THR:CA	4:E:6:VAL:HB	2.31	0.61
3:D:316:ILE:HG23	3:D:317:THR:N	2.15	0.61
2:C:21:VAL:HG13	2:C:22:LEU:H	1.65	0.61
2:H:448:LEU:HB2	2:H:553:THR:CG2	2.30	0.61
3:I:1191:PRO:O	3:I:1193:TRP:N	2.33	0.61
3:D:1177:ILE:HD11	3:D:1196:LEU:HD11	1.80	0.61
3:I:425:ARG:HD2	3:I:459:ALA:HB2	1.82	0.61
5:Y:108:VAL:HA	5:Y:385:ARG:HH12	1.66	0.61
3:D:450:HIS:HD2	3:D:451:PRO:HD2	1.64	0.61
2:C:1252:SER:OG	2:C:1255:THR:O	2.19	0.61
3:I:31:ARG:NH2	3:I:106:GLU:OE2	2.29	0.61
2:H:1200:LYS:O	2:H:1202:GLY:N	2.32	0.61
2:H:106:GLU:N	2:H:107:ARG:HA	2.15	0.61
3:D:750:PRO:HA	3:D:777:HIS:CE1	2.35	0.61
3:I:1254:GLU:O	3:I:1257:VAL:HG12	2.00	0.61
5:Y:264:LYS:HD2	5:Y:264:LYS:N	2.14	0.61
3:D:120:LEU:HB2	3:D:121:PRO:CD	2.30	0.61
3:D:105:ILE:HD13	3:D:273:ILE:CD1	2.29	0.61
2:H:1156:ARG:HH11	2:H:1157:GLN:H	1.48	0.61
1:A:8:PHE:CE1	1:B:223:ILE:HG12	2.35	0.61
3:D:841:GLY:CA	3:D:901:ARG:HD3	2.30	0.61
2:C:816:ILE:HD13	2:C:1074:GLY:CA	2.30	0.61
2:H:926:GLY:CA	2:H:1056:VAL:HG12	2.26	0.61
2:H:1211:ARG:NE	2:H:1211:ARG:O	2.33	0.61
1:A:221:ALA:HB1	1:B:228:LEU:HD13	1.82	0.61
3:D:451:PRO:HG2	3:D:625:MET:SD	2.40	0.61
2:H:1336:ASN:HB2	3:I:33:TRP:CH2	2.35	0.61
3:I:57:PHE:CZ	3:I:252:LEU:HD22	2.36	0.61
3:I:186:GLN:HB2	3:I:238:ILE:CD1	2.24	0.61
3:D:686:TRP:HB3	3:D:758:PRO:HG2	1.82	0.61
1:A:45:ARG:HH22	2:C:1216:ARG:CA	2.12	0.61
3:I:349:TYR:CE2	3:I:379:PRO:HG2	2.31	0.61
3:I:824:PRO:O	3:I:826:ILE:HG13	2.01	0.61
3:I:534:GLU:O	3:I:538:ARG:HB2	2.01	0.61
2:H:400:VAL:HG12	2:H:404:LYS:HE2	1.81	0.61
2:C:127:ILE:HD13	2:C:127:ILE:H	1.65	0.61
5:X:48:ILE:HG13	5:X:49:ASN:H	1.65	0.61
3:I:1295:ASN:O	3:I:1298:VAL:HG12	2.00	0.61
1:A:163:GLU:CB	1:A:166:ARG:HB3	2.30	0.61
2:H:26:TYR:HE2	2:H:28:LEU:HB2	1.65	0.61
2:C:1105:SER:HB2	3:D:731:ARG:HB2	1.82	0.61
3:I:56:LEU:HB3	3:I:250:ARG:NH2	2.16	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:936:ARG:NH1	5:X:495:ARG:HD3	2.15	0.61
5:Y:412:LEU:HB2	5:Y:435:ILE:HD11	1.83	0.61
2:C:1078:LYS:HG2	2:C:1079:ILE:H	1.66	0.61
3:D:230:SER:CB	3:D:1339:GLY:H	2.13	0.60
2:H:845:LEU:HD13	2:H:845:LEU:H	1.65	0.60
2:C:898:GLU:HG3	5:X:565:ILE:CD1	2.31	0.60
2:C:514:PHE:HE2	2:C:760:ASN:HB3	1.66	0.60
3:I:1140:ARG:HH21	3:I:1236:GLU:CG	2.13	0.60
3:D:1343:GLU:HA	3:D:1344:LEU:HB2	1.82	0.60
3:I:138:VAL:O	3:I:143:SER:HB3	2.00	0.60
3:D:500:ILE:HD13	3:D:500:ILE:H	1.66	0.60
2:H:557:ARG:HB3	2:H:587:LEU:HD23	1.83	0.60
2:H:131:THR:HG23	2:H:133:ASN:N	2.11	0.60
2:C:59:ILE:CG2	2:C:479:LEU:HD13	2.32	0.60
5:X:264:LYS:HD2	5:X:264:LYS:N	2.16	0.60
5:X:145:LEU:HD21	5:X:225:ARG:HE	1.65	0.60
3:D:147:ILE:HG13	3:D:148:GLU:N	2.17	0.60
3:I:50:LYS:HG2	3:I:51:PRO:HD2	1.83	0.60
2:C:752:ASN:O	2:C:753:LEU:HG	2.01	0.60
2:C:1204:LEU:CD2	2:C:1205:PRO:HD2	2.32	0.60
2:C:1313:HIS:CG	4:E:31:GLN:HE22	2.19	0.60
2:C:72:SER:O	2:C:98:VAL:HG23	2.02	0.60
3:I:355:ILE:HG12	3:I:464:ASP:O	2.00	0.60
2:H:800:MET:CE	2:H:800:MET:HA	2.30	0.60
4:E:25:ARG:NH2	4:E:68:GLU:OE1	2.34	0.60
2:H:504:GLU:O	2:H:508:SER:HB3	2.01	0.60
1:A:23:HIS:HE1	1:A:25:LYS:HE3	1.66	0.60
3:I:858:VAL:CB	3:I:859:PRO:HD3	2.24	0.60
4:E:5:THR:HB	4:E:7:GLN:HB2	1.83	0.60
2:H:28:LEU:CD2	2:H:524:ILE:HG23	2.32	0.60
3:D:349:TYR:HE2	3:D:379:PRO:HG2	1.67	0.60
2:H:1286:THR:N	3:I:479:GLU:OE2	2.33	0.60
2:C:1002:LEU:CD1	2:C:1003:THR:H	2.13	0.60
5:Y:213:ASP:HB2	5:Y:216:LEU:HB3	1.81	0.60
2:H:303:ASP:HB2	2:H:310:ILE:CD1	2.28	0.60
3:D:681:LYS:HB2	3:D:681:LYS:NZ	2.16	0.60
2:H:813:GLU:HG2	3:I:504:GLN:NE2	2.16	0.60
3:D:708:ASN:OD1	3:D:712:GLN:HB2	2.00	0.60
2:C:517:GLN:HG3	2:C:759:SER:OG	2.01	0.60
3:D:137:ARG:CZ	5:X:95:THR:HG23	2.30	0.60
2:C:37:LYS:HE3	2:C:37:LYS:HA	1.84	0.60
5:Y:238:LYS:HE2	5:Y:242:HIS:HE1	1.65	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:245:ARG:HB3	2:H:337:PHE:CZ	2.37	0.60
2:C:740:GLU:OE2	2:C:974:ARG:NH2	2.34	0.60
1:B:179:PRO:O	1:B:207:THR:OG1	2.15	0.60
1:B:64:VAL:HG13	1:B:69:SER:OG	2.02	0.60
3:I:1140:ARG:HG2	3:I:1240:VAL:HG11	1.83	0.60
3:I:1173:ARG:HG2	3:I:1189:MET:HE1	1.84	0.60
1:A:42:ALA:HA	1:B:38:THR:HG23	1.83	0.60
5:X:390:ILE:HD11	5:X:435:ILE:CG2	2.31	0.60
2:H:218:GLU:HG2	2:H:299:LYS:HA	1.83	0.60
2:C:1192:GLU:O	2:C:1196:LYS:HD3	2.01	0.60
2:C:201:ARG:NH1	5:X:36:VAL:HG11	2.17	0.60
3:D:139:LEU:HD11	3:D:185:ILE:HD13	1.83	0.60
3:I:803:VAL:HG22	3:I:1259:GLN:OE1	2.01	0.60
2:C:13:LYS:NZ	2:C:793:GLU:OE1	2.31	0.60
2:H:59:ILE:HD11	2:H:63:SER:HB3	1.83	0.60
3:I:140:TYR:HA	3:I:181:GLY:HA2	1.84	0.60
6:H:1401:RFP:O1	6:H:1401:RFP:O11	2.19	0.60
3:D:426:ALA:HB3	3:D:427:PRO:CD	2.32	0.60
3:I:1145:PHE:CE2	3:I:1256:ILE:HD11	2.36	0.60
1:A:80:GLU:HG3	2:C:694:ARG:HH12	1.67	0.60
2:H:91:THR:HG22	2:H:139:ASN:H	1.65	0.60
1:G:56:VAL:HG12	1:G:173:VAL:HG11	1.84	0.60
3:D:1292:LEU:HD21	3:I:1284:ARG:HH22	1.67	0.59
1:A:167:PRO:HG2	1:A:170:ARG:HG3	1.84	0.59
3:I:30:ILE:HG23	3:I:243:PRO:HB3	1.84	0.59
2:C:691:PRO:HA	2:C:788:SER:OG	2.02	0.59
2:H:663:VAL:HA	2:H:666:SER:HB3	1.84	0.59
2:H:514:PHE:N	6:H:1401:RFP:O8	2.35	0.59
3:D:789:LYS:HB3	3:D:932:MET:SD	2.42	0.59
3:D:27:PRO:O	3:D:31:ARG:HD3	2.01	0.59
3:I:701:LEU:HD21	3:I:723:TYR:HB2	1.83	0.59
5:Y:390:ILE:HD11	5:Y:435:ILE:HG22	1.84	0.59
5:X:16:GLY:HA2	5:X:19:GLN:HG3	1.83	0.59
5:X:363:ARG:O	5:X:367:ILE:HG12	2.02	0.59
2:H:1186:VAL:HG13	2:H:1187:PHE:H	1.67	0.59
2:C:13:LYS:HD2	2:C:1181:PRO:HG2	1.84	0.59
2:C:744:GLY:HA2	2:C:974:ARG:HH11	1.68	0.59
1:F:11:PRO:HB3	1:F:31:LEU:CD2	2.31	0.59
5:Y:240:ARG:HD3	5:Y:244:THR:HB	1.83	0.59
3:D:173:GLY:O	3:D:175:GLU:HG3	2.03	0.59
2:C:1285:TYR:HA	2:C:1288:GLN:HB3	1.83	0.59
3:D:139:LEU:HD13	3:D:140:TYR:N	2.17	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:190:ALA:HB2	1:B:200:LYS:HB3	1.84	0.59
2:C:59:ILE:CG2	2:C:479:LEU:HB3	2.32	0.59
3:I:205:LEU:HD22	3:I:217:LEU:CD2	2.33	0.59
2:C:11:ILE:HG21	2:C:697:LYS:NZ	2.17	0.59
2:H:766:ASN:N	2:H:787:PRO:HG3	2.18	0.59
5:Y:512:GLY:H	5:Y:517:SER:CB	2.15	0.59
2:C:105:TYR:CD1	2:C:106:GLU:HB2	2.38	0.59
3:I:147:ILE:HG13	3:I:148:GLU:N	2.17	0.59
5:X:600:HIS:H	5:X:601:PRO:HD2	1.67	0.59
5:X:119:ILE:O	5:X:123:ILE:HG13	2.02	0.59
1:B:83:LEU:HD11	3:D:527:LEU:CA	2.26	0.59
3:D:124:ILE:HG13	3:D:189:LEU:HD11	1.83	0.59
2:C:634:VAL:H	2:C:645:PHE:HE2	1.50	0.59
3:D:899:TYR:CE1	3:D:915:ILE:HD12	2.38	0.59
1:A:158:ARG:HE	1:A:172:LEU:HD13	1.67	0.59
3:I:50:LYS:NZ	3:I:50:LYS:HB3	2.18	0.59
1:A:22:THR:O	1:A:207:THR:HG22	2.03	0.59
2:H:11:ILE:HG21	2:H:697:LYS:NZ	2.17	0.59
3:D:202:ARG:O	3:D:206:ASN:ND2	2.33	0.59
2:C:216:THR:O	2:C:220:ILE:HG13	2.03	0.59
3:I:262:THR:OG1	3:I:266:ASN:ND2	2.30	0.59
2:C:302:ILE:HG22	2:C:309:LEU:HB3	1.84	0.59
3:D:50:LYS:HZ2	3:D:50:LYS:HB3	1.67	0.59
3:D:50:LYS:NZ	3:D:50:LYS:HB3	2.16	0.59
5:X:112:THR:HG22	5:X:113:ARG:H	1.66	0.59
2:H:1296:ASP:OD2	2:H:1320:PRO:HB2	2.01	0.59
3:D:116:PHE:HB3	3:D:237:MET:CE	2.33	0.59
3:I:325:LYS:NZ	3:I:330:MET:HG2	2.17	0.59
2:C:51:ALA:HB3	2:C:465:ARG:HH11	1.67	0.59
1:A:320:ASN:O	1:A:323:PRO:HD3	2.02	0.59
1:A:195:ARG:HH21	1:A:198:LEU:HD21	1.67	0.59
3:I:1173:ARG:NH1	3:I:1176:VAL:HG21	2.17	0.59
3:D:614:LEU:CG	4:E:7:GLN:HG3	2.31	0.59
3:D:120:LEU:HD22	3:D:1330:ARG:HD2	1.83	0.59
2:H:747:GLY:O	2:H:748:ILE:HG13	2.02	0.59
2:C:1002:LEU:HG	2:C:1007:LYS:HG2	1.83	0.59
2:H:11:ILE:HD13	2:H:697:LYS:NZ	2.18	0.59
2:C:236:LYS:HE3	2:C:238:GLN:HE21	1.68	0.59
3:I:615:LYS:HB3	3:I:616:PRO:HD3	1.84	0.59
2:C:841:ARG:HA	2:C:1046:VAL:CG1	2.33	0.59
3:D:546:ALA:HB3	3:D:547:ARG:O	2.03	0.59
2:C:131:THR:HG22	2:C:135:THR:N	2.17	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:1335:ILE:HD11	3:I:22:ILE:CG1	2.32	0.59
2:C:403:MET:HG2	2:C:407:ARG:NH1	2.17	0.59
3:D:1347:LEU:CD2	3:D:1358:PRO:HG2	2.32	0.59
2:C:510:GLN:O	2:C:511:LEU:HB2	2.03	0.59
5:X:448:ARG:CD	5:X:452:ILE:HD12	2.32	0.59
2:C:839:VAL:HG13	2:C:1049:ILE:HG22	1.84	0.59
3:I:394:ILE:HG23	5:Y:536:THR:HG22	1.85	0.59
3:I:708:ASN:OD1	3:I:712:GLN:HB2	2.03	0.59
2:C:452:ARG:HH11	2:C:585:GLY:HA3	1.67	0.59
2:H:607:SER:H	2:H:610:GLU:HB2	1.68	0.59
1:A:112:ALA:HB3	1:A:126:PRO:HA	1.84	0.59
5:X:507:MET:HB3	5:X:520:GLY:HA3	1.85	0.59
5:X:23:THR:HB	5:X:26:GLU:HG3	1.85	0.59
1:B:14:VAL:HG22	1:B:28:LEU:HD22	1.85	0.59
5:Y:112:THR:HG22	5:Y:113:ARG:H	1.67	0.59
2:C:1296:ASP:OD1	3:D:345:LYS:NZ	2.35	0.59
3:D:901:ARG:HA	3:D:908:ILE:HA	1.85	0.58
3:D:858:VAL:CB	3:D:859:PRO:HD3	2.26	0.58
2:C:841:ARG:HA	2:C:1046:VAL:HG13	1.83	0.58
3:I:527:LEU:HB2	3:I:535:ARG:NH1	2.18	0.58
3:D:124:ILE:CG1	3:D:189:LEU:HD11	2.33	0.58
2:H:28:LEU:HD21	2:H:524:ILE:HG23	1.84	0.58
3:D:598:LYS:NZ	3:D:726:ALA:O	2.36	0.58
3:D:169:LEU:HD13	3:D:173:GLY:HA3	1.84	0.58
3:I:490:ILE:HG23	3:I:500:ILE:HD11	1.85	0.58
1:G:64:VAL:HG12	1:G:171:LEU:HD11	1.84	0.58
4:E:60:ASN:HB2	4:E:63:ILE:HG12	1.83	0.58
5:Y:465:ARG:O	5:Y:468:ARG:HG2	2.02	0.58
5:X:561:MET:SD	5:X:576:VAL:HG22	2.43	0.58
3:I:1284:ARG:HA	3:I:1287:ILE:HG12	1.84	0.58
2:C:933:VAL:CG1	2:C:948:ILE:HD11	2.31	0.58
5:X:242:HIS:O	5:X:246:GLN:HB2	2.03	0.58
2:C:617:ALA:HB2	2:C:650:VAL:CG2	2.33	0.58
2:C:562:GLU:HG2	2:C:574:SER:HB3	1.84	0.58
2:C:39:ILE:CG2	2:C:40:GLU:HG2	2.32	0.58
2:C:106:GLU:HG2	2:C:109:ALA:H	1.68	0.58
1:B:183:ILE:HD13	1:B:205:MET:HA	1.85	0.58
3:D:19:ALA:HB2	3:D:1343:GLU:HB3	1.84	0.58
3:I:508:LEU:HD11	3:I:725:MET:HG2	1.84	0.58
3:D:9:LYS:HE3	3:D:11:GLN:HG2	1.83	0.58
2:H:406:ASN:HB3	2:H:411:ARG:HB2	1.84	0.58
1:G:149:GLY:HA3	1:G:177:TYR:CE2	2.38	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:901:LEU:O	2:H:905:ILE:HG13	2.02	0.58
2:C:253:PHE:CZ	2:C:287:VAL:HG12	2.38	0.58
1:F:182:ARG:NH2	1:F:206:GLU:OE1	2.35	0.58
2:C:316:GLU:HG3	2:C:352:ARG:HH12	1.68	0.58
3:D:139:LEU:O	3:D:139:LEU:HD22	2.03	0.58
3:D:545:HIS:HB2	3:D:546:ALA:CB	2.33	0.58
3:I:270:ARG:HE	5:Y:449:THR:HG22	1.67	0.58
3:D:810:THR:CG2	3:D:893:GLY:HA3	2.32	0.58
3:I:886:VAL:HG13	3:I:1230:THR:HG21	1.85	0.58
1:F:68:TYR:HD1	1:F:79:LEU:HD11	1.68	0.58
3:I:144:TYR:HE1	3:I:161:THR:HG23	1.68	0.58
3:I:40:LYS:HB3	3:I:42:GLU:HG2	1.85	0.58
2:H:105:TYR:CG	2:H:114:VAL:HG13	2.37	0.58
3:I:1180:VAL:HG22	3:I:1185:PRO:HA	1.85	0.58
3:D:127:LEU:HD11	3:D:194:LEU:HD11	1.84	0.58
3:D:1158:GLU:HA	3:D:1223:LEU:CD2	2.32	0.58
1:F:118:ASP:OD1	1:F:119:GLY:N	2.36	0.58
3:D:864:LEU:CD1	3:D:901:ARG:HH12	2.16	0.58
2:C:59:ILE:HG21	2:C:479:LEU:HD13	1.86	0.58
3:I:583:VAL:HG13	3:I:587:LEU:HD22	1.84	0.58
2:H:1214:ASP:HB3	2:H:1218:GLY:H	1.68	0.58
3:D:149:GLY:HA2	3:D:156:ARG:HG2	1.84	0.58
2:H:1237:HIS:O	2:H:1238:LEU:HG	2.02	0.58
2:C:1142:ARG:O	2:C:1146:GLN:HB2	2.04	0.58
3:D:825:VAL:CG2	3:D:835:LEU:HB2	2.33	0.58
3:D:85:CYS:HB3	3:D:88:CYS:O	2.04	0.58
5:Y:541:ARG:O	5:Y:545:HIS:HB2	2.03	0.58
3:I:611:ILE:HG22	3:I:865:HIS:CE1	2.39	0.58
5:Y:290:LEU:HB3	5:Y:333:VAL:HG21	1.86	0.58
3:I:263:SER:HB2	5:Y:507:MET:CE	2.34	0.58
2:H:963:GLU:O	2:H:967:LEU:HD13	2.02	0.58
2:C:838:CYS:HB2	2:C:918:LEU:CB	2.33	0.58
2:C:363:LEU:HD13	2:C:382:GLU:HG2	1.85	0.58
2:H:237:LEU:HD13	2:H:292:ILE:HD12	1.84	0.58
2:H:753:LEU:O	2:H:753:LEU:HD12	2.03	0.58
3:D:552:ILE:HD13	3:D:570:LYS:HB2	1.85	0.58
3:I:139:LEU:HD13	3:I:140:TYR:N	2.18	0.58
2:C:520:PRO:O	2:C:524:ILE:HG12	2.04	0.58
2:C:854:ILE:HD11	2:C:885:GLY:CA	2.33	0.58
2:H:516:ASP:OD2	2:H:518:ASN:ND2	2.37	0.58
2:C:15:PHE:CE2	2:C:1182:ILE:HD11	2.39	0.58
2:C:1070:HIS:CD2	2:C:1111:GLN:HA	2.39	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:158:ARG:NH2	1:A:162:GLU:HB3	2.17	0.58
3:I:394:ILE:CG2	5:Y:536:THR:HG22	2.33	0.58
3:D:141:PHE:O	3:D:297:ARG:HD3	2.03	0.58
3:D:655:SER:HA	3:D:658:GLU:HG2	1.84	0.58
2:H:716:ALA:HB3	2:H:784:ALA:HB3	1.85	0.58
2:C:345:PRO:O	2:C:349:GLU:HG2	2.03	0.58
2:H:53:PHE:HA	2:H:56:VAL:HG23	1.85	0.58
3:I:527:LEU:HD13	3:I:531:LYS:HB3	1.85	0.58
3:I:543:SER:O	3:I:574:VAL:HB	2.04	0.58
2:H:699:LEU:HD23	2:H:799:ASN:CG	2.22	0.58
3:I:1148:ARG:NH2	3:I:1149:ARG:O	2.36	0.58
3:D:50:LYS:HG2	3:D:51:PRO:CD	2.34	0.58
4:J:39:VAL:CG1	4:J:40:PRO:HD2	2.33	0.58
1:G:149:GLY:HA3	1:G:177:TYR:CD2	2.39	0.58
5:X:503:GLU:N	5:X:504:PRO:HA	2.19	0.58
5:Y:600:HIS:H	5:Y:601:PRO:HD2	1.69	0.58
2:H:1142:ARG:NH2	2:H:1165:SER:O	2.36	0.58
2:H:811:ASN:O	2:H:1099:ASN:ND2	2.34	0.58
5:X:126:GLY:O	5:X:130:VAL:HG23	2.03	0.58
1:B:86:LYS:NZ	3:D:526:VAL:O	2.35	0.58
1:B:192:VAL:HG21	1:B:198:LEU:CD1	2.27	0.58
3:I:426:ALA:HB3	3:I:427:PRO:CD	2.34	0.58
3:D:828:GLY:HA2	3:D:832:LYS:CA	2.34	0.58
5:Y:471:LEU:HB3	5:Y:478:PRO:HD3	1.86	0.58
2:C:1073:LYS:HD3	3:D:462:ASP:HB3	1.86	0.58
2:H:768:MET:O	2:H:785:ASP:N	2.35	0.58
2:C:1333:LEU:HD23	3:D:307:LEU:HD22	1.84	0.58
1:B:196:THR:OG1	3:D:443:GLU:HG3	2.03	0.58
2:H:516:ASP:HB2	6:H:1401:RFP:H20C	1.86	0.58
3:D:430:HIS:HA	3:D:921:GLN:HB3	1.86	0.58
3:D:133:ARG:HB2	3:D:133:ARG:NH2	2.19	0.58
3:D:1174:ARG:HA	3:D:1192:LYS:HG3	1.85	0.58
1:A:13:LEU:CD2	1:A:16:ILE:HD11	2.19	0.58
3:I:709:ARG:O	3:I:711:GLY:N	2.37	0.58
3:D:762:ASN:OD1	3:D:764:ARG:HB3	2.04	0.58
2:H:185:ASP:HB2	2:H:197:ARG:HB2	1.85	0.58
2:C:524:ILE:HD13	2:C:524:ILE:N	2.19	0.57
3:D:120:LEU:CB	3:D:121:PRO:CD	2.82	0.57
3:I:245:LEU:O	3:I:250:ARG:NH1	2.35	0.57
5:Y:517:SER:O	5:Y:518:HIS:ND1	2.36	0.57
5:X:301:ASN:O	5:X:305:LEU:HD13	2.03	0.57
2:H:1274:GLU:OE1	2:H:1274:GLU:N	2.37	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:Y:274:ARG:NH1	5:Y:369:GLU:OE2	2.37	0.57
3:I:544:LEU:HD13	3:I:719:PHE:HE1	1.68	0.57
3:D:858:VAL:HB	3:D:859:PRO:CD	2.26	0.57
3:I:139:LEU:HD21	3:I:185:ILE:HD13	1.86	0.57
2:H:96:LEU:HD22	2:H:127:ILE:HD12	1.86	0.57
2:H:500:ALA:O	2:H:504:GLU:HB2	2.04	0.57
3:D:298:MET:CE	5:X:402:LEU:HB3	2.34	0.57
3:D:58:CYS:SG	3:D:61:ILE:N	2.69	0.57
1:G:182:ARG:HG2	1:G:206:GLU:HB3	1.86	0.57
3:D:543:SER:O	3:D:574:VAL:HB	2.03	0.57
2:C:142:GLU:HG2	2:C:515:MET:SD	2.44	0.57
3:I:554:GLU:HA	3:I:589:TYR:CD2	2.38	0.57
2:H:629:PHE:HB2	2:H:647:ARG:HH12	1.69	0.57
3:D:733:SER:O	3:D:737:ILE:HG12	2.04	0.57
5:X:224:LEU:HB2	5:X:259:PHE:CE1	2.38	0.57
3:I:1173:ARG:HG2	3:I:1189:MET:CE	2.34	0.57
2:H:740:GLU:HB2	2:H:741:MET:SD	2.44	0.57
1:A:134:THR:HG21	2:C:727:VAL:O	2.03	0.57
3:I:40:LYS:HE3	3:I:42:GLU:HG3	1.86	0.57
2:C:1029:LEU:O	2:C:1032:LYS:HG3	2.03	0.57
3:I:1290:ARG:NH1	3:I:1296:GLY:O	2.37	0.57
3:I:614:LEU:HD23	4:J:7:GLN:HG3	1.86	0.57
3:I:230:SER:CB	3:I:1339:GLY:H	2.17	0.57
2:C:400:VAL:O	2:C:404:LYS:HE2	2.04	0.57
2:C:1180:MET:HB3	2:C:1181:PRO:C	2.25	0.57
2:C:698:PRO:HB3	2:C:1231:TYR:CZ	2.40	0.57
2:H:1081:PRO:HB2	2:H:1083:GLU:HG2	1.86	0.57
2:H:807:TRP:HH2	2:H:1216:ARG:HE	1.51	0.57
2:C:568:ASN:HB3	2:C:572:ILE:CD1	2.35	0.57
2:H:817:LEU:CB	2:H:1097:VAL:HG13	2.35	0.57
1:F:223:ILE:HD13	1:G:8:PHE:CE1	2.39	0.57
2:H:384:LEU:O	2:H:388:LEU:HG	2.05	0.57
2:C:673:HIS:O	2:C:1109:ILE:HG22	2.04	0.57
5:X:355:ILE:HD13	5:X:355:ILE:O	2.05	0.57
3:I:1270:GLY:HA3	3:I:1299:GLY:HA2	1.87	0.57
3:D:1145:PHE:CD2	3:D:1256:ILE:HD11	2.40	0.57
4:E:44:ASP:HB2	4:E:49:ILE:HD11	1.87	0.57
3:I:648:GLU:N	3:I:648:GLU:OE2	2.37	0.57
2:H:204:LEU:HD11	2:H:369:MET:HG3	1.85	0.57
3:D:1197:ASN:HD22	3:D:1212:ASP:HB3	1.69	0.57
2:C:953:LEU:HD21	2:C:1033:ARG:HG3	1.85	0.57
3:D:66:LYS:HG3	3:D:69:GLU:OE2	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:300:LEU:CD1	1:A:304:LYS:HE2	2.34	0.57
3:D:227:PHE:HE1	3:D:234:PRO:HD3	1.70	0.57
3:I:1287:ILE:HA	3:I:1290:ARG:HG2	1.85	0.57
3:D:828:GLY:HA2	3:D:832:LYS:HA	1.85	0.57
2:C:829:THR:CG2	2:C:1059:ARG:HG2	2.35	0.57
2:H:1204:LEU:CD2	2:H:1205:PRO:HD2	2.35	0.57
3:I:749:LYS:CG	3:I:750:PRO:HD2	2.30	0.57
2:C:59:ILE:HD11	2:C:63:SER:OG	2.04	0.57
5:Y:98:VAL:O	5:Y:102:MET:HG2	2.04	0.57
3:D:660:GLU:HG2	3:D:685:ILE:HD13	1.85	0.57
2:C:670:PHE:HZ	2:C:1117:LEU:HD22	1.70	0.57
3:I:1345:ARG:HH21	3:I:1373:ARG:HH21	1.52	0.57
1:F:158:ARG:NH2	1:F:162:GLU:HB3	2.20	0.57
2:H:94:ALA:N	2:H:126:GLU:OE2	2.24	0.57
1:F:44:ARG:HA	1:F:183:ILE:HG21	1.85	0.57
2:C:514:PHE:CE2	2:C:760:ASN:HB3	2.39	0.57
5:X:27:VAL:HA	5:X:30:HIS:CD2	2.37	0.57
1:A:219:ARG:O	1:A:223:ILE:HG13	2.03	0.57
2:H:658:GLN:HB3	2:H:1186:VAL:HG11	1.86	0.57
3:D:809:VAL:HG13	3:D:912:GLY:H	1.69	0.57
2:C:86:GLN:HA	2:C:140:GLY:HA2	1.85	0.57
2:H:555:TYR:HE2	2:H:616:ILE:HD13	1.68	0.57
2:C:526:HIS:HA	2:C:529:ARG:HH12	1.67	0.57
2:C:549:ASP:OD1	3:D:750:PRO:HB3	2.04	0.57
2:H:645:PHE:CD1	2:H:650:VAL:HB	2.40	0.57
3:D:554:GLU:HA	3:D:589:TYR:HD2	1.70	0.57
3:I:412:LEU:O	3:I:416:ILE:HG23	2.04	0.57
5:X:525:ASP:OD1	5:X:528:LEU:HG	2.05	0.57
3:D:1369:ARG:HB3	3:D:1369:ARG:NH1	2.19	0.57
3:I:678:ARG:HA	3:I:681:LYS:HG3	1.87	0.57
2:H:159:SER:OG	2:H:442:VAL:HG11	2.04	0.57
2:C:41:GLN:CD	2:C:42:ASP:H	2.08	0.57
2:H:1304:MET:O	2:H:1308:ILE:HG13	2.05	0.57
3:D:1198:VAL:HB	3:D:1210:ILE:HD13	1.86	0.57
3:D:514:THR:HG21	3:D:595:ALA:O	2.04	0.57
3:I:583:VAL:CG1	3:I:587:LEU:HD22	2.34	0.57
5:Y:453:PRO:HD2	5:Y:456:MET:CB	2.35	0.57
3:D:120:LEU:CG	5:X:46:GLN:HB2	2.35	0.57
2:C:618:GLN:OE1	3:D:770:LEU:HB2	2.05	0.57
1:F:134:THR:HG21	2:H:727:VAL:O	2.05	0.57
3:I:513:MET:CE	3:I:579:LEU:HB2	2.34	0.57
1:A:310:ARG:HA	1:A:310:ARG:NE	2.20	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:609:TYR:HD1	3:D:610:ARG:HD2	1.70	0.56
2:H:27:LEU:HD13	2:H:528:ARG:NH2	2.14	0.56
1:A:205:MET:HE1	1:A:217:ILE:HD11	1.87	0.56
1:A:231:PHE:CD2	1:B:43:LEU:HD11	2.39	0.56
3:I:620:PHE:O	3:I:624:ILE:HG23	2.05	0.56
3:I:601:ILE:HD12	3:I:604:MET:CE	2.35	0.56
3:I:608:CYS:O	3:I:612:LEU:HB2	2.05	0.56
2:H:616:ILE:HB	2:H:637:ARG:HB2	1.86	0.56
1:B:62:ASP:OD1	1:B:143:ARG:NH1	2.39	0.56
1:B:118:ASP:OD1	1:B:119:GLY:N	2.38	0.56
3:D:1255:VAL:O	3:D:1258:ARG:HB3	2.05	0.56
3:I:230:SER:HB2	3:I:1339:GLY:N	2.18	0.56
2:H:568:ASN:HB3	2:H:572:ILE:HD12	1.87	0.56
1:B:179:PRO:HA	1:B:208:ASN:HD21	1.71	0.56
2:C:753:LEU:O	2:C:753:LEU:HD12	2.05	0.56
3:D:661:VAL:HG23	3:D:682:VAL:HB	1.85	0.56
1:A:300:LEU:HD13	1:A:304:LYS:HE2	1.87	0.56
1:G:110:VAL:HB	1:G:131:CYS:HB2	1.86	0.56
1:G:42:ALA:O	1:G:46:ILE:HG12	2.06	0.56
2:C:177:ILE:HG13	2:C:183:TRP:CZ3	2.40	0.56
3:D:505:ASP:HB3	3:D:629:PHE:CE2	2.37	0.56
3:D:1284:ARG:NH2	3:I:1292:LEU:HD11	2.20	0.56
3:I:423:LEU:CD2	3:I:447:ILE:HD11	2.32	0.56
2:H:521:LEU:CD2	2:H:686:GLN:HB3	2.35	0.56
2:H:989:LEU:CD1	2:H:992:LEU:HD22	2.34	0.56
2:H:1141:LEU:CD1	2:H:1141:LEU:H	2.18	0.56
2:C:1304:MET:O	2:C:1308:ILE:HG13	2.05	0.56
2:H:960:LEU:HD12	2:H:1032:LYS:HD3	1.86	0.56
3:D:252:LEU:H	3:D:252:LEU:HD23	1.70	0.56
1:A:78:ILE:O	1:A:82:LEU:HG	2.04	0.56
3:I:619:ILE:O	3:I:623:GLN:HG2	2.05	0.56
3:D:144:TYR:HB3	3:D:159:ILE:CG2	2.34	0.56
3:I:141:PHE:O	3:I:297:ARG:HD3	2.05	0.56
2:H:661:VAL:HG23	2:H:662:SER:O	2.06	0.56
3:I:382:TYR:CE1	3:I:401:VAL:HG21	2.41	0.56
2:H:808:ASN:N	3:I:633:ALA:HB2	2.19	0.56
2:H:454:ARG:HD3	2:H:459:MET:HG2	1.87	0.56
3:I:1268:ASN:HB3	3:I:1300:ALA:CB	2.35	0.56
2:C:1141:LEU:CD1	2:C:1141:LEU:H	2.18	0.56
2:C:1029:LEU:HD12	2:C:1032:LYS:HE3	1.88	0.56
2:C:42:ASP:HB3	2:C:43:PRO:CD	2.23	0.56
2:C:131:THR:HG22	2:C:135:THR:H	1.69	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:521:LEU:HD23	2:H:686:GLN:HB3	1.86	0.56
3:I:583:VAL:CG1	3:I:584:PRO:HD2	2.35	0.56
2:H:936:ARG:HD2	2:H:1047:LEU:H	1.70	0.56
3:D:919:ALA:O	3:D:923:ILE:HG12	2.05	0.56
2:H:484:LEU:HB3	2:H:486:THR:HG22	1.88	0.56
2:H:810:TYR:CD2	3:I:359:PRO:HG2	2.40	0.56
2:C:229:ILE:HB	2:C:240:GLU:CD	2.26	0.56
2:H:734:ILE:O	2:H:749:ASP:N	2.38	0.56
2:C:176:ILE:HD11	2:C:428:VAL:HG21	1.86	0.56
3:D:1229:VAL:O	3:D:1233:ILE:HG13	2.06	0.56
1:G:29:GLU:HA	1:G:200:LYS:CB	2.36	0.56
1:F:11:PRO:HD3	1:G:227:GLN:HG3	1.87	0.56
2:C:616:ILE:HB	2:C:637:ARG:HB2	1.88	0.56
3:D:589:TYR:O	3:D:591:ILE:HG13	2.05	0.56
3:I:363:LEU:HA	3:I:450:HIS:ND1	2.20	0.56
3:D:658:GLU:HA	3:D:661:VAL:HG12	1.88	0.56
2:H:672:GLU:HG3	2:H:673:HIS:CD2	2.39	0.56
2:C:51:ALA:HA	2:C:54:ARG:HB3	1.88	0.56
3:I:541:LEU:HB2	3:I:545:HIS:CE1	2.41	0.56
4:J:5:THR:CA	4:J:6:VAL:CB	2.81	0.56
5:X:461:ASN:HB3	5:X:465:ARG:CZ	2.35	0.56
3:I:573:THR:HG22	3:I:576:ARG:HG3	1.88	0.56
1:A:131:CYS:O	1:A:132:HIS:ND1	2.39	0.56
1:A:152:TYR:CE2	2:C:824:GLN:HG2	2.41	0.56
2:C:1142:ARG:HH22	2:C:1165:SER:N	2.04	0.56
3:I:1195:GLN:N	3:I:1195:GLN:OE1	2.38	0.56
1:A:243:LYS:HB2	1:A:243:LYS:NZ	2.20	0.56
2:C:80:PHE:HB3	2:C:85:CYS:SG	2.46	0.56
3:D:841:GLY:HA3	3:D:901:ARG:HD3	1.88	0.56
3:I:111:THR:HG23	3:I:300:GLN:NE2	2.20	0.56
3:D:1290:ARG:NH1	3:D:1296:GLY:O	2.39	0.56
2:H:794:LEU:HD21	2:H:796:LEU:CG	2.33	0.56
3:D:205:LEU:CD2	3:D:217:LEU:HD22	2.34	0.56
2:C:634:VAL:HG22	2:C:645:PHE:HE2	1.70	0.56
1:A:11:PRO:HG3	1:B:228:LEU:H	1.71	0.56
2:C:618:GLN:HG2	2:C:637:ARG:HH22	1.70	0.56
3:D:697:MET:CE	3:D:738:ARG:HA	2.36	0.56
2:H:105:TYR:CD1	2:H:114:VAL:HG13	2.41	0.56
3:D:515:ARG:HH22	3:D:717:VAL:C	2.09	0.56
3:D:437:PHE:HZ	3:D:453:VAL:HG21	1.69	0.56
2:C:1084:ASP:HB2	2:C:1216:ARG:HG2	1.88	0.56
3:I:767:LEU:HB3	3:I:771:GLN:HE22	1.69	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:564:PRO:HG3	6:H:1401:RFP:H302	1.88	0.56
3:I:1346:GLY:HA3	3:I:1349:GLU:OE2	2.06	0.56
2:C:106:GLU:N	2:C:107:ARG:HA	2.19	0.56
3:I:449:LEU:HD12	3:I:450:HIS:H	1.70	0.56
3:I:85:CYS:HB3	3:I:88:CYS:O	2.06	0.56
3:D:116:PHE:HB3	3:D:237:MET:HE3	1.87	0.56
3:D:648:GLU:N	3:D:648:GLU:OE2	2.38	0.56
2:C:163:LYS:HD3	2:C:163:LYS:H	1.69	0.56
3:I:1366:HIS:O	3:I:1370:MET:HB2	2.06	0.56
2:C:1341:ASP:HB2	2:C:1342:GLU:OE1	2.06	0.56
1:G:52:PRO:HG3	1:G:150:ARG:HH12	1.71	0.56
2:H:568:ASN:HB3	2:H:572:ILE:CD1	2.36	0.56
3:I:1154:ALA:HB1	3:I:1211:SER:HB3	1.86	0.56
2:H:106:GLU:HB3	2:H:107:ARG:HA	1.87	0.56
2:H:467:GLY:HA2	2:H:470:ARG:HG3	1.88	0.56
3:D:1264:ALA:HB1	3:D:1303:SER:O	2.06	0.56
1:A:239:GLN:HG3	1:A:240:PRO:HD2	1.87	0.56
5:Y:459:THR:O	5:Y:463:LEU:HD13	2.06	0.56
2:C:563:THR:HG21	3:D:780:ARG:CZ	2.35	0.56
2:C:894:GLN:O	2:C:895:LEU:HB2	2.06	0.56
5:Y:503:GLU:N	5:Y:504:PRO:HA	2.21	0.55
2:H:898:GLU:CB	5:Y:540:LEU:HD21	2.34	0.55
1:F:45:ARG:NH1	2:H:1216:ARG:HA	2.21	0.55
5:Y:582:VAL:HB	5:Y:586:ARG:HG2	1.88	0.55
2:H:92:TYR:CD1	2:H:129:LEU:HB2	2.41	0.55
5:X:452:ILE:HD11	5:X:500:ILE:HG22	1.88	0.55
3:I:288:PRO:HB2	3:I:291:ILE:CG1	2.36	0.55
2:H:367:TYR:CD1	2:H:384:LEU:HD13	2.41	0.55
3:D:703:THR:HA	3:D:717:VAL:HA	1.86	0.55
5:Y:439:ILE:O	5:Y:443:ILE:HG13	2.06	0.55
1:G:107:ILE:HD11	1:G:136:GLU:HG2	1.88	0.55
1:G:192:VAL:HG21	1:G:198:LEU:CD1	2.29	0.55
5:X:139:GLU:CA	5:X:142:THR:HG22	2.32	0.55
2:C:202:ARG:HA	5:X:29:ASP:OD1	2.06	0.55
2:H:933:VAL:CG1	2:H:948:ILE:HD11	2.34	0.55
3:I:382:TYR:HE1	3:I:401:VAL:CG2	2.19	0.55
2:H:742:TYR:CB	2:H:743:PRO:HD3	2.35	0.55
3:D:824:PRO:HD3	3:D:836:ARG:HE	1.71	0.55
2:H:18:ARG:N	2:H:1188:ASP:OD2	2.26	0.55
2:C:936:ARG:HB3	2:C:939:VAL:HG21	1.88	0.55
5:X:130:VAL:O	5:X:134:VAL:HG23	2.06	0.55
2:H:1289:GLU:HG3	2:H:1290:MET:N	2.21	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:1372:ARG:NH2	3:I:853:THR:HG21	2.21	0.55
5:Y:428:SER:O	5:Y:432:THR:OG1	2.25	0.55
3:I:405:GLU:O	3:I:407:VAL:N	2.39	0.55
1:A:184:ALA:HB2	2:C:1091:GLY:N	2.22	0.55
2:C:1046:VAL:HG22	2:C:1047:LEU:HD13	1.89	0.55
3:D:1270:GLY:HA3	3:D:1299:GLY:HA2	1.88	0.55
2:C:59:ILE:HG21	2:C:479:LEU:HB3	1.88	0.55
3:I:474:LEU:HD22	3:I:477:GLN:NE2	2.22	0.55
3:D:142:GLU:HA	3:D:180:MET:CE	2.36	0.55
3:D:930:LEU:HD22	3:D:1244:GLN:HG3	1.88	0.55
3:D:40:LYS:HB3	3:D:42:GLU:HG2	1.87	0.55
3:I:490:ILE:HA	3:I:500:ILE:HD12	1.88	0.55
3:I:131:PRO:HG2	3:I:135:ILE:HD13	1.89	0.55
2:C:811:ASN:O	2:C:1099:ASN:ND2	2.34	0.55
2:C:55:SER:CB	2:C:56:VAL:HG13	2.34	0.55
3:I:768:ASN:O	3:I:771:GLN:NE2	2.39	0.55
3:I:120:LEU:CB	3:I:121:PRO:CD	2.85	0.55
2:C:1180:MET:HB3	2:C:1181:PRO:O	2.06	0.55
5:Y:511:ILE:HG22	5:Y:517:SER:HB2	1.88	0.55
2:H:1087:TYR:O	2:H:1213:TYR:N	2.27	0.55
2:H:1291:LEU:HD13	3:I:345:LYS:NZ	2.21	0.55
3:I:370:LYS:HG3	3:I:371:LYS:H	1.72	0.55
5:Y:126:GLY:O	5:Y:130:VAL:HG23	2.07	0.55
5:X:595:LEU:O	5:X:599:ARG:NH1	2.38	0.55
2:H:1252:SER:HB3	2:H:1259:LEU:CD2	2.36	0.55
3:D:768:ASN:ND2	3:D:771:GLN:OE1	2.39	0.55
3:D:316:ILE:HG13	3:D:317:THR:N	2.21	0.55
2:C:397:LEU:O	2:C:398:SER:OG	2.24	0.55
3:D:156:ARG:HD3	3:D:157:GLN:HG3	1.89	0.55
1:A:91:ARG:NH2	1:A:209:GLY:O	2.40	0.55
1:G:186:ASN:HB2	1:G:202:VAL:HB	1.87	0.55
2:C:582:ASN:N	2:C:586:PHE:O	2.38	0.55
3:I:857:LEU:HB2	3:I:860:ARG:HB2	1.88	0.55
2:C:518:ASN:HD21	2:C:761:GLN:HG2	1.72	0.55
5:Y:558:VAL:HG22	5:Y:587:ILE:HD11	1.88	0.55
2:H:263:VAL:HG22	2:H:273:HIS:CD2	2.41	0.55
2:C:144:VAL:HB	2:C:526:HIS:CE1	2.42	0.55
3:D:664:ILE:CD1	3:D:681:LYS:HE3	2.33	0.55
2:H:634:VAL:H	2:H:645:PHE:HE2	1.55	0.55
3:D:349:TYR:CE2	3:D:379:PRO:HG2	2.42	0.55
2:C:93:SER:HB2	2:C:126:GLU:CD	2.26	0.55
4:E:39:VAL:CG1	4:E:40:PRO:HD2	2.37	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:1087:TYR:CE2	2:C:1215:GLY:HA2	2.42	0.55
3:I:863:LEU:HB2	3:I:866:GLU:HB2	1.89	0.55
5:Y:562:ARG:HG3	5:Y:591:GLU:OE1	2.06	0.55
3:I:546:ALA:HB3	3:I:547:ARG:O	2.07	0.55
5:Y:547:VAL:CG2	5:Y:603:ARG:HD2	2.37	0.55
2:C:1017:GLN:O	2:C:1021:LEU:HG	2.06	0.55
5:X:518:HIS:HB2	5:X:521:ASP:OD2	2.06	0.55
3:I:144:TYR:CE1	3:I:161:THR:HG23	2.42	0.55
5:X:439:ILE:O	5:X:443:ILE:HG13	2.07	0.55
3:I:27:PRO:O	3:I:31:ARG:NH1	2.40	0.55
2:C:163:LYS:CD	2:C:163:LYS:H	2.19	0.55
5:Y:562:ARG:NH1	5:Y:591:GLU:OE2	2.39	0.55
5:X:143:TYR:O	5:X:147:GLN:HG2	2.06	0.55
5:Y:445:ASP:N	5:Y:445:ASP:OD1	2.39	0.55
1:G:90:VAL:HG13	1:G:121:VAL:HG13	1.87	0.55
3:I:197:GLU:O	3:I:201:LEU:HD23	2.06	0.55
2:C:980:VAL:O	2:C:984:VAL:HG22	2.06	0.55
2:C:10:ARG:HD3	2:C:1175:ASN:HD21	1.72	0.55
3:D:1284:ARG:HH22	3:I:1292:LEU:HD21	1.71	0.55
2:C:515:MET:CE	2:C:527:LYS:HE2	2.34	0.55
3:D:154:LEU:CD2	3:D:160:LEU:HD21	2.32	0.55
2:H:1313:HIS:HD2	3:I:474:LEU:HD23	1.72	0.55
2:C:82:VAL:HB	2:C:92:TYR:CE2	2.41	0.55
3:D:120:LEU:HG	5:X:46:GLN:CB	2.35	0.55
3:I:154:LEU:HD21	3:I:160:LEU:HD21	1.89	0.55
2:C:1314:GLN:HG3	4:E:28:ARG:HH12	1.72	0.55
2:C:1314:GLN:HG3	4:E:28:ARG:NH1	2.21	0.55
5:X:133:SER:OG	5:X:365:MET:HB2	2.07	0.55
2:H:442:VAL:HG12	2:H:443:ASP:H	1.71	0.55
1:G:118:ASP:OD1	1:G:119:GLY:N	2.38	0.55
3:I:1323:ALA:O	3:I:1328:THR:HG22	2.07	0.55
2:H:1268:GLN:O	3:I:346:ARG:HA	2.06	0.55
2:C:54:ARG:H	2:C:55:SER:CB	2.10	0.55
2:H:590:PRO:HB2	2:H:655:VAL:HG21	1.88	0.55
2:C:685:MET:CE	2:C:1235:LEU:HD11	2.36	0.55
2:C:942:ASP:HB2	2:C:1048:LYS:NZ	2.22	0.55
3:D:57:PHE:HB3	3:D:98:ARG:NH1	2.22	0.55
2:H:821:ARG:NE	2:H:1082:ILE:HD13	2.22	0.55
3:I:24:LEU:HD11	3:I:116:PHE:CZ	2.41	0.55
1:A:13:LEU:HD21	1:A:16:ILE:CD1	2.19	0.55
5:Y:469:GLN:HG2	5:Y:473:GLU:HB2	1.89	0.55
2:C:557:ARG:NH2	2:C:606:LEU:O	2.40	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:1261:LEU:CD2	3:D:1306:LEU:HD22	2.37	0.55
5:Y:138:PRO:CG	5:Y:353:LEU:HD21	2.37	0.55
3:I:66:LYS:HG3	3:I:69:GLU:OE2	2.07	0.55
2:C:1292:THR:OG1	2:C:1293:VAL:N	2.36	0.55
2:C:901:LEU:O	2:C:905:ILE:HG13	2.07	0.55
2:H:840:SER:HB3	2:H:850:ILE:HD11	1.89	0.55
1:G:62:ASP:OD1	1:G:143:ARG:NH1	2.38	0.55
4:E:59:ILE:HG23	4:E:64:LEU:HD21	1.89	0.55
2:H:177:ILE:HG13	2:H:183:TRP:CZ3	2.42	0.55
2:C:812:PHE:N	2:C:815:SER:HB2	2.22	0.54
3:D:803:VAL:HG22	3:D:1259:GLN:OE1	2.07	0.54
2:C:837:ALA:C	2:C:918:LEU:HD22	2.27	0.54
5:Y:148:TYR:OH	5:Y:218:ARG:HG2	2.07	0.54
2:H:403:MET:HG2	2:H:407:ARG:HH12	1.72	0.54
5:X:503:GLU:HB3	5:X:504:PRO:O	2.07	0.54
2:H:42:ASP:HB2	2:H:47:TYR:CD2	2.42	0.54
2:H:866:ASP:HA	2:H:872:TYR:CZ	2.42	0.54
5:Y:253:SER:O	5:Y:257:LYS:HG3	2.07	0.54
1:A:41:ASN:OD1	2:C:1218:GLY:HA3	2.06	0.54
3:D:395:LYS:HG3	5:X:536:THR:HG21	1.88	0.54
2:C:814:ASP:O	2:C:1074:GLY:HA2	2.07	0.54
3:I:807:LEU:HD23	3:I:1259:GLN:HG2	1.89	0.54
2:H:28:LEU:CD2	2:H:527:LYS:HD2	2.33	0.54
1:F:45:ARG:NE	1:G:38:THR:OG1	2.38	0.54
1:F:158:ARG:HB2	1:F:158:ARG:NH2	2.22	0.54
2:H:725:GLN:HE22	2:H:966:ILE:HD11	1.73	0.54
3:I:697:MET:SD	3:I:741:ALA:HB3	2.46	0.54
3:I:363:LEU:O	3:I:486:SER:OG	2.21	0.54
3:D:88:CYS:O	3:D:90:VAL:N	2.40	0.54
2:C:747:GLY:O	2:C:748:ILE:HG13	2.06	0.54
2:C:1298:VAL:HG23	2:C:1299:ASN:H	1.72	0.54
2:C:59:ILE:CD1	2:C:479:LEU:HD22	2.34	0.54
2:H:12:ARG:O	2:H:13:LYS:HG2	2.07	0.54
3:I:1257:VAL:HA	3:I:1260:MET:HB3	1.88	0.54
1:G:49:SER:HA	1:G:151:GLY:HA2	1.90	0.54
2:C:533:LEU:HD23	2:C:533:LEU:H	1.71	0.54
2:C:452:ARG:HH22	2:C:458:GLU:CD	2.10	0.54
2:H:1298:VAL:HG13	2:H:1321:GLU:HG3	1.88	0.54
2:H:752:ASN:O	2:H:753:LEU:HG	2.07	0.54
2:H:86:GLN:HA	2:H:140:GLY:HA2	1.89	0.54
2:C:224:PHE:CD2	2:C:347:ILE:HG21	2.43	0.54
1:A:192:VAL:O	1:A:194:GLN:N	2.40	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:1145:PHE:CD2	3:I:1256:ILE:HD11	2.41	0.54
2:H:59:ILE:HB	2:H:480:SER:OG	2.06	0.54
3:D:120:LEU:HG	5:X:46:GLN:NE2	2.22	0.54
3:D:554:GLU:HA	3:D:589:TYR:CD2	2.43	0.54
3:I:508:LEU:O	3:I:508:LEU:HD23	2.08	0.54
2:C:73:TYR:HA	2:C:98:VAL:HA	1.89	0.54
1:G:67:GLU:O	1:G:78:ILE:HB	2.07	0.54
3:I:347:VAL:HG23	3:I:350:SER:OG	2.07	0.54
2:C:539:THR:O	2:C:540:ARG:HG3	2.06	0.54
3:I:140:TYR:OH	3:I:312:ARG:NH1	2.39	0.54
4:E:5:THR:CA	4:E:6:VAL:CB	2.83	0.54
2:C:9:LYS:N	2:C:9:LYS:HD3	2.22	0.54
1:F:44:ARG:HG3	1:F:183:ILE:CG2	2.37	0.54
3:D:355:ILE:HG12	3:D:464:ASP:O	2.08	0.54
3:D:169:LEU:HD22	3:D:176:PHE:CE2	2.43	0.54
2:H:866:ASP:HA	2:H:872:TYR:OH	2.08	0.54
2:H:759:SER:HB3	2:H:763:THR:H	1.73	0.54
5:X:354:THR:HG23	5:X:357:GLN:HB3	1.89	0.54
2:C:898:GLU:HG3	5:X:565:ILE:HD11	1.90	0.54
3:D:152:THR:O	3:D:154:LEU:N	2.40	0.54
3:D:810:THR:OG1	3:D:811:GLU:N	2.39	0.54
2:C:1064:ASP:OD1	2:C:1239:VAL:HG23	2.08	0.54
3:I:369:PRO:HB2	3:I:372:MET:HB2	1.89	0.54
3:I:278:ARG:O	3:I:282:LEU:HG	2.08	0.54
3:D:621:ALA:HA	3:D:624:ILE:HG12	1.89	0.54
2:H:207:THR:HG21	2:H:351:LEU:HG	1.90	0.54
3:D:513:MET:O	3:D:575:GLY:HA3	2.08	0.54
2:H:434:ASP:HB3	2:H:439:LYS:HB2	1.89	0.54
1:A:100:LEU:HD21	1:A:121:VAL:CG2	2.30	0.54
3:D:501:VAL:CG2	3:D:602:SER:HB2	2.34	0.54
2:H:62:TYR:CD2	2:H:480:SER:HB3	2.39	0.54
3:I:108:ALA:HB3	3:I:279:LEU:HD12	1.90	0.54
2:H:1142:ARG:O	2:H:1146:GLN:HB2	2.08	0.54
2:C:1342:GLU:HG3	3:D:18:ASP:OD2	2.08	0.54
2:C:892:GLU:O	2:C:893:THR:OG1	2.21	0.54
4:E:15:ASN:OD1	4:E:17:PHE:HB2	2.08	0.54
3:D:422:LEU:HA	3:D:436:ALA:HA	1.90	0.54
3:D:864:LEU:CG	3:D:901:ARG:HH12	2.21	0.54
3:D:1221:LEU:HD23	3:D:1229:VAL:HG11	1.90	0.54
2:H:1313:HIS:CD2	3:I:474:LEU:HD23	2.43	0.54
1:F:79:LEU:O	1:F:83:LEU:HD13	2.08	0.54
3:D:1141:VAL:HG22	3:D:1240:VAL:HG21	1.88	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:943:LYS:O	2:H:947:GLU:HG2	2.07	0.54
2:H:1277:ALA:HB3	3:I:434:ILE:HD13	1.90	0.54
2:H:189:ASP:HB2	2:H:190:PRO:HD2	1.89	0.54
5:X:592:ALA:O	5:X:596:ARG:HG2	2.07	0.54
3:I:535:ARG:HB3	3:I:541:LEU:CD1	2.34	0.54
3:I:824:PRO:HD3	3:I:836:ARG:HE	1.73	0.54
3:I:19:ALA:CB	3:I:1343:GLU:HB3	2.38	0.54
2:H:819:SER:HB2	2:H:1085:MET:SD	2.48	0.54
2:C:344:GLY:HA3	2:C:346:TYR:CZ	2.43	0.54
5:X:357:GLN:NE2	5:X:360:ASP:OD2	2.40	0.54
2:H:468:LEU:O	2:H:471:VAL:HG22	2.08	0.54
2:H:101:ARG:HG3	2:H:118:LYS:H	1.73	0.54
5:Y:147:GLN:O	5:Y:151:VAL:HG23	2.08	0.54
2:C:873:ILE:HD11	2:C:931:VAL:HG22	1.89	0.54
3:D:125:GLY:O	3:D:129:ASP:N	2.41	0.54
3:D:864:LEU:HD21	3:D:901:ARG:HH22	1.71	0.54
3:I:546:ALA:N	3:I:547:ARG:CA	2.67	0.54
3:I:768:ASN:ND2	3:I:771:GLN:OE1	2.41	0.54
3:I:205:LEU:HD13	3:I:217:LEU:HD22	1.89	0.54
3:D:1138:LEU:HB3	3:D:1139:PRO:HD3	1.90	0.54
2:H:1086:PRO:HG2	2:H:1094:VAL:HG21	1.90	0.54
3:D:120:LEU:HB3	3:D:121:PRO:HD3	1.89	0.54
2:C:1212:LEU:CD1	2:C:1225:VAL:HG21	2.38	0.54
3:I:1194:ARG:N	3:I:1194:ARG:HD2	2.23	0.54
5:X:117:ILE:HG13	5:X:421:TYR:HB2	1.90	0.54
2:C:888:THR:HG23	2:C:916:SER:HB3	1.90	0.54
3:D:579:LEU:HD23	3:D:627:THR:HG21	1.89	0.54
2:H:1043:ALA:HB1	2:H:1044:PRO:HD2	1.89	0.54
3:D:1215:GLU:HB3	3:D:1220:ILE:HD11	1.89	0.54
3:D:797:THR:O	3:D:801:VAL:HG23	2.08	0.54
3:D:1301:THR:CG2	3:I:1301:THR:HG23	2.31	0.53
4:J:4:VAL:O	4:J:5:THR:OG1	2.24	0.53
3:D:518:VAL:HG23	3:D:716:GLN:OE1	2.08	0.53
3:D:709:ARG:O	3:D:711:GLY:N	2.41	0.53
2:C:1180:MET:HB3	2:C:1181:PRO:HA	1.88	0.53
3:I:264:ASP:OD2	3:I:324:LEU:HA	2.09	0.53
3:I:252:LEU:HD23	3:I:252:LEU:H	1.72	0.53
3:D:474:LEU:HA	3:D:477:GLN:HE21	1.72	0.53
1:B:14:VAL:HG13	1:B:28:LEU:CD2	2.37	0.53
5:X:17:LYS:N	5:X:18:GLU:HA	2.23	0.53
3:I:502:PRO:HB3	3:I:506:VAL:HG11	1.90	0.53
3:I:115:TRP:CE2	3:I:1329:THR:HG23	2.43	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:549:ASP:OD1	2:H:550:VAL:N	2.40	0.53
2:H:54:ARG:HG2	2:H:55:SER:CB	2.38	0.53
1:B:83:LEU:HD12	1:B:86:LYS:HD2	1.89	0.53
1:A:18:GLN:HE22	1:A:213:PRO:CG	2.11	0.53
1:A:318:LEU:O	1:A:320:ASN:N	2.37	0.53
3:I:1234:VAL:HA	3:I:1253:ILE:HG21	1.88	0.53
5:X:333:VAL:HG22	5:X:336:GLU:HB2	1.89	0.53
1:A:134:THR:HG21	2:C:727:VAL:HG23	1.90	0.53
1:F:31:LEU:HB2	1:F:199:ASP:O	2.08	0.53
2:C:681:MET:O	2:C:685:MET:HG2	2.08	0.53
3:D:260:PHE:O	5:X:504:PRO:HG2	2.08	0.53
