Full wwPDB X-ray Structure Validation Report ⓘ

Jun 18, 2024 – 09:53 AM EDT

PDB ID	:	4B2T
Title	:	The crystal structures of the eukaryotic chaperonin CCT reveal its functional partitioning
Authors	:	Kalisman, N.; Schroeder, G.F.; Levitt, M.
Deposited on	:	2012-07-17
Resolution	:	5.50 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

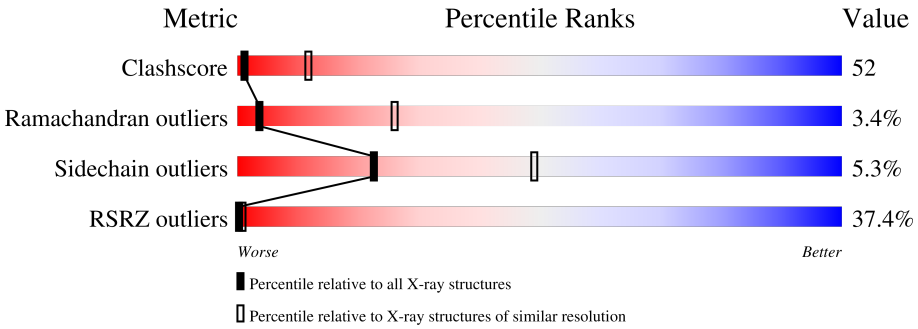
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.20.1
EDS	:	2.37.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 5.50 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))
Clashscore	141614	1010 (7.10-3.90)
Ramachandran outliers	138981	1014 (7.12-3.82)
Sidechain outliers	138945	1191 (7.20-3.80)
RSRZ outliers	127900	1023 (7.08-3.76)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	556	25% 29% 51% 6% 13%
1	a	556	27% 57% 6% • 35%
2	B	535	43% 35% 52% • 10%
2	b	535	30% 62% 5% 33%
3	D	542	29% 28% 55% 5% 11%
3	d	542	25% 61% 5% 34%
4	E	541	21% 32% 50% 7% 11%

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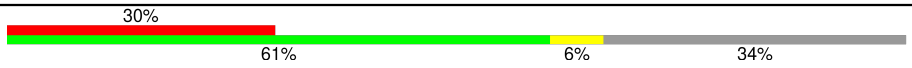
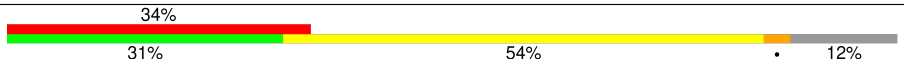
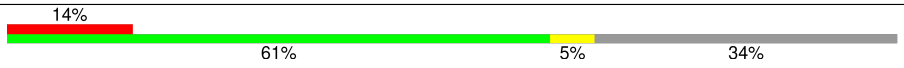
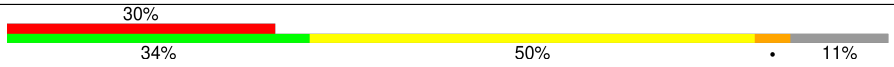
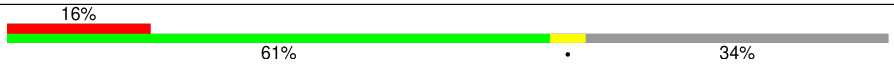
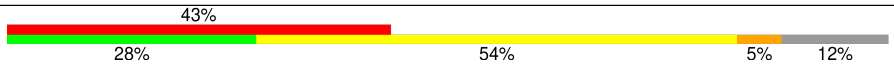
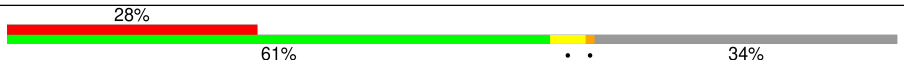
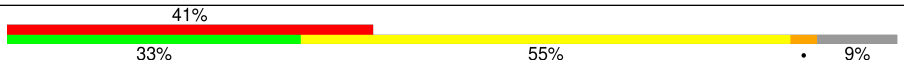
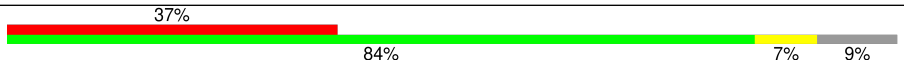
Mol	Chain	Length	Quality of chain
4	e	541	
5	G	545	
5	g	545	
6	H	543	
6	h	543	
7	Q	548	
7	q	548	
8	Z	531	
8	z	531	

2 Entry composition (i)

There are 8 unique types of molecules in this entry. The entry contains 51877 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called T-COMPLEX PROTEIN 1 SUBUNIT ALPHA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	481	Total	C	N	O	S	0	0	0
			3625	2280	633	692	20			
1	a	359	Total	C	N	O	S	0	0	0
			2705	1703	469	520	13			

- Molecule 2 is a protein called T-COMPLEX PROTEIN 1 SUBUNIT BETA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	481	Total	C	N	O	S	0	0	0
			3602	2258	629	696	19			
2	b	359	Total	C	N	O	S	0	0	0
			2658	1652	469	524	13			

- Molecule 3 is a protein called T-COMPLEX PROTEIN 1 SUBUNIT DELTA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	D	481	Total	C	N	O	S	0	0	0
			3610	2259	627	703	21			
3	d	359	Total	C	N	O	S	0	0	0
			2690	1671	473	532	14			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
D	158	VAL	GLU	conflict	UNP Q2T9X2
D	510	LEU	GLN	conflict	UNP Q2T9X2
d	1158	VAL	GLU	conflict	UNP Q2T9X2
d	1510	LEU	GLN	conflict	UNP Q2T9X2

- Molecule 4 is a protein called T-COMPLEX PROTEIN 1 SUBUNIT EPSILON.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	E	481	Total	C	N	O	S	0	0	0
			3674	2299	644	703	28			
4	e	359	Total	C	N	O	S	0	0	0
			2724	1688	486	528	22			

- Molecule 5 is a protein called T-COMPLEX PROTEIN 1 SUBUNIT GAMMA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	G	481	Total	C	N	O	S	0	0	0
			3719	2326	661	705	27			
5	g	359	Total	C	N	O	S	0	0	0
			2735	1711	480	523	21			

- Molecule 6 is a protein called T-COMPLEX PROTEIN 1 SUBUNIT ETA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	H	481	Total	C	N	O	S	0	0	0
			3671	2320	633	693	25			
6	h	359	Total	C	N	O	S	0	0	0
			2724	1719	472	517	16			

- Molecule 7 is a protein called T-COMPLEX PROTEIN 1 SUBUNIT THETA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	Q	481	Total	C	N	O	S	0	0	0
			3673	2317	628	703	25			
7	q	359	Total	C	N	O	S	0	0	0
			2739	1729	467	526	17			

- Molecule 8 is a protein called T-COMPLEX PROTEIN 1 SUBUNIT ZETA.

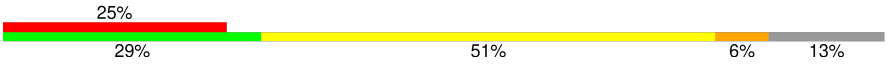
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	Z	481	Total	C	N	O	S	0	0	0
			3664	2310	638	697	19			
8	z	481	Total	C	N	O	S	0	0	0
			3664	2310	638	697	19			

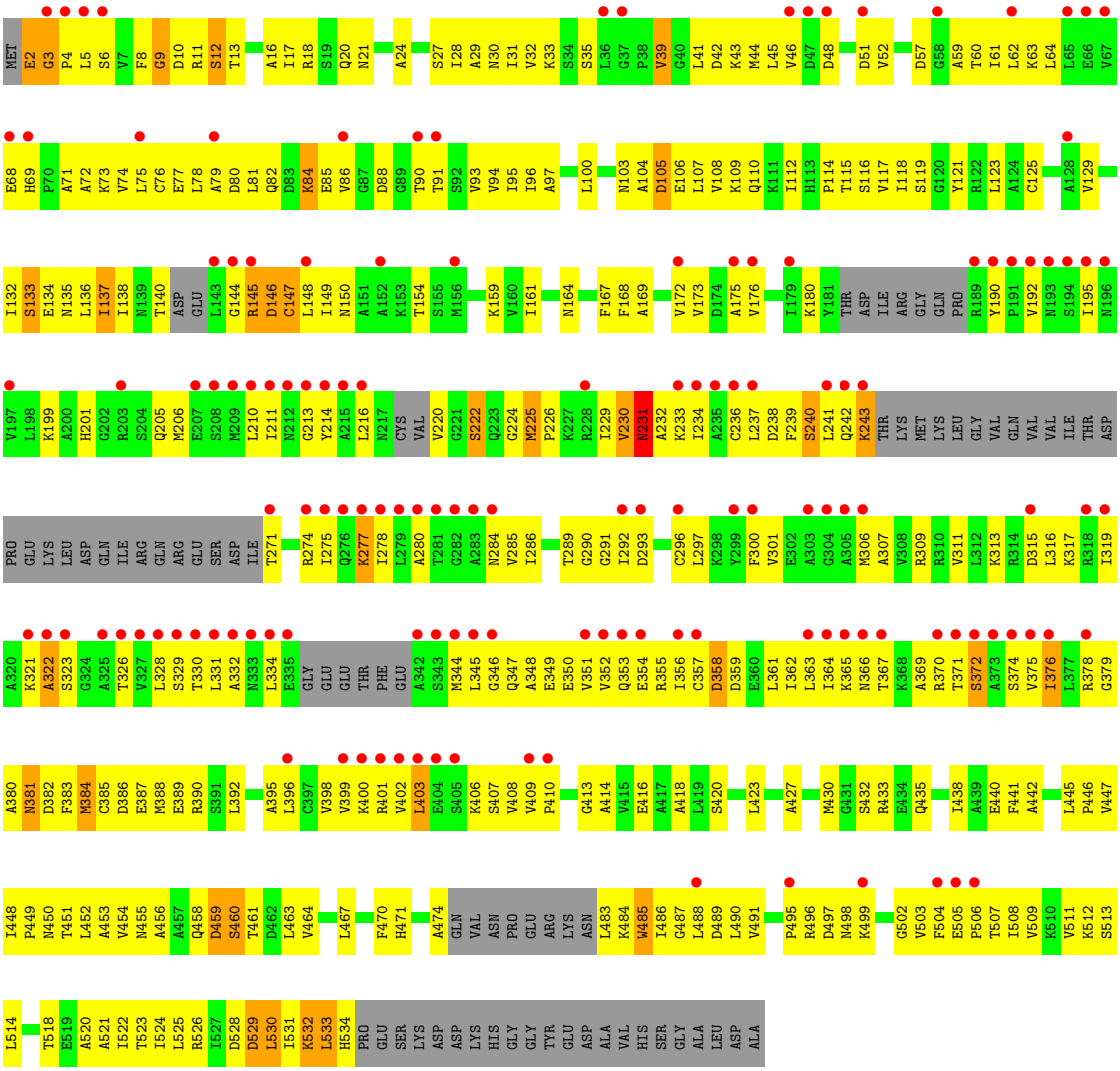
3 Residue-property plots (i)

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

• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT ALPHA

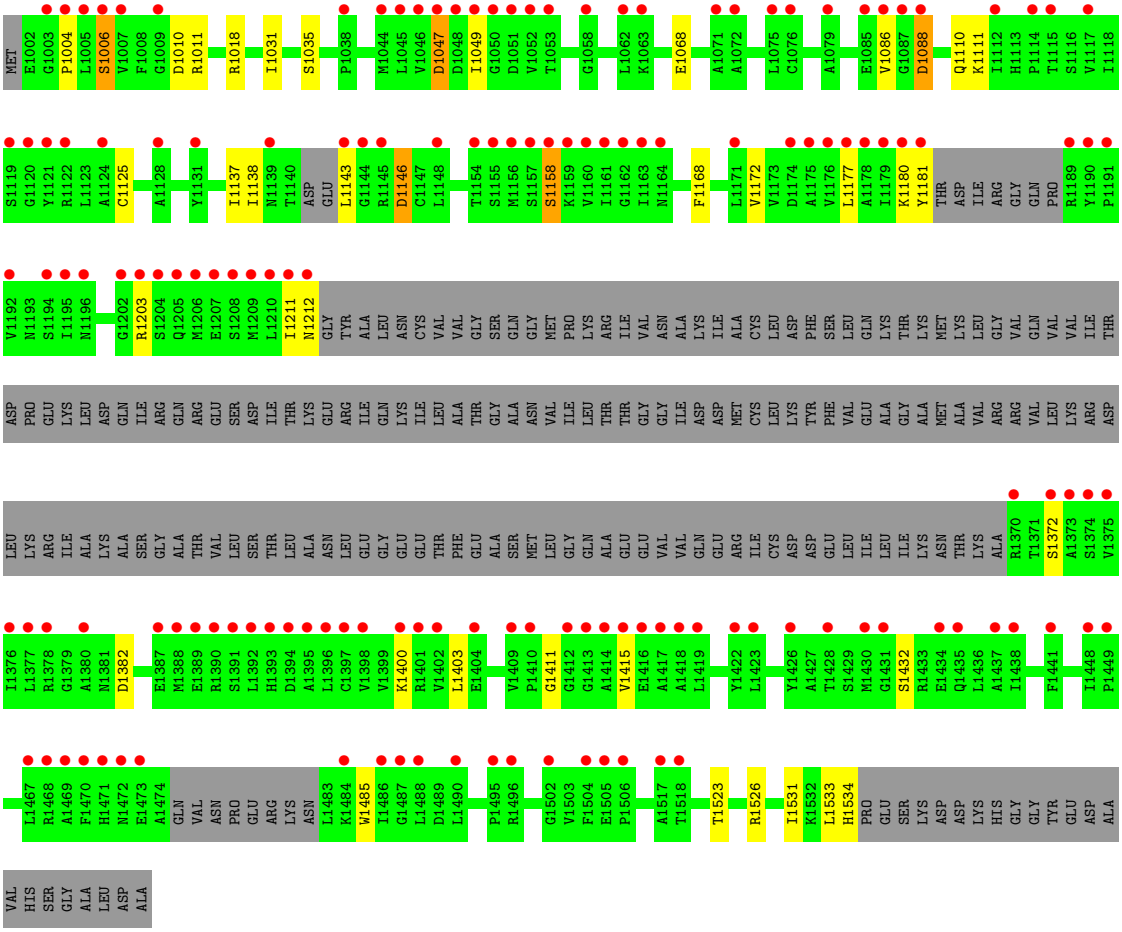
Chain A:





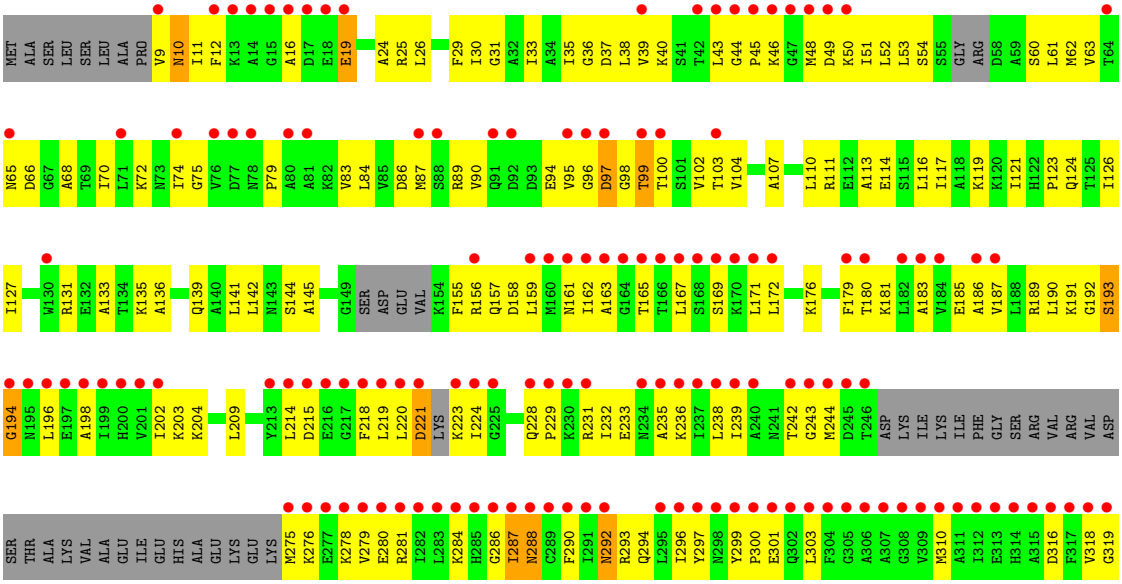
• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT ALPHA

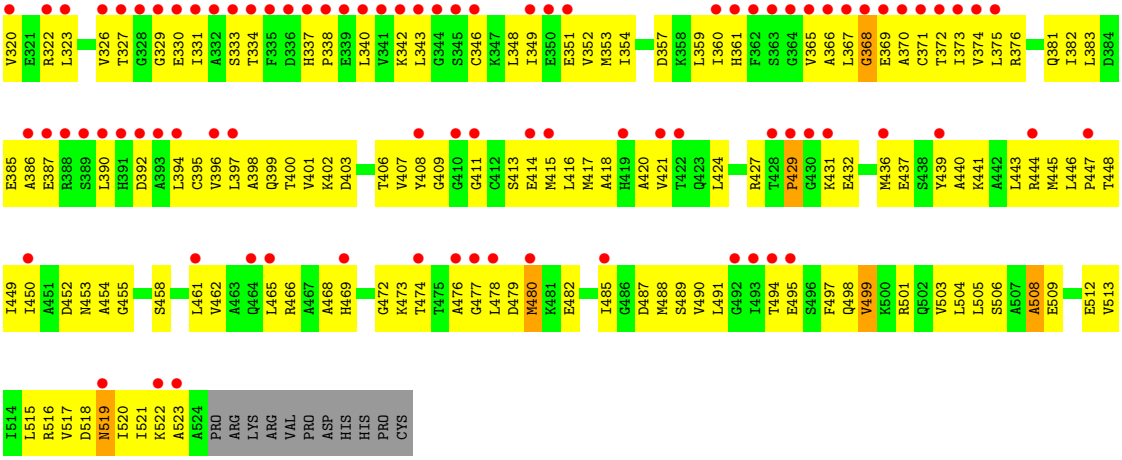
Chain a:



• Molecule 2: T-COMPLEX PROTEIN 1 SUBUNIT BETA

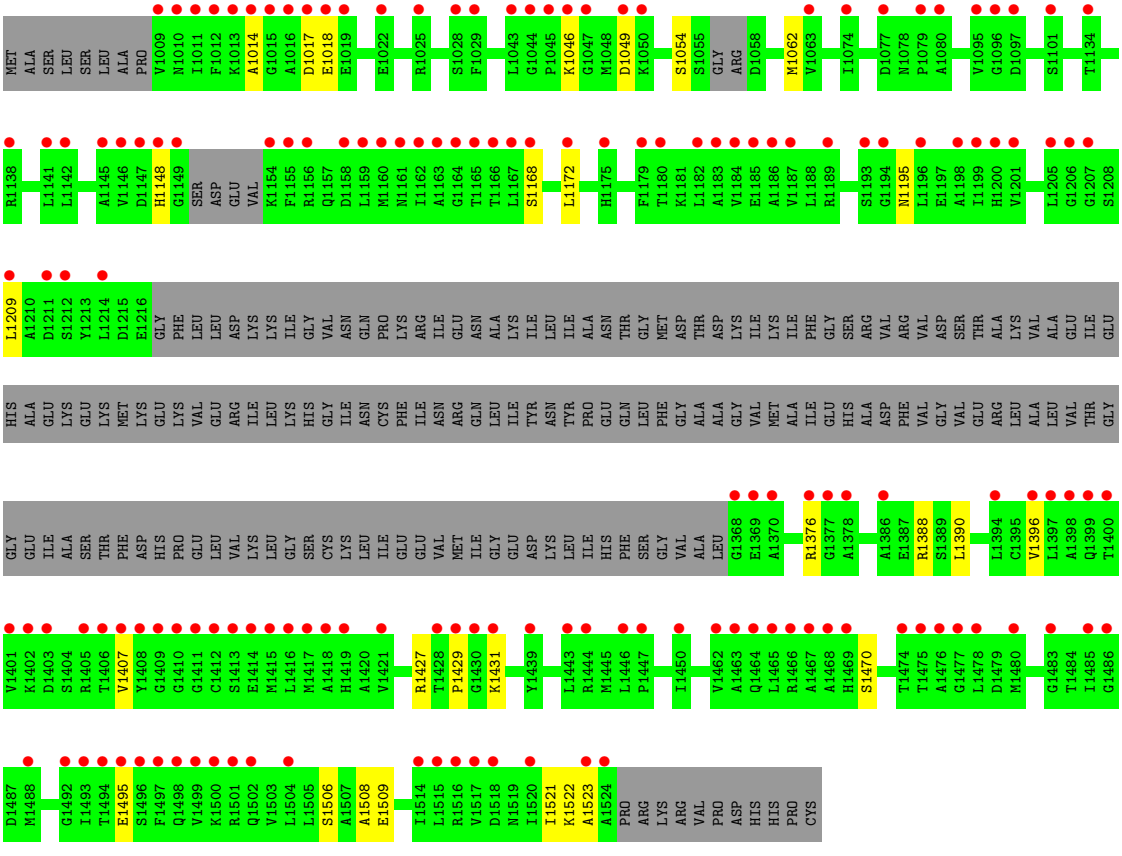
Chain B:





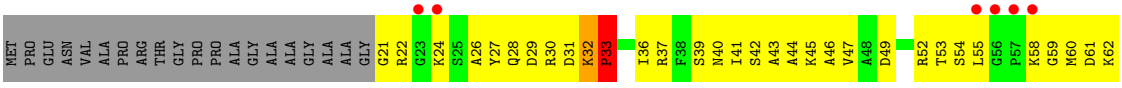
• Molecule 2: T-COMPLEX PROTEIN 1 SUBUNIT BETA

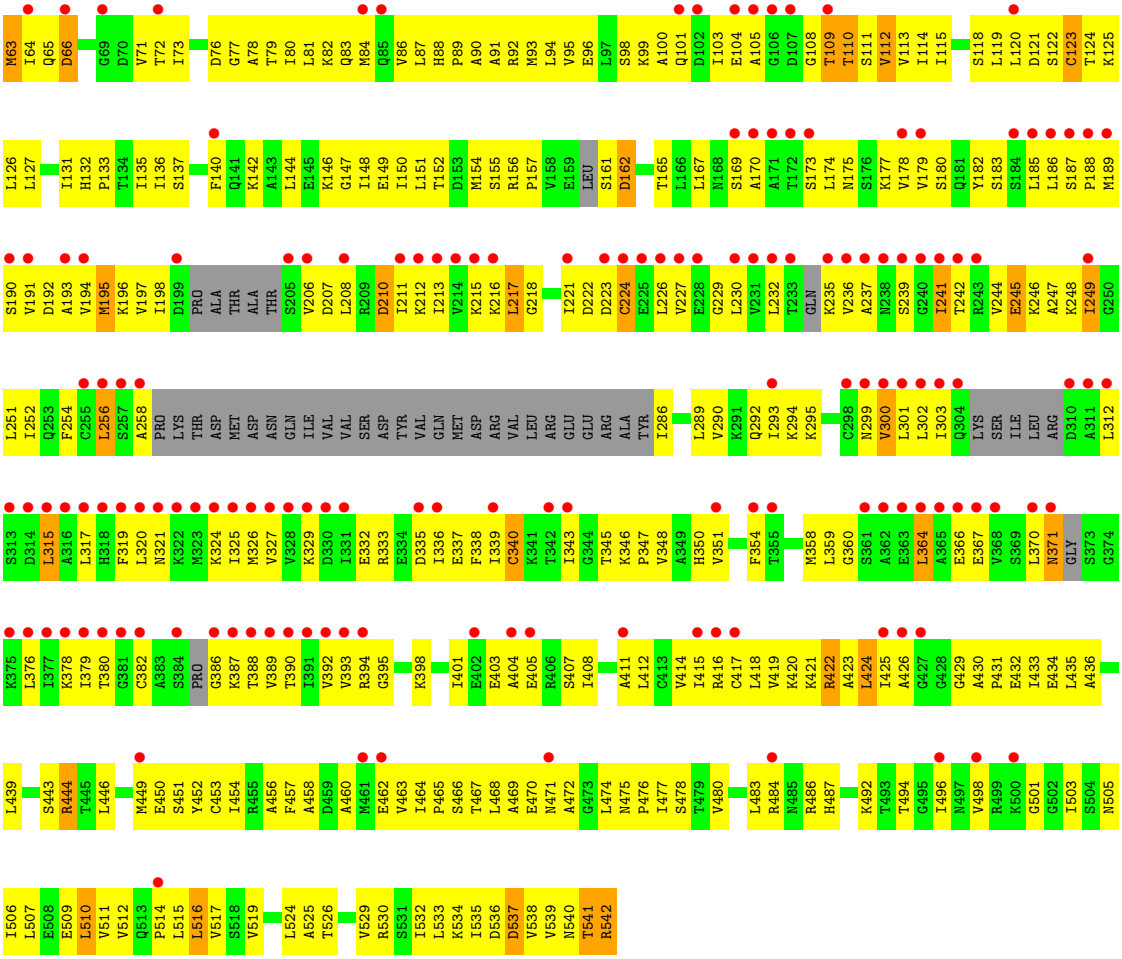
Chain b:



• Molecule 3: T-COMPLEX PROTEIN 1 SUBUNIT DELTA

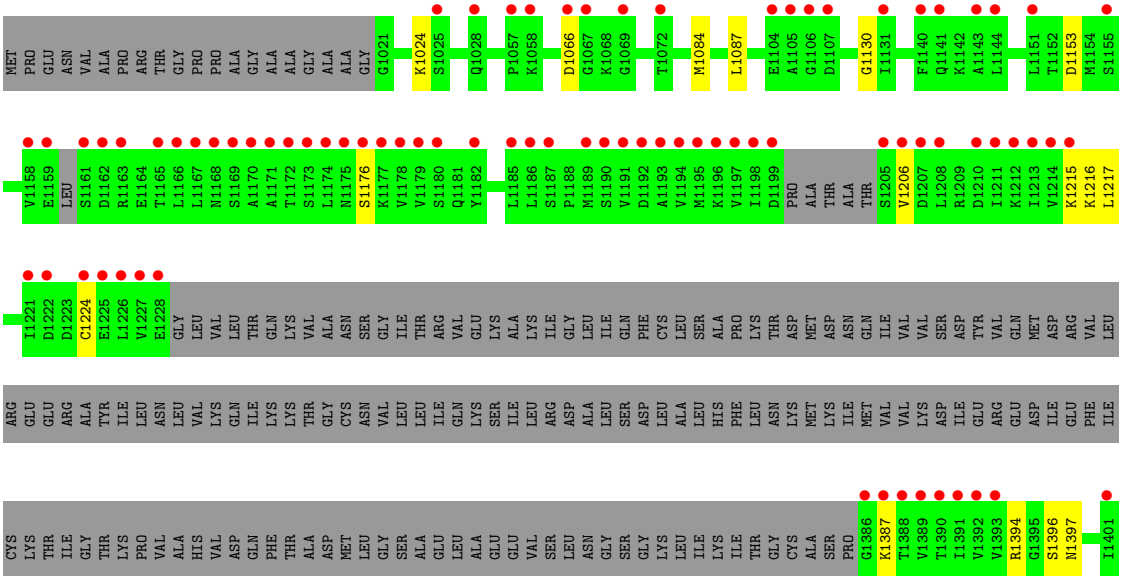
Chain D:

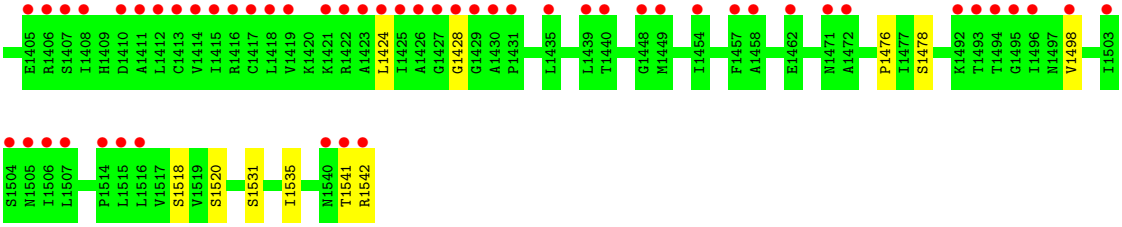




• Molecule 3: T-COMPLEX PROTEIN 1 SUBUNIT DELTA

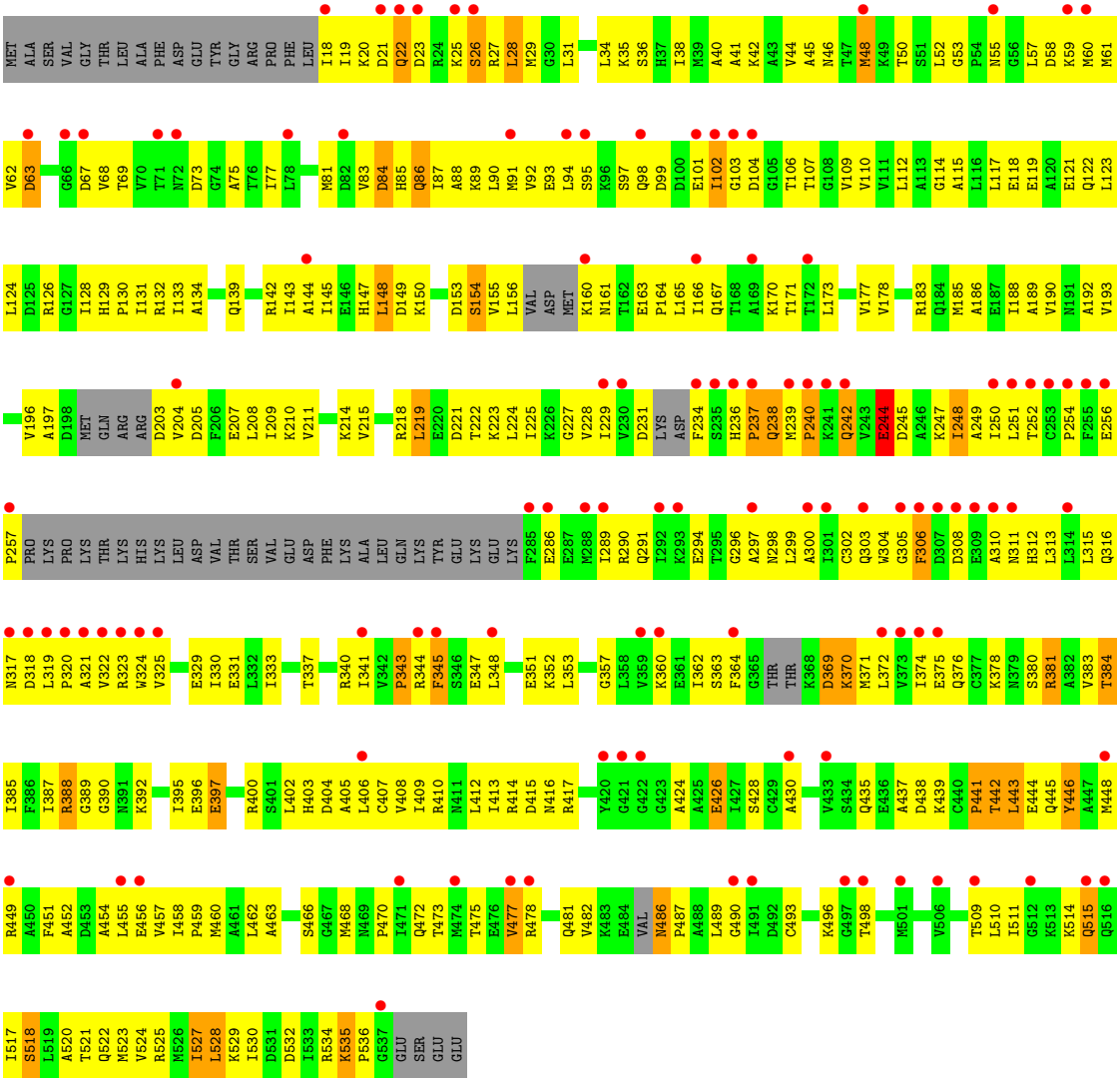
Chain d:





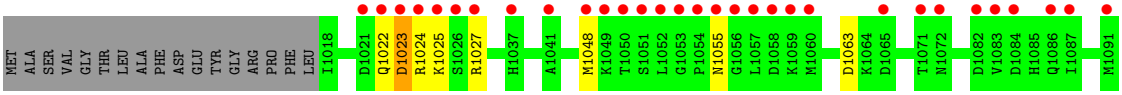
• Molecule 4: T-COMPLEX PROTEIN 1 SUBUNIT EPSILON

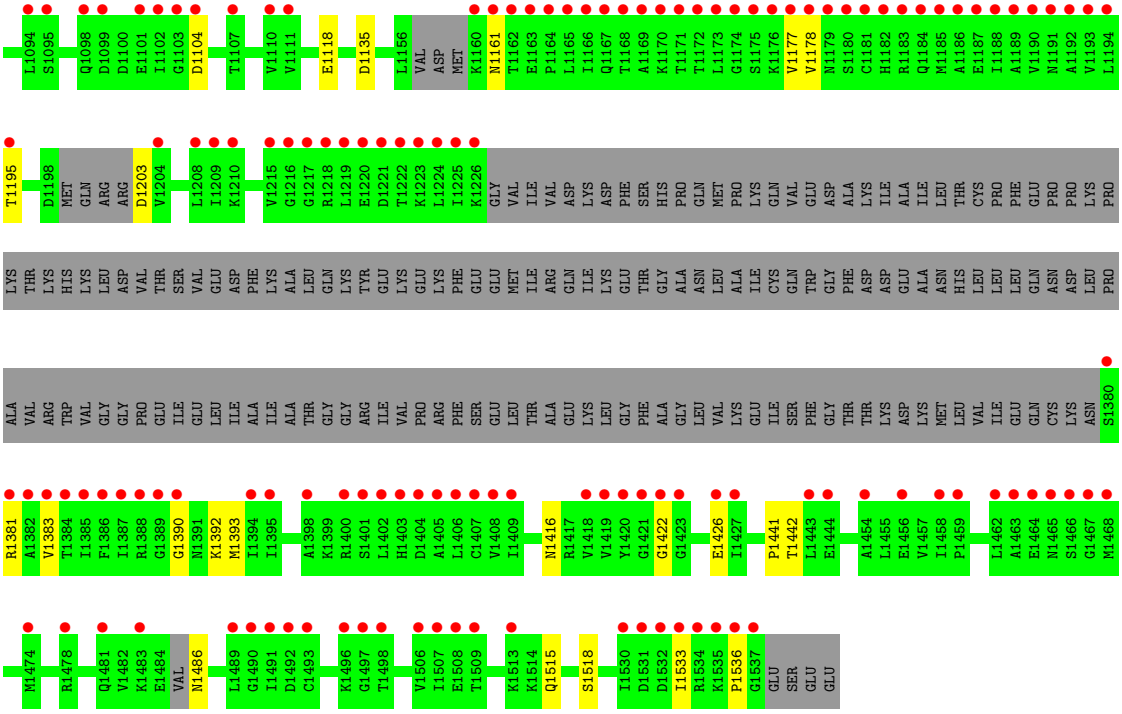
Chain E:



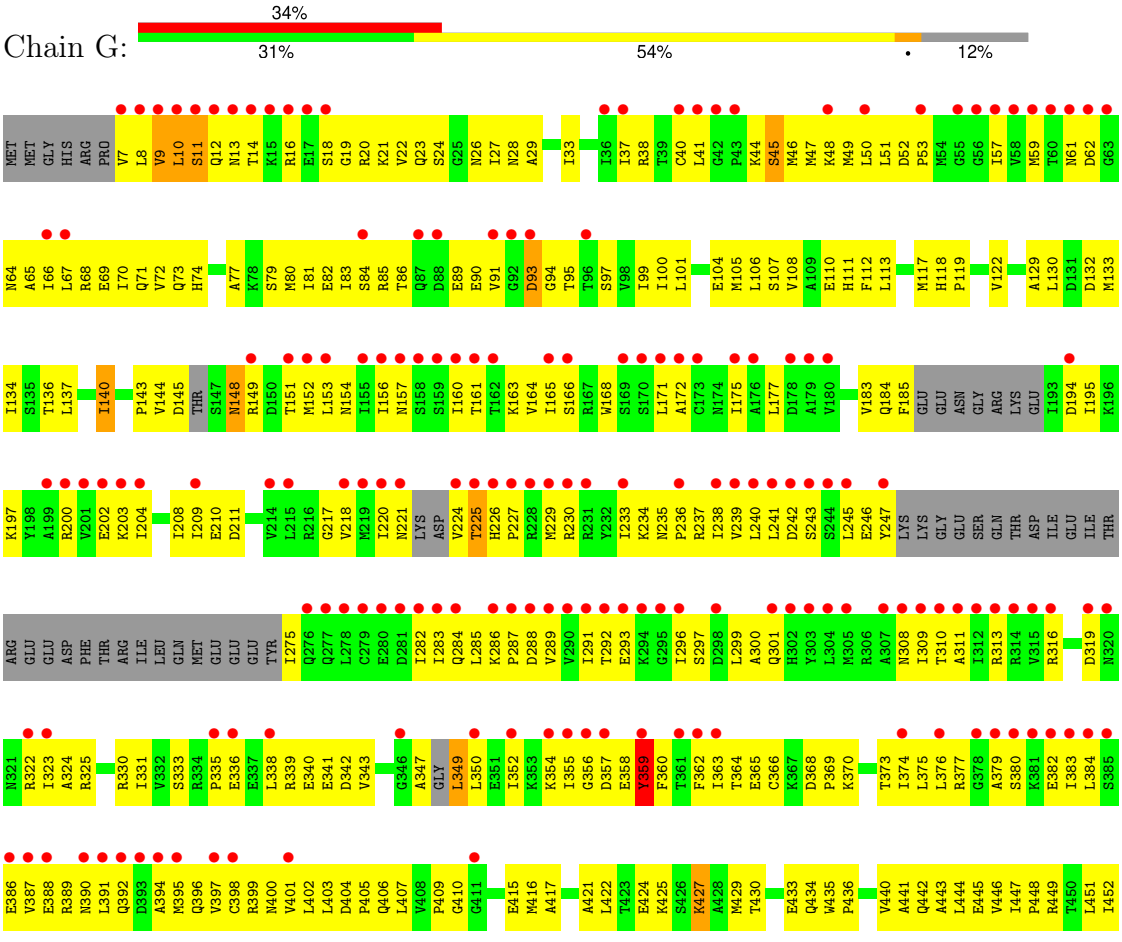
• Molecule 4: T-COMPLEX PROTEIN 1 SUBUNIT EPSILON

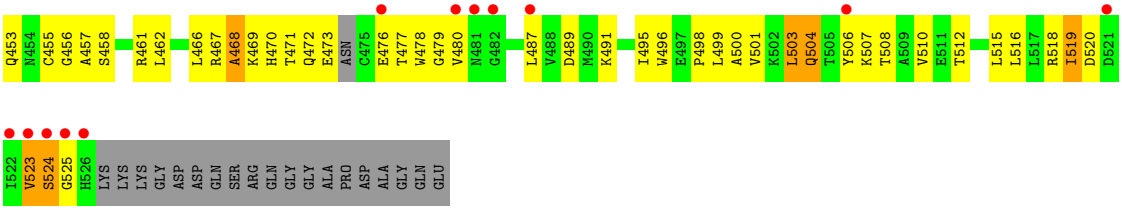
Chain e:



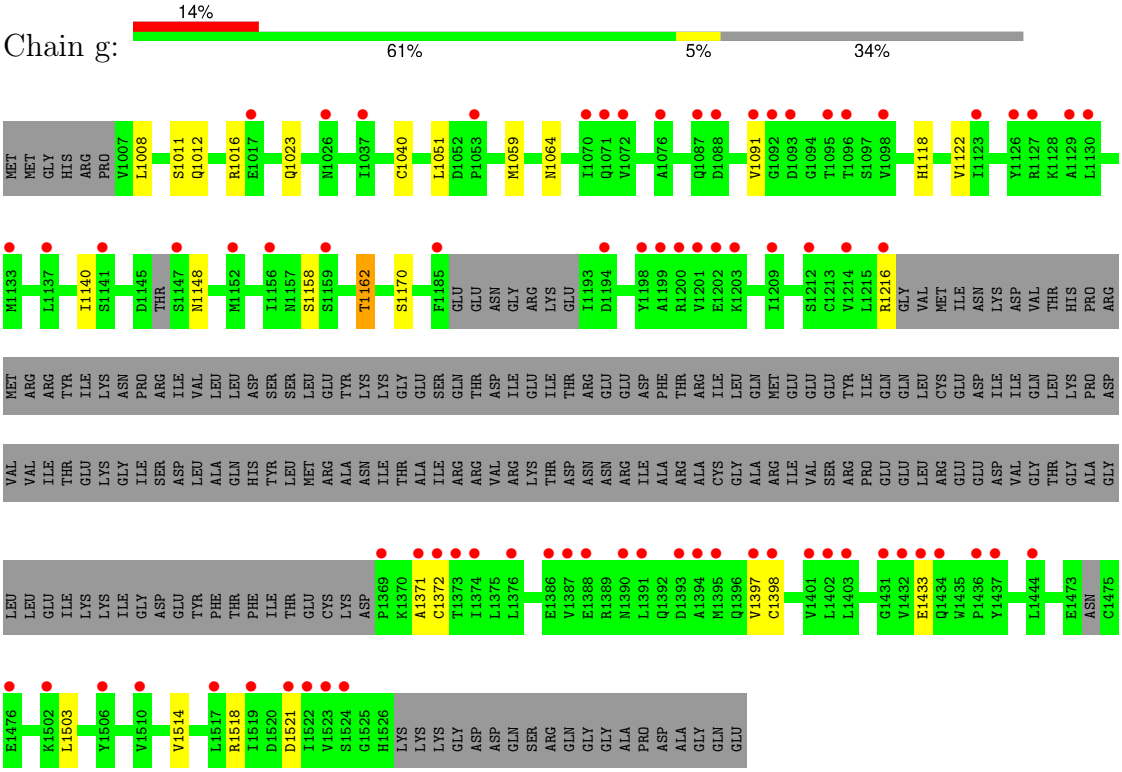


• Molecule 5: T-COMPLEX PROTEIN 1 SUBUNIT GAMMA

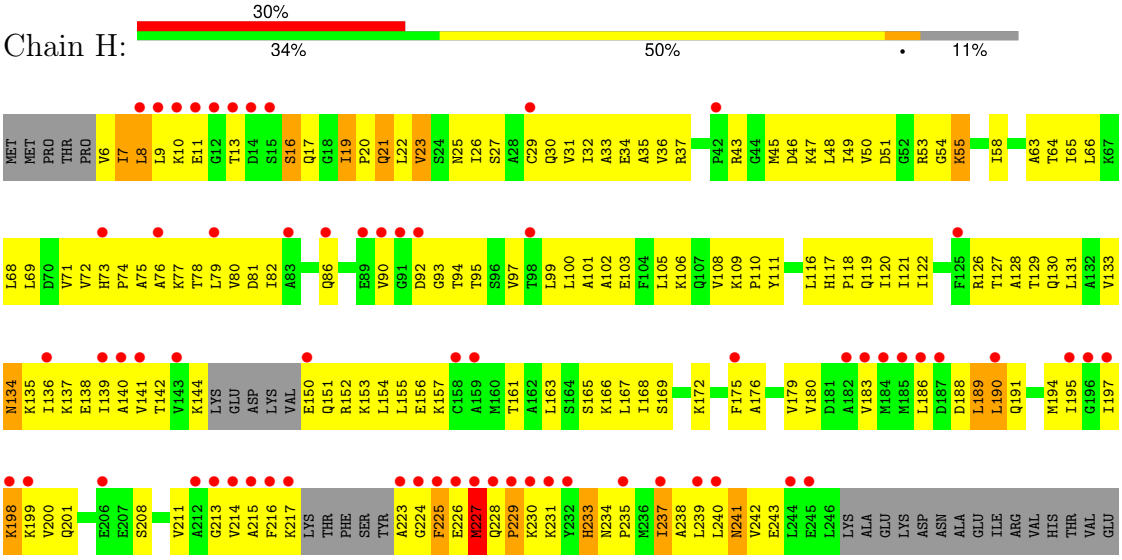


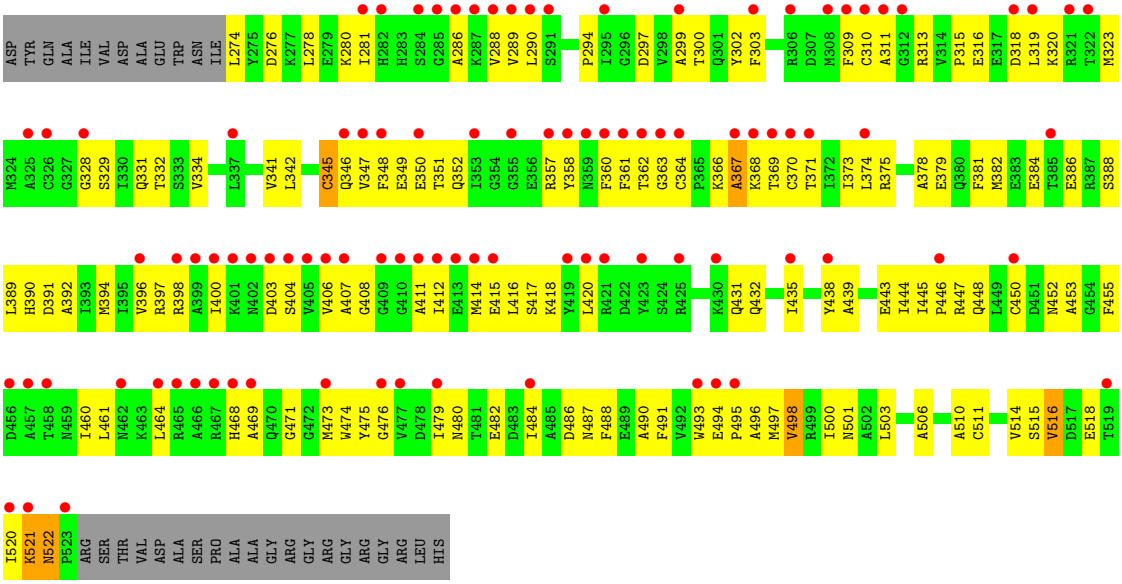


• Molecule 5: T-COMPLEX PROTEIN 1 SUBUNIT GAMMA



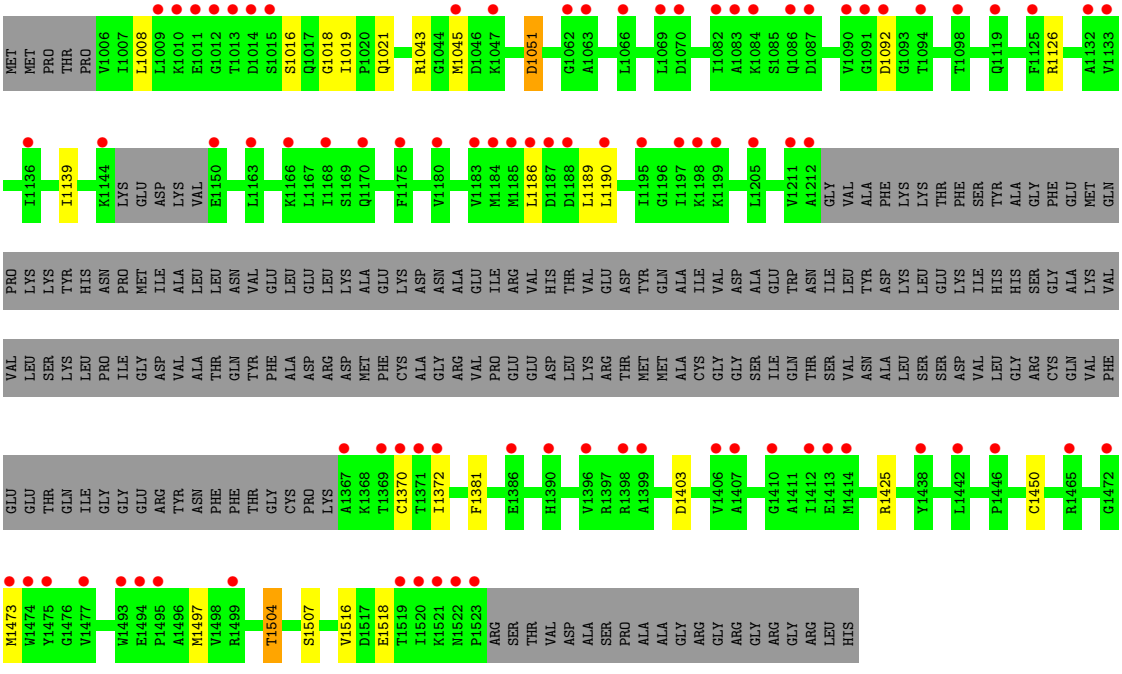
• Molecule 6: T-COMPLEX PROTEIN 1 SUBUNIT ETA





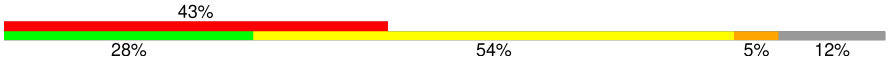
• Molecule 6: T-COMPLEX PROTEIN 1 SUBUNIT ETA

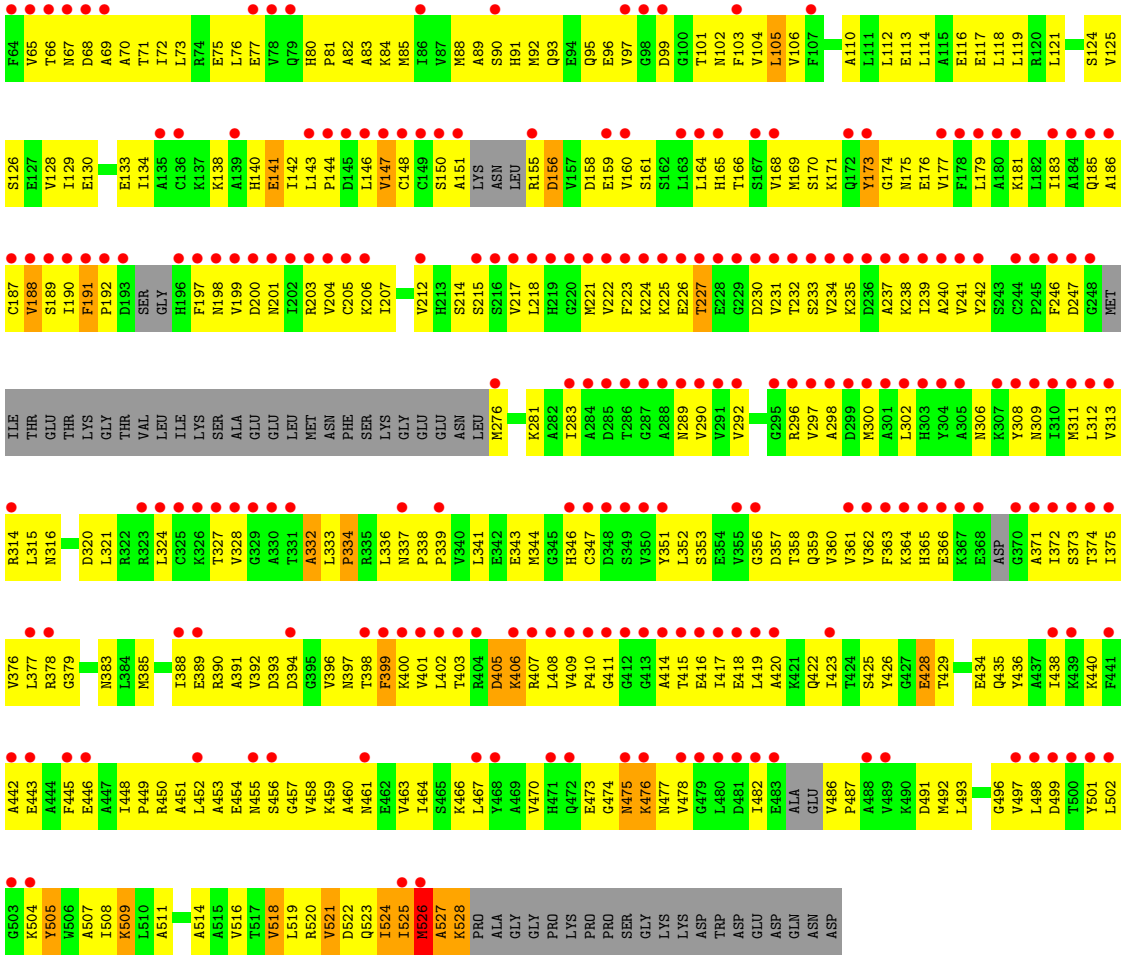
Chain h:



• Molecule 7: T-COMPLEX PROTEIN 1 SUBUNIT THETA

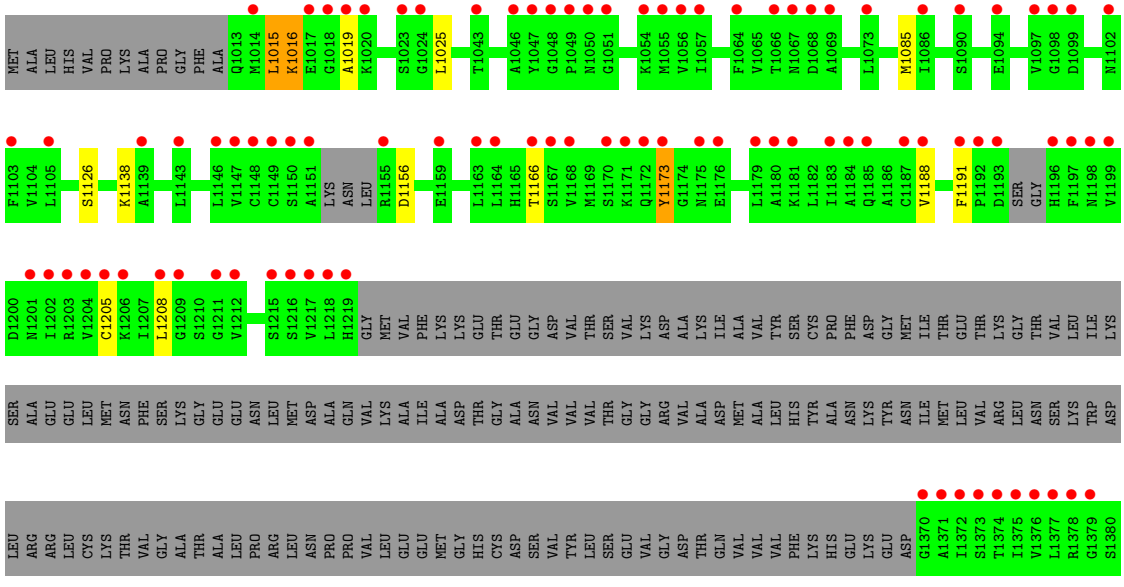
Chain Q:

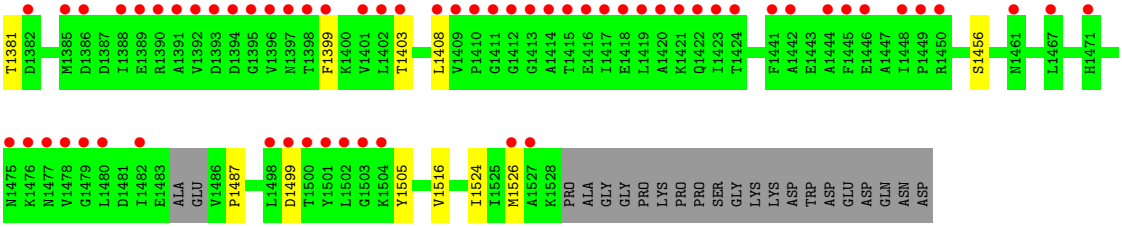




• Molecule 7: T-COMPLEX PROTEIN 1 SUBUNIT THETA

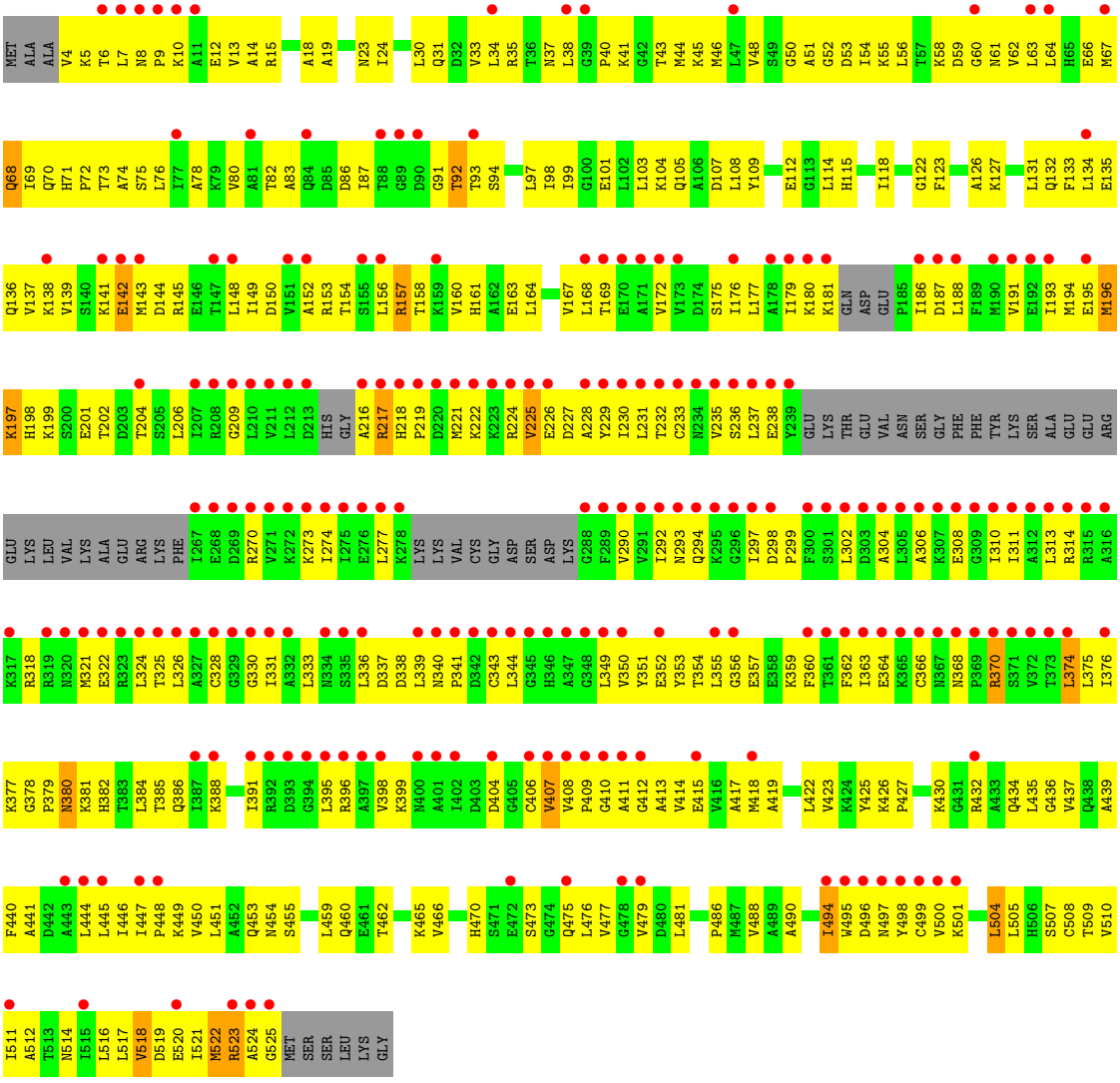
Chain q:





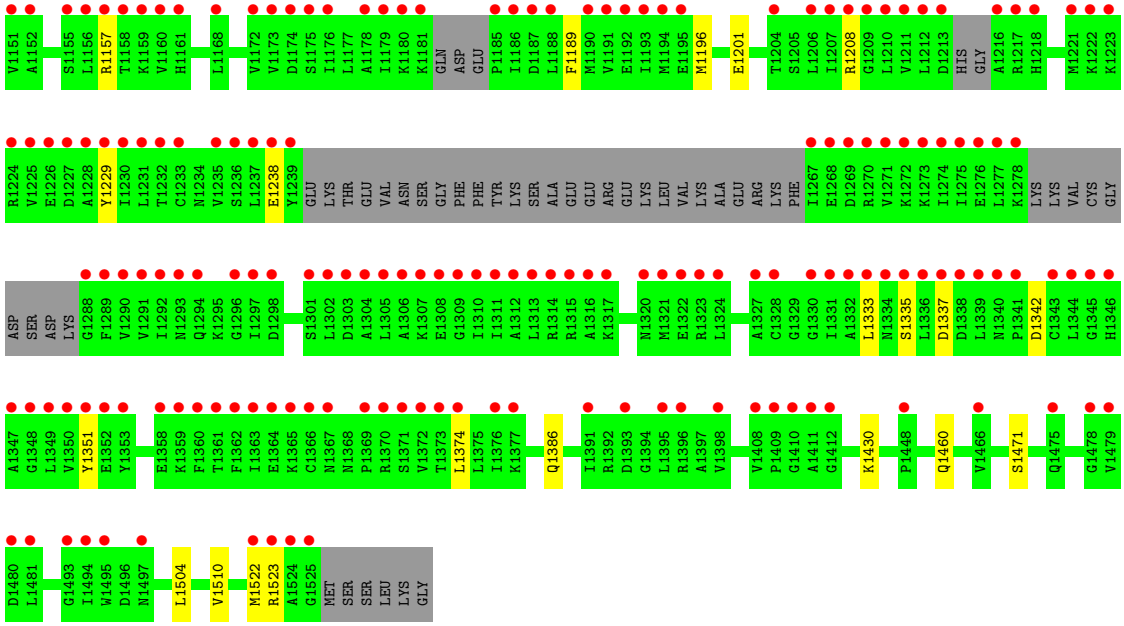
• Molecule 8: T-COMPLEX PROTEIN 1 SUBUNIT ZETA

Chain Z:



• Molecule 8: T-COMPLEX PROTEIN 1 SUBUNIT ZETA

Chain z:


V1151 A1152 S1155 L1156 R1157 T1158 K1159 V1160 H1161 L1168 V1172 V1173 D1174 S1175 I1176 L1177 A1178 I1179 K1180 K1181 GLN ASP GLU P1185 I1186 D1187 L1188 F1189 M1190 V1191 E1192 I1193 M1194 E1195 M1196 E1201 T1204 S1205 L1206 I1207 R1208 G1209 L1210 V1211 L1212 D1213 HIS GLY A1216 R1217 H1218 M1221 K1222 K1223
R1224 V1225 E1226 D1227 A1228 Y1229 I1230 L1231 T1232 C1233 N1234 V1235 S1236 L1237 E1238 Y1239 GLU LYS THR GLU VAL ASN SER GLY PHE PHE TYR LYS SER ALA GLU GLU ARG GLU LYS LEU VAL LYS ALA GLU ARG LYS PHE I1267 E1268 D1269 R1270 V1271 K1272 K1273 I1274 I1275 E1276 L1277 K1278 LYS LYS VAL CYS GLY
ASP SER ASP LYS G1288 F1289 V1290 V1291 I1292 N1293 Q1294 K1295 G1296 I1297 D1298 S1301 L1302 D1303 A1304 L1305 A1306 K1307 E1308 G1309 I1310 I1311 A1312 L1313 R1314 R1315 A1316 K1317 N1320 M1321 E1322 R1323 L1324 A1327 C1328 G1329 G1330 I1331 A1332 L1333 N1334 S1335 L1336 D1337 D1338 L1339 N1340 P1341 D1342 C1343 L1344 G1345 H1346
A1347 G1348 L1349 V1350 Y1351 E1352 Y1353 E1358 K1359 F1360 T1361 F1362 I1363 E1364 K1365 C1366 N1367 N1368 P1369 R1370 S1371 V1372 T1373 L1374 L1375 I1376 K1377 Q1386 I1391 R1392 D1393 G1394 L1395 R1396 A1397 V1398 V1408 P1409 G1410 A1411 G1412 K1430 P1448 Q1460 V1466 S1471 Q1475 G1478 V1479
D1480 L1481 G1493 I1494 W1495 D1496 N1497 L1504 V1510 M1522 R1523 A1524 G1525 MET SER SER LEU LYS GLY

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 2	Depositor
Cell constants a, b, c, α, β, γ	272.70Å 313.50Å 158.30Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	200.00 – 5.50 97.58 – 5.44	Depositor EDS
% Data completeness (in resolution range)	99.1 (200.00-5.50) 98.4 (97.58-5.44)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.37 (at 5.41Å)	Xtriage
Refinement program	CNS 1.3	Depositor
R, R_{free}	0.340 , 0.399 0.342 , (Not available)	Depositor DCC
R_{free} test set	No test flags present.	wwPDB-VP
Wilson B-factor (Å^2)	257.8	Xtriage
Anisotropy	0.400	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.41 , 425.9	EDS
L-test for twinning[2]	$< \|L\| > = 0.32$, $< L^2 > = 0.16$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.75	EDS
Total number of atoms	51877	wwPDB-VP
Average B, all atoms (Å^2)	277.0	wwPDB-VP

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

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
1	A	0.22	0/3657	0.44	0/4934
1	a	0.22	0/2733	0.46	0/3695
2	B	0.22	0/3638	0.43	0/4903
2	b	0.21	0/2680	0.44	0/3615
3	D	0.21	0/3632	0.46	0/4891
3	d	0.21	0/2707	0.45	0/3650
4	E	0.22	0/3712	0.44	0/4997
4	e	0.21	0/2743	0.44	0/3687
5	G	0.21	0/3758	0.45	0/5073
5	g	0.21	0/2763	0.46	0/3733
6	H	0.23	0/3716	0.43	0/5008
6	h	0.22	0/2751	0.45	0/3711
7	Q	0.23	0/3724	0.44	0/5032
7	q	0.23	0/2774	0.43	0/3746
8	Z	0.22	0/3702	0.44	0/4995
8	z	0.21	0/3702	0.45	0/4995
All	All	0.22	0/52392	0.44	0/70665

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3625	0	3783	380	0
1	a	2705	0	2799	0	0
2	B	3602	0	3705	353	0
2	b	2658	0	2733	0	0
3	D	3610	0	3810	456	0
3	d	2690	0	2818	0	0
4	E	3674	0	3781	382	0
4	e	2724	0	2822	0	0
5	G	3719	0	3870	398	0
5	g	2735	0	2851	0	0
6	H	3671	0	3783	366	0
6	h	2724	0	2842	0	0
7	Q	3673	0	3719	383	0
7	q	2739	0	2777	0	0
8	Z	3664	0	3820	413	0
8	z	3664	0	3820	0	0
All	All	51877	0	53733	2912	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 52.