2:H:639:LYS:HA	2:H:639:LYS:HE2	1.89	0.53
3:I:1241:TYR:HB3	3:I:1246:VAL:HG23	1.90	0.53
2:C:840:SER:CB	2:C:850:ILE:HD11	2.29	0.53
4:J:3:ARG:O	4:J:4:VAL:HG13	2.08	0.53
2:H:496:LYS:N	2:H:497:PRO:HD2	2.24	0.53
5:X:290:LEU:HD13	5:X:336:GLU:HB3	1.89	0.53
2:C:594:VAL:CG2	2:C:599:VAL:HG22	2.37	0.53
3:I:57:PHE:CE1	3:I:252:LEU:HD22	2.44	0.53
2:H:812:PHE:H	2:H:815:SER:HB2	1.74	0.53
5:X:365:MET:O	5:X:369:GLU:HG3	2.07	0.53
2:C:347:ILE:HD11	2:C:433:ILE:HD11	1.89	0.53
2:C:367:TYR:CD1	2:C:381:ALA:HA	2.43	0.53
1:A:255:ARG:HD3	1:A:259:ASP:OD2	2.08	0.53
5:X:374:ARG:HH21	5:X:377:LYS:HD2	1.72	0.53
3:I:422:LEU:HD11	3:I:469:HIS:HB2	1.89	0.53
2:C:12:ARG:O	2:C:13:LYS:HG2	2.09	0.53
3:D:33:TRP:O	3:D:102:MET:HB2	2.08	0.53
2:H:1287:LEU:HD23	3:I:1357:ILE:HG12	1.91	0.53
2:H:818:VAL:HG22	2:H:819:SER:H	1.73	0.53
2:C:975:ILE:HD13	2:C:975:ILE:O	2.08	0.53
3:D:1193:TRP:O	3:D:1194:ARG:HB2	2.08	0.53
3:I:544:LEU:HD13	3:I:719:PHE:CE1	2.43	0.53
2:C:1028:LYS:O	2:C:1032:LYS:HG2	2.08	0.53
1:A:79:LEU:O	1:A:83:LEU:HD13	2.08	0.53
4:J:48:VAL:O	4:J:52:ARG:HG3	2.07	0.53
5:X:271:ASN:O	5:X:275:VAL:HG23	2.07	0.53
3:D:1322:ALA:HB3	3:D:1331:VAL:HG21	1.90	0.53
3:I:1247:LYS:H	3:I:1247:LYS:CD	2.14	0.53
3:D:546:ALA:N	3:D:547:ARG:CA	2.68	0.53
1:F:9:LEU:O	1:G:227:GLN:NE2	2.42	0.53
2:H:994:ARG:HD3	2:H:994:ARG:N	2.24	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:190:ALA:HB2	1:F:200:LYS:CB	2.38	0.53
2:C:960:LEU:HD12	2:C:1032:LYS:HD3	1.89	0.53
3:I:930:LEU:HD11	3:I:1241:TYR:HE2	1.72	0.53
2:C:806:PRO:HD3	2:C:1100:PRO:HG3	1.90	0.53
3:D:1346:GLY:HA3	3:D:1349:GLU:OE2	2.09	0.53
3:D:1169:THR:HA	3:D:1173:ARG:HB3	1.91	0.53
3:I:1287:ILE:O	3:I:1291:GLU:HG2	2.07	0.53
2:H:896:THR:CG2	2:H:897:PRO:HD2	2.39	0.53
3:D:583:VAL:HG13	3:D:587:LEU:HD22	1.91	0.53
3:D:501:VAL:HG23	3:D:502:PRO:HD2	1.91	0.53
2:H:513:GLN:HA	6:H:1401:RFP:H373	1.90	0.53
2:H:1335:ILE:CD1	3:I:22:ILE:HD11	2.36	0.53
2:H:523:GLU:C	2:H:527:LYS:HE2	2.28	0.53
3:D:573:THR:HG23	3:D:576:ARG:H	1.73	0.53
3:D:40:LYS:HE3	3:D:42:GLU:HG3	1.90	0.53
2:C:1238:LEU:HD12	2:C:1239:VAL:O	2.08	0.53
2:C:699:LEU:HB2	2:C:799:ASN:ND2	2.24	0.53
5:Y:476:ARG:HD2	5:Y:476:ARG:H	1.72	0.53
3:I:918:ILE:HD13	3:I:919:ALA:N	2.23	0.53
3:I:606:ASN:OD1	3:I:610:ARG:NH1	2.40	0.53
2:H:122:VAL:HG23	2:H:490:GLN:HG3	1.91	0.53
2:H:828:PHE:CB	2:H:1060:ILE:HD13	2.35	0.53
2:C:590:PRO:HD3	2:C:605:TYR:HE1	1.72	0.53
1:A:183:ILE:CD1	1:A:205:MET:HG3	2.39	0.53
2:C:1065:LYS:NZ	3:D:462:ASP:O	2.35	0.53
2:C:618:GLN:HG2	2:C:637:ARG:NH2	2.23	0.53
5:Y:301:ASN:O	5:Y:305:LEU:HD13	2.08	0.53
3:D:367:GLY:HA3	3:D:448:GLN:HB2	1.91	0.53
3:D:905:ARG:NH2	4:E:10:VAL:HG11	2.20	0.53
3:D:583:VAL:CG1	3:D:584:PRO:HD2	2.38	0.53
2:H:522:SER:HA	2:H:525:THR:CG2	2.39	0.53
3:D:749:LYS:NZ	3:D:753:SER:HB2	2.23	0.53
2:H:632:ASP:O	2:H:633:LEU:HD23	2.09	0.53
3:D:1252:HIS:O	3:D:1256:ILE:HG23	2.09	0.53
2:C:1293:VAL:HG23	2:C:1301:ARG:HA	1.91	0.53
5:X:540:LEU:HD13	5:X:607:LEU:HG	1.91	0.53
2:C:810:TYR:CD2	3:D:359:PRO:HG2	2.44	0.53
2:C:67:GLU:HG2	2:C:103:VAL:CG1	2.38	0.53
2:H:528:ARG:HH22	2:H:663:VAL:CG2	2.22	0.53
3:I:222:LYS:HE2	3:I:1273:ASP:CG	2.30	0.53
5:Y:585:GLU:HB3	5:Y:589:GLN:NE2	2.21	0.53
2:C:149:LEU:HD12	2:C:452:ARG:O	2.09	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:X:123:ILE:O	5:X:127:ILE:HG12	2.09	0.53
5:X:11:LEU:HD22	5:X:15:ARG:NH2	2.24	0.53
3:D:654:ILE:HD13	3:D:760:THR:HB	1.90	0.53
1:G:88:LEU:HG	1:G:128:HIS:HD2	1.74	0.53
3:D:619:ILE:O	3:D:623:GLN:HG2	2.09	0.53
3:I:1176:VAL:HG22	3:I:1189:MET:SD	2.49	0.53
2:H:57:PHE:CE2	2:H:472:GLU:HG3	2.44	0.53
2:H:488:MET:HE3	2:H:491:ASP:H	1.74	0.53
3:I:858:VAL:HB	3:I:859:PRO:CD	2.25	0.53
3:D:227:PHE:O	3:D:230:SER:OG	2.22	0.53
3:I:423:LEU:HB3	3:I:466:MET:CE	2.38	0.53
2:H:514:PHE:HB2	6:H:1401:RFP:O8	2.09	0.53
2:H:516:ASP:HB2	6:H:1401:RFP:C32	2.39	0.53
2:H:522:SER:HA	2:H:525:THR:HG22	1.89	0.53
3:I:263:SER:HB2	5:Y:507:MET:HE2	1.91	0.53
3:D:1347:LEU:O	3:D:1351:VAL:HG23	2.08	0.53
1:F:50:SER:HB3	1:G:8:PHE:CZ	2.44	0.53
3:I:451:PRO:HG2	3:I:625:MET:SD	2.49	0.53
5:X:600:HIS:H	5:X:601:PRO:CD	2.21	0.53
3:D:58:CYS:SG	3:D:61:ILE:HG13	2.49	0.53
5:Y:130:VAL:O	5:Y:134:VAL:HG23	2.09	0.53
3:D:620:PHE:O	3:D:624:ILE:HG23	2.09	0.53
3:D:1322:ALA:HB1	3:D:1326:GLN:NE2	2.24	0.53
1:B:48:LEU:HD22	3:D:534:GLU:HG3	1.90	0.53
3:D:1266:ILE:HG13	3:D:1274:PHE:O	2.09	0.53
2:C:828:PHE:HB2	2:C:1060:ILE:HD13	1.91	0.53
2:H:88:ARG:NH2	2:H:1040:ASP:OD1	2.42	0.53
5:X:453:PRO:HD2	5:X:456:MET:HB2	1.90	0.53
5:Y:355:ILE:O	5:Y:355:ILE:HD13	2.09	0.53
2:H:27:LEU:HD22	2:H:528:ARG:NH2	2.23	0.52
3:I:1347:LEU:CD2	3:I:1358:PRO:HG2	2.38	0.52
2:H:21:VAL:HG13	2:H:22:LEU:N	2.22	0.52
3:I:19:ALA:HB1	3:I:1343:GLU:HB3	1.91	0.52
2:C:92:TYR:HE1	2:C:129:LEU:HD12	1.73	0.52
3:I:515:ARG:HH22	3:I:717:VAL:C	2.12	0.52
2:C:384:LEU:O	2:C:388:LEU:HG	2.09	0.52
1:G:102:LEU:HB3	1:G:142:MET:HG2	1.90	0.52
2:C:943:LYS:O	2:C:947:GLU:HG2	2.09	0.52
2:H:1339:LEU:H	2:H:1339:LEU:HD12	1.73	0.52
1:G:33:ARG:NH1	2:H:820:GLU:OE2	2.43	0.52
3:I:169:LEU:HD13	3:I:173:GLY:HA2	1.90	0.52
1:A:11:PRO:HB3	1:A:31:LEU:HD21	1.91	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:538:LEU:CD2	2:C:547:VAL:HG11	2.39	0.52
3:I:316:ILE:N	3:I:316:ILE:HD13	2.25	0.52
2:H:494:ASN:OD1	2:H:495:ALA:N	2.42	0.52
3:I:797:THR:O	3:I:801:VAL:HG23	2.08	0.52
2:C:706:ARG:HA	2:C:792:GLY:O	2.09	0.52
2:C:1081:PRO:CB	2:C:1083:GLU:HG2	2.39	0.52
2:C:68:LEU:HD22	2:C:475:VAL:HG21	1.90	0.52
3:I:1290:ARG:HD2	3:I:1299:GLY:HA3	1.90	0.52
2:H:1252:SER:HB3	2:H:1259:LEU:HD21	1.92	0.52
2:C:1335:ILE:CD1	3:D:22:ILE:HD11	2.37	0.52
3:D:279:LEU:HD21	3:D:296:LYS:HG2	1.91	0.52
4:E:31:GLN:HB2	4:E:46:THR:HG21	1.91	0.52
3:I:681:LYS:NZ	3:I:681:LYS:HB2	2.25	0.52
1:G:98:VAL:HG11	1:G:121:VAL:HG22	1.91	0.52
3:D:436:ALA:HB3	3:D:485:MET:HA	1.91	0.52
2:C:1066:MET:HG3	2:C:1234:LYS:HA	1.89	0.52
3:I:545:HIS:CE1	3:I:574:VAL:HG21	2.45	0.52
2:H:684:ASN:HB3	2:H:687:ARG:HH12	1.75	0.52
3:I:1256:ILE:O	3:I:1260:MET:HB2	2.09	0.52
2:C:1153:ALA:CB	2:C:1194:GLU:HG2	2.39	0.52
2:C:1281:TYR:O	3:D:483:LEU:HD23	2.10	0.52
2:C:1223:ARG:HG3	2:C:1224:PRO:HD2	1.91	0.52
5:X:120:ALA:HB3	5:X:421:TYR:HB3	1.91	0.52
5:X:141:ILE:HG13	5:X:256:PHE:CD1	2.45	0.52
2:H:691:PRO:HA	2:H:788:SER:OG	2.09	0.52
2:C:988:LYS:O	2:C:991:LYS:HE3	2.09	0.52
5:Y:493:LYS:O	5:Y:497:VAL:HG23	2.10	0.52
1:F:67:GLU:O	1:F:78:ILE:HB	2.10	0.52
1:B:83:LEU:CD1	3:D:527:LEU:HA	2.27	0.52
3:D:185:ILE:HG22	3:D:238:ILE:HD13	1.91	0.52
2:C:699:LEU:H	2:C:799:ASN:HD21	1.56	0.52
5:Y:600:HIS:H	5:Y:601:PRO:CD	2.22	0.52
1:B:74:VAL:HG12	1:B:76:GLU:H	1.75	0.52
4:J:60:ASN:H	4:J:63:ILE:CG1	2.23	0.52
3:I:1264:ALA:HB1	3:I:1303:SER:O	2.09	0.52
2:H:119:GLU:HG2	2:H:120:GLN:N	2.25	0.52
2:C:840:SER:HB3	2:C:850:ILE:CD1	2.29	0.52
2:H:131:THR:HG22	2:H:135:THR:N	2.25	0.52
2:C:31:GLN:HG3	2:C:130:MET:HE1	1.92	0.52
3:D:20:ILE:HD13	3:D:1320:ILE:HD11	1.92	0.52
3:I:513:MET:HE2	3:I:579:LEU:HB2	1.91	0.52
3:D:423:LEU:O	3:D:434:ILE:HA	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:13:LYS:HA	3:D:13:LYS:HZ3	1.74	0.52
2:C:299:LYS:HE3	2:C:334:GLU:OE1	2.10	0.52
2:C:1313:HIS:CD2	3:D:474:LEU:HD23	2.45	0.52
1:A:22:THR:HB	1:A:207:THR:O	2.09	0.52
1:A:236:ASP:HA	1:B:14:VAL:HB	1.90	0.52
1:G:64:VAL:CG1	1:G:171:LEU:HD11	2.40	0.52
5:Y:600:HIS:HB2	5:Y:601:PRO:HD3	1.91	0.52
3:I:1329:THR:O	3:I:1333:THR:OG1	2.19	0.52
3:D:701:LEU:HD21	3:D:723:TYR:HB2	1.90	0.52
2:C:1319:MET:HE3	2:C:1324:ASN:HB2	1.90	0.52
1:A:285:THR:O	1:A:289:LEU:HG	2.09	0.52
2:C:1120:ALA:HB1	2:C:1198:LEU:HB3	1.92	0.52
5:X:132:CYS:SG	5:X:257:LYS:HD2	2.50	0.52
3:I:846:GLU:HA	3:I:858:VAL:HA	1.92	0.52
3:I:425:ARG:NH2	3:I:464:ASP:OD2	2.42	0.52
3:I:807:LEU:O	3:I:807:LEU:HD12	2.10	0.52
3:D:292:VAL:HG22	3:D:296:LYS:HE3	1.92	0.52
2:H:1210:ILE:HG23	2:H:1211:ARG:HH11	1.73	0.52
5:Y:240:ARG:HD3	5:Y:244:THR:CB	2.39	0.52
3:I:856:ILE:HG13	3:I:857:LEU:O	2.09	0.52
1:B:19:VAL:O	1:B:20:SER:HB3	2.09	0.52
2:C:989:LEU:HG	2:C:990:ASP:H	1.75	0.52
3:I:864:LEU:HD11	3:I:901:ARG:NH1	2.18	0.52
3:D:573:THR:CG2	3:D:576:ARG:HG3	2.36	0.52
2:H:1223:ARG:HG3	2:H:1224:PRO:HD2	1.90	0.52
2:C:533:LEU:HG	6:C:1401:RFP:H141	1.92	0.52
2:H:1234:LYS:HE2	2:H:1238:LEU:HD22	1.91	0.52
2:H:106:GLU:HG2	2:H:109:ALA:H	1.75	0.52
2:H:1186:VAL:HG13	2:H:1187:PHE:N	2.25	0.52
2:C:1304:MET:CE	2:C:1308:ILE:HD11	2.40	0.52
2:C:1066:MET:HG2	2:C:1232:MET:HE2	1.92	0.52
5:Y:324:LYS:HB3	5:Y:325:PRO:HD2	1.92	0.52
2:H:902:LEU:HD21	5:Y:608:ARG:HG3	1.91	0.52
5:X:277:MET:HE1	5:X:359:LYS:HE2	1.91	0.52
2:H:395:TYR:CE2	2:H:420:LEU:HG	2.45	0.52
2:H:1180:MET:HB3	2:H:1181:PRO:C	2.30	0.52
3:I:355:ILE:HA	3:I:447:ILE:HG23	1.92	0.52
3:I:474:LEU:HB3	4:J:28:ARG:HH21	1.74	0.52
5:Y:401:PHE:O	5:Y:405:ILE:HG23	2.09	0.52
2:C:685:MET:HE3	2:C:1235:LEU:HD11	1.92	0.52
3:I:643:ASP:O	3:I:720:ASN:ND2	2.19	0.52
2:H:105:TYR:CD1	2:H:106:GLU:HB2	2.44	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:1204:LEU:HD22	2:C:1205:PRO:HD2	1.92	0.52
3:I:492:SER:HB2	3:I:499:ILE:HB	1.91	0.52
3:D:58:CYS:SG	3:D:60:ARG:N	2.83	0.52
3:D:807:LEU:O	3:D:807:LEU:HD12	2.10	0.52
5:X:459:THR:O	5:X:463:LEU:HD13	2.09	0.52
2:H:1341:ASP:HB2	2:H:1342:GLU:OE1	2.10	0.52
3:D:143:SER:HB2	5:X:100:MET:CE	2.39	0.52
1:G:31:LEU:HB2	1:G:199:ASP:O	2.10	0.52
3:D:24:LEU:H	3:D:232:ASN:ND2	2.07	0.52
2:C:311:CYS:SG	2:C:315:MET:HB2	2.50	0.52
2:C:130:MET:SD	2:C:134:GLY:HA2	2.50	0.52
2:H:1180:MET:HB3	2:H:1181:PRO:O	2.09	0.52
3:I:227:PHE:HE1	3:I:234:PRO:HD3	1.75	0.52
3:D:1366:HIS:O	3:D:1370:MET:HB2	2.09	0.52
3:I:50:LYS:HG2	3:I:51:PRO:CD	2.40	0.52
5:Y:298:PRO:HB2	5:Y:301:ASN:HD22	1.75	0.52
5:X:551:LEU:HD22	5:X:597:LYS:HD2	1.90	0.52
3:D:428:THR:HG23	3:D:433:GLY:HA3	1.91	0.52
3:I:526:VAL:HG12	3:I:549:LYS:HB2	1.92	0.52
3:D:789:LYS:HD2	3:D:932:MET:SD	2.49	0.51
3:D:449:LEU:HD12	3:D:450:HIS:H	1.75	0.51
3:D:1171:GLY:N	3:D:1172:LYS:O	2.41	0.51
1:A:130:ILE:HG22	1:A:131:CYS:SG	2.50	0.51
2:H:1200:LYS:HE2	2:H:1206:THR:HB	1.92	0.51
5:Y:213:ASP:HB2	5:Y:216:LEU:CB	2.39	0.51
5:X:224:LEU:HB2	5:X:259:PHE:CZ	2.45	0.51
3:D:370:LYS:HG3	3:D:371:LYS:H	1.74	0.51
3:I:428:THR:HG23	3:I:433:GLY:HA3	1.91	0.51
1:A:13:LEU:HD11	1:A:16:ILE:CG1	2.40	0.51
1:B:153:VAL:O	1:B:175:ALA:N	2.42	0.51
5:X:35:ILE:HG23	5:X:36:VAL:HG13	1.92	0.51
3:D:1269:ALA:N	3:D:1300:ALA:HB2	2.20	0.51
3:D:506:VAL:HG23	3:D:628:GLY:HA3	1.91	0.51
5:Y:585:GLU:O	5:Y:589:GLN:N	2.40	0.51
3:I:161:THR:HG22	3:I:162:GLU:H	1.75	0.51
3:I:42:GLU:HG3	5:Y:451:ARG:HH21	1.74	0.51
3:I:450:HIS:NE2	3:I:625:MET:SD	2.84	0.51
5:Y:290:LEU:O	5:Y:294:GLN:HB3	2.10	0.51
3:D:66:LYS:HB2	3:D:69:GLU:HG2	1.91	0.51
1:B:77:ASP:O	1:B:81:ILE:HG13	2.09	0.51
2:H:342:ASP:HA	2:H:437:ASN:HB3	1.91	0.51
1:A:282:VAL:CG2	1:A:316:MET:HE2	2.40	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:886:LYS:HD3	2:H:916:SER:O	2.09	0.51
2:C:1259:LEU:HD12	2:C:1260:GLY:N	2.25	0.51
2:H:53:PHE:HA	2:H:56:VAL:CG2	2.40	0.51
2:C:926:GLY:CA	2:C:1056:VAL:HG12	2.38	0.51
1:A:180:VAL:CG1	1:A:183:ILE:HG12	2.40	0.51
3:D:930:LEU:HD11	3:D:1241:TYR:HE2	1.74	0.51
3:D:369:PRO:HG3	3:D:446:ALA:O	2.10	0.51
5:Y:119:ILE:O	5:Y:123:ILE:HG13	2.09	0.51
3:D:918:ILE:HD13	3:D:919:ALA:N	2.26	0.51
2:H:992:LEU:HD23	2:H:996:ARG:HG3	1.93	0.51
2:C:1161:LEU:HD23	2:C:1164:PHE:CD1	2.46	0.51
3:I:147:ILE:HG23	3:I:156:ARG:C	2.30	0.51
1:A:244:GLU:HB2	1:A:246:LYS:NZ	2.24	0.51
2:C:560:PRO:HB2	3:D:776:THR:OG1	2.10	0.51
2:C:67:GLU:HG2	2:C:103:VAL:HG12	1.91	0.51
3:D:139:LEU:HD13	3:D:140:TYR:HB3	1.91	0.51
2:H:1293:VAL:HG21	2:H:1304:MET:CB	2.40	0.51
2:H:1180:MET:HB3	2:H:1181:PRO:HA	1.92	0.51
2:H:818:VAL:HG22	2:H:819:SER:N	2.26	0.51
3:I:413:ASP:HA	3:I:416:ILE:HD12	1.91	0.51
3:I:700:ASN:O	3:I:704:GLU:HG2	2.10	0.51
3:I:664:ILE:HD12	3:I:681:LYS:HE3	1.91	0.51
2:C:905:ILE:HG12	5:X:595:LEU:HD22	1.90	0.51
1:A:190:ALA:HB2	1:A:200:LYS:HB3	1.92	0.51
3:I:1138:LEU:HB3	3:I:1139:PRO:HD3	1.92	0.51
3:I:778:GLY:HA2	3:I:781:LYS:HE3	1.92	0.51
2:C:42:ASP:O	2:C:44:GLU:HG2	2.10	0.51
1:G:124:VAL:HG11	1:G:209:GLY:CA	2.34	0.51
3:D:412:LEU:O	3:D:416:ILE:HD12	2.10	0.51
3:D:1261:LEU:HD21	3:D:1306:LEU:CD2	2.40	0.51
2:C:149:LEU:HD23	2:C:451:ARG:HE	1.75	0.51
1:A:118:ASP:OD1	1:A:119:GLY:N	2.44	0.51
3:I:1156:LEU:HA	3:I:1208:ASP:O	2.10	0.51
2:C:496:LYS:N	2:C:497:PRO:HD2	2.24	0.51
5:X:35:ILE:HG23	5:X:36:VAL:N	2.25	0.51
2:H:1314:GLN:HG3	4:J:28:ARG:HH12	1.73	0.51
2:C:720:ARG:HE	2:C:736:VAL:CG2	2.23	0.51
3:D:48:THR:OG1	3:D:50:LYS:NZ	2.44	0.51
3:D:363:LEU:HA	3:D:450:HIS:CE1	2.46	0.51
5:X:213:ASP:HB2	5:X:216:LEU:HB2	1.92	0.51
2:C:848:GLU:HG2	2:C:888:THR:HA	1.92	0.51
2:C:518:ASN:OD1	2:C:1236:ASN:ND2	2.43	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:919:ALA:O	3:I:923:ILE:HG12	2.11	0.51
1:G:22:THR:HB	1:G:207:THR:O	2.10	0.51
2:C:667:LEU:HD11	2:C:708:VAL:HG21	1.92	0.51
2:H:157:PHE:CZ	2:H:431:LYS:HD3	2.46	0.51
3:D:886:VAL:HG13	3:D:1230:THR:HG21	1.92	0.51
2:H:829:THR:HG22	2:H:1059:ARG:HG2	1.92	0.51
3:D:1247:LYS:CD	3:D:1247:LYS:H	2.15	0.51
2:C:660:VAL:HG22	2:C:661:VAL:N	2.22	0.51
3:D:611:ILE:HG13	3:D:612:LEU:CD2	2.40	0.51
2:C:92:TYR:CE1	2:C:129:LEU:HB2	2.46	0.51
2:C:1290:MET:SD	2:C:1294:LYS:HD3	2.51	0.51
2:H:1187:PHE:HZ	3:I:772:TYR:HD2	1.57	0.51
3:D:422:LEU:HD12	3:D:469:HIS:HB2	1.92	0.51
3:D:813:ASP:HA	3:D:895:CYS:SG	2.51	0.51
3:I:762:ASN:OD1	3:I:764:ARG:HB3	2.10	0.51
2:C:866:ASP:HA	2:C:872:TYR:OH	2.11	0.51
3:D:545:HIS:CE1	3:D:574:VAL:HG21	2.46	0.51
2:H:516:ASP:HB2	6:H:1401:RFP:H322	1.92	0.51
3:I:217:LEU:O	3:I:221:ILE:HG12	2.10	0.51
1:A:14:VAL:HG21	1:A:29:GLU:HB2	1.92	0.51
5:Y:240:ARG:HH11	5:Y:244:THR:HG21	1.76	0.51
3:I:678:ARG:HA	3:I:681:LYS:CG	2.41	0.51
3:I:856:ILE:HA	3:I:860:ARG:HH21	1.75	0.51
1:A:41:ASN:HD21	2:C:1218:GLY:CA	2.24	0.51
5:Y:598:LEU:O	5:Y:599:ARG:HD2	2.11	0.51
2:C:639:LYS:HA	2:C:639:LYS:HE2	1.93	0.51
2:H:9:LYS:HD3	2:H:9:LYS:N	2.25	0.51
5:Y:231:THR:HB	5:Y:252:LEU:HD22	1.92	0.51
2:H:1301:ARG:HG3	2:H:1302:THR:N	2.26	0.51
5:X:240:ARG:HD3	5:X:244:THR:CG2	2.41	0.51
4:J:38:LEU:HD13	4:J:58:LEU:CD2	2.38	0.51
2:C:49:LEU:HD11	2:C:464:PHE:CG	2.46	0.51
3:D:930:LEU:HA	3:D:1244:GLN:OE1	2.10	0.51
2:C:1043:ALA:HB1	2:C:1044:PRO:HD2	1.93	0.51
2:C:221:LEU:HD13	2:C:298:ALA:HA	1.92	0.51
3:I:147:ILE:HD12	3:I:178:ALA:HB2	1.93	0.51
3:D:1194:ARG:N	3:D:1194:ARG:HD2	2.26	0.51
2:C:542:ARG:O	2:C:544:GLY:N	2.39	0.51
3:I:390:LEU:HD12	3:I:390:LEU:N	2.26	0.51
2:H:99:LYS:N	2:H:99:LYS:HD3	2.26	0.51
5:Y:271:ASN:O	5:Y:275:VAL:HG23	2.11	0.51
2:H:453:ILE:HG23	2:H:453:ILE:O	2.11	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:1103:VAL:N	2:C:1104:PRO:HD2	2.26	0.51
2:H:1314:GLN:O	3:I:473:THR:HG23	2.11	0.51
2:C:590:PRO:O	2:C:659:GLN:NE2	2.44	0.51
3:I:800:LEU:O	3:I:803:VAL:HG12	2.11	0.51
2:H:741:MET:N	2:H:741:MET:SD	2.83	0.51
1:A:180:VAL:HG11	1:A:183:ILE:HG12	1.92	0.51
3:D:640:GLY:N	3:D:643:ASP:OD2	2.43	0.51
2:H:82:VAL:HB	2:H:92:TYR:CE2	2.45	0.51
5:X:442:SER:HG	5:X:446:GLN:HE21	1.58	0.51
3:D:588:PRO:HG2	3:D:591:ILE:HD11	1.92	0.51
3:I:33:TRP:O	3:I:102:MET:HB2	2.11	0.51
2:C:227:LYS:NZ	2:C:334:GLU:OE2	2.36	0.51
3:I:932:MET:O	3:I:933:ARG:HG3	2.10	0.51
3:D:136:GLU:HA	3:D:139:LEU:HD12	1.94	0.50
1:A:317:ARG:C	1:A:318:LEU:HD13	2.31	0.50
3:I:205:LEU:CD2	3:I:217:LEU:HD22	2.36	0.50
1:B:227:GLN:O	1:B:228:LEU:HG	2.10	0.50
2:C:1105:SER:HB2	3:D:731:ARG:HD3	1.93	0.50
5:Y:513:ASP:N	5:Y:517:SER:OG	2.45	0.50
2:C:106:GLU:HB3	2:C:107:ARG:HA	1.92	0.50
2:C:1289:GLU:HG3	2:C:1290:MET:N	2.25	0.50
2:H:105:TYR:HA	2:H:106:GLU:HB2	1.93	0.50
2:H:607:SER:N	2:H:610:GLU:HB2	2.26	0.50
3:D:835:LEU:HD22	3:D:1242:ARG:NH1	2.25	0.50
3:D:179:LYS:HD3	3:D:179:LYS:H	1.76	0.50
2:H:998:LEU:O	2:H:998:LEU:HD13	2.11	0.50
1:A:71:LYS:HB3	1:A:74:VAL:HG21	1.92	0.50
2:C:166:SER:O	2:C:168:GLY:N	2.36	0.50
2:C:478:ARG:HD3	2:C:492:MET:HG3	1.92	0.50
3:D:803:VAL:HG13	3:D:1259:GLN:NE2	2.14	0.50
4:E:5:THR:HB	4:E:7:GLN:N	2.27	0.50
5:Y:262:VAL:HG13	5:Y:263:PRO:CD	2.35	0.50
2:C:38:PHE:HE2	2:C:49:LEU:HD12	1.77	0.50
2:H:518:ASN:OD1	2:H:1236:ASN:ND2	2.44	0.50
2:C:564:PRO:HA	2:C:684:ASN:ND2	2.23	0.50
2:C:189:ASP:HB2	2:C:190:PRO:HD2	1.94	0.50
3:D:242:LEU:HD12	3:D:243:PRO:HD2	1.92	0.50
3:I:1159:ILE:HD12	3:I:1186:TYR:CE2	2.42	0.50
3:I:27:PRO:HD3	3:I:236:TRP:CE3	2.46	0.50
5:Y:113:ARG:O	5:Y:117:ILE:HD13	2.11	0.50
2:H:1204:LEU:HD22	2:H:1205:PRO:HD2	1.94	0.50
2:C:550:VAL:HG11	3:D:776:THR:HG23	1.93	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:880:GLY:H	2:C:920:VAL:HG13	1.77	0.50
5:Y:515:GLU:HA	5:Y:516:ASP:CB	2.40	0.50
2:C:643:SER:C	2:C:644:LEU:HD12	2.31	0.50
2:C:689:ALA:HB2	2:C:1233:LEU:HD22	1.94	0.50
2:H:166:SER:O	2:H:168:GLY:N	2.41	0.50
2:C:676:ALA:HB2	3:D:772:TYR:CE1	2.46	0.50
3:I:473:THR:HG22	3:I:475:GLU:HG2	1.91	0.50
2:C:21:VAL:HG13	2:C:22:LEU:N	2.26	0.50
3:I:1148:ARG:NH2	3:I:1148:ARG:HB2	2.27	0.50
5:X:384:LEU:O	5:X:384:LEU:HD13	2.11	0.50
3:D:1320:ILE:HG22	3:D:1352:ILE:CD1	2.38	0.50
3:D:412:LEU:O	3:D:416:ILE:HG23	2.11	0.50
5:Y:138:PRO:HD2	5:Y:353:LEU:HD11	1.94	0.50
1:A:158:ARG:HE	1:A:172:LEU:CD1	2.24	0.50
4:J:15:ASN:HD21	4:J:17:PHE:HB2	1.76	0.50
1:A:82:LEU:HD11	1:A:171:LEU:HD13	1.93	0.50
3:D:161:THR:HG22	3:D:162:GLU:H	1.75	0.50
1:A:248:GLU:OE1	1:A:248:GLU:N	2.43	0.50
2:C:1295:SER:HB2	3:D:347:VAL:HG12	1.93	0.50
2:C:1116:HIS:HE1	2:C:1226:THR:HG23	1.74	0.50
1:A:151:GLY:O	1:A:153:VAL:HG23	2.11	0.50
2:H:151:ARG:HH22	2:H:175:ARG:HH11	1.60	0.50
3:D:778:GLY:HA2	3:D:781:LYS:HE3	1.92	0.50
3:D:610:ARG:HG2	3:D:864:LEU:HD22	1.91	0.50
3:D:583:VAL:HG13	3:D:584:PRO:HD2	1.94	0.50
1:F:195:ARG:HH21	1:F:198:LEU:HD21	1.76	0.50
2:C:839:VAL:HG22	2:C:1049:ILE:CG2	2.41	0.50
3:I:58:CYS:SG	3:I:61:ILE:N	2.71	0.50
1:A:54:CYS:SG	1:A:148:ARG:HD3	2.51	0.50
2:H:517:GLN:HE21	2:H:760:ASN:H	1.60	0.50
2:C:714:VAL:CG2	2:C:787:PRO:HD2	2.41	0.50
1:B:149:GLY:HA3	1:B:177:TYR:CD2	2.47	0.50
3:D:1226:VAL:HG11	3:I:1292:LEU:HA	1.92	0.50
2:H:13:LYS:NZ	2:H:793:GLU:OE1	2.41	0.50
2:H:513:GLN:HA	6:H:1401:RFP:C37	2.42	0.50
2:C:557:ARG:NH1	2:C:611:GLU:OE1	2.40	0.50
3:I:590:SER:O	3:I:594:GLN:N	2.44	0.50
3:D:197:GLU:O	3:D:201:LEU:HD23	2.12	0.50
4:J:16:ARG:O	4:J:19:LEU:HB3	2.11	0.50
5:X:244:THR:HA	5:X:247:GLU:HG3	1.94	0.50
5:Y:402:LEU:O	5:Y:406:GLN:HB2	2.11	0.50
1:A:183:ILE:HD11	1:A:205:MET:HG3	1.92	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:932:MET:HB3	3:D:1139:PRO:HG2	1.93	0.50
3:D:52:GLU:OE1	5:X:451:ARG:HD2	2.11	0.50
1:G:191:ARG:NH2	3:I:441:LEU:O	2.44	0.50
3:I:265:LEU:HD11	3:I:330:MET:SD	2.51	0.50
2:H:944:ARG:HD3	2:H:944:ARG:O	2.11	0.50
5:X:17:LYS:HB3	5:X:17:LYS:NZ	2.25	0.50
3:D:356:THR:O	3:D:448:GLN:HA	2.11	0.50
3:D:534:GLU:O	3:D:538:ARG:HB2	2.11	0.50
1:B:18:GLN:C	1:B:20:SER:H	2.14	0.50
3:D:813:ASP:OD1	3:D:896:ALA:HB3	2.12	0.50
1:G:41:ASN:OD1	2:H:1217:THR:HA	2.12	0.50
2:C:356:THR:HG21	2:C:362:ALA:HA	1.94	0.50
2:H:487:LEU:HB3	2:H:488:MET:HG3	1.94	0.50
3:I:474:LEU:HA	3:I:477:GLN:NE2	2.21	0.50
2:H:524:ILE:HA	2:H:527:LYS:CD	2.41	0.50
3:D:30:ILE:HD12	3:D:243:PRO:HG3	1.94	0.50
2:C:611:GLU:HG3	2:C:616:ILE:HD11	1.93	0.50
1:A:104:LYS:HD3	1:A:105:SER:N	2.26	0.50
3:D:1295:ASN:O	3:D:1298:VAL:HG12	2.12	0.50
1:B:218:ARG:NH1	1:B:222:THR:OG1	2.44	0.50
5:X:8:GLN:HE21	5:X:32:PRO:CD	2.25	0.50
2:C:954:LYS:HE3	2:C:958:LYS:HE2	1.94	0.50
2:C:841:ARG:HH12	3:D:256:ASP:HB3	1.74	0.50
3:I:260:PHE:O	5:Y:504:PRO:HG2	2.12	0.50
3:D:374:LEU:HD22	3:D:381:ILE:CD1	2.42	0.50
3:D:824:PRO:O	3:D:826:ILE:HG13	2.12	0.50
1:A:104:LYS:HD2	1:A:110:VAL:HG22	1.93	0.50
3:I:1157:ALA:O	3:I:1207:GLY:N	2.45	0.50
2:H:629:PHE:H	2:H:647:ARG:HH22	1.59	0.50
3:I:50:LYS:HZ2	3:I:50:LYS:HB3	1.76	0.50
5:Y:99:ARG:HD3	5:Y:99:ARG:O	2.12	0.50
3:D:401:VAL:HG12	3:D:408:VAL:HG21	1.92	0.50
3:I:810:THR:OG1	3:I:811:GLU:N	2.41	0.50
3:D:533:ALA:HB2	3:D:578:ILE:HD13	1.93	0.50
4:E:4:VAL:O	4:E:5:THR:OG1	2.23	0.50
2:H:22:LEU:HB3	2:H:655:VAL:CG1	2.42	0.50
2:H:1045:GLY:O	2:H:1046:VAL:HB	2.12	0.50
3:I:720:ASN:O	3:I:720:ASN:ND2	2.45	0.50
2:H:11:ILE:HG21	2:H:697:LYS:HZ2	1.77	0.50
3:D:552:ILE:HG12	3:D:590:SER:OG	2.12	0.50
3:D:841:GLY:HA2	3:D:901:ARG:HD3	1.93	0.49
3:I:600:ALA:CA	3:I:603:LYS:HB3	2.38	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:217:LEU:O	3:D:221:ILE:HG12	2.12	0.49
2:H:681:MET:HE3	2:H:1073:LYS:HE3	1.93	0.49
3:D:128:LEU:HD11	3:D:188:LEU:CD2	2.37	0.49
3:D:279:LEU:HD21	3:D:296:LYS:CG	2.42	0.49
3:I:514:THR:HG21	3:I:595:ALA:O	2.12	0.49
3:D:899:TYR:O	3:D:1251:LYS:HD3	2.11	0.49
3:D:1177:ILE:HG13	3:D:1190:ILE:HD13	1.94	0.49
2:H:671:LEU:HD23	2:H:1186:VAL:CG2	2.42	0.49
5:X:115:GLY:O	5:X:119:ILE:HG12	2.11	0.49
2:H:1028:LYS:O	2:H:1032:LYS:HG2	2.12	0.49
5:X:598:LEU:O	5:X:599:ARG:HD2	2.11	0.49
3:I:116:PHE:HB3	3:I:237:MET:CE	2.42	0.49
2:H:47:TYR:CD1	2:H:70:TYR:HE2	2.30	0.49
4:J:60:ASN:H	4:J:63:ILE:HB	1.77	0.49
5:X:541:ARG:O	5:X:545:HIS:HB2	2.12	0.49
3:I:899:TYR:CE2	3:I:1251:LYS:HD2	2.47	0.49
3:I:1348:LYS:O	3:I:1352:ILE:HG12	2.12	0.49
3:I:1270:GLY:HA2	3:I:1298:VAL:C	2.32	0.49
3:I:545:HIS:HB2	3:I:546:ALA:CB	2.41	0.49
2:H:1255:THR:O	2:H:1257:GLN:N	2.42	0.49
5:Y:402:LEU:HA	5:Y:405:ILE:HG12	1.94	0.49
2:C:487:LEU:HD13	2:C:488:MET:H	1.75	0.49
2:H:1146:GLN:NE2	2:H:1160:ASP:HB2	2.27	0.49
2:C:891:GLY:O	2:C:893:THR:HG23	2.12	0.49
1:A:244:GLU:HB2	1:A:246:LYS:CE	2.41	0.49
3:I:58:CYS:SG	3:I:60:ARG:N	2.85	0.49
3:D:435:GLN:HB2	3:D:457:TYR:OH	2.12	0.49
3:D:539:SER:OG	3:D:540:GLY:N	2.45	0.49
3:I:293:ARG:NH1	5:Y:104:GLU:HB2	2.27	0.49
2:H:10:ARG:HE	2:H:1171:ARG:HE	1.61	0.49
1:A:18:GLN:NE2	1:A:213:PRO:HG2	2.11	0.49
2:C:559:CYS:SG	2:C:661:VAL:HA	2.52	0.49
3:D:1155:ILE:O	3:D:1156:LEU:HD23	2.13	0.49
3:D:128:LEU:HD21	3:D:188:LEU:HD13	1.93	0.49
3:I:589:TYR:O	3:I:591:ILE:HG13	2.12	0.49
3:D:105:ILE:CD1	3:D:273:ILE:HD11	2.41	0.49
2:H:1087:TYR:CE2	2:H:1215:GLY:HA2	2.43	0.49
3:D:527:LEU:HD12	3:D:535:ARG:CZ	2.43	0.49
3:D:541:LEU:HD23	3:D:541:LEU:H	1.78	0.49
3:D:1270:GLY:CA	3:D:1299:GLY:HA2	2.43	0.49
1:B:29:GLU:HA	1:B:200:LYS:HB3	1.93	0.49
3:D:425:ARG:CD	3:D:459:ALA:HB2	2.42	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:138:VAL:O	3:D:143:SER:HB3	2.13	0.49
3:D:1195:GLN:OE1	3:D:1195:GLN:N	2.45	0.49
2:C:1127:LYS:HG2	2:C:1144:PHE:CZ	2.48	0.49
2:C:59:ILE:HG12	2:C:66:SER:HB3	1.93	0.49
3:D:583:VAL:CG1	3:D:587:LEU:HD22	2.43	0.49
3:I:155:GLU:CD	3:I:158:GLN:HB2	2.31	0.49
3:D:824:PRO:HD3	3:D:836:ARG:NE	2.27	0.49
3:I:490:ILE:O	3:I:499:ILE:HG22	2.12	0.49
5:X:453:PRO:O	5:X:456:MET:HB2	2.12	0.49
5:Y:299:LYS:O	5:Y:303:ILE:HG12	2.12	0.49
5:Y:245:ALA:O	5:Y:249:ILE:HG13	2.13	0.49
3:I:126:LEU:HD21	3:I:223:LEU:CD1	2.42	0.49
2:C:816:ILE:CD1	2:C:1074:GLY:HA3	2.36	0.49
1:A:163:GLU:HG3	1:A:170:ARG:NH1	2.26	0.49
5:Y:145:LEU:CD2	5:Y:225:ARG:HH21	2.24	0.49
2:C:1065:LYS:HG2	2:C:1235:LEU:HD12	1.95	0.49
3:D:848:VAL:HG11	3:D:880:VAL:HG12	1.93	0.49
2:H:985:GLU:HG2	2:H:989:LEU:HD13	1.95	0.49
3:D:31:ARG:NE	3:D:241:VAL:HG21	2.28	0.49
3:I:1193:TRP:O	3:I:1194:ARG:HB2	2.12	0.49
2:C:1313:HIS:HD2	3:D:474:LEU:HD23	1.78	0.49
2:C:339:ASN:O	2:C:345:PRO:HD3	2.12	0.49
2:H:1276:TRP:CE3	2:H:1276:TRP:HA	2.47	0.49
2:H:1133:LYS:HG3	2:H:1134:GLN:HG3	1.95	0.49
2:H:176:ILE:HD11	2:H:428:VAL:HG21	1.94	0.49
5:Y:295:CYS:SG	5:Y:330:LEU:HD23	2.52	0.49
5:X:560:ARG:HG2	5:X:565:ILE:HG23	1.93	0.49
3:I:259:ARG:HH21	5:Y:504:PRO:CB	2.17	0.49
5:Y:469:GLN:O	5:Y:473:GLU:N	2.40	0.49
2:H:741:MET:HG2	2:H:743:PRO:O	2.12	0.49
3:I:707:ILE:HG22	3:I:708:ASN:H	1.76	0.49
2:H:765:ILE:HG13	2:H:787:PRO:HG2	1.95	0.49
3:I:155:GLU:HG3	3:I:158:GLN:HB2	1.94	0.49
3:I:515:ARG:NH2	3:I:718:SER:O	2.44	0.49
3:I:31:ARG:HA	3:I:34:SER:OG	2.12	0.49
3:I:500:ILE:HD13	3:I:500:ILE:H	1.77	0.49
3:I:126:LEU:HD21	3:I:223:LEU:HD13	1.95	0.49
3:D:245:LEU:HD12	3:D:246:PRO:HD2	1.93	0.49
3:I:888:CYS:HB2	3:I:898:CYS:SG	2.52	0.49
2:H:145:ILE:HD11	2:H:506:PHE:CD2	2.48	0.49
3:I:614:LEU:CD2	4:J:7:GLN:HG3	2.42	0.49
2:C:487:LEU:HD12	2:C:488:MET:H	1.78	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:12:ARG:NH1	2:C:1159:VAL:HG21	2.28	0.49
1:A:44:ARG:HG3	1:A:183:ILE:CG2	2.38	0.49
3:I:222:LYS:HZ3	3:I:1276:GLU:HB2	1.78	0.49
2:H:96:LEU:HB2	2:H:127:ILE:CD1	2.43	0.49
2:H:989:LEU:HG	2:H:990:ASP:H	1.78	0.49
3:D:1368:ASP:O	3:D:1372:ARG:HB2	2.12	0.49
2:C:545:PHE:HZ	3:D:781:LYS:HA	1.76	0.49
3:I:29:MET:HE2	3:I:29:MET:O	2.13	0.49
2:H:1297:ASP:OD1	2:H:1300:GLY:HA3	2.12	0.49
5:X:346:GLN:O	5:X:350:GLU:HG3	2.11	0.49
5:Y:363:ARG:O	5:Y:367:ILE:HG12	2.12	0.49
2:H:896:THR:HG22	2:H:898:GLU:OE1	2.13	0.49
3:I:127:LEU:HD21	3:I:234:PRO:HB3	1.94	0.49
2:C:590:PRO:CB	2:C:655:VAL:HG21	2.39	0.49
2:C:1121:ALA:O	2:C:1180:MET:N	2.45	0.49
1:G:29:GLU:HA	1:G:200:LYS:HB3	1.94	0.49
2:H:20:GLN:O	2:H:22:LEU:N	2.45	0.49
2:H:1014:LEU:HA	2:H:1017:GLN:OE1	2.13	0.49
3:I:56:LEU:HB3	3:I:250:ARG:HH21	1.75	0.49
2:C:1314:GLN:HA	4:E:28:ARG:NH2	2.28	0.49
1:F:200:LYS:HG3	1:F:200:LYS:O	2.13	0.49
3:I:242:LEU:HD12	3:I:243:PRO:CD	2.43	0.49
3:D:1157:ALA:O	3:D:1207:GLY:N	2.46	0.49
5:Y:333:VAL:HG22	5:Y:336:GLU:HB2	1.93	0.49
3:D:1197:ASN:ND2	3:D:1212:ASP:HB3	2.28	0.49
2:C:748:ILE:O	2:C:748:ILE:HD12	2.12	0.49
5:Y:528:LEU:O	5:Y:528:LEU:HD12	2.12	0.49
3:I:393:THR:HG23	3:I:396:ALA:H	1.78	0.49
2:C:1243:MET:SD	3:D:445:LYS:HB3	2.53	0.49
2:C:751:TYR:CE1	2:C:783:LEU:HD12	2.47	0.49
1:F:42:ALA:O	1:F:46:ILE:HG12	2.13	0.49
3:I:1361:THR:O	4:J:21:LEU:HD21	2.13	0.49
3:I:1165:PHE:CD2	3:I:1168:GLU:HG3	2.47	0.49
3:D:844:THR:HB	3:D:858:VAL:O	2.13	0.49
5:X:245:ALA:O	5:X:249:ILE:HG13	2.13	0.49
2:C:9:LYS:HE3	2:C:12:ARG:HH21	1.77	0.49
3:D:369:PRO:HB3	3:D:444:GLY:O	2.13	0.49
2:H:94:ALA:HB2	2:H:129:LEU:CD1	2.42	0.49
2:C:1108:ASN:ND2	2:C:1108:ASN:O	2.45	0.49
3:I:245:LEU:HD12	3:I:246:PRO:HD2	1.94	0.49
2:C:123:TYR:OH	2:C:126:GLU:HB2	2.13	0.49
3:I:325:LYS:HB3	3:I:325:LYS:HZ3	1.78	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:1205:GLU:HB2	3:I:1208:ASP:OD1	2.12	0.49
3:I:210:SER:O	3:I:214:ARG:HG3	2.12	0.49
3:I:746:LEU:HD22	3:I:746:LEU:H	1.78	0.48
3:I:128:LEU:HA	3:I:192:MET:HE1	1.94	0.48
3:I:583:VAL:HG13	3:I:584:PRO:HD2	1.95	0.48
3:I:154:LEU:CD2	3:I:160:LEU:HD21	2.43	0.48
3:I:436:ALA:N	3:I:484:MET:O	2.33	0.48
1:A:253:LEU:HB3	1:A:321:TRP:HH2	1.74	0.48
1:G:191:ARG:HH22	3:I:442:ILE:HA	1.78	0.48
3:I:524:GLY:CA	3:I:548:VAL:HG23	2.43	0.48
5:Y:240:ARG:O	5:Y:242:HIS:N	2.46	0.48
2:H:923:GLY:HA2	3:I:371:LYS:HE3	1.95	0.48
5:Y:477:GLU:N	5:Y:477:GLU:OE1	2.45	0.48
2:C:551:HIS:CG	2:C:552:PRO:HD2	2.48	0.48
2:C:801:ARG:HD2	2:C:1229:TYR:OH	2.14	0.48
3:I:329:ASP:OD1	3:I:332:LYS:HE3	2.12	0.48
2:H:488:MET:HB2	2:H:489:PRO:CA	2.43	0.48
3:D:316:ILE:HG13	3:D:317:THR:H	1.78	0.48
2:H:1065:LYS:HG2	2:H:1235:LEU:HD12	1.95	0.48
3:D:678:ARG:O	3:D:681:LYS:HG3	2.13	0.48
2:C:634:VAL:HG22	2:C:645:PHE:CZ	2.47	0.48
5:X:105:MET:HG3	5:X:384:LEU:HD12	1.94	0.48
3:D:147:ILE:HD12	3:D:178:ALA:CB	2.42	0.48
2:C:94:ALA:O	2:C:126:GLU:HG2	2.12	0.48
3:D:489:ASN:HA	3:D:904:ALA:HB1	1.94	0.48
5:X:379:MET:CE	5:X:379:MET:HA	2.43	0.48
2:C:494:ASN:OD1	2:C:495:ALA:N	2.45	0.48
1:B:49:SER:CA	1:B:151:GLY:HA2	2.39	0.48
2:H:516:ASP:OD1	2:H:522:SER:OG	2.30	0.48
3:D:120:LEU:CD2	3:D:1330:ARG:HD2	2.43	0.48
2:C:452:ARG:NH1	2:C:585:GLY:HA3	2.28	0.48
3:D:19:ALA:HB1	3:D:1343:GLU:HB3	1.94	0.48
3:I:1322:ALA:HB1	3:I:1326:GLN:NE2	2.29	0.48
2:C:1276:TRP:CE3	2:C:1276:TRP:HA	2.49	0.48
3:I:661:VAL:O	3:I:665:GLN:HG3	2.13	0.48
2:C:1297:ASP:OD1	2:C:1300:GLY:HA3	2.13	0.48
5:Y:310:GLU:O	5:Y:344:LEU:HD23	2.13	0.48
3:D:99:ARG:HA	3:D:248:ASP:HB2	1.96	0.48
3:I:362:ARG:HD2	3:I:364:HIS:HE1	1.78	0.48
3:D:930:LEU:HD23	3:D:1244:GLN:HG3	1.94	0.48
3:D:20:ILE:HD11	3:D:1320:ILE:HD11	1.94	0.48
3:D:860:ARG:NH1	3:D:866:GLU:HG2	2.29	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:596:LEU:N	3:I:596:LEU:HD23	2.28	0.48
5:X:145:LEU:HD21	5:X:225:ARG:NE	2.29	0.48
3:D:366:CYS:SG	3:D:437:PHE:HB2	2.54	0.48
1:G:185:TYR:HA	1:G:202:VAL:O	2.13	0.48
2:H:157:PHE:CE1	2:H:431:LYS:HD3	2.48	0.48
2:C:1276:TRP:HA	2:C:1276:TRP:HE3	1.79	0.48
2:C:453:ILE:O	2:C:453:ILE:HG23	2.13	0.48
3:D:118:LYS:NZ	5:X:43:ASP:OD2	2.45	0.48
5:X:580:PHE:O	5:X:582:VAL:N	2.46	0.48
5:X:316:PHE:CZ	5:X:334:SER:HA	2.48	0.48
3:I:145:VAL:HG21	3:I:165:TYR:CD2	2.48	0.48
2:H:1058:ARG:HD3	2:H:1240:ASP:OD1	2.12	0.48
2:H:59:ILE:HG22	2:H:476:LYS:HA	1.95	0.48
5:Y:450:ILE:HD11	5:Y:500:ILE:O	2.13	0.48
2:H:106:GLU:CB	2:H:107:ARG:HA	2.43	0.48
3:D:490:ILE:HG23	3:D:500:ILE:HD11	1.96	0.48
2:C:747:GLY:C	2:C:748:ILE:HG13	2.33	0.48
2:C:185:ASP:O	2:C:196:VAL:HG23	2.13	0.48
2:C:817:LEU:HB3	2:C:1097:VAL:HG13	1.94	0.48
3:I:773:PHE:O	3:I:776:THR:HG22	2.14	0.48
2:H:975:ILE:HD13	2:H:975:ILE:O	2.12	0.48
2:C:963:GLU:O	2:C:967:LEU:HD13	2.12	0.48
3:I:12:THR:O	3:I:13:LYS:HD2	2.13	0.48
2:H:487:LEU:HB3	2:H:488:MET:CG	2.44	0.48
3:I:824:PRO:HD3	3:I:836:ARG:NE	2.28	0.48
5:Y:123:ILE:O	5:Y:127:ILE:HG12	2.13	0.48
3:D:799:ARG:NH1	3:D:1146:GLU:OE1	2.46	0.48
3:D:588:PRO:HG2	3:D:592:VAL:HG13	1.95	0.48
2:H:697:LYS:HG3	2:H:698:PRO:HD2	1.95	0.48
2:C:893:THR:O	2:C:895:LEU:N	2.41	0.48
1:B:232:VAL:O	1:B:233:ASP:HB2	2.13	0.48
2:C:442:VAL:HG12	2:C:443:ASP:H	1.78	0.48
2:C:9:LYS:CE	2:C:12:ARG:HH21	2.27	0.48
2:C:1105:SER:HB3	2:C:1106:ARG:HD2	1.95	0.48
3:D:355:ILE:HA	3:D:447:ILE:HG23	1.96	0.48
2:C:1283:ALA:HB1	2:C:1286:THR:HB	1.96	0.48
5:X:113:ARG:O	5:X:117:ILE:HD13	2.13	0.48
5:X:519:LEU:O	5:X:519:LEU:HD13	2.14	0.48
2:H:582:ASN:HD22	2:H:588:GLU:CD	2.17	0.48
2:H:1108:ASN:O	2:H:1108:ASN:ND2	2.46	0.48
3:I:306:LEU:O	3:I:326:SER:HB2	2.13	0.48
3:I:1169:THR:HA	3:I:1173:ARG:HB3	1.96	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:720:ARG:HE	2:C:736:VAL:HG22	1.78	0.48
1:F:45:ARG:HG2	2:H:1083:GLU:HB2	1.95	0.48
2:H:127:ILE:HD13	2:H:127:ILE:N	2.26	0.48
2:C:591:TYR:O	2:C:603:ILE:HA	2.14	0.48
3:I:316:ILE:HA	3:I:323:PRO:HA	1.95	0.48
5:Y:250:LEU:O	5:Y:254:GLU:HG2	2.13	0.48
3:I:422:LEU:CD1	3:I:469:HIS:HB2	2.44	0.48
2:H:582:ASN:HB3	2:H:586:PHE:C	2.34	0.48
3:D:278:ARG:O	3:D:282:LEU:HG	2.13	0.48
1:A:99:ILE:HA	1:A:144:ILE:O	2.14	0.48
3:I:1282:TYR:HA	3:I:1285:VAL:HG22	1.96	0.48
3:I:194:LEU:O	3:I:198:CYS:HB2	2.13	0.48
3:D:313:GLY:O	3:D:314:ARG:HB2	2.14	0.48
2:H:158:ASP:N	2:H:173:ASN:O	2.46	0.48
2:C:709:ALA:O	2:C:715:THR:HG22	2.14	0.48
2:C:524:ILE:HD11	2:C:712:SER:OG	2.14	0.48
3:D:1284:ARG:HA	3:D:1287:ILE:CG1	2.44	0.48
2:H:660:VAL:HG22	2:H:661:VAL:N	2.25	0.48
5:X:560:ARG:CG	5:X:565:ILE:HG23	2.43	0.48
2:H:699:LEU:HB2	2:H:799:ASN:HD21	1.77	0.48
3:D:531:LYS:NZ	3:D:531:LYS:HB3	2.29	0.48
5:X:600:HIS:HB2	5:X:601:PRO:HD3	1.95	0.48
3:I:403:ARG:O	3:I:405:GLU:N	2.47	0.48
3:I:132:LEU:O	3:I:136:GLU:HB2	2.14	0.48
5:Y:489:MET:SD	5:Y:493:LYS:HB3	2.54	0.48
1:B:9:LEU:HD23	1:B:9:LEU:H	1.79	0.48
5:X:470:MET:HG2	5:X:486:ARG:HH11	1.79	0.48
2:H:669:PRO:HG2	2:H:1070:HIS:HE1	1.79	0.48
5:Y:316:PHE:HZ	5:Y:334:SER:HA	1.78	0.48
3:D:704:GLU:O	3:D:705:THR:OG1	2.29	0.48
3:I:361:LEU:HD23	3:I:366:CYS:HA	1.96	0.48
1:B:83:LEU:HD13	3:D:526:VAL:HG23	1.95	0.48
1:B:57:THR:HG21	1:B:177:TYR:OH	2.14	0.48
3:D:205:LEU:HB3	3:D:217:LEU:HD22	1.96	0.48
3:I:1346:GLY:O	3:I:1350:ASN:HB2	2.14	0.48
2:C:678:ARG:HE	2:C:1106:ARG:HG2	1.78	0.48
2:C:122:VAL:HG22	2:C:123:TYR:N	2.29	0.48
3:I:413:ASP:HA	3:I:416:ILE:CD1	2.43	0.48
3:I:37:GLU:HB2	3:I:104:HIS:CE1	2.49	0.48
3:D:298:MET:HE3	5:X:402:LEU:HB3	1.95	0.48
3:D:144:TYR:HB3	3:D:159:ILE:HG22	1.95	0.48
3:D:422:LEU:CD1	3:D:469:HIS:HB2	2.44	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:83:LEU:O	1:A:86:LYS:HB2	2.14	0.48
3:I:169:LEU:HD13	3:I:173:GLY:CA	2.44	0.48
3:D:1148:ARG:HB2	3:D:1148:ARG:HH21	1.79	0.48
2:H:946:LEU:HD12	2:H:949:GLU:HG2	1.96	0.48
2:H:977:ALA:O	2:H:980:VAL:HG12	2.14	0.48
1:A:7:GLU:H	1:B:150:ARG:HH22	1.62	0.48
2:H:122:VAL:HG22	2:H:123:TYR:N	2.28	0.47
2:H:478:ARG:HD3	2:H:492:MET:HG3	1.96	0.47
2:H:1101:LEU:HD11	3:I:505:ASP:HA	1.95	0.47
2:C:736:VAL:HG11	2:C:740:GLU:CA	2.41	0.47
5:X:48:ILE:HG13	5:X:49:ASN:N	2.29	0.47
2:H:442:VAL:HG12	2:H:443:ASP:N	2.29	0.47
3:I:923:ILE:HD11	3:I:1252:HIS:HB2	1.95	0.47
5:Y:311:THR:HG23	5:Y:355:ILE:HG21	1.96	0.47
2:H:1276:TRP:HE3	2:H:1276:TRP:HA	1.79	0.47
3:I:62:PHE:O	3:I:101:ARG:HG3	2.13	0.47
2:C:500:ALA:O	2:C:504:GLU:HB2	2.13	0.47
2:H:1269:ARG:HD2	3:I:346:ARG:NE	2.30	0.47
3:D:1262:ARG:O	3:D:1280:VAL:HG22	2.14	0.47
3:D:1287:ILE:HA	3:D:1290:ARG:HG2	1.95	0.47
2:C:170:VAL:HG23	2:C:171:LEU:N	2.21	0.47
1:A:11:PRO:O	1:A:12:ARG:HG3	2.14	0.47
2:C:510:GLN:C	2:C:512:SER:H	2.17	0.47
2:H:94:ALA:O	2:H:126:GLU:HG2	2.15	0.47
3:D:646:ILE:HD12	3:D:646:ILE:O	2.13	0.47
2:C:1146:GLN:CD	2:C:1160:ASP:HB2	2.35	0.47
2:C:127:ILE:HD13	2:C:127:ILE:N	2.28	0.47
1:A:243:LYS:N	1:A:243:LYS:HD3	2.29	0.47
4:J:25:ARG:HD3	4:J:64:LEU:HD12	1.96	0.47
3:I:1262:ARG:HD3	3:I:1279:GLN:OE1	2.15	0.47
3:D:690:ASN:ND2	3:D:745:GLY:HA3	2.30	0.47
3:D:30:ILE:CG2	3:D:243:PRO:HB3	2.39	0.47
3:D:30:ILE:HD13	3:D:33:TRP:CZ3	2.49	0.47
2:H:1014:LEU:O	2:H:1017:GLN:NE2	2.47	0.47
2:C:533:LEU:N	2:C:533:LEU:HD23	2.28	0.47
2:C:1065:LYS:O	2:C:1235:LEU:HB2	2.14	0.47
3:D:19:ALA:HB2	3:D:1343:GLU:CB	2.43	0.47
5:Y:452:ILE:HG21	5:Y:457:ILE:HG12	1.94	0.47
2:C:542:ARG:HG2	2:C:543:ALA:N	2.29	0.47
3:I:658:GLU:HA	3:I:661:VAL:HG12	1.96	0.47
2:H:169:LYS:HA	2:H:169:LYS:HD3	1.67	0.47
2:C:210:LEU:O	2:C:215:TYR:HB2	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:Y:281:ARG:O	5:Y:285:ARG:HB2	2.14	0.47
2:H:487:LEU:CG	2:H:488:MET:HA	2.44	0.47
1:G:192:VAL:CG1	1:G:194:GLN:HG2	2.37	0.47
3:I:531:LYS:HZ2	3:I:531:LYS:HB3	1.80	0.47
3:D:186:GLN:CB	3:D:238:ILE:HD11	2.34	0.47
3:D:542:ALA:HB3	3:D:545:HIS:ND1	2.29	0.47
2:C:745:GLU:HA	2:C:1017:GLN:OE1	2.14	0.47
2:C:1121:ALA:HA	2:C:1180:MET:HB2	1.96	0.47
2:C:105:TYR:CG	2:C:106:GLU:HB2	2.48	0.47
2:H:1209:GLN:O	2:H:1210:ILE:HG13	2.14	0.47
3:I:147:ILE:HG13	3:I:149:GLY:H	1.79	0.47
2:H:106:GLU:H	2:H:107:ARG:HA	1.80	0.47
3:D:1328:THR:HA	3:D:1331:VAL:CG1	2.44	0.47
1:A:246:LYS:N	1:A:246:LYS:HD3	2.29	0.47
2:C:954:LYS:HE3	2:C:958:LYS:CE	2.44	0.47
2:C:1272:GLU:HA	2:C:1275:VAL:HG22	1.96	0.47
2:H:71:VAL:O	2:H:72:SER:OG	2.24	0.47
2:C:1156:ARG:HH11	2:C:1157:GLN:H	1.62	0.47
2:H:253:PHE:CZ	2:H:287:VAL:HG12	2.50	0.47
3:I:1290:ARG:CD	3:I:1299:GLY:HA3	2.44	0.47
2:C:372:PRO:HG3	5:X:36:VAL:HG22	1.97	0.47
3:D:803:VAL:HB	3:D:1313:SER:HB3	1.97	0.47
3:I:120:LEU:HD22	3:I:1330:ARG:HD3	1.97	0.47
2:H:802:VAL:HG23	2:H:1098:LEU:HG	1.97	0.47
2:C:741:MET:SD	2:C:741:MET:N	2.87	0.47
2:H:725:GLN:NE2	2:H:966:ILE:HD11	2.30	0.47
2:H:842:ASP:N	2:H:1046:VAL:HG11	2.30	0.47
2:C:1172:LEU:O	2:C:1176:LEU:HG	2.14	0.47
3:I:1140:ARG:HH21	3:I:1236:GLU:HG2	1.77	0.47
2:H:941:LYS:O	2:H:941:LYS:HD2	2.14	0.47
2:H:1219:GLU:OE2	3:I:634:ARG:NH1	2.48	0.47
1:A:178:SER:HA	1:A:179:PRO:HD3	1.73	0.47
3:I:813:ASP:OD1	3:I:896:ALA:HB3	2.13	0.47
3:I:1280:VAL:HG11	3:I:1304:ARG:NE	2.23	0.47
3:D:535:ARG:HB3	3:D:541:LEU:CD2	2.38	0.47
3:I:592:VAL:HG23	3:I:593:ASN:OD1	2.15	0.47
2:C:1284:ALA:CB	3:D:1361:THR:HB	2.40	0.47
2:H:773:LEU:H	2:H:773:LEU:HD13	1.79	0.47
3:I:1207:GLY:HA2	3:I:1223:LEU:CD2	2.43	0.47
3:I:490:ILE:HG23	3:I:500:ILE:CD1	2.44	0.47
2:C:1024:GLU:O	2:C:1028:LYS:HG3	2.15	0.47
3:I:368:LEU:HD12	3:I:369:PRO:HD2	1.96	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:773:PHE:O	3:D:776:THR:HG22	2.14	0.47
2:H:157:PHE:HA	2:H:174:ALA:HA	1.96	0.47
5:X:379:MET:HE2	5:X:379:MET:HA	1.97	0.47
2:C:728:ASP:OD2	2:C:729:ALA:N	2.47	0.47
1:A:47:LEU:HD21	1:A:220:ALA:HB2	1.96	0.47
3:D:269:TYR:HA	3:D:272:VAL:HG12	1.95	0.47
2:C:756:TYR:H	2:C:766:ASN:HB2	1.80	0.47
2:C:26:TYR:CE2	2:C:28:LEU:HB2	2.49	0.47
5:X:28:ASN:HD22	5:X:29:ASP:H	1.61	0.47
2:H:559:CYS:SG	2:H:661:VAL:HA	2.54	0.47
2:H:1305:TYR:HE1	3:I:379:PRO:HG3	1.80	0.47
2:H:1252:SER:O	2:H:1256:GLN:NE2	2.48	0.47
3:I:392:THR:HG22	5:Y:606:VAL:HG11	1.96	0.47
3:D:678:ARG:C	3:D:678:ARG:HD2	2.35	0.47
3:I:800:LEU:HB3	3:I:920:ALA:CB	2.41	0.47
2:H:633:LEU:HD22	2:H:645:PHE:O	2.15	0.47
1:A:205:MET:CE	1:A:217:ILE:HD11	2.44	0.47
3:D:1357:ILE:H	3:D:1357:ILE:HD12	1.79	0.47
1:G:14:VAL:HG22	1:G:28:LEU:CD2	2.43	0.47
3:I:161:THR:H	3:I:164:GLN:CD	2.18	0.47
2:C:1106:ARG:HD2	2:C:1106:ARG:N	2.30	0.47
5:Y:120:ALA:HA	5:Y:123:ILE:CD1	2.42	0.47
2:H:773:LEU:H	2:H:773:LEU:CD1	2.28	0.47
3:I:579:LEU:HD13	3:I:579:LEU:O	2.14	0.47
1:B:22:THR:HG22	1:B:208:ASN:O	2.14	0.47
2:C:845:LEU:CD2	2:C:889:PRO:HG2	2.43	0.47
3:I:1171:GLY:N	3:I:1172:LYS:O	2.47	0.47
2:C:1286:THR:O	2:C:1290:MET:HB2	2.15	0.47
1:G:191:ARG:NH2	3:I:442:ILE:HA	2.30	0.47
2:C:936:ARG:HH11	5:X:495:ARG:HD3	1.80	0.47
2:H:106:GLU:HG3	2:H:108:GLU:N	2.30	0.47
3:D:474:LEU:HD11	4:E:27:ALA:HB3	1.96	0.47
1:A:207:THR:HG23	1:A:209:GLY:H	1.79	0.47
3:I:660:GLU:O	3:I:664:ILE:HG12	2.13	0.47
2:H:673:HIS:O	2:H:1109:ILE:HG22	2.14	0.47
2:C:429:MET:O	2:C:433:ILE:HG13	2.15	0.47
1:A:47:LEU:CD2	1:A:220:ALA:HB2	2.44	0.47
2:H:551:HIS:CG	2:H:552:PRO:HD2	2.50	0.47
2:C:1303:LYS:HA	2:C:1303:LYS:HE2	1.96	0.47
2:C:998:LEU:HD13	2:C:998:LEU:O	2.14	0.47
4:J:62:GLN:O	4:J:66:VAL:HG23	2.15	0.47
5:Y:544:THR:O	5:Y:548:LEU:HG	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:818:VAL:HG22	2:C:819:SER:N	2.30	0.47
2:H:131:THR:HG22	2:H:135:THR:H	1.80	0.47
2:H:135:THR:OG1	2:H:143:ARG:O	2.23	0.47
2:H:194:LEU:HD23	2:H:429:MET:CE	2.44	0.47
2:C:1255:THR:O	2:C:1257:GLN:N	2.41	0.47
2:C:557:ARG:O	2:C:576:SER:HB3	2.14	0.47
2:C:1239:VAL:HG12	2:C:1240:ASP:N	2.27	0.47
3:D:1260:MET:HE2	3:D:1306:LEU:HD11	1.97	0.47
1:A:85:LEU:HD22	1:A:88:LEU:HD12	1.96	0.47
1:B:181:GLU:HB2	1:B:206:GLU:O	2.14	0.47
5:X:528:LEU:HD12	5:X:528:LEU:O	2.14	0.47
1:G:56:VAL:HG12	1:G:173:VAL:CG1	2.44	0.47
3:I:325:LYS:HB3	3:I:325:LYS:NZ	2.28	0.47
5:X:453:PRO:HD2	5:X:456:MET:HG3	1.96	0.47
3:D:179:LYS:HD3	3:D:179:LYS:N	2.29	0.47
4:J:59:ILE:HG23	4:J:64:LEU:HD21	1.96	0.47
2:C:818:VAL:HG22	2:C:819:SER:H	1.79	0.47
1:A:226:GLU:HB3	1:B:10:LYS:NZ	2.29	0.47
1:F:15:ASP:HB3	1:F:27:THR:OG1	2.15	0.47
5:Y:224:LEU:HB2	5:Y:259:PHE:CE1	2.50	0.47
3:D:615:LYS:HB3	3:D:616:PRO:HD3	1.97	0.47
3:I:844:THR:HB	3:I:858:VAL:O	2.14	0.47
2:C:766:ASN:N	2:C:787:PRO:HG3	2.30	0.47
2:C:1103:VAL:H	2:C:1104:PRO:HD2	1.79	0.47
4:E:5:THR:HB	4:E:7:GLN:H	1.78	0.47
3:I:744:ARG:HD2	3:I:763:PHE:CE1	2.50	0.47
2:C:170:VAL:O	2:C:171:LEU:HB2	2.14	0.47
2:C:13:LYS:HE3	2:C:1183:ALA:HB2	1.97	0.47
2:C:342:ASP:N	2:C:342:ASP:OD1	2.45	0.47
2:C:15:PHE:CD2	2:C:1182:ILE:HD11	2.50	0.47
2:C:241:LEU:HD22	2:C:285:ILE:HG21	1.97	0.47
1:F:68:TYR:HB3	2:H:756:TYR:CD1	2.50	0.47
5:X:511:ILE:HG22	5:X:517:SER:HB3	1.96	0.47
5:X:511:ILE:HG23	5:X:512:GLY:N	2.26	0.47
1:A:223:ILE:HD13	1:B:8:PHE:CE1	2.49	0.47
3:I:621:ALA:HA	3:I:624:ILE:CG1	2.45	0.47
3:I:822:MET:HG2	3:I:839:VAL:HG23	1.96	0.47
5:X:525:ASP:HB3	5:X:528:LEU:HD21	1.97	0.47
3:I:1237:VAL:O	3:I:1240:VAL:HG22	2.15	0.47
3:D:85:CYS:SG	3:D:86:GLU:N	2.88	0.47
5:Y:545:HIS:NE2	5:Y:566:ASP:OD2	2.27	0.47
3:D:513:MET:HE2	3:D:579:LEU:HB2	1.97	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:24:LEU:HD23	3:D:232:ASN:ND2	2.30	0.47
2:H:157:PHE:HD2	2:H:174:ALA:HB2	1.79	0.47
5:X:470:MET:HG2	5:X:486:ARG:NH1	2.30	0.47
2:H:868:SER:OG	2:H:942:ASP:OD1	2.32	0.47
5:X:310:GLU:O	5:X:344:LEU:HD23	2.15	0.47
3:D:901:ARG:HB3	3:D:908:ILE:HA	1.96	0.47
2:C:766:ASN:H	2:C:787:PRO:HG3	1.80	0.47
2:C:842:ASP:H	2:C:1046:VAL:HG11	1.77	0.47
1:A:42:ALA:HA	1:B:38:THR:CG2	2.44	0.47
3:I:227:PHE:O	3:I:230:SER:OG	2.17	0.47
3:I:120:LEU:HD22	3:I:1330:ARG:CD	2.45	0.47
3:I:1346:GLY:HA3	3:I:1349:GLU:CD	2.35	0.47
5:Y:582:VAL:CB	5:Y:586:ARG:HG2	2.45	0.47
2:H:170:VAL:CG2	2:H:171:LEU:H	2.21	0.47
5:Y:573:LEU:CD2	5:Y:588:ARG:HB2	2.43	0.47
3:I:524:GLY:C	3:I:548:VAL:HG23	2.36	0.47
3:D:1157:ALA:O	3:D:1223:LEU:HD21	2.15	0.47
1:A:232:VAL:O	1:B:218:ARG:HG3	2.15	0.47
3:D:118:LYS:HE3	5:X:39:ASP:OD2	2.15	0.47
2:H:975:ILE:O	2:H:979:LEU:HB2	2.15	0.47
2:H:37:LYS:HE3	2:H:37:LYS:HA	1.96	0.47
3:D:1359:ALA:HA	3:D:1363:TYR:HB2	1.96	0.47
5:Y:230:VAL:O	5:Y:234:THR:HG23	2.14	0.47
5:X:484:ALA:HB1	5:X:490:PRO:O	2.14	0.47
1:A:302:GLU:O	1:A:306:VAL:HG22	2.15	0.47
1:A:143:ARG:H	1:A:143:ARG:HD2	1.80	0.47
2:C:26:TYR:HE2	2:C:28:LEU:HB2	1.80	0.46
2:C:51:ALA:C	2:C:53:PHE:H	2.18	0.46
3:I:1247:LYS:N	3:I:1247:LYS:HD3	2.19	0.46
3:D:128:LEU:HA	3:D:192:MET:CE	2.41	0.46
5:Y:138:PRO:CD	5:Y:353:LEU:HD21	2.45	0.46
2:C:845:LEU:HD13	2:C:845:LEU:N	2.27	0.46
2:C:348:SER:O	2:C:352:ARG:HG3	2.14	0.46
3:I:856:ILE:HD12	3:I:857:LEU:N	2.30	0.46
2:C:704:MET:CE	2:C:704:MET:HA	2.46	0.46
2:H:157:PHE:CD2	2:H:174:ALA:HB2	2.50	0.46
2:C:1122:LYS:HG2	2:C:1229:TYR:CE2	2.49	0.46
4:J:25:ARG:HD3	4:J:64:LEU:CD1	2.45	0.46
5:X:52:GLY:O	5:X:53:ILE:HB	2.14	0.46
2:H:1163:THR:HG22	2:H:1164:PHE:H	1.80	0.46
1:F:142:MET:SD	1:F:144:ILE:HD11	2.56	0.46
3:I:841:GLY:HA3	3:I:901:ARG:HG2	1.98	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:311:ARG:HG3	5:X:42:GLU:OE1	2.15	0.46
3:I:186:GLN:CA	3:I:238:ILE:HD11	2.45	0.46
2:C:756:TYR:H	2:C:766:ASN:HB3	1.78	0.46
2:C:103:VAL:HG22	2:C:104:ILE:N	2.29	0.46
3:I:614:LEU:HG	4:J:7:GLN:HG3	1.98	0.46
2:H:572:ILE:HD13	6:H:1401:RFP:C1	2.45	0.46
3:D:573:THR:HG22	3:D:576:ARG:CD	2.44	0.46
2:H:634:VAL:HG22	2:H:645:PHE:CZ	2.49	0.46
3:D:42:GLU:HG3	5:X:451:ARG:HH21	1.79	0.46
2:C:1252:SER:HA	5:X:523:ILE:O	2.14	0.46
3:D:824:PRO:CD	3:D:836:ARG:HD3	2.46	0.46
3:I:508:LEU:HD12	3:I:725:MET:HG2	1.97	0.46
1:G:98:VAL:HG11	1:G:121:VAL:CG2	2.45	0.46
1:G:92:VAL:HG22	1:G:121:VAL:HG22	1.98	0.46
5:X:377:LYS:HA	5:X:380:VAL:HG12	1.97	0.46
5:Y:316:PHE:CD1	5:Y:337:VAL:HG11	2.50	0.46
2:H:103:VAL:HG22	2:H:104:ILE:N	2.30	0.46
3:D:34:SER:HB3	3:D:104:HIS:ND1	2.30	0.46
3:I:503:SER:O	3:I:507:VAL:HG23	2.16	0.46
2:C:1199:LEU:HD13	2:C:1206:THR:HA	1.97	0.46
2:C:201:ARG:HH12	5:X:36:VAL:HG11	1.79	0.46
1:A:29:GLU:O	1:A:31:LEU:N	2.47	0.46
2:H:170:VAL:HG23	2:H:171:LEU:N	2.28	0.46
2:H:170:VAL:O	2:H:171:LEU:HB2	2.16	0.46
3:D:1260:MET:CE	3:D:1306:LEU:HD11	2.45	0.46
1:A:85:LEU:HD21	1:A:130:ILE:HD13	1.96	0.46
1:F:51:MET:HB2	1:F:179:PRO:HD2	1.97	0.46
2:H:1087:TYR:HE2	2:H:1215:GLY:CA	2.28	0.46
3:I:279:LEU:HD23	3:I:295:GLU:HG3	1.98	0.46
3:D:482:ALA:C	3:D:483:LEU:HD12	2.35	0.46
3:I:107:LEU:HD11	3:I:242:LEU:HB3	1.96	0.46
3:D:1158:GLU:HA	3:D:1223:LEU:HD21	1.95	0.46
3:D:252:LEU:O	3:D:252:LEU:HG	2.16	0.46
1:A:184:ALA:HB2	2:C:1091:GLY:CA	2.46	0.46
5:X:456:MET:O	5:X:460:ILE:HG13	2.15	0.46
1:G:33:ARG:HE	1:G:197:ASP:HB2	1.80	0.46
5:Y:281:ARG:HD3	5:Y:359:LYS:NZ	2.30	0.46
3:I:421:VAL:HB	3:I:439:PRO:HG3	1.96	0.46
3:I:1174:ARG:HA	3:I:1192:LYS:HG3	1.96	0.46
3:I:847:ASP:H	3:I:858:VAL:HA	1.80	0.46
3:D:532:GLU:HG3	3:D:533:ALA:N	2.30	0.46
1:B:154:PRO:O	1:B:157:THR:HG22	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:192:VAL:CG1	1:B:194:GLN:HG2	2.43	0.46
5:X:242:HIS:HA	5:X:245:ALA:HB3	1.96	0.46
2:C:462:ASN:O	2:C:466:VAL:HG23	2.15	0.46
2:H:511:LEU:HA	2:H:513:GLN:HE21	1.80	0.46
1:G:12:ARG:H	1:G:30:PRO:HG2	1.80	0.46
3:D:720:ASN:O	3:D:720:ASN:ND2	2.49	0.46
3:D:377:PHE:O	3:D:381:ILE:HG13	2.16	0.46
2:H:842:ASP:CB	2:H:1046:VAL:HG11	2.44	0.46
3:I:286:ALA:O	3:I:288:PRO:HD3	2.15	0.46
3:I:1297:LYS:CE	3:I:1297:LYS:HA	2.45	0.46
2:H:403:MET:HG2	2:H:407:ARG:NH1	2.29	0.46
2:C:1032:LYS:O	2:C:1036:ILE:HG13	2.14	0.46
1:A:232:VAL:HG13	1:B:218:ARG:CZ	2.45	0.46
3:D:1159:ILE:HD12	3:D:1186:TYR:HE2	1.80	0.46
3:D:478:LEU:HB3	4:E:20:VAL:HG13	1.97	0.46
2:H:1335:ILE:HD11	3:I:22:ILE:HG13	1.98	0.46
2:C:1335:ILE:HD11	3:D:22:ILE:CG1	2.45	0.46
2:C:92:TYR:CE1	2:C:129:LEU:HD12	2.49	0.46
2:H:807:TRP:HE1	2:H:1086:PRO:HD3	1.80	0.46
2:H:92:TYR:CE1	2:H:129:LEU:HB2	2.51	0.46
2:C:568:ASN:HB3	2:C:572:ILE:HD12	1.98	0.46
5:Y:115:GLY:O	5:Y:119:ILE:HG12	2.15	0.46
2:H:773:LEU:HD22	2:H:773:LEU:O	2.15	0.46
2:H:18:ARG:HD3	2:H:619:ALA:O	2.15	0.46
2:C:1161:LEU:HD21	2:C:1172:LEU:HD11	1.97	0.46
2:H:557:ARG:NH2	2:H:607:SER:O	2.48	0.46
5:X:311:THR:HG23	5:X:355:ILE:HG21	1.98	0.46
5:X:322:MET:HG2	5:X:324:LYS:HG2	1.98	0.46
2:H:216:THR:OG1	2:H:219:GLN:HG3	2.16	0.46
2:H:848:GLU:HG2	2:H:888:THR:HA	1.98	0.46
3:I:310:GLY:HA2	3:I:314:ARG:HE	1.81	0.46
5:Y:309:ASN:ND2	5:Y:312:SER:HB3	2.31	0.46
2:H:538:LEU:HD11	2:H:547:VAL:HG11	1.98	0.46
3:D:392:THR:HG22	5:X:603:ARG:HG2	1.97	0.46
2:C:1246:ARG:NH2	2:C:1249:GLY:H	2.12	0.46
1:A:16:ILE:HG23	1:A:26:VAL:HG22	1.98	0.46
5:X:387:VAL:HG13	5:X:408:GLY:HA3	1.97	0.46
2:C:896:THR:HG22	2:C:898:GLU:OE1	2.16	0.46
5:Y:503:GLU:HB3	5:Y:504:PRO:O	2.16	0.46
3:D:205:LEU:HD13	3:D:217:LEU:HA	1.97	0.46
3:I:425:ARG:HG2	3:I:427:PRO:HD2	1.98	0.46
3:I:1357:ILE:H	3:I:1357:ILE:HD12	1.80	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:44:ILE:HG22	5:X:450:ILE:HG22	1.97	0.46
5:X:451:ARG:O	5:X:452:ILE:HG13	2.16	0.46
5:Y:511:ILE:HG23	5:Y:517:SER:CB	2.45	0.46
3:D:899:TYR:CZ	3:D:915:ILE:HD12	2.51	0.46
2:C:886:LYS:HD3	2:C:916:SER:O	2.14	0.46
2:H:1277:ALA:CB	3:I:434:ILE:HD13	2.46	0.46
2:C:777:VAL:HG21	2:C:783:LEU:HD21	1.97	0.46
3:I:679:TYR:O	3:I:683:ILE:HG13	2.16	0.46
2:C:785:ASP:CG	2:C:789:THR:HG23	2.35	0.46
3:D:26:SER:O	3:D:29:MET:HB3	2.16	0.46
2:C:1101:LEU:HD11	3:D:505:ASP:HA	1.96	0.46
1:A:45:ARG:NH2	2:C:1216:ARG:HA	2.16	0.46
3:I:145:VAL:HA	3:I:180:MET:HB3	1.96	0.46
2:C:515:MET:HE2	2:C:523:GLU:HG2	1.98	0.46
2:H:1060:ILE:HA	2:H:1064:ASP:OD2	2.16	0.46
2:C:589:THR:OG1	2:C:590:PRO:HD2	2.16	0.46
2:C:11:ILE:HD13	2:C:697:LYS:CE	2.45	0.46
3:I:1230:THR:O	3:I:1234:VAL:HG12	2.16	0.46
2:C:245:ARG:HB3	2:C:337:PHE:CE2	2.50	0.46
3:D:824:PRO:HD3	3:D:836:ARG:HD3	1.97	0.46
2:H:1199:LEU:HD13	2:H:1206:THR:HA	1.97	0.46
2:H:698:PRO:HB3	2:H:1231:TYR:CZ	2.51	0.46
3:D:298:MET:SD	5:X:402:LEU:HB3	2.56	0.46
5:X:453:PRO:HB2	5:X:455:HIS:CE1	2.51	0.46
2:H:1339:LEU:N	2:H:1339:LEU:HD12	2.31	0.46
1:B:19:VAL:O	1:B:20:SER:CB	2.64	0.46
2:C:442:VAL:HG12	2:C:443:ASP:N	2.30	0.46
2:H:446:ASP:HB2	2:H:551:HIS:CD2	2.51	0.46
3:D:390:LEU:N	3:D:390:LEU:HD12	2.30	0.46
5:X:251:LYS:O	5:X:255:VAL:HG23	2.16	0.46
3:D:614:LEU:CD2	4:E:7:GLN:HG3	2.45	0.46
3:I:886:VAL:HG22	3:I:1257:VAL:CG1	2.46	0.46
2:H:807:TRP:HE1	2:H:1086:PRO:CD	2.28	0.46
2:C:843:THR:HG22	2:C:844:LYS:H	1.80	0.46
5:Y:238:LYS:HE2	5:Y:242:HIS:CE1	2.49	0.46
1:G:81:ILE:HG23	1:G:131:CYS:SG	2.56	0.46
3:I:801:VAL:HG13	3:I:917:VAL:HG12	1.98	0.46
3:D:818:GLU:HA	3:D:881:LYS:HE2	1.97	0.46
5:X:515:GLU:N	5:X:516:ASP:HA	2.30	0.46
3:D:1165:PHE:CD2	3:D:1168:GLU:HG3	2.51	0.46
2:C:43:PRO:HD3	2:C:47:TYR:CD2	2.51	0.46
1:B:153:VAL:HA	1:B:154:PRO:HD3	1.81	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:1292:LEU:HD12	3:I:1292:LEU:N	2.31	0.46
2:H:678:ARG:HE	2:H:1106:ARG:HG2	1.81	0.46
2:C:1148:ALA:HB1	2:C:1180:MET:CE	2.46	0.46
3:I:1234:VAL:HG13	3:I:1235:ASN:N	2.31	0.46
3:I:160:LEU:HA	3:I:164:GLN:HE22	1.79	0.46
3:I:621:ALA:O	3:I:624:ILE:HG12	2.16	0.46
3:D:1346:GLY:O	3:D:1350:ASN:HB2	2.15	0.46
5:X:11:LEU:HB3	5:X:15:ARG:NH1	2.30	0.46
3:D:161:THR:HG22	3:D:162:GLU:N	2.31	0.46
3:D:97:VAL:HG13	3:D:101:ARG:NH2	2.30	0.46
2:C:360:LEU:HD13	2:C:378:ARG:HH11	1.79	0.46
2:H:690:VAL:HG11	2:H:830:THR:HG21	1.97	0.46
3:I:1320:ILE:HG22	3:I:1352:ILE:CD1	2.45	0.46
2:C:138:ILE:O	2:C:141:THR:OG1	2.30	0.46
4:E:16:ARG:O	4:E:20:VAL:HG23	2.16	0.46
3:I:349:TYR:CD1	3:I:472:LEU:HD11	2.51	0.46
5:Y:449:THR:HG23	5:Y:503:GLU:OE1	2.16	0.46
3:D:1361:THR:O	4:E:21:LEU:HD21	2.15	0.46
2:H:429:MET:O	2:H:433:ILE:HG13	2.16	0.46
5:Y:586:ARG:HH22	5:Y:590:ILE:HD11	1.81	0.46
3:I:161:THR:HG22	3:I:162:GLU:N	2.31	0.46
5:Y:448:ARG:HD3	5:Y:450:ILE:CG1	2.44	0.46
2:C:213:LEU:HD21	2:C:390:PHE:CZ	2.51	0.46
5:X:22:LEU:HD13	5:X:48:ILE:HD12	1.97	0.46
2:H:11:ILE:HD13	2:H:697:LYS:HZ3	1.81	0.46
3:D:701:LEU:CD2	3:D:723:TYR:HB2	2.46	0.46
2:H:342:ASP:N	2:H:342:ASP:OD1	2.43	0.46
3:D:886:VAL:CG1	3:D:1230:THR:HG21	2.46	0.46
3:I:747:MET:O	3:I:755:ILE:HG22	2.16	0.46
1:B:126:PRO:HG2	1:B:127:GLN:OE1	2.15	0.46
3:D:1205:GLU:HB2	3:D:1208:ASP:OD1	2.15	0.46
3:I:1338:ALA:O	3:I:1340:LYS:N	2.49	0.46
1:G:153:VAL:HB	1:G:175:ALA:HB3	1.97	0.46
3:I:527:LEU:HB2	3:I:535:ARG:CZ	2.46	0.45
4:E:3:ARG:O	4:E:4:VAL:HG13	2.16	0.45
3:D:521:LYS:HB2	3:D:542:ALA:HB2	1.98	0.45
5:Y:479:THR:OG1	5:Y:482:GLU:HB2	2.16	0.45
3:I:262:THR:O	5:Y:507:MET:N	2.37	0.45
1:B:33:ARG:HE	1:B:197:ASP:HB2	1.81	0.45
2:H:127:ILE:HG12	2:H:127:ILE:O	2.16	0.45
2:C:1064:ASP:OD1	2:C:1238:LEU:HB2	2.15	0.45
3:D:489:ASN:HA	3:D:904:ALA:CB	2.46	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:1298:VAL:HG23	2:H:1299:ASN:N	2.29	0.45
5:Y:608:ARG:HB3	5:Y:608:ARG:NH1	2.31	0.45
3:I:313:GLY:O	3:I:314:ARG:HB2	2.16	0.45
3:I:179:LYS:H	3:I:179:LYS:HE3	1.81	0.45
3:D:786:THR:O	3:D:790:THR:HG23	2.16	0.45
3:D:1290:ARG:HD2	3:D:1299:GLY:HA3	1.97	0.45
3:D:804:ALA:HB2	3:D:1259:GLN:NE2	2.31	0.45
2:H:528:ARG:NH2	2:H:663:VAL:HB	2.31	0.45
3:D:600:ALA:CA	3:D:603:LYS:HB3	2.37	0.45
2:C:515:MET:HE3	2:C:527:LYS:CE	2.39	0.45
3:I:591:ILE:HD12	3:I:592:VAL:HG13	1.97	0.45
3:D:697:MET:HE1	3:D:738:ARG:HA	1.99	0.45
2:H:993:PRO:HB2	2:H:994:ARG:H	1.57	0.45
2:H:1325:VAL:O	2:H:1329:GLU:HG3	2.17	0.45
2:C:71:VAL:O	2:C:72:SER:OG	2.27	0.45
2:C:73:TYR:O	2:C:74:ARG:HB2	2.15	0.45
2:C:672:GLU:HG3	2:C:673:HIS:CD2	2.51	0.45
3:D:700:ASN:O	3:D:704:GLU:HG2	2.15	0.45
3:D:1148:ARG:HB2	3:D:1148:ARG:NH2	2.31	0.45
2:H:216:THR:O	2:H:220:ILE:HG13	2.16	0.45
5:Y:292:VAL:HG13	5:Y:297:MET:O	2.16	0.45
2:H:838:CYS:HB2	2:H:918:LEU:HB2	1.98	0.45
2:H:884:VAL:HB	2:H:918:LEU:HB3	1.97	0.45
2:C:56:VAL:HB	2:C:57:PHE:H	1.46	0.45
3:D:1221:LEU:HD23	3:D:1226:VAL:HA	1.98	0.45
3:I:746:LEU:HD22	3:I:746:LEU:N	2.31	0.45
2:H:572:ILE:HD13	6:H:1401:RFP:O1	2.16	0.45
2:C:591:TYR:CE1	2:C:616:ILE:HG23	2.51	0.45
2:C:603:ILE:HD12	2:C:603:ILE:O	2.16	0.45
2:C:106:GLU:H	2:C:107:ARG:HA	1.81	0.45
3:D:424:ASN:HB2	3:D:434:ILE:HG13	1.98	0.45
2:H:810:TYR:CE1	2:H:1078:LYS:HD2	2.50	0.45
3:I:149:GLY:HA2	3:I:156:ARG:HG2	1.97	0.45
3:D:344:GLY:O	3:D:345:LYS:HB2	2.17	0.45
3:D:1234:VAL:HG13	3:D:1235:ASN:N	2.31	0.45
1:G:41:ASN:CG	2:H:1217:THR:HA	2.36	0.45
2:H:10:ARG:HD3	2:H:1175:ASN:HD21	1.82	0.45
5:X:445:ASP:OD1	5:X:445:ASP:N	2.34	0.45
3:D:79:LYS:HE3	5:X:569:THR:N	2.32	0.45
2:C:230:PHE:CE1	2:C:239:MET:HG3	2.51	0.45
3:D:81:ARG:HA	3:D:92:VAL:O	2.16	0.45
3:I:378:LYS:HG3	3:I:382:TYR:CZ	2.51	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:403:MET:HG2	2:C:407:ARG:HH12	1.82	0.45
3:I:1347:LEU:O	3:I:1351:VAL:HG23	2.16	0.45
3:I:646:ILE:HD12	3:I:646:ILE:O	2.15	0.45
2:C:555:TYR:OH	2:C:637:ARG:NH2	2.50	0.45
1:A:80:GLU:HG3	2:C:694:ARG:NH1	2.31	0.45
2:H:993:PRO:HD2	2:H:996:ARG:HB3	1.99	0.45
3:I:279:LEU:HD23	3:I:295:GLU:CG	2.46	0.45
5:X:572:THR:O	5:X:576:VAL:HG23	2.16	0.45
2:H:812:PHE:N	2:H:815:SER:HB2	2.31	0.45
3:D:309:ASN:HD22	3:D:314:ARG:HA	1.82	0.45
1:G:57:THR:HG22	1:G:175:ALA:HB2	1.98	0.45
2:C:702:THR:HA	2:C:1184:THR:O	2.15	0.45
3:I:482:ALA:C	3:I:483:LEU:HD12	2.37	0.45
2:H:31:GLN:O	2:H:130:MET:HE1	2.16	0.45
2:C:686:GLN:O	2:C:688:GLN:N	2.41	0.45
5:X:276:MET:O	5:X:280:VAL:HG23	2.17	0.45
2:C:475:VAL:HG23	2:C:492:MET:SD	2.57	0.45
3:D:607:THR:O	3:D:611:ILE:HG12	2.17	0.45
3:I:504:GLN:HG3	3:I:505:ASP:H	1.82	0.45
3:I:385:LEU:HD23	3:I:411:ILE:HG13	1.98	0.45
3:D:510:LEU:HD12	3:D:601:ILE:CD1	2.43	0.45
1:F:52:PRO:HG2	1:F:219:ARG:NH2	2.27	0.45
3:I:590:SER:HB3	3:I:594:GLN:NE2	2.29	0.45
3:I:252:LEU:O	3:I:252:LEU:HG	2.16	0.45
5:Y:386:LEU:O	5:Y:390:ILE:HG23	2.15	0.45
2:C:1024:GLU:HG3	2:C:1028:LYS:HD2	1.99	0.45
3:I:860:ARG:NH1	3:I:866:GLU:HG2	2.32	0.45
2:C:641:GLU:HG3	2:C:642:SER:H	1.80	0.45
5:Y:286:LEU:HD23	5:Y:340:ALA:HB2	1.99	0.45
2:C:515:MET:CE	2:C:527:LYS:CE	2.94	0.45
3:D:587:LEU:HD12	3:D:611:ILE:HD11	1.98	0.45
3:D:502:PRO:HB3	3:D:506:VAL:HG11	1.98	0.45
3:D:832:LYS:HZ1	3:D:832:LYS:HA	1.82	0.45
1:G:227:GLN:O	1:G:229:GLU:N	2.50	0.45
5:X:148:TYR:OH	5:X:218:ARG:HA	2.16	0.45
3:D:364:HIS:HB3	3:D:487:THR:HG21	1.99	0.45
2:H:106:GLU:HB3	2:H:107:ARG:CA	2.47	0.45
3:I:611:ILE:HG13	3:I:612:LEU:CD2	2.47	0.45
3:I:116:PHE:HB3	3:I:237:MET:HE3	1.98	0.45
1:B:81:ILE:HG12	1:B:131:CYS:SG	2.57	0.45
3:I:97:VAL:HG13	3:I:101:ARG:NH2	2.31	0.45
4:E:12:LYS:HD3	4:E:12:LYS:HA	1.80	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:Y:343:LYS:O	5:Y:347:ILE:HG13	2.16	0.45
1:B:102:LEU:HG	1:B:115:ILE:HG12	1.99	0.45
3:I:522:GLY:O	3:I:523:GLU:HG2	2.17	0.45
3:D:746:LEU:HD22	3:D:746:LEU:H	1.82	0.45
2:H:142:GLU:O	2:H:143:ARG:HB2	2.16	0.45
3:D:478:LEU:HD11	4:E:47:THR:HG23	1.99	0.45
2:H:1293:VAL:HG21	2:H:1304:MET:HB2	1.98	0.45
3:D:768:ASN:O	3:D:771:GLN:NE2	2.50	0.45
2:H:562:GLU:HG2	2:H:574:SER:HB3	1.95	0.45
3:D:665:GLN:HG2	3:D:678:ARG:NH1	2.32	0.45
3:D:1154:ALA:HB1	3:D:1211:SER:HB3	1.99	0.45
2:C:697:LYS:HD2	2:C:793:GLU:OE2	2.16	0.45
2:C:1284:ALA:HA	3:D:1357:ILE:HD13	1.99	0.45
1:A:49:SER:OG	1:A:50:SER:N	2.50	0.45
2:C:975:ILE:O	2:C:979:LEU:HB2	2.17	0.45
3:I:703:THR:O	3:I:718:SER:N	2.50	0.45
2:C:192:ASP:HB3	2:C:346:TYR:CD1	2.52	0.45
2:C:518:ASN:ND2	2:C:761:GLN:HG2	2.31	0.45
3:I:801:VAL:HG12	3:I:805:GLN:HB3	1.99	0.45
3:D:372:MET:O	3:D:376:LEU:HG	2.16	0.45
3:I:8:LEU:HD23	3:I:8:LEU:N	2.32	0.45
3:D:840:LEU:O	3:D:840:LEU:HD12	2.17	0.45
1:A:303:ILE:O	1:A:307:LEU:HD13	2.17	0.45
2:C:44:GLU:HG3	2:C:45:GLY:N	2.32	0.45
2:H:120:GLN:HG3	2:H:121:GLU:N	2.32	0.45
2:C:1045:GLY:O	2:C:1046:VAL:HB	2.16	0.45
3:D:768:ASN:OD1	3:D:771:GLN:N	2.33	0.45
3:D:842:ARG:HD2	3:D:882:VAL:CG2	2.38	0.45
2:C:670:PHE:CE2	2:C:1113:LEU:HB3	2.52	0.45
3:D:40:LYS:HA	3:D:41:PRO:HD3	1.78	0.45
2:H:628:HIS:HB3	2:H:647:ARG:HH21	1.78	0.45
3:D:270:ARG:NE	5:X:449:THR:HG22	2.29	0.45
3:D:474:LEU:HD11	4:E:27:ALA:CB	2.46	0.45
3:D:169:LEU:HD22	3:D:176:PHE:HE2	1.82	0.45
3:I:664:ILE:HG21	3:I:681:LYS:HD2	1.98	0.45
2:H:177:ILE:N	2:H:177:ILE:HD12	2.31	0.45
2:H:207:THR:O	2:H:211:ARG:HG3	2.17	0.45
2:H:1285:TYR:HD2	3:I:1361:THR:HG21	1.81	0.45
1:F:61:ILE:HG12	1:F:142:MET:HB3	1.99	0.45
3:D:167:ASP:O	3:D:171:GLU:HG2	2.16	0.45
2:H:1006:GLU:H	2:H:1006:GLU:CD	2.20	0.45
3:D:1178:THR:HG22	3:D:1187:GLU:HA	1.97	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:176:CYS:O	1:G:178:SER:N	2.43	0.45
3:D:215:LYS:O	3:D:219:LYS:HG3	2.17	0.45
3:D:1140:ARG:NH2	3:D:1144:LEU:HD21	2.31	0.45
3:I:1161:GLY:HA2	3:I:1181:ASP:HB2	1.99	0.45
3:D:841:GLY:HA3	3:D:901:ARG:CD	2.47	0.45
3:D:316:ILE:O	3:D:317:THR:OG1	2.25	0.45
2:H:802:VAL:CG2	2:H:1098:LEU:HG	2.47	0.45
3:I:707:ILE:HD11	3:I:716:GLN:HG3	1.99	0.45
3:D:1241:TYR:CD1	3:D:1248:ILE:HG21	2.52	0.45
3:I:572:THR:HB	3:I:576:ARG:HD2	1.98	0.45
5:X:225:ARG:O	5:X:229:VAL:HG13	2.16	0.45
4:J:15:ASN:ND2	4:J:17:PHE:HB2	2.32	0.45
3:I:526:VAL:HG12	3:I:549:LYS:O	2.17	0.45
3:D:704:GLU:HB2	3:D:718:SER:OG	2.17	0.45
3:D:1307:LEU:N	3:D:1307:LEU:HD23	2.31	0.45
3:I:516:ASP:OD1	3:I:516:ASP:N	2.46	0.45
2:H:344:GLY:HA2	2:H:345:PRO:HD3	1.84	0.45
1:F:152:TYR:CD2	2:H:824:GLN:HG2	2.52	0.45
3:D:746:LEU:N	3:D:746:LEU:HD22	2.32	0.45
2:C:1210:ILE:HG23	2:C:1211:ARG:NH1	2.32	0.45
2:C:53:PHE:HD1	2:C:57:PHE:CD2	2.34	0.45
3:I:527:LEU:HD13	3:I:531:LYS:HB2	1.97	0.45
3:D:611:ILE:HG13	3:D:612:LEU:HD22	1.99	0.45
2:C:153:PRO:O	2:C:404:LYS:HE3	2.17	0.45
3:D:41:PRO:HG3	3:D:273:ILE:HG22	1.99	0.45
5:X:452:ILE:HD11	5:X:500:ILE:CG2	2.47	0.45
2:C:106:GLU:HG3	2:C:108:GLU:N	2.32	0.45
3:I:30:ILE:HD13	3:I:33:TRP:CZ3	2.52	0.45
3:I:325:LYS:HZ1	3:I:330:MET:HG2	1.81	0.45
3:I:372:MET:O	3:I:376:LEU:HG	2.16	0.45
2:C:966:ILE:HG23	2:C:967:LEU:HD12	1.99	0.45
1:A:281:LEU:HG	1:A:307:LEU:HD21	1.98	0.45
2:H:1303:LYS:HA	2:H:1303:LYS:HE2	1.98	0.45
3:I:239:LEU:HD12	3:I:239:LEU:O	2.17	0.45
3:I:848:VAL:HG11	3:I:880:VAL:HA	1.98	0.45
3:I:610:ARG:HH21	3:I:901:ARG:NH2	2.14	0.44
3:D:900:GLY:O	3:D:908:ILE:HG22	2.17	0.44
4:J:10:VAL:HG11	4:J:16:ARG:CG	2.47	0.44
2:C:144:VAL:HG23	2:C:515:MET:HB2	1.99	0.44
2:H:678:ARG:HD3	2:H:681:MET:HG3	1.98	0.44
2:H:1239:VAL:HG12	2:H:1240:ASP:N	2.28	0.44
3:I:584:PRO:O	3:I:589:TYR:OH	2.22	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:178:PRO:HA	2:C:397:LEU:CD2	2.42	0.44
2:C:1042:LEU:HD13	2:C:1042:LEU:N	2.28	0.44
5:X:511:ILE:CG2	5:X:517:SER:HB3	2.48	0.44
5:Y:586:ARG:O	5:Y:589:GLN:HB2	2.17	0.44
2:H:747:GLY:C	2:H:748:ILE:HG13	2.36	0.44
2:H:748:ILE:C	2:H:748:ILE:HD12	2.38	0.44
3:D:1184:ASP:HA	3:D:1185:PRO:HD3	1.75	0.44
2:H:18:ARG:HB2	2:H:1188:ASP:OD2	2.18	0.44
3:I:77:ARG:HA	3:I:77:ARG:HD2	1.79	0.44
2:H:73:TYR:O	2:H:74:ARG:HB2	2.16	0.44
3:D:66:LYS:HB3	3:D:66:LYS:NZ	2.32	0.44
2:C:542:ARG:HG2	2:C:543:ALA:H	1.82	0.44
1:F:85:LEU:CD2	1:F:130:ILE:HD13	2.47	0.44
3:I:159:ILE:HD12	3:I:159:ILE:N	2.32	0.44
5:X:47:MET:O	5:X:55:VAL:HG11	2.17	0.44
2:C:632:ASP:O	2:C:633:LEU:HD23	2.17	0.44
5:X:556:ALA:O	5:X:560:ARG:HB2	2.17	0.44
3:D:572:THR:HB	3:D:576:ARG:HB2	2.00	0.44
1:B:227:GLN:C	1:B:229:GLU:H	2.20	0.44
2:H:877:VAL:HG11	2:H:883:LEU:CD2	2.45	0.44
1:A:152:TYR:CE2	2:C:824:GLN:HA	2.51	0.44
5:X:311:THR:HB	5:X:345:GLN:HG2	1.99	0.44
2:C:1293:VAL:HG21	2:C:1304:MET:CB	2.48	0.44
3:D:159:ILE:N	3:D:159:ILE:HD12	2.32	0.44
2:C:80:PHE:O	2:C:84:GLU:HB3	2.16	0.44
5:Y:355:ILE:O	5:Y:358:VAL:HG22	2.17	0.44
2:C:988:LYS:NZ	2:C:988:LYS:HB3	2.31	0.44
2:H:582:ASN:HB2	2:H:588:GLU:HG3	1.99	0.44
3:I:1190:ILE:N	3:I:1190:ILE:HD12	2.32	0.44
2:C:296:VAL:O	2:C:336:LEU:N	2.50	0.44
3:I:73:GLY:O	3:I:76:LYS:HE3	2.17	0.44
3:I:532:GLU:O	3:I:535:ARG:HB2	2.17	0.44
3:I:145:VAL:CG1	3:I:180:MET:HB3	2.36	0.44
3:D:545:HIS:HB2	3:D:546:ALA:CA	2.48	0.44
3:I:761:ALA:HB3	3:I:767:LEU:CD1	2.44	0.44
5:Y:471:LEU:HD12	5:Y:472:GLN:N	2.32	0.44
5:X:101:TYR:HE2	5:X:388:ILE:HD11	1.82	0.44
3:I:647:PRO:HG3	3:I:697:MET:CA	2.43	0.44
2:H:1298:VAL:CG1	2:H:1321:GLU:HG3	2.47	0.44
3:I:517:CYS:N	3:I:544:LEU:O	2.42	0.44
2:C:177:ILE:N	2:C:177:ILE:HD12	2.33	0.44
3:D:579:LEU:O	3:D:579:LEU:HD13	2.16	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:9:LEU:HD23	1:G:9:LEU:H	1.83	0.44
3:D:888:CYS:HB2	3:D:898:CYS:SG	2.58	0.44
3:D:535:ARG:HB3	3:D:541:LEU:HD11	2.00	0.44
3:D:844:THR:OG1	3:D:856:ILE:HD11	2.17	0.44
2:C:712:SER:HB3	2:C:714:VAL:HG12	2.00	0.44
2:C:68:LEU:HA	2:C:68:LEU:HD12	1.83	0.44
3:I:145:VAL:HA	3:I:180:MET:CB	2.48	0.44
3:I:614:LEU:CG	4:J:7:GLN:HG3	2.48	0.44
3:I:1148:ARG:HH21	3:I:1148:ARG:HB2	1.82	0.44
3:I:828:GLY:CA	3:I:832:LYS:HA	2.46	0.44
3:D:822:MET:CG	3:D:838:ARG:HG3	2.47	0.44
1:G:37:HIS:CE1	2:H:1216:ARG:HD3	2.53	0.44
3:I:56:LEU:O	3:I:250:ARG:NH2	2.43	0.44
3:D:473:THR:HB	3:D:476:ALA:HB3	1.98	0.44
3:D:1180:VAL:HG22	3:D:1185:PRO:CA	2.46	0.44
3:D:588:PRO:HB2	3:D:591:ILE:HD11	2.00	0.44
2:C:98:VAL:HG11	2:C:124:MET:SD	2.57	0.44
3:I:856:ILE:HD12	3:I:857:LEU:H	1.82	0.44
3:D:1346:GLY:HA3	3:D:1349:GLU:CD	2.37	0.44
2:C:208:ILE:HD11	2:C:365:GLU:HB3	1.98	0.44
2:C:1186:VAL:HG13	2:C:1187:PHE:N	2.31	0.44
3:I:1307:LEU:HD23	3:I:1307:LEU:N	2.33	0.44
3:I:16:GLU:HB3	3:I:1369:ARG:HH22	1.82	0.44
1:B:152:TYR:OH	3:D:535:ARG:NH1	2.43	0.44
5:X:35:ILE:HG13	5:X:36:VAL:N	2.25	0.44
3:I:531:LYS:NZ	3:I:531:LYS:HB3	2.32	0.44
2:H:736:VAL:HG11	2:H:740:GLU:CB	2.47	0.44
2:C:668:ILE:HG23	2:C:669:PRO:HD2	1.99	0.44
2:C:935:THR:HA	2:C:1048:LYS:HB3	1.99	0.44
1:A:300:LEU:HD13	1:A:300:LEU:O	2.17	0.44
3:D:1328:THR:HA	3:D:1331:VAL:HG12	1.99	0.44
5:X:316:PHE:CD1	5:X:337:VAL:HG11	2.52	0.44
2:C:270:THR:H	2:C:273:HIS:HD2	1.65	0.44
3:D:384:LYS:HA	3:D:384:LYS:HD2	1.86	0.44
2:C:1274:GLU:N	2:C:1274:GLU:OE1	2.50	0.44
2:H:51:ALA:C	2:H:53:PHE:H	2.21	0.44
3:D:901:ARG:CA	3:D:908:ILE:HA	2.48	0.44
2:H:876:GLU:HG3	2:H:927:THR:CG2	2.30	0.44
3:D:230:SER:CB	3:D:1338:ALA:HA	2.47	0.44
2:C:202:ARG:HH21	2:C:369:MET:HA	1.82	0.44
2:H:528:ARG:HH22	2:H:663:VAL:HG23	1.83	0.44
2:C:59:ILE:O	2:C:62:TYR:HB2	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:924:VAL:HG12	2:H:1058:ARG:HH22	1.82	0.44
5:Y:470:MET:CB	5:Y:478:PRO:HB3	2.41	0.44
2:C:682:GLY:HA2	2:C:685:MET:HG2	1.99	0.44
2:H:127:ILE:HA	2:H:128:PRO:HD3	1.83	0.44
3:I:510:LEU:CD1	3:I:601:ILE:HD11	2.47	0.44
5:X:561:MET:HA	5:X:567:MET:SD	2.56	0.44
2:C:985:GLU:HG3	2:C:988:LYS:HB2	1.99	0.44
2:C:667:LEU:HD23	2:C:704:MET:HB3	1.98	0.44
5:X:306:PHE:O	5:X:310:GLU:HG2	2.17	0.44
5:Y:519:LEU:O	5:Y:519:LEU:HD13	2.18	0.44
2:H:30:ILE:HD12	2:H:581:THR:HG22	2.00	0.44
3:I:901:ARG:HA	3:I:908:ILE:HA	1.99	0.44
3:I:1278:GLU:HG3	3:I:1279:GLN:N	2.33	0.44
1:A:45:ARG:HG2	2:C:1083:GLU:OE1	2.18	0.44
2:C:57:PHE:CE1	2:C:475:VAL:HG11	2.53	0.44
3:D:112:ALA:HA	3:D:238:ILE:CG2	2.43	0.44
2:C:117:ILE:HG21	2:C:487:LEU:HD23	2.00	0.44
1:A:180:VAL:HG11	1:A:183:ILE:CG1	2.48	0.44
2:H:475:VAL:O	2:H:479:LEU:HB2	2.18	0.44
5:Y:108:VAL:HG23	5:Y:109:GLU:N	2.29	0.44
2:C:127:ILE:HG12	2:C:127:ILE:O	2.18	0.44
5:Y:455:HIS:O	5:Y:459:THR:HG23	2.18	0.44
3:D:395:LYS:HZ1	5:X:609:SER:HB3	1.82	0.44
5:X:343:LYS:O	5:X:346:GLN:HB3	2.18	0.44
3:I:214:ARG:O	3:I:218:THR:HG22	2.18	0.44
2:H:1103:VAL:N	2:H:1104:PRO:HD2	2.33	0.44
3:D:268:LEU:HG	3:D:306:LEU:HA	2.00	0.44
3:D:220:ARG:NE	3:D:224:LEU:HD11	2.33	0.44
3:D:706:VAL:C	3:D:707:ILE:HG13	2.38	0.44
3:I:610:ARG:HH21	3:I:901:ARG:HH22	1.65	0.44
2:C:1084:ASP:HB2	2:C:1216:ARG:CG	2.47	0.44
2:C:103:VAL:HG22	2:C:104:ILE:H	1.82	0.44
2:H:1254:VAL:HG23	2:H:1255:THR:N	2.33	0.44
3:D:160:LEU:N	3:D:160:LEU:HD12	2.32	0.44
3:I:1258:ARG:HG3	3:I:1259:GLN:N	2.33	0.44
2:C:119:GLU:HG2	2:C:120:GLN:N	2.33	0.44
3:D:128:LEU:CD1	3:D:188:LEU:HD22	2.41	0.44
3:I:552:ILE:HG22	3:I:554:GLU:HG3	2.00	0.44
2:H:578:TYR:HB3	2:H:590:PRO:HG3	2.00	0.44
2:H:1214:ASP:OD1	2:H:1216:ARG:HB2	2.18	0.44
3:I:573:THR:HG22	3:I:576:ARG:CG	2.46	0.44
3:I:595:ALA:HB1	3:I:596:LEU:HD23	1.99	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:149:GLY:CA	3:I:156:ARG:HG2	2.48	0.44
3:D:513:MET:HB3	3:D:513:MET:HE2	1.94	0.44
2:H:236:LYS:HE3	2:H:238:GLN:HE21	1.83	0.44
1:A:256:PRO:HA	1:A:277:TYR:HA	2.00	0.44
2:H:643:SER:C	2:H:644:LEU:HD12	2.39	0.44
2:C:465:ARG:O	2:C:469:VAL:HG23	2.18	0.44
2:C:201:ARG:HD2	2:C:370:MET:SD	2.58	0.44
3:I:686:TRP:HB3	3:I:758:PRO:HG2	1.99	0.44
2:C:403:MET:HG2	2:C:407:ARG:CZ	2.47	0.44
6:C:1401:RFP:O11	6:C:1401:RFP:O1	2.35	0.44
1:A:104:LYS:HG3	1:A:114:ASP:OD2	2.18	0.44
2:H:153:PRO:HD2	2:H:452:ARG:HD3	2.00	0.44
3:I:42:GLU:OE1	5:Y:451:ARG:HG2	2.17	0.44
3:I:31:ARG:CZ	3:I:241:VAL:HG21	2.48	0.44
3:D:490:ILE:HA	3:D:500:ILE:HD12	2.00	0.44
2:C:516:ASP:OD1	2:C:518:ASN:ND2	2.51	0.44
3:D:1323:ALA:O	3:D:1328:THR:HG22	2.18	0.44
3:I:494:ALA:HA	3:I:1252:HIS:HE1	1.83	0.44
2:C:159:SER:HA	2:C:442:VAL:HG11	2.00	0.44
1:B:102:LEU:O	1:B:141:SER:HA	2.18	0.44
2:H:670:PHE:CE2	2:H:1113:LEU:HB3	2.53	0.44
1:F:153:VAL:HG13	1:F:157:THR:OG1	2.17	0.44
3:I:202:ARG:O	3:I:206:ASN:ND2	2.45	0.44
2:H:707:ALA:O	2:H:710:VAL:HG12	2.18	0.44
1:A:308:ALA:HA	1:A:312:LEU:O	2.17	0.44
3:I:901:ARG:CB	3:I:908:ILE:HA	2.47	0.43
3:D:610:ARG:HG3	3:D:864:LEU:CD1	2.25	0.43
3:D:140:TYR:HA	3:D:181:GLY:CA	2.45	0.43
3:I:598:LYS:HE3	3:I:599:LYS:HE3	1.99	0.43
2:C:454:ARG:CD	2:C:459:MET:HG2	2.41	0.43
2:C:119:GLU:OE2	2:C:489:PRO:HB2	2.18	0.43
2:C:11:ILE:HD13	2:C:697:LYS:HE3	1.99	0.43
3:I:1309:ILE:HG22	3:I:1310:THR:N	2.33	0.43
2:C:1254:VAL:HG23	2:C:1255:THR:N	2.31	0.43
3:I:416:ILE:HG13	3:I:441:LEU:CD2	2.48	0.43
2:H:105:TYR:CG	2:H:106:GLU:HB2	2.52	0.43
1:A:23:HIS:CE1	1:A:25:LYS:HE3	2.50	0.43
2:H:821:ARG:CZ	2:H:1082:ILE:HD13	2.48	0.43
2:C:751:TYR:HE1	2:C:783:LEU:HD12	1.83	0.43
3:I:306:LEU:HD23	3:I:306:LEU:C	2.39	0.43
1:A:222:THR:O	1:A:226:GLU:HG3	2.17	0.43
3:D:392:THR:CG2	5:X:603:ARG:HG2	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:X:45:ILE:C	5:X:45:ILE:HD12	2.38	0.43
5:X:406:GLN:HA	5:X:406:GLN:NE2	2.32	0.43
3:D:286:ALA:C	3:D:288:PRO:HD3	2.38	0.43
2:H:599:VAL:HG21	2:H:623:LEU:HD21	1.99	0.43
2:C:148:GLN:HA	2:C:531:SER:O	2.18	0.43
2:C:850:ILE:N	2:C:850:ILE:HD12	2.33	0.43
2:C:812:PHE:CE1	3:D:629:PHE:HZ	2.36	0.43
2:C:1209:GLN:O	2:C:1210:ILE:HG13	2.18	0.43
2:C:1086:PRO:HA	2:C:1213:TYR:O	2.18	0.43
2:C:1214:ASP:HA	2:C:1221:PHE:CZ	2.52	0.43
2:C:91:THR:HB	2:C:138:ILE:HD13	2.01	0.43
2:H:1293:VAL:HG21	2:H:1304:MET:HG3	2.00	0.43
2:H:681:MET:O	2:H:685:MET:HG2	2.17	0.43
3:D:43:THR:OG1	3:D:44:ILE:N	2.51	0.43
1:B:183:ILE:HD11	1:B:205:MET:HE2	2.00	0.43
3:I:1322:ALA:CB	3:I:1331:VAL:HG21	2.48	0.43
4:E:60:ASN:H	4:E:63:ILE:HB	1.83	0.43
3:D:1158:GLU:HA	3:D:1223:LEU:HD22	1.99	0.43
5:Y:133:SER:OG	5:Y:365:MET:HB2	2.18	0.43
2:C:1304:MET:HE1	2:C:1308:ILE:HD11	2.01	0.43
2:H:1327:LEU:HD13	2:H:1339:LEU:HD11	1.99	0.43
3:I:801:VAL:CG1	3:I:805:GLN:HB3	2.48	0.43
5:X:312:SER:OG	5:X:314:THR:HG23	2.18	0.43
3:D:1283:SER:O	3:D:1287:ILE:HG23	2.18	0.43
3:D:1287:ILE:O	3:D:1291:GLU:HG2	2.18	0.43
5:X:142:THR:O	5:X:146:GLU:HG3	2.17	0.43
3:D:478:LEU:HD22	4:E:24:ALA:HB2	2.00	0.43
4:E:38:LEU:HD13	4:E:58:LEU:CD2	2.37	0.43
3:I:473:THR:HB	3:I:476:ALA:HB3	1.97	0.43
2:C:46:GLN:O	2:C:49:LEU:HB3	2.19	0.43
2:C:309:LEU:H	2:C:309:LEU:CD2	2.24	0.43
3:I:799:ARG:HD2	3:I:1310:THR:CG2	2.48	0.43
3:I:518:VAL:HG23	3:I:716:GLN:OE1	2.18	0.43
1:B:227:GLN:O	1:B:229:GLU:N	2.44	0.43
1:A:134:THR:CG2	2:C:727:VAL:HG23	2.47	0.43
3:D:1357:ILE:HD12	3:D:1357:ILE:N	2.33	0.43