All (2912) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:456:GLY:HA3	8:Z:118:ILE:HD11	1.37	1.06
1:A:211:ILE:HG22	1:A:213:GLY:H	1.21	1.04
3:D:540:ASN:HB3	3:D:542:ARG:HD3	1.36	1.03
3:D:31:ASP:HB3	3:D:36:ILE:HB	1.39	1.03
4:E:94:LEU:HD21	4:E:523:MET:HB2	1.39	1.03
7:Q:525:ILE:HG23	7:Q:526:MET:H	1.22	1.03
6:H:8:LEU:HA	7:Q:80:HIS:HB2	1.38	1.02
1:A:140:THR:HB	1:A:144:GLY:HA3	1.39	1.01
8:Z:206:LEU:HD13	8:Z:374:LEU:HD12	1.43	1.01
7:Q:225:LYS:HE3	7:Q:361:VAL:HG22	1.42	1.00
7:Q:33:ILE:HG13	7:Q:112:LEU:HB3	1.41	1.00
1:A:532:LYS:HD2	3:D:63:MET:HG2	1.39	0.99
4:E:31:LEU:HA	4:E:34:LEU:HD23	1.45	0.99
3:D:126:LEU:HB3	3:D:131:ILE:HD12	1.46	0.97
4:E:55:ASN:HD22	4:E:466:SER:HA	1.24	0.97
8:Z:231:LEU:HD11	8:Z:339:LEU:HB3	1.43	0.97
3:D:211:ILE:HG23	3:D:389:VAL:HG23	1.46	0.97
4:E:87:ILE:HD13	4:E:527:ILE:HG21	1.43	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:352:LEU:HD11	7:Q:359:GLN:HB3	1.42	0.97
4:E:228:VAL:HG23	4:E:374:ILE:HB	1.44	0.96
5:G:51:LEU:HG	5:G:57:ILE:HG12	1.48	0.96
6:H:19:ILE:H	6:H:20:PRO:HD2	1.27	0.96
1:A:12:SER:HB2	1:A:17:ILE:HB	1.47	0.96
6:H:25:ASN:HD22	6:H:75:ALA:HB2	1.28	0.95
7:Q:428:GLU:HA	7:Q:435:GLN:HE21	1.28	0.95
6:H:30:GLN:HA	6:H:102:ALA:HB1	1.48	0.95
7:Q:104:VAL:HG23	7:Q:511:ALA:HB2	1.49	0.95
6:H:329:SER:HB3	6:H:341:VAL:HG13	1.49	0.95
2:B:326:VAL:HG12	2:B:365:VAL:HG11	1.49	0.94
2:B:218:PHE:HB2	2:B:326:VAL:HG11	1.48	0.94
2:B:33:ILE:HA	2:B:107:ALA:HB1	1.50	0.94
8:Z:225:VAL:HB	8:Z:228:ALA:HB2	1.50	0.94
5:G:466:LEU:HA	5:G:487:LEU:HD22	1.48	0.93
5:G:72:VAL:HG13	8:Z:6:THR:HA	1.50	0.93
3:D:315:LEU:HD22	3:D:315:LEU:H	1.32	0.92
5:G:23:GLN:HE21	5:G:113:LEU:HD13	1.34	0.92
3:D:245:GLU:HG3	3:D:246:LYS:HD2	1.52	0.92
8:Z:41:LYS:HD2	8:Z:455:SER:HA	1.49	0.92
3:D:197:VAL:HG12	3:D:387:LYS:HA	1.51	0.92
8:Z:101:GLU:HB2	8:Z:446:ILE:HD12	1.52	0.91
2:B:121:ILE:HG23	2:B:431:LYS:HD2	1.49	0.91
5:G:204:ILE:HD13	5:G:355:ILE:HG21	1.50	0.91
1:A:106:GLU:HA	1:A:109:LYS:HD2	1.50	0.90
3:D:210:ASP:O	3:D:388:THR:HA	1.70	0.90
4:E:204:VAL:HB	4:E:410:ARG:HG3	1.51	0.90
1:A:351:VAL:HG13	1:A:364:ILE:HG12	1.54	0.90
1:A:408:VAL:HG21	1:A:504:PHE:HB3	1.50	0.90
7:Q:241:VAL:HG13	7:Q:321:LEU:HD22	1.54	0.90
1:A:220:VAL:HG13	1:A:306:MET:HG3	1.52	0.90
6:H:190:LEU:HD11	6:H:195:ILE:HD11	1.52	0.90
7:Q:90:SER:HB3	7:Q:105:LEU:HD21	1.54	0.90
5:G:152:MET:SD	5:G:402:LEU:HD11	2.11	0.90
5:G:241:LEU:HD13	5:G:338:LEU:HD11	1.54	0.90
5:G:239:VAL:HG22	5:G:343:VAL:HG22	1.53	0.89
4:E:50:THR:HB	4:E:57:LEU:HD12	1.54	0.89
6:H:215:ALA:HB3	6:H:373:ILE:HD11	1.53	0.89
5:G:74:HIS:HB2	8:Z:5:LYS:HB2	1.55	0.89
6:H:17:GLN:HB3	6:H:518:GLU:HG3	1.54	0.89
7:Q:247:ASP:HA	7:Q:298:ALA:HB2	1.54	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:26:ASN:HD21	5:G:519:ILE:HD12	1.37	0.89
1:A:349:GLU:HB3	1:A:366:ASN:HB3	1.54	0.89
7:Q:199:VAL:HG12	7:Q:396:VAL:HG12	1.53	0.89
1:A:31:ILE:HG22	1:A:43:LYS:HE2	1.54	0.89
5:G:203:LYS:HD2	5:G:384:LEU:HG	1.54	0.88
8:Z:230:ILE:HG21	8:Z:324:LEU:HD21	1.54	0.88
1:A:10:ASP:O	1:A:531:ILE:HA	1.72	0.88
3:D:178:VAL:HB	3:D:403:GLU:HG2	1.55	0.88
2:B:144:SER:HB2	2:B:474:THR:HG21	1.55	0.88
8:Z:237:LEU:HG	8:Z:336:LEU:HD11	1.56	0.88
6:H:183:VAL:HG13	6:H:190:LEU:HD22	1.56	0.88
3:D:119:LEU:HD12	3:D:529:VAL:HG21	1.56	0.88
2:B:229:PRO:HG2	2:B:310:MET:HB2	1.56	0.87
7:Q:199:VAL:HG13	7:Q:400:LYS:HD2	1.53	0.87
6:H:23:VAL:HG22	6:H:109:LYS:HE3	1.54	0.87
8:Z:466:VAL:HG22	8:Z:486:PRO:HB3	1.55	0.87
3:D:208:LEU:HG	3:D:416:ARG:HD3	1.56	0.87
3:D:152:THR:HG22	3:D:515:LEU:HD21	1.53	0.87
3:D:101:GLN:HE22	3:D:105:ALA:HB3	1.37	0.86
4:E:99:ASP:HA	4:E:103:GLY:HA2	1.56	0.86
8:Z:224:ARG:HH11	8:Z:351:TYR:HB3	1.38	0.86
1:A:530:LEU:HD12	1:A:531:ILE:N	1.90	0.86
1:A:2:GLU:HG3	3:D:43:ALA:HB3	1.56	0.86
7:Q:142:ILE:HG22	7:Q:146:LEU:HD23	1.57	0.86
2:B:158:ASP:HA	2:B:161:ASN:HD22	1.41	0.85
3:D:239:SER:HB2	3:D:321:ASN:HB3	1.57	0.85
4:E:156:LEU:HB3	4:E:161:ASN:HB3	1.56	0.85
6:H:33:ALA:HB1	6:H:99:LEU:HA	1.58	0.85
1:A:180:LYS:HD3	1:A:403:LEU:HD23	1.58	0.85
7:Q:112:LEU:HD22	7:Q:519:LEU:HD21	1.55	0.85
4:E:188:ILE:HG23	4:E:224:LEU:HB2	1.59	0.85
6:H:26:ILE:HG23	6:H:105:LEU:HB3	1.58	0.85
6:H:120:ILE:HD11	7:Q:457:GLY:HA3	1.57	0.85
8:Z:199:LYS:HZ1	8:Z:377:LYS:HD3	1.41	0.85
6:H:48:LEU:HG	6:H:58:ILE:HG12	1.59	0.84
8:Z:277:LEU:HD22	8:Z:340:ASN:HA	1.58	0.84
4:E:247:LYS:HB3	4:E:353:LEU:HD13	1.57	0.84
1:A:137:ILE:HD12	1:A:410:PRO:HD3	1.57	0.84
6:H:154:LEU:HD23	6:H:157:LYS:HZ3	1.41	0.84
3:D:167:LEU:HD23	3:D:191:VAL:HG21	1.56	0.84
3:D:247:ALA:HA	3:D:299:ASN:HD21	1.43	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Z:103:LEU:HD22	8:Z:516:LEU:HD21	1.59	0.84
7:Q:183:ILE:HG23	7:Q:217:VAL:HG22	1.58	0.84
4:E:209:ILE:HA	4:E:383:VAL:HG22	1.59	0.84
1:A:506:PRO:HB2	1:A:509:VAL:HG23	1.59	0.83
3:D:421:LYS:HE2	3:D:515:LEU:HD23	1.60	0.83
4:E:458:ILE:HB	4:E:459:PRO:HD3	1.61	0.83
5:G:238:ILE:HD13	5:G:323:ILE:HG21	1.59	0.83
4:E:163:GLU:HB3	4:E:164:PRO:HD3	1.60	0.83
6:H:227:MET:HA	6:H:230:LYS:NZ	1.93	0.83
1:A:112:ILE:HG23	1:A:433:ARG:HD3	1.58	0.83
4:E:98:GLN:HE21	4:E:102:ILE:HD11	1.41	0.83
1:A:237:LEU:HD13	1:A:331:LEU:HG	1.61	0.83
2:B:239:ILE:HG21	2:B:331:ILE:HG12	1.61	0.82
4:E:25:LYS:HG2	4:E:536:PRO:HA	1.60	0.82
7:Q:205:CYS:SG	7:Q:376:VAL:HA	2.19	0.82
1:A:356:ILE:HD13	1:A:361:LEU:HD22	1.61	0.82
5:G:407:LEU:HD13	5:G:496:TRP:HB3	1.61	0.82
7:Q:390:ARG:HH11	7:Q:390:ARG:HG2	1.45	0.82
1:A:199:LYS:HB2	1:A:385:CYS:HB3	1.61	0.82
1:A:351:VAL:HG22	1:A:364:ILE:HG23	1.62	0.82
7:Q:297:VAL:HG21	7:Q:312:LEU:HD21	1.61	0.82
8:Z:201:GLU:HA	8:Z:377:LYS:O	1.80	0.82
5:G:130:LEU:HD23	5:G:510:VAL:HG21	1.61	0.82
6:H:313:ARG:HH11	6:H:313:ARG:HG3	1.42	0.82
8:Z:448:PRO:HA	8:Z:451:LEU:HD12	1.61	0.82
1:A:85:GLU:HB3	1:A:512:LYS:HE2	1.62	0.82
1:A:532:LYS:HG3	3:D:63:MET:O	1.80	0.81
2:B:421:VAL:HA	2:B:424:LEU:HD12	1.61	0.81
4:E:20:LYS:NZ	6:H:31:VAL:HB	1.94	0.81
5:G:491:LYS:HA	5:G:496:TRP:HE1	1.45	0.81
2:B:95:VAL:HG23	2:B:96:GLY:H	1.44	0.81
5:G:156:ILE:HG23	5:G:394:ALA:HB1	1.62	0.81
7:Q:151:ALA:HB3	7:Q:159:GLU:HG3	1.60	0.81
6:H:346:GLN:HB3	6:H:363:GLY:HA3	1.62	0.81
7:Q:238:LYS:NZ	7:Q:341:LEU:HD11	1.96	0.81
7:Q:240:ALA:HB2	7:Q:344:MET:SD	2.20	0.81
4:E:510:LEU:HG	4:E:514:LYS:NZ	1.94	0.81
2:B:209:LEU:HD21	2:B:382:ILE:HG22	1.63	0.81
3:D:443:SER:OG	3:D:454:ILE:HB	1.80	0.81
2:B:454:ALA:HB2	2:B:480:MET:SD	2.20	0.81
8:Z:168:LEU:HD21	8:Z:391:ILE:HG12	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Z:406:CYS:HB3	8:Z:498:TYR:HB2	1.62	0.81
2:B:520:ILE:HD12	4:E:60:MET:HB3	1.60	0.81
5:G:238:ILE:HD11	5:G:291:ILE:HG13	1.62	0.81
4:E:161:ASN:HD22	4:E:164:PRO:HB2	1.46	0.80
7:Q:276:MET:SD	7:Q:300:MET:HB2	2.20	0.80
2:B:354:ILE:HD12	2:B:359:LEU:HD22	1.63	0.80
4:E:527:ILE:HA	4:E:530:ILE:HD12	1.63	0.80
2:B:53:LEU:HA	2:B:60:SER:O	1.81	0.80
8:Z:231:LEU:HG	8:Z:339:LEU:HD13	1.61	0.80
3:D:236:VAL:HG21	3:D:329:LYS:HG2	1.64	0.80
4:E:234:PHE:HE1	4:E:372:LEU:HD13	1.47	0.80
6:H:6:VAL:HG12	6:H:7:ILE:HG13	1.62	0.80
1:A:530:LEU:HD12	1:A:531:ILE:H	1.46	0.80
4:E:489:LEU:HD21	4:E:498:THR:HB	1.64	0.80
2:B:214:LEU:HG	2:B:373:ILE:HG12	1.62	0.80
6:H:25:ASN:ND2	6:H:75:ALA:HB2	1.95	0.80
6:H:190:LEU:HD23	6:H:397:ARG:HB2	1.63	0.80
4:E:21:ASP:HB3	4:E:25:LYS:HD2	1.61	0.79
4:E:97:SER:O	4:E:101:GLU:HG2	1.82	0.79
2:B:465:LEU:HA	2:B:485:ILE:HD12	1.64	0.79
8:Z:228:ALA:HB1	8:Z:290:VAL:HG21	1.65	0.79
1:A:27:SER:O	1:A:31:ILE:HG13	1.83	0.79
1:A:27:SER:HB2	5:G:9:VAL:HG11	1.65	0.79
6:H:49:ILE:HD11	6:H:65:ILE:HG23	1.65	0.79
6:H:522:ASN:HB3	7:Q:77:GLU:HB2	1.63	0.79
4:E:298:ASN:HA	4:E:319:LEU:HG	1.63	0.79
6:H:23:VAL:HG13	6:H:109:LYS:HZ1	1.47	0.79
1:A:237:LEU:HD21	1:A:334:LEU:HD22	1.62	0.79
4:E:251:LEU:HD21	4:E:348:LEU:HD22	1.65	0.78
5:G:347:ALA:HB3	5:G:365:GLU:HB3	1.65	0.78
3:D:93:MET:HA	3:D:96:GLU:OE1	1.83	0.78
1:A:418:ALA:HB2	1:A:471:HIS:NE2	1.98	0.78
3:D:64:ILE:HD11	3:D:80:ILE:HG23	1.65	0.78
2:B:97:ASP:CG	2:B:98:GLY:H	1.87	0.78
2:B:136:ALA:HB1	2:B:424:LEU:HD13	1.65	0.78
6:H:211:VAL:HG13	6:H:362:THR:HB	1.64	0.78
1:A:190:TYR:HD2	1:A:400:LYS:HB2	1.48	0.77
4:E:177:VAL:HB	4:E:397:GLU:HG2	1.65	0.77
6:H:239:LEU:HD22	6:H:319:LEU:HD12	1.65	0.77
5:G:49:MET:HE2	5:G:51:LEU:HD11	1.65	0.77
1:A:234:ILE:HG21	1:A:319:ILE:HG21	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:33:PRO:HA	3:D:536:ASP:CG	2.04	0.77
1:A:408:VAL:CG2	1:A:504:PHE:HB3	2.14	0.77
4:E:98:GLN:NE2	4:E:102:ILE:HD11	1.98	0.77
7:Q:333:LEU:HD13	7:Q:339:PRO:HB3	1.65	0.77
7:Q:524:ILE:HG21	8:Z:46:MET:H	1.50	0.77
2:B:196:LEU:HD22	2:B:394:LEU:HB3	1.67	0.77
6:H:231:LYS:HA	6:H:348:PHE:O	1.84	0.77
8:Z:118:ILE:HD12	8:Z:118:ILE:H	1.50	0.77
1:A:530:LEU:HD13	3:D:62:LYS:HB3	1.65	0.77
7:Q:225:LYS:HA	7:Q:313:VAL:HG22	1.66	0.77
2:B:513:VAL:HA	2:B:516:ARG:NH1	1.99	0.77
4:E:404:ASP:HA	4:E:407:CYS:SG	2.25	0.76
8:Z:48:VAL:HG22	8:Z:54:ILE:HG12	1.65	0.76
4:E:20:LYS:HZ2	6:H:31:VAL:HB	1.51	0.76
6:H:97:VAL:HG23	6:H:506:ALA:HB2	1.68	0.76
2:B:50:LYS:HA	3:D:538:VAL:HG22	1.66	0.76
4:E:193:VAL:HG13	4:E:204:VAL:HG11	1.65	0.76
6:H:238:ALA:HB3	6:H:289:VAL:HG22	1.68	0.76
5:G:130:LEU:HD11	5:G:507:LYS:HD3	1.65	0.76
2:B:11:ILE:HA	4:E:85:HIS:H	1.51	0.76
2:B:299:TYR:HB3	2:B:300:PRO:HD3	1.67	0.76
5:G:388:GLU:O	5:G:392:GLN:HG3	1.86	0.76
1:A:68:GLU:HB2	5:G:11:SER:HA	1.68	0.76
6:H:235:PRO:HD2	6:H:345:CYS:O	1.86	0.76
6:H:238:ALA:HB2	6:H:286:ALA:HB1	1.66	0.76
8:Z:440:PHE:O	8:Z:444:LEU:HG	1.86	0.76
3:D:24:LYS:HD3	3:D:28:GLN:HE22	1.50	0.76
4:E:35:LYS:HA	4:E:38:ILE:HD12	1.68	0.76
5:G:416:MET:HG2	5:G:466:LEU:HD22	1.66	0.76
1:A:356:ILE:HG23	1:A:378:ARG:NH2	2.00	0.76
5:G:86:THR:O	5:G:90:GLU:HG2	1.86	0.76
8:Z:46:MET:HB2	8:Z:56:LEU:HD13	1.68	0.76
5:G:466:LEU:HG	5:G:487:LEU:HD13	1.67	0.75
6:H:157:LYS:O	6:H:161:THR:HG23	1.86	0.75
8:Z:118:ILE:HG21	8:Z:432:ARG:HB2	1.68	0.75
8:Z:228:ALA:HB1	8:Z:290:VAL:CG2	2.17	0.75
8:Z:293:ASN:HD22	8:Z:297:ILE:HD11	1.51	0.75
1:A:17:ILE:HG23	1:A:18:ARG:H	1.52	0.75
3:D:237:ALA:HB1	3:D:321:ASN:OD1	1.86	0.75
3:D:433:ILE:HD11	3:D:465:PRO:HG3	1.68	0.75
4:E:236:HIS:HB3	4:E:239:MET:HG3	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:H:29:CYS:HA	6:H:79:LEU:HD11	1.66	0.75
5:G:70:ILE:HG23	8:Z:7:LEU:HD23	1.68	0.75
6:H:19:ILE:N	6:H:20:PRO:HD2	2.01	0.75
7:Q:20:LYS:NZ	8:Z:68:GLN:HB3	2.02	0.75
8:Z:114:LEU:HD23	8:Z:432:ARG:HD3	1.68	0.75
4:E:466:SER:HB3	4:E:493:CYS:SG	2.26	0.74
7:Q:521:VAL:HG13	8:Z:45:LYS:HA	1.69	0.74
8:Z:216:ALA:HB1	8:Z:221:MET:HB2	1.69	0.74
8:Z:466:VAL:HG21	8:Z:479:VAL:HG22	1.68	0.74
2:B:407:VAL:HG23	2:B:495:GLU:HB2	1.70	0.74
3:D:477:ILE:H	3:D:477:ILE:HD12	1.52	0.74
6:H:51:ASP:OD2	6:H:55:LYS:HB3	1.88	0.74
5:G:73:GLN:HB2	8:Z:5:LYS:HB3	1.67	0.74
3:D:529:VAL:O	3:D:533:LEU:HG	1.87	0.74
6:H:394:MET:HE3	6:H:397:ARG:HH21	1.51	0.74
7:Q:58:ASN:HD21	7:Q:62:LYS:HB2	1.53	0.74
7:Q:129:ILE:HD12	7:Q:516:VAL:HG13	1.68	0.74
1:A:33:LYS:HA	1:A:95:ILE:HD11	1.68	0.74
2:B:33:ILE:HG21	2:B:111:ARG:HD3	1.70	0.74
3:D:244:VAL:HG11	3:D:299:ASN:OD1	1.88	0.74
6:H:200:VAL:HG11	6:H:358:TYR:HE2	1.50	0.74
6:H:414:MET:HG2	6:H:464:LEU:HG	1.67	0.74
3:D:101:GLN:NE2	3:D:105:ALA:HB3	2.02	0.74
7:Q:234:VAL:HG11	7:Q:289:ASN:OD1	1.87	0.74
3:D:32:LYS:O	3:D:36:ILE:HG22	1.87	0.74
4:E:306:PHE:HB2	4:E:323:ARG:HB3	1.69	0.74
7:Q:104:VAL:HG13	7:Q:105:LEU:HD23	1.70	0.74
2:B:51:ILE:HD12	2:B:63:VAL:HG22	1.69	0.74
7:Q:49:PRO:HA	7:Q:170:SER:HA	1.70	0.74
2:B:190:LEU:HD11	2:B:371:CYS:SG	2.28	0.74
4:E:413:ILE:HG23	4:E:414:ARG:HG3	1.69	0.74
5:G:238:ILE:HA	5:G:289:VAL:HG23	1.69	0.73
1:A:180:LYS:HZ1	1:A:403:LEU:HB3	1.53	0.73
4:E:511:ILE:HD12	4:E:511:ILE:H	1.53	0.73
5:G:64:ASN:HB2	5:G:95:THR:HG21	1.68	0.73
6:H:135:LYS:O	6:H:139:ILE:HG12	1.87	0.73
4:E:236:HIS:CD2	4:E:315:LEU:HD12	2.24	0.73
5:G:240:LEU:HD12	5:G:331:ILE:HG12	1.69	0.73
5:G:74:HIS:H	8:Z:5:LYS:HB2	1.52	0.73
3:D:94:LEU:HD22	3:D:113:VAL:HG13	1.71	0.73
3:D:193:ALA:HB1	3:D:389:VAL:HG21	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:238:ASP:HB3	1:A:329:SER:HA	1.69	0.73
5:G:89:GLU:HA	5:G:389:ARG:NH2	2.03	0.73
6:H:227:MET:HA	6:H:230:LYS:HZ1	1.53	0.73
7:Q:17:GLU:HA	8:Z:70:GLN:CD	2.09	0.73
1:A:43:LYS:HG2	5:G:520:ASP:OD1	1.88	0.73
3:D:256:LEU:N	3:D:256:LEU:HD12	2.03	0.73
8:Z:115:HIS:HB3	8:Z:118:ILE:HD13	1.68	0.73
2:B:43:LEU:HD12	2:B:44:GLY:H	1.54	0.73
7:Q:402:LEU:HD12	7:Q:406:LYS:HA	1.70	0.73
8:Z:131:LEU:HD23	8:Z:505:LEU:HD12	1.69	0.73
3:D:217:LEU:HD11	3:D:398:LYS:HG3	1.71	0.72
2:B:12:PHE:HB3	2:B:16:ALA:HB3	1.70	0.72
3:D:235:LYS:HE3	3:D:367:GLU:HB2	1.69	0.72
8:Z:176:ILE:HD13	8:Z:179:ILE:HD11	1.71	0.72
1:A:136:LEU:HD22	1:A:407:SER:HB3	1.69	0.72
3:D:32:LYS:NZ	3:D:33:PRO:HD2	2.03	0.72
4:E:331:GLU:OE1	6:H:297:ASP:HB3	1.89	0.72
6:H:188:ASP:O	6:H:189:LEU:HB2	1.88	0.72
3:D:290:VAL:HG21	3:D:319:PHE:HB2	1.70	0.72
2:B:79:PRO:HD3	2:B:522:LYS:HD2	1.70	0.72
5:G:220:ILE:HD11	5:G:323:ILE:HD11	1.72	0.72
1:A:121:TYR:HB3	1:A:518:THR:HG23	1.71	0.72
6:H:19:ILE:H	6:H:20:PRO:CD	2.02	0.72
1:A:135:ASN:HB3	1:A:484:LYS:HD3	1.70	0.72
3:D:421:LYS:HG2	3:D:515:LEU:HB3	1.71	0.71
5:G:49:MET:HG3	5:G:59:MET:HG2	1.72	0.71
7:Q:233:SER:HA	7:Q:351:TYR:HA	1.72	0.71
3:D:78:ALA:HB2	3:D:109:THR:HG21	1.72	0.71
7:Q:230:ASP:HB3	7:Q:311:MET:HA	1.71	0.71
1:A:2:GLU:CG	3:D:43:ALA:HB3	2.20	0.71
8:Z:97:LEU:HD23	8:Z:450:VAL:HG21	1.72	0.71
4:E:55:ASN:ND2	4:E:466:SER:HA	2.02	0.71
8:Z:222:LYS:HB2	8:Z:311:ILE:HD11	1.71	0.71
4:E:510:LEU:HG	4:E:514:LYS:HZ2	1.52	0.71
4:E:534:ARG:HH21	6:H:35:ALA:CB	2.03	0.71
5:G:399:ARG:O	5:G:403:LEU:HD13	1.91	0.71
7:Q:289:ASN:OD1	7:Q:290:VAL:HG23	1.89	0.71
1:A:8:PHE:O	1:A:533:LEU:HD22	1.91	0.71
7:Q:526:MET:HG2	8:Z:48:VAL:O	1.90	0.71
2:B:124:GLN:HG2	4:E:55:ASN:ND2	2.06	0.71
8:Z:414:VAL:HA	8:Z:475:GLN:HE22	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:H:43:ARG:NH2	6:H:480:ASN:HA	2.05	0.71
6:H:167:LEU:HB3	6:H:384:GLU:HG2	1.72	0.71
2:B:231:ARG:HH21	2:B:348:LEU:HD11	1.55	0.71
3:D:187:SER:HB2	3:D:188:PRO:HD3	1.73	0.71
3:D:252:ILE:HB	3:D:303:ILE:HD13	1.71	0.71
5:G:407:LEU:HB3	5:G:498:PRO:HA	1.72	0.71
7:Q:176:GLU:HG3	7:Q:212:VAL:HG13	1.73	0.71
6:H:19:ILE:HA	6:H:22:LEU:HD23	1.73	0.71
6:H:366:LYS:HD3	6:H:368:LYS:NZ	2.06	0.71
8:Z:193:ILE:HG21	8:Z:388:LYS:HG3	1.71	0.71
2:B:518:ASP:CG	4:E:59:LYS:HZ3	1.94	0.70
5:G:27:ILE:HG23	5:G:106:LEU:HB3	1.73	0.70
7:Q:113:GLU:O	7:Q:116:GLU:HG2	1.91	0.70
7:Q:452:LEU:HG	7:Q:482:ILE:HD11	1.73	0.70
7:Q:524:ILE:CG2	8:Z:46:MET:H	2.03	0.70
2:B:187:VAL:HG21	2:B:397:LEU:HD13	1.72	0.70
3:D:210:ASP:HB3	3:D:387:LYS:O	1.92	0.70
4:E:222:THR:HG22	4:E:387:ILE:HA	1.73	0.70
5:G:401:VAL:HA	5:G:405:PRO:HB3	1.72	0.70
6:H:313:ARG:HG3	6:H:313:ARG:NH1	2.04	0.70
7:Q:232:THR:O	7:Q:351:TYR:HA	1.91	0.70
6:H:278:LEU:HD23	6:H:302:TYR:HB2	1.73	0.70
1:A:532:LYS:HG2	3:D:65:GLN:CB	2.20	0.70
3:D:299:ASN:OD1	3:D:300:VAL:HG23	1.91	0.70
4:E:209:ILE:HA	4:E:383:VAL:CG2	2.21	0.70
5:G:47:MET:O	8:Z:518:VAL:HG22	1.91	0.70
7:Q:525:ILE:HG23	7:Q:526:MET:N	2.01	0.70
8:Z:138:LYS:HA	8:Z:408:VAL:HG12	1.74	0.70
8:Z:455:SER:HB3	8:Z:481:LEU:HD13	1.73	0.70
2:B:279:VAL:HG11	2:B:303:LEU:HB3	1.73	0.70
3:D:192:ASP:O	3:D:195:MET:HG3	1.91	0.70
4:E:362:ILE:HB	4:E:364:PHE:CE1	2.27	0.70
1:A:458:GLN:HB3	1:A:463:LEU:HD11	1.72	0.70
4:E:247:LYS:O	4:E:353:LEU:HD22	1.91	0.70
8:Z:105:GLN:HA	8:Z:108:LEU:HD12	1.72	0.70
4:E:468:MET:SD	4:E:496:LYS:HB3	2.31	0.70
6:H:161:THR:HG21	6:H:491:PHE:HB3	1.72	0.70
7:Q:70:ALA:H	7:Q:101:THR:HG21	1.56	0.70
7:Q:523:GLN:HB3	8:Z:45:LYS:NZ	2.07	0.70
8:Z:135:GLU:HA	8:Z:138:LYS:HD3	1.74	0.70
4:E:87:ILE:CD1	4:E:527:ILE:HG21	2.20	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:337:ASN:H	7:Q:338:PRO:HD2	1.55	0.70
7:Q:417:ILE:HD11	7:Q:449:PRO:HG3	1.73	0.70
2:B:416:LEU:HD22	2:B:474:THR:HG23	1.74	0.70
2:B:427:ARG:O	2:B:429:PRO:HD3	1.91	0.70
3:D:144:LEU:HB2	3:D:526:THR:HG21	1.71	0.70
5:G:200:ARG:HE	5:G:322:ARG:HH11	1.40	0.70
5:G:238:ILE:HD11	5:G:291:ILE:CG1	2.22	0.70
4:E:85:HIS:O	4:E:89:LYS:HG3	1.92	0.69
5:G:73:GLN:NE2	8:Z:9:PRO:HD3	2.07	0.69
6:H:239:LEU:HD23	6:H:290:LEU:HB2	1.74	0.69
7:Q:17:GLU:HA	8:Z:70:GLN:OE1	1.92	0.69
8:Z:222:LYS:HD2	8:Z:311:ILE:HD11	1.74	0.69
3:D:178:VAL:CB	3:D:403:GLU:HG2	2.22	0.69
7:Q:103:PHE:HE1	7:Q:448:ILE:HG12	1.57	0.69
7:Q:221:MET:HA	7:Q:374:THR:OG1	1.92	0.69
8:Z:30:LEU:HD22	8:Z:74:ALA:HB1	1.74	0.69
1:A:2:GLU:HA	3:D:88:HIS:HB3	1.74	0.69
4:E:286:GLU:HA	4:E:313:LEU:HD13	1.74	0.69
5:G:14:THR:HG23	5:G:525:GLY:HA3	1.74	0.69
5:G:156:ILE:HD11	5:G:398:CYS:SG	2.33	0.69
6:H:154:LEU:HD23	6:H:157:LYS:NZ	2.07	0.69
7:Q:80:HIS:HB3	7:Q:83:ALA:HB3	1.72	0.69
1:A:172:VAL:O	1:A:176:VAL:HG23	1.92	0.69
2:B:187:VAL:O	2:B:191:LYS:HB2	1.93	0.69
3:D:146:LYS:O	3:D:149:GLU:HG2	1.93	0.69
5:G:397:VAL:HA	5:G:400:ASN:HD22	1.57	0.69
6:H:200:VAL:HG11	6:H:358:TYR:CE2	2.27	0.69
7:Q:161:SER:HB2	7:Q:181:LYS:HD2	1.74	0.69
1:A:348:ALA:HA	1:A:367:THR:HA	1.74	0.69
2:B:186:ALA:HA	2:B:189:ARG:HH12	1.57	0.69
2:B:280:GLU:HG2	2:B:284:LYS:HE3	1.75	0.69
4:E:161:ASN:HB2	4:E:164:PRO:HD2	1.73	0.69
4:E:166:ILE:HG22	4:E:170:LYS:HE2	1.75	0.69
7:Q:237:ALA:HA	7:Q:289:ASN:HD21	1.55	0.69
8:Z:197:LYS:HE2	8:Z:381:LYS:HG3	1.75	0.69
8:Z:224:ARG:CZ	8:Z:349:LEU:HD11	2.23	0.69
1:A:328:LEU:HD21	1:A:344:MET:HB3	1.73	0.69
3:D:193:ALA:CB	3:D:389:VAL:HG21	2.23	0.69
3:D:237:ALA:HB2	3:D:327:VAL:HG12	1.75	0.69
7:Q:410:PRO:O	7:Q:414:ALA:HB3	1.93	0.69
2:B:398:ALA:O	2:B:402:LYS:HD2	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Z:294:GLN:NE2	8:Z:318:ARG:HD3	2.08	0.69
8:Z:409:PRO:O	8:Z:413:ALA:HB3	1.93	0.69
1:A:31:ILE:HG12	5:G:16:ARG:HH12	1.58	0.68
2:B:30:ILE:HA	2:B:33:ILE:HD12	1.74	0.68
6:H:406:VAL:HB	6:H:412:ILE:HD11	1.75	0.68
7:Q:85:MET:HA	7:Q:88:MET:SD	2.33	0.68
7:Q:337:ASN:C	7:Q:339:PRO:HD2	2.13	0.68
3:D:256:LEU:HD21	3:D:301:LEU:HD21	1.74	0.68
3:D:416:ARG:HH11	3:D:420:LYS:NZ	1.91	0.68
6:H:133:VAL:HG12	6:H:137:LYS:NZ	2.09	0.68
1:A:145:ARG:HG2	1:A:149:ILE:HD11	1.76	0.68
1:A:211:ILE:HG12	1:A:376:ILE:HG12	1.76	0.68
4:E:218:ARG:HA	4:E:389:GLY:HA2	1.76	0.68
6:H:412:ILE:O	6:H:416:LEU:HG	1.94	0.68
3:D:415:ILE:O	3:D:419:VAL:HG13	1.94	0.68
1:A:69:HIS:HB2	5:G:8:LEU:O	1.94	0.68
2:B:516:ARG:HG2	4:E:58:ASP:H	1.57	0.68
7:Q:53:ASN:HB3	7:Q:67:ASN:OD1	1.94	0.68
8:Z:414:VAL:HA	8:Z:475:GLN:NE2	2.08	0.68
7:Q:239:ILE:HD12	7:Q:328:VAL:HG11	1.76	0.68
2:B:25:ARG:HD2	2:B:117:ILE:HD13	1.76	0.68
3:D:41:ILE:HG23	3:D:120:LEU:HB3	1.75	0.68
3:D:52:ARG:HA	3:D:114:ILE:HD11	1.76	0.68
3:D:505:ASN:O	3:D:509:GLU:HG2	1.94	0.68
5:G:112:PHE:HE2	5:G:436:PRO:HA	1.59	0.68
3:D:177:LYS:HD3	3:D:407:SER:HB3	1.76	0.68
7:Q:225:LYS:NZ	7:Q:352:LEU:HB2	2.09	0.68
8:Z:44:MET:SD	8:Z:56:LEU:HG	2.34	0.68
6:H:21:GLN:NE2	6:H:22:LEU:HD13	2.09	0.67
7:Q:174:GLY:HA2	7:Q:177:VAL:HG13	1.76	0.67
7:Q:203:ARG:HH22	7:Q:223:PHE:HD1	1.41	0.67
1:A:234:ILE:HG21	1:A:319:ILE:CG2	2.24	0.67
4:E:27:ARG:HH22	4:E:534:ARG:NH2	1.92	0.67
5:G:23:GLN:NE2	5:G:113:LEU:HB3	2.10	0.67
5:G:29:ALA:HA	8:Z:4:VAL:HG13	1.76	0.67
5:G:246:GLU:HA	5:G:297:SER:HB3	1.75	0.67
6:H:30:GLN:O	6:H:34:GLU:HG2	1.94	0.67
6:H:198:LYS:HZ3	6:H:217:LYS:HG3	1.59	0.67
5:G:140:ILE:HG13	5:G:476:GLU:OE1	1.93	0.67
4:E:204:VAL:CG2	4:E:413:ILE:HG21	2.24	0.67
8:Z:12:GLU:O	8:Z:522:MET:HA	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Z:181:LYS:HE2	8:Z:370:ARG:HH12	1.57	0.67
1:A:530:LEU:HD21	3:D:63:MET:H	1.59	0.67
4:E:94:LEU:HD11	4:E:523:MET:HB3	1.76	0.67
5:G:33:ILE:HD11	5:G:67:LEU:HD22	1.76	0.67
6:H:153:LYS:HG2	6:H:157:LYS:HZ2	1.59	0.67
1:A:2:GLU:CA	3:D:88:HIS:HB3	2.25	0.67
1:A:241:LEU:HG	1:A:331:LEU:HD21	1.77	0.67
3:D:249:ILE:HG21	3:D:345:THR:HG21	1.76	0.67
3:D:256:LEU:HD11	3:D:303:ILE:CD1	2.25	0.67
5:G:64:ASN:ND2	5:G:68:ARG:HD2	2.10	0.67
6:H:22:LEU:H	6:H:22:LEU:HD22	1.60	0.67
8:Z:504:LEU:HD23	8:Z:505:LEU:N	2.10	0.67
4:E:344:ARG:HE	4:E:345:PHE:H	1.40	0.67
4:E:536:PRO:HD2	6:H:50:VAL:O	1.94	0.67
5:G:70:ILE:HG22	8:Z:6:THR:O	1.95	0.67
5:G:129:ALA:HA	5:G:132:ASP:OD2	1.95	0.67
5:G:359:TYR:HD1	5:G:359:TYR:H	1.42	0.67
5:G:498:PRO:HB2	5:G:501:VAL:HG23	1.77	0.67
6:H:198:LYS:NZ	6:H:217:LYS:HG3	2.10	0.67
6:H:417:SER:HA	6:H:439:ALA:HB1	1.77	0.67
6:H:450:CYS:SG	6:H:460:ILE:HG21	2.35	0.67
8:Z:197:LYS:O	8:Z:198:HIS:HB2	1.95	0.67
1:A:20:GLN:HB2	5:G:7:VAL:N	2.10	0.67
2:B:279:VAL:HG21	2:B:303:LEU:HB2	1.75	0.67
2:B:461:LEU:HD21	2:B:478:LEU:HD13	1.76	0.67
6:H:118:PRO:HA	6:H:121:ILE:HD12	1.77	0.66
3:D:241:ILE:O	3:D:326:MET:HB2	1.95	0.66
3:D:256:LEU:HD11	3:D:303:ILE:HG13	1.76	0.66
4:E:227:GLY:HA3	4:E:375:GLU:HA	1.77	0.66
5:G:19:GLY:O	5:G:23:GLN:HG2	1.94	0.66
6:H:237:ILE:O	6:H:342:LEU:HA	1.95	0.66
8:Z:199:LYS:NZ	8:Z:377:LYS:HD3	2.11	0.66
7:Q:397:ASN:O	7:Q:401:VAL:HG23	1.94	0.66
7:Q:523:GLN:O	8:Z:45:LYS:HD2	1.95	0.66
1:A:313:LYS:HE2	1:A:317:LYS:HE3	1.76	0.66
2:B:194:GLY:HA3	2:B:401:VAL:HG21	1.77	0.66
3:D:175:ASN:HA	3:D:180:SER:HB3	1.78	0.66
4:E:118:GLU:O	4:E:121:GLU:HG2	1.96	0.66
5:G:144:VAL:O	5:G:405:PRO:HB2	1.95	0.66
8:Z:230:ILE:HD13	8:Z:290:VAL:HB	1.77	0.66
2:B:111:ARG:HG2	2:B:111:ARG:HH11	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:379:ALA:HB3	5:G:383:ILE:HD12	1.76	0.66
5:G:469:LYS:HA	5:G:472:GLN:OE1	1.96	0.66
7:Q:72:ILE:O	7:Q:76:LEU:HG	1.94	0.66
8:Z:417:ALA:HB2	8:Z:470:HIS:HE2	1.61	0.66
3:D:137:SER:HB3	3:D:530:ARG:HG3	1.78	0.66
3:D:232:LEU:HD21	3:D:339:ILE:HD11	1.76	0.66
3:D:474:LEU:HD11	3:D:501:GLY:HA2	1.78	0.66
7:Q:239:ILE:HD13	7:Q:324:LEU:HD11	1.78	0.66
7:Q:328:VAL:HG12	7:Q:366:GLU:HG2	1.75	0.66
8:Z:118:ILE:CG2	8:Z:432:ARG:HB2	2.26	0.66
2:B:72:LYS:NZ	2:B:89:ARG:HG3	2.10	0.66
4:E:156:LEU:HD23	4:E:161:ASN:HB3	1.77	0.66
5:G:10:LEU:H	5:G:10:LEU:HD12	1.60	0.66
5:G:104:GLU:HG2	5:G:446:VAL:HG11	1.78	0.66
6:H:453:ALA:HB3	6:H:479:ILE:HD11	1.78	0.66
7:Q:206:LYS:HB3	7:Q:385:MET:HG2	1.76	0.66
2:B:51:ILE:HG23	2:B:63:VAL:HG22	1.78	0.66
6:H:141:VAL:HG21	6:H:474:TRP:HE1	1.60	0.66
7:Q:44:ARG:NE	7:Q:451:ALA:HB2	2.11	0.66
7:Q:55:MET:SD	7:Q:63:LEU:HD11	2.36	0.66
5:G:240:LEU:HD12	5:G:324:ALA:HB2	1.77	0.66
8:Z:7:LEU:HD11	8:Z:522:MET:SD	2.35	0.66
1:A:86:VAL:HG13	1:A:512:LYS:NZ	2.10	0.65
3:D:126:LEU:HD11	3:D:453:CYS:HA	1.78	0.65
4:E:170:LYS:NZ	4:E:183:ARG:HA	2.11	0.65
4:E:437:ALA:O	4:E:445:GLN:HG3	1.96	0.65
5:G:422:LEU:HD23	5:G:441:ALA:HB2	1.77	0.65
8:Z:13:VAL:HG22	8:Z:522:MET:HG2	1.78	0.65
8:Z:270:ARG:HB3	8:Z:336:LEU:HD13	1.78	0.65
4:E:435:GLN:O	4:E:439:LYS:HG3	1.95	0.65
8:Z:218:HIS:ND1	8:Z:219:PRO:HD2	2.11	0.65
2:B:337:HIS:H	2:B:338:PRO:HD2	1.60	0.65
3:D:105:ALA:HA	3:D:417:CYS:SG	2.37	0.65
4:E:248:ILE:O	4:E:353:LEU:HA	1.97	0.65
5:G:376:LEU:HD21	5:G:391:LEU:HD22	1.78	0.65
8:Z:94:SER:O	8:Z:98:ILE:HG12	1.95	0.65
2:B:141:LEU:HG	2:B:417:MET:SD	2.36	0.65
2:B:411:GLY:HA2	2:B:446:LEU:HD23	1.77	0.65
5:G:137:LEU:HD11	5:G:506:TYR:CE2	2.31	0.65
7:Q:411:GLY:HA3	7:Q:499:ASP:OD2	1.97	0.65
5:G:72:VAL:HG21	5:G:81:ILE:HD11	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:H:197:ILE:HG21	6:H:386:GLU:HG3	1.78	0.65
8:Z:152:ALA:HB3	8:Z:169:THR:HG23	1.77	0.65
3:D:30:ARG:HG3	3:D:539:VAL:HG22	1.78	0.65
3:D:248:LYS:HD2	3:D:359:LEU:HD13	1.78	0.65
4:E:20:LYS:HZ3	6:H:32:ILE:CD1	2.09	0.65
4:E:90:LEU:O	4:E:523:MET:HE3	1.96	0.65
4:E:221:ASP:HB3	4:E:388:ARG:HD2	1.78	0.65
4:E:437:ALA:HA	4:E:448:MET:SD	2.37	0.65
6:H:23:VAL:HA	6:H:109:LYS:NZ	2.11	0.65
7:Q:24:GLY:HA2	7:Q:522:ASP:O	1.97	0.65
7:Q:44:ARG:HA	7:Q:102:ASN:HD21	1.61	0.65
1:A:233:LYS:HA	1:A:346:GLY:O	1.96	0.65
1:A:445:LEU:N	1:A:446:PRO:HD2	2.12	0.65
2:B:221:ASP:OD1	2:B:359:LEU:HG	1.97	0.65
3:D:251:LEU:HD12	3:D:336:ILE:HG23	1.78	0.65
1:A:192:VAL:HG13	1:A:400:LYS:HD2	1.77	0.65
3:D:235:LYS:HZ2	3:D:242:THR:HA	1.61	0.65
7:Q:238:LYS:HZ2	7:Q:341:LEU:HD11	1.61	0.65
3:D:194:VAL:HA	3:D:197:VAL:HG22	1.78	0.65
3:D:232:LEU:HD22	3:D:335:ASP:HB3	1.78	0.65
5:G:221:ASN:HD22	5:G:316:ARG:HH22	1.44	0.65
6:H:364:CYS:HB2	6:H:367:ALA:HB2	1.79	0.65
8:Z:145:ARG:O	8:Z:149:ILE:HG13	1.96	0.65
3:D:232:LEU:HD11	3:D:339:ILE:HD11	1.79	0.65
3:D:293:ILE:HD13	3:D:301:LEU:HD22	1.80	0.65
4:E:161:ASN:ND2	4:E:164:PRO:HB2	2.11	0.65
6:H:6:VAL:CG2	7:Q:21:HIS:HB2	2.27	0.65
3:D:446:LEU:HD23	3:D:454:ILE:HD11	1.79	0.64
5:G:46:MET:HG2	8:Z:517:LEU:HD22	1.77	0.64
5:G:130:LEU:HD23	5:G:510:VAL:CG2	2.28	0.64
8:Z:273:LYS:O	8:Z:277:LEU:HG	1.97	0.64
8:Z:374:LEU:HD23	8:Z:391:ILE:HD13	1.77	0.64
1:A:487:GLY:HA3	1:A:498:ASN:HD21	1.63	0.64
3:D:179:VAL:CG1	3:D:404:ALA:HA	2.26	0.64
4:E:224:LEU:HD13	4:E:385:ILE:HG12	1.78	0.64
5:G:149:ARG:HG3	5:G:177:LEU:HD11	1.78	0.64
7:Q:226:GLU:HG3	7:Q:314:ARG:HG2	1.78	0.64
3:D:154:MET:HB3	3:D:492:LYS:HD3	1.79	0.64
8:Z:154:THR:HA	8:Z:157:ARG:HD2	1.79	0.64
8:Z:176:ILE:HD11	8:Z:395:LEU:HB3	1.79	0.64
7:Q:173:TYR:HB3	7:Q:388:ILE:HG12	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:29:ALA:HB1	1:A:95:ILE:HA	1.80	0.64
2:B:97:ASP:CG	2:B:98:GLY:N	2.48	0.64
2:B:236:LYS:NZ	2:B:288:ASN:HD21	1.96	0.64
3:D:227:VAL:HG11	3:D:378:LYS:HE3	1.79	0.64
4:E:90:LEU:HA	4:E:93:GLU:OE1	1.97	0.64
8:Z:31:GLN:CG	8:Z:97:LEU:HA	2.27	0.64
8:Z:415:GLU:HG2	8:Z:447:ILE:HB	1.79	0.64
1:A:112:ILE:HA	1:A:433:ARG:CZ	2.27	0.64
8:Z:426:LYS:N	8:Z:427:PRO:HD2	2.13	0.64
2:B:287:ILE:HG22	2:B:343:LEU:HD21	1.79	0.64
3:D:213:ILE:HD11	3:D:412:LEU:HD11	1.78	0.64
4:E:204:VAL:HG21	4:E:413:ILE:HG21	1.80	0.64
4:E:410:ARG:HA	4:E:413:ILE:HG22	1.79	0.64
4:E:460:MET:HG2	4:E:470:PRO:HB3	1.77	0.64
6:H:128:ALA:HB1	6:H:438:TYR:CD2	2.33	0.64
1:A:117:VAL:HG12	1:A:121:TYR:CE2	2.33	0.64
5:G:240:LEU:CD1	5:G:324:ALA:HB2	2.28	0.64
6:H:119:GLN:HB2	7:Q:52:MET:HE2	1.79	0.64
8:Z:417:ALA:CB	8:Z:470:HIS:HE2	2.11	0.64
1:A:2:GLU:HB3	3:D:90:ALA:HB3	1.79	0.64
1:A:148:LEU:HD13	1:A:399:VAL:HG13	1.79	0.64
4:E:31:LEU:HD12	4:E:34:LEU:HB2	1.80	0.63
5:G:33:ILE:HG21	5:G:80:MET:HG3	1.79	0.63
5:G:49:MET:O	8:Z:521:ILE:HG23	1.98	0.63
5:G:225:THR:HG21	5:G:301:GLN:HG2	1.80	0.63
1:A:85:GLU:HB3	1:A:512:LYS:CE	2.27	0.63
1:A:190:TYR:OH	1:A:396:LEU:HD22	1.98	0.63
1:A:356:ILE:HG23	1:A:378:ARG:HH21	1.64	0.63
3:D:41:ILE:HD12	3:D:120:LEU:HB3	1.80	0.63
5:G:160:ILE:HG23	5:G:165:ILE:HG23	1.80	0.63
6:H:407:ALA:HB1	6:H:487:ASN:HD22	1.60	0.63
1:A:210:LEU:CD1	1:A:375:VAL:HG22	2.28	0.63
1:A:448:ILE:O	1:A:452:LEU:HG	1.98	0.63
4:E:481:GLN:HE21	4:E:487:PRO:CA	2.11	0.63
5:G:62:ASP:O	5:G:66:ILE:HG13	1.98	0.63
7:Q:20:LYS:HZ3	8:Z:68:GLN:HB3	1.60	0.63
7:Q:138:LYS:HE3	7:Q:142:ILE:HD11	1.80	0.63
8:Z:476:LEU:HB3	8:Z:488:VAL:HG13	1.81	0.63
1:A:238:ASP:CB	1:A:329:SER:HA	2.27	0.63
2:B:219:LEU:HB3	2:B:372:THR:HG21	1.81	0.63
4:E:223:LYS:HD3	4:E:388:ARG:NH2	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:46:MET:HA	8:Z:517:LEU:HB3	1.80	0.63
5:G:221:ASN:HD22	5:G:316:ARG:NH2	1.96	0.63
5:G:435:TRP:HB2	5:G:436:PRO:HD3	1.80	0.63
1:A:118:ILE:HG23	1:A:522:ILE:HG12	1.80	0.63
3:D:417:CYS:HA	3:D:516:LEU:HD12	1.80	0.63
3:D:515:LEU:HG	3:D:519:VAL:CG2	2.28	0.63
4:E:234:PHE:HA	4:E:322:VAL:HG22	1.79	0.63
6:H:23:VAL:HA	6:H:109:LYS:HZ1	1.64	0.63
6:H:73:HIS:CD2	6:H:74:PRO:HD2	2.34	0.63
7:Q:338:PRO:N	7:Q:339:PRO:HD2	2.13	0.63
2:B:497:PHE:CE2	2:B:501:ARG:HD3	2.33	0.63
4:E:41:ALA:O	4:E:44:VAL:HG12	1.98	0.63
4:E:291:GLN:HA	4:E:294:GLU:OE1	1.98	0.63
6:H:522:ASN:CB	7:Q:77:GLU:HB2	2.27	0.63
7:Q:17:GLU:HB2	8:Z:68:GLN:HG2	1.80	0.63
8:Z:224:ARG:NH2	8:Z:349:LEU:HD11	2.12	0.63
2:B:238:LEU:HB2	2:B:343:LEU:CD2	2.29	0.63
5:G:237:ARG:HB3	5:G:343:VAL:CG1	2.29	0.63
6:H:453:ALA:CB	6:H:479:ILE:HD11	2.29	0.63
4:E:118:GLU:HA	4:E:121:GLU:OE2	1.98	0.63
5:G:424:GLU:HA	5:G:427:LYS:NZ	2.14	0.63
6:H:226:GLU:O	6:H:227:MET:HB2	1.99	0.63
7:Q:171:LYS:HB2	7:Q:173:TYR:CE1	2.34	0.63
3:D:218:GLY:O	3:D:394:ARG:HB3	1.99	0.63
3:D:514:PRO:HG2	3:D:517:VAL:HG23	1.81	0.63
7:Q:91:HIS:O	7:Q:95:GLN:HG2	1.98	0.63
7:Q:191:PHE:N	7:Q:192:PRO:CD	2.62	0.63
7:Q:324:LEU:O	7:Q:328:VAL:HG22	1.99	0.63
8:Z:376:ILE:HD11	8:Z:391:ILE:HD12	1.81	0.63
1:A:137:ILE:HD13	1:A:499:LYS:HG3	1.80	0.62
6:H:133:VAL:HA	6:H:136:ILE:HD12	1.81	0.62
8:Z:105:GLN:HB3	8:Z:439:ALA:HB1	1.81	0.62
3:D:63:MET:HG3	3:D:71:VAL:HG13	1.80	0.62
4:E:145:ILE:HD11	4:E:514:LYS:HA	1.81	0.62
4:E:424:ALA:HB1	4:E:487:PRO:O	1.98	0.62
1:A:103:ASN:HB3	1:A:440:GLU:HB3	1.81	0.62
1:A:467:LEU:HD22	1:A:488:LEU:HG	1.80	0.62
6:H:100:LEU:HD21	6:H:445:ILE:HD11	1.80	0.62
8:Z:224:ARG:NH1	8:Z:351:TYR:HB3	2.10	0.62
1:A:68:GLU:HB2	5:G:11:SER:CA	2.29	0.62
2:B:513:VAL:HA	2:B:516:ARG:HH12	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:72:THR:HG21	3:D:83:GLN:HE21	1.64	0.62
5:G:53:PRO:HD2	8:Z:525:GLY:HA2	1.81	0.62
5:G:130:LEU:HB2	5:G:510:VAL:HG11	1.80	0.62
5:G:285:LEU:O	5:G:340:GLU:HG3	1.99	0.62
8:Z:470:HIS:HA	8:Z:477:VAL:HG21	1.82	0.62
1:A:46:VAL:HA	1:A:51:ASP:O	1.99	0.62
3:D:540:ASN:O	3:D:541:THR:HG22	1.99	0.62
4:E:360:LYS:HE2	4:E:362:ILE:HG12	1.82	0.62
1:A:138:ILE:HB	1:A:406:LYS:HE2	1.81	0.62
1:A:206:MET:CE	1:A:206:MET:HA	2.30	0.62
2:B:468:ALA:HB3	2:B:485:ILE:HD13	1.82	0.62
3:D:119:LEU:HB2	3:D:529:VAL:HG11	1.80	0.62
7:Q:20:LYS:HD3	7:Q:527:ALA:N	2.15	0.62
8:Z:230:ILE:HA	8:Z:290:VAL:O	2.00	0.62
8:Z:233:CYS:HB3	8:Z:293:ASN:OD1	1.99	0.62
1:A:225:MET:SD	1:A:306:MET:HA	2.40	0.62
5:G:10:LEU:HD22	5:G:523:VAL:HG11	1.81	0.62
5:G:245:LEU:HB2	5:G:296:ILE:HG23	1.82	0.62
7:Q:198:ASN:ND2	7:Q:200:ASP:HB2	2.13	0.62
8:Z:122:GLY:HA3	8:Z:436:GLY:HA3	1.81	0.62
2:B:232:ILE:CG2	2:B:235:ALA:HB2	2.29	0.62
3:D:82:LYS:NZ	3:D:99:LYS:HZ3	1.97	0.62
5:G:433:GLU:C	5:G:436:PRO:HD2	2.20	0.62
6:H:78:THR:O	6:H:82:ILE:HG13	2.00	0.62
7:Q:166:THR:HG21	7:Q:496:GLY:O	1.99	0.62
1:A:180:LYS:HZ2	1:A:403:LEU:HG	1.65	0.62
2:B:38:LEU:HG	2:B:50:LYS:HE2	1.81	0.62
7:Q:230:ASP:OD1	7:Q:306:ASN:HA	2.00	0.62
7:Q:390:ARG:HG2	7:Q:390:ARG:NH1	2.13	0.62
8:Z:156:LEU:HD21	8:Z:168:LEU:HD22	1.81	0.62
8:Z:447:ILE:O	8:Z:451:LEU:HG	2.00	0.62
1:A:211:ILE:HG22	1:A:213:GLY:N	2.04	0.62
3:D:416:ARG:O	3:D:419:VAL:HG22	1.99	0.62
7:Q:45:THR:O	7:Q:51:GLY:HA2	2.00	0.62
7:Q:388:ILE:O	7:Q:392:VAL:HG23	2.00	0.62
2:B:244:MET:HB2	2:B:296:ILE:HG23	1.81	0.61
3:D:244:VAL:HG11	3:D:299:ASN:CG	2.20	0.61
3:D:256:LEU:HD11	3:D:303:ILE:CG1	2.29	0.61
5:G:218:VAL:HG21	5:G:323:ILE:HG12	1.82	0.61
7:Q:337:ASN:N	7:Q:338:PRO:HD2	2.15	0.61
3:D:112:VAL:HG13	3:D:113:VAL:N	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:200:ARG:NE	5:G:322:ARG:HH11	1.97	0.61
8:Z:218:HIS:HB3	8:Z:221:MET:HG3	1.82	0.61
1:A:284:ASN:OD1	1:A:285:VAL:HG23	2.00	0.61
2:B:337:HIS:N	2:B:338:PRO:HD2	2.15	0.61
2:B:520:ILE:HD12	4:E:60:MET:H	1.65	0.61
3:D:147:GLY:HA2	3:D:150:ILE:HD12	1.81	0.61
3:D:215:LYS:HB3	3:D:405:GLU:OE2	2.01	0.61
3:D:348:VAL:HG21	3:D:354:PHE:HD1	1.65	0.61
8:Z:61:ASN:HB2	8:Z:92:THR:HG21	1.81	0.61
1:A:2:GLU:OE1	3:D:44:ALA:HB2	2.00	0.61
4:E:385:ILE:HG21	4:E:402:LEU:HD21	1.82	0.61
5:G:74:HIS:N	8:Z:5:LYS:HB2	2.16	0.61
6:H:136:ILE:HD11	6:H:503:LEU:HD12	1.81	0.61
6:H:166:LYS:HD2	6:H:388:SER:OG	2.00	0.61
7:Q:40:ALA:HB1	7:Q:106:VAL:HA	1.82	0.61
6:H:366:LYS:HD3	6:H:368:LYS:HZ1	1.65	0.61
7:Q:33:ILE:O	7:Q:37:LYS:HG3	2.00	0.61
1:A:216:LEU:HB3	1:A:362:ILE:HB	1.82	0.61
2:B:281:ARG:HG2	2:B:281:ARG:HH11	1.65	0.61
3:D:112:VAL:HG13	3:D:113:VAL:H	1.65	0.61
3:D:434:GLU:HG3	3:D:492:LYS:HD2	1.81	0.61
4:E:534:ARG:HH21	6:H:35:ALA:HB2	1.66	0.61
6:H:175:PHE:HB3	6:H:389:LEU:HD21	1.82	0.61
6:H:201:GLN:OE1	6:H:379:GLU:HG2	2.00	0.61
3:D:55:LEU:HD22	3:D:114:ILE:HD12	1.83	0.61
3:D:80:ILE:O	3:D:84:MET:HG2	2.01	0.61
3:D:348:VAL:HG11	3:D:354:PHE:N	2.16	0.61
4:E:94:LEU:HD21	4:E:523:MET:CB	2.24	0.61
2:B:520:ILE:CD1	4:E:60:MET:H	2.14	0.61
4:E:481:GLN:HE21	4:E:487:PRO:HA	1.65	0.61
5:G:229:MET:SD	5:G:310:THR:HA	2.41	0.61
6:H:278:LEU:HG	6:H:303:PHE:CE1	2.35	0.61
6:H:515:SER:O	7:Q:52:MET:HB3	2.00	0.61
1:A:489:ASP:OD1	1:A:491:VAL:HB	2.00	0.61
5:G:48:LYS:HD2	8:Z:520:GLU:HG3	1.82	0.61
2:B:158:ASP:HA	2:B:161:ASN:ND2	2.15	0.60
8:Z:101:GLU:OE2	8:Z:104:LYS:HD3	2.00	0.60
3:D:432:GLU:HG2	3:D:464:ILE:HB	1.83	0.60
4:E:437:ALA:HB2	4:E:448:MET:HB2	1.83	0.60
4:E:486:ASN:HB3	4:E:487:PRO:HD2	1.83	0.60
5:G:134:ILE:HD11	5:G:507:LYS:HE2	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:H:352:GLN:HG2	6:H:357:ARG:HG2	1.83	0.60
7:Q:29:VAL:O	7:Q:33:ILE:HD13	2.01	0.60
8:Z:238:GLU:HA	8:Z:298:ASP:HB2	1.82	0.60
8:Z:426:LYS:HD2	8:Z:434:GLN:HG2	1.83	0.60
1:A:28:ILE:HA	1:A:31:ILE:HD12	1.83	0.60
1:A:222:SER:OG	1:A:301:VAL:HG22	2.00	0.60
3:D:509:GLU:O	3:D:510:LEU:HB2	2.01	0.60
4:E:20:LYS:HZ3	6:H:32:ILE:HD13	1.66	0.60
5:G:165:ILE:HD12	5:G:387:VAL:HG13	1.83	0.60
7:Q:477:ASN:HB3	7:Q:491:ASP:CG	2.22	0.60
1:A:20:GLN:NE2	5:G:7:VAL:HG23	2.16	0.60
1:A:458:GLN:HB3	1:A:463:LEU:CD1	2.31	0.60
2:B:236:LYS:HZ3	2:B:288:ASN:HD21	1.47	0.60
3:D:146:LYS:O	3:D:150:ILE:HG13	2.01	0.60
3:D:235:LYS:NZ	3:D:242:THR:HA	2.17	0.60
5:G:23:GLN:O	5:G:27:ILE:HD13	2.02	0.60
5:G:49:MET:O	8:Z:521:ILE:HG13	2.01	0.60
5:G:134:ILE:CD1	5:G:507:LYS:HE2	2.30	0.60
8:Z:34:LEU:HD12	8:Z:37:ASN:HD21	1.67	0.60
1:A:175:ALA:HB1	1:A:195:ILE:HD12	1.83	0.60
4:E:41:ALA:HA	4:E:44:VAL:HG12	1.84	0.60
4:E:85:HIS:ND1	4:E:87:ILE:HG22	2.16	0.60
4:E:88:ALA:O	4:E:92:VAL:HG23	2.02	0.60
5:G:452:ILE:HD11	5:G:457:ALA:HB3	1.84	0.60
6:H:352:GLN:CG	6:H:357:ARG:HG2	2.32	0.60
6:H:407:ALA:O	6:H:411:ALA:HB3	2.00	0.60
7:Q:147:VAL:HG21	7:Q:407:ARG:HB3	1.84	0.60
8:Z:419:ALA:O	8:Z:423:VAL:HG23	2.02	0.60
1:A:351:VAL:CG1	1:A:364:ILE:HG12	2.31	0.60
3:D:24:LYS:NZ	3:D:539:VAL:HG11	2.16	0.60
4:E:458:ILE:O	4:E:462:LEU:HG	2.01	0.60
5:G:72:VAL:HG22	8:Z:6:THR:HG23	1.83	0.60
6:H:392:ALA:O	6:H:396:VAL:HG23	2.01	0.60
7:Q:17:GLU:HB2	8:Z:68:GLN:CG	2.32	0.60
1:A:24:ALA:O	1:A:28:ILE:HG12	2.01	0.60
1:A:401:ARG:HH21	1:A:506:PRO:HG2	1.65	0.60
4:E:98:GLN:HE21	4:E:102:ILE:CD1	2.13	0.60
5:G:500:ALA:HA	5:G:503:LEU:HB3	1.83	0.60
8:Z:48:VAL:HA	8:Z:53:ASP:O	2.01	0.60
5:G:51:LEU:O	8:Z:523:ARG:HG3	2.02	0.60
5:G:137:LEU:HB3	5:G:499:LEU:HD11	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:H:190:LEU:HD23	6:H:397:ARG:CB	2.32	0.60
8:Z:118:ILE:HG21	8:Z:432:ARG:HD2	1.83	0.60
4:E:210:LYS:HB3	4:E:383:VAL:O	2.01	0.60
5:G:156:ILE:CG2	5:G:394:ALA:HB1	2.29	0.60
8:Z:354:THR:HG22	8:Z:359:LYS:HG3	1.82	0.60
1:A:145:ARG:O	1:A:147:CYS:N	2.35	0.60
1:A:180:LYS:NZ	1:A:403:LEU:HB3	2.17	0.60
2:B:229:PRO:HG2	2:B:232:ILE:HD11	1.84	0.60
5:G:50:LEU:O	5:G:51:LEU:HD12	2.02	0.60
6:H:347:VAL:HB	6:H:362:THR:HG23	1.83	0.60
7:Q:57:ILE:HA	7:Q:62:LYS:O	2.02	0.60
8:Z:109:TYR:CE2	8:Z:435:LEU:HB3	2.36	0.60
8:Z:153:ARG:O	8:Z:157:ARG:HG3	2.02	0.60
2:B:416:LEU:HD22	2:B:474:THR:CG2	2.32	0.59
6:H:6:VAL:HG21	7:Q:21:HIS:HB2	1.84	0.59
6:H:21:GLN:HE22	6:H:22:LEU:HD13	1.67	0.59
8:Z:411:ALA:HB2	8:Z:494:ILE:HG21	1.82	0.59
1:A:450:ASN:OD1	1:A:460:SER:HB2	2.02	0.59
2:B:86:ASP:O	2:B:90:VAL:HG23	2.02	0.59
3:D:63:MET:SD	3:D:73:ILE:HD11	2.42	0.59
3:D:120:LEU:HD23	3:D:529:VAL:HG13	1.83	0.59
3:D:433:ILE:HG13	3:D:483:LEU:HD23	1.84	0.59
5:G:374:ILE:HG21	5:G:391:LEU:HD21	1.83	0.59
6:H:23:VAL:HG13	6:H:109:LYS:NZ	2.17	0.59
1:A:12:SER:O	1:A:529:ASP:HA	2.02	0.59
2:B:327:THR:HG22	2:B:365:VAL:HG12	1.82	0.59
3:D:408:ILE:O	3:D:412:LEU:HG	2.03	0.59
4:E:28:LEU:O	4:E:532:ASP:HA	2.02	0.59
4:E:234:PHE:CE1	4:E:372:LEU:HD13	2.34	0.59
5:G:137:LEU:O	5:G:140:ILE:HD13	2.02	0.59
5:G:275:ILE:HG21	5:G:299:LEU:HB2	1.85	0.59
6:H:37:ARG:HG3	6:H:99:LEU:HD22	1.84	0.59
6:H:495:PRO:HB2	6:H:498:VAL:HG23	1.83	0.59
1:A:232:ALA:HB3	1:A:348:ALA:HB3	1.84	0.59
1:A:243:LYS:HE2	1:A:271:THR:OG1	2.01	0.59
1:A:532:LYS:HG2	3:D:65:GLN:HB2	1.82	0.59
2:B:49:ASP:HB3	2:B:65:ASN:OD1	2.02	0.59
2:B:408:TYR:CE1	2:B:494:THR:HG22	2.38	0.59
3:D:256:LEU:HD11	3:D:303:ILE:HD12	1.83	0.59
5:G:26:ASN:ND2	5:G:519:ILE:HD12	2.14	0.59
5:G:398:CYS:HA	5:G:401:VAL:HG12	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:469:LYS:HD2	5:G:472:GLN:OE1	2.02	0.59
6:H:126:ARG:O	6:H:130:GLN:HG3	2.02	0.59
6:H:415:GLU:HB2	6:H:468:HIS:NE2	2.18	0.59
7:Q:402:LEU:HA	7:Q:405:ASP:O	2.02	0.59
7:Q:416:GLU:OE1	7:Q:448:ILE:HG21	2.02	0.59
2:B:399:GLN:OE1	2:B:498:GLN:HG3	2.03	0.59
4:E:308:ASP:HA	4:E:311:ASN:HD22	1.66	0.59
6:H:108:VAL:HG21	6:H:121:ILE:HG21	1.85	0.59
8:Z:108:LEU:O	8:Z:112:GLU:HG3	2.03	0.59
8:Z:181:LYS:CE	8:Z:370:ARG:HH12	2.15	0.59
2:B:519:ASN:O	2:B:520:ILE:HD13	2.03	0.59
3:D:252:ILE:HG21	3:D:351:VAL:HG22	1.84	0.59
4:E:223:LYS:HD3	4:E:388:ARG:HH21	1.67	0.59
5:G:22:VAL:HG11	5:G:520:ASP:O	2.03	0.59
7:Q:238:LYS:HE2	7:Q:346:HIS:HE1	1.67	0.59
1:A:115:THR:HG23	3:D:58:LYS:HE3	1.85	0.59
2:B:403:ASP:OD2	2:B:498:GLN:HG2	2.02	0.59
3:D:436:ALA:HA	3:D:458:ALA:HB1	1.84	0.59
7:Q:356:GLY:O	7:Q:357:ASP:HB2	2.02	0.59
2:B:338:PRO:HA	2:B:342:LYS:HG3	1.85	0.59
2:B:409:GLY:HA2	2:B:495:GLU:OE2	2.03	0.59
4:E:214:LYS:HD3	4:E:215:VAL:H	1.67	0.59
5:G:23:GLN:HE22	5:G:113:LEU:HB3	1.67	0.59
1:A:242:GLN:HA	1:A:293:ASP:HB2	1.84	0.59
2:B:223:LYS:NZ	2:B:351:GLU:HB2	2.18	0.59
2:B:445:MET:O	2:B:449:ILE:HG12	2.03	0.59
2:B:446:LEU:O	2:B:450:ILE:HG13	2.02	0.59
2:B:476:ALA:HB1	2:B:485:ILE:HD11	1.84	0.59
3:D:122:SER:HA	3:D:125:LYS:HE3	1.85	0.59
3:D:223:ASP:HB2	3:D:394:ARG:HD2	1.85	0.59
4:E:154:SER:HB3	4:E:416:ASN:ND2	2.18	0.59
4:E:322:VAL:HG21	4:E:372:LEU:HD22	1.84	0.59
5:G:226:HIS:HB3	5:G:229:MET:HG3	1.84	0.59
5:G:359:TYR:N	5:G:359:TYR:CD1	2.71	0.59
6:H:153:LYS:HG2	6:H:157:LYS:NZ	2.17	0.59
7:Q:394:ASP:O	7:Q:398:THR:HG23	2.03	0.59
8:Z:476:LEU:O	8:Z:488:VAL:HA	2.03	0.59
3:D:178:VAL:CG2	3:D:403:GLU:HG2	2.32	0.59
6:H:37:ARG:HG2	6:H:448:GLN:HG2	1.84	0.59
1:A:172:VAL:HG13	1:A:396:LEU:HD23	1.85	0.58
3:D:33:PRO:HA	3:D:536:ASP:OD1	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:343:ILE:HD11	3:D:379:ILE:HG21	1.85	0.58
4:E:221:ASP:CB	4:E:388:ARG:HD2	2.33	0.58
6:H:165:SER:HB3	6:H:480:ASN:HB3	1.85	0.58
3:D:227:VAL:O	3:D:389:VAL:HA	2.04	0.58
3:D:230:LEU:HD23	3:D:339:ILE:HG12	1.85	0.58
4:E:86:GLN:OE1	4:E:86:GLN:N	2.36	0.58
4:E:387:ILE:HG22	4:E:395:ILE:HG23	1.85	0.58
2:B:186:ALA:HA	2:B:189:ARG:NH1	2.17	0.58
6:H:460:ILE:HG23	6:H:461:LEU:N	2.18	0.58
8:Z:134:LEU:HA	8:Z:137:VAL:HG22	1.84	0.58
8:Z:333:LEU:HD21	8:Z:343:CYS:SG	2.44	0.58
1:A:5:LEU:HD11	1:A:11:ARG:HB2	1.85	0.58
2:B:418:ALA:HA	2:B:440:ALA:HB1	1.83	0.58
2:B:448:THR:HG23	2:B:458:SER:HB2	1.84	0.58
4:E:25:LYS:HZ3	4:E:536:PRO:HB3	1.68	0.58
4:E:511:ILE:HD12	4:E:511:ILE:N	2.18	0.58
6:H:17:GLN:HB3	6:H:518:GLU:CG	2.30	0.58
6:H:278:LEU:HD21	6:H:299:ALA:HA	1.86	0.58
7:Q:37:LYS:O	7:Q:41:GLN:HG2	2.04	0.58
7:Q:47:TYR:HB2	7:Q:102:ASN:HD22	1.67	0.58
2:B:39:VAL:HA	2:B:50:LYS:NZ	2.19	0.58
5:G:237:ARG:HB3	5:G:343:VAL:HG11	1.84	0.58
6:H:233:HIS:O	6:H:235:PRO:HD3	2.03	0.58
6:H:521:LYS:CG	7:Q:57:ILE:HB	2.34	0.58
7:Q:84:LYS:O	7:Q:88:MET:HG3	2.02	0.58
7:Q:143:LEU:HD21	7:Q:419:LEU:HD11	1.86	0.58
7:Q:523:GLN:HB3	8:Z:45:LYS:HZ1	1.68	0.58
8:Z:142:GLU:C	8:Z:144:ASP:H	2.07	0.58
1:A:42:ASP:CG	5:G:518:ARG:HG2	2.24	0.58
1:A:115:THR:HG23	3:D:58:LYS:NZ	2.18	0.58
3:D:90:ALA:O	3:D:93:MET:HG3	2.04	0.58
3:D:216:LYS:HE3	3:D:376:LEU:HD11	1.85	0.58
4:E:535:LYS:HB2	6:H:50:VAL:HB	1.86	0.58
6:H:408:GLY:HA2	6:H:494:GLU:OE2	2.04	0.58
6:H:497:MET:HE2	6:H:497:MET:O	2.03	0.58
7:Q:411:GLY:O	7:Q:492:MET:HG3	2.03	0.58
1:A:530:LEU:HD11	3:D:63:MET:N	2.18	0.58
2:B:155:PHE:CE2	2:B:157:GLN:HB3	2.39	0.58
3:D:206:VAL:CG2	3:D:419:VAL:HG21	2.34	0.58
6:H:186:LEU:N	6:H:186:LEU:HD12	2.19	0.58
6:H:224:GLY:HA2	6:H:310:CYS:O	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Z:186:ILE:CD1	8:Z:399:LYS:HA	2.34	0.58
8:Z:322:GLU:O	8:Z:326:LEU:HG	2.03	0.58
1:A:467:LEU:O	1:A:471:HIS:HB2	2.03	0.58
2:B:499:VAL:O	2:B:503:VAL:HG23	2.04	0.58
3:D:346:LYS:HB2	3:D:358:MET:SD	2.44	0.58
4:E:144:ALA:O	4:E:148:LEU:HD12	2.03	0.58
8:Z:59:ASP:O	8:Z:63:LEU:HG	2.04	0.58
8:Z:118:ILE:HD12	8:Z:118:ILE:N	2.18	0.58
8:Z:308:GLU:HB2	8:Z:310:ILE:HG12	1.86	0.58
8:Z:406:CYS:CB	8:Z:498:TYR:HB2	2.34	0.58
8:Z:417:ALA:HB2	8:Z:470:HIS:NE2	2.18	0.58
1:A:416:GLU:CD	1:A:416:GLU:H	2.06	0.58
3:D:32:LYS:HB3	3:D:33:PRO:HD2	1.86	0.58
3:D:364:LEU:HD21	3:D:366:GLU:OE1	2.04	0.58
3:D:474:LEU:O	3:D:476:PRO:HD3	2.03	0.58
4:E:25:LYS:HA	4:E:535:LYS:O	2.04	0.58
4:E:122:GLN:O	4:E:126:ARG:HG3	2.03	0.58
1:A:190:TYR:CD2	1:A:400:LYS:HB2	2.35	0.58
3:D:486:ARG:O	3:D:494:THR:HG21	2.04	0.58
4:E:166:ILE:O	4:E:170:LYS:HG3	2.04	0.58
4:E:438:ASP:HA	4:E:445:GLN:HE21	1.68	0.58
5:G:240:LEU:HB2	5:G:331:ILE:HA	1.84	0.58
5:G:275:ILE:HG23	5:G:300:ALA:HB2	1.86	0.58
7:Q:238:LYS:HZ3	7:Q:341:LEU:HD11	1.69	0.58
7:Q:460:ALA:HA	7:Q:463:VAL:HG12	1.86	0.58
1:A:42:ASP:OD2	5:G:518:ARG:HG2	2.03	0.57
1:A:445:LEU:H	1:A:446:PRO:HD2	1.67	0.57
2:B:520:ILE:HG23	4:E:60:MET:O	2.04	0.57
3:D:81:LEU:HB3	3:D:95:VAL:HG22	1.84	0.57
4:E:40:ALA:HB3	4:E:87:ILE:HG21	1.84	0.57
5:G:46:MET:HE2	8:Z:517:LEU:HD23	1.86	0.57
6:H:109:LYS:N	6:H:110:PRO:HD2	2.19	0.57
6:H:455:PHE:HB2	6:H:482:GLU:OE2	2.04	0.57
8:Z:186:ILE:HD12	8:Z:399:LYS:HA	1.86	0.57
8:Z:204:THR:HG22	8:Z:377:LYS:H	1.68	0.57
1:A:46:VAL:HG22	1:A:52:VAL:HG22	1.85	0.57
1:A:277:LYS:HZ2	1:A:280:ALA:HB3	1.69	0.57
1:A:533:LEU:HD23	1:A:533:LEU:N	2.19	0.57
8:Z:179:ILE:HD12	8:Z:187:ASP:O	2.04	0.57
1:A:45:LEU:HD11	1:A:61:ILE:HA	1.86	0.57
2:B:235:ALA:HB3	2:B:349:ILE:HD12	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:516:ARG:O	4:E:57:LEU:HB3	2.04	0.57
4:E:473:THR:O	4:E:477:VAL:HG23	2.05	0.57
5:G:38:ARG:HA	5:G:100:ILE:HD11	1.86	0.57
5:G:242:ASP:OD2	5:G:331:ILE:HG22	2.03	0.57
6:H:37:ARG:HB2	6:H:99:LEU:HD13	1.87	0.57
6:H:73:HIS:HD2	6:H:74:PRO:HD2	1.69	0.57
7:Q:53:ASN:O	7:Q:54:LYS:HD3	2.04	0.57
7:Q:186:ALA:O	7:Q:190:ILE:HG13	2.03	0.57
8:Z:101:GLU:HG2	8:Z:446:ILE:HB	1.86	0.57
8:Z:299:PRO:HA	8:Z:302:LEU:HD12	1.86	0.57
1:A:526:ARG:O	3:D:60:MET:HB3	2.04	0.57
2:B:516:ARG:HD2	4:E:58:ASP:OD2	2.04	0.57
3:D:45:LYS:HD2	3:D:121:ASP:HB2	1.87	0.57
5:G:425:LYS:O	5:G:429:MET:HG2	2.03	0.57
5:G:479:GLY:C	5:G:487:LEU:HD12	2.24	0.57
6:H:510:ALA:O	6:H:514:VAL:HG23	2.03	0.57
7:Q:150:SER:HB2	7:Q:159:GLU:OE1	2.05	0.57
1:A:176:VAL:HG13	1:A:190:TYR:CD1	2.39	0.57
1:A:532:LYS:NZ	3:D:65:GLN:HB2	2.19	0.57
3:D:256:LEU:HD13	3:D:312:LEU:CD1	2.33	0.57
4:E:85:HIS:CG	4:E:87:ILE:HG22	2.39	0.57
4:E:218:ARG:CA	4:E:389:GLY:HA2	2.33	0.57
4:E:242:GLN:HG2	4:E:242:GLN:O	2.03	0.57
6:H:226:GLU:HB3	6:H:227:MET:CE	2.34	0.57
6:H:522:ASN:HD21	7:Q:76:LEU:HA	1.69	0.57
8:Z:407:VAL:HG13	8:Z:407:VAL:O	2.05	0.57
8:Z:446:ILE:O	8:Z:450:VAL:HG23	2.05	0.57
2:B:113:ALA:O	2:B:117:ILE:HG13	2.05	0.57
3:D:256:LEU:HD12	3:D:256:LEU:H	1.68	0.57
4:E:20:LYS:HZ2	6:H:31:VAL:CB	2.17	0.57
4:E:443:LEU:HD23	4:E:444:GLU:N	2.20	0.57
5:G:108:VAL:O	5:G:111:HIS:HB3	2.04	0.57
5:G:195:ILE:HG22	5:G:197:LYS:H	1.69	0.57
7:Q:332:ALA:O	7:Q:334:PRO:HD3	2.04	0.57
7:Q:420:ALA:HA	7:Q:442:ALA:HB1	1.87	0.57
1:A:140:THR:HB	1:A:144:GLY:CA	2.25	0.57
1:A:220:VAL:HG22	1:A:306:MET:SD	2.44	0.57
2:B:172:LEU:HD21	2:B:386:ALA:HA	1.87	0.57
4:E:20:LYS:NZ	6:H:32:ILE:HG12	2.20	0.57
5:G:47:MET:HB3	5:G:61:ASN:ND2	2.20	0.57
7:Q:173:TYR:HD1	7:Q:173:TYR:H	1.50	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:225:ILE:HG23	4:E:375:GLU:HB3	1.87	0.57
4:E:457:VAL:HG23	4:E:458:ILE:N	2.20	0.57
5:G:50:LEU:HA	8:Z:521:ILE:O	2.03	0.57
5:G:240:LEU:N	5:G:240:LEU:HD23	2.18	0.57
6:H:450:CYS:HA	6:H:479:ILE:HD13	1.86	0.57
1:A:137:ILE:HG23	1:A:499:LYS:HE3	1.87	0.57
1:A:530:LEU:CD2	3:D:63:MET:H	2.17	0.57
2:B:123:PRO:HB3	2:B:515:LEU:HG	1.85	0.57
2:B:349:ILE:HA	2:B:361:HIS:O	2.05	0.57
3:D:54:SER:HA	3:D:60:MET:H	1.69	0.57
3:D:217:LEU:HA	3:D:401:ILE:CD1	2.34	0.57
6:H:320:LYS:O	6:H:323:MET:HB3	2.05	0.57
6:H:407:ALA:HB1	6:H:487:ASN:ND2	2.20	0.57
8:Z:87:ILE:N	8:Z:87:ILE:HD12	2.20	0.57
2:B:297:TYR:HB3	2:B:300:PRO:HD2	1.87	0.57
3:D:33:PRO:HD3	3:D:537:ASP:OD1	2.03	0.57
3:D:371:ASN:HD22	3:D:394:ARG:HE	1.52	0.57
7:Q:405:ASP:HB2	7:Q:502:LEU:HD22	1.87	0.57
8:Z:229:TYR:HB3	8:Z:344:LEU:HB3	1.87	0.57
8:Z:354:THR:CG2	8:Z:359:LYS:HG3	2.35	0.57
2:B:220:LEU:HD13	2:B:319:GLY:HA3	1.87	0.56
3:D:245:GLU:HG3	3:D:246:LYS:CD	2.31	0.56
4:E:186:ALA:O	4:E:190:VAL:HG23	2.05	0.56
5:G:91:VAL:HG11	5:G:501:VAL:HA	1.86	0.56
6:H:225:PHE:HB3	6:H:228:GLN:HG3	1.85	0.56
7:Q:377:LEU:O	7:Q:378:ARG:HD2	2.04	0.56
8:Z:378:GLY:HA3	8:Z:384:LEU:HD21	1.85	0.56
2:B:100:THR:O	2:B:104:VAL:HG23	2.05	0.56
4:E:156:LEU:CB	4:E:161:ASN:HB3	2.34	0.56
5:G:401:VAL:HG13	5:G:402:LEU:HD13	1.87	0.56
7:Q:20:LYS:HD3	7:Q:528:LYS:H	1.70	0.56
7:Q:55:MET:CG	7:Q:63:LEU:HD11	2.35	0.56
1:A:313:LYS:HE2	1:A:317:LYS:CE	2.35	0.56
2:B:518:ASP:O	2:B:519:ASN:HB2	2.06	0.56
3:D:317:LEU:HG	3:D:321:ASN:HD21	1.71	0.56
3:D:487:HIS:CE1	3:D:492:LYS:HA	2.40	0.56
3:D:539:VAL:HG12	3:D:541:THR:H	1.70	0.56
4:E:250:ILE:HG21	4:E:341:ILE:HG12	1.87	0.56
5:G:165:ILE:HG21	5:G:390:ASN:CB	2.35	0.56
5:G:433:GLU:H	5:G:433:GLU:CD	2.08	0.56
5:G:479:GLY:O	5:G:487:LEU:HD12	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:H:239:LEU:O	6:H:240:LEU:HD23	2.05	0.56
6:H:521:LYS:HG2	7:Q:57:ILE:O	2.05	0.56
7:Q:205:CYS:HG	7:Q:376:VAL:HA	1.70	0.56
8:Z:46:MET:HG3	8:Z:54:ILE:HG23	1.86	0.56
8:Z:139:VAL:HB	8:Z:407:VAL:O	2.04	0.56
1:A:24:ALA:HA	5:G:9:VAL:HG22	1.88	0.56
2:B:111:ARG:HG2	2:B:111:ARG:NH1	2.19	0.56
2:B:411:GLY:HA3	2:B:447:PRO:HB3	1.87	0.56
4:E:208:LEU:O	4:E:383:VAL:HG22	2.04	0.56
4:E:472:GLN:O	4:E:475:THR:HB	2.06	0.56
5:G:491:LYS:HA	5:G:496:TRP:NE1	2.18	0.56
2:B:11:ILE:O	4:E:84:ASP:N	2.33	0.56
3:D:29:ASP:HB2	3:D:540:ASN:CG	2.25	0.56
3:D:175:ASN:HA	3:D:180:SER:CB	2.36	0.56
3:D:236:VAL:HG11	3:D:329:LYS:HD3	1.86	0.56
3:D:292:GLN:HA	3:D:295:LYS:HE2	1.87	0.56
3:D:424:LEU:HD12	3:D:424:LEU:O	2.05	0.56
4:E:156:LEU:HG	4:E:156:LEU:O	2.06	0.56
5:G:74:HIS:HB2	8:Z:5:LYS:CB	2.31	0.56
7:Q:392:VAL:O	7:Q:396:VAL:HG23	2.05	0.56
7:Q:523:GLN:HB3	8:Z:45:LYS:CE	2.36	0.56
1:A:410:PRO:O	1:A:414:ALA:HB3	2.05	0.56
2:B:53:LEU:HB3	3:D:542:ARG:NH1	2.21	0.56
4:E:117:LEU:CD2	4:E:524:VAL:HG13	2.36	0.56
4:E:117:LEU:HD21	4:E:524:VAL:HG13	1.88	0.56
4:E:156:LEU:HB3	4:E:161:ASN:CB	2.32	0.56
6:H:142:THR:HG22	6:H:404:SER:OG	2.05	0.56
8:Z:31:GLN:HG2	8:Z:97:LEU:HA	1.87	0.56
8:Z:407:VAL:CG2	8:Z:495:TRP:HB3	2.36	0.56
3:D:24:LYS:CD	3:D:28:GLN:HE22	2.17	0.56
3:D:249:ILE:HG13	3:D:343:ILE:HD13	1.87	0.56
4:E:98:GLN:HE22	4:E:515:GLN:HG2	1.71	0.56
5:G:20:ARG:O	5:G:20:ARG:HG2	2.05	0.56
5:G:137:LEU:HD11	5:G:506:TYR:CD2	2.40	0.56
5:G:289:VAL:HG11	5:G:350:LEU:HD13	1.88	0.56
8:Z:127:LYS:NZ	8:Z:509:THR:HB	2.21	0.56
1:A:107:LEU:O	1:A:112:ILE:HB	2.05	0.56
3:D:151:LEU:HD21	3:D:435:LEU:HD11	1.87	0.56
3:D:416:ARG:HH11	3:D:420:LYS:HZ1	1.53	0.56
4:E:247:LYS:HE3	4:E:298:ASN:ND2	2.20	0.56
5:G:52:ASP:HB3	8:Z:525:GLY:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:347:ALA:HB3	5:G:365:GLU:O	2.06	0.56
6:H:215:ALA:HB3	6:H:373:ILE:CD1	2.32	0.56
8:Z:476:LEU:HD22	8:Z:490:ALA:CB	2.36	0.56
1:A:456:ALA:HB3	1:A:490:LEU:HD22	1.88	0.56
2:B:29:PHE:HB3	2:B:110:LEU:HB3	1.88	0.56
2:B:52:LEU:HD11	2:B:70:ILE:HA	1.88	0.56
6:H:281:ILE:HG21	6:H:289:VAL:HG21	1.88	0.56
7:Q:410:PRO:HB2	7:Q:492:MET:HB2	1.87	0.56
4:E:18:ILE:HG22	4:E:19:ILE:H	1.70	0.56
4:E:34:LEU:H	4:E:34:LEU:HD22	1.71	0.56
8:Z:333:LEU:HB2	8:Z:339:LEU:HD23	1.88	0.56
8:Z:501:LYS:O	8:Z:504:LEU:HB3	2.06	0.56
2:B:221:ASP:CG	2:B:359:LEU:HG	2.26	0.55
4:E:204:VAL:CB	4:E:410:ARG:HG3	2.32	0.55
5:G:72:VAL:HG12	5:G:73:GLN:N	2.21	0.55
5:G:89:GLU:HA	5:G:389:ARG:HH22	1.69	0.55
5:G:358:GLU:HB3	5:G:360:PHE:CE1	2.41	0.55
5:G:445:GLU:O	5:G:449:ARG:HG3	2.05	0.55
6:H:150:GLU:OE2	6:H:400:ILE:HG23	2.06	0.55
8:Z:109:TYR:HB3	8:Z:114:LEU:HD13	1.86	0.55
1:A:133:SER:HA	1:A:136:LEU:HD21	1.88	0.55
2:B:116:LEU:HA	2:B:119:LYS:HD2	1.88	0.55
3:D:37:ARG:HG3	3:D:536:ASP:OD1	2.06	0.55
4:E:451:PHE:O	4:E:455:LEU:HG	2.07	0.55
5:G:49:MET:HB2	5:G:59:MET:CE	2.36	0.55
5:G:105:MET:CE	5:G:510:VAL:HA	2.36	0.55
6:H:161:THR:HG21	6:H:491:PHE:CB	2.37	0.55
1:A:352:VAL:HG22	1:A:353:GLN:N	2.20	0.55
2:B:229:PRO:CG	2:B:232:ILE:HD11	2.35	0.55
5:G:37:ILE:HD11	5:G:99:ILE:HG21	1.87	0.55
6:H:198:LYS:HZ3	6:H:217:LYS:CE	2.19	0.55
6:H:350:GLU:HA	6:H:358:TYR:O	2.06	0.55
7:Q:17:GLU:HG2	8:Z:70:GLN:NE2	2.20	0.55
7:Q:143:LEU:N	7:Q:144:PRO:HD2	2.22	0.55
8:Z:83:ALA:O	8:Z:87:ILE:HD13	2.05	0.55
3:D:226:LEU:CD1	3:D:389:VAL:HB	2.36	0.55
5:G:168:TRP:CD1	5:G:209:ILE:HB	2.42	0.55
5:G:330:ARG:HD2	5:G:342:ASP:OD1	2.06	0.55
6:H:448:GLN:HG3	6:H:452:ASN:ND2	2.21	0.55
7:Q:117:GLU:O	7:Q:121:LEU:HG	2.07	0.55
8:Z:127:LYS:HD2	8:Z:509:THR:HG21	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Z:135:GLU:HG3	8:Z:138:LYS:NZ	2.21	0.55
8:Z:139:VAL:HB	8:Z:407:VAL:HG13	1.87	0.55
8:Z:150:ASP:O	8:Z:154:THR:HG23	2.06	0.55
1:A:74:VAL:O	1:A:78:LEU:HG	2.06	0.55
3:D:137:SER:OG	3:D:533:LEU:HB2	2.06	0.55
6:H:349:GLU:HG3	6:H:360:PHE:HD2	1.70	0.55
7:Q:69:ALA:HB3	7:Q:101:THR:HG22	1.89	0.55
7:Q:206:LYS:HD3	7:Q:389:GLU:OE1	2.07	0.55
8:Z:376:ILE:HG22	8:Z:384:LEU:HD22	1.89	0.55
1:A:17:ILE:O	1:A:20:GLN:HG2	2.07	0.55
1:A:521:ALA:HA	1:A:524:ILE:HD12	1.89	0.55
2:B:390:LEU:O	2:B:394:LEU:HG	2.06	0.55
2:B:513:VAL:HG13	2:B:516:ARG:NH1	2.20	0.55
4:E:229:ILE:HB	4:E:384:THR:HG21	1.89	0.55
5:G:48:LYS:HA	8:Z:518:VAL:HG13	1.89	0.55
5:G:417:ALA:HB2	5:G:476:GLU:HG3	1.88	0.55
6:H:79:LEU:HA	6:H:82:ILE:HD12	1.89	0.55
7:Q:58:ASN:ND2	7:Q:62:LYS:HB2	2.19	0.55
7:Q:188:VAL:HG13	7:Q:197:PHE:CE1	2.41	0.55
8:Z:98:ILE:HD11	8:Z:447:ILE:HD11	1.88	0.55
8:Z:459:LEU:HD23	8:Z:460:GLN:N	2.22	0.55
1:A:17:ILE:HG13	1:A:21:ASN:HD21	1.71	0.55
1:A:226:PRO:CG	1:A:229:ILE:HD11	2.37	0.55
2:B:292:ASN:HD22	2:B:293:ARG:N	2.05	0.55
4:E:83:VAL:HG13	4:E:88:ALA:HB3	1.88	0.55
4:E:145:ILE:CD1	4:E:514:LYS:HA	2.36	0.55
4:E:444:GLU:O	4:E:448:MET:HG3	2.07	0.55
5:G:118:HIS:CD2	5:G:119:PRO:HD2	2.42	0.55
5:G:224:VAL:HG21	5:G:352:ILE:HG21	1.88	0.55
6:H:341:VAL:O	6:H:341:VAL:HG12	2.07	0.55
7:Q:13:GLN:OE1	8:Z:72:PRO:HD2	2.06	0.55
8:Z:273:LYS:HD3	8:Z:337:ASP:OD1	2.07	0.55
1:A:43:LYS:HE3	5:G:520:ASP:OD2	2.07	0.55
1:A:529:ASP:O	3:D:62:LYS:HD2	2.07	0.55
3:D:178:VAL:O	3:D:178:VAL:HG12	2.07	0.55
3:D:207:ASP:O	3:D:210:ASP:HB2	2.07	0.55
5:G:72:VAL:CG2	5:G:81:ILE:HD11	2.37	0.55
7:Q:242:TYR:OH	7:Q:283:ILE:HG12	2.07	0.55
7:Q:312:LEU:HD23	7:Q:313:VAL:N	2.22	0.55
7:Q:475:ASN:O	7:Q:477:ASN:N	2.40	0.55
1:A:323:SER:HB2	1:A:347:GLN:N	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:322:ARG:O	2:B:326:VAL:HG23	2.06	0.55
3:D:294:LYS:HD3	3:D:325:ILE:HD11	1.87	0.55
8:Z:355:LEU:HD22	8:Z:377:LYS:HE3	1.87	0.55
1:A:96:ILE:O	1:A:100:LEU:HG	2.07	0.55
1:A:456:ALA:CB	1:A:490:LEU:HD22	2.38	0.55
2:B:497:PHE:CZ	2:B:501:ARG:HD3	2.41	0.55
3:D:124:THR:HA	3:D:127:LEU:HD12	1.89	0.55
4:E:387:ILE:CG2	4:E:395:ILE:HG23	2.37	0.55
5:G:200:ARG:NE	5:G:322:ARG:NH1	2.55	0.55
5:G:359:TYR:HD1	5:G:359:TYR:N	2.02	0.55
1:A:80:ASP:O	1:A:84:LYS:HD3	2.06	0.54
3:D:21:GLY:O	3:D:22:ARG:HG2	2.08	0.54
3:D:197:VAL:HG12	3:D:387:LYS:CA	2.33	0.54
3:D:211:ILE:HG23	3:D:389:VAL:CG2	2.28	0.54
3:D:239:SER:HB2	3:D:321:ASN:CB	2.32	0.54
4:E:130:PRO:HB3	4:E:528:LEU:HD22	1.88	0.54
4:E:215:VAL:HB	4:E:392:LYS:NZ	2.22	0.54
5:G:203:LYS:HB2	5:G:384:LEU:HD11	1.89	0.54
6:H:163:LEU:HD22	6:H:168:ILE:HG21	1.90	0.54
7:Q:15:LEU:HA	8:Z:71:HIS:ND1	2.22	0.54
7:Q:114:LEU:HD11	7:Q:443:GLU:OE2	2.07	0.54
7:Q:118:LEU:HD21	7:Q:440:LYS:HG3	1.89	0.54
7:Q:164:LEU:O	7:Q:168:VAL:HG13	2.07	0.54
1:A:201:HIS:HA	1:A:379:GLY:O	2.08	0.54
2:B:474:THR:O	2:B:474:THR:HG22	2.07	0.54
3:D:251:LEU:HD23	3:D:345:THR:OG1	2.07	0.54
4:E:170:LYS:HZ2	4:E:183:ARG:HA	1.70	0.54
4:E:290:ARG:O	4:E:294:GLU:HG3	2.07	0.54
5:G:136:THR:O	5:G:140:ILE:HG23	2.06	0.54
6:H:156:GLU:HA	6:H:180:VAL:HG21	1.89	0.54
6:H:190:LEU:HD11	6:H:195:ILE:CD1	2.31	0.54
6:H:487:ASN:HA	6:H:490:ALA:HB3	1.89	0.54
7:Q:390:ARG:CZ	7:Q:390:ARG:HA	2.37	0.54
1:A:132:ILE:O	1:A:136:LEU:HG	2.07	0.54
2:B:167:LEU:HD13	2:B:179:PHE:HB2	1.90	0.54
2:B:172:LEU:O	2:B:176:LYS:N	2.40	0.54
2:B:204:LYS:O	2:B:376:ARG:HA	2.07	0.54
3:D:170:ALA:HB2	3:D:415:ILE:HD11	1.89	0.54
3:D:230:LEU:HD13	3:D:338:PHE:HB3	1.89	0.54
4:E:254:PRO:HB3	4:E:304:TRP:HB3	1.89	0.54
5:G:407:LEU:HD12	5:G:407:LEU:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:160:VAL:O	7:Q:164:LEU:HG	2.07	0.54
7:Q:191:PHE:H	7:Q:192:PRO:CD	2.20	0.54
7:Q:203:ARG:HH11	7:Q:221:MET:HG2	1.73	0.54
7:Q:338:PRO:N	7:Q:339:PRO:CD	2.70	0.54
8:Z:37:ASN:HA	8:Z:43:THR:H	1.73	0.54
8:Z:350:VAL:HA	8:Z:362:PHE:O	2.07	0.54
8:Z:422:LEU:HB3	8:Z:437:VAL:HG12	1.90	0.54
1:A:105:ASP:HA	1:A:108:VAL:HB	1.90	0.54
2:B:131:ARG:O	2:B:135:LYS:HG3	2.06	0.54
2:B:192:GLY:O	2:B:193:SER:HB2	2.07	0.54
2:B:236:LYS:HD2	2:B:286:GLY:O	2.07	0.54
3:D:443:SER:HB3	3:D:451:SER:HA	1.89	0.54
6:H:226:GLU:O	6:H:227:MET:CB	2.55	0.54
7:Q:378:ARG:HG3	7:Q:378:ARG:HH11	1.71	0.54
2:B:203:LYS:HG3	2:B:203:LYS:O	2.07	0.54
2:B:408:TYR:CE2	2:B:489:SER:HB3	2.43	0.54
2:B:420:ALA:O	2:B:424:LEU:HG	2.08	0.54
6:H:488:PHE:HA	6:H:493:TRP:CZ2	2.43	0.54
7:Q:129:ILE:HG22	7:Q:133:GLU:HG3	1.89	0.54
7:Q:477:ASN:HB3	7:Q:491:ASP:OD1	2.07	0.54
1:A:105:ASP:O	1:A:109:LYS:HG3	2.08	0.54
2:B:9:VAL:HA	4:E:85:HIS:NE2	2.22	0.54
4:E:524:VAL:HA	4:E:527:ILE:CD1	2.38	0.54
5:G:209:ILE:O	5:G:209:ILE:HG22	2.07	0.54
6:H:521:LYS:HG2	7:Q:57:ILE:HB	1.89	0.54
1:A:275:ILE:HD11	1:A:296:CYS:HB3	1.90	0.54
2:B:219:LEU:HD21	2:B:359:LEU:HD23	1.90	0.54
4:E:392:LYS:O	4:E:396:GLU:HG3	2.07	0.54
5:G:350:LEU:HG	5:G:363:ILE:HG12	1.90	0.54
5:G:424:GLU:O	5:G:427:LYS:HG2	2.07	0.54
6:H:227:MET:HA	6:H:230:LYS:HZ2	1.68	0.54
7:Q:80:HIS:HB3	7:Q:83:ALA:CB	2.38	0.54
8:Z:445:LEU:O	8:Z:449:LYS:HG3	2.08	0.54
1:A:59:ALA:O	1:A:63:LYS:HG3	2.08	0.54
2:B:141:LEU:HD21	2:B:413:SER:OG	2.08	0.54
3:D:72:THR:HG21	3:D:83:GLN:NE2	2.23	0.54
3:D:467:THR:O	3:D:470:GLU:HB3	2.07	0.54
4:E:236:HIS:CG	4:E:237:PRO:HD2	2.43	0.54
5:G:18:SER:H	5:G:21:LYS:HB2	1.73	0.54
5:G:85:ARG:NE	5:G:85:ARG:HA	2.23	0.54
5:G:144:VAL:HG21	5:G:407:LEU:CD2	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:55:MET:HG2	7:Q:65:VAL:HG22	1.90	0.54
7:Q:206:LYS:HB3	7:Q:385:MET:CG	2.36	0.54
7:Q:225:LYS:HD2	7:Q:352:LEU:HD13	1.89	0.54
8:Z:414:VAL:O	8:Z:418:MET:HG3	2.08	0.54
3:D:29:ASP:HB2	3:D:540:ASN:HB2	1.89	0.54
4:E:25:LYS:HE2	4:E:536:PRO:HB3	1.89	0.54
4:E:121:GLU:HA	4:E:124:LEU:HD12	1.90	0.54
5:G:52:ASP:HB3	8:Z:525:GLY:C	2.28	0.54
5:G:286:LYS:HD2	5:G:340:GLU:OE2	2.08	0.54
6:H:9:LEU:HD22	6:H:13:THR:HG21	1.90	0.54
6:H:406:VAL:HB	6:H:412:ILE:CD1	2.38	0.54
7:Q:104:VAL:HG13	7:Q:105:LEU:N	2.23	0.54
7:Q:146:LEU:HD12	7:Q:147:VAL:N	2.23	0.54
7:Q:327:THR:HG22	7:Q:366:GLU:CD	2.28	0.54
7:Q:523:GLN:HG2	8:Z:33:VAL:HG13	1.90	0.54
8:Z:109:TYR:HB3	8:Z:114:LEU:CD1	2.38	0.54
8:Z:133:PHE:HA	8:Z:136:GLN:OE1	2.07	0.54
2:B:43:LEU:HD23	2:B:449:ILE:HB	1.89	0.53
2:B:52:LEU:C	2:B:53:LEU:HD12	2.28	0.53
2:B:97:ASP:C	2:B:99:THR:H	2.10	0.53
2:B:202:ILE:HG12	2:B:372:THR:CG2	2.38	0.53
4:E:44:VAL:HG11	4:E:91:MET:HG3	1.90	0.53
4:E:149:ASP:OD2	4:E:510:LEU:HD21	2.07	0.53
5:G:70:ILE:HG21	8:Z:6:THR:HG22	1.90	0.53
5:G:112:PHE:CE2	5:G:436:PRO:HA	2.42	0.53
5:G:156:ILE:HG12	5:G:398:CYS:HB2	1.91	0.53
6:H:274:LEU:HD22	6:H:299:ALA:HB2	1.89	0.53
6:H:294:PRO:HG3	6:H:313:ARG:HD3	1.88	0.53
7:Q:191:PHE:HE2	7:Q:373:SER:HG	1.56	0.53
7:Q:436:TYR:O	7:Q:440:LYS:HG2	2.08	0.53
1:A:86:VAL:HG11	1:A:509:VAL:HA	1.91	0.53
1:A:150:ASN:O	1:A:154:THR:HG23	2.09	0.53
1:A:383:PHE:HA	1:A:386:ASP:OD2	2.07	0.53
2:B:508:ALA:O	2:B:512:GLU:HG3	2.08	0.53
3:D:312:LEU:HB3	3:D:329:LYS:HD2	1.90	0.53
8:Z:222:LYS:HB2	8:Z:311:ILE:CD1	2.38	0.53
1:A:526:ARG:HG3	3:D:60:MET:HA	1.91	0.53
3:D:36:ILE:CG2	3:D:536:ASP:HA	2.38	0.53
4:E:119:GLU:HG3	4:E:454:ALA:HB2	1.89	0.53
4:E:289:ILE:HD11	4:E:310:ALA:HB1	1.91	0.53
4:E:318:ASP:C	4:E:319:LEU:HD12	2.29	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:83:ILE:HG23	5:G:508:THR:CG2	2.39	0.53
7:Q:238:LYS:HB3	7:Q:344:MET:HB3	1.90	0.53
8:Z:294:GLN:HE22	8:Z:318:ARG:HD3	1.71	0.53
1:A:60:THR:O	1:A:64:LEU:HG	2.08	0.53
1:A:112:ILE:HA	1:A:433:ARG:NH2	2.23	0.53
2:B:70:ILE:O	2:B:74:ILE:HG13	2.08	0.53
3:D:224:CYS:SG	3:D:393:VAL:HA	2.49	0.53
5:G:50:LEU:HD23	8:Z:521:ILE:O	2.07	0.53
5:G:164:VAL:HB	5:G:386:GLU:HG2	1.90	0.53
5:G:225:THR:HB	5:G:311:ALA:O	2.07	0.53
7:Q:222:VAL:CG1	7:Q:360:VAL:HB	2.39	0.53
3:D:256:LEU:HD13	3:D:312:LEU:HD13	1.90	0.53
4:E:42:LYS:HG2	4:E:46:ASN:HD21	1.72	0.53
4:E:256:GLU:HB2	4:E:257:PRO:HD2	1.89	0.53
5:G:12:GLN:O	5:G:13:ASN:HB2	2.09	0.53
5:G:49:MET:O	5:G:49:MET:HG2	2.09	0.53
5:G:217:GLY:HA3	5:G:364:THR:HA	1.91	0.53
6:H:111:TYR:HB3	6:H:116:LEU:HD22	1.90	0.53
6:H:238:ALA:N	6:H:288:VAL:O	2.41	0.53
8:Z:179:ILE:HD13	8:Z:191:VAL:CG2	2.38	0.53
8:Z:350:VAL:HG13	8:Z:363:ILE:HG12	1.90	0.53
8:Z:450:VAL:HG12	8:Z:454:ASN:ND2	2.24	0.53
1:A:45:LEU:HD13	1:A:64:LEU:HB2	1.90	0.53
2:B:43:LEU:HD12	2:B:44:GLY:N	2.22	0.53
2:B:399:GLN:O	2:B:403:ASP:HB3	2.08	0.53
2:B:432:GLU:O	2:B:436:MET:HG3	2.07	0.53
3:D:433:ILE:HG13	3:D:483:LEU:CD2	2.39	0.53
3:D:515:LEU:O	3:D:519:VAL:HG23	2.09	0.53
6:H:9:LEU:HD13	6:H:13:THR:CG2	2.38	0.53
6:H:153:LYS:O	6:H:157:LYS:HG3	2.08	0.53
7:Q:204:VAL:HG13	7:Q:377:LEU:HG	1.89	0.53
7:Q:225:LYS:HZ2	7:Q:352:LEU:HB2	1.70	0.53
1:A:17:ILE:HG23	1:A:18:ARG:N	2.21	0.53
1:A:59:ALA:HB1	1:A:63:LYS:HE3	1.91	0.53
1:A:137:ILE:CD1	1:A:410:PRO:HD3	2.35	0.53
1:A:211:ILE:HG12	1:A:376:ILE:CG1	2.38	0.53
1:A:239:PHE:HD2	1:A:330:THR:HA	1.74	0.53
2:B:72:LYS:HZ1	2:B:89:ARG:HG3	1.74	0.53
2:B:224:ILE:O	2:B:224:ILE:HG13	2.09	0.53
5:G:247:TYR:HB2	5:G:275:ILE:HD11	1.91	0.53
5:G:396:GLN:NE2	5:G:399:ARG:HB3	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:H:23:VAL:CG1	6:H:109:LYS:HZ1	2.18	0.53
6:H:225:PHE:CB	6:H:228:GLN:HG3	2.39	0.53
6:H:394:MET:O	6:H:397:ARG:HB3	2.08	0.53
6:H:418:LYS:HZ2	6:H:469:ALA:HA	1.74	0.53
7:Q:347:CYS:SG	7:Q:363:PHE:HB3	2.48	0.53
8:Z:44:MET:HB3	8:Z:58:LYS:HG2	1.91	0.53
1:A:115:THR:HG23	3:D:58:LYS:CE	2.39	0.53
1:A:351:VAL:CG2	1:A:364:ILE:HG23	2.37	0.53
5:G:282:ILE:HG22	5:G:287:PRO:HG3	1.90	0.53
6:H:48:LEU:CG	6:H:58:ILE:HG12	2.37	0.53
8:Z:175:SER:O	8:Z:179:ILE:HG12	2.09	0.53
3:D:82:LYS:CE	3:D:99:LYS:HZ3	2.22	0.53
3:D:420:LYS:HB2	3:D:516:LEU:HD12	1.90	0.53
7:Q:226:GLU:HG3	7:Q:314:ARG:CG	2.39	0.53
2:B:190:LEU:N	2:B:190:LEU:HD12	2.24	0.53
3:D:24:LYS:HZ2	3:D:539:VAL:HG11	1.73	0.53
4:E:94:LEU:HD11	4:E:523:MET:CB	2.39	0.53
4:E:405:ALA:O	4:E:409:ILE:HG13	2.08	0.53
5:G:71:GLN:HB3	8:Z:8:ASN:HB2	1.91	0.53
5:G:107:SER:HA	5:G:110:GLU:OE2	2.08	0.53
5:G:442:GLN:HA	5:G:445:GLU:OE2	2.09	0.53
6:H:520:ILE:O	7:Q:56:VAL:HA	2.09	0.53
7:Q:15:LEU:HA	8:Z:71:HIS:CE1	2.44	0.53
7:Q:113:GLU:HA	7:Q:116:GLU:OE2	2.09	0.53
2:B:275:MET:HA	2:B:278:LYS:HD2	1.91	0.52
3:D:194:VAL:HA	3:D:197:VAL:CG2	2.38	0.52
5:G:184:GLN:OE1	5:G:402:LEU:HD23	2.10	0.52
5:G:285:LEU:HD22	5:G:339:ARG:HA	1.90	0.52
6:H:73:HIS:HB3	6:H:76:ALA:HB3	1.92	0.52
8:Z:161:HIS:CE1	8:Z:164:LEU:HB3	2.44	0.52
8:Z:180:LYS:HB3	8:Z:186:ILE:HG12	1.92	0.52
8:Z:218:HIS:HB2	8:Z:302:LEU:HB3	1.91	0.52
1:A:213:GLY:O	1:A:374:SER:N	2.42	0.52
2:B:455:GLY:HA3	3:D:135:ILE:CG1	2.39	0.52
4:E:437:ALA:CB	4:E:448:MET:HB2	2.38	0.52
5:G:355:ILE:HB	5:G:360:PHE:CD2	2.44	0.52
6:H:133:VAL:HG12	6:H:137:LYS:HZ2	1.74	0.52
6:H:191:GLN:HB3	6:H:194:MET:SD	2.48	0.52
8:Z:176:ILE:HA	8:Z:179:ILE:HG12	1.91	0.52
8:Z:290:VAL:HA	8:Z:311:ILE:O	2.10	0.52
1:A:458:GLN:O	1:A:459:ASP:C	2.48	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:528:ASP:OD2	3:D:53:THR:HG21	2.10	0.52
2:B:446:LEU:HB3	2:B:447:PRO:CD	2.40	0.52
4:E:18:ILE:HG13	6:H:73:HIS:CD2	2.44	0.52
6:H:27:SER:O	6:H:31:VAL:HG23	2.10	0.52
6:H:278:LEU:CD2	6:H:302:TYR:HB2	2.40	0.52
8:Z:355:LEU:HD13	8:Z:375:LEU:HD21	1.90	0.52
1:A:133:SER:HA	1:A:136:LEU:HD11	1.91	0.52
1:A:532:LYS:HG2	3:D:65:GLN:HB3	1.91	0.52
2:B:19:GLU:HB3	2:B:24:ALA:HA	1.91	0.52
2:B:520:ILE:HD12	4:E:60:MET:CB	2.37	0.52
5:G:72:VAL:HG22	8:Z:6:THR:O	2.09	0.52
5:G:80:MET:HA	5:G:83:ILE:HD12	1.92	0.52
5:G:407:LEU:HA	5:G:499:LEU:N	2.25	0.52
8:Z:230:ILE:O	8:Z:344:LEU:HA	2.09	0.52
2:B:218:PHE:HA	2:B:372:THR:OG1	2.09	0.52
4:E:237:PRO:HG2	4:E:238:GLN:H	1.75	0.52
5:G:71:GLN:H	8:Z:524:ALA:HB1	1.74	0.52
6:H:133:VAL:HG12	6:H:137:LYS:HZ1	1.72	0.52
7:Q:221:MET:HA	7:Q:374:THR:HG1	1.72	0.52
8:Z:14:ALA:HB1	8:Z:19:ALA:HB2	1.92	0.52
8:Z:48:VAL:HG13	8:Z:53:ASP:O	2.09	0.52
1:A:9:GLY:HA2	1:A:533:LEU:HD22	1.92	0.52
1:A:214:TYR:HA	1:A:374:SER:OG	2.09	0.52
2:B:407:VAL:CG2	2:B:495:GLU:HB2	2.37	0.52
3:D:404:ALA:O	3:D:408:ILE:HG13	2.10	0.52
5:G:396:GLN:HE22	5:G:399:ARG:HD3	1.74	0.52
6:H:17:GLN:O	6:H:20:PRO:HD2	2.10	0.52
6:H:443:GLU:O	6:H:447:ARG:HB2	2.10	0.52
8:Z:103:LEU:CD2	8:Z:516:LEU:HD21	2.36	0.52
8:Z:333:LEU:HD23	8:Z:339:LEU:HD23	1.90	0.52
8:Z:514:ASN:O	8:Z:518:VAL:HG23	2.10	0.52
1:A:6:SER:HA	3:D:87:LEU:HD11	1.91	0.52
1:A:75:LEU:HB3	1:A:94:VAL:HG13	1.90	0.52
2:B:11:ILE:HA	4:E:85:HIS:HB2	1.92	0.52
2:B:231:ARG:NH2	2:B:348:LEU:HD11	2.23	0.52
3:D:226:LEU:HD11	3:D:389:VAL:HB	1.91	0.52
3:D:237:ALA:HA	3:D:317:LEU:HD11	1.91	0.52
3:D:247:ALA:HA	3:D:299:ASN:ND2	2.20	0.52
3:D:290:VAL:HG13	3:D:320:LEU:HD23	1.91	0.52
4:E:299:LEU:HD12	4:E:320:PRO:O	2.09	0.52
6:H:73:HIS:HB3	6:H:76:ALA:CB	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Z:422:LEU:HA	8:Z:425:TYR:HB3	1.92	0.52
2:B:53:LEU:HD23	3:D:542:ARG:NH2	2.25	0.52
3:D:36:ILE:HG23	3:D:536:ASP:HA	1.92	0.52
3:D:450:GLU:O	3:D:454:ILE:HG13	2.10	0.52
4:E:45:ALA:CB	4:E:114:GLY:HA3	2.40	0.52
5:G:46:MET:CA	8:Z:517:LEU:HB3	2.40	0.52
5:G:62:ASP:OD2	5:G:64:ASN:HB3	2.10	0.52
5:G:226:HIS:ND1	5:G:227:PRO:HD2	2.25	0.52
7:Q:93:GLN:HE22	7:Q:97:VAL:HG22	1.74	0.52
7:Q:138:LYS:O	7:Q:142:ILE:HG13	2.10	0.52
7:Q:292:VAL:HG21	7:Q:324:LEU:CD2	2.39	0.52
8:Z:426:LYS:N	8:Z:427:PRO:CD	2.73	0.52
2:B:79:PRO:CG	2:B:522:LYS:HG3	2.40	0.52
2:B:90:VAL:O	2:B:94:GLU:HG2	2.10	0.52
2:B:144:SER:CB	2:B:474:THR:HG21	2.33	0.52
4:E:204:VAL:HB	4:E:410:ARG:CG	2.33	0.52
5:G:165:ILE:HG21	5:G:390:ASN:HB3	1.92	0.52
6:H:36:VAL:HG23	6:H:95:THR:HG23	1.92	0.52
8:Z:118:ILE:H	8:Z:118:ILE:CD1	2.20	0.52
1:A:356:ILE:HG23	1:A:378:ARG:CZ	2.40	0.52
6:H:78:THR:HA	6:H:81:ASP:OD2	2.09	0.52
6:H:118:PRO:O	6:H:121:ILE:HB	2.10	0.52
6:H:133:VAL:HG13	6:H:500:ILE:HG23	1.92	0.52
7:Q:188:VAL:HG13	7:Q:197:PHE:CZ	2.45	0.52
7:Q:448:ILE:N	7:Q:448:ILE:HD12	2.25	0.52
8:Z:109:TYR:HA	8:Z:112:GLU:CD	2.30	0.52
3:D:431:PRO:HG2	3:D:432:GLU:OE1	2.09	0.51
4:E:161:ASN:HD22	4:E:164:PRO:CB	2.20	0.51
6:H:71:VAL:HB	6:H:77:LYS:HE3	1.90	0.51
7:Q:33:ILE:HG13	7:Q:112:LEU:CB	2.28	0.51
8:Z:462:THR:HA	8:Z:465:LYS:HE2	1.90	0.51
1:A:277:LYS:HA	1:A:277:LYS:NZ	2.24	0.51
1:A:427:ALA:O	1:A:435:GLN:HG3	2.11	0.51
1:A:438:ILE:O	1:A:441:PHE:HB3	2.10	0.51
2:B:194:GLY:CA	2:B:401:VAL:HG21	2.38	0.51
2:B:202:ILE:HG13	2:B:219:LEU:HD23	1.92	0.51
3:D:230:LEU:CD1	3:D:338:PHE:HB3	2.40	0.51
5:G:51:LEU:HD13	8:Z:521:ILE:HG23	1.93	0.51
5:G:286:LYS:N	5:G:287:PRO:CD	2.73	0.51
5:G:404:ASP:OD2	5:G:406:GLN:HG2	2.09	0.51
6:H:216:PHE:CE2	6:H:318:ASP:HB3	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:H:230:LYS:O	6:H:349:GLU:HA	2.09	0.51
8:Z:222:LYS:HB2	8:Z:311:ILE:CG1	2.41	0.51
8:Z:225:VAL:HG21	8:Z:290:VAL:HG22	1.92	0.51
2:B:196:LEU:HD11	2:B:395:CYS:HA	1.93	0.51
2:B:513:VAL:HG13	2:B:516:ARG:HH12	1.74	0.51
3:D:197:VAL:CG1	3:D:387:LYS:HA	2.35	0.51
6:H:238:ALA:CB	6:H:289:VAL:HG22	2.38	0.51
7:Q:523:GLN:HB3	8:Z:45:LYS:HE3	1.92	0.51
8:Z:138:LYS:HD2	8:Z:406:CYS:SG	2.50	0.51
2:B:135:LYS:O	2:B:139:GLN:HG3	2.11	0.51
2:B:509:GLU:HA	2:B:512:GLU:OE1	2.11	0.51
3:D:178:VAL:HB	3:D:403:GLU:CG	2.36	0.51
3:D:206:VAL:HG21	3:D:419:VAL:HG21	1.92	0.51
3:D:300:VAL:HG13	3:D:326:MET:HE1	1.91	0.51
4:E:248:ILE:HG12	4:E:299:LEU:HD23	1.92	0.51
4:E:463:ALA:HB2	4:E:473:THR:HG21	1.92	0.51
5:G:380:SER:O	5:G:384:LEU:HB2	2.11	0.51
8:Z:144:ASP:O	8:Z:148:LEU:HG	2.11	0.51
8:Z:160:VAL:CG2	8:Z:386:GLN:HG2	2.40	0.51
8:Z:164:LEU:HD13	8:Z:202:THR:HG22	1.91	0.51
1:A:222:SER:OG	1:A:225:MET:HG2	2.11	0.51
2:B:239:ILE:HB	2:B:331:ILE:HA	1.93	0.51
2:B:351:GLU:HG3	2:B:360:ILE:HD13	1.92	0.51
3:D:119:LEU:HB3	3:D:140:PHE:HE2	1.75	0.51
4:E:93:GLU:HB2	4:E:523:MET:HE1	1.93	0.51
5:G:51:LEU:HD13	8:Z:521:ILE:CG2	2.40	0.51
6:H:150:GLU:O	6:H:151:GLN:HB3	2.11	0.51
6:H:152:ARG:O	6:H:156:GLU:HG3	2.10	0.51
7:Q:296:ARG:HH12	7:Q:315:LEU:HD11	1.75	0.51
1:A:32:VAL:HB	1:A:91:THR:HG23	1.93	0.51
1:A:487:GLY:CA	1:A:498:ASN:HD21	2.23	0.51
2:B:279:VAL:HG11	2:B:303:LEU:CB	2.41	0.51
3:D:144:LEU:HG	3:D:526:THR:HB	1.92	0.51
3:D:463:VAL:HG23	3:D:464:ILE:N	2.26	0.51
4:E:445:GLN:O	4:E:449:ARG:HG3	2.10	0.51
5:G:49:MET:HB2	5:G:59:MET:HE2	1.92	0.51
5:G:476:GLU:O	5:G:476:GLU:HG2	2.10	0.51
7:Q:225:LYS:HD2	7:Q:352:LEU:HD22	1.92	0.51