3:D:1158:GLU:O	3:D:1223:LEU:HD11	2.19	0.43
5:Y:365:MET:O	5:Y:369:GLU:HG3	2.18	0.43
3:I:369:PRO:HG3	3:I:446:ALA:O	2.18	0.43
5:X:453:PRO:HD2	5:X:456:MET:CB	2.48	0.43
1:B:19:VAL:HG12	1:B:19:VAL:O	2.18	0.43
2:C:686:GLN:C	2:C:688:GLN:H	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:988:LYS:NZ	2:H:988:LYS:HB3	2.33	0.43
3:I:119:SER:HA	3:I:311:ARG:HH12	1.83	0.43
2:H:24:VAL:HA	2:H:25:PRO:HD3	1.86	0.43
2:C:57:PHE:O	2:C:67:GLU:HA	2.19	0.43
3:D:766:GLY:C	3:D:767:LEU:HD22	2.39	0.43
1:A:318:LEU:HD13	1:A:318:LEU:N	2.33	0.43
3:D:681:LYS:O	3:D:685:ILE:HG13	2.19	0.43
2:H:684:ASN:CB	2:H:687:ARG:HH12	2.31	0.43
3:I:120:LEU:N	3:I:120:LEU:HD12	2.33	0.43
2:C:228:VAL:HG22	2:C:245:ARG:NH1	2.33	0.43
3:D:247:PRO:HA	3:D:250:ARG:NH1	2.33	0.43
3:D:121:PRO:O	3:D:123:ARG:HD2	2.18	0.43
1:F:11:PRO:HA	1:F:30:PRO:O	2.18	0.43
3:D:823:THR:OG1	3:D:824:PRO:HD2	2.17	0.43
2:C:105:TYR:HA	2:C:106:GLU:HB2	2.00	0.43
1:B:47:LEU:HA	1:B:51:MET:HG2	1.99	0.43
2:C:149:LEU:CD2	2:C:451:ARG:HE	2.31	0.43
3:D:515:ARG:HG3	3:D:719:PHE:CZ	2.52	0.43
3:D:1332:LEU:HD12	3:D:1332:LEU:HA	1.87	0.43
2:C:243:PRO:HB2	2:C:278:GLU:HG3	2.00	0.43
5:X:240:ARG:CD	5:X:244:THR:HB	2.38	0.43
2:H:924:VAL:CG1	2:H:1058:ARG:HH22	2.31	0.43
2:C:22:LEU:HB3	2:C:655:VAL:CG1	2.48	0.43
3:I:799:ARG:NH1	3:I:1146:GLU:OE1	2.52	0.43
2:H:756:TYR:H	2:H:766:ASN:CB	2.32	0.43
3:D:349:TYR:CE1	3:D:472:LEU:HD11	2.53	0.43
2:C:611:GLU:CD	2:C:616:ILE:HD11	2.38	0.43
3:D:1180:VAL:HG21	3:D:1185:PRO:HB3	2.00	0.43
2:H:894:GLN:HE21	3:I:77:ARG:NH1	2.14	0.43
1:B:118:ASP:HB3	1:B:121:VAL:HB	2.00	0.43
2:C:183:TRP:HB2	2:C:199:ASP:HA	2.00	0.43
1:G:83:LEU:HD21	3:I:551:ARG:HB2	2.00	0.43
3:D:8:LEU:N	3:D:8:LEU:HD23	2.33	0.43
1:G:85:LEU:CD2	1:G:130:ILE:HD13	2.49	0.43
2:C:161:LYS:NZ	2:C:161:LYS:HB3	2.34	0.43
1:F:207:THR:HG23	1:F:209:GLY:H	1.84	0.43
3:D:532:GLU:O	3:D:535:ARG:HB2	2.18	0.43
1:B:37:HIS:NE2	2:C:1216:ARG:HD3	2.34	0.43
3:I:766:GLY:C	3:I:767:LEU:HD22	2.39	0.43
2:H:1064:ASP:OD1	2:H:1239:VAL:HG23	2.19	0.43
2:C:342:ASP:O	2:C:437:ASN:ND2	2.52	0.43
3:I:708:ASN:HA	3:I:712:GLN:HA	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:Y:108:VAL:HA	5:Y:385:ARG:NH1	2.31	0.43
1:F:9:LEU:HD11	1:F:195:ARG:CZ	2.48	0.43
2:C:637:ARG:O	2:C:638:SER:HB2	2.19	0.43
3:I:605:LEU:HD22	3:I:620:PHE:CD2	2.54	0.43
3:I:450:HIS:HD2	3:I:451:PRO:HD2	1.79	0.43
3:I:701:LEU:HD23	3:I:723:TYR:HB2	2.00	0.43
2:H:105:TYR:HA	2:H:106:GLU:HA	1.87	0.43
3:D:515:ARG:NH2	3:D:717:VAL:HG12	2.33	0.43
2:C:980:VAL:CG2	2:C:984:VAL:HG13	2.48	0.43
5:Y:316:PHE:CZ	5:Y:334:SER:HA	2.54	0.43
2:C:785:ASP:OD1	2:C:789:THR:HG23	2.19	0.43
2:C:1006:GLU:CD	2:C:1006:GLU:H	2.21	0.43
1:A:73:GLY:O	1:A:133:LEU:HA	2.19	0.43
3:D:668:PHE:HD2	3:D:675:ALA:CB	2.32	0.43
2:H:667:LEU:HD23	2:H:704:MET:HB3	1.99	0.43
5:Y:374:ARG:HH21	5:Y:377:LYS:HD2	1.83	0.43
4:E:73:GLN:O	4:E:77:ALA:HB3	2.18	0.43
2:H:843:THR:HB	2:H:845:LEU:HD21	2.00	0.43
2:C:676:ALA:HA	3:D:772:TYR:OH	2.19	0.43
1:G:29:GLU:HA	1:G:200:LYS:HB2	1.99	0.43
3:D:799:ARG:HB3	3:D:1309:ILE:HG21	1.99	0.43
2:H:152:SER:OG	2:H:404:LYS:NZ	2.23	0.43
2:H:893:THR:O	2:H:895:LEU:N	2.45	0.43
3:D:592:VAL:HG23	3:D:593:ASN:OD1	2.19	0.43
3:I:704:GLU:HB3	3:I:705:THR:H	1.70	0.43
2:H:557:ARG:NH1	2:H:611:GLU:OE1	2.52	0.43
3:I:325:LYS:HZ3	3:I:330:MET:HG2	1.82	0.43
1:B:100:LEU:HD21	1:B:121:VAL:HG21	2.01	0.43
3:D:1274:PHE:HD2	3:D:1275:LEU:HG	1.83	0.43
2:H:431:LYS:O	2:H:435:ILE:HG13	2.19	0.43
2:H:1108:ASN:ND2	2:H:1111:GLN:OE1	2.52	0.43
3:D:286:ALA:O	3:D:288:PRO:HD3	2.18	0.43
2:H:984:VAL:HG12	2:H:986:ALA:HB2	2.00	0.43
5:X:395:THR:HA	5:X:404:LEU:CD2	2.48	0.43
1:F:7:GLU:O	1:F:8:PHE:HB2	2.18	0.43
3:D:1170:LYS:C	3:D:1173:ARG:HD2	2.39	0.43
3:D:686:TRP:O	3:D:690:ASN:N	2.49	0.43
2:C:850:ILE:HG23	2:C:885:GLY:O	2.17	0.43
3:D:1301:THR:HG22	3:I:1290:ARG:HH22	1.83	0.43
1:A:166:ARG:CZ	1:A:166:ARG:HB2	2.48	0.43
2:H:564:PRO:HA	2:H:684:ASN:ND2	2.24	0.43
3:D:714:GLU:HG2	3:D:715:LYS:H	1.83	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:160:LEU:N	3:I:160:LEU:HD12	2.34	0.43
2:C:221:LEU:HD21	2:C:314:ASN:ND2	2.28	0.43
3:D:899:TYR:HE1	3:D:915:ILE:HG23	1.82	0.43
1:A:104:LYS:C	1:A:104:LYS:HD3	2.39	0.43
3:I:621:ALA:CA	3:I:624:ILE:HG12	2.47	0.43
3:D:364:HIS:HB3	3:D:487:THR:HG23	2.00	0.43
2:H:1116:HIS:CE1	2:H:1226:THR:HG23	2.49	0.43
2:H:106:GLU:CB	2:H:107:ARG:CA	2.96	0.43
1:A:243:LYS:HB2	1:A:243:LYS:HZ3	1.84	0.43
3:D:1216:ALA:O	3:D:1220:ILE:HG13	2.19	0.43
3:D:1266:ILE:HA	3:D:1302:TYR:HA	2.00	0.43
5:X:453:PRO:HD2	5:X:456:MET:CG	2.48	0.43
3:D:162:GLU:HG2	3:D:163:GLU:N	2.33	0.43
2:H:946:LEU:O	2:H:949:GLU:HG3	2.19	0.43
3:I:276:ASN:O	3:I:280:LYS:HG3	2.19	0.43
3:I:735:ALA:O	3:I:739:GLN:HG3	2.18	0.43
3:I:384:LYS:HD2	3:I:384:LYS:HA	1.83	0.43
2:C:169:LYS:HA	2:C:169:LYS:HD3	1.69	0.43
2:H:1243:MET:SD	3:I:445:LYS:HE3	2.58	0.43
5:X:291:CYS:O	5:X:295:CYS:HB2	2.19	0.43
3:D:596:LEU:N	3:D:596:LEU:HD23	2.34	0.43
3:I:166:LEU:HD12	3:I:167:ASP:N	2.34	0.43
3:I:140:TYR:OH	3:I:300:GLN:HG2	2.19	0.43
3:D:522:GLY:O	3:D:523:GLU:HG2	2.19	0.43
2:C:1331:ARG:HG3	3:D:33:TRP:CZ3	2.54	0.43
1:F:212:ASP:OD2	1:F:215:GLU:HG2	2.19	0.43
5:Y:511:ILE:HG23	5:Y:512:GLY:N	2.28	0.43
1:F:51:MET:HA	1:F:52:PRO:HD3	1.83	0.43
3:D:1343:GLU:HB2	3:D:1373:ARG:HH22	1.84	0.43
1:B:64:VAL:HG12	1:B:171:LEU:HD11	2.01	0.43
3:D:27:PRO:HG3	3:D:240:THR:HG22	2.01	0.43
2:C:1298:VAL:HG23	2:C:1299:ASN:N	2.34	0.43
1:F:69:SER:O	1:F:78:ILE:HG12	2.19	0.43
3:D:143:SER:HB2	5:X:100:MET:HE2	1.99	0.43
2:H:103:VAL:HG22	2:H:104:ILE:H	1.84	0.43
1:G:79:LEU:HD23	1:G:82:LEU:HD12	2.00	0.43
2:C:944:ARG:HG3	2:C:944:ARG:HH11	1.84	0.43
2:H:603:ILE:O	2:H:603:ILE:HD12	2.19	0.43
2:C:836:LEU:O	2:C:1052:VAL:N	2.38	0.43
3:I:96:LYS:O	3:I:99:ARG:HB3	2.18	0.43
2:H:462:ASN:O	2:H:466:VAL:HG23	2.19	0.43
3:D:864:LEU:HD21	3:D:901:ARG:NH2	2.34	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:1278:GLU:HG3	3:I:1279:GLN:H	1.84	0.43
2:C:807:TRP:HH2	2:C:1216:ARG:HE	1.64	0.43
3:D:1284:ARG:CA	3:D:1287:ILE:HG12	2.48	0.43
1:A:100:LEU:CD2	1:A:121:VAL:HG21	2.37	0.43
3:D:545:HIS:HA	3:D:546:ALA:HA	1.81	0.43
2:H:896:THR:HG23	2:H:897:PRO:HD2	2.00	0.43
3:D:205:LEU:HD13	3:D:217:LEU:HD22	2.00	0.43
2:H:13:LYS:HD2	2:H:1181:PRO:HG2	1.95	0.43
3:I:425:ARG:CD	3:I:459:ALA:HB2	2.49	0.43
3:D:519:ASN:ND2	3:D:709:ARG:HA	2.34	0.43
3:I:262:THR:O	5:Y:507:MET:HG3	2.18	0.43
2:C:697:LYS:HD2	2:C:793:GLU:CD	2.39	0.43
2:C:92:TYR:O	2:C:128:PRO:HA	2.18	0.43
3:I:1357:ILE:N	3:I:1357:ILE:HD12	2.34	0.43
2:H:1085:MET:CE	2:H:1094:VAL:HG23	2.49	0.43
5:X:27:VAL:O	5:X:31:LEU:HG	2.19	0.43
1:B:22:THR:HB	1:B:207:THR:O	2.18	0.43
5:X:407:GLU:HB2	5:X:439:ILE:HG22	2.01	0.43
3:I:704:GLU:O	3:I:705:THR:OG1	2.31	0.43
3:D:31:ARG:HD2	3:D:241:VAL:HG11	2.00	0.43
5:Y:394:TYR:CG	5:Y:439:ILE:HD11	2.54	0.43
2:H:944:ARG:O	2:H:947:GLU:HB2	2.19	0.43
1:A:246:LYS:HG2	1:A:246:LYS:O	2.19	0.43
5:Y:231:THR:O	5:Y:235:ILE:HG13	2.19	0.43
3:D:1307:LEU:H	3:D:1307:LEU:HD23	1.84	0.43
1:G:82:LEU:O	1:G:86:LYS:HG3	2.18	0.43
3:I:63:GLY:O	3:I:98:ARG:NH2	2.51	0.43
2:H:702:THR:HA	2:H:1184:THR:O	2.19	0.43
5:Y:372:ALA:O	5:Y:376:LYS:HG3	2.18	0.43
2:H:178:PRO:HG2	2:H:182:SER:O	2.19	0.43
3:D:901:ARG:CB	3:D:908:ILE:HA	2.49	0.42
2:C:1086:PRO:O	2:C:1094:VAL:HG22	2.18	0.42
2:C:1214:ASP:OD1	2:C:1216:ARG:HB2	2.19	0.42
3:I:535:ARG:CB	3:I:541:LEU:HD11	2.43	0.42
3:I:124:ILE:HG13	3:I:189:LEU:HD11	2.01	0.42
3:I:550:VAL:HG23	3:I:552:ILE:HD11	2.00	0.42
3:D:1149:ARG:HA	3:D:1150:PRO:HD3	1.89	0.42
2:H:714:VAL:HG23	2:H:787:PRO:HD2	2.00	0.42
1:F:192:VAL:HG21	1:F:198:LEU:HD12	2.01	0.42
1:F:221:ALA:HB1	1:G:228:LEU:HD12	2.01	0.42
3:D:918:ILE:HD11	3:D:1252:HIS:NE2	2.33	0.42
2:C:1142:ARG:NH2	2:C:1165:SER:O	2.52	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:X:120:ALA:HA	5:X:123:ILE:HD12	2.00	0.42
2:C:192:ASP:HB3	2:C:346:TYR:HD1	1.84	0.42
1:A:310:ARG:HA	1:A:310:ARG:HE	1.80	0.42
2:H:453:ILE:HG22	2:H:585:GLY:O	2.19	0.42
3:I:482:ALA:O	3:I:488:ASN:ND2	2.52	0.42
5:X:530:LEU:H	5:X:530:LEU:HD12	1.84	0.42
2:H:1054:LEU:O	2:H:1054:LEU:HD12	2.18	0.42
2:C:211:ARG:NH2	2:C:217:THR:OG1	2.46	0.42
2:C:405:PHE:O	2:C:409:LEU:HD23	2.19	0.42
3:I:809:VAL:HG13	3:I:912:GLY:H	1.84	0.42
3:D:1167:LYS:HE3	3:D:1173:ARG:NH1	2.20	0.42
2:C:840:SER:OG	2:C:1047:LEU:HB3	2.19	0.42
2:C:91:THR:HG22	2:C:139:ASN:H	1.84	0.42
1:A:227:GLN:HE22	1:B:11:PRO:HD3	1.84	0.42
3:D:771:GLN:HE21	3:D:772:TYR:N	2.17	0.42
2:C:660:VAL:C	2:C:661:VAL:HG13	2.39	0.42
3:I:836:ARG:HA	3:I:836:ARG:HD2	1.77	0.42
2:H:38:PHE:O	2:H:39:ILE:HB	2.19	0.42
3:I:205:LEU:HB3	3:I:217:LEU:HD22	2.01	0.42
1:F:68:TYR:OH	2:H:1057:LYS:HD2	2.19	0.42
2:C:685:MET:HE2	2:C:1067:ALA:CB	2.49	0.42
2:C:681:MET:CE	2:C:1073:LYS:HE3	2.48	0.42
1:B:183:ILE:HD11	1:B:205:MET:HG3	2.01	0.42
3:I:703:THR:HA	3:I:717:VAL:HA	2.00	0.42
3:I:25:ALA:HB3	3:I:30:ILE:HD11	2.01	0.42
3:I:50:LYS:HG2	3:I:51:PRO:N	2.34	0.42
5:Y:242:HIS:O	5:Y:246:GLN:HB2	2.19	0.42
1:G:100:LEU:HD11	1:G:121:VAL:HG11	2.01	0.42
3:D:401:VAL:HG12	3:D:408:VAL:CG2	2.49	0.42
3:I:268:LEU:HG	3:I:306:LEU:HA	2.00	0.42
3:I:119:SER:HA	3:I:311:ARG:NH1	2.34	0.42
3:I:650:LYS:HE2	3:I:765:GLU:OE1	2.18	0.42
2:H:161:LYS:NZ	2:H:161:LYS:HB3	2.34	0.42
2:C:994:ARG:N	2:C:994:ARG:HD3	2.34	0.42
1:B:88:LEU:HD22	1:B:90:VAL:CG2	2.49	0.42
3:D:214:ARG:O	3:D:218:THR:HG22	2.18	0.42
2:C:317:LEU:HD13	2:C:322:LEU:HD21	2.01	0.42
2:C:1327:LEU:HA	2:C:1337:ILE:HD11	2.01	0.42
2:H:391:SER:OG	2:H:393:ASP:OD1	2.29	0.42
3:D:155:GLU:CD	3:D:155:GLU:H	2.22	0.42
3:I:1189:MET:HE2	3:I:1189:MET:HB3	1.90	0.42
3:D:526:VAL:HG12	3:D:549:LYS:O	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:213:LYS:C	3:D:217:LEU:HG	2.40	0.42
3:I:298:MET:SD	5:Y:402:LEU:HB3	2.58	0.42
3:I:1259:GLN:H	3:I:1259:GLN:HG3	1.68	0.42
3:I:832:LYS:HZ2	3:I:832:LYS:HB2	1.83	0.42
5:Y:134:VAL:HG22	5:Y:273:MET:HE1	2.00	0.42
2:C:155:VAL:HG12	2:C:405:PHE:HA	2.01	0.42
5:X:477:GLU:H	5:X:477:GLU:CD	2.22	0.42
2:H:718:ALA:HB2	2:H:783:LEU:HG	2.00	0.42
3:D:869:CYS:HA	3:D:872:LEU:HD13	2.02	0.42
4:E:72:GLN:O	4:E:76:GLU:HB2	2.19	0.42
2:H:68:LEU:HD12	2:H:68:LEU:HA	1.86	0.42
2:H:119:GLU:OE1	2:H:490:GLN:HB2	2.18	0.42
2:C:310:ILE:O	2:C:311:CYS:HB3	2.20	0.42
2:H:145:ILE:HD11	2:H:506:PHE:CE2	2.54	0.42
3:D:238:ILE:HG13	3:D:238:ILE:O	2.20	0.42
3:D:1267:VAL:O	3:D:1268:ASN:HB2	2.19	0.42
2:C:131:THR:HG23	2:C:133:ASN:N	2.22	0.42
2:C:515:MET:HE2	2:C:523:GLU:CG	2.50	0.42
3:D:586:GLY:O	3:D:587:LEU:HB2	2.19	0.42
2:C:170:VAL:HG11	2:C:172:TYR:OH	2.19	0.42
1:F:41:ASN:CG	2:H:1218:GLY:HA3	2.39	0.42
3:I:909:ILE:HD12	3:I:909:ILE:O	2.20	0.42
3:D:915:ILE:O	3:D:918:ILE:HG23	2.20	0.42
2:C:73:TYR:CD2	2:C:73:TYR:N	2.87	0.42
2:H:901:LEU:HD13	5:Y:563:PHE:CE2	2.54	0.42
2:C:225:PHE:CB	2:C:336:LEU:HD22	2.49	0.42
3:D:511:TYR:CE2	3:D:596:LEU:HD12	2.54	0.42
2:H:102:LEU:HB3	2:H:117:ILE:HD11	2.01	0.42
2:C:1054:LEU:HD12	2:C:1054:LEU:O	2.20	0.42
2:H:854:ILE:O	2:H:857:VAL:HG22	2.19	0.42
5:Y:410:ILE:HD12	5:Y:413:MET:HB3	2.01	0.42
5:Y:462:LYS:O	5:Y:466:ILE:HG13	2.20	0.42
3:I:105:ILE:HG13	3:I:244:VAL:CG2	2.49	0.42
5:X:288:MET:HA	5:X:302:PHE:CZ	2.54	0.42
5:X:423:ARG:HG3	5:X:425:TYR:H	1.84	0.42
2:H:505:PHE:HD2	2:H:506:PHE:CD1	2.37	0.42
2:H:660:VAL:C	2:H:661:VAL:HG13	2.40	0.42
3:I:270:ARG:NE	5:Y:449:THR:HG22	2.34	0.42
3:D:709:ARG:O	3:D:709:ARG:NH1	2.35	0.42
2:C:1314:GLN:HG2	2:C:1315:MET:H	1.84	0.42
3:D:647:PRO:HG3	3:D:697:MET:CA	2.45	0.42
2:H:403:MET:O	2:H:407:ARG:NH1	2.52	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:333:ILE:HD12	2:H:333:ILE:N	2.34	0.42
3:D:834:PRO:C	3:D:835:LEU:HD12	2.40	0.42
1:G:77:ASP:O	1:G:81:ILE:HG13	2.18	0.42
3:D:513:MET:CE	3:D:579:LEU:HB2	2.50	0.42
2:C:866:ASP:HA	2:C:872:TYR:CZ	2.54	0.42
4:J:26:ARG:HE	4:J:30:MET:HE2	1.83	0.42
3:I:125:GLY:O	3:I:129:ASP:N	2.52	0.42
3:D:399:LYS:NZ	3:D:403:ARG:HH11	2.17	0.42
3:I:1166:GLY:O	3:I:1176:VAL:HB	2.19	0.42
2:C:52:ALA:O	2:C:53:PHE:HB2	2.20	0.42
1:B:200:LYS:O	1:B:200:LYS:HG3	2.19	0.42
3:I:263:SER:HB2	5:Y:507:MET:HE1	2.01	0.42
3:D:20:ILE:HD11	3:D:1319:PHE:CZ	2.55	0.42
3:I:697:MET:CE	3:I:738:ARG:HA	2.49	0.42
1:B:27:THR:CG2	1:B:202:VAL:HG22	2.47	0.42
3:D:909:ILE:HD12	3:D:909:ILE:O	2.19	0.42
2:H:1066:MET:HE2	2:H:1076:ILE:HD11	2.01	0.42
3:I:721:SER:O	3:I:725:MET:HG3	2.20	0.42
5:Y:143:TYR:O	5:Y:147:GLN:HG2	2.20	0.42
1:A:282:VAL:O	1:A:316:MET:N	2.49	0.42
3:D:1230:THR:O	3:D:1234:VAL:HG12	2.19	0.42
3:I:12:THR:C	3:I:13:LYS:HD2	2.40	0.42
1:A:75:GLN:HA	2:C:728:ASP:HA	2.01	0.42
1:A:47:LEU:HD23	1:A:51:MET:SD	2.59	0.42
2:C:225:PHE:HB2	2:C:336:LEU:HD22	2.02	0.42
3:D:306:LEU:HD23	3:D:306:LEU:C	2.40	0.42
3:I:281:ARG:O	3:I:285:LEU:HG	2.20	0.42
5:X:543:ALA:O	5:X:547:VAL:HG23	2.19	0.42
1:G:16:ILE:HG12	1:G:26:VAL:HG22	2.02	0.42
2:H:488:MET:HB2	2:H:489:PRO:HA	2.01	0.42
3:D:532:GLU:OE1	3:D:578:ILE:HB	2.20	0.42
4:J:5:THR:HB	4:J:7:GLN:HB2	2.02	0.42
3:D:128:LEU:CD2	3:D:188:LEU:HD22	2.48	0.42
1:G:200:LYS:HG3	1:G:200:LYS:O	2.20	0.42
2:C:1042:LEU:HB2	2:C:1043:ALA:H	1.73	0.42
3:D:355:ILE:HA	3:D:447:ILE:O	2.19	0.42
2:H:360:LEU:HD13	2:H:378:ARG:NH1	2.31	0.42
3:D:281:ARG:O	3:D:285:LEU:HG	2.20	0.42
1:B:65:LEU:HA	1:B:169:GLY:HA2	2.00	0.42
2:H:367:TYR:HD2	2:H:376:PRO:HG3	1.85	0.42
2:H:869:GLY:C	2:H:870:ILE:HD12	2.40	0.42
5:X:607:LEU:HD12	5:X:607:LEU:O	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:X:132:CYS:SG	5:X:257:LYS:NZ	2.82	0.42
2:H:174:ALA:N	2:H:186:PHE:O	2.51	0.42
2:H:151:ARG:CZ	2:H:156:PHE:HZ	2.33	0.42
2:H:854:ILE:HB	2:H:857:VAL:HG11	2.01	0.42
1:G:47:LEU:CD2	1:G:220:ALA:HB2	2.50	0.42
2:C:69:GLN:HE22	2:C:101:ARG:NH2	2.18	0.42
2:C:186:PHE:HA	2:C:195:PHE:O	2.18	0.42
2:C:197:ARG:NH1	2:C:201:ARG:O	2.52	0.42
2:C:876:GLU:OE2	2:C:876:GLU:N	2.53	0.42
3:I:545:HIS:HA	3:I:546:ALA:HA	1.79	0.42
2:H:908:GLU:H	2:H:908:GLU:CD	2.23	0.42
5:X:408:GLY:HA2	5:X:435:ILE:HG23	2.00	0.42
2:H:1293:VAL:HG23	2:H:1301:ARG:HA	2.01	0.42
2:H:1287:LEU:HD23	3:I:1357:ILE:CG1	2.49	0.42
2:H:1278:LEU:HD21	2:H:1286:THR:HG22	2.01	0.42
2:C:1142:ARG:HH22	2:C:1164:PHE:HB2	1.84	0.42
3:D:1190:ILE:N	3:D:1190:ILE:HD12	2.34	0.42
2:C:1029:LEU:HD12	2:C:1032:LYS:CE	2.50	0.42
3:D:57:PHE:CZ	3:D:252:LEU:HD22	2.55	0.42
1:A:184:ALA:HB2	2:C:1091:GLY:HA2	2.02	0.42
2:C:890:LYS:NZ	2:C:890:LYS:HB3	2.35	0.42
2:H:223:LEU:HD13	2:H:426:ILE:HD13	2.00	0.42
3:D:901:ARG:HB2	3:D:907:HIS:O	2.20	0.42
1:B:151:GLY:O	1:B:177:TYR:HB2	2.20	0.42
3:D:1292:LEU:HD11	3:I:1284:ARG:NH2	2.34	0.42
2:C:202:ARG:CZ	2:C:369:MET:HG2	2.50	0.42
2:H:699:LEU:HD13	2:H:1181:PRO:HB3	2.00	0.42
2:C:454:ARG:NH1	2:C:462:ASN:OD1	2.53	0.42
3:I:1149:ARG:HA	3:I:1150:PRO:HD3	1.93	0.42
3:D:708:ASN:HA	3:D:712:GLN:HA	2.01	0.42
3:I:40:LYS:HE3	3:I:42:GLU:CG	2.49	0.42
2:H:138:ILE:O	2:H:141:THR:OG1	2.35	0.42
5:X:130:VAL:HG13	5:X:365:MET:HG3	2.02	0.42
2:C:563:THR:HG21	3:D:780:ARG:NE	2.35	0.42
2:H:517:GLN:NE2	2:H:760:ASN:OD1	2.53	0.42
2:H:526:HIS:ND1	2:H:526:HIS:O	2.53	0.42
4:J:12:LYS:HD3	4:J:12:LYS:HA	1.88	0.42
1:G:217:ILE:HG13	1:G:218:ARG:N	2.35	0.42
2:H:465:ARG:O	2:H:469:VAL:HG23	2.20	0.42
3:I:846:GLU:HA	3:I:858:VAL:HG13	2.02	0.42
3:I:139:LEU:HD22	3:I:139:LEU:O	2.19	0.42
3:I:41:PRO:HB3	3:I:270:ARG:HG3	2.00	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:678:ARG:O	2:C:681:MET:HB2	2.19	0.42
2:C:843:THR:HB	2:C:845:LEU:HD21	2.02	0.42
3:D:285:LEU:CD1	5:X:410:ILE:HD11	2.50	0.42
3:D:591:ILE:HD12	3:D:592:VAL:HG13	2.02	0.42
3:D:422:LEU:HD22	3:D:484:MET:CE	2.50	0.42
2:C:367:TYR:CE1	2:C:380:ALA:HB1	2.54	0.42
2:C:1319:MET:HG3	2:C:1323:PHE:HD2	1.85	0.42
2:H:10:ARG:O	2:H:1172:LEU:HA	2.20	0.42
1:A:69:SER:OG	1:A:70:THR:N	2.53	0.42
4:E:65:ASP:O	4:E:69:ARG:HG3	2.20	0.42
2:H:728:ASP:OD2	2:H:729:ALA:N	2.52	0.42
3:I:545:HIS:HB2	3:I:546:ALA:CA	2.50	0.41
3:D:905:ARG:HH12	4:E:10:VAL:HG12	1.85	0.41
3:D:139:LEU:C	3:D:139:LEU:HD13	2.40	0.41
3:D:145:VAL:CG1	3:D:180:MET:HB3	2.42	0.41
2:C:106:GLU:CB	2:C:107:ARG:HA	2.48	0.41
2:C:106:GLU:CG	2:C:109:ALA:H	2.30	0.41
1:A:158:ARG:NH2	1:A:158:ARG:HB2	2.35	0.41
2:C:844:LYS:HB2	2:C:844:LYS:NZ	2.34	0.41
3:D:588:PRO:CB	3:D:591:ILE:HD11	2.50	0.41
2:C:218:GLU:CG	2:C:299:LYS:HA	2.49	0.41
3:I:85:CYS:SG	3:I:86:GLU:N	2.93	0.41
2:C:73:TYR:CG	2:C:74:ARG:N	2.87	0.41
2:C:344:GLY:HA2	2:C:345:PRO:HD3	1.85	0.41
5:Y:515:GLU:HA	5:Y:516:ASP:HB2	2.01	0.41
3:D:101:ARG:O	3:D:246:PRO:HG3	2.21	0.41
5:X:291:CYS:O	5:X:297:MET:HB3	2.20	0.41
2:C:34:SER:OG	2:C:455:SER:HB2	2.20	0.41
3:I:670:SER:O	3:I:672:LEU:HD13	2.20	0.41
3:I:1216:ALA:HB3	3:I:1219:ASP:OD1	2.20	0.41
1:F:53:GLY:HA3	1:F:177:TYR:O	2.20	0.41
3:D:670:SER:O	3:D:672:LEU:HD13	2.20	0.41
2:C:835:GLU:HG3	2:C:1053:TYR:HE1	1.85	0.41
5:Y:564:GLY:HA3	5:Y:570:ASP:HB3	2.01	0.41
2:H:1270:PHE:HB3	2:H:1271:GLY:H	1.59	0.41
2:H:911:SER:OG	2:H:913:VAL:HG12	2.20	0.41
3:I:1166:GLY:O	3:I:1167:LYS:HB2	2.20	0.41
2:H:97:ARG:HA	2:H:122:VAL:O	2.20	0.41
2:C:807:TRP:HE1	2:C:1086:PRO:HD3	1.85	0.41
2:C:1220:GLN:HG2	2:C:1221:PHE:O	2.20	0.41
2:H:843:THR:HG22	2:H:844:LYS:H	1.85	0.41
2:H:27:LEU:CD1	2:H:528:ARG:HH21	2.19	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:166:ARG:HG3	1:A:166:ARG:O	2.20	0.41
3:I:392:THR:HG21	5:Y:606:VAL:HG11	2.00	0.41
2:C:1180:MET:CB	2:C:1181:PRO:HA	2.49	0.41
3:I:155:GLU:H	3:I:155:GLU:CD	2.22	0.41
3:D:899:TYR:CD2	3:D:909:ILE:HG12	2.55	0.41
2:H:400:VAL:HA	2:H:403:MET:HE2	2.03	0.41
2:C:1163:THR:HG22	2:C:1164:PHE:H	1.86	0.41
5:Y:240:ARG:NH1	5:Y:244:THR:HG21	2.35	0.41
5:X:112:THR:HG22	5:X:113:ARG:N	2.33	0.41
2:C:980:VAL:HG23	2:C:984:VAL:HG13	2.02	0.41
5:X:337:VAL:O	5:X:341:LEU:HG	2.21	0.41
1:A:135:ASP:OD1	1:A:138:ALA:HB2	2.20	0.41
3:D:679:TYR:CZ	3:D:683:ILE:HD11	2.55	0.41
3:D:1324:SER:CB	3:D:1348:LYS:HD3	2.50	0.41
3:D:1170:LYS:O	3:D:1173:ARG:HD2	2.20	0.41
2:H:700:VAL:CG1	2:H:1114:GLU:HG3	2.29	0.41
1:B:153:VAL:HG21	1:B:177:TYR:CE2	2.55	0.41
2:C:898:GLU:OE1	2:C:898:GLU:N	2.43	0.41
3:I:162:GLU:HG2	3:I:163:GLU:N	2.36	0.41
2:H:600:THR:HG22	2:H:601:ASP:N	2.31	0.41
3:I:33:TRP:HB3	3:I:102:MET:HG3	2.01	0.41
2:C:886:LYS:HB3	2:C:917:SER:HA	2.02	0.41
1:G:98:VAL:HG21	1:G:121:VAL:HG23	2.01	0.41
3:D:24:LEU:HD23	3:D:232:ASN:HD22	1.86	0.41
2:C:1233:LEU:HD12	2:C:1233:LEU:O	2.20	0.41
3:I:133:ARG:O	3:I:133:ARG:NH2	2.43	0.41
2:H:764:CYS:HB2	2:H:831:ILE:HB	2.01	0.41
3:D:843:VAL:HA	3:D:861:ASN:HA	2.03	0.41
2:C:721:GLY:HA3	2:C:779:ARG:N	2.35	0.41
2:H:56:VAL:HB	2:H:57:PHE:H	1.38	0.41
2:C:57:PHE:HE1	2:C:472:GLU:HA	1.83	0.41
3:I:475:GLU:H	3:I:475:GLU:HG2	1.70	0.41
5:Y:470:MET:HG2	5:Y:486:ARG:HH11	1.85	0.41
2:H:814:ASP:O	2:H:1074:GLY:HA2	2.20	0.41
2:C:1328:LYS:HD2	3:D:102:MET:SD	2.60	0.41
1:A:44:ARG:HA	1:A:183:ILE:HG21	2.02	0.41
2:H:967:LEU:O	2:H:971:LEU:HB2	2.21	0.41
6:C:1401:RFP:C35	6:C:1401:RFP:C33	2.98	0.41
3:I:573:THR:HG22	3:I:576:ARG:CD	2.51	0.41
2:C:844:LYS:HZ3	2:C:844:LYS:HB2	1.85	0.41
2:H:106:GLU:CG	2:H:109:ALA:H	2.33	0.41
3:D:825:VAL:HG23	3:D:835:LEU:HB2	2.00	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:X:274:ARG:NH1	5:X:369:GLU:OE2	2.52	0.41
1:A:190:ALA:HB2	1:A:200:LYS:CB	2.50	0.41
2:H:408:SER:O	2:H:431:LYS:NZ	2.42	0.41
3:I:887:SER:O	3:I:888:CYS:HB3	2.21	0.41
3:D:783:LEU:O	3:D:786:THR:HB	2.21	0.41
3:D:155:GLU:CG	3:D:158:GLN:HB2	2.50	0.41
1:G:183:ILE:HD11	1:G:205:MET:HE2	2.00	0.41
2:C:842:ASP:HB3	2:C:1046:VAL:HG21	2.01	0.41
3:D:1292:LEU:HD12	3:D:1292:LEU:N	2.35	0.41
3:D:614:LEU:HD23	4:E:7:GLN:HG3	2.02	0.41
5:X:240:ARG:HB3	5:X:244:THR:HB	2.01	0.41
3:I:473:THR:O	3:I:477:GLN:HG3	2.20	0.41
2:H:1313:HIS:CG	4:J:31:GLN:HE22	2.38	0.41
2:C:22:LEU:HD13	2:C:23:ASP:O	2.21	0.41
3:I:504:GLN:HA	3:I:730:ALA:HA	2.01	0.41
2:C:1117:LEU:HD13	2:C:1195:ILE:HG12	2.02	0.41
3:D:899:TYR:CE1	3:D:915:ILE:HG23	2.55	0.41
3:D:147:ILE:CG1	3:D:148:GLU:N	2.83	0.41
3:I:1140:ARG:O	3:I:1144:LEU:HG	2.20	0.41
3:I:130:MET:HA	3:I:131:PRO:HD3	1.93	0.41
1:B:222:THR:O	1:B:225:ALA:HB3	2.20	0.41
2:H:10:ARG:CZ	2:H:1171:ARG:HH21	2.32	0.41
2:C:504:GLU:O	2:C:508:SER:HB3	2.20	0.41
2:C:215:TYR:CE1	2:C:223:LEU:HD11	2.55	0.41
2:H:680:LEU:HD23	2:H:680:LEU:O	2.20	0.41
3:D:153:ASN:HB2	3:D:172:PHE:CZ	2.56	0.41
1:B:58:GLU:HB2	1:B:145:LYS:HB3	2.02	0.41
3:D:873:GLU:OE2	3:D:877:VAL:HB	2.21	0.41
3:I:1262:ARG:O	3:I:1280:VAL:HG22	2.21	0.41
3:D:526:VAL:HG12	3:D:549:LYS:HB2	2.02	0.41
2:C:1211:ARG:HB2	2:C:1220:GLN:HE21	1.84	0.41
3:D:546:ALA:H	3:D:547:ARG:C	2.23	0.41
5:X:238:LYS:HD3	5:X:242:HIS:HE1	1.86	0.41
3:D:832:LYS:HB2	3:D:832:LYS:HZ2	1.85	0.41
2:C:152:SER:HA	2:C:153:PRO:HD3	1.88	0.41
2:H:514:PHE:HB2	6:H:1401:RFP:C35	2.50	0.41
3:I:19:ALA:HB2	3:I:1343:GLU:CB	2.50	0.41
2:C:1087:TYR:HE2	2:C:1215:GLY:CA	2.33	0.41
3:I:681:LYS:O	3:I:685:ILE:HG13	2.21	0.41
2:C:384:LEU:HD23	2:C:385:PHE:N	2.35	0.41
1:A:200:LYS:HG3	1:A:200:LYS:O	2.20	0.41
3:I:644:MET:O	3:I:764:ARG:NH1	2.54	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:232:VAL:HG12	1:B:233:ASP:O	2.20	0.41
5:X:324:LYS:HB3	5:X:325:PRO:HD2	2.01	0.41
2:H:848:GLU:CD	2:H:888:THR:HG22	2.41	0.41
2:H:338:THR:OG1	2:H:345:PRO:HG3	2.21	0.41
3:I:834:PRO:C	3:I:835:LEU:HD12	2.41	0.41
2:H:958:LYS:HE2	2:H:958:LYS:HB2	1.90	0.41
2:C:468:LEU:O	2:C:471:VAL:HG22	2.20	0.41
3:D:438:GLU:HA	3:D:439:PRO:HD3	1.90	0.41
2:C:1101:LEU:HD23	3:D:725:MET:SD	2.60	0.41
1:G:181:GLU:HG2	3:I:531:LYS:HD3	2.03	0.41
3:I:759:ILE:CG2	3:I:771:GLN:HG3	2.38	0.41
3:I:260:PHE:O	5:Y:505:ILE:HG22	2.21	0.41
3:D:921:GLN:O	3:D:925:GLU:HB2	2.21	0.41
1:A:231:PHE:CE2	1:B:43:LEU:HD11	2.55	0.41
3:I:161:THR:HG22	3:I:162:GLU:CD	2.41	0.41
3:D:147:ILE:HG23	3:D:156:ARG:C	2.41	0.41
2:H:894:GLN:O	2:H:895:LEU:HB2	2.20	0.41
5:Y:408:GLY:HA2	5:Y:435:ILE:HG23	2.02	0.41
1:G:110:VAL:HG11	1:G:140:ILE:HD11	2.02	0.41
3:I:122:SER:HB2	3:I:132:LEU:HD22	2.02	0.41
5:Y:587:ILE:HD12	5:Y:587:ILE:HA	1.93	0.41
1:G:67:GLU:HA	1:G:78:ILE:HG21	2.01	0.41
2:C:1243:MET:CE	3:D:372:MET:HB2	2.51	0.41
1:A:143:ARG:N	1:A:143:ARG:HD2	2.36	0.41
1:A:150:ARG:NH1	1:A:150:ARG:HB3	2.35	0.41
3:I:873:GLU:H	3:I:873:GLU:HG3	1.65	0.41
3:I:478:LEU:HD12	4:J:47:THR:HG23	2.02	0.41
1:A:154:PRO:HD2	1:A:157:THR:OG1	2.21	0.41
3:I:271:ARG:HH12	3:I:317:THR:HG21	1.86	0.41
3:I:609:TYR:HD1	3:I:610:ARG:HD2	1.85	0.41
3:I:1284:ARG:HA	3:I:1287:ILE:CG1	2.47	0.41
2:H:1333:LEU:HB2	2:H:1335:ILE:HG22	2.01	0.41
2:C:145:ILE:HA	2:C:511:LEU:O	2.21	0.41
3:D:291:ILE:HD11	5:X:384:LEU:CD2	2.45	0.41
2:H:712:SER:HB3	2:H:714:VAL:HG12	2.02	0.41
1:G:227:GLN:C	1:G:229:GLU:H	2.23	0.41
2:C:1106:ARG:O	2:C:1108:ASN:N	2.48	0.41
1:F:219:ARG:O	1:F:223:ILE:HG13	2.20	0.41
3:I:524:GLY:HA2	3:I:548:VAL:HA	2.01	0.41
2:C:811:ASN:O	2:C:1099:ASN:HB2	2.20	0.41
1:A:232:VAL:HG13	1:B:218:ARG:NE	2.36	0.41
1:A:62:ASP:OD1	1:A:143:ARG:NH1	2.42	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:X:514:ASP:C	5:X:516:ASP:HA	2.41	0.41
2:C:290:GLU:N	2:C:290:GLU:OE1	2.52	0.41
4:E:48:VAL:O	4:E:52:ARG:HG3	2.21	0.41
2:C:914:LYS:HG2	2:C:915:ASP:H	1.85	0.41
2:H:1092:THR:HA	2:H:1093:PRO:HD3	1.90	0.41
3:I:841:GLY:CA	3:I:901:ARG:HG2	2.50	0.41
2:H:53:PHE:HZ	2:H:68:LEU:HB3	1.85	0.41
3:D:846:GLU:HA	3:D:858:VAL:HA	2.03	0.41
1:B:149:GLY:HA3	1:B:177:TYR:CG	2.55	0.41
2:C:812:PHE:CD2	2:C:813:GLU:HG3	2.56	0.41
2:C:705:GLU:CD	2:C:705:GLU:H	2.25	0.41
2:C:57:PHE:CE1	2:C:472:GLU:HA	2.56	0.41
2:C:202:ARG:HD3	5:X:35:ILE:HB	2.03	0.41
3:D:185:ILE:O	3:D:189:LEU:HG	2.20	0.41
2:H:933:VAL:HG12	2:H:948:ILE:CD1	2.41	0.41
2:H:1304:MET:CE	2:H:1308:ILE:HD11	2.51	0.41
2:H:1308:ILE:HG21	3:I:379:PRO:HB2	2.03	0.41
2:H:1314:GLN:HA	4:J:28:ARG:NH2	2.35	0.41
2:H:634:VAL:HG22	2:H:645:PHE:CE2	2.56	0.41
2:C:562:GLU:HG3	2:C:562:GLU:O	2.19	0.41
2:C:1331:ARG:HG3	3:D:33:TRP:CH2	2.55	0.41
5:X:290:LEU:CD1	5:X:336:GLU:HB3	2.49	0.41
2:H:163:LYS:CD	2:H:163:LYS:H	2.27	0.41
5:X:12:LEU:CD2	5:X:27:VAL:HG11	2.51	0.41
2:C:1314:GLN:O	3:D:473:THR:HG23	2.21	0.41
3:D:1145:PHE:HB3	3:D:1309:ILE:CD1	2.48	0.41
3:D:1256:ILE:O	3:D:1260:MET:HB2	2.21	0.41
2:C:1212:LEU:HG	2:C:1225:VAL:HG22	2.03	0.41
3:D:1171:GLY:HA3	3:D:1172:LYS:CB	2.45	0.41
1:A:250:ASP:HB3	1:A:253:LEU:HD13	2.03	0.41
3:I:66:LYS:HB3	3:I:66:LYS:NZ	2.35	0.41
2:C:972:PHE:CA	2:C:975:ILE:HG22	2.49	0.41
3:D:423:LEU:HB3	3:D:466:MET:HE1	2.03	0.41
3:I:42:GLU:HB3	5:Y:451:ARG:NE	2.36	0.41
3:I:147:ILE:CG1	3:I:148:GLU:N	2.83	0.41
2:H:73:TYR:N	2:H:73:TYR:CD2	2.89	0.41
3:I:31:ARG:HD2	3:I:104:HIS:CD2	2.56	0.41
5:Y:387:VAL:HG22	5:Y:435:ILE:HD13	2.01	0.41
3:D:297:ARG:NH1	5:X:97:PRO:HA	2.35	0.41
2:H:811:ASN:HA	2:H:815:SER:HB2	2.03	0.41
2:H:637:ARG:O	2:H:638:SER:HB2	2.21	0.41
2:H:1291:LEU:HD13	3:I:345:LYS:HZ2	1.86	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:H:870:ILE:HG22	2:H:944:ARG:NH1	2.35	0.41
3:D:650:LYS:NZ	3:D:760:THR:O	2.51	0.41
2:H:166:SER:O	2:H:167:SER:OG	2.37	0.41
3:D:97:VAL:HG13	3:D:101:ARG:CZ	2.50	0.41
3:I:895:CYS:HB3	3:I:898:CYS:SG	2.60	0.41
5:X:47:MET:HA	5:X:55:VAL:HG21	2.02	0.41
2:C:834:GLN:O	2:C:1053:TYR:HA	2.21	0.41
1:F:117:HIS:ND1	1:F:117:HIS:O	2.49	0.41
1:A:228:LEU:HD21	1:B:224:LEU:HD23	2.02	0.41
5:Y:345:GLN:O	5:Y:349:GLU:HG3	2.21	0.41
3:D:688:ALA:O	3:D:692:ARG:HG2	2.21	0.41
2:H:771:VAL:HG23	2:H:775:GLU:CD	2.41	0.41
2:C:60:GLN:O	2:C:61:SER:OG	2.33	0.41
2:C:869:GLY:C	2:C:870:ILE:HD12	2.41	0.41
3:D:1167:LYS:HB3	3:D:1170:LYS:HB2	2.02	0.41
3:D:841:GLY:HA3	3:D:901:ARG:CG	2.51	0.41
3:D:856:ILE:HD12	3:D:857:LEU:H	1.86	0.41
3:D:856:ILE:HD12	3:D:857:LEU:N	2.36	0.41
2:C:1103:VAL:N	2:C:1104:PRO:CD	2.83	0.41
3:I:539:SER:O	3:I:541:LEU:N	2.53	0.41
2:H:681:MET:CE	2:H:1073:LYS:HE3	2.50	0.41
2:C:302:ILE:HG22	2:C:309:LEU:CB	2.50	0.41
1:A:14:VAL:HG12	1:A:15:ASP:N	2.36	0.41
2:H:714:VAL:CG2	2:H:787:PRO:HD2	2.50	0.41
5:X:108:VAL:HB	5:X:110:LEU:HG	2.02	0.41
3:D:431:ARG:NH2	3:D:493:PRO:HG3	2.35	0.41
2:H:1329:GLU:O	2:H:1332:SER:HB3	2.21	0.41
2:C:213:LEU:HD13	2:C:422:LYS:HB3	2.00	0.41
2:H:1205:PRO:O	2:H:1207:SER:N	2.48	0.41
3:D:605:LEU:HD22	3:D:620:PHE:CD2	2.56	0.41
3:I:169:LEU:HD22	3:I:176:PHE:CZ	2.56	0.41
5:Y:608:ARG:HB3	5:Y:608:ARG:HH11	1.86	0.41
3:I:680:ASN:O	3:I:683:ILE:HB	2.20	0.41
3:D:220:ARG:HG2	3:D:224:LEU:HG	2.02	0.41
2:C:243:PRO:HB3	2:C:277:LEU:HB2	2.03	0.41
2:H:493:ILE:O	2:H:493:ILE:HG13	2.20	0.41
1:G:219:ARG:O	1:G:223:ILE:HG13	2.21	0.41
3:D:1282:TYR:HA	3:D:1285:VAL:HG22	2.03	0.41
2:H:297:VAL:HB	2:H:317:LEU:HD21	2.04	0.41
3:D:666:GLU:O	3:D:669:GLN:HB3	2.21	0.41
1:A:187:VAL:O	1:A:188:GLU:HB2	2.21	0.41
3:D:503:SER:O	3:D:507:VAL:HG23	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:32:GLU:HA	1:G:198:LEU:HD22	2.03	0.40
2:H:845:LEU:HD13	2:H:845:LEU:N	2.33	0.40
2:C:876:GLU:HG3	2:C:927:THR:CG2	2.37	0.40
1:A:227:GLN:NE2	1:B:11:PRO:HD3	2.37	0.40
2:H:1305:TYR:HD1	3:I:349:TYR:OH	2.05	0.40
2:H:898:GLU:OE1	2:H:898:GLU:N	2.38	0.40
2:H:1180:MET:CB	2:H:1181:PRO:HA	2.50	0.40
2:H:1241:ASP:N	2:H:1241:ASP:OD2	2.54	0.40
2:C:49:LEU:HD21	2:C:464:PHE:CD2	2.55	0.40
2:C:153:PRO:HD2	2:C:404:LYS:NZ	2.36	0.40
2:H:1337:ILE:HG22	3:I:22:ILE:HB	2.03	0.40
2:C:81:ASP:OD1	2:C:83:GLN:HG2	2.21	0.40
1:F:41:ASN:OD1	1:F:185:TYR:OH	2.39	0.40
2:H:765:ILE:HA	2:H:787:PRO:CG	2.50	0.40
3:I:697:MET:SD	3:I:742:GLY:N	2.94	0.40
5:X:30:HIS:O	5:X:31:LEU:HD23	2.22	0.40
2:H:842:ASP:HB2	2:H:1046:VAL:HG11	2.02	0.40
2:H:1332:SER:O	3:I:243:PRO:HG2	2.22	0.40
3:D:500:ILE:CD1	3:D:500:ILE:H	2.31	0.40
2:C:1304:MET:HE3	2:C:1308:ILE:HD11	2.03	0.40
5:Y:311:THR:O	5:Y:341:LEU:HB3	2.21	0.40
1:F:27:THR:HG22	1:F:202:VAL:HG22	2.03	0.40
5:Y:530:LEU:HD12	5:Y:530:LEU:H	1.85	0.40
3:D:265:LEU:HD11	3:D:330:MET:SD	2.61	0.40
2:C:804:PHE:HZ	2:C:1230:MET:CE	2.34	0.40
3:I:532:GLU:HG2	3:I:577:ALA:HB3	2.02	0.40
2:C:896:THR:CG2	2:C:897:PRO:HD2	2.51	0.40
2:H:705:GLU:CD	2:H:705:GLU:H	2.25	0.40
2:H:148:GLN:HB2	2:H:511:LEU:HD21	2.03	0.40
5:Y:470:MET:HE1	5:Y:482:GLU:HB3	2.03	0.40
3:D:1358:PRO:HB3	3:D:1366:HIS:CD2	2.56	0.40
2:C:82:VAL:HG13	2:C:83:GLN:H	1.87	0.40
2:H:1085:MET:HE2	2:H:1094:VAL:HG23	2.03	0.40
2:H:618:GLN:OE1	3:I:769:VAL:HG13	2.21	0.40
5:Y:108:VAL:HG12	5:Y:385:ARG:CZ	2.51	0.40
1:G:13:LEU:O	1:G:28:LEU:HA	2.21	0.40
2:C:106:GLU:HB3	2:C:107:ARG:CA	2.50	0.40
2:H:205:PRO:O	2:H:208:ILE:HG22	2.21	0.40
2:H:18:ARG:HE	2:H:18:ARG:HA	1.85	0.40
2:C:1204:LEU:HD23	2:C:1205:PRO:HD2	2.01	0.40
3:D:809:VAL:HG23	3:D:894:VAL:O	2.20	0.40
5:X:147:GLN:O	5:X:151:VAL:HG23	2.20	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:605:LEU:HD23	3:D:624:ILE:HD13	2.03	0.40
2:H:944:ARG:HD3	2:H:944:ARG:C	2.42	0.40
3:I:805:GLN:HB2	3:I:805:GLN:HE21	1.67	0.40
5:X:551:LEU:CD2	5:X:597:LYS:HD2	2.51	0.40
3:I:526:VAL:CG1	3:I:549:LYS:HB2	2.52	0.40
1:G:41:ASN:OD1	2:H:1217:THR:HG22	2.22	0.40
2:C:958:LYS:O	2:C:962:GLU:HG2	2.21	0.40
3:D:166:LEU:HD12	3:D:167:ASP:N	2.36	0.40
1:G:213:PRO:O	1:G:217:ILE:HG12	2.21	0.40
3:D:873:GLU:H	3:D:873:GLU:HG3	1.67	0.40
1:B:234:LEU:O	1:B:235:ARG:HB2	2.21	0.40
3:D:1168:GLU:O	3:D:1169:THR:OG1	2.39	0.40
2:H:122:VAL:HG13	2:H:124:MET:HG3	2.03	0.40
2:C:1101:LEU:O	2:C:1104:PRO:HD2	2.22	0.40
2:H:921:PRO:HG2	2:H:924:VAL:HG21	2.03	0.40
3:I:591:ILE:CD1	3:I:592:VAL:HG13	2.51	0.40
2:H:578:TYR:CD2	2:H:659:GLN:HA	2.56	0.40
3:I:1344:LEU:O	3:I:1350:ASN:ND2	2.55	0.40
2:C:213:LEU:HD13	2:C:422:LYS:HB2	2.01	0.40
2:C:699:LEU:HB2	2:C:799:ASN:HD21	1.87	0.40
2:H:1187:PHE:CZ	3:I:772:TYR:HD2	2.35	0.40
3:D:293:ARG:NH2	3:D:297:ARG:HE	2.19	0.40
3:D:58:CYS:HB3	3:D:61:ILE:HB	2.03	0.40
3:I:888:CYS:SG	3:I:890:THR:HB	2.61	0.40
1:F:124:VAL:HG11	1:F:209:GLY:HA3	2.03	0.40
2:H:1013:GLN:HA	2:H:1016:GLU:HB2	2.02	0.40
2:C:395:TYR:CE2	2:C:420:LEU:HG	2.56	0.40
2:H:1315:MET:O	2:H:1316:GLU:HB2	2.22	0.40
1:F:86:LYS:CE	1:F:173:VAL:HG23	2.51	0.40
3:I:83:VAL:HG12	3:I:84:ILE:O	2.22	0.40
2:H:1166:ASP:C	2:H:1168:GLU:H	2.23	0.40
2:C:622:ASN:OD1	2:C:623:LEU:N	2.54	0.40
2:C:722:GLY:N	2:C:734:ILE:HD11	2.35	0.40
3:I:1167:LYS:NZ	3:I:1173:ARG:HH12	2.19	0.40
3:D:609:TYR:CD1	3:D:610:ARG:HD2	2.53	0.40
3:I:1280:VAL:HG21	3:I:1304:ARG:NH2	2.37	0.40
3:D:549:LYS:HG2	3:D:571:ASP:OD1	2.21	0.40
3:D:230:SER:HB3	3:D:1338:ALA:HA	2.03	0.40
2:C:697:LYS:HG3	2:C:698:PRO:HD2	2.04	0.40
2:H:59:ILE:HG12	2:H:65:ASN:O	2.22	0.40
2:C:572:ILE:HD13	6:C:1401:RFP:O1	2.21	0.40
1:F:28:LEU:O	1:F:200:LYS:HA	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:412:LEU:O	3:I:416:ILE:HD12	2.22	0.40
3:I:1269:ALA:H	3:I:1300:ALA:HB2	1.86	0.40
3:D:483:LEU:HD12	3:D:483:LEU:N	2.36	0.40
2:H:734:ILE:HG23	2:H:749:ASP:HB2	2.04	0.40
3:I:131:PRO:O	3:I:136:GLU:HG2	2.21	0.40
5:Y:250:LEU:O	5:Y:253:SER:HB2	2.21	0.40
3:D:394:ILE:HG21	5:X:536:THR:HA	2.03	0.40
2:C:1256:GLN:HG3	2:C:1298:VAL:CG1	2.52	0.40
2:C:1246:ARG:NE	3:D:348:ASP:OD2	2.40	0.40
1:F:33:ARG:HD3	1:F:33:ARG:HA	1.82	0.40
3:I:114:ILE:HG13	3:I:304:ASP:HB3	2.02	0.40
5:Y:555:GLU:OE2	5:Y:597:LYS:NZ	2.43	0.40
2:H:387:ASN:HB3	2:H:394:ARG:HG3	2.04	0.40
1:F:77:ASP:O	1:F:81:ILE:HG13	2.21	0.40
3:D:432:LEU:HD12	3:D:499:ILE:HG12	2.03	0.40
3:I:905:ARG:NH2	4:J:16:ARG:HG3	2.36	0.40
3:D:316:ILE:HD11	3:D:320:ASN:O	2.21	0.40
2:H:699:LEU:HD23	2:H:799:ASN:OD1	2.21	0.40
2:C:590:PRO:CD	2:C:605:TYR:HE1	2.35	0.40
2:C:1335:ILE:HD11	3:D:22:ILE:HG13	2.04	0.40
2:H:966:ILE:HG23	2:H:967:LEU:HD12	2.04	0.40
4:J:18:ASP:O	4:J:22:VAL:HG12	2.22	0.40
1:A:195:ARG:NH2	1:A:198:LEU:HD21	2.35	0.40
2:C:839:VAL:O	2:C:886:LYS:NZ	2.40	0.40
5:X:279:ARG:NH2	5:X:350:GLU:OE1	2.54	0.40
1:A:51:MET:HA	1:A:52:PRO:HD3	1.81	0.40
2:H:958:LYS:O	2:H:962:GLU:HG2	2.22	0.40
5:Y:296:LYS:HD3	5:Y:296:LYS:HA	1.85	0.40
5:X:227:GLN:HG3	5:X:252:LEU:HB2	2.02	0.40
2:C:1031:ALA:O	2:C:1035:LYS:HG3	2.21	0.40
2:C:911:SER:C	2:C:913:VAL:H	2.25	0.40
2:H:1132:LEU:HD13	2:H:1174:GLU:OE2	2.21	0.40
1:A:33:ARG:NH1	1:A:199:ASP:OD2	2.54	0.40
5:Y:395:THR:HA	5:Y:404:LEU:CD2	2.52	0.40
3:I:172:PHE:HB3	3:I:175:GLU:OE1	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	321/329 (98%)	254 (79%)	52 (16%)	15 (5%)	4	45
1	B	217/329 (66%)	188 (87%)	23 (11%)	6 (3%)	8	60
1	F	227/329 (69%)	194 (86%)	28 (12%)	5 (2%)	10	65
1	G	213/329 (65%)	188 (88%)	20 (9%)	5 (2%)	10	64
2	C	1333/1342 (99%)	1066 (80%)	225 (17%)	42 (3%)	6	57
2	H	1333/1342 (99%)	1065 (80%)	222 (17%)	46 (4%)	6	55
3	D	1154/1407 (82%)	919 (80%)	193 (17%)	42 (4%)	5	54
3	I	1154/1407 (82%)	925 (80%)	192 (17%)	37 (3%)	6	57
4	E	88/91 (97%)	76 (86%)	7 (8%)	5 (6%)	3	40
4	J	74/91 (81%)	64 (86%)	5 (7%)	5 (7%)	2	34
5	X	511/613 (83%)	444 (87%)	54 (11%)	13 (2%)	9	62
5	Y	454/613 (74%)	410 (90%)	33 (7%)	11 (2%)	9	64
All	All	7079/8222 (86%)	5793 (82%)	1054 (15%)	232 (3%)	6	56