7:Q:230:ASP:CB	7:Q:311:MET:HA	2.38	0.51
7:Q:327:THR:OG1	7:Q:372:ILE:HB	2.10	0.51
5:G:391:LEU:O	5:G:395:MET:HG3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:337:ASN:H	7:Q:338:PRO:CD	2.23	0.51
7:Q:425:SER:O	7:Q:429:THR:HG23	2.11	0.51
8:Z:292:ILE:HD13	8:Z:313:LEU:HD13	1.93	0.51
2:B:446:LEU:HB3	2:B:447:PRO:HD3	1.93	0.51
2:B:479:ASP:OD1	2:B:482:GLU:HG2	2.10	0.51
3:D:82:LYS:NZ	3:D:99:LYS:NZ	2.58	0.51
3:D:179:VAL:HG11	3:D:407:SER:HB2	1.93	0.51
4:E:133:ILE:HB	4:E:528:LEU:HD11	1.93	0.51
4:E:248:ILE:HD12	4:E:337:THR:HG21	1.92	0.51
5:G:406:GLN:O	5:G:499:LEU:N	2.35	0.51
6:H:316:GLU:HG2	6:H:320:LYS:HE3	1.93	0.51
6:H:411:ALA:HB2	6:H:487:ASN:ND2	2.25	0.51
8:Z:311:ILE:HD12	8:Z:311:ILE:N	2.26	0.51
1:A:137:ILE:HG21	1:A:499:LYS:HG3	1.92	0.51
2:B:52:LEU:O	2:B:53:LEU:HD12	2.11	0.51
2:B:516:ARG:HG2	4:E:57:LEU:HA	1.92	0.51
3:D:333:ARG:O	3:D:337:GLU:HG3	2.11	0.51
4:E:123:LEU:HB3	4:E:128:ILE:HD12	1.91	0.51
5:G:512:THR:O	5:G:516:LEU:HG	2.11	0.51
6:H:9:LEU:HB3	6:H:13:THR:HB	1.92	0.51
6:H:294:PRO:HG3	6:H:313:ARG:CG	2.41	0.51
6:H:378:ALA:HB3	6:H:381:PHE:HD1	1.76	0.51
7:Q:171:LYS:HB2	7:Q:173:TYR:CD1	2.45	0.51
7:Q:337:ASN:N	7:Q:338:PRO:CD	2.74	0.51
7:Q:520:ARG:O	7:Q:522:ASP:N	2.44	0.51
1:A:164:ASN:HB3	1:A:206:MET:HE1	1.91	0.51
3:D:196:LYS:HB3	3:D:386:GLY:N	2.25	0.51
3:D:417:CYS:HA	3:D:516:LEU:CD1	2.41	0.51
3:D:525:ALA:O	3:D:529:VAL:HG23	2.11	0.51
4:E:443:LEU:N	4:E:443:LEU:CD2	2.74	0.51
7:Q:155:ARG:HH22	7:Q:192:PRO:CG	2.24	0.51
8:Z:209:GLY:HA3	8:Z:364:GLU:HA	1.92	0.51
1:A:105:ASP:O	1:A:108:VAL:HB	2.11	0.50
1:A:167:PHE:HB2	1:A:206:MET:HE1	1.93	0.50
1:A:401:ARG:NH2	1:A:506:PRO:HG2	2.27	0.50
1:A:408:VAL:HG22	1:A:409:VAL:N	2.26	0.50
2:B:35:ILE:HB	2:B:84:LEU:CD1	2.41	0.50
2:B:186:ALA:HB2	2:B:214:LEU:HD11	1.92	0.50
2:B:330:GLU:HB2	2:B:342:LYS:HD3	1.91	0.50
4:E:87:ILE:HG23	4:E:88:ALA:N	2.26	0.50
4:E:231:ASP:OD1	4:E:371:MET:HE3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:407:LEU:CB	5:G:498:PRO:HA	2.40	0.50
6:H:92:ASP:CG	6:H:93:GLY:N	2.64	0.50
7:Q:24:GLY:O	7:Q:27:GLU:HB3	2.11	0.50
7:Q:68:ASP:O	7:Q:72:ILE:HG13	2.10	0.50
7:Q:140:HIS:HE2	7:Q:508:ILE:HB	1.76	0.50
7:Q:156:ASP:O	7:Q:160:VAL:HG23	2.11	0.50
2:B:29:PHE:CZ	2:B:515:LEU:HA	2.46	0.50
2:B:89:ARG:HH11	2:B:89:ARG:HG2	1.76	0.50
2:B:124:GLN:HG2	4:E:55:ASN:HD21	1.73	0.50
2:B:461:LEU:CD2	2:B:478:LEU:HD13	2.42	0.50
3:D:86:VAL:CG1	3:D:91:ALA:HB3	2.42	0.50
3:D:194:VAL:O	3:D:198:ILE:HG23	2.10	0.50
6:H:26:ILE:HG23	6:H:105:LEU:CB	2.36	0.50
6:H:215:ALA:CB	6:H:373:ILE:HD11	2.33	0.50
8:Z:412:GLY:HA2	8:Z:415:GLU:CD	2.32	0.50
4:E:416:ASN:O	4:E:417:ARG:HG2	2.12	0.50
5:G:137:LEU:HA	5:G:140:ILE:CD1	2.41	0.50
7:Q:20:LYS:HB3	7:Q:525:ILE:HG13	1.93	0.50
7:Q:155:ARG:HH22	7:Q:192:PRO:HG2	1.75	0.50
8:Z:13:VAL:HG13	8:Z:522:MET:HG2	1.94	0.50
8:Z:99:ILE:HG13	8:Z:512:ALA:HB2	1.92	0.50
8:Z:422:LEU:HB2	8:Z:441:ALA:HB2	1.93	0.50
3:D:98:SER:O	3:D:109:THR:HG23	2.11	0.50
4:E:134:ALA:HB1	4:E:525:ARG:HG3	1.93	0.50
4:E:344:ARG:NH2	4:E:345:PHE:CD2	2.80	0.50
4:E:426:GLU:HB3	4:E:455:LEU:O	2.11	0.50
5:G:462:LEU:O	5:G:466:LEU:HB2	2.12	0.50
7:Q:408:LEU:HD12	7:Q:408:LEU:O	2.10	0.50
8:Z:164:LEU:HG	8:Z:167:VAL:HB	1.93	0.50
8:Z:168:LEU:O	8:Z:172:VAL:HG23	2.12	0.50
8:Z:198:HIS:O	8:Z:199:LYS:HB2	2.11	0.50
8:Z:293:ASN:HD22	8:Z:297:ILE:CD1	2.23	0.50
1:A:322:ALA:O	1:A:369:ALA:HB3	2.12	0.50
1:A:349:GLU:HB3	1:A:366:ASN:CB	2.35	0.50
1:A:498:ASN:HB3	1:A:503:VAL:HB	1.92	0.50
3:D:187:SER:O	3:D:191:VAL:HG23	2.11	0.50
3:D:252:ILE:HD11	3:D:354:PHE:CG	2.45	0.50
4:E:115:ALA:HB1	4:E:457:VAL:HG11	1.94	0.50
6:H:213:GLY:O	6:H:370:CYS:HA	2.12	0.50
7:Q:138:LYS:HD2	7:Q:141:GLU:OE1	2.11	0.50
8:Z:328:CYS:SG	8:Z:366:CYS:SG	3.06	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:24:ALA:HB1	1:A:72:ALA:HB2	1.93	0.50
1:A:398:VAL:O	1:A:402:VAL:HG23	2.12	0.50
2:B:487:ASP:O	2:B:491:LEU:HG	2.11	0.50
3:D:483:LEU:HD22	3:D:496:ILE:HD11	1.92	0.50
3:D:486:ARG:HG3	3:D:503:ILE:HG12	1.93	0.50
4:E:300:ALA:HB3	4:E:321:ALA:HB2	1.94	0.50
5:G:283:ILE:HG12	5:G:309:ILE:CD1	2.42	0.50
6:H:331:GLN:CG	6:H:341:VAL:HG11	2.41	0.50
6:H:331:GLN:HG2	6:H:341:VAL:HG11	1.94	0.50
8:Z:333:LEU:HB2	8:Z:339:LEU:CD2	2.42	0.50
8:Z:409:PRO:O	8:Z:414:VAL:HG23	2.11	0.50
1:A:277:LYS:NZ	1:A:280:ALA:HB3	2.26	0.50
1:A:447:VAL:HG13	1:A:448:ILE:N	2.27	0.50
2:B:408:TYR:CZ	2:B:489:SER:HB3	2.46	0.50
4:E:73:ASP:O	4:E:77:ILE:HG13	2.10	0.50
4:E:215:VAL:HB	4:E:392:LYS:HZ2	1.77	0.50
4:E:318:ASP:O	4:E:319:LEU:HD12	2.12	0.50
7:Q:215:SER:HA	7:Q:378:ARG:HG2	1.93	0.50
8:Z:142:GLU:HG3	8:Z:144:ASP:H	1.77	0.50
1:A:5:LEU:CD1	1:A:11:ARG:HB2	2.40	0.50
1:A:114:PRO:HB3	1:A:525:LEU:HD22	1.93	0.50
1:A:409:VAL:HB	1:A:410:PRO:HD2	1.94	0.50
1:A:474:ALA:O	1:A:483:LEU:HB2	2.11	0.50
2:B:11:ILE:HD11	4:E:40:ALA:HB1	1.93	0.50
2:B:51:ILE:N	3:D:538:VAL:HG13	2.26	0.50
2:B:408:TYR:OH	2:B:489:SER:HB3	2.12	0.50
3:D:249:ILE:O	3:D:359:LEU:HA	2.12	0.50
3:D:487:HIS:HE1	3:D:492:LYS:HA	1.77	0.50
5:G:95:THR:O	5:G:99:ILE:HG12	2.12	0.50
5:G:203:LYS:HB2	5:G:384:LEU:HD21	1.93	0.50
5:G:230:ARG:NE	5:G:308:ASN:HB3	2.27	0.50
6:H:50:VAL:HG13	6:H:54:GLY:O	2.12	0.50
6:H:63:ALA:H	6:H:94:THR:HG21	1.76	0.50
6:H:238:ALA:O	6:H:289:VAL:HA	2.12	0.50
3:D:82:LYS:HZ3	3:D:99:LYS:HZ3	1.60	0.50
3:D:421:LYS:CG	3:D:515:LEU:HB3	2.39	0.50
4:E:27:ARG:NH2	4:E:534:ARG:NH2	2.59	0.50
7:Q:171:LYS:HB2	7:Q:173:TYR:HE1	1.77	0.50
8:Z:139:VAL:O	8:Z:407:VAL:HG12	2.11	0.50
8:Z:232:THR:O	8:Z:339:LEU:HD21	2.11	0.50
2:B:51:ILE:H	3:D:538:VAL:HG13	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:465:LEU:HD12	2:B:485:ILE:HD12	1.93	0.49
2:B:477:GLY:HA3	2:B:488:MET:HG2	1.93	0.49
3:D:169:SER:HB2	3:D:418:LEU:HD22	1.94	0.49
3:D:179:VAL:HG12	3:D:404:ALA:HA	1.93	0.49
3:D:515:LEU:HG	3:D:519:VAL:HG23	1.91	0.49
4:E:251:LEU:O	4:E:302:CYS:HA	2.12	0.49
4:E:385:ILE:O	4:E:387:ILE:HD12	2.12	0.49
5:G:46:MET:HG2	8:Z:517:LEU:CD2	2.42	0.49
5:G:110:GLU:HA	5:G:113:LEU:HD12	1.94	0.49
5:G:171:LEU:O	5:G:175:ILE:HG13	2.12	0.49
7:Q:353:SER:O	7:Q:360:VAL:HG22	2.11	0.49
8:Z:23:ASN:O	8:Z:73:THR:HG21	2.12	0.49
8:Z:35:ARG:HD2	8:Z:450:VAL:HG22	1.94	0.49
8:Z:55:LYS:HE2	8:Z:62:VAL:HG11	1.94	0.49
8:Z:62:VAL:O	8:Z:66:GLU:HG2	2.12	0.49
8:Z:415:GLU:OE2	8:Z:447:ILE:HG21	2.11	0.49
1:A:532:LYS:HZ2	3:D:65:GLN:HB2	1.77	0.49
2:B:505:LEU:O	2:B:509:GLU:HG2	2.12	0.49
3:D:105:ALA:N	3:D:416:ARG:HH22	2.10	0.49
4:E:178:VAL:HG21	4:E:185:MET:HG3	1.93	0.49
4:E:306:PHE:HB3	4:E:323:ARG:HD3	1.94	0.49
4:E:340:ARG:HD2	4:E:352:LYS:HD3	1.94	0.49
5:G:23:GLN:NE2	5:G:113:LEU:HD22	2.27	0.49
7:Q:44:ARG:HE	7:Q:451:ALA:HB2	1.77	0.49
1:A:31:ILE:CG1	5:G:16:ARG:HH12	2.24	0.49
1:A:119:SER:O	1:A:123:LEU:HG	2.12	0.49
1:A:125:CYS:O	1:A:129:VAL:HG23	2.12	0.49
2:B:522:LYS:HE2	2:B:523:ALA:H	1.77	0.49
3:D:122:SER:HB2	3:D:456:ALA:HB1	1.93	0.49
4:E:145:ILE:HG23	4:E:149:ASP:OD1	2.12	0.49
4:E:363:SER:HA	4:E:370:LYS:HA	1.94	0.49
4:E:400:ARG:O	4:E:403:HIS:HB3	2.12	0.49
7:Q:92:MET:O	7:Q:96:GLU:HG2	2.12	0.49
7:Q:218:LEU:HD13	7:Q:362:VAL:CG1	2.42	0.49
7:Q:246:PHE:CB	7:Q:297:VAL:HG13	2.42	0.49
7:Q:474:GLY:HA3	7:Q:478:VAL:CG2	2.42	0.49
8:Z:15:ARG:O	8:Z:18:ALA:HB3	2.12	0.49
8:Z:224:ARG:NH1	8:Z:349:LEU:HD11	2.28	0.49
1:A:82:GLN:NE2	1:A:86:VAL:HG21	2.27	0.49
1:A:474:ALA:HB3	1:A:486:ILE:HG13	1.94	0.49
2:B:218:PHE:CB	2:B:326:VAL:HG11	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:61:ASP:O	3:D:62:LYS:HD3	2.12	0.49
3:D:466:SER:OG	3:D:480:VAL:HG21	2.13	0.49
3:D:469:ALA:HB1	3:D:474:LEU:HB2	1.93	0.49
5:G:65:ALA:O	5:G:69:GLU:HG2	2.13	0.49
5:G:325:ARG:HG2	5:G:325:ARG:HH11	1.78	0.49
5:G:401:VAL:HG13	5:G:402:LEU:CD1	2.42	0.49
6:H:289:VAL:HB	6:H:310:CYS:SG	2.52	0.49
6:H:378:ALA:HB3	6:H:381:PHE:CD1	2.48	0.49
6:H:390:HIS:O	6:H:394:MET:HG2	2.13	0.49
7:Q:49:PRO:CA	7:Q:170:SER:HA	2.42	0.49
1:A:86:VAL:HG13	1:A:512:LYS:HZ1	1.74	0.49
2:B:215:ASP:O	2:B:371:CYS:HB3	2.12	0.49
3:D:24:LYS:HG3	3:D:30:ARG:HH11	1.77	0.49
3:D:132:HIS:HB3	3:D:135:ILE:CD1	2.42	0.49
3:D:317:LEU:HG	3:D:321:ASN:ND2	2.27	0.49
4:E:94:LEU:HG	4:E:523:MET:HG2	1.95	0.49
4:E:511:ILE:H	4:E:511:ILE:CD1	2.23	0.49
5:G:477:THR:O	5:G:489:ASP:HA	2.13	0.49
7:Q:410:PRO:HG3	7:Q:476:LYS:HG2	1.95	0.49
7:Q:417:ILE:HG13	7:Q:467:LEU:HD21	1.95	0.49
8:Z:35:ARG:HG2	8:Z:453:GLN:HE22	1.77	0.49
8:Z:473:SER:HB2	8:Z:477:VAL:CG2	2.43	0.49
2:B:158:ASP:O	2:B:162:ILE:HG12	2.13	0.49
3:D:36:ILE:HG21	3:D:536:ASP:C	2.33	0.49
3:D:89:PRO:HA	3:D:92:ARG:HD2	1.94	0.49
4:E:193:VAL:HG11	4:E:409:ILE:HG22	1.95	0.49
5:G:38:ARG:HG3	5:G:100:ILE:CD1	2.42	0.49
6:H:443:GLU:OE1	6:H:461:LEU:HD11	2.13	0.49
7:Q:17:GLU:CB	8:Z:68:GLN:HG2	2.43	0.49
7:Q:218:LEU:HD13	7:Q:362:VAL:HG13	1.94	0.49
1:A:2:GLU:CB	3:D:90:ALA:HB3	2.43	0.49
1:A:224:GLY:HA3	1:A:301:VAL:HG13	1.94	0.49
2:B:239:ILE:HD12	2:B:329:GLY:O	2.13	0.49
4:E:87:ILE:CD1	4:E:527:ILE:HD13	2.43	0.49
5:G:203:LYS:CD	5:G:384:LEU:HG	2.34	0.49
5:G:285:LEU:HD11	5:G:338:LEU:HB3	1.94	0.49
5:G:424:GLU:HA	5:G:427:LYS:HZ3	1.78	0.49
7:Q:14:MET:HG3	8:Z:70:GLN:OE1	2.12	0.49
7:Q:112:LEU:HD22	7:Q:519:LEU:CD2	2.36	0.49
7:Q:292:VAL:HG21	7:Q:324:LEU:HD21	1.95	0.49
8:Z:131:LEU:CD2	8:Z:505:LEU:HD12	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Z:132:GLN:O	8:Z:136:GLN:HG3	2.11	0.49
1:A:59:ALA:HB2	1:A:90:THR:HG21	1.93	0.49
1:A:445:LEU:N	1:A:446:PRO:CD	2.76	0.49
2:B:163:ALA:HB3	2:B:180:THR:HG23	1.95	0.49
3:D:431:PRO:HG2	3:D:432:GLU:CD	2.33	0.49
3:D:470:GLU:C	3:D:472:ALA:H	2.16	0.49
4:E:75:ALA:HB2	4:E:106:THR:HG21	1.95	0.49
5:G:352:ILE:HD11	5:G:359:TYR:HB3	1.95	0.49
5:G:523:VAL:HG12	5:G:524:SER:N	2.28	0.49
7:Q:524:ILE:CG2	8:Z:46:MET:N	2.73	0.49
2:B:187:VAL:CG2	2:B:397:LEU:HD13	2.41	0.49
2:B:353:MET:HA	2:B:357:ASP:O	2.13	0.49
3:D:251:LEU:CB	3:D:347:PRO:HA	2.43	0.49
4:E:90:LEU:HA	4:E:93:GLU:CD	2.33	0.49
4:E:95:SER:HB2	4:E:106:THR:HG22	1.95	0.49
4:E:173:LEU:HD13	4:E:185:MET:HB2	1.94	0.49
8:Z:97:LEU:HB3	8:Z:446:ILE:HD13	1.94	0.49
1:A:483:LEU:O	1:A:486:ILE:HG12	2.13	0.49
2:B:487:ASP:HB3	2:B:490:VAL:HB	1.94	0.49
2:B:522:LYS:NZ	3:D:22:ARG:O	2.46	0.49
4:E:20:LYS:HZ3	6:H:32:ILE:CG1	2.26	0.49
6:H:154:LEU:HA	6:H:157:LYS:HZ3	1.78	0.49
6:H:226:GLU:HB3	6:H:227:MET:HE2	1.94	0.49
7:Q:44:ARG:HE	7:Q:451:ALA:CB	2.25	0.49
7:Q:239:ILE:O	7:Q:344:MET:HA	2.12	0.49
7:Q:407:ARG:HB2	7:Q:501:TYR:HB3	1.94	0.49
7:Q:448:ILE:HD12	7:Q:448:ILE:H	1.78	0.49
1:A:57:ASP:O	1:A:61:ILE:HG13	2.12	0.48
1:A:506:PRO:HB2	1:A:509:VAL:CG2	2.37	0.48
2:B:74:ILE:HA	3:D:541:THR:OG1	2.13	0.48
2:B:287:ILE:CG2	2:B:343:LEU:HD21	2.43	0.48
5:G:23:GLN:NE2	5:G:113:LEU:HD13	2.16	0.48
5:G:72:VAL:HA	8:Z:6:THR:O	2.12	0.48
5:G:183:VAL:HG23	5:G:194:ASP:OD2	2.13	0.48
6:H:450:CYS:HA	6:H:479:ILE:CD1	2.43	0.48
7:Q:222:VAL:HG23	7:Q:374:THR:HG21	1.94	0.48
7:Q:316:ASN:OD1	7:Q:320:ASP:HB2	2.13	0.48
8:Z:13:VAL:HG13	8:Z:522:MET:CG	2.43	0.48
8:Z:410:GLY:HA3	8:Z:496:ASP:OD1	2.13	0.48
2:B:79:PRO:HD3	2:B:522:LYS:CD	2.40	0.48
2:B:198:ALA:HB1	2:B:369:GLU:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:174:LEU:HB2	3:D:183:SER:OG	2.13	0.48
3:D:226:LEU:HD21	3:D:389:VAL:HG11	1.95	0.48
3:D:395:GLY:O	3:D:401:ILE:HD11	2.12	0.48
4:E:34:LEU:O	4:E:38:ILE:HG13	2.13	0.48
5:G:101:LEU:HG	5:G:447:ILE:HD11	1.95	0.48
5:G:209:ILE:HD13	5:G:387:VAL:HG21	1.94	0.48
7:Q:138:LYS:HG2	7:Q:426:TYR:CD2	2.48	0.48
7:Q:174:GLY:HA2	7:Q:177:VAL:CG1	2.41	0.48
7:Q:246:PHE:HB2	7:Q:297:VAL:HG13	1.94	0.48
1:A:271:THR:HA	1:A:274:ARG:NH2	2.28	0.48
1:A:350:GLU:HB3	1:A:366:ASN:HD22	1.77	0.48
1:A:483:LEU:HD12	1:A:485:TRP:CH2	2.48	0.48
2:B:11:ILE:HA	4:E:85:HIS:N	2.24	0.48
3:D:483:LEU:HD22	3:D:496:ILE:CD1	2.42	0.48
4:E:18:ILE:HG22	4:E:19:ILE:HG13	1.95	0.48
4:E:315:LEU:HD23	4:E:315:LEU:C	2.34	0.48
5:G:79:SER:O	5:G:83:ILE:HG13	2.13	0.48
6:H:199:LYS:HG3	6:H:199:LYS:O	2.13	0.48
6:H:418:LYS:NZ	6:H:469:ALA:HA	2.27	0.48
7:Q:103:PHE:CE1	7:Q:448:ILE:HG12	2.42	0.48
7:Q:227:THR:HG23	7:Q:302:LEU:HD22	1.94	0.48
7:Q:351:TYR:CE2	7:Q:364:LYS:HE2	2.49	0.48
7:Q:486:VAL:O	7:Q:486:VAL:HG13	2.14	0.48
8:Z:161:HIS:C	8:Z:163:GLU:H	2.15	0.48
1:A:35:SER:HA	1:A:41:LEU:H	1.78	0.48
1:A:384:MET:SD	1:A:384:MET:N	2.87	0.48
2:B:46:LYS:O	2:B:453:ASN:HB3	2.14	0.48
4:E:459:PRO:HA	4:E:462:LEU:HG	1.95	0.48
6:H:86:GLN:HE21	6:H:90:VAL:CG2	2.26	0.48
6:H:129:THR:O	6:H:133:VAL:HG23	2.14	0.48
6:H:214:VAL:HG23	6:H:361:PHE:HB2	1.95	0.48
6:H:366:LYS:O	6:H:368:LYS:N	2.46	0.48
6:H:496:ALA:O	6:H:500:ILE:HG13	2.13	0.48
6:H:516:VAL:HG22	7:Q:53:ASN:O	2.13	0.48
7:Q:55:MET:SD	7:Q:63:LEU:HD21	2.53	0.48
7:Q:199:VAL:CG1	7:Q:396:VAL:HG12	2.35	0.48
7:Q:428:GLU:HA	7:Q:435:GLN:NE2	2.12	0.48
1:A:4:PRO:O	1:A:5:LEU:HD23	2.13	0.48
1:A:9:GLY:HA2	1:A:533:LEU:CD2	2.44	0.48
2:B:196:LEU:HD11	2:B:398:ALA:HB2	1.94	0.48
2:B:238:LEU:HD22	2:B:287:ILE:HG21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:287:ILE:HD11	2:B:290:PHE:HB2	1.95	0.48
3:D:31:ASP:HB3	3:D:36:ILE:CB	2.27	0.48
3:D:79:THR:O	3:D:83:GLN:HG3	2.13	0.48
3:D:364:LEU:HD11	3:D:366:GLU:HB3	1.95	0.48
3:D:420:LYS:HD2	3:D:516:LEU:HD11	1.95	0.48
3:D:464:ILE:O	3:D:468:LEU:HG	2.13	0.48
3:D:486:ARG:C	3:D:494:THR:HG21	2.34	0.48
4:E:375:GLU:HG3	4:E:376:GLN:HG2	1.95	0.48
4:E:456:GLU:C	4:E:459:PRO:HD2	2.34	0.48
5:G:105:MET:HE1	5:G:510:VAL:HA	1.95	0.48
5:G:352:ILE:HG23	5:G:352:ILE:O	2.14	0.48
5:G:445:GLU:O	5:G:448:PRO:HG2	2.14	0.48
5:G:468:ALA:O	5:G:472:GLN:HG3	2.14	0.48
6:H:169:SER:HA	6:H:172:LYS:HB3	1.95	0.48
7:Q:188:VAL:O	7:Q:188:VAL:HG12	2.12	0.48
7:Q:239:ILE:CD1	7:Q:328:VAL:HG11	2.42	0.48
7:Q:417:ILE:HG13	7:Q:467:LEU:CD2	2.44	0.48
1:A:205:GLN:HA	1:A:378:ARG:O	2.14	0.48
1:A:286:ILE:HD12	1:A:286:ILE:N	2.29	0.48
2:B:37:ASP:O	2:B:40:LYS:HB3	2.13	0.48
2:B:202:ILE:HB	2:B:374:VAL:HA	1.96	0.48
2:B:290:PHE:CE2	2:B:292:ASN:HB2	2.48	0.48
2:B:316:ASP:OD2	2:B:318:VAL:HG12	2.14	0.48
3:D:26:ALA:O	3:D:27:TYR:HB2	2.14	0.48
3:D:476:PRO:O	3:D:480:VAL:HG23	2.14	0.48
7:Q:71:THR:O	7:Q:75:GLU:HG2	2.14	0.48
7:Q:391:ALA:HA	7:Q:394:ASP:OD2	2.13	0.48
8:Z:459:LEU:HD23	8:Z:459:LEU:C	2.34	0.48
1:A:286:ILE:HB	1:A:307:ALA:HB2	1.95	0.48
2:B:519:ASN:C	2:B:520:ILE:HD13	2.34	0.48
3:D:430:ALA:N	3:D:431:PRO:HD2	2.29	0.48
4:E:297:ALA:HB2	4:E:353:LEU:HD21	1.96	0.48
5:G:74:HIS:CB	8:Z:5:LYS:HB2	2.33	0.48
5:G:350:LEU:HA	5:G:362:PHE:O	2.14	0.48
5:G:473:GLU:HB3	5:G:478:TRP:HE1	1.79	0.48
6:H:191:GLN:HB3	6:H:194:MET:HG3	1.96	0.48
6:H:288:VAL:HA	6:H:309:PHE:O	2.13	0.48
7:Q:453:ALA:HB1	7:Q:458:VAL:HB	1.96	0.48
8:Z:40:PRO:HA	8:Z:158:THR:HA	1.95	0.48
8:Z:161:HIS:NE2	8:Z:168:LEU:HB2	2.28	0.48
1:A:13:THR:O	1:A:16:ALA:HB3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:41:LEU:HA	5:G:518:ARG:HD2	1.96	0.48
1:A:450:ASN:OD1	1:A:464:VAL:HG21	2.14	0.48
2:B:232:ILE:HG22	2:B:235:ALA:HB2	1.95	0.48
3:D:454:ILE:O	3:D:457:PHE:HB3	2.13	0.48
3:D:535:ILE:HG22	3:D:535:ILE:O	2.13	0.48
4:E:163:GLU:O	4:E:167:GLN:HG3	2.14	0.48
5:G:204:ILE:HD12	5:G:375:LEU:HD13	1.96	0.48
7:Q:191:PHE:H	7:Q:192:PRO:HD3	1.79	0.48
1:A:93:VAL:HG13	1:A:94:VAL:N	2.28	0.48
1:A:112:ILE:HG23	1:A:433:ARG:CD	2.36	0.48
2:B:219:LEU:HB3	2:B:372:THR:CG2	2.43	0.48
3:D:190:SER:O	3:D:194:VAL:HG23	2.14	0.48
3:D:370:LEU:HD13	3:D:392:VAL:HG21	1.94	0.48
6:H:134:ASN:HD22	6:H:134:ASN:N	2.12	0.48
6:H:155:LEU:HD22	6:H:396:VAL:HG13	1.96	0.48
7:Q:45:THR:HA	7:Q:455:ASN:OD1	2.13	0.48
8:Z:160:VAL:HG21	8:Z:386:GLN:HG2	1.95	0.48
8:Z:181:LYS:HE2	8:Z:370:ARG:NH1	2.28	0.48
1:A:137:ILE:HD13	1:A:499:LYS:CG	2.43	0.48
6:H:240:LEU:HD13	6:H:334:VAL:HG22	1.95	0.48
7:Q:241:VAL:HG22	7:Q:324:LEU:HD23	1.96	0.48
8:Z:14:ALA:O	8:Z:520:GLU:HB3	2.14	0.48
8:Z:38:LEU:HD23	8:Z:450:VAL:HG11	1.95	0.48
8:Z:50:GLY:C	8:Z:52:GLY:H	2.17	0.48
8:Z:133:PHE:HD1	8:Z:136:GLN:OE1	1.96	0.48
1:A:137:ILE:HG23	1:A:499:LYS:HZ1	1.79	0.47
1:A:330:THR:HG22	1:A:332:ALA:H	1.79	0.47
1:A:398:VAL:HG23	1:A:399:VAL:N	2.29	0.47
2:B:223:LYS:HZ1	2:B:351:GLU:HB2	1.77	0.47
2:B:238:LEU:HB2	2:B:343:LEU:HD23	1.96	0.47
2:B:399:GLN:O	2:B:403:ASP:N	2.47	0.47
3:D:29:ASP:HB2	3:D:540:ASN:CB	2.44	0.47
3:D:46:ALA:HA	3:D:49:ASP:OD2	2.14	0.47
3:D:174:LEU:HD13	3:D:183:SER:HA	1.96	0.47
3:D:186:LEU:HD23	3:D:189:MET:HE1	1.95	0.47
4:E:410:ARG:O	4:E:413:ILE:HG22	2.14	0.47
5:G:515:LEU:O	5:G:519:ILE:HG13	2.14	0.47
7:Q:113:GLU:O	7:Q:117:GLU:HG3	2.14	0.47
7:Q:205:CYS:SG	7:Q:207:ILE:HD11	2.53	0.47
8:Z:181:LYS:CD	8:Z:370:ARG:HH12	2.27	0.47
2:B:156:ARG:HA	2:B:159:LEU:HD12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:281:ARG:HA	2:B:284:LYS:HD2	1.95	0.47
3:D:249:ILE:CG2	3:D:345:THR:HG21	2.42	0.47
4:E:312:HIS:O	4:E:315:LEU:HB3	2.14	0.47
5:G:211:ASP:C	5:G:377:ARG:HG3	2.35	0.47
5:G:397:VAL:HA	5:G:400:ASN:ND2	2.26	0.47
6:H:214:VAL:HA	6:H:371:THR:HB	1.95	0.47
7:Q:525:ILE:CG2	7:Q:526:MET:H	2.03	0.47
1:A:413:GLY:HA3	1:A:449:PRO:HB3	1.95	0.47
2:B:123:PRO:O	2:B:126:ILE:HB	2.13	0.47
2:B:228:GLN:NE2	2:B:301:GLU:HG2	2.29	0.47
3:D:88:HIS:CE1	3:D:90:ALA:H	2.31	0.47
3:D:421:LYS:HE2	3:D:515:LEU:CD2	2.37	0.47
3:D:433:ILE:CD1	3:D:465:PRO:HG3	2.42	0.47
4:E:426:GLU:OE1	4:E:426:GLU:N	2.48	0.47
4:E:454:ALA:O	4:E:457:VAL:HG22	2.14	0.47
5:G:82:GLU:O	5:G:86:THR:HG23	2.15	0.47
6:H:117:HIS:O	6:H:121:ILE:HG13	2.14	0.47
6:H:224:GLY:HA3	6:H:228:GLN:OE1	2.14	0.47
7:Q:22:PHE:N	7:Q:22:PHE:CD1	2.83	0.47
7:Q:212:VAL:HA	7:Q:378:ARG:O	2.14	0.47
7:Q:446:GLU:O	7:Q:450:ARG:HB2	2.14	0.47
8:Z:221:MET:HG2	8:Z:306:ALA:HB2	1.97	0.47
1:A:115:THR:HA	1:A:118:ILE:HD12	1.96	0.47
1:A:121:TYR:HB3	1:A:518:THR:CG2	2.43	0.47
1:A:385:CYS:HA	1:A:388:MET:HE3	1.95	0.47
2:B:33:ILE:CG2	2:B:111:ARG:HD3	2.43	0.47
2:B:340:LEU:HD12	2:B:343:LEU:HD12	1.97	0.47
2:B:346:CYS:SG	2:B:349:ILE:HG13	2.54	0.47
3:D:78:ALA:HB2	3:D:109:THR:CG2	2.42	0.47
5:G:137:LEU:HD11	5:G:506:TYR:HE2	1.78	0.47
5:G:200:ARG:O	5:G:373:THR:HA	2.14	0.47
6:H:224:GLY:O	6:H:300:THR:HG23	2.14	0.47
7:Q:222:VAL:HA	7:Q:361:VAL:O	2.14	0.47
1:A:289:THR:OG1	1:A:316:LEU:HD22	2.14	0.47
1:A:369:ALA:C	1:A:371:THR:H	2.18	0.47
2:B:9:VAL:HG13	4:E:36:SER:HB2	1.97	0.47
2:B:39:VAL:HA	2:B:50:LYS:HZ1	1.79	0.47
3:D:24:LYS:HG3	3:D:30:ARG:NH1	2.30	0.47
3:D:251:LEU:HD12	3:D:336:ILE:HD12	1.95	0.47
5:G:44:LYS:HD3	5:G:455:CYS:HA	1.96	0.47
5:G:286:LYS:N	5:G:287:PRO:HD3	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:416:MET:HE3	5:G:466:LEU:HD22	1.97	0.47
6:H:516:VAL:HA	7:Q:53:ASN:O	2.15	0.47
7:Q:13:GLN:CG	8:Z:71:HIS:HA	2.45	0.47
7:Q:21:HIS:H	7:Q:21:HIS:CD2	2.31	0.47
1:A:210:LEU:HD12	1:A:375:VAL:HG22	1.96	0.47
2:B:35:ILE:HB	2:B:84:LEU:HD12	1.97	0.47
2:B:203:LYS:HB2	2:B:383:LEU:HG	1.95	0.47
3:D:226:LEU:HG	3:D:389:VAL:HB	1.96	0.47
3:D:256:LEU:N	3:D:256:LEU:CD1	2.76	0.47
4:E:207:GLU:C	4:E:209:ILE:H	2.16	0.47
5:G:245:LEU:HD12	5:G:296:ILE:HG12	1.95	0.47
5:G:470:HIS:HE1	5:G:476:GLU:HG3	1.80	0.47
6:H:100:LEU:HD21	6:H:445:ILE:CD1	2.45	0.47
6:H:110:PRO:HG2	6:H:111:TYR:CD1	2.49	0.47
6:H:224:GLY:O	6:H:225:PHE:HB2	2.14	0.47
8:Z:104:LYS:O	8:Z:108:LEU:HG	2.14	0.47
1:A:82:GLN:HG2	1:A:90:THR:HA	1.96	0.47
1:A:292:ILE:HG13	1:A:309:ARG:HB3	1.97	0.47
2:B:51:ILE:H	3:D:538:VAL:CG1	2.28	0.47
3:D:43:ALA:O	3:D:47:VAL:HG23	2.15	0.47
3:D:239:SER:CB	3:D:321:ASN:HB3	2.37	0.47
3:D:431:PRO:HG2	3:D:432:GLU:OE2	2.15	0.47
4:E:85:HIS:CE1	4:E:87:ILE:HG22	2.49	0.47
4:E:109:VAL:HG13	4:E:110:VAL:N	2.29	0.47
4:E:165:LEU:HD13	4:E:190:VAL:HG13	1.97	0.47
4:E:410:ARG:HA	4:E:413:ILE:CG2	2.44	0.47
5:G:152:MET:HG3	5:G:401:VAL:HG11	1.95	0.47
5:G:416:MET:HG2	5:G:466:LEU:CD2	2.40	0.47
6:H:36:VAL:O	6:H:95:THR:HG21	2.14	0.47
6:H:175:PHE:O	6:H:179:VAL:HG23	2.14	0.47
6:H:239:LEU:HD22	6:H:319:LEU:CD1	2.41	0.47
7:Q:187:CYS:SG	7:Q:217:VAL:HG13	2.54	0.47
7:Q:390:ARG:HA	7:Q:390:ARG:NE	2.30	0.47
8:Z:351:TYR:HB2	8:Z:353:TYR:CE1	2.50	0.47
1:A:85:GLU:HB3	1:A:512:LYS:NZ	2.30	0.47
1:A:132:ILE:HD12	1:A:511:VAL:HG22	1.97	0.47
2:B:232:ILE:HD12	2:B:288:ASN:O	2.15	0.47
2:B:367:LEU:C	2:B:369:GLU:H	2.18	0.47
4:E:244:GLU:HB3	4:E:245:ASP:H	1.54	0.47
5:G:319:ASP:O	5:G:323:ILE:HG13	2.14	0.47
7:Q:188:VAL:HG11	7:Q:399:PHE:CG	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:204:VAL:HG11	7:Q:389:GLU:HG3	1.97	0.47
1:A:75:LEU:HD13	1:A:94:VAL:HG13	1.96	0.47
2:B:276:LYS:HB2	2:B:299:TYR:HE2	1.80	0.47
3:D:49:ASP:O	3:D:52:ARG:HB3	2.15	0.47
3:D:156:ARG:HB3	3:D:424:LEU:CD1	2.44	0.47
4:E:298:ASN:O	4:E:320:PRO:HD2	2.15	0.47
4:E:428:SER:HB2	4:E:487:PRO:HB3	1.97	0.47
4:E:522:GLN:CD	4:E:522:GLN:N	2.69	0.47
5:G:471:THR:O	5:G:471:THR:HG22	2.14	0.47
6:H:144:LYS:HD3	6:H:154:LEU:HD11	1.97	0.47
6:H:186:LEU:HD12	6:H:186:LEU:H	1.80	0.47
7:Q:409:VAL:N	7:Q:499:ASP:O	2.43	0.47
8:Z:382:HIS:O	8:Z:385:THR:HB	2.15	0.47
2:B:111:ARG:HA	2:B:114:GLU:OE2	2.15	0.47
2:B:209:LEU:HD21	2:B:382:ILE:CG2	2.38	0.47
2:B:281:ARG:HG2	2:B:281:ARG:NH1	2.29	0.47
2:B:288:ASN:N	2:B:288:ASN:ND2	2.62	0.47
3:D:174:LEU:HD13	3:D:186:LEU:HB2	1.97	0.47
4:E:61:MET:CE	4:E:81:MET:HB2	2.45	0.47
4:E:417:ARG:HG3	4:E:417:ARG:HH11	1.79	0.47
5:G:177:LEU:HD23	5:G:177:LEU:C	2.35	0.47
7:Q:188:VAL:HB	7:Q:399:PHE:CE2	2.49	0.47
1:A:12:SER:HB2	1:A:17:ILE:CB	2.32	0.46
1:A:355:ARG:HA	1:A:359:ASP:O	2.15	0.46
1:A:423:LEU:HD13	1:A:441:PHE:CD2	2.50	0.46
1:A:526:ARG:HD2	3:D:59:GLY:O	2.14	0.46
2:B:83:VAL:HA	2:B:86:ASP:OD2	2.14	0.46
2:B:454:ALA:CB	2:B:480:MET:SD	2.98	0.46
3:D:154:MET:HB3	3:D:492:LYS:CD	2.44	0.46
3:D:173:SER:CB	3:D:414:VAL:HG21	2.45	0.46
3:D:185:LEU:HD22	3:D:222:ASP:OD1	2.15	0.46
3:D:348:VAL:HG21	3:D:354:PHE:HA	1.97	0.46
4:E:456:GLU:O	4:E:459:PRO:HD2	2.14	0.46
6:H:66:LEU:HB3	6:H:80:VAL:HG22	1.97	0.46
6:H:233:HIS:CG	6:H:234:ASN:N	2.83	0.46
6:H:522:ASN:CG	7:Q:77:GLU:HB2	2.35	0.46
7:Q:364:LYS:O	7:Q:365:HIS:HB2	2.15	0.46
7:Q:525:ILE:CG2	8:Z:67:MET:HG2	2.46	0.46
1:A:395:ALA:HA	1:A:398:VAL:HG22	1.97	0.46
1:A:474:ALA:O	1:A:485:TRP:NE1	2.48	0.46
2:B:61:LEU:HD21	2:B:63:VAL:HG23	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:95:VAL:HG23	2:B:96:GLY:N	2.21	0.46
2:B:516:ARG:HG2	4:E:58:ASP:N	2.29	0.46
3:D:148:ILE:O	3:D:152:THR:HG23	2.15	0.46
3:D:286:ILE:HG21	3:D:315:LEU:HB2	1.98	0.46
4:E:18:ILE:HG22	4:E:19:ILE:N	2.30	0.46
4:E:90:LEU:HD23	4:E:93:GLU:OE1	2.15	0.46
4:E:521:THR:HB	4:E:522:GLN:NE2	2.30	0.46
5:G:46:MET:HB3	8:Z:517:LEU:O	2.16	0.46
5:G:157:ASN:O	5:G:161:THR:HG23	2.14	0.46
5:G:163:LYS:H	5:G:166:SER:HB3	1.79	0.46
5:G:499:LEU:O	5:G:503:LEU:N	2.45	0.46
6:H:198:LYS:HZ3	6:H:217:LYS:CG	2.25	0.46
6:H:213:GLY:O	6:H:371:THR:N	2.49	0.46
6:H:228:GLN:OE1	6:H:309:PHE:HA	2.15	0.46
6:H:241:ASN:HD22	6:H:241:ASN:HA	1.52	0.46
7:Q:33:ILE:HG21	7:Q:116:GLU:OE2	2.14	0.46
1:A:241:LEU:HG	1:A:331:LEU:CD2	2.44	0.46
2:B:455:GLY:HA3	3:D:135:ILE:HG12	1.97	0.46
4:E:20:LYS:HZ3	6:H:32:ILE:HG12	1.80	0.46
4:E:62:VAL:HA	4:E:67:ASP:O	2.16	0.46
4:E:236:HIS:CD2	4:E:237:PRO:HD2	2.50	0.46
5:G:200:ARG:NH1	5:G:202:GLU:HB2	2.31	0.46
5:G:203:LYS:HB2	5:G:384:LEU:CG	2.45	0.46
5:G:433:GLU:O	5:G:436:PRO:HD2	2.15	0.46
6:H:286:ALA:HB2	6:H:342:LEU:HD21	1.98	0.46
6:H:349:GLU:HG3	6:H:360:PHE:CD2	2.49	0.46
7:Q:20:LYS:HD2	7:Q:525:ILE:HG13	1.97	0.46
7:Q:520:ARG:O	8:Z:43:THR:HB	2.16	0.46
8:Z:188:LEU:HD11	8:Z:396:ARG:HD3	1.98	0.46
8:Z:349:LEU:HG	8:Z:351:TYR:HD2	1.80	0.46
1:A:2:GLU:CD	3:D:44:ALA:H	2.16	0.46
1:A:90:THR:O	1:A:93:VAL:HG12	2.15	0.46
1:A:496:ARG:HG2	1:A:497:ASP:N	2.31	0.46
3:D:236:VAL:HG21	3:D:329:LYS:H	1.80	0.46
4:E:192:ALA:O	4:E:196:VAL:HG22	2.15	0.46
4:E:227:GLY:HA2	4:E:380:SER:OG	2.16	0.46
7:Q:16:LYS:HD2	7:Q:525:ILE:HB	1.96	0.46
7:Q:393:ASP:O	7:Q:396:VAL:HB	2.15	0.46
8:Z:48:VAL:CG2	8:Z:54:ILE:HG12	2.39	0.46
2:B:187:VAL:HG21	2:B:397:LEU:CD1	2.43	0.46
2:B:320:VAL:HA	2:B:323:LEU:HD12	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:252:ILE:HD12	3:D:351:VAL:HA	1.98	0.46
3:D:335:ASP:O	3:D:339:ILE:HG13	2.15	0.46
4:E:167:GLN:O	4:E:171:THR:HG23	2.15	0.46
4:E:193:VAL:O	4:E:197:ALA:HB2	2.15	0.46
5:G:49:MET:HB3	8:Z:518:VAL:HG11	1.97	0.46
5:G:129:ALA:O	5:G:132:ASP:HB2	2.16	0.46
6:H:163:LEU:O	6:H:166:LYS:HB2	2.15	0.46
6:H:226:GLU:HB3	6:H:227:MET:HE3	1.97	0.46
7:Q:296:ARG:NH1	7:Q:315:LEU:HD11	2.31	0.46
8:Z:34:LEU:HD11	8:Z:60:GLY:HA2	1.98	0.46
8:Z:179:ILE:HD13	8:Z:191:VAL:HG23	1.97	0.46
1:A:370:ARG:C	1:A:372:SER:H	2.18	0.46
1:A:533:LEU:HD12	3:D:66:ASP:HA	1.96	0.46
2:B:516:ARG:CG	4:E:57:LEU:HA	2.45	0.46
3:D:258:ALA:HB2	3:D:286:ILE:HG13	1.98	0.46
4:E:145:ILE:HD12	4:E:514:LYS:HG3	1.96	0.46
6:H:197:ILE:CG2	6:H:386:GLU:HG3	2.44	0.46
6:H:238:ALA:O	6:H:289:VAL:HG13	2.14	0.46
6:H:350:GLU:OE2	6:H:357:ARG:HD2	2.16	0.46
7:Q:466:LYS:O	7:Q:470:VAL:HG23	2.16	0.46
1:A:423:LEU:HD13	1:A:441:PHE:HD2	1.79	0.46
1:A:467:LEU:HB2	1:A:488:LEU:HD21	1.97	0.46
2:B:413:SER:O	2:B:417:MET:HG2	2.16	0.46
3:D:100:ALA:O	3:D:104:GLU:HG3	2.15	0.46
3:D:217:LEU:HG	3:D:401:ILE:HD12	1.98	0.46
3:D:251:LEU:HB3	3:D:347:PRO:HA	1.97	0.46
4:E:42:LYS:NZ	4:E:46:ASN:HD21	2.13	0.46
4:E:131:ILE:HD12	4:E:131:ILE:H	1.81	0.46
4:E:489:LEU:HD23	4:E:490:GLY:N	2.30	0.46
5:G:448:PRO:O	5:G:451:LEU:HB3	2.16	0.46
7:Q:197:PHE:CB	7:Q:403:THR:HG21	2.46	0.46
8:Z:34:LEU:HG	8:Z:93:THR:HG23	1.97	0.46
8:Z:123:PHE:CE1	8:Z:439:ALA:HB3	2.51	0.46
8:Z:475:GLN:HG3	8:Z:475:GLN:O	2.15	0.46
1:A:176:VAL:O	1:A:180:LYS:HB2	2.16	0.46
1:A:220:VAL:O	1:A:225:MET:SD	2.74	0.46
1:A:520:ALA:O	1:A:524:ILE:HG13	2.16	0.46
2:B:36:GLY:O	2:B:104:VAL:HG22	2.15	0.46
2:B:231:ARG:HH21	2:B:348:LEU:CD1	2.27	0.46
2:B:520:ILE:HD12	4:E:60:MET:N	2.30	0.46
3:D:195:MET:SD	3:D:196:LYS:HG3	2.55	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:315:LEU:HD23	4:E:315:LEU:O	2.16	0.46
4:E:317:ASN:O	4:E:318:ASP:HB2	2.15	0.46
6:H:122:ILE:HG23	6:H:511:CYS:SG	2.56	0.46
6:H:223:ALA:O	6:H:311:ALA:HA	2.16	0.46
6:H:315:PRO:HB2	6:H:318:ASP:OD2	2.15	0.46
1:A:2:GLU:OE2	3:D:39:SER:O	2.34	0.46
1:A:190:TYR:HB3	1:A:400:LYS:HG3	1.97	0.46
1:A:275:ILE:HG23	1:A:300:PHE:CE1	2.50	0.46
3:D:24:LYS:CE	3:D:28:GLN:HE22	2.29	0.46
3:D:174:LEU:HD12	3:D:187:SER:OG	2.16	0.46
4:E:22:GLN:HG3	4:E:23:ASP:O	2.16	0.46
4:E:325:VAL:HB	4:E:330:ILE:HD11	1.98	0.46
6:H:36:VAL:CG2	6:H:95:THR:HG23	2.46	0.46
6:H:411:ALA:HB2	6:H:487:ASN:HD21	1.81	0.46
7:Q:13:GLN:N	7:Q:13:GLN:NE2	2.63	0.46
7:Q:16:LYS:HD2	7:Q:525:ILE:CB	2.45	0.46
7:Q:148:CYS:HB2	7:Q:476:LYS:NZ	2.31	0.46
7:Q:168:VAL:O	7:Q:173:TYR:CE1	2.69	0.46
8:Z:46:MET:CG	8:Z:54:ILE:HG23	2.45	0.46
8:Z:141:LYS:O	8:Z:142:GLU:HB3	2.16	0.46
8:Z:175:SER:O	8:Z:179:ILE:HG23	2.16	0.46
1:A:132:ILE:C	1:A:134:GLU:H	2.19	0.46
3:D:36:ILE:HD11	3:D:40:ASN:HD21	1.81	0.46
3:D:61:ASP:C	3:D:62:LYS:HD3	2.36	0.46
3:D:64:ILE:HG21	3:D:83:GLN:HB3	1.97	0.46
3:D:416:ARG:HH11	3:D:420:LYS:HZ2	1.63	0.46
3:D:472:ALA:HB2	3:D:498:VAL:HB	1.98	0.46
3:D:475:ASN:HB3	3:D:478:SER:HB3	1.97	0.46
4:E:518:SER:HA	4:E:522:GLN:HE21	1.81	0.46
5:G:84:SER:HB2	5:G:95:THR:CG2	2.45	0.46
6:H:43:ARG:HH21	6:H:480:ASN:HA	1.77	0.46
6:H:290:LEU:HD11	6:H:361:PHE:CE2	2.51	0.46
7:Q:453:ALA:CB	7:Q:463:VAL:HG11	2.46	0.46
8:Z:24:ILE:HD13	8:Z:107:ASP:HB2	1.97	0.46
8:Z:123:PHE:HD1	8:Z:440:PHE:HB2	1.81	0.46
8:Z:217:ARG:HG2	8:Z:302:LEU:HD22	1.98	0.46
8:Z:218:HIS:HB3	8:Z:221:MET:CG	2.43	0.46
2:B:239:ILE:HG22	2:B:331:ILE:HG23	1.98	0.45
3:D:290:VAL:HG11	3:D:319:PHE:C	2.36	0.45
5:G:26:ASN:OD1	5:G:516:LEU:HB3	2.16	0.45
6:H:521:LYS:O	6:H:522:ASN:CB	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:227:THR:HB	7:Q:230:ASP:CG	2.36	0.45
8:Z:126:ALA:HB2	8:Z:437:VAL:HA	1.97	0.45
8:Z:161:HIS:C	8:Z:163:GLU:N	2.67	0.45
2:B:396:VAL:O	2:B:400:THR:HG23	2.16	0.45
3:D:364:LEU:HG	3:D:364:LEU:O	2.17	0.45
4:E:236:HIS:HB3	4:E:239:MET:CG	2.42	0.45
4:E:443:LEU:HD23	4:E:444:GLU:H	1.80	0.45
5:G:136:THR:O	5:G:140:ILE:HD12	2.16	0.45
5:G:296:ILE:HG13	5:G:313:ARG:HB3	1.98	0.45
6:H:300:THR:O	6:H:303:PHE:HB2	2.16	0.45
7:Q:73:LEU:HD12	7:Q:90:SER:OG	2.15	0.45
7:Q:85:MET:O	7:Q:88:MET:HE2	2.16	0.45
7:Q:99:ASP:OD2	7:Q:398:THR:HG22	2.16	0.45
8:Z:123:PHE:HE1	8:Z:439:ALA:HB3	1.80	0.45
8:Z:135:GLU:HG3	8:Z:138:LYS:HZ2	1.80	0.45
1:A:118:ILE:CG2	1:A:522:ILE:HG23	2.45	0.45
1:A:286:ILE:HB	1:A:307:ALA:CB	2.46	0.45
2:B:415:MET:HE1	2:B:466:ARG:HB2	1.97	0.45
3:D:157:PRO:HA	3:D:423:ALA:HA	1.98	0.45
3:D:170:ALA:O	3:D:174:LEU:HG	2.16	0.45
3:D:302:LEU:HD13	3:D:339:ILE:HD13	1.98	0.45
3:D:462:GLU:O	3:D:465:PRO:HG2	2.15	0.45
5:G:165:ILE:CD1	5:G:387:VAL:HG13	2.45	0.45
6:H:64:THR:O	6:H:68:LEU:HD12	2.15	0.45
6:H:190:LEU:CD2	6:H:397:ARG:HB2	2.40	0.45
6:H:445:ILE:N	6:H:446:PRO:HD2	2.30	0.45
7:Q:13:GLN:HG3	8:Z:71:HIS:HA	1.98	0.45
8:Z:99:ILE:O	8:Z:103:LEU:HG	2.17	0.45
8:Z:447:ILE:N	8:Z:448:PRO:HD2	2.31	0.45
2:B:219:LEU:HD22	2:B:374:VAL:CG2	2.47	0.45
2:B:368:GLY:C	2:B:370:ALA:H	2.20	0.45
3:D:216:LYS:CE	3:D:376:LEU:HD11	2.47	0.45
4:E:529:LYS:HA	6:H:45:MET:SD	2.56	0.45
5:G:85:ARG:HG3	5:G:85:ARG:HH11	1.82	0.45
5:G:160:ILE:HG23	5:G:165:ILE:CG2	2.45	0.45
5:G:347:ALA:O	5:G:349:LEU:HB2	2.16	0.45
6:H:92:ASP:CG	6:H:93:GLY:H	2.20	0.45
6:H:366:LYS:HB3	6:H:368:LYS:HE3	1.98	0.45
7:Q:206:LYS:HD3	7:Q:389:GLU:CD	2.37	0.45
7:Q:223:PHE:CZ	7:Q:316:ASN:HA	2.51	0.45
8:Z:82:THR:HG22	8:Z:86:ASP:OD2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Z:333:LEU:HG	8:Z:338:ASP:O	2.16	0.45
1:A:329:SER:OG	1:A:330:THR:N	2.50	0.45
2:B:61:LEU:HD23	2:B:61:LEU:O	2.17	0.45
2:B:452:ASP:C	2:B:454:ALA:H	2.19	0.45
3:D:32:LYS:HZ1	3:D:33:PRO:HD2	1.80	0.45
3:D:446:LEU:HD23	3:D:454:ILE:CD1	2.45	0.45
4:E:188:ILE:HG21	4:E:385:ILE:HG23	1.98	0.45
4:E:511:ILE:HA	4:E:514:LYS:NZ	2.32	0.45
5:G:27:ILE:HG13	5:G:106:LEU:HB3	1.98	0.45
6:H:163:LEU:HB2	6:H:172:LYS:HB2	1.98	0.45
6:H:239:LEU:HD21	6:H:290:LEU:HD12	1.99	0.45
8:Z:172:VAL:HG13	8:Z:395:LEU:HD23	1.99	0.45
1:A:75:LEU:HD13	1:A:94:VAL:CG1	2.47	0.45
1:A:470:PHE:HD2	1:A:495:PRO:HB2	1.81	0.45
2:B:139:GLN:HA	2:B:142:LEU:CD1	2.47	0.45
4:E:236:HIS:HD2	4:E:315:LEU:HD12	1.76	0.45
4:E:306:PHE:HB2	4:E:323:ARG:CB	2.42	0.45
4:E:443:LEU:HD22	4:E:443:LEU:H	1.82	0.45
5:G:107:SER:O	5:G:110:GLU:HG2	2.17	0.45
6:H:37:ARG:HG3	6:H:99:LEU:CD2	2.47	0.45
7:Q:16:LYS:HG3	7:Q:525:ILE:HD13	1.99	0.45
7:Q:110:ALA:O	7:Q:114:LEU:HD23	2.17	0.45
8:Z:127:LYS:HZ2	8:Z:509:THR:HB	1.81	0.45
1:A:129:VAL:O	1:A:132:ILE:HB	2.17	0.45
1:A:297:LEU:O	1:A:301:VAL:HG23	2.16	0.45
1:A:449:PRO:HA	1:A:452:LEU:HD12	1.99	0.45
1:A:487:GLY:HA3	1:A:498:ASN:ND2	2.31	0.45
2:B:11:ILE:HG12	4:E:85:HIS:CB	2.47	0.45
3:D:26:ALA:C	3:D:28:GLN:H	2.20	0.45
3:D:32:LYS:HZ3	3:D:33:PRO:HD2	1.77	0.45
3:D:224:CYS:HA	3:D:392:VAL:O	2.16	0.45
4:E:153:ASP:O	4:E:154:SER:C	2.55	0.45
6:H:289:VAL:O	6:H:310:CYS:HA	2.17	0.45
7:Q:134:ILE:HD12	7:Q:434:GLU:CD	2.37	0.45
8:Z:44:MET:HG3	8:Z:56:LEU:HD11	1.99	0.45
8:Z:148:LEU:HD22	8:Z:398:VAL:HG13	1.99	0.45
2:B:9:VAL:HG13	4:E:36:SER:CB	2.47	0.45
3:D:108:GLY:O	3:D:110:THR:N	2.50	0.45
4:E:254:PRO:HB3	4:E:304:TRP:CB	2.46	0.45
5:G:50:LEU:C	5:G:51:LEU:HD12	2.38	0.45
5:G:453:GLN:C	5:G:455:CYS:H	2.20	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:H:119:GLN:HG2	7:Q:50:ASN:HD22	1.81	0.45
6:H:228:GLN:O	6:H:230:LYS:N	2.50	0.45
6:H:276:ASP:O	6:H:280:LYS:HG3	2.17	0.45
6:H:497:MET:CE	6:H:501:ASN:HB2	2.46	0.45
8:Z:277:LEU:HD22	8:Z:341:PRO:HD3	1.98	0.45
2:B:94:GLU:O	2:B:395:CYS:HB3	2.16	0.45
2:B:172:LEU:CD1	2:B:209:LEU:HD13	2.47	0.45
3:D:31:ASP:CB	3:D:36:ILE:HB	2.29	0.45
3:D:81:LEU:HD13	3:D:95:VAL:HA	1.99	0.45
3:D:119:LEU:HD12	3:D:529:VAL:CG2	2.39	0.45
3:D:161:SER:N	3:D:422:ARG:NH1	2.65	0.45
4:E:42:LYS:HG2	4:E:46:ASN:ND2	2.32	0.45
4:E:224:LEU:HD12	4:E:384:THR:O	2.16	0.45
4:E:446:TYR:N	4:E:446:TYR:CD1	2.85	0.45
5:G:48:LYS:O	5:G:59:MET:HA	2.17	0.45
5:G:242:ASP:O	5:G:293:GLU:HB3	2.17	0.45
5:G:467:ARG:HH11	5:G:467:ARG:HG3	1.81	0.45
6:H:136:ILE:O	6:H:140:ALA:HB2	2.17	0.45
7:Q:126:SER:HB3	8:Z:41:LYS:HD3	1.99	0.45
7:Q:445:PHE:HA	7:Q:448:ILE:HD13	1.99	0.45
7:Q:504:LYS:O	7:Q:508:ILE:HD12	2.17	0.45
7:Q:514:ALA:O	7:Q:518:VAL:HG23	2.16	0.45
8:Z:114:LEU:CD2	8:Z:432:ARG:HD3	2.44	0.45
8:Z:230:ILE:HG13	8:Z:324:LEU:HD11	1.99	0.45
8:Z:352:GLU:HA	8:Z:360:PHE:O	2.17	0.45
1:A:211:ILE:N	1:A:374:SER:O	2.50	0.45
1:A:213:GLY:HA3	1:A:365:LYS:CB	2.46	0.45
1:A:232:ALA:O	1:A:347:GLN:HA	2.17	0.45
1:A:390:ARG:HA	1:A:390:ARG:HD2	1.81	0.45
2:B:280:GLU:O	2:B:284:LYS:HG3	2.17	0.45
3:D:300:VAL:O	3:D:300:VAL:HG12	2.16	0.45
3:D:484:ARG:HH11	3:D:484:ARG:HG3	1.82	0.45
4:E:48:MET:HG2	4:E:110:VAL:HG11	1.97	0.45
4:E:219:LEU:O	4:E:222:THR:HG23	2.16	0.45
5:G:151:THR:HA	5:G:154:ASN:HD22	1.82	0.45
5:G:183:VAL:HG12	5:G:370:LYS:O	2.17	0.45
6:H:179:VAL:O	6:H:183:VAL:HG23	2.17	0.45
6:H:214:VAL:HA	6:H:371:THR:CB	2.47	0.45
6:H:407:ALA:HB1	6:H:487:ASN:HB2	1.99	0.45
7:Q:223:PHE:C	7:Q:224:LYS:HD2	2.36	0.45
7:Q:407:ARG:HD2	7:Q:501:TYR:CD2	2.53	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:521:VAL:CG1	7:Q:524:ILE:HD13	2.46	0.45
8:Z:186:ILE:HB	8:Z:399:LYS:HG3	1.99	0.45
8:Z:304:ALA:O	8:Z:308:GLU:HG2	2.17	0.45
1:A:168:PHE:HZ	1:A:205:GLN:HB2	1.81	0.44
1:A:180:LYS:CD	1:A:190:TYR:HB2	2.47	0.44
1:A:206:MET:HA	1:A:206:MET:HE2	1.99	0.44
2:B:472:GLY:C	2:B:473:LYS:HD2	2.38	0.44
3:D:77:GLY:HA2	3:D:80:ILE:HD12	1.99	0.44
3:D:136:ILE:HG22	3:D:533:LEU:HD13	1.99	0.44
3:D:420:LYS:CD	3:D:516:LEU:HD11	2.46	0.44
3:D:483:LEU:HD22	3:D:496:ILE:HG13	1.99	0.44
4:E:357:GLY:HA3	4:E:376:GLN:HB2	1.98	0.44
5:G:27:ILE:HG22	5:G:28:ASN:N	2.32	0.44
5:G:70:ILE:CG2	8:Z:6:THR:HG22	2.46	0.44
5:G:72:VAL:HG13	8:Z:5:LYS:O	2.17	0.44
6:H:417:SER:CA	6:H:439:ALA:HB1	2.45	0.44
8:Z:127:LYS:HD2	8:Z:509:THR:CB	2.47	0.44
1:A:27:SER:CB	5:G:9:VAL:HG11	2.41	0.44
1:A:190:TYR:HD2	1:A:400:LYS:CB	2.23	0.44
1:A:233:LYS:HB3	1:A:345:LEU:HD13	1.98	0.44
1:A:395:ALA:O	1:A:398:VAL:HG22	2.17	0.44
1:A:502:GLY:O	1:A:504:PHE:HD1	2.00	0.44
2:B:44:GLY:C	2:B:46:LYS:H	2.20	0.44
2:B:72:LYS:HZ3	2:B:89:ARG:HG3	1.77	0.44
2:B:102:VAL:HG13	2:B:103:THR:N	2.32	0.44
2:B:385:GLU:HA	2:B:385:GLU:OE1	2.17	0.44
3:D:88:HIS:HA	3:D:89:PRO:HD3	1.90	0.44
3:D:123:CYS:SG	3:D:533:LEU:HD22	2.57	0.44
3:D:155:SER:OG	3:D:425:ILE:HG23	2.17	0.44
3:D:444:ARG:HG2	3:D:444:ARG:O	2.18	0.44
4:E:86:GLN:H	4:E:86:GLN:CD	2.20	0.44
4:E:297:ALA:HB2	4:E:353:LEU:CD2	2.46	0.44
4:E:510:LEU:HG	4:E:514:LYS:HZ1	1.78	0.44
5:G:101:LEU:HD23	5:G:446:VAL:CG2	2.47	0.44
5:G:137:LEU:HB3	5:G:499:LEU:CD1	2.47	0.44
5:G:145:ASP:OD2	5:G:148:ASN:HB2	2.17	0.44
5:G:204:ILE:HD13	5:G:355:ILE:CG2	2.35	0.44
5:G:366:CYS:O	5:G:369:PRO:HD3	2.17	0.44
5:G:458:SER:HB3	5:G:461:ARG:HB3	2.00	0.44
6:H:135:LYS:HA	6:H:135:LYS:HD2	1.88	0.44
6:H:455:PHE:HB2	6:H:482:GLU:CD	2.37	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:204:VAL:HG22	7:Q:375:ILE:HD12	2.00	0.44
1:A:5:LEU:HD21	1:A:531:ILE:HD13	1.99	0.44
1:A:30:ASN:O	1:A:33:LYS:HB3	2.16	0.44
1:A:82:GLN:NE2	1:A:86:VAL:CG2	2.81	0.44
1:A:137:ILE:HB	1:A:408:VAL:O	2.17	0.44
1:A:453:ALA:HB1	1:A:458:GLN:O	2.17	0.44
2:B:455:GLY:CA	3:D:135:ILE:HD11	2.47	0.44
3:D:33:PRO:HA	3:D:536:ASP:OD2	2.17	0.44
3:D:436:ALA:O	3:D:458:ALA:HB1	2.18	0.44
4:E:20:LYS:HZ2	6:H:31:VAL:CG1	2.31	0.44
4:E:40:ALA:CB	4:E:87:ILE:HG21	2.47	0.44
4:E:61:MET:HE2	4:E:81:MET:HB2	1.99	0.44
4:E:139:GLN:O	4:E:143:ILE:HG13	2.18	0.44
4:E:312:HIS:CE1	4:E:316:GLN:HE22	2.35	0.44
5:G:130:LEU:HA	5:G:133:MET:CE	2.46	0.44
5:G:172:ALA:HA	5:G:175:ILE:HD12	2.00	0.44
5:G:424:GLU:HA	5:G:427:LYS:HZ1	1.81	0.44
5:G:466:LEU:HG	5:G:487:LEU:CD1	2.44	0.44
6:H:46:ASP:O	6:H:47:LYS:HD3	2.17	0.44
8:Z:59:ASP:OD2	8:Z:62:VAL:HG23	2.18	0.44
2:B:183:ALA:O	2:B:187:VAL:HG23	2.18	0.44
2:B:326:VAL:CG1	2:B:365:VAL:HG11	2.35	0.44
3:D:439:LEU:HD13	3:D:457:PHE:HD2	1.82	0.44
3:D:532:ILE:O	3:D:535:ILE:HB	2.18	0.44
4:E:405:ALA:O	4:E:408:VAL:HG22	2.18	0.44
4:E:511:ILE:O	4:E:515:GLN:HB3	2.17	0.44
5:G:407:LEU:HA	5:G:499:LEU:H	1.81	0.44
7:Q:32:ASN:OD1	7:Q:82:ALA:HB2	2.17	0.44
7:Q:434:GLU:O	7:Q:438:ILE:HG13	2.17	0.44
8:Z:186:ILE:HD12	8:Z:399:LYS:O	2.17	0.44
8:Z:196:MET:HG2	8:Z:360:PHE:CZ	2.52	0.44
1:A:222:SER:C	1:A:224:GLY:H	2.21	0.44
1:A:230:VAL:HB	1:A:231:ASN:H	1.60	0.44
2:B:141:LEU:O	2:B:145:ALA:HB2	2.18	0.44
2:B:337:HIS:N	2:B:338:PRO:CD	2.81	0.44
2:B:518:ASP:C	4:E:59:LYS:HZ2	2.21	0.44
3:D:217:LEU:HA	3:D:401:ILE:HD11	1.98	0.44
3:D:235:LYS:HG2	3:D:367:GLU:CD	2.38	0.44
3:D:414:VAL:HG23	3:D:415:ILE:N	2.33	0.44
4:E:410:ARG:CA	4:E:413:ILE:HG22	2.47	0.44
5:G:50:LEU:HD11	5:G:66:ILE:HG23	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:292:THR:HB	5:G:313:ARG:HA	2.00	0.44
5:G:430:THR:HA	5:G:434:GLN:NE2	2.31	0.44
6:H:9:LEU:HD13	6:H:13:THR:HG22	2.00	0.44
7:Q:22:PHE:HB3	7:Q:525:ILE:HD12	2.00	0.44
7:Q:34:GLN:HA	7:Q:37:LYS:HE2	1.99	0.44
7:Q:59:HIS:C	7:Q:61:GLU:H	2.21	0.44
7:Q:80:HIS:CE1	7:Q:82:ALA:HB3	2.52	0.44
7:Q:119:LEU:HD21	7:Q:125:VAL:HA	1.99	0.44
8:Z:87:ILE:N	8:Z:87:ILE:CD1	2.81	0.44
2:B:458:SER:O	2:B:462:VAL:HG23	2.17	0.44
3:D:137:SER:HG	3:D:533:LEU:HB2	1.83	0.44
3:D:229:GLY:HA3	3:D:380:THR:HA	1.99	0.44
3:D:315:LEU:H	3:D:315:LEU:CD2	2.10	0.44
3:D:429:GLY:O	3:D:433:ILE:HG12	2.18	0.44
4:E:132:ARG:HG2	4:E:443:LEU:HG	1.99	0.44
4:E:155:VAL:HG21	4:E:412:LEU:HD11	1.98	0.44
4:E:511:ILE:HA	4:E:514:LYS:HZ3	1.82	0.44
5:G:130:LEU:HD21	5:G:507:LYS:HA	2.00	0.44
6:H:214:VAL:HG12	6:H:371:THR:OG1	2.18	0.44
6:H:366:LYS:HD3	6:H:368:LYS:HZ2	1.77	0.44
6:H:391:ASP:HA	6:H:394:MET:CG	2.48	0.44
6:H:497:MET:HE3	6:H:500:ILE:HB	1.99	0.44
1:A:18:ARG:HH12	1:A:108:VAL:HG13	1.83	0.44
1:A:530:LEU:HD11	3:D:63:MET:O	2.17	0.44
1:A:533:LEU:CD1	3:D:66:ASP:HA	2.47	0.44
2:B:29:PHE:CE1	2:B:515:LEU:HA	2.52	0.44
2:B:189:ARG:NH1	2:B:189:ARG:HB3	2.33	0.44
2:B:196:LEU:HD21	2:B:394:LEU:O	2.18	0.44
2:B:397:LEU:O	2:B:401:VAL:HG13	2.17	0.44
2:B:408:TYR:CD1	2:B:494:THR:HG22	2.52	0.44
2:B:520:ILE:CD1	4:E:60:MET:HB3	2.38	0.44
2:B:521:ILE:O	4:E:62:VAL:HB	2.18	0.44
4:E:83:VAL:HG13	4:E:88:ALA:CB	2.47	0.44
4:E:164:PRO:O	4:E:167:GLN:HB2	2.18	0.44
5:G:41:LEU:HD22	5:G:100:ILE:HD12	2.00	0.44
5:G:64:ASN:HD21	5:G:68:ARG:HD2	1.83	0.44
5:G:133:MET:SD	5:G:444:LEU:HD11	2.58	0.44
5:G:374:ILE:HD13	5:G:391:LEU:HD21	1.99	0.44
5:G:415:GLU:CD	5:G:415:GLU:H	2.21	0.44
5:G:462:LEU:O	5:G:462:LEU:HD13	2.18	0.44
6:H:37:ARG:NH2	6:H:444:ILE:HG13	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:27:GLU:O	7:Q:31:ARG:HG3	2.17	0.44
7:Q:225:LYS:CD	7:Q:352:LEU:HD13	2.48	0.44
7:Q:297:VAL:HG23	7:Q:314:ARG:HB3	2.00	0.44
8:Z:204:THR:HG22	8:Z:377:LYS:N	2.32	0.44
8:Z:356:GLY:O	8:Z:357:GLU:HB2	2.18	0.44
8:Z:470:HIS:HA	8:Z:477:VAL:CG2	2.48	0.44
1:A:16:ALA:O	1:A:20:GLN:HG2	2.18	0.44
1:A:408:VAL:HG23	1:A:505:GLU:C	2.37	0.44
1:A:448:ILE:N	1:A:449:PRO:HD2	2.33	0.44
2:B:155:PHE:CD2	2:B:157:GLN:HB3	2.53	0.44
2:B:439:TYR:OH	2:B:504:LEU:HD22	2.17	0.44
3:D:78:ALA:CB	3:D:109:THR:HG21	2.45	0.44
3:D:144:LEU:HD23	3:D:526:THR:OG1	2.17	0.44
3:D:179:VAL:HB	3:D:186:LEU:CD1	2.47	0.44
3:D:339:ILE:HG23	3:D:343:ILE:HD12	2.00	0.44
3:D:430:ALA:HB1	3:D:492:LYS:O	2.17	0.44
5:G:44:LYS:CD	5:G:455:CYS:HA	2.48	0.44
5:G:325:ARG:HG2	5:G:325:ARG:NH1	2.32	0.44
6:H:117:HIS:NE2	7:Q:454:GLU:O	2.51	0.44
7:Q:160:VAL:HG11	7:Q:185:GLN:HG2	1.99	0.44
8:Z:274:ILE:HD11	8:Z:336:LEU:CD2	2.48	0.44
1:A:392:LEU:O	1:A:396:LEU:HG	2.18	0.44
1:A:513:SER:OG	1:A:514:LEU:N	2.51	0.44
2:B:375:LEU:CD1	2:B:387:GLU:HA	2.48	0.44
2:B:398:ALA:O	2:B:401:VAL:HG22	2.18	0.44
3:D:76:ASP:OD2	3:D:78:ALA:HB3	2.18	0.44
3:D:226:LEU:HA	3:D:390:THR:O	2.17	0.44
3:D:289:LEU:O	3:D:293:ILE:HG13	2.17	0.44
4:E:20:LYS:HZ1	6:H:31:VAL:HB	1.76	0.44
4:E:25:LYS:CE	4:E:536:PRO:HB3	2.48	0.44
4:E:102:ILE:HG12	4:E:515:GLN:OE1	2.18	0.44
4:E:208:LEU:HD22	4:E:381:ARG:O	2.17	0.44
4:E:478:ARG:O	4:E:482:VAL:HG23	2.18	0.44
7:Q:234:VAL:HG11	7:Q:289:ASN:CG	2.38	0.44
8:Z:30:LEU:HD21	8:Z:64:LEU:HD22	2.00	0.44
2:B:48:MET:HB3	3:D:534:LYS:O	2.18	0.43
2:B:229:PRO:O	2:B:310:MET:HG3	2.17	0.43
3:D:28:GLN:HG3	3:D:541:THR:CA	2.47	0.43
3:D:193:ALA:HB2	3:D:226:LEU:HD11	2.00	0.43
4:E:225:ILE:HG22	4:E:227:GLY:H	1.83	0.43
4:E:325:VAL:HG12	4:E:330:ILE:HG12	1.98	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:143:PRO:HA	5:G:406:GLN:OE1	2.17	0.43
6:H:208:SER:HA	6:H:375:ARG:HH11	1.82	0.43
6:H:521:LYS:O	6:H:522:ASN:HB2	2.18	0.43
8:Z:75:SER:O	8:Z:78:ALA:HB3	2.18	0.43
8:Z:341:PRO:HA	8:Z:344:LEU:CD1	2.47	0.43
8:Z:470:HIS:ND1	8:Z:477:VAL:HB	2.32	0.43
2:B:11:ILE:HD11	4:E:40:ALA:CA	2.48	0.43
2:B:61:LEU:HD23	2:B:61:LEU:C	2.39	0.43
2:B:68:ALA:HB2	2:B:99:THR:HG21	2.01	0.43
5:G:79:SER:HA	5:G:82:GLU:OE1	2.17	0.43
5:G:282:ILE:HG12	5:G:338:LEU:HD13	1.98	0.43
5:G:409:PRO:HA	5:G:495:ILE:O	2.17	0.43
6:H:9:LEU:HD23	7:Q:77:GLU:O	2.18	0.43
6:H:72:VAL:HG12	6:H:72:VAL:O	2.18	0.43
6:H:431:GLN:O	6:H:435:ILE:HG13	2.17	0.43
7:Q:125:VAL:O	7:Q:128:VAL:HB	2.17	0.43
7:Q:454:GLU:C	7:Q:456:SER:H	2.21	0.43
7:Q:459:LYS:HE2	7:Q:461:ASN:HB2	2.00	0.43
7:Q:460:ALA:HA	7:Q:463:VAL:CG1	2.48	0.43
7:Q:460:ALA:O	7:Q:464:ILE:HG13	2.18	0.43
7:Q:527:ALA:HB2	8:Z:66:GLU:O	2.17	0.43
8:Z:118:ILE:HG21	8:Z:432:ARG:CB	2.42	0.43
8:Z:142:GLU:HG3	8:Z:144:ASP:HB2	2.01	0.43
8:Z:168:LEU:HD23	8:Z:172:VAL:HG23	1.99	0.43
8:Z:321:MET:O	8:Z:325:THR:HG23	2.17	0.43
8:Z:331:ILE:HD12	8:Z:343:CYS:SG	2.57	0.43
8:Z:368:ASN:OD1	8:Z:370:ARG:HB2	2.18	0.43
1:A:285:VAL:HA	1:A:306:MET:O	2.18	0.43
2:B:52:LEU:HB2	2:B:62:MET:HB3	2.00	0.43
2:B:66:ASP:O	2:B:70:ILE:HG13	2.18	0.43
3:D:426:ALA:O	3:D:431:PRO:HD3	2.18	0.43
4:E:61:MET:O	4:E:69:THR:HB	2.19	0.43
5:G:233:ILE:HD12	5:G:233:ILE:N	2.33	0.43
6:H:242:VAL:HG22	6:H:243:GLU:N	2.32	0.43
7:Q:140:HIS:HB3	7:Q:505:TYR:HE1	1.83	0.43
7:Q:140:HIS:CE1	7:Q:509:LYS:HB2	2.53	0.43
7:Q:231:VAL:HG23	7:Q:311:MET:HB2	2.00	0.43
8:Z:225:VAL:HG21	8:Z:290:VAL:CG2	2.48	0.43
1:A:137:ILE:N	1:A:408:VAL:O	2.51	0.43
1:A:446:PRO:O	1:A:450:ASN:HB2	2.19	0.43
2:B:83:VAL:O	2:B:87:MET:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:232:ILE:HG21	2:B:235:ALA:HB2	1.98	0.43
2:B:288:ASN:N	2:B:288:ASN:HD22	2.16	0.43
3:D:32:LYS:C	3:D:36:ILE:HG22	2.38	0.43
3:D:241:ILE:HD11	3:D:324:LYS:HB3	2.01	0.43
4:E:329:GLU:O	4:E:333:ILE:HG13	2.19	0.43
4:E:369:ASP:O	4:E:370:LYS:C	2.56	0.43
5:G:33:ILE:HD13	5:G:80:MET:HB2	2.00	0.43
6:H:176:ALA:O	6:H:180:VAL:HG23	2.18	0.43
7:Q:191:PHE:N	7:Q:192:PRO:HD2	2.33	0.43
7:Q:221:MET:O	7:Q:363:PHE:HD1	2.01	0.43
1:A:39:VAL:HG21	1:A:455:ASN:O	2.19	0.43
1:A:145:ARG:O	1:A:146:ASP:C	2.56	0.43
1:A:278:ILE:HG21	1:A:286:ILE:HG12	2.00	0.43
1:A:317:LYS:O	1:A:321:LYS:HG3	2.18	0.43
1:A:447:VAL:O	1:A:451:THR:HG23	2.18	0.43
2:B:51:ILE:CG2	2:B:61:LEU:HG	2.48	0.43
2:B:517:VAL:CG2	2:B:520:ILE:HD11	2.48	0.43
3:D:192:ASP:HA	3:D:195:MET:CG	2.48	0.43
3:D:217:LEU:CD1	3:D:401:ILE:HD12	2.49	0.43
5:G:49:MET:HG3	5:G:59:MET:CG	2.46	0.43
5:G:72:VAL:CG1	5:G:73:GLN:N	2.82	0.43
5:G:396:GLN:HE22	5:G:399:ARG:HH11	1.66	0.43
6:H:13:THR:HG22	6:H:13:THR:O	2.17	0.43
6:H:415:GLU:HG2	6:H:473:MET:HG3	2.00	0.43
7:Q:336:LEU:HD12	7:Q:336:LEU:N	2.34	0.43
7:Q:414:ALA:HB1	7:Q:476:LYS:O	2.19	0.43
8:Z:154:THR:HA	8:Z:157:ARG:CD	2.48	0.43
8:Z:156:LEU:HD11	8:Z:168:LEU:HD22	2.01	0.43
1:A:357:CYS:O	1:A:358:ASP:HB2	2.18	0.43
3:D:162:ASP:HB3	3:D:165:THR:OG1	2.18	0.43
3:D:540:ASN:HB3	3:D:542:ARG:CD	2.27	0.43
5:G:49:MET:CE	5:G:57:ILE:HD13	2.49	0.43
5:G:89:GLU:CD	5:G:389:ARG:HH22	2.21	0.43
5:G:316:ARG:HB2	5:G:319:ASP:OD2	2.18	0.43
6:H:51:ASP:C	6:H:53:ARG:H	2.22	0.43
6:H:127:THR:O	6:H:131:LEU:HG	2.19	0.43
6:H:352:GLN:HG2	6:H:357:ARG:CG	2.48	0.43
7:Q:204:VAL:CG1	7:Q:377:LEU:HG	2.49	0.43
7:Q:246:PHE:HB2	7:Q:297:VAL:HA	2.01	0.43
8:Z:69:ILE:CG2	8:Z:74:ALA:HB3	2.49	0.43
8:Z:417:ALA:CA	8:Z:470:HIS:HE2	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:Z:445:LEU:O	8:Z:448:PRO:HG2	2.18	0.43
8:Z:497:ASN:HB3	8:Z:499:CYS:SG	2.59	0.43
1:A:240:SER:HB3	1:A:290:GLY:HA3	2.01	0.43
2:B:10:ASN:O	4:E:85:HIS:N	2.51	0.43
2:B:61:LEU:CD2	2:B:63:VAL:HG23	2.49	0.43
2:B:127:ILE:HG23	2:B:512:GLU:HB3	2.01	0.43
2:B:131:ARG:HH11	2:B:131:ARG:HG3	1.83	0.43
2:B:461:LEU:C	2:B:461:LEU:HD13	2.39	0.43
3:D:170:ALA:HB3	3:D:187:SER:HB3	2.01	0.43
3:D:294:LYS:CD	3:D:325:ILE:HD11	2.48	0.43
6:H:189:LEU:O	6:H:190:LEU:O	2.37	0.43
6:H:194:MET:O	6:H:369:THR:HA	2.18	0.43
8:Z:378:GLY:CA	8:Z:384:LEU:HD21	2.47	0.43
1:A:17:ILE:HG21	1:A:528:ASP:O	2.18	0.43
1:A:69:HIS:CE1	1:A:71:ALA:HB3	2.54	0.43
1:A:104:ALA:O	1:A:108:VAL:HG23	2.19	0.43
1:A:220:VAL:CG1	1:A:225:MET:HG3	2.48	0.43
2:B:45:PRO:HA	2:B:169:SER:HA	2.01	0.43
2:B:352:VAL:HG23	2:B:354:ILE:HG13	2.00	0.43
4:E:20:LYS:NZ	6:H:32:ILE:N	2.67	0.43
4:E:112:LEU:HD21	4:E:517:ILE:HA	2.01	0.43
4:E:205:ASP:OD2	4:E:207:GLU:HB2	2.19	0.43
4:E:211:VAL:HG13	4:E:387:ILE:HD13	2.00	0.43
4:E:249:ALA:HB2	4:E:297:ALA:CB	2.49	0.43
5:G:71:GLN:CG	8:Z:8:ASN:HB2	2.49	0.43
5:G:93:ASP:CG	5:G:94:GLY:N	2.72	0.43
8:Z:233:CYS:SG	8:Z:336:LEU:HG	2.59	0.43
8:Z:355:LEU:HD22	8:Z:377:LYS:CE	2.49	0.43
1:A:43:LYS:HG2	5:G:520:ASP:CG	2.39	0.43
2:B:326:VAL:O	2:B:365:VAL:HB	2.18	0.43
4:E:225:ILE:HG22	4:E:227:GLY:N	2.33	0.43
5:G:49:MET:HE3	5:G:57:ILE:HD13	2.01	0.43
5:G:66:ILE:O	5:G:70:ILE:HG13	2.19	0.43
6:H:23:VAL:CA	6:H:109:LYS:HZ1	2.30	0.43
6:H:37:ARG:CG	6:H:448:GLN:HG2	2.49	0.43
6:H:101:ALA:O	6:H:105:LEU:HG	2.18	0.43
7:Q:85:MET:HA	7:Q:88:MET:CE	2.48	0.43
7:Q:146:LEU:HD22	7:Q:418:GLU:OE1	2.19	0.43
7:Q:165:HIS:HB2	7:Q:181:LYS:HD3	2.00	0.43
8:Z:235:VAL:HG22	8:Z:236:SER:N	2.34	0.43
1:A:236:CYS:HB3	1:A:316:LEU:HD11	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:11:ILE:CA	4:E:85:HIS:HB2	2.48	0.43
2:B:218:PHE:CD1	2:B:326:VAL:HG21	2.54	0.43
3:D:28:GLN:HG2	3:D:29:ASP:N	2.33	0.43
3:D:33:PRO:O	3:D:536:ASP:OD1	2.36	0.43
3:D:212:LYS:HD2	3:D:230:LEU:HD11	2.01	0.43
4:E:305:GLY:HA2	4:E:324:TRP:CE2	2.54	0.43
4:E:446:TYR:N	4:E:446:TYR:HD1	2.16	0.43
5:G:49:MET:CG	5:G:59:MET:HG2	2.46	0.43
5:G:80:MET:HA	5:G:83:ILE:CD1	2.49	0.43
5:G:245:LEU:HD12	5:G:296:ILE:CG1	2.49	0.43
5:G:462:LEU:HD11	5:G:480:VAL:HG22	2.00	0.43
6:H:54:GLY:O	6:H:55:LYS:C	2.56	0.43
6:H:471:GLY:HA3	6:H:475:TYR:CE1	2.53	0.43
6:H:497:MET:HE2	6:H:501:ASN:HB2	2.00	0.43
6:H:520:ILE:HG21	7:Q:76:LEU:HD22	2.00	0.43
8:Z:380:ASN:HD22	8:Z:380:ASN:HA	1.66	0.43
8:Z:407:VAL:HG22	8:Z:495:TRP:CG	2.53	0.43
1:A:2:GLU:O	1:A:3:GLY:O	2.36	0.42
1:A:20:GLN:HE21	5:G:7:VAL:N	2.17	0.42
3:D:131:ILE:HG12	3:D:449:MET:HE2	2.01	0.42
4:E:189:ALA:HA	4:E:406:LEU:HD21	1.99	0.42
5:G:421:ALA:O	5:G:424:GLU:HB3	2.19	0.42
6:H:228:GLN:CB	6:H:229:PRO:HD2	2.49	0.42
7:Q:41:GLN:HA	7:Q:44:ARG:HB2	2.00	0.42
7:Q:89:ALA:HB1	7:Q:104:VAL:HG21	2.00	0.42
8:Z:76:LEU:O	8:Z:80:VAL:HG23	2.19	0.42
8:Z:91:GLY:O	8:Z:92:THR:C	2.57	0.42
1:A:12:SER:OG	1:A:17:ILE:HD13	2.19	0.42
1:A:138:ILE:HG21	1:A:406:LYS:NZ	2.34	0.42
1:A:328:LEU:HD22	1:A:328:LEU:N	2.34	0.42
2:B:131:ARG:HG2	2:B:135:LYS:HE2	2.01	0.42
3:D:115:ILE:O	3:D:119:LEU:HG	2.20	0.42
3:D:132:HIS:CD2	3:D:133:PRO:HD2	2.54	0.42
3:D:170:ALA:HB1	3:D:187:SER:HA	2.00	0.42
3:D:226:LEU:CG	3:D:389:VAL:HB	2.49	0.42
3:D:416:ARG:O	3:D:420:LYS:HG3	2.19	0.42
3:D:515:LEU:HG	3:D:519:VAL:HG21	2.02	0.42
5:G:40:CYS:HA	5:G:45:SER:HB2	2.00	0.42
5:G:194:ASP:HB3	5:G:399:ARG:HG3	2.01	0.42
6:H:16:SER:O	6:H:21:GLN:HB2	2.19	0.42
6:H:448:GLN:HG3	6:H:452:ASN:HD21	1.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:201:ASN:HB3	7:Q:371:ALA:O	2.19	0.42
7:Q:212:VAL:C	7:Q:214:SER:H	2.22	0.42
7:Q:225:LYS:CA	7:Q:313:VAL:HG22	2.44	0.42
7:Q:351:TYR:HE2	7:Q:364:LYS:HE2	1.83	0.42
7:Q:358:THR:O	7:Q:358:THR:HG23	2.19	0.42
7:Q:408:LEU:CD1	7:Q:498:LEU:HD13	2.49	0.42
8:Z:8:ASN:CG	8:Z:9:PRO:HD2	2.40	0.42
8:Z:511:ILE:HA	8:Z:514:ASN:HD22	1.83	0.42
1:A:5:LEU:HD13	1:A:531:ILE:HG21	2.02	0.42
1:A:137:ILE:O	1:A:137:ILE:HG22	2.19	0.42
1:A:242:GLN:HG3	1:A:291:GLY:O	2.19	0.42
2:B:187:VAL:HG11	2:B:397:LEU:HB3	2.00	0.42
2:B:243:GLY:HA2	2:B:292:ASN:OD1	2.20	0.42
2:B:414:GLU:HB3	2:B:443:LEU:O	2.19	0.42
3:D:99:LYS:O	3:D:103:ILE:HG13	2.19	0.42
3:D:378:LYS:HE2	3:D:380:THR:CG2	2.49	0.42
4:E:62:VAL:HG22	4:E:68:VAL:HA	2.01	0.42
6:H:110:PRO:HG2	6:H:111:TYR:HD1	1.84	0.42
6:H:168:ILE:HD11	6:H:175:PHE:CE1	2.55	0.42
6:H:348:PHE:HE2	6:H:361:PHE:CE2	2.38	0.42
6:H:448:GLN:HE21	6:H:452:ASN:CG	2.21	0.42
7:Q:93:GLN:NE2	7:Q:97:VAL:HG22	2.34	0.42
7:Q:148:CYS:HB2	7:Q:476:LYS:HZ2	1.83	0.42
8:Z:101:GLU:O	8:Z:104:LYS:HB3	2.20	0.42
8:Z:217:ARG:HG2	8:Z:302:LEU:CD2	2.49	0.42
1:A:136:LEU:O	1:A:138:ILE:N	2.52	0.42
1:A:176:VAL:HG22	1:A:190:TYR:CZ	2.55	0.42
1:A:233:LYS:HB3	1:A:345:LEU:HB3	2.00	0.42
2:B:465:LEU:O	2:B:469:HIS:HB2	2.19	0.42
3:D:340:CYS:HB2	3:D:347:PRO:HD3	2.00	0.42
3:D:477:ILE:H	3:D:477:ILE:CD1	2.28	0.42
4:E:52:LEU:HD12	4:E:53:GLY:H	1.84	0.42
4:E:115:ALA:CB	4:E:457:VAL:HG11	2.50	0.42
4:E:520:ALA:O	4:E:524:VAL:HG23	2.19	0.42
4:E:532:ASP:O	6:H:47:LYS:HD2	2.19	0.42
5:G:37:ILE:O	5:G:40:CYS:HB2	2.20	0.42
5:G:72:VAL:HG22	8:Z:6:THR:CG2	2.47	0.42
5:G:185:PHE:CZ	5:G:370:LYS:HB3	2.54	0.42
6:H:294:PRO:HG3	6:H:313:ARG:CD	2.49	0.42
6:H:348:PHE:HE2	6:H:361:PHE:CZ	2.37	0.42
6:H:414:MET:HE3	6:H:464:LEU:HB3	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:168:VAL:HA	7:Q:173:TYR:OH	2.19	0.42
7:Q:524:ILE:HG21	8:Z:46:MET:N	2.24	0.42
8:Z:35:ARG:HG3	8:Z:450:VAL:CG1	2.49	0.42
8:Z:196:MET:SD	8:Z:197:LYS:N	2.92	0.42
8:Z:415:GLU:OE1	8:Z:415:GLU:N	2.44	0.42
2:B:10:ASN:H	4:E:85:HIS:CD2	2.37	0.42
2:B:96:GLY:O	2:B:97:ASP:O	2.37	0.42
2:B:203:LYS:HA	2:B:383:LEU:HD11	2.00	0.42
2:B:520:ILE:HG22	2:B:521:ILE:N	2.35	0.42
3:D:36:ILE:CD1	3:D:40:ASN:HD21	2.32	0.42
3:D:186:LEU:HA	3:D:189:MET:HE3	2.02	0.42
4:E:535:LYS:HA	4:E:536:PRO:HD2	1.93	0.42
5:G:27:ILE:HG23	5:G:106:LEU:CB	2.45	0.42
5:G:101:LEU:O	5:G:105:MET:HG3	2.19	0.42
7:Q:187:CYS:C	7:Q:189:SER:H	2.22	0.42
8:Z:9:PRO:O	8:Z:10:LYS:HB2	2.20	0.42
2:B:95:VAL:O	2:B:392:ASP:HB3	2.19	0.42
2:B:181:LYS:O	2:B:185:GLU:HB2	2.20	0.42
2:B:231:ARG:HE	2:B:348:LEU:HD11	1.84	0.42
2:B:418:ALA:O	2:B:440:ALA:HB1	2.20	0.42
2:B:478:LEU:HD12	2:B:479:ASP:H	1.84	0.42
3:D:217:LEU:CD1	3:D:398:LYS:HG3	2.45	0.42
5:G:49:MET:N	8:Z:518:VAL:HG13	2.34	0.42
5:G:356:GLY:O	5:G:357:ASP:HB2	2.19	0.42
5:G:368:ASP:C	5:G:370:LYS:H	2.23	0.42
6:H:51:ASP:O	6:H:53:ARG:N	2.47	0.42
6:H:237:ILE:HG21	6:H:328:GLY:HA3	2.01	0.42
6:H:374:LEU:HB3	6:H:382:MET:CE	2.50	0.42
1:A:169:ALA:O	1:A:173:VAL:HG23	2.20	0.42
1:A:222:SER:HG	1:A:301:VAL:HG22	1.85	0.42
1:A:311:VAL:HG12	1:A:315:ASP:HB2	2.01	0.42
1:A:326:THR:HB	1:A:344:MET:HB3	2.02	0.42
1:A:450:ASN:O	1:A:454:VAL:HG23	2.19	0.42
2:B:186:ALA:O	2:B:190:LEU:HD13	2.18	0.42
2:B:219:LEU:HD22	2:B:374:VAL:HG21	2.02	0.42
2:B:244:MET:O	2:B:300:PRO:HG2	2.20	0.42
3:D:378:LYS:HE2	3:D:380:THR:HG21	2.02	0.42
4:E:132:ARG:CG	4:E:443:LEU:HG	2.50	0.42
4:E:248:ILE:CD1	4:E:337:THR:HG21	2.50	0.42
4:E:304:TRP:HB3	4:E:305:GLY:H	1.74	0.42
5:G:354:LYS:HA	5:G:359:TYR:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:H:165:SER:HB3	6:H:480:ASN:CB	2.48	0.42
7:Q:379:GLY:N	7:Q:385:MET:SD	2.93	0.42
8:Z:55:LYS:CE	8:Z:62:VAL:HG11	2.50	0.42
8:Z:91:GLY:O	8:Z:93:THR:N	2.52	0.42
8:Z:97:LEU:N	8:Z:97:LEU:HD12	2.35	0.42
1:A:97:ALA:HA	1:A:100:LEU:HD12	2.01	0.42
1:A:159:LYS:HB2	1:A:161:ILE:HG22	2.01	0.42
1:A:376:ILE:HD13	1:A:376:ILE:N	2.35	0.42
2:B:31:GLY:O	2:B:35:ILE:HG12	2.20	0.42
2:B:75:GLY:N	3:D:541:THR:OG1	2.51	0.42
4:E:234:PHE:HE2	4:E:240:PRO:O	2.03	0.42
4:E:362:ILE:HB	4:E:364:PHE:HE1	1.77	0.42
5:G:144:VAL:HG11	5:G:407:LEU:HD21	2.01	0.42
6:H:103:GLU:OE2	6:H:106:LYS:HD3	2.20	0.42
6:H:136:ILE:HG21	6:H:500:ILE:HG13	2.01	0.42
6:H:313:ARG:HH11	6:H:313:ARG:CG	2.18	0.42
7:Q:25:LEU:HD22	7:Q:26:GLU:OE1	2.20	0.42
7:Q:59:HIS:CD2	7:Q:59:HIS:H	2.38	0.42
7:Q:156:ASP:OD2	7:Q:158:ASP:HB2	2.20	0.42
7:Q:179:LEU:HG	7:Q:183:ILE:HD11	2.01	0.42
8:Z:297:ILE:HG13	8:Z:314:ARG:HB3	2.02	0.42
8:Z:450:VAL:O	8:Z:453:GLN:HB3	2.18	0.42
1:A:115:THR:HG21	3:D:471:ASN:O	2.19	0.42
1:A:483:LEU:HD12	1:A:485:TRP:CZ2	2.55	0.42
2:B:139:GLN:HA	2:B:142:LEU:HD12	2.01	0.42
2:B:171:LEU:HD21	2:B:382:ILE:HG12	2.02	0.42
2:B:373:ILE:HG21	2:B:390:LEU:HD21	2.02	0.42
3:D:41:ILE:HG21	3:D:124:THR:CG2	2.49	0.42
3:D:182:TYR:CD2	3:D:221:ILE:HB	2.54	0.42
4:E:189:ALA:O	4:E:193:VAL:HG23	2.20	0.42
5:G:23:GLN:HG3	5:G:24:SER:H	1.84	0.42
5:G:77:ALA:O	5:G:80:MET:HB2	2.20	0.42
5:G:83:ILE:HG23	5:G:508:THR:HG22	2.02	0.42
5:G:105:MET:HB3	5:G:105:MET:HE2	1.71	0.42
5:G:285:LEU:HD22	5:G:339:ARG:C	2.39	0.42
5:G:296:ILE:CG1	5:G:313:ARG:HB3	2.49	0.42
7:Q:13:GLN:CD	8:Z:72:PRO:HD2	2.40	0.42
7:Q:142:ILE:HD13	7:Q:422:GLN:CB	2.50	0.42
1:A:2:GLU:OE2	3:D:44:ALA:N	2.39	0.42
1:A:136:LEU:HB3	1:A:407:SER:HB3	2.01	0.42
1:A:445:LEU:C	1:A:447:VAL:H	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:507:THR:O	1:A:511:VAL:HG23	2.20	0.42
1:A:530:LEU:HD21	3:D:63:MET:HB3	2.02	0.42
3:D:37:ARG:NE	3:D:536:ASP:OD2	2.53	0.42
4:E:156:LEU:CD2	4:E:161:ASN:HB3	2.47	0.42
5:G:153:LEU:HD13	5:G:177:LEU:HD12	2.02	0.42
6:H:238:ALA:HB2	6:H:286:ALA:CB	2.44	0.42
6:H:460:ILE:CG2	6:H:461:LEU:N	2.82	0.42
7:Q:124:SER:O	7:Q:128:VAL:HG23	2.19	0.42
7:Q:333:LEU:HD21	7:Q:343:GLU:CG	2.49	0.42
7:Q:401:VAL:O	7:Q:405:ASP:N	2.53	0.42
8:Z:131:LEU:HD21	8:Z:505:LEU:HB2	2.02	0.42
8:Z:195:GLU:HB2	8:Z:384:LEU:HD13	2.02	0.42
8:Z:413:ALA:HA	8:Z:477:VAL:O	2.18	0.42
8:Z:446:ILE:HG23	8:Z:447:ILE:N	2.34	0.42
1:A:73:LYS:O	1:A:76:CYS:HB2	2.19	0.41
1:A:381:ASN:HB2	1:A:384:MET:SD	2.60	0.41
3:D:104:GLU:OE1	3:D:524:LEU:HD11	2.19	0.41
3:D:132:HIS:HB3	3:D:135:ILE:HD12	2.02	0.41
3:D:137:SER:HA	3:D:533:LEU:HD12	2.02	0.41
3:D:213:ILE:HD11	3:D:412:LEU:CD1	2.46	0.41
3:D:439:LEU:HB2	3:D:458:ALA:HB2	2.01	0.41
4:E:147:HIS:O	4:E:150:LYS:HB3	2.20	0.41
5:G:202:GLU:O	5:G:375:LEU:HA	2.20	0.41
5:G:285:LEU:HD22	5:G:339:ARG:CA	2.50	0.41
6:H:522:ASN:ND2	7:Q:75:GLU:O	2.52	0.41
7:Q:356:GLY:O	7:Q:357:ASP:CB	2.67	0.41
7:Q:502:LEU:HD12	7:Q:502:LEU:HA	1.87	0.41
8:Z:134:LEU:CD2	8:Z:414:VAL:HG11	2.50	0.41
8:Z:176:ILE:HD11	8:Z:395:LEU:CB	2.49	0.41
8:Z:177:LEU:O	8:Z:177:LEU:HD23	2.20	0.41
8:Z:228:ALA:HB1	8:Z:290:VAL:HG23	1.99	0.41
8:Z:352:GLU:CG	8:Z:359:LYS:HB3	2.50	0.41
8:Z:476:LEU:HD22	8:Z:490:ALA:HB2	2.01	0.41
1:A:176:VAL:HG21	1:A:399:VAL:HG11	2.02	0.41
3:D:123:CYS:SG	3:D:136:ILE:HG21	2.60	0.41
3:D:197:VAL:HG21	3:D:211:ILE:HD11	2.02	0.41
3:D:256:LEU:HD13	3:D:312:LEU:HD12	2.01	0.41
3:D:346:LYS:HD2	3:D:358:MET:SD	2.60	0.41
3:D:371:ASN:ND2	3:D:394:ARG:HD3	2.36	0.41
3:D:432:GLU:CD	3:D:432:GLU:N	2.73	0.41
4:E:343:PRO:HG2	4:E:347:GLU:HG3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:245:LEU:HD12	5:G:296:ILE:HD13	2.02	0.41
7:Q:281:LYS:HA	7:Q:308:TYR:HE2	1.84	0.41
8:Z:331:ILE:HB	8:Z:343:CYS:SG	2.60	0.41
8:Z:350:VAL:HG22	8:Z:363:ILE:HG23	2.01	0.41
8:Z:352:GLU:HG2	8:Z:359:LYS:HB3	2.02	0.41
8:Z:412:GLY:HA2	8:Z:415:GLU:OE1	2.20	0.41
1:A:2:GLU:N	3:D:88:HIS:HB3	2.35	0.41
1:A:220:VAL:HG12	1:A:225:MET:HG3	2.02	0.41
1:A:328:LEU:HD21	1:A:344:MET:CB	2.48	0.41
1:A:484:LYS:O	1:A:486:ILE:N	2.46	0.41
1:A:507:THR:HG23	1:A:508:ILE:N	2.36	0.41
2:B:367:LEU:O	2:B:369:GLU:N	2.54	0.41
3:D:232:LEU:HD21	3:D:339:ILE:CD1	2.47	0.41
3:D:343:ILE:HG12	3:D:382:CYS:SG	2.60	0.41
4:E:129:HIS:HA	4:E:130:PRO:HD3	1.95	0.41
4:E:344:ARG:HG3	4:E:345:PHE:N	2.35	0.41
4:E:417:ARG:HG3	4:E:417:ARG:NH1	2.35	0.41
5:G:243:SER:OG	5:G:335:PRO:HD3	2.21	0.41
5:G:289:VAL:HG12	5:G:310:THR:HB	2.02	0.41
5:G:394:ALA:O	5:G:397:VAL:HG22	2.20	0.41
6:H:198:LYS:HZ3	6:H:217:LYS:HE3	1.85	0.41
7:Q:130:GLU:O	7:Q:134:ILE:HG13	2.18	0.41
7:Q:415:THR:O	7:Q:419:LEU:HG	2.19	0.41
7:Q:423:ILE:O	7:Q:426:TYR:HB3	2.20	0.41
8:Z:70:GLN:O	8:Z:72:PRO:HD3	2.20	0.41
1:A:138:ILE:HG21	1:A:406:LYS:HZ1	1.85	0.41
1:A:420:SER:HA	1:A:442:ALA:HB1	2.01	0.41
2:B:97:ASP:C	2:B:99:THR:N	2.73	0.41
2:B:365:VAL:O	2:B:366:ALA:C	2.59	0.41
3:D:142:LYS:HZ2	3:D:446:LEU:HD21	1.85	0.41
3:D:237:ALA:CA	3:D:317:LEU:HD11	2.49	0.41
3:D:411:ALA:O	3:D:415:ILE:HG13	2.19	0.41
3:D:421:LYS:CE	3:D:515:LEU:HD23	2.42	0.41
4:E:466:SER:HB3	4:E:493:CYS:HG	1.84	0.41
5:G:71:GLN:H	8:Z:524:ALA:CB	2.32	0.41
5:G:130:LEU:HD11	5:G:507:LYS:CD	2.43	0.41
5:G:238:ILE:HD13	5:G:323:ILE:CG2	2.40	0.41
5:G:416:MET:HE2	5:G:466:LEU:HD13	2.02	0.41
6:H:37:ARG:HD2	6:H:99:LEU:HD11	2.02	0.41
6:H:391:ASP:HA	6:H:394:MET:HG3	2.02	0.41
6:H:415:GLU:O	6:H:418:LYS:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:353:SER:OG	7:Q:360:VAL:HG23	2.20	0.41
8:Z:7:LEU:HD21	8:Z:522:MET:HB3	2.02	0.41
8:Z:374:LEU:CD2	8:Z:391:ILE:HD13	2.47	0.41
1:A:77:GLU:O	1:A:81:LEU:HG	2.21	0.41
3:D:151:LEU:HD21	3:D:435:LEU:CD1	2.49	0.41
4:E:25:LYS:HB3	4:E:26:SER:H	1.68	0.41
4:E:41:ALA:O	4:E:42:LYS:C	2.58	0.41
4:E:145:ILE:HD13	4:E:145:ILE:HA	1.94	0.41
5:G:149:ARG:CG	5:G:177:LEU:HD11	2.50	0.41
7:Q:147:VAL:HG21	7:Q:501:TYR:HB2	2.02	0.41
7:Q:191:PHE:CE1	7:Q:197:PHE:HE1	2.38	0.41
8:Z:13:VAL:HG22	8:Z:522:MET:CG	2.45	0.41
8:Z:73:THR:O	8:Z:76:LEU:HB2	2.19	0.41
8:Z:225:VAL:HG22	8:Z:311:ILE:HG12	2.03	0.41
1:A:107:LEU:O	1:A:110:GLN:HB2	2.21	0.41
1:A:137:ILE:HG23	1:A:499:LYS:CE	2.49	0.41
1:A:234:ILE:HD11	1:A:364:ILE:HG21	2.03	0.41
1:A:356:ILE:HD12	1:A:361:LEU:HB2	2.02	0.41
2:B:477:GLY:HA3	2:B:488:MET:CG	2.51	0.41
3:D:98:SER:HB2	3:D:109:THR:HG22	2.02	0.41
3:D:118:SER:OG	3:D:460:ALA:HB1	2.20	0.41
3:D:173:SER:HB2	3:D:414:VAL:HG11	2.02	0.41
3:D:345:THR:HB	3:D:360:GLY:HA3	2.02	0.41
4:E:416:ASN:C	4:E:417:ARG:HG2	2.40	0.41
5:G:119:PRO:O	5:G:122:VAL:HB	2.20	0.41
8:Z:426:LYS:HB2	8:Z:434:GLN:HG2	2.02	0.41
1:A:62:LEU:HD12	1:A:79:ALA:CB	2.51	0.41
1:A:356:ILE:CD1	1:A:361:LEU:HB2	2.50	0.41
2:B:26:LEU:O	2:B:30:ILE:HG13	2.20	0.41
2:B:297:TYR:HB3	2:B:300:PRO:CD	2.50	0.41
2:B:521:ILE:HG13	4:E:61:MET:CE	2.51	0.41
3:D:252:ILE:HB	3:D:303:ILE:CD1	2.46	0.41
4:E:459:PRO:HA	4:E:462:LEU:CD1	2.51	0.41
5:G:383:ILE:O	5:G:383:ILE:HG22	2.21	0.41
5:G:440:VAL:O	5:G:443:ALA:HB3	2.20	0.41
5:G:467:ARG:HG3	5:G:467:ARG:NH1	2.36	0.41
5:G:523:VAL:HG12	5:G:524:SER:H	1.85	0.41
6:H:231:LYS:HE3	6:H:347:VAL:HG13	2.03	0.41
1:A:168:PHE:O	1:A:172:VAL:HG23	2.21	0.41
1:A:448:ILE:HB	1:A:449:PRO:HD3	2.03	0.41
1:A:484:LYS:C	1:A:486:ILE:H	2.24	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:508:ILE:HG23	1:A:509:VAL:N	2.36	0.41
2:B:94:GLU:OE1	2:B:94:GLU:HA	2.20	0.41
2:B:189:ARG:HB3	2:B:189:ARG:HH11	1.86	0.41
3:D:186:LEU:HD23	3:D:189:MET:CE	2.51	0.41
4:E:35:LYS:CA	4:E:38:ILE:HD12	2.46	0.41
4:E:378:LYS:HB2	4:E:378:LYS:HE3	1.90	0.41
5:G:168:TRP:CZ3	5:G:210:GLU:HB2	2.56	0.41
5:G:236:PRO:HA	5:G:288:ASP:OD2	2.21	0.41
5:G:399:ARG:HG2	5:G:399:ARG:NH1	2.36	0.41
6:H:346:GLN:HG3	6:H:347:VAL:HG23	2.03	0.41
6:H:464:LEU:HD13	6:H:476:GLY:O	2.21	0.41
6:H:464:LEU:HA	6:H:484:ILE:HG21	2.02	0.41
7:Q:327:THR:HG22	7:Q:366:GLU:OE2	2.20	0.41
1:A:172:VAL:HG12	1:A:399:VAL:HG21	2.01	0.41
1:A:230:VAL:O	1:A:232:ALA:N	2.54	0.41
1:A:369:ALA:C	1:A:371:THR:N	2.74	0.41
1:A:403:LEU:HA	1:A:403:LEU:HD12	1.80	0.41
2:B:209:LEU:HD11	2:B:382:ILE:HG23	2.02	0.41
2:B:238:LEU:CD2	2:B:287:ILE:HG21	2.51	0.41
3:D:41:ILE:HG23	3:D:120:LEU:CB	2.47	0.41
3:D:111:SER:O	3:D:112:VAL:C	2.59	0.41
3:D:179:VAL:HG11	3:D:404:ALA:HA	2.00	0.41
3:D:206:VAL:HG23	3:D:419:VAL:HG21	2.00	0.41
3:D:249:ILE:HG13	3:D:343:ILE:HG21	2.03	0.41
3:D:371:ASN:HD22	3:D:394:ARG:NE	2.16	0.41
4:E:95:SER:HB2	4:E:106:THR:CG2	2.50	0.41
4:E:104:ASP:OD2	4:E:408:VAL:HG12	2.21	0.41
4:E:247:LYS:HD2	4:E:296:GLY:O	2.21	0.41
4:E:252:THR:HG23	4:E:303:GLN:OE1	2.21	0.41
4:E:457:VAL:HG23	4:E:458:ILE:H	1.84	0.41
4:E:481:GLN:NE2	4:E:487:PRO:HB3	2.36	0.41
4:E:518:SER:CA	4:E:522:GLN:HE21	2.34	0.41
5:G:46:MET:O	5:G:48:LYS:NZ	2.53	0.41
5:G:117:MET:O	5:G:118:HIS:C	2.59	0.41
5:G:447:ILE:N	5:G:448:PRO:HD2	2.35	0.41
5:G:504:GLN:HA	5:G:504:GLN:HE21	1.86	0.41
6:H:65:ILE:O	6:H:69:LEU:HG	2.21	0.41
6:H:416:LEU:O	6:H:420:LEU:HG	2.21	0.41
6:H:435:ILE:O	6:H:438:TYR:HB3	2.20	0.41
6:H:486:ASP:OD1	6:H:488:PHE:HB3	2.21	0.41
7:Q:97:VAL:HG12	7:Q:401:VAL:HG22	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:155:ARG:HD3	7:Q:155:ARG:HA	1.82	0.41
7:Q:504:LYS:O	7:Q:507:ALA:HB3	2.21	0.41
7:Q:525:ILE:HG13	7:Q:526:MET:N	2.35	0.41
7:Q:526:MET:O	7:Q:527:ALA:HB2	2.21	0.41
8:Z:109:TYR:HA	8:Z:112:GLU:OE1	2.20	0.41
8:Z:325:THR:HB	8:Z:330:GLY:O	2.21	0.41
8:Z:374:LEU:HD22	8:Z:391:ILE:HG21	2.02	0.41
8:Z:520:GLU:C	8:Z:521:ILE:HD12	2.41	0.41
2:B:437:GLU:HG3	2:B:441:LYS:HE3	2.03	0.41
2:B:521:ILE:HG12	4:E:61:MET:SD	2.60	0.41
5:G:208:ILE:HG13	5:G:210:GLU:H	1.86	0.41
6:H:214:VAL:HA	6:H:371:THR:OG1	2.21	0.41
7:Q:126:SER:CB	8:Z:41:LYS:HD3	2.51	0.41
8:Z:422:LEU:HB3	8:Z:437:VAL:CG1	2.51	0.41
1:A:105:ASP:O	1:A:109:LYS:N	2.50	0.40
1:A:354:GLU:HG3	1:A:363:LEU:HD12	2.02	0.40
2:B:133:ALA:HB1	2:B:421:VAL:HG11	2.02	0.40
2:B:414:GLU:OE1	2:B:414:GLU:HA	2.21	0.40
2:B:441:LYS:HA	2:B:444:ARG:HE	1.87	0.40
3:D:237:ALA:CB	3:D:327:VAL:HG12	2.49	0.40
3:D:332:GLU:HB3	3:D:335:ASP:OD2	2.21	0.40
3:D:345:THR:O	3:D:345:THR:HG23	2.21	0.40
3:D:507:LEU:HD12	3:D:512:VAL:HG12	2.03	0.40
4:E:237:PRO:O	4:E:239:MET:N	2.54	0.40
4:E:441:PRO:O	4:E:442:THR:O	2.39	0.40
4:E:527:ILE:H	4:E:527:ILE:HG13	1.53	0.40
6:H:117:HIS:HA	6:H:118:PRO:HD3	1.93	0.40
6:H:168:ILE:HG13	6:H:168:ILE:O	2.21	0.40
7:Q:197:PHE:HB3	7:Q:403:THR:HG21	2.04	0.40
7:Q:475:ASN:O	7:Q:476:LYS:C	2.59	0.40
8:Z:194:MET:HE1	8:Z:360:PHE:HE2	1.85	0.40
8:Z:407:VAL:HG23	8:Z:495:TRP:HB3	2.03	0.40
1:A:44:MET:SD	1:A:52:VAL:HG13	2.62	0.40
1:A:136:LEU:HB3	1:A:407:SER:CB	2.51	0.40
1:A:137:ILE:O	1:A:408:VAL:HG12	2.21	0.40
1:A:460:SER:O	1:A:464:VAL:HG23	2.22	0.40
1:A:533:LEU:HD23	1:A:533:LEU:H	1.86	0.40
2:B:161:ASN:O	2:B:165:THR:HG23	2.21	0.40
2:B:414:GLU:HG3	2:B:446:LEU:HD22	2.03	0.40
2:B:517:VAL:HA	4:E:58:ASP:O	2.21	0.40
3:D:169:SER:CB	3:D:418:LEU:HD22	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:540:ASN:C	3:D:542:ARG:H	2.24	0.40
4:E:142:ARG:NH2	6:H:167:LEU:HD13	2.36	0.40
4:E:248:ILE:CG1	4:E:299:LEU:HD23	2.50	0.40
4:E:363:SER:HB3	4:E:370:LYS:HG3	2.03	0.40
4:E:430:ALA:O	4:E:452:ALA:HB1	2.21	0.40
4:E:524:VAL:HA	4:E:527:ILE:HD12	2.04	0.40
5:G:46:MET:CE	8:Z:517:LEU:HA	2.52	0.40
5:G:470:HIS:CE1	5:G:476:GLU:HG3	2.56	0.40
6:H:71:VAL:HG12	6:H:77:LYS:HG2	2.03	0.40
6:H:241:ASN:HB2	6:H:332:THR:HA	2.02	0.40
6:H:420:LEU:HB2	6:H:439:ALA:HB2	2.03	0.40
7:Q:174:GLY:CA	7:Q:177:VAL:HG13	2.48	0.40
7:Q:508:ILE:HD12	7:Q:508:ILE:H	1.86	0.40
1:A:11:ARG:CB	1:A:531:ILE:HG12	2.51	0.40
1:A:441:PHE:O	1:A:445:LEU:HG	2.21	0.40
2:B:111:ARG:HG3	2:B:114:GLU:OE2	2.21	0.40
2:B:191:LYS:HZ3	2:B:401:VAL:HG12	1.86	0.40
2:B:223:LYS:CE	2:B:360:ILE:HD12	2.51	0.40
3:D:142:LYS:NZ	3:D:446:LEU:HD21	2.37	0.40
3:D:151:LEU:HD21	3:D:435:LEU:CG	2.51	0.40
3:D:254:PHE:HB2	3:D:350:HIS:HA	2.04	0.40
3:D:300:VAL:HG13	3:D:326:MET:SD	2.61	0.40
3:D:416:ARG:NH1	3:D:420:LYS:HZ2	2.18	0.40
3:D:506:ILE:HG23	3:D:511:VAL:HB	2.04	0.40
4:E:25:LYS:NZ	4:E:536:PRO:HB3	2.33	0.40
4:E:215:VAL:HB	4:E:392:LYS:HE3	2.04	0.40
5:G:104:GLU:HG2	5:G:446:VAL:CG1	2.48	0.40
5:G:275:ILE:HD13	5:G:299:LEU:HD12	2.04	0.40
6:H:19:ILE:O	6:H:23:VAL:HG23	2.20	0.40
6:H:323:MET:HA	6:H:328:GLY:O	2.20	0.40
7:Q:448:ILE:N	7:Q:449:PRO:HD2	2.36	0.40
7:Q:491:ASP:OD1	7:Q:493:LEU:HB3	2.22	0.40
8:Z:91:GLY:O	8:Z:94:SER:N	2.54	0.40
8:Z:404:ASP:C	8:Z:406:CYS:H	2.24	0.40
1:A:2:GLU:HB3	3:D:91:ALA:N	2.36	0.40
2:B:172:LEU:HD13	2:B:209:LEU:HD13	2.02	0.40
2:B:465:LEU:HD12	2:B:485:ILE:CD1	2.51	0.40
3:D:32:LYS:HB3	3:D:32:LYS:HZ3	1.86	0.40
4:E:225:ILE:CG2	4:E:375:GLU:HB3	2.52	0.40
4:E:240:PRO:HD2	4:E:320:PRO:HD3	2.04	0.40
5:G:347:ALA:HB3	5:G:365:GLU:CB	2.44	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:G:447:ILE:HB	5:G:448:PRO:HD3	2.04	0.40
6:H:238:ALA:CB	6:H:286:ALA:HB1	2.42	0.40
6:H:398:ARG:HB3	6:H:495:PRO:HG3	2.03	0.40
7:Q:231:VAL:HG22	7:Q:309:ASN:O	2.21	0.40
7:Q:521:VAL:HG12	7:Q:524:ILE:HD13	2.02	0.40
8:Z:23:ASN:N	8:Z:23:ASN:HD22	2.19	0.40
8:Z:142:GLU:C	8:Z:144:ASP:N	2.73	0.40
1:A:385:CYS:O	1:A:389:GLU:HB2	2.22	0.40
2:B:102:VAL:HA	2:B:503:VAL:HG13	2.03	0.40
2:B:242:THR:HA	2:B:294:GLN:NE2	2.36	0.40
3:D:421:LYS:C	3:D:423:ALA:H	2.25	0.40
5:G:165:ILE:HD11	5:G:172:ALA:CB	2.51	0.40
5:G:203:LYS:HB2	5:G:384:LEU:CD1	2.52	0.40
6:H:6:VAL:O	6:H:7:ILE:HB	2.22	0.40
6:H:126:ARG:HH11	6:H:126:ARG:HG3	1.87	0.40
6:H:351:THR:OG1	6:H:360:PHE:HE2	2.05	0.40
6:H:361:PHE:CD1	6:H:361:PHE:N	2.89	0.40
7:Q:66:THR:HG21	7:Q:71:THR:CG2	2.51	0.40
7:Q:160:VAL:CG1	7:Q:185:GLN:HG2	2.50	0.40
7:Q:188:VAL:HG11	7:Q:399:PHE:CD1	2.55	0.40
8:Z:324:LEU:O	8:Z:324:LEU:HD12	2.22	0.40
8:Z:355:LEU:HD11	8:Z:362:PHE:HZ	1.87	0.40
8:Z:407:VAL:HG22	8:Z:495:TRP:HB3	2.03	0.40
8:Z:520:GLU:OE1	8:Z:522:MET:HG3	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	471/556 (85%)	390 (83%)	63 (13%)	18 (4%)	3 24