All (232) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	52	PRO
1	B	20	SER
1	B	52	PRO
2	C	21	VAL
2	C	39	ILE
2	C	43	PRO
2	C	53	PHE
2	C	110	PRO
2	C	114	VAL
2	C	170	VAL
2	C	661	VAL
2	C	669	PRO
2	C	699	LEU

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Mol	Chain	Res	Type
2	C	748	ILE
2	C	993	PRO
2	C	1185	PRO
2	C	1341	ASP
3	D	120	LEU
3	D	155	GLU
3	D	311	ARG
3	D	390	LEU
3	D	404	GLU
3	D	406	ALA
3	D	708	ASN
3	D	721	SER
3	D	901	ARG
3	D	913	GLU
3	D	914	ALA
3	D	1268	ASN
4	E	6	VAL
4	E	35	LYS
5	X	241	SER
5	X	490	PRO
1	F	52	PRO
1	G	52	PRO
1	G	228	LEU
2	H	21	VAL
2	H	39	ILE
2	H	53	PHE
2	H	79	VAL
2	H	110	PRO
2	H	114	VAL
2	H	661	VAL
2	H	748	ILE
2	H	993	PRO
2	H	1185	PRO
2	H	1341	ASP
3	I	108	ALA
3	I	120	LEU
3	I	390	LEU
3	I	404	GLU
3	I	406	ALA
3	I	595	ALA
3	I	710	ASP
3	I	851	PRO

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Mol	Chain	Res	Type
3	I	914	ALA
3	I	1268	ASN
4	J	4	VAL
4	J	6	VAL
4	J	35	LYS
5	Y	241	SER
1	A	93	GLN
1	A	193	GLU
1	A	319	GLU
1	B	19	VAL
2	C	56	VAL
2	C	79	VAL
2	C	437	ASN
2	C	686	GLN
2	C	753	LEU
2	C	1186	VAL
2	C	1236	ASN
2	C	1239	VAL
2	C	1256	GLN
3	D	89	GLY
3	D	255	LEU
3	D	316	ILE
3	D	542	ALA
3	D	590	SER
3	D	595	ALA
3	D	710	ASP
3	D	847	ASP
3	D	851	PRO
3	D	1363	TYR
4	E	4	VAL
5	X	581	ASP
2	H	56	VAL
2	H	78	PRO
2	H	170	VAL
2	H	437	ASN
2	H	535	PRO
2	H	669	PRO
2	H	753	LEU
2	H	1046	VAL
2	H	1186	VAL
2	H	1236	ASN
2	H	1239	VAL

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Mol	Chain	Res	Type
3	I	89	GLY
3	I	153	ASN
3	I	155	GLU
3	I	417	ARG
3	I	542	ALA
3	I	590	SER
3	I	707	ILE
3	I	708	ASN
3	I	721	SER
3	I	847	ASP
3	I	901	ARG
3	I	913	GLU
3	I	1195	GLN
5	Y	491	GLU
1	A	14	VAL
1	A	201	LEU
2	C	78	PRO
2	C	1003	THR
2	C	1046	VAL
2	C	1240	ASP
3	D	53	ARG
3	D	108	ALA
3	D	210	SER
3	D	417	ARG
3	D	559	ALA
3	D	1195	GLN
5	X	50	ASP
5	X	108	VAL
5	X	308	GLY
5	X	514	ASP
5	X	600	HIS
1	F	33	ARG
1	G	188	GLU
3	I	53	ARG
3	I	210	SER
3	I	559	ALA
3	I	1344	LEU
3	I	1363	TYR
5	Y	308	GLY
5	Y	490	PRO
5	Y	504	PRO
5	Y	515	GLU