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	a	351/556 (63%)	283 (81%)	50 (14%)	18 (5%)	2	19
2	B	473/535 (88%)	398 (84%)	62 (13%)	13 (3%)	5	31
2	b	353/535 (66%)	301 (85%)	42 (12%)	10 (3%)	5	30
3	D	469/542 (86%)	385 (82%)	70 (15%)	14 (3%)	4	28
3	d	351/542 (65%)	300 (86%)	42 (12%)	9 (3%)	5	31
4	E	471/541 (87%)	392 (83%)	60 (13%)	19 (4%)	3	23
4	e	351/541 (65%)	295 (84%)	39 (11%)	17 (5%)	2	21
5	G	471/545 (86%)	396 (84%)	62 (13%)	13 (3%)	5	30
5	g	351/545 (64%)	291 (83%)	51 (14%)	9 (3%)	5	31
6	H	473/543 (87%)	384 (81%)	73 (15%)	16 (3%)	3	26
6	h	353/543 (65%)	289 (82%)	54 (15%)	10 (3%)	5	30
7	Q	473/548 (86%)	406 (86%)	45 (10%)	22 (5%)	2	21
7	q	351/548 (64%)	292 (83%)	48 (14%)	11 (3%)	4	27
8	Z	473/531 (89%)	400 (85%)	57 (12%)	16 (3%)	3	26
8	z	473/531 (89%)	403 (85%)	57 (12%)	13 (3%)	5	31
All	All	6708/8682 (77%)	5605 (84%)	875 (13%)	228 (3%)	3	26