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Mol	Chain	Res	Type
1	A	166	ARG
1	A	188	GLU
1	B	188	GLU
1	B	235	ARG
2	C	908	GLU
2	C	1080	ASN
2	C	1093	PRO
2	C	1139	ALA
2	C	1315	MET
3	D	707	ILE
3	D	855	ASP
3	D	1344	LEU
4	E	5	THR
5	X	23	THR
5	X	491	GLU
5	X	504	PRO
1	F	153	VAL
1	F	166	ARG
1	G	177	TYR
2	H	43	PRO
2	H	487	LEU
2	H	699	LEU
2	H	895	LEU
2	H	908	GLU
2	H	1003	THR
2	H	1080	ASN
2	H	1093	PRO
2	H	1139	ALA
2	H	1240	ASP
2	H	1256	GLN
2	H	1315	MET
3	I	255	LEU
3	I	855	ASP
4	J	5	THR
5	Y	108	VAL
5	Y	514	ASP
5	Y	581	ASP
1	A	117	HIS
1	A	196	THR
1	A	232	VAL
1	A	322	PRO
2	C	740	GLU

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Mol	Chain	Res	Type
3	D	811	GLU
3	D	902	ASP
3	D	1174	ARG
1	F	188	GLU
2	H	488	MET
2	H	543	ALA
2	H	740	GLU
2	H	746	ALA
2	H	812	PHE
5	Y	600	HIS
1	B	49	SER
2	C	69	GLN
2	C	143	ARG
2	C	746	ALA
2	C	812	PHE
2	C	895	LEU
2	C	1237	HIS
3	D	153	ASN
3	D	728	SER
3	D	850	LYS
3	D	888	CYS
3	D	1173	ARG
4	E	59	ILE
1	G	49	SER
2	H	13	LYS
2	H	104	ILE
2	H	739	ASP
3	I	850	LYS
3	I	1174	ARG
3	I	1194	ARG
4	J	59	ILE
1	A	153	VAL
2	C	104	ILE
5	X	20	GLY
2	C	373	GLY
5	X	35	ILE
2	H	373	GLY
2	H	736	VAL
3	I	706	VAL
3	I	1339	GLY
1	A	187	VAL
3	D	742	GLY

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Mol	Chain	Res	Type
3	D	1339	GLY
3	I	540	GLY
1	A	151	GLY
3	D	706	VAL
3	I	471	PRO
5	Y	564	GLY
2	H	489	PRO
2	H	1181	PRO
2	C	1181	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	281/286 (98%)	270 (96%)	11 (4%)	43	85
1	B	189/286 (66%)	184 (97%)	5 (3%)	59	90
1	F	197/286 (69%)	191 (97%)	6 (3%)	53	89
1	G	185/286 (65%)	180 (97%)	5 (3%)	57	90
2	C	1150/1157 (99%)	1084 (94%)	66 (6%)	29	76
2	H	1150/1157 (99%)	1084 (94%)	66 (6%)	29	76
3	D	971/1168 (83%)	911 (94%)	60 (6%)	26	74
3	I	971/1168 (83%)	913 (94%)	58 (6%)	27	75
4	E	74/75 (99%)	72 (97%)	2 (3%)	57	90
4	J	65/75 (87%)	63 (97%)	2 (3%)	52	89
5	X	460/540 (85%)	442 (96%)	18 (4%)	43	85
5	Y	407/540 (75%)	388 (95%)	19 (5%)	36	82
All	All	6100/7024 (87%)	5782 (95%)	318 (5%)	32	79

All (318) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	33	ARG
1	A	77	ASP

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Mol	Chain	Res	Type
1	A	79	LEU
1	A	88	LEU
1	A	117	HIS
1	A	158	ARG
1	A	243	LYS
1	A	246	LYS
1	A	259	ASP
1	A	262	LEU
1	A	318	LEU
1	B	13	LEU
1	B	37	HIS
1	B	77	ASP
1	B	182	ARG
1	B	228	LEU
2	C	9	LYS
2	C	15	PHE
2	C	18	ARG
2	C	32	LEU
2	C	37	LYS
2	C	39	ILE
2	C	41	GLN
2	C	56	VAL
2	C	70	TYR
2	C	73	TYR
2	C	80	PHE
2	C	88	ARG
2	C	127	ILE
2	C	133	ASN
2	C	150	HIS
2	C	163	LYS
2	C	479	LEU
2	C	487	LEU
2	C	528	ARG
2	C	600	THR
2	C	645	PHE
2	C	650	VAL
2	C	661	VAL
2	C	690	VAL
2	C	693	LEU
2	C	704	MET
2	C	711	ASP
2	C	741	MET

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Mol	Chain	Res	Type
2	C	773	LEU
2	C	800	MET
2	C	817	LEU
2	C	845	LEU
2	C	941	LYS
2	C	944	ARG
2	C	955	GLN
2	C	964	LEU
2	C	975	ILE
2	C	994	ARG
2	C	1002	LEU
2	C	1007	LYS
2	C	1010	GLN
2	C	1017	GLN
2	C	1032	LYS
2	C	1034	ARG
2	C	1042	LEU
2	C	1060	ILE
2	C	1106	ARG
2	C	1119	MET
2	C	1141	LEU
2	C	1146	GLN
2	C	1158	LYS
2	C	1180	MET
2	C	1209	GLN
2	C	1211	ARG
2	C	1233	LEU
2	C	1248	THR
2	C	1259	LEU
2	C	1264	GLN
2	C	1265	PHE
2	C	1270	PHE
2	C	1276	TRP
2	C	1288	GLN
2	C	1291	LEU
2	C	1336	ASN
2	C	1339	LEU
2	C	1341	ASP
3	D	13	LYS
3	D	31	ARG
3	D	50	LYS
3	D	92	VAL

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Mol	Chain	Res	Type
3	D	114	ILE
3	D	133	ARG
3	D	139	LEU
3	D	140	TYR
3	D	151	MET
3	D	165	TYR
3	D	169	LEU
3	D	179	LYS
3	D	188	LEU
3	D	235	GLU
3	D	239	LEU
3	D	250	ARG
3	D	324	LEU
3	D	416	ILE
3	D	422	LEU
3	D	430	HIS
3	D	475	GLU
3	D	500	ILE
3	D	505	ASP
3	D	508	LEU
3	D	516	ASP
3	D	527	LEU
3	D	532	GLU
3	D	538	ARG
3	D	541	LEU
3	D	571	ASP
3	D	594	GLN
3	D	605	LEU
3	D	668	PHE
3	D	678	ARG
3	D	681	LYS
3	D	709	ARG
3	D	713	GLU
3	D	771	GLN
3	D	795	TYR
3	D	805	GLN
3	D	816	THR
3	D	832	LYS
3	D	847	ASP
3	D	864	LEU
3	D	867	GLN
3	D	873	GLU

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Mol	Chain	Res	Type
3	D	911	LYS
3	D	918	ILE
3	D	932	MET
3	D	933	ARG
3	D	1134	ILE
3	D	1148	ARG
3	D	1149	ARG
3	D	1188	GLU
3	D	1227	HIS
3	D	1247	LYS
3	D	1256	ILE
3	D	1257	VAL
3	D	1306	LEU
3	D	1341	ARG
4	E	4	VAL
4	E	6	VAL
5	X	21	TYR
5	X	23	THR
5	X	28	ASN
5	X	99	ARG
5	X	136	GLU
5	X	266	PHE
5	X	355	ILE
5	X	379	MET
5	X	384	LEU
5	X	400	GLN
5	X	401	PHE
5	X	452	ILE
5	X	457	ILE
5	X	476	ARG
5	X	495	ARG
5	X	545	HIS
5	X	562	ARG
5	X	607	LEU
1	F	37	HIS
1	F	77	ASP
1	F	88	LEU
1	F	158	ARG
1	F	160	HIS
1	F	234	LEU
1	G	13	LEU
1	G	37	HIS

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Mol	Chain	Res	Type
1	G	77	ASP
1	G	88	LEU
1	G	127	GLN
2	H	9	LYS
2	H	15	PHE
2	H	18	ARG
2	H	37	LYS
2	H	42	ASP
2	H	46	GLN
2	H	56	VAL
2	H	70	TYR
2	H	73	TYR
2	H	80	PHE
2	H	88	ARG
2	H	99	LYS
2	H	127	ILE
2	H	150	HIS
2	H	163	LYS
2	H	311	CYS
2	H	379	GLU
2	H	464	PHE
2	H	479	LEU
2	H	488	MET
2	H	514	PHE
2	H	529	ARG
2	H	539	THR
2	H	600	THR
2	H	645	PHE
2	H	661	VAL
2	H	704	MET
2	H	711	ASP
2	H	773	LEU
2	H	800	MET
2	H	807	TRP
2	H	817	LEU
2	H	844	LYS
2	H	845	LEU
2	H	941	LYS
2	H	944	ARG
2	H	953	LEU
2	H	955	GLN
2	H	964	LEU

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Mol	Chain	Res	Type
2	H	971	LEU
2	H	975	ILE
2	H	994	ARG
2	H	1002	LEU
2	H	1005	GLU
2	H	1010	GLN
2	H	1017	GLN
2	H	1032	LYS
2	H	1034	ARG
2	H	1042	LEU
2	H	1060	ILE
2	H	1119	MET
2	H	1141	LEU
2	H	1158	LYS
2	H	1180	MET
2	H	1209	GLN
2	H	1211	ARG
2	H	1233	LEU
2	H	1248	THR
2	H	1264	GLN
2	H	1270	PHE
2	H	1276	TRP
2	H	1288	GLN
2	H	1291	LEU
2	H	1326	LEU
2	H	1339	LEU
2	H	1341	ASP
3	I	31	ARG
3	I	50	LYS
3	I	92	VAL
3	I	114	ILE
3	I	117	LEU
3	I	133	ARG
3	I	139	LEU
3	I	140	TYR
3	I	141	PHE
3	I	151	MET
3	I	169	LEU
3	I	179	LYS
3	I	188	LEU
3	I	235	GLU
3	I	239	LEU

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Mol	Chain	Res	Type
3	I	250	ARG
3	I	316	ILE
3	I	325	LYS
3	I	416	ILE
3	I	430	HIS
3	I	475	GLU
3	I	500	ILE
3	I	516	ASP
3	I	527	LEU
3	I	532	GLU
3	I	538	ARG
3	I	541	LEU
3	I	571	ASP
3	I	594	GLN
3	I	605	LEU
3	I	668	PHE
3	I	678	ARG
3	I	681	LYS
3	I	709	ARG
3	I	771	GLN
3	I	795	TYR
3	I	805	GLN
3	I	816	THR
3	I	832	LYS
3	I	847	ASP
3	I	864	LEU
3	I	867	GLN
3	I	873	GLU
3	I	911	LYS
3	I	918	ILE
3	I	932	MET
3	I	933	ARG
3	I	1134	ILE
3	I	1148	ARG
3	I	1149	ARG
3	I	1247	LYS
3	I	1256	ILE
3	I	1259	GLN
3	I	1297	LYS
3	I	1306	LEU
3	I	1350	ASN
3	I	1366	HIS

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Mol	Chain	Res	Type
3	I	1369	ARG
4	J	4	VAL
4	J	6	VAL
5	Y	136	GLU
5	Y	266	PHE
5	Y	355	ILE
5	Y	371	LYS
5	Y	379	MET
5	Y	384	LEU
5	Y	400	GLN
5	Y	452	ILE
5	Y	457	ILE
5	Y	476	ARG
5	Y	477	GLU
5	Y	495	ARG
5	Y	515	GLU
5	Y	517	SER
5	Y	545	HIS
5	Y	562	ARG
5	Y	565	ILE
5	Y	589	GLN
5	Y	607	LEU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (97) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	18	GLN
1	A	23	HIS
1	A	227	GLN
1	A	239	GLN
1	B	66	HIS
1	B	84	ASN
2	C	69	GLN
2	C	238	GLN
2	C	273	HIS
2	C	314	ASN
2	C	517	GLN
2	C	518	ASN
2	C	582	ASN
2	C	673	HIS
2	C	684	ASN
2	C	725	GLN

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Mol	Chain	Res	Type
2	C	799	ASN
2	C	922	ASN
2	C	952	GLN
2	C	955	GLN
2	C	1010	GLN
2	C	1072	ASN
2	C	1134	GLN
2	C	1146	GLN
2	C	1175	ASN
2	C	1220	GLN
2	C	1236	ASN
2	C	1264	GLN
2	C	1313	HIS
3	D	164	GLN
3	D	209	ASN
3	D	309	ASN
3	D	419	HIS
3	D	477	GLN
3	D	504	GLN
3	D	519	ASN
3	D	690	ASN
3	D	921	GLN
3	D	1197	ASN
3	D	1268	ASN
3	D	1326	GLN
3	D	1350	ASN
3	D	1366	HIS
4	E	31	GLN
5	X	8	GLN
5	X	28	ASN
5	X	30	HIS
5	X	46	GLN
5	X	54	GLN
5	X	242	HIS
5	X	301	ASN
5	X	342	GLN
5	X	345	GLN
5	X	406	GLN
5	X	437	GLN
5	X	446	GLN
5	X	455	HIS
1	G	66	HIS

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Mol	Chain	Res	Type
2	H	46	GLN
2	H	69	GLN
2	H	238	GLN
2	H	510	GLN
2	H	513	GLN
2	H	517	GLN
2	H	582	ASN
2	H	684	ASN
2	H	686	GLN
2	H	725	GLN
2	H	766	ASN
2	H	799	ASN
2	H	894	GLN
2	H	922	ASN
2	H	1072	ASN
2	H	1116	HIS
2	H	1134	GLN
2	H	1175	ASN
2	H	1236	ASN
2	H	1264	GLN
2	H	1288	GLN
2	H	1313	HIS
3	I	300	GLN
3	I	309	ASN
3	I	477	GLN
3	I	504	GLN
3	I	519	ASN
3	I	623	GLN
3	I	1227	HIS
4	J	15	ASN
4	J	31	GLN
5	Y	242	HIS
5	Y	301	ASN
5	Y	342	GLN
5	Y	383	ASN
5	Y	400	GLN
5	Y	437	GLN
5	Y	469	GLN
5	Y	589	GLN

5.3.3 RNA ⓘ

There are no RNA chains 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 ⓘ

Of 8 ligands modelled in this entry, 6 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
6	RFP	C	1401	-	63,63,63	2.39	11 (17%)	94,94,94	2.28	30 (31%)
6	RFP	H	1401	-	63,63,63	2.45	11 (17%)	94,94,94	2.03	28 (29%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	RFP	C	1401	-	-	0/60/85/85	0/1/5/5
6	RFP	H	1401	-	-	1/60/85/85	0/1/5/5

All (22) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	C	1401	RFP	O3-C6	12.62	1.57	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	H	1401	RFP	O3-C6	12.49	1.57	1.37
6	H	1401	RFP	C15-N1	6.99	1.50	1.35
6	C	1401	RFP	C12-C11	-6.34	1.36	1.54
6	C	1401	RFP	C15-N1	6.32	1.48	1.35
6	H	1401	RFP	C12-C11	-6.27	1.36	1.54
6	H	1401	RFP	C3-C43	4.60	1.55	1.46
6	C	1401	RFP	C18-C17	4.04	1.55	1.43
6	C	1401	RFP	C3-C43	3.78	1.53	1.46
6	H	1401	RFP	O7-C25	-3.53	1.39	1.44
6	H	1401	RFP	C18-C17	3.48	1.54	1.43
6	H	1401	RFP	C43-N2	3.45	1.34	1.28
6	C	1401	RFP	O7-C35	3.13	1.42	1.35
6	C	1401	RFP	C43-N2	3.02	1.33	1.28
6	C	1401	RFP	O7-C25	-2.86	1.40	1.44
6	C	1401	RFP	C17-C16	2.77	1.41	1.34
6	H	1401	RFP	C2-N1	2.72	1.48	1.43
6	H	1401	RFP	O6-C27	-2.49	1.38	1.43
6	H	1401	RFP	O7-C35	2.46	1.40	1.35
6	H	1401	RFP	C17-C16	2.27	1.40	1.34
6	C	1401	RFP	C18-C19	2.22	1.42	1.33
6	C	1401	RFP	C2-N1	2.16	1.47	1.43

All (58) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	C	1401	RFP	C2-C3-C43	-6.88	115.01	123.70
6	C	1401	RFP	O4-C11-C5	-6.16	122.02	132.35
6	H	1401	RFP	C41-C42-N4	5.98	117.42	110.82
6	H	1401	RFP	O4-C11-C5	-5.93	122.40	132.35
6	C	1401	RFP	O7-C35-C36	5.32	121.14	111.12
6	C	1401	RFP	C37-O6-C27	5.24	124.47	113.35
6	C	1401	RFP	C38-N4-C42	5.17	119.14	110.64
6	C	1401	RFP	C38-N4-C39	4.94	118.76	110.64
6	H	1401	RFP	C41-N3-N2	4.82	138.52	113.48
6	H	1401	RFP	C38-N4-C39	4.72	118.39	110.64
6	C	1401	RFP	C41-N3-N2	4.57	137.21	113.48
6	H	1401	RFP	C17-C18-C19	-4.56	112.60	124.21
6	H	1401	RFP	C12-O3-C6	-4.52	102.36	107.83
6	H	1401	RFP	O7-C35-C36	4.45	119.51	111.12
6	C	1401	RFP	C17-C16-C15	-4.37	110.58	121.67
6	C	1401	RFP	C12-C11-C5	4.26	116.64	107.20
6	C	1401	RFP	O5-C12-C13	4.11	113.34	106.74

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	H	1401	RFP	C38-N4-C42	4.04	117.28	110.64
6	C	1401	RFP	C40-N3-N2	-3.77	93.88	113.48
6	C	1401	RFP	C3-C2-N1	-3.59	112.00	121.11
6	H	1401	RFP	C30-C16-C17	-3.43	115.33	123.30
6	H	1401	RFP	C25-O7-C35	3.39	123.13	117.71
6	H	1401	RFP	C12-C11-C5	3.37	114.67	107.20
6	C	1401	RFP	C13-C12-C11	-3.35	106.10	113.77
6	C	1401	RFP	O3-C6-C5	-3.15	106.59	112.85
6	C	1401	RFP	C3-C43-N2	-3.09	115.97	120.94
6	C	1401	RFP	O7-C25-C26	3.03	115.47	107.48
6	H	1401	RFP	C12-O5-C29	2.97	124.72	117.01
6	C	1401	RFP	C25-O7-C35	2.96	122.45	117.71
6	H	1401	RFP	O3-C6-C5	-2.82	107.25	112.85
6	C	1401	RFP	C23-C22-C21	-2.79	106.95	112.54
6	H	1401	RFP	C6-C5-C11	-2.79	102.44	107.41
6	C	1401	RFP	C1-C2-N1	2.77	124.61	117.93
6	H	1401	RFP	C37-O6-C27	2.76	119.21	113.35
6	H	1401	RFP	C17-C16-C15	-2.73	114.76	121.67
6	C	1401	RFP	C18-C17-C16	-2.71	119.23	126.92
6	C	1401	RFP	C41-C42-N4	2.70	113.81	110.82
6	C	1401	RFP	O8-C35-C36	-2.65	115.28	124.96
6	H	1401	RFP	C2-C3-C43	-2.63	120.38	123.70
6	H	1401	RFP	C42-N4-C39	2.50	113.03	109.54
6	H	1401	RFP	C3-C2-N1	-2.50	114.78	121.11
6	H	1401	RFP	C32-C22-C23	-2.49	106.11	111.18
6	H	1401	RFP	C31-C20-C19	-2.47	104.11	110.05
6	C	1401	RFP	C5-C10-C9	-2.43	114.30	119.73
6	H	1401	RFP	C43-N2-N3	-2.40	118.17	120.75
6	C	1401	RFP	C3-C2-C1	2.38	123.39	120.35
6	H	1401	RFP	C40-N3-N2	-2.37	101.14	113.48
6	H	1401	RFP	C5-C10-C9	-2.26	114.69	119.73
6	C	1401	RFP	C12-O3-C6	-2.26	105.10	107.83
6	H	1401	RFP	C1-C2-N1	2.21	123.27	117.93
6	H	1401	RFP	O3-C6-C7	2.19	125.48	121.18
6	H	1401	RFP	O5-C12-C13	2.19	110.26	106.74
6	C	1401	RFP	O3-C6-C7	2.17	125.45	121.18
6	H	1401	RFP	C26-C27-C28	2.16	117.19	111.97
6	C	1401	RFP	C31-C20-C19	-2.14	104.91	110.05
6	C	1401	RFP	C17-C18-C19	-2.10	118.86	124.21
6	C	1401	RFP	C30-C16-C17	-2.08	118.46	123.30
6	C	1401	RFP	C6-C5-C11	-2.03	103.78	107.41

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
6	H	1401	RFP	C29-C28-C27-C26

There are no ring outliers.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	323/329 (98%)	0.26	6 (1%) 64 47	0, 73, 165, 263	0
1	B	221/329 (67%)	0.50	16 (7%) 15 14	3, 97, 189, 266	0
1	F	229/329 (69%)	0.58	15 (6%) 18 16	16, 121, 201, 266	0
1	G	217/329 (65%)	0.53	11 (5%) 27 22	39, 111, 186, 215	0
2	C	1335/1342 (99%)	0.17	41 (3%) 47 35	0, 48, 166, 284	0
2	H	1335/1342 (99%)	0.33	60 (4%) 32 25	1, 86, 201, 341	0
3	D	1160/1407 (82%)	0.18	28 (2%) 56 41	0, 40, 157, 284	0
3	I	1160/1407 (82%)	0.31	48 (4%) 35 27	1, 52, 180, 322	0
4	E	90/91 (98%)	-0.04	1 (1%) 77 60	0, 40, 109, 159	0
4	J	76/91 (83%)	0.35	2 (2%) 53 39	5, 76, 155, 167	0
5	X	517/613 (84%)	0.36	25 (4%) 29 23	3, 99, 228, 365	0
5	Y	458/613 (74%)	0.33	28 (6%) 21 18	2, 102, 219, 328	0
All	All	7121/8222 (86%)	0.29	281 (3%) 37 29	0, 70, 190, 365	0

All (281) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	H	1002	LEU	12.6
3	I	10	ALA	8.6
5	X	319	ALA	8.2
5	X	36	VAL	8.2
2	H	1001	GLY	8.1
3	I	11	GLN	7.7
2	C	231	GLU	7.4
5	X	56	MET	7.3
5	Y	337	VAL	6.6
2	H	982	GLY	5.9
5	Y	239	GLY	5.9

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Mol	Chain	Res	Type	RSRZ
5	X	24	TYR	5.8
3	I	1203	ARG	5.8
2	C	232	ILE	5.3
2	H	60	GLN	5.2
2	H	983	GLY	5.2
5	X	53	ILE	5.1
3	I	208	THR	5.1
1	G	171	LEU	5.1
2	H	1000	LEU	5.0
3	I	13	LYS	4.9
2	H	334	GLU	4.8
1	F	194	GLN	4.8
2	C	311	CYS	4.8
5	Y	574	GLU	4.7
5	Y	320	ILE	4.5
3	I	563	LEU	4.5
3	I	12	THR	4.5
2	H	1003	THR	4.5
5	Y	319	ALA	4.4
5	Y	212	ILE	4.4
3	I	207	GLU	4.3
1	F	148	ARG	4.2
3	D	80	HIS	4.2
3	I	212	THR	4.1
5	X	35	ILE	4.1
3	D	1203	ARG	4.1
2	C	118	LYS	4.1
2	C	236	LYS	4.1
2	C	331	LYS	4.0
3	I	216	LYS	4.0
2	H	998	LEU	3.9
2	H	251	ALA	3.9
3	I	1172	LYS	3.9
5	X	336	GLU	3.9
3	I	521	LYS	3.9
2	C	251	ALA	3.9
2	H	725	GLN	3.9
1	G	29	GLU	3.8
2	H	984	VAL	3.8
1	F	192	VAL	3.7
2	C	116	ASP	3.7
2	C	238	GLN	3.7

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Mol	Chain	Res	Type	RSRZ
2	H	981	ALA	3.6
2	C	165	HIS	3.6
5	X	340	ALA	3.5
2	H	720	ARG	3.5
2	H	990	ASP	3.5
2	C	319	LEU	3.5
2	H	374	GLU	3.5
2	H	332	ARG	3.5
2	H	909	LYS	3.5
5	Y	336	GLU	3.5
3	D	1171	GLY	3.4
2	H	258	ASN	3.4
2	C	233	ARG	3.4
3	I	9	LYS	3.4
3	I	587	LEU	3.4
5	X	6	GLN	3.4
1	G	59	VAL	3.3
1	F	162	GLU	3.3
5	X	305	LEU	3.3
3	I	213	LYS	3.2
3	I	217	LEU	3.2
2	H	165	HIS	3.2
2	H	1008	GLN	3.2
1	F	205	MET	3.1
3	I	675	ALA	3.1
2	C	101	ARG	3.1
1	G	172	LEU	3.1
5	Y	489	MET	3.1
2	H	773	LEU	3.1
2	H	1020	GLU	3.1
2	H	996	ARG	3.1
5	X	54	GLN	3.1
1	B	169	GLY	3.1
2	H	101	ARG	3.0
1	A	193	GLU	3.0
3	I	1373	ARG	3.0
5	Y	284	GLU	3.0
5	Y	293	GLU	3.0
2	C	292	ILE	3.0
1	F	193	GLU	3.0
2	H	1004	ASP	3.0
2	C	267	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
2	C	237	LEU	3.0
5	X	57	GLU	3.0
5	Y	578	LYS	3.0
3	D	205	LEU	3.0
5	Y	241	SER	3.0
5	Y	333	VAL	2.9
3	D	1185	PRO	2.9
3	D	1172	LYS	2.9
2	H	999	GLU	2.9
3	D	1170	LYS	2.9
3	I	1294	ALA	2.9
1	B	147	GLN	2.9
3	I	204	GLU	2.9
3	I	564	VAL	2.9
5	X	307	THR	2.8
1	F	112	ALA	2.8
3	D	314	ARG	2.8
3	I	80	HIS	2.8
3	D	81	ARG	2.8
2	H	1007	LYS	2.8
1	B	172	LEU	2.8
2	C	305	SER	2.8
5	Y	421	TYR	2.8
1	B	171	LEU	2.8
2	C	332	ARG	2.8
2	C	783	LEU	2.8
1	B	112	ALA	2.8
3	I	1375	ALA	2.8
5	X	289	LYS	2.7
3	D	1179	PRO	2.7
3	I	674	THR	2.7
1	A	243	LYS	2.7
2	C	316	GLU	2.7
2	H	413	GLU	2.7
5	Y	305	LEU	2.7
5	X	315	TRP	2.7
5	X	52	GLY	2.6
1	B	73	GLY	2.6
1	G	13	LEU	2.6
2	C	304	GLU	2.6
4	E	91	ARG	2.6
5	Y	322	MET	2.6

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Mol	Chain	Res	Type	RSRZ
1	B	74	VAL	2.6
3	D	1133	ASP	2.6
2	H	269	ILE	2.6
5	Y	330	LEU	2.6
5	Y	237	ALA	2.6
5	Y	315	TRP	2.6
1	G	51	MET	2.6
2	H	414	ILE	2.5
2	H	1009	ASN	2.5
2	H	321	LEU	2.5
3	I	586	GLY	2.5
3	I	1161	GLY	2.5
2	H	252	SER	2.5
5	Y	338	HIS	2.5
3	I	205	LEU	2.5
1	F	165	GLU	2.5
3	D	1199	PHE	2.5
2	H	232	ILE	2.5
2	C	321	LEU	2.5
2	C	257	ALA	2.5
5	X	15	ARG	2.5
5	X	318	ALA	2.5
2	C	844	LYS	2.5
3	D	830	ASP	2.5
3	I	831	VAL	2.5
1	A	245	GLU	2.5
1	G	58	GLU	2.4
3	D	82	GLY	2.4
3	D	1204	VAL	2.4
1	B	168	ILE	2.4
2	H	988	LYS	2.4
1	B	138	ALA	2.4
5	X	303	ILE	2.4
1	F	131	CYS	2.4
1	B	70	THR	2.4
2	C	77	GLU	2.4
2	C	1001	GLY	2.4
2	C	1002	LEU	2.4
3	I	1371	ARG	2.4
3	I	1171	GLY	2.4
4	J	2	ALA	2.4
1	A	3	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
3	I	830	ASP	2.4
2	H	492	MET	2.4
5	X	299	LYS	2.4
5	X	306	PHE	2.4
3	I	8	LEU	2.4
3	I	1297	LYS	2.4
5	Y	310	GLU	2.4
1	F	160	HIS	2.4
2	C	172	TYR	2.4
2	H	987	GLU	2.4
5	X	293	GLU	2.4
5	Y	340	ALA	2.3
3	I	1295	ASN	2.3
1	F	110	VAL	2.3
2	H	724	VAL	2.3
3	D	212	THR	2.3
5	X	240	ARG	2.3
3	I	314	ARG	2.3
4	J	26	ARG	2.3
1	F	164	ASP	2.3
5	X	237	ALA	2.3
2	C	334	GLU	2.3
2	H	771	VAL	2.3
2	H	1153	ALA	2.3
3	D	1302	TYR	2.3
5	Y	238	LYS	2.3
3	D	211	GLU	2.3
1	A	25	LYS	2.3
2	H	892	GLU	2.3
3	D	1198	VAL	2.3
5	Y	573	LEU	2.3
3	I	392	THR	2.2
1	G	107	ILE	2.2
3	D	1186	TYR	2.2
3	I	218	THR	2.2
1	F	163	GLU	2.2
2	H	1010	GLN	2.2
2	H	718	ALA	2.2
2	H	719	LYS	2.2
3	I	221	ILE	2.2
2	H	957	LYS	2.2
2	H	292	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
3	D	477	GLN	2.2
3	I	559	ALA	2.2
2	C	1006	GLU	2.2
3	I	1372	ARG	2.2
3	I	1179	PRO	2.2
2	H	1152	GLY	2.2
3	I	520	ALA	2.2
2	H	255	ILE	2.2
1	F	195	ARG	2.2
2	C	310	ILE	2.2
1	G	18	GLN	2.2
2	H	107	ARG	2.2
2	H	1006	GLU	2.2
3	D	587	LEU	2.2
3	D	832	LYS	2.2
2	H	264	GLU	2.2
2	C	269	ILE	2.1
1	B	97	GLU	2.1
2	H	953	LEU	2.1
5	X	44	ILE	2.1
1	B	54	CYS	2.1
2	C	282	VAL	2.1
3	I	333	GLY	2.1
2	C	103	VAL	2.1
2	C	164	THR	2.1
3	I	562	GLU	2.1
5	Y	481	GLU	2.1
2	H	614	TYR	2.1
1	B	122	GLU	2.1
2	H	908	GLU	2.1
3	D	932	MET	2.1
2	C	1000	LEU	2.1
1	G	191	ARG	2.1
3	D	154	LEU	2.1
5	Y	307	THR	2.1
2	H	969	ALA	2.1
3	D	1200	GLU	2.1
2	H	1161	LEU	2.1
1	B	133	LEU	2.1
3	I	477	GLN	2.1
3	I	1282	TYR	2.1
2	C	996	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
2	H	1019	ASP	2.1
1	G	173	VAL	2.1
1	B	235	ARG	2.1
1	B	67	GLU	2.1
2	C	483	ASP	2.1
2	C	864	LYS	2.0
2	H	304	GLU	2.0
2	H	623	LEU	2.0
1	F	184	ALA	2.0
1	A	4	SER	2.0
2	C	854	ILE	2.0
3	D	707	ILE	2.0
2	C	983	GLY	2.0
3	D	445	LYS	2.0
3	I	1374	ALA	2.0
5	Y	273	MET	2.0
3	I	709	ARG	2.0
5	Y	240	ARG	2.0

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

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

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q < 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å ²)	Q<0.9
8	MG	I	1503	1/1	0.73	3.30	20,20,20,20	0
6	RFP	H	1401	59/59	0.36	1.51	20,20,20,20	0
6	RFP	C	1401	59/59	0.30	0.95	20,20,20,20	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
8	MG	D	1503	1/1	0.17	-0.10	24,24,24,24	0
7	ZN	I	1502	1/1	0.18	-0.30	49,49,49,49	0
7	ZN	D	1502	1/1	0.16	-0.68	8,8,8,8	0
7	ZN	D	1501	1/1	0.09	-1.23	54,54,54,54	0
7	ZN	I	1501	1/1	0.05	-1.45	60,60,60,60	0

6.5 Other polymers

There are no such residues in this entry.