All (228) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	3	GLY
1	A	145	ARG
1	A	146	ASP
1	A	230	VAL
2	B	54	SER
2	B	97	ASP
2	B	193	SER
2	B	519	ASN
3	D	33	PRO
4	E	63	ASP
4	E	244	GLU
4	E	441	PRO
5	G	148	ASN
5	G	333	SER
5	G	519	ILE
6	H	190	LEU
6	H	233	HIS

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Mol	Chain	Res	Type
6	H	237	ILE
7	Q	235	LYS
7	Q	476	LYS
7	Q	497	VAL
7	Q	526	MET
7	Q	527	ALA
8	Z	226	GLU
8	Z	379	PRO
1	a	1004	PRO
1	a	1011	ARG
1	a	1047	ASP
1	a	1533	LEU
2	b	1018	GLU
2	b	1054	SER
2	b	1148	HIS
4	e	1063	ASP
6	h	1018	GLY
6	h	1189	LEU
6	h	1190	LEU
7	q	1015	LEU
7	q	1016	LYS
8	z	1016	ALA
8	z	1050	GLY
8	z	1051	ALA
8	z	1157	ARG
8	z	1522	MET
1	A	48	ASP
1	A	459	ASP
1	A	485	TRP
2	B	429	PRO
2	B	506	SER
4	E	237	PRO
4	E	242	GLN
4	E	248	ILE
4	E	343	PRO
4	E	370	LYS
4	E	390	GLY
4	E	415	ASP
4	E	442	THR
5	G	11	SER
5	G	45	SER
5	G	93	ASP

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Mol	Chain	Res	Type
5	G	349	LEU
5	G	359	TYR
5	G	468	ALA
5	G	523	VAL
5	G	524	SER
6	H	227	MET
6	H	367	ALA
6	H	498	VAL
7	Q	17	GLU
7	Q	334	PRO
7	Q	475	ASN
7	Q	487	PRO
7	Q	521	VAL
8	Z	407	VAL
8	Z	522	MET
1	a	1006	SER
1	a	1158	SER
1	a	1485	TRP
2	b	1046	LYS
2	b	1168	SER
2	b	1508	ALA
2	b	1523	ALA
3	d	1498	VAL
4	e	1104	ASP
4	e	1177	VAL
4	e	1390	GLY
4	e	1442	THR
4	e	1533	ILE
5	g	1008	LEU
5	g	1011	SER
5	g	1162	THR
5	g	1371	ALA
6	h	1372	ILE
6	h	1507	SER
7	q	1188	VAL
7	q	1487	PRO
8	z	1017	GLN
1	A	461	THR
2	B	233	GLU
2	B	333	SER
2	B	508	ALA
3	D	42	SER

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Mol	Chain	Res	Type
3	D	66	ASP
3	D	109	THR
3	D	249	ILE
3	D	541	THR
4	E	154	SER
4	E	238	GLN
4	E	518	SER
6	H	55	LYS
7	Q	60	LEU
7	Q	169	MET
7	Q	405	ASP
7	Q	525	ILE
8	Z	51	ALA
8	Z	510	VAL
1	a	1088	ASP
1	a	1146	ASP
3	d	1541	THR
4	e	1023	ASP
4	e	1441	PRO
4	e	1518	SER
5	g	1148	ASN
6	h	1051	ASP
7	q	1019	ALA
8	z	1335	SER
1	A	88	ASP
1	A	380	ALA
1	A	460	SER
2	B	10	ASN
3	D	162	ASP
3	D	241	ILE
3	D	245	GLU
3	D	424	LEU
4	E	26	SER
6	H	19	ILE
6	H	189	LEU
6	H	432	GLN
7	Q	105	LEU
7	Q	156	ASP
7	Q	191	PHE
8	Z	92	THR
8	Z	430	LYS
1	a	1111	LYS

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Mol	Chain	Res	Type
1	a	1411	GLY
1	a	1531	ILE
2	b	1014	ALA
2	b	1429	PRO
3	d	1066	ASP
3	d	1428	GLY
4	e	1135	ASP
4	e	1161	ASN
4	e	1381	ARG
4	e	1416	ASN
4	e	1536	PRO
5	g	1521	ASP
6	h	1504	THR
6	h	1518	GLU
7	q	1526	MET
8	z	1189	PHE
8	z	1333	LEU
1	A	133	SER
1	A	231	ASN
1	A	322	ALA
1	A	376	ILE
1	A	432	SER
2	B	499	VAL
3	D	112	VAL
3	D	510	LEU
4	E	22	GLN
6	H	7	ILE
6	H	225	PHE
7	Q	147	VAL
7	Q	332	ALA
8	Z	68	GLN
8	Z	142	GLU
8	Z	143	MET
8	Z	157	ARG
8	Z	504	LEU
1	a	1031	ILE
1	a	1203	ARG
1	a	1432	SER
3	d	1206	VAL
3	d	1224	CYS
5	g	1040	CYS
7	q	1191	PHE

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Mol	Chain	Res	Type
7	q	1505	TYR
8	z	1430	LYS
8	z	1471	SER
1	A	137	ILE
3	D	422	ARG
4	E	240	PRO
4	E	477	VAL
5	G	9	VAL
6	H	23	VAL
7	Q	81	PRO
7	Q	188	VAL
7	Q	505	TYR
3	d	1535	ILE
7	q	1025	LEU
7	q	1173	TYR
1	A	9	GLY
4	E	486	ASN
5	G	410	GLY
6	H	516	VAL
1	a	1211	ILE
2	b	1407	VAL
3	d	1130	GLY
7	q	1516	VAL
2	B	368	GLY
6	H	229	PRO
8	Z	500	VAL
4	e	1178	VAL
4	e	1422	GLY
5	g	1514	VAL
6	h	1139	ILE
8	z	1510	VAL
2	B	194	GLY
6	H	522	ASN
8	Z	518	VAL
8	z	1089	GLY
3	D	300	VAL
8	Z	494	ILE
1	a	1086	VAL
1	a	1415	VAL
3	d	1476	PRO
4	e	1486	ASN
5	g	1122	VAL

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Mol	Chain	Res	Type
6	h	1516	VAL

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	395/461 (86%)	368 (93%)	27 (7%)	16	42
1	a	297/461 (64%)	269 (91%)	28 (9%)	8	29
2	B	382/429 (89%)	372 (97%)	10 (3%)	46	67
2	b	281/429 (66%)	263 (94%)	18 (6%)	17	44
3	D	407/454 (90%)	388 (95%)	19 (5%)	26	52
3	d	303/454 (67%)	285 (94%)	18 (6%)	19	46
4	E	400/455 (88%)	371 (93%)	29 (7%)	14	40
4	e	298/455 (66%)	283 (95%)	15 (5%)	24	50
5	G	416/470 (88%)	402 (97%)	14 (3%)	37	60
5	g	307/470 (65%)	288 (94%)	19 (6%)	18	45
6	H	394/445 (88%)	381 (97%)	13 (3%)	38	61
6	h	292/445 (66%)	274 (94%)	18 (6%)	18	45
7	Q	398/452 (88%)	380 (96%)	18 (4%)	27	53
7	q	296/452 (66%)	279 (94%)	17 (6%)	20	47
8	Z	398/440 (90%)	386 (97%)	12 (3%)	41	63
8	z	398/440 (90%)	374 (94%)	24 (6%)	19	46
All	All	5662/7212 (78%)	5363 (95%)	299 (5%)	22	49

All (299) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	2	GLU
1	A	12	SER
1	A	39	VAL

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Mol	Chain	Res	Type
1	A	84	LYS
1	A	105	ASP
1	A	116	SER
1	A	147	CYS
1	A	222	SER
1	A	225	MET
1	A	231	ASN
1	A	240	SER
1	A	243	LYS
1	A	277	LYS
1	A	358	ASP
1	A	372	SER
1	A	381	ASN
1	A	382	ASP
1	A	384	MET
1	A	387	GLU
1	A	403	LEU
1	A	430	MET
1	A	523	THR
1	A	529	ASP
1	A	530	LEU
1	A	532	LYS
1	A	533	LEU
1	A	534	HIS
2	B	19	GLU
2	B	99	THR
2	B	221	ASP
2	B	287	ILE
2	B	288	ASN
2	B	292	ASN
2	B	334	THR
2	B	381	GLN
2	B	406	THR
2	B	480	MET
3	D	32	LYS
3	D	33	PRO
3	D	63	MET
3	D	110	THR
3	D	123	CYS
3	D	195	MET
3	D	210	ASP
3	D	217	LEU

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Mol	Chain	Res	Type
3	D	224	CYS
3	D	256	LEU
3	D	315	LEU
3	D	340	CYS
3	D	364	LEU
3	D	371	ASN
3	D	444	ARG
3	D	452	TYR
3	D	516	LEU
3	D	537	ASP
3	D	542	ARG
4	E	28	LEU
4	E	29	MET
4	E	48	MET
4	E	63	ASP
4	E	84	ASP
4	E	86	GLN
4	E	102	ILE
4	E	107	THR
4	E	148	LEU
4	E	160	LYS
4	E	203	ASP
4	E	219	LEU
4	E	244	GLU
4	E	306	PHE
4	E	345	PHE
4	E	351	GLU
4	E	369	ASP
4	E	381	ARG
4	E	384	THR
4	E	388	ARG
4	E	397	GLU
4	E	426	GLU
4	E	443	LEU
4	E	446	TYR
4	E	509	THR
4	E	515	GLN
4	E	527	ILE
4	E	528	LEU
4	E	535	LYS
5	G	10	LEU
5	G	97	SER

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Mol	Chain	Res	Type
5	G	140	ILE
5	G	225	THR
5	G	234	LYS
5	G	235	ASN
5	G	284	GLN
5	G	336	GLU
5	G	341	GLU
5	G	359	TYR
5	G	382	GLU
5	G	427	LYS
5	G	503	LEU
5	G	504	GLN
6	H	8	LEU
6	H	10	LYS
6	H	11	GLU
6	H	16	SER
6	H	21	GLN
6	H	134	ASN
6	H	138	GLU
6	H	198	LYS
6	H	227	MET
6	H	241	ASN
6	H	345	CYS
6	H	403	ASP
6	H	521	LYS
7	Q	13	GLN
7	Q	14	MET
7	Q	15	LEU
7	Q	17	GLU
7	Q	141	GLU
7	Q	173	TYR
7	Q	175	ASN
7	Q	227	THR
7	Q	383	ASN
7	Q	399	PHE
7	Q	406	LYS
7	Q	428	GLU
7	Q	473	GLU
7	Q	509	LYS
7	Q	518	VAL
7	Q	524	ILE
7	Q	526	MET

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Mol	Chain	Res	Type
7	Q	528	LYS
8	Z	196	MET
8	Z	197	LYS
8	Z	217	ARG
8	Z	225	VAL
8	Z	227	ASP
8	Z	370	ARG
8	Z	374	LEU
8	Z	380	ASN
8	Z	507	SER
8	Z	508	CYS
8	Z	519	ASP
8	Z	523	ARG
1	a	1006	SER
1	a	1010	ASP
1	a	1018	ARG
1	a	1035	SER
1	a	1047	ASP
1	a	1049	ILE
1	a	1068	GLU
1	a	1088	ASP
1	a	1110	GLN
1	a	1125	CYS
1	a	1137	ILE
1	a	1138	ILE
1	a	1143	LEU
1	a	1146	ASP
1	a	1158	SER
1	a	1168	PHE
1	a	1172	VAL
1	a	1177	LEU
1	a	1180	LYS
1	a	1181	TYR
1	a	1212	ASN
1	a	1372	SER
1	a	1382	ASP
1	a	1400	LYS
1	a	1403	LEU
1	a	1523	THR
1	a	1526	ARG
1	a	1534	HIS
2	b	1017	ASP

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Mol	Chain	Res	Type
2	b	1049	ASP
2	b	1062	MET
2	b	1172	LEU
2	b	1195	ASN
2	b	1209	LEU
2	b	1376	ARG
2	b	1388	ARG
2	b	1390	LEU
2	b	1396	VAL
2	b	1427	ARG
2	b	1431	LYS
2	b	1470	SER
2	b	1495	GLU
2	b	1506	SER
2	b	1509	GLU
2	b	1521	ILE
2	b	1522	LYS
3	d	1024	LYS
3	d	1084	MET
3	d	1087	LEU
3	d	1153	ASP
3	d	1176	SER
3	d	1215	LYS
3	d	1216	LYS
3	d	1217	LEU
3	d	1387	LYS
3	d	1394	ARG
3	d	1396	SER
3	d	1397	ASN
3	d	1424	LEU
3	d	1478	SER
3	d	1518	SER
3	d	1520	SER
3	d	1531	SER
3	d	1542	ARG
4	e	1022	GLN
4	e	1023	ASP
4	e	1024	ARG
4	e	1025	LYS
4	e	1027	ARG
4	e	1048	MET
4	e	1055	ASN

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Mol	Chain	Res	Type
4	e	1118	GLU
4	e	1195	THR
4	e	1203	ASP
4	e	1383	VAL
4	e	1392	LYS
4	e	1393	MET
4	e	1426	GLU
4	e	1515	GLN
5	g	1012	GLN
5	g	1016	ARG
5	g	1023	GLN
5	g	1051	LEU
5	g	1059	MET
5	g	1064	ASN
5	g	1091	VAL
5	g	1118	HIS
5	g	1140	ILE
5	g	1158	SER
5	g	1162	THR
5	g	1170	SER
5	g	1216	ARG
5	g	1372	CYS
5	g	1397	VAL
5	g	1398	CYS
5	g	1433	GLU
5	g	1503	LEU
5	g	1518	ARG
6	h	1008	LEU
6	h	1016	SER
6	h	1019	ILE
6	h	1021	GLN
6	h	1043	ARG
6	h	1045	MET
6	h	1051	ASP
6	h	1092	ASP
6	h	1126	ARG
6	h	1186	LEU
6	h	1370	CYS
6	h	1381	PHE
6	h	1403	ASP
6	h	1425	ARG
6	h	1450	CYS

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Mol	Chain	Res	Type
6	h	1473	MET
6	h	1497	MET
6	h	1504	THR
7	q	1015	LEU
7	q	1016	LYS
7	q	1085	MET
7	q	1126	SER
7	q	1138	LYS
7	q	1156	ASP
7	q	1166	THR
7	q	1173	TYR
7	q	1205	CYS
7	q	1208	LEU
7	q	1381	THR
7	q	1399	PHE
7	q	1403	THR
7	q	1408	LEU
7	q	1456	SER
7	q	1499	ASP
7	q	1524	ILE
8	z	1007	LEU
8	z	1017	GLN
8	z	1032	ASP
8	z	1043	THR
8	z	1047	LEU
8	z	1093	THR
8	z	1104	LYS
8	z	1121	GLU
8	z	1135	GLU
8	z	1138	LYS
8	z	1146	GLU
8	z	1196	MET
8	z	1201	GLU
8	z	1208	ARG
8	z	1229	TYR
8	z	1238	GLU
8	z	1337	ASP
8	z	1342	ASP
8	z	1351	TYR
8	z	1374	LEU
8	z	1386	GLN
8	z	1460	GLN

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Mol	Chain	Res	Type
8	z	1504	LEU
8	z	1523	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (144) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	20	GLN
1	A	103	ASN
1	A	366	ASN
1	A	425	ASN
1	A	435	GLN
1	A	455	ASN
1	A	472	ASN
1	A	498	ASN
2	B	161	ASN
2	B	227	ASN
2	B	288	ASN
2	B	294	GLN
2	B	302	GLN
2	B	337	HIS
2	B	381	GLN
2	B	391	HIS
2	B	453	ASN
2	B	498	GLN
3	D	40	ASN
3	D	83	GLN
3	D	101	GLN
3	D	132	HIS
3	D	292	GLN
3	D	371	ASN
3	D	471	ASN
4	E	22	GLN
4	E	46	ASN
4	E	98	GLN
4	E	129	HIS
4	E	236	HIS
4	E	311	ASN
4	E	317	ASN
4	E	481	GLN
4	E	522	GLN
5	G	23	GLN
5	G	28	ASN

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Mol	Chain	Res	Type
5	G	64	ASN
5	G	73	GLN
5	G	118	HIS
5	G	154	ASN
5	G	221	ASN
5	G	321	ASN
5	G	396	GLN
5	G	400	ASN
5	G	434	GLN
5	G	454	ASN
6	H	17	GLN
6	H	21	GLN
6	H	25	ASN
6	H	73	HIS
6	H	107	GLN
6	H	134	ASN
6	H	171	GLN
6	H	241	ASN
6	H	432	GLN
6	H	448	GLN
6	H	470	GLN
6	H	487	ASN
6	H	501	ASN
7	Q	59	HIS
7	Q	93	GLN
7	Q	198	ASN
7	Q	201	ASN
7	Q	219	HIS
7	Q	346	HIS
7	Q	435	GLN
7	Q	513	ASN
8	Z	23	ASN
8	Z	71	HIS
8	Z	294	GLN
8	Z	380	ASN
8	Z	400	ASN
8	Z	438	GLN
8	Z	453	GLN
8	Z	454	ASN
8	Z	514	ASN
1	a	1021	ASN
1	a	1082	GLN

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Mol	Chain	Res	Type
1	a	1103	ASN
1	a	1110	GLN
1	a	1393	HIS
1	a	1425	ASN
1	a	1498	ASN
1	a	1500	GLN
2	b	1073	ASN
2	b	1091	GLN
2	b	1124	GLN
2	b	1161	ASN
2	b	1195	ASN
2	b	1200	HIS
2	b	1380	GLN
2	b	1502	GLN
3	d	1028	GLN
3	d	1141	GLN
3	d	1168	ASN
3	d	1175	ASN
3	d	1485	ASN
4	e	1055	ASN
4	e	1098	GLN
4	e	1184	GLN
4	e	1391	ASN
4	e	1411	ASN
4	e	1481	GLN
4	e	1522	GLN
5	g	1012	GLN
5	g	1073	GLN
5	g	1154	ASN
5	g	1434	GLN
5	g	1454	ASN
5	g	1470	HIS
5	g	1504	GLN
6	h	1021	GLN
6	h	1073	HIS
6	h	1134	ASN
6	h	1151	GLN
6	h	1191	GLN
6	h	1201	GLN
6	h	1209	GLN
6	h	1402	ASN
6	h	1431	GLN

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Mol	Chain	Res	Type
6	h	1448	GLN
6	h	1452	ASN
6	h	1487	ASN
7	q	1050	ASN
7	q	1093	GLN
7	q	1102	ASN
7	q	1165	HIS
7	q	1185	GLN
7	q	1435	GLN
7	q	1513	ASN
7	q	1523	GLN
8	z	1023	ASN
8	z	1031	GLN
8	z	1070	GLN
8	z	1234	ASN
8	z	1293	ASN
8	z	1368	ASN
8	z	1386	GLN
8	z	1400	ASN
8	z	1434	GLN
8	z	1438	GLN
8	z	1460	GLN
8	z	1497	ASN
8	z	1503	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} 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	481/556 (86%)	1.59	140 (29%)	0	1	260, 260, 260, 260	0
1	a	359/556 (64%)	2.09	151 (42%)	0	0	282, 282, 282, 282	0
2	B	481/535 (89%)	2.59	229 (47%)	0	0	281, 281, 281, 281	0
2	b	359/535 (67%)	2.16	159 (44%)	0	0	272, 272, 272, 272	0
3	D	481/542 (88%)	1.82	158 (32%)	0	1	289, 289, 289, 289	0
3	d	359/542 (66%)	1.78	134 (37%)	0	1	266, 266, 266, 266	0
4	E	481/541 (88%)	1.26	112 (23%)	0	2	262, 262, 262, 262	0
4	e	359/541 (66%)	2.37	164 (45%)	0	0	283, 283, 283, 283	0
5	G	481/545 (88%)	1.97	185 (38%)	0	1	283, 283, 283, 283	0
5	g	359/545 (65%)	1.18	76 (21%)	0	2	275, 275, 275, 275	0
6	H	481/543 (88%)	1.70	163 (33%)	0	1	272, 272, 272, 272	0
6	h	359/543 (66%)	1.18	85 (23%)	0	2	258, 258, 258, 258	0
7	Q	481/548 (87%)	2.56	233 (48%)	0	0	308, 308, 308, 308	0
7	q	359/548 (65%)	2.01	156 (43%)	0	0	261, 261, 261, 261	0
8	Z	481/531 (90%)	2.52	219 (45%)	0	0	297, 297, 297, 297	0
8	z	481/531 (90%)	2.37	194 (40%)	0	1	276, 276, 276, 276	0
All	All	6842/8682 (78%)	1.96	2558 (37%)	0	1	258, 276, 308, 308	0

All (2558) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
8	Z	288	GLY	25.1
8	z	1209	GLY	21.8
6	H	224	GLY	18.3
8	z	1288	GLY	16.3
4	e	1226	LYS	15.8

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Mol	Chain	Res	Type	RSRZ
6	H	228	GLN	14.5
8	z	1216	ALA	14.5
2	B	219	LEU	14.4
2	B	215	ASP	14.4
8	z	1268	GLU	14.3
2	B	218	PHE	14.0
3	d	1170	ALA	13.7
8	Z	312	ALA	13.4
7	Q	412	GLY	13.3
7	Q	192	PRO	13.2
1	A	333	ASN	13.0
2	B	200	HIS	12.7
8	z	1312	ALA	12.5
1	A	334	LEU	12.4
2	B	223	LYS	12.2
8	z	1210	LEU	12.2
7	Q	197	PHE	12.0
8	Z	278	LYS	11.9
1	A	190	TYR	11.8
1	A	331	LEU	11.8
7	Q	67	ASN	11.5
7	Q	290	VAL	11.5
8	z	1267	ILE	11.4
2	b	1406	THR	11.4
6	H	229	PRO	11.3
5	G	156	ILE	11.2
8	Z	267	ILE	11.2
8	z	1237	LEU	11.1
4	e	1224	LEU	11.0
7	Q	311	MET	11.0
7	Q	219	HIS	11.0
2	B	220	LEU	11.0
2	b	1407	VAL	11.0
3	D	312	LEU	10.9
8	Z	236	SER	10.9
3	D	327	VAL	10.9
8	z	1208	ARG	10.8
8	Z	216	ALA	10.8
3	D	236	VAL	10.8
4	E	235	SER	10.7
8	z	1311	ILE	10.7
2	b	1013	LYS	10.7

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Mol	Chain	Res	Type	RSRZ
8	Z	289	PHE	10.6
7	Q	231	VAL	10.6
7	Q	309	ASN	10.5
4	e	1493	CYS	10.5
7	Q	289	ASN	10.4
1	A	191	PRO	10.3
2	B	308	GLY	10.3
2	B	221	ASP	10.3
5	G	525	GLY	10.3
8	Z	211	VAL	10.3
8	Z	209	GLY	10.2
8	z	1289	PHE	10.2
6	H	10	LYS	10.2
2	B	214	LEU	10.2
8	z	1310	ILE	10.1
2	b	1016	ALA	10.1
2	b	1495	GLU	10.1
8	Z	344	LEU	10.0
2	b	1015	GLY	10.0
2	b	1496	SER	10.0
8	Z	296	GLY	9.9
2	b	1494	THR	9.9
8	Z	237	LEU	9.9
8	Z	210	LEU	9.9
8	z	1213	ASP	9.8
7	Q	188	VAL	9.7
1	a	1160	VAL	9.7
2	B	224	ILE	9.7
2	B	360	ILE	9.7
7	Q	190	ILE	9.7
2	B	16	ALA	9.7
1	a	1370	ARG	9.6
7	Q	310	ILE	9.5
2	B	244	MET	9.5
7	Q	189	SER	9.5
7	Q	191	PHE	9.4
8	z	1222	LYS	9.4
8	z	1371	SER	9.4
1	A	330	THR	9.3
1	A	275	ILE	9.3
8	Z	192	GLU	9.2
5	G	310	THR	9.2

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Mol	Chain	Res	Type	RSRZ
2	B	296	ILE	9.2
3	D	235	LYS	9.1
1	A	243	LYS	9.1
2	B	198	ALA	9.1
8	z	1225	VAL	9.1
7	q	1219	HIS	9.1
4	e	1380	SER	9.0
8	z	1339	LEU	9.0
8	z	1223	LYS	8.9
3	D	329	LYS	8.9
4	e	1225	ILE	8.9
8	Z	232	THR	8.9
8	z	1313	LEU	8.9
3	D	328	VAL	8.9
2	B	313	GLU	8.9
3	d	1169	SER	8.8
2	b	1014	ALA	8.8
8	Z	295	LYS	8.7
5	G	14	THR	8.7
2	B	309	VAL	8.7
1	A	194	SER	8.6
8	z	1352	GLU	8.6
8	z	1373	THR	8.6
5	G	230	ARG	8.6
2	B	236	LYS	8.6
1	a	1397	CYS	8.6
3	D	320	LEU	8.6
3	D	232	LEU	8.6
3	d	1199	ASP	8.6
8	z	1271	VAL	8.5
2	B	216	GLU	8.4
2	b	1409	GLY	8.4
6	H	215	ALA	8.4
2	B	304	PHE	8.4
3	d	1173	SER	8.4
2	B	213	TYR	8.4
7	q	1172	GLN	8.4
6	H	310	CYS	8.4
8	z	1192	GLU	8.4
8	z	1217	ARG	8.4
7	Q	297	VAL	8.4
2	b	1410	GLY	8.3

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Mol	Chain	Res	Type	RSRZ
8	z	1307	LYS	8.3
4	E	323	ARG	8.3
7	Q	196	HIS	8.3
8	z	1224	ARG	8.3
7	Q	413	GLY	8.3
3	D	237	ALA	8.3
3	D	189	MET	8.2
8	z	1372	VAL	8.2
4	e	1508	GLU	8.2
7	q	1499	ASP	8.2
8	Z	217	ARG	8.2
2	B	15	GLY	8.2
2	B	311	ALA	8.1
2	B	370	ALA	8.1
8	Z	313	LEU	8.1
7	q	1018	GLY	8.1
2	B	287	ILE	8.1
8	Z	274	ILE	8.1
8	z	1308	GLU	8.1
2	B	342	LYS	8.1
2	b	1408	TYR	8.1
4	E	95	SER	8.1
1	a	1205	GLN	8.1
2	B	282	ILE	8.0
5	G	15	LYS	8.0
8	z	1293	ASN	8.0
3	D	311	ALA	8.0
3	D	238	ASN	8.0
4	e	1382	ALA	8.0
8	z	1290	VAL	8.0
1	a	1373	ALA	8.0
7	Q	225	LYS	8.0
6	H	223	ALA	8.0
8	Z	221	MET	8.0
8	z	1291	VAL	8.0
5	G	203	LYS	8.0
7	Q	248	GLY	7.9
1	a	1161	ILE	7.9
8	Z	292	ILE	7.9
8	Z	235	VAL	7.9
4	E	285	PHE	7.9
1	a	1086	VAL	7.9

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Mol	Chain	Res	Type	RSRZ
5	G	219	MET	7.9
1	a	1394	ASP	7.9
8	Z	310	ILE	7.8
5	G	290	VAL	7.8
2	b	1368	GLY	7.8
8	z	1269	ASP	7.8
8	Z	320	ASN	7.8
8	z	1226	GLU	7.8
3	D	256	LEU	7.8
3	d	1495	GLY	7.8
1	a	1471	HIS	7.8
7	q	1410	PRO	7.8
4	E	321	ALA	7.8
8	z	1336	LEU	7.8
8	Z	345	GLY	7.7
6	H	13	THR	7.7
4	e	1383	VAL	7.7
4	E	306	PHE	7.7
7	q	1203	ARG	7.7
2	B	334	THR	7.7
3	D	377	ILE	7.7
7	Q	500	THR	7.7
3	d	1221	ILE	7.6
2	B	237	ILE	7.6
8	z	1212	LEU	7.6
4	E	322	VAL	7.6
2	B	327	THR	7.6
7	Q	366	GLU	7.6
8	z	1361	THR	7.6
8	Z	497	ASN	7.6
8	z	1363	ILE	7.6
4	e	1102	ILE	7.5
4	e	1223	LYS	7.5
5	G	282	ILE	7.5
5	G	289	VAL	7.5
1	a	1162	GLY	7.5
1	a	1472	ASN	7.5
4	e	1185	MET	7.5
7	Q	155	ARG	7.5
7	Q	232	THR	7.5
2	B	362	PHE	7.5
1	A	195	ILE	7.4

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Mol	Chain	Res	Type	RSRZ
6	H	216	PHE	7.4
8	z	1228	ALA	7.4
4	e	1022	GLN	7.4
8	Z	311	ILE	7.4
8	z	1304	ALA	7.4
1	A	143	LEU	7.3
2	B	343	LEU	7.3
4	e	1409	ILE	7.3
4	e	1405	ALA	7.3
8	Z	233	CYS	7.3
4	E	255	PHE	7.3
5	G	160	ILE	7.3
6	H	309	PHE	7.3
2	B	199	ILE	7.3
2	B	300	PRO	7.2
5	G	311	ALA	7.2
8	z	1227	ASP	7.2
7	Q	308	TYR	7.2
3	D	190	SER	7.2
8	Z	271	VAL	7.2
2	B	338	PRO	7.2
2	B	312	ILE	7.2
7	Q	370	GLY	7.2
8	Z	293	ASN	7.2
8	Z	223	LYS	7.2
5	G	524	SER	7.2
8	z	1338	ASP	7.2
7	Q	288	ALA	7.2
7	Q	187	CYS	7.2
1	A	335	GLU	7.2
1	A	345	LEU	7.2
5	G	287	PRO	7.1
3	D	231	VAL	7.1
5	G	526	HIS	7.1
2	B	372	THR	7.1
7	q	1370	GLY	7.1
7	q	1398	THR	7.1
2	b	1148	HIS	7.1
2	B	494	THR	7.1
3	d	1428	GLY	7.1
8	Z	230	ILE	7.1
2	B	239	ILE	7.1

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Mol	Chain	Res	Type	RSRZ
6	H	308	MET	7.1
4	e	1172	THR	7.1
7	Q	193	ASP	7.1
8	Z	321	MET	7.1
2	B	345	SER	7.1
7	q	1173	TYR	7.0
5	g	1199	ALA	7.0
7	q	1097	VAL	7.0
7	Q	99	ASP	7.0
7	q	1099	ASP	7.0
4	e	1509	THR	7.0
2	B	411	GLY	7.0
8	z	1305	LEU	7.0
3	D	378	LYS	7.0
2	B	279	VAL	6.9
1	A	332	ALA	6.9
8	Z	191	VAL	6.9
8	Z	323	ARG	6.9
5	G	224	VAL	6.9
7	Q	239	ILE	6.9
8	z	1211	VAL	6.9
1	A	271	THR	6.9
7	Q	287	GLY	6.9
8	Z	291	VAL	6.9
5	g	1201	VAL	6.9
6	H	468	HIS	6.8
7	Q	235	LYS	6.8
8	z	1274	ILE	6.8
2	B	228	GLN	6.8
4	e	1173	LEU	6.8
8	Z	234	ASN	6.8
6	H	12	GLY	6.8
5	G	283	ILE	6.8
6	H	244	LEU	6.8
8	Z	222	LYS	6.7
4	e	1491	ILE	6.7
4	E	234	PHE	6.7
8	Z	231	LEU	6.7
5	g	1372	CYS	6.7
3	d	1174	LEU	6.7
3	d	1228	GLU	6.7
2	B	290	PHE	6.7

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Mol	Chain	Res	Type	RSRZ
8	Z	346	HIS	6.7
3	D	105	ALA	6.7
4	e	1055	ASN	6.7
8	Z	363	ILE	6.7
2	b	1149	GLY	6.7
7	Q	348	ASP	6.7
7	q	1374	THR	6.7
3	d	1107	ASP	6.7
8	z	1186	ILE	6.7
1	A	372	SER	6.7
4	E	289	ILE	6.6
4	e	1537	GLY	6.6
8	z	1297	ILE	6.6
1	a	1145	ARG	6.6
1	a	1413	GLY	6.6
2	b	1369	GLU	6.6
3	d	1159	GLU	6.6
5	g	1200	ARG	6.6
8	z	1320	ASN	6.6
4	e	1190	VAL	6.6
4	e	1084	ASP	6.6
4	e	1497	GLY	6.6
7	q	1217	VAL	6.6
2	B	230	LYS	6.6
2	b	1493	ILE	6.6
7	Q	365	HIS	6.6
4	e	1404	ASP	6.6
5	G	335	PRO	6.5
7	q	1197	PHE	6.5
1	a	1157	SER	6.5
6	H	402	ASN	6.5
5	G	239	VAL	6.5
4	e	1387	ILE	6.5
4	e	1183	ARG	6.5
2	B	361	HIS	6.5
2	B	217	GLY	6.5
7	q	1019	ALA	6.5
1	a	1159	LYS	6.5
2	B	164	GLY	6.5
8	Z	411	ALA	6.5
2	B	297	TYR	6.5
7	Q	151	ALA	6.5

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Mol	Chain	Res	Type	RSRZ
4	e	1166	ILE	6.5
2	B	307	ALA	6.5
5	G	13	ASN	6.5
4	e	1054	PRO	6.5
3	D	170	ALA	6.5
3	D	233	THR	6.5
2	B	335	PHE	6.5
7	q	1048	GLY	6.5
1	a	1144	GLY	6.4
1	a	1156	MET	6.4
7	q	1204	VAL	6.4
7	q	1373	SER	6.4
8	z	1272	LYS	6.4
3	D	426	ALA	6.4
7	Q	479	GLY	6.4
2	B	371	CYS	6.4
3	d	1426	ALA	6.4
8	Z	330	GLY	6.4
1	A	274	ARG	6.3
6	H	225	PHE	6.3
2	B	163	ALA	6.3
7	Q	224	LYS	6.3
8	z	1236	SER	6.3
2	b	1477	GLY	6.3
4	e	1053	GLY	6.3
2	B	373	ILE	6.3
8	Z	179	ILE	6.3
8	z	1179	ILE	6.3
2	B	201	VAL	6.3
3	D	212	LYS	6.3
7	q	1202	ILE	6.3
3	D	326	MET	6.3
4	E	236	HIS	6.3
4	e	1381	ARG	6.3
3	d	1177	LYS	6.3
4	e	1170	LYS	6.3
6	h	1014	ASP	6.3
1	a	1155	SER	6.3
5	G	291	ILE	6.2
4	e	1496	LYS	6.2
8	Z	180	LYS	6.2
8	Z	350	VAL	6.2

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Mol	Chain	Res	Type	RSRZ
8	z	1238	GLU	6.2
7	Q	367	LYS	6.2
4	e	1095	SER	6.2
1	A	283	ALA	6.2
2	B	301	GLU	6.2
7	q	1216	SER	6.2
4	e	1082	ASP	6.2
2	B	96	GLY	6.2
4	e	1384	THR	6.2
7	Q	299	ASP	6.2
7	q	1500	THR	6.2
2	B	298	ASN	6.2
7	Q	204	VAL	6.2
1	a	1473	GLU	6.2
3	d	1161	SER	6.2
8	Z	331	ILE	6.2
3	D	365	ALA	6.2
5	G	157	ASN	6.2
2	b	1411	GLY	6.2
7	Q	501	TYR	6.2
4	e	1182	HIS	6.2
7	Q	236	ASP	6.2
7	Q	347	CYS	6.1
8	Z	294	GLN	6.1
7	Q	202	ILE	6.1
3	d	1389	VAL	6.1
7	Q	150	SER	6.1
7	Q	326	LYS	6.1
4	e	1189	ALA	6.1
7	Q	291	VAL	6.1
2	b	1500	LYS	6.1
7	Q	373	SER	6.1
7	Q	489	VAL	6.1
2	B	235	ALA	6.1
1	a	1208	SER	6.1
1	A	214	TYR	6.1
4	e	1406	LEU	6.1
3	d	1211	ILE	6.1
8	z	1301	SER	6.1
8	Z	315	ARG	6.1
2	B	13	LYS	6.1
7	Q	414	ALA	6.1

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Mol	Chain	Res	Type	RSRZ
4	e	1385	ILE	6.1
7	q	1412	GLY	6.1
8	Z	268	GLU	6.1
7	q	1212	VAL	6.0
3	D	214	VAL	6.0
6	H	494	GLU	6.0
2	B	303	LEU	6.0
3	D	322	LYS	6.0
5	G	7	VAL	6.0
8	Z	10	LYS	6.0
7	Q	403	THR	6.0
8	Z	212	LEU	6.0
4	e	1422	GLY	6.0
1	a	1177	LEU	6.0
1	a	1470	PHE	6.0
7	Q	363	PHE	6.0
2	B	14	ALA	6.0
6	H	520	ILE	6.0
7	q	1395	GLY	6.0
5	G	319	ASP	6.0
7	q	1215	SER	6.0
8	z	1316	ALA	6.0
2	B	238	LEU	5.9
5	G	8	LEU	5.9
2	B	341	VAL	5.9
8	z	1364	GLU	5.9
2	b	1146	VAL	5.9
2	b	1474	THR	5.9
3	D	85	GLN	5.9
5	G	296	ILE	5.9
6	H	214	VAL	5.9
3	D	325	ILE	5.9
2	B	95	VAL	5.9
8	Z	366	CYS	5.9
8	z	1207	ILE	5.9
7	Q	324	LEU	5.9
5	G	308	ASN	5.9
4	E	256	GLU	5.9
1	A	145	ARG	5.9
7	Q	364	LYS	5.8
8	z	1231	LEU	5.8
7	Q	327	THR	5.8

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Mol	Chain	Res	Type	RSRZ
2	B	365	VAL	5.8
5	G	16	ARG	5.8
7	Q	371	ALA	5.8
8	z	1522	MET	5.8
1	A	66	GLU	5.8
8	Z	301	SER	5.8
1	a	1174	ASP	5.8
2	b	1476	ALA	5.8
2	B	310	MET	5.8
3	d	1206	VAL	5.8
7	Q	372	ILE	5.8
8	Z	361	THR	5.8
4	E	22	GLN	5.8
1	a	1212	ASN	5.8
5	G	58	VAL	5.8
3	D	313	SER	5.8
4	e	1408	VAL	5.8
2	B	374	VAL	5.8
3	D	376	LEU	5.8
3	d	1423	ALA	5.7
4	e	1174	GLY	5.7
4	e	1191	ASN	5.7
3	d	1386	GLY	5.7
4	E	102	ILE	5.7
8	Z	277	LEU	5.7
5	G	394	ALA	5.7
8	Z	218	HIS	5.7
8	z	1089	GLY	5.7
8	Z	328	CYS	5.7
7	Q	416	GLU	5.7
7	q	1414	ALA	5.7
6	H	14	ASP	5.7
6	H	311	ALA	5.7
7	q	1378	ARG	5.7
4	e	1025	LYS	5.7
1	A	278	ILE	5.6
3	D	215	LYS	5.6
3	D	224	CYS	5.6
3	D	366	GLU	5.6
8	z	1524	ALA	5.6
5	G	244	SER	5.6
6	h	1083	ALA	5.6

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Mol	Chain	Res	Type	RSRZ
3	d	1493	THR	5.6
4	e	1176	LYS	5.6
7	Q	411	GLY	5.6
3	D	321	ASN	5.6
7	Q	201	ASN	5.6
1	a	1204	SER	5.6
8	Z	336	LEU	5.6
1	a	1488	LEU	5.6
4	e	1402	LEU	5.6
5	G	91	VAL	5.6
4	e	1165	LEU	5.6
1	A	210	LEU	5.6
3	D	239	SER	5.6
7	Q	499	ASP	5.6
2	b	1154	LYS	5.6
7	Q	227	THR	5.6
5	G	218	VAL	5.6
7	Q	307	LYS	5.6
2	B	225	GLY	5.6
4	e	1169	ALA	5.6
4	E	311	ASN	5.6
8	Z	496	ASP	5.6
2	b	1466	ARG	5.6
8	Z	314	ARG	5.6
7	Q	198	ASN	5.5
4	e	1178	VAL	5.5
8	Z	371	SER	5.5
2	B	229	PRO	5.5
8	z	1309	GLY	5.5
8	Z	229	TYR	5.5
3	D	318	HIS	5.5
2	B	278	LYS	5.5
2	B	288	ASN	5.5
3	d	1213	ILE	5.5
4	e	1209	ILE	5.5
5	G	355	ILE	5.5
7	q	1375	ILE	5.5
5	g	1216	ARG	5.5
6	H	410	GLY	5.5
8	Z	225	VAL	5.5
4	e	1024	ARG	5.5
6	H	9	LEU	5.5

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Mol	Chain	Res	Type	RSRZ
3	D	310	ASP	5.5
1	A	212	ASN	5.5
5	G	390	ASN	5.5
2	B	329	GLY	5.5
7	Q	237	ALA	5.5
8	z	1323	ARG	5.4
8	Z	373	THR	5.4
1	a	1401	ARG	5.4
7	Q	240	ALA	5.4
8	Z	316	ALA	5.4
3	d	1496	ILE	5.4
3	D	185	LEU	5.4
4	E	98	GLN	5.4
8	Z	90	ASP	5.4
8	Z	275	ILE	5.4
7	Q	407	ARG	5.4
2	b	1199	ILE	5.4
5	g	1433	GLU	5.4
8	z	1221	MET	5.4
2	B	289	CYS	5.4
8	Z	213	ASP	5.4
1	a	1164	ASN	5.4
5	g	1203	LYS	5.4
4	E	292	ILE	5.4
3	D	324	LYS	5.4
7	Q	147	VAL	5.4
7	Q	480	LEU	5.4
2	b	1497	PHE	5.4
7	q	1150	SER	5.4
8	z	1278	LYS	5.4
2	B	421	VAL	5.4
8	z	1229	TYR	5.4
3	D	367	GLU	5.3
8	Z	364	GLU	5.3
3	D	173	SER	5.3
5	G	384	LEU	5.3
2	B	286	GLY	5.3
8	z	1321	MET	5.3
8	z	1230	ILE	5.3
4	e	1161	ASN	5.3
4	e	1168	THR	5.3
2	b	1478	LEU	5.3

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Mol	Chain	Res	Type	RSRZ
2	B	344	GLY	5.3
3	d	1388	THR	5.3
7	q	1049	PRO	5.3
8	Z	347	ALA	5.3
5	G	202	GLU	5.3
5	G	245	LEU	5.3
1	a	1372	SER	5.3
2	B	337	HIS	5.3
1	A	373	ALA	5.3
3	D	298	CYS	5.3
5	G	152	MET	5.3
8	z	1350	VAL	5.3
5	G	159	SER	5.3
2	B	92	ASP	5.3
2	B	478	LEU	5.3
5	G	363	ILE	5.3
1	A	281	THR	5.3
8	z	1292	ILE	5.3
4	E	288	MET	5.3
8	Z	334	ASN	5.2
2	B	392	ASP	5.2
3	D	330	ASP	5.2
8	z	1158	THR	5.2
4	e	1056	GLY	5.2
5	G	304	LEU	5.2
5	G	17	GLU	5.2
2	b	1415	MET	5.2
2	b	1043	LEU	5.2
7	Q	215	SER	5.2
8	Z	88	THR	5.2
5	G	361	THR	5.2
7	q	1411	GLY	5.2
2	B	366	ALA	5.2
2	b	1499	VAL	5.2
5	G	221	ASN	5.2
6	H	11	GLU	5.2
7	Q	220	GLY	5.2
2	B	331	ILE	5.2
6	H	348	PHE	5.2
4	E	254	PRO	5.2
6	H	347	VAL	5.2
4	e	1175	SER	5.2

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Mol	Chain	Res	Type	RSRZ
4	e	1459	PRO	5.2
8	Z	332	ALA	5.2
6	H	401	LYS	5.2
8	z	1181	LYS	5.1
6	H	519	THR	5.1
1	a	1203	ARG	5.1
1	A	342	ALA	5.1
2	b	1165	THR	5.1
7	Q	180	ALA	5.1
8	Z	238	GLU	5.1
1	a	1163	ILE	5.1
2	b	1184	VAL	5.1
7	Q	476	LYS	5.1
3	D	368	VAL	5.1
6	H	476	GLY	5.1
5	G	165	ILE	5.1
7	q	1478	VAL	5.1
2	B	322	ARG	5.1
1	a	1210	LEU	5.1
5	G	338	LEU	5.1
3	D	56	GLY	5.1
6	H	465	ARG	5.1
6	h	1407	ALA	5.1
2	B	280	GLU	5.1
5	G	315	VAL	5.1
8	z	1088	THR	5.1
1	A	404	GLU	5.1
1	a	1391	SER	5.1
4	E	26	SER	5.1
8	z	1525	GLY	5.1
6	h	1495	PRO	5.1
8	Z	148	LEU	5.1
7	Q	55	MET	5.0
2	B	169	SER	5.0
2	B	170	LYS	5.0
4	e	1388	ARG	5.0
5	G	59	MET	5.0
8	Z	305	LEU	5.0
3	D	336	ILE	5.0
8	Z	11	ALA	5.0
4	E	373	VAL	5.0
5	G	11	SER	5.0

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Mol	Chain	Res	Type	RSRZ
5	G	312	ILE	5.0
7	Q	47	TYR	5.0
7	Q	415	THR	5.0
2	B	17	ASP	5.0
4	E	307	ASP	5.0
4	e	1386	PHE	5.0
7	Q	223	PHE	5.0
1	A	344	MET	5.0
4	E	286	GLU	5.0
6	H	369	THR	5.0
6	H	409	GLY	5.0
2	b	1405	ARG	5.0
7	Q	218	LEU	5.0
1	a	1158	SER	5.0
2	b	1414	GLU	5.0
5	g	1432	VAL	5.0
3	d	1171	ALA	4.9
3	d	1178	VAL	4.9
5	g	1087	GLN	4.9
2	B	166	THR	4.9
2	B	485	ILE	4.9
5	G	523	VAL	4.9
5	G	155	ILE	4.9
4	E	104	ASP	4.9
8	Z	187	ASP	4.9
8	Z	297	ILE	4.9
2	B	336	ASP	4.9
7	q	1047	TYR	4.9
7	Q	296	ARG	4.9
4	E	253	CYS	4.9
4	E	364	PHE	4.9
6	H	230	LYS	4.9
4	e	1192	ALA	4.9
2	B	430	GLY	4.9
7	q	1067	ASN	4.9
8	z	1039	GLY	4.9
8	Z	402	ILE	4.9
8	Z	398	VAL	4.9
7	Q	399	PHE	4.9
2	b	1465	LEU	4.9
2	b	1166	THR	4.9
7	q	1050	ASN	4.9

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Mol	Chain	Res	Type	RSRZ
7	q	1476	LYS	4.9
3	D	361	SER	4.9
8	z	1195	GLU	4.9
2	B	332	ALA	4.9
7	Q	286	THR	4.9
2	b	1164	GLY	4.9
7	Q	146	LEU	4.9
8	Z	394	GLY	4.9
4	e	1532	ASP	4.9
2	B	291	ILE	4.9
3	D	213	ILE	4.9
5	G	309	ILE	4.9
5	g	1431	GLY	4.9
6	H	364	CYS	4.8
7	Q	298	ALA	4.8
2	b	1485	ILE	4.8
1	a	1374	SER	4.8
7	q	1390	ARG	4.8
1	a	1006	SER	4.8
7	Q	368	GLU	4.8
7	Q	66	THR	4.8
1	a	1484	LYS	4.8
3	D	188	PRO	4.8
4	e	1186	ALA	4.8
1	a	1375	VAL	4.8
6	H	467	ARG	4.8
2	B	319	GLY	4.8
5	G	281	ASP	4.8
8	Z	239	TYR	4.8
7	q	1196	HIS	4.8
1	A	192	VAL	4.8
7	Q	179	LEU	4.8
7	q	1164	LEU	4.8
6	h	1091	GLY	4.8
7	q	1201	ASN	4.8
6	H	400	ILE	4.8
1	a	1393	HIS	4.8
2	B	196	LEU	4.8
6	h	1187	ASP	4.8
8	z	1206	LEU	4.8
3	D	206	VAL	4.8
8	Z	341	PRO	4.8

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Mol	Chain	Res	Type	RSRZ
2	B	167	LEU	4.8
2	B	393	ALA	4.8
4	e	1104	ASP	4.8
2	b	1012	PHE	4.7
1	a	1211	ILE	4.7
3	D	384	SER	4.7
2	B	315	ALA	4.7
2	b	1145	ALA	4.7
3	d	1422	ARG	4.7
8	z	1239	TYR	4.7
3	d	1212	LYS	4.7
2	B	429	PRO	4.7
7	q	1498	LEU	4.7
2	b	1095	VAL	4.7
5	G	288	ASP	4.7
8	Z	270	ARG	4.7
3	d	1226	LEU	4.7
3	d	1140	PHE	4.7
6	H	140	ALA	4.7
7	Q	206	LYS	4.7
8	Z	193	ILE	4.7
2	b	1045	PRO	4.7
2	B	88	SER	4.7
8	Z	343	CYS	4.7
7	Q	503	GLY	4.7
5	G	9	VAL	4.7
1	a	1044	MET	4.7
3	D	364	LEU	4.7
1	a	1398	VAL	4.7
5	g	1202	GLU	4.7
4	e	1187	GLU	4.7
8	Z	372	VAL	4.7
3	d	1198	ILE	4.7
6	H	286	ALA	4.7
8	z	1275	ILE	4.7
3	d	1393	VAL	4.7
7	Q	234	VAL	4.7
7	q	1184	ALA	4.7
5	G	226	HIS	4.6
7	q	1171	LYS	4.6
7	q	1394	ASP	4.6
4	e	1023	ASP	4.6

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Mol	Chain	Res	Type	RSRZ
3	d	1506	ILE	4.6
7	q	1191	PHE	4.6
8	Z	300	PHE	4.6
4	e	1531	ASP	4.6
1	a	1387	GLU	4.6
1	a	1416	GLU	4.6
6	H	367	ALA	4.6
7	q	1167	SER	4.6
2	b	1163	ALA	4.6
4	e	1222	THR	4.6
2	b	1010	ASN	4.6
4	e	1072	ASN	4.6
8	z	1004	VAL	4.6
8	Z	181	LYS	4.6
5	G	173	CYS	4.6
7	Q	149	CYS	4.6
7	Q	230	ASP	4.6
8	z	1194	MET	4.6
8	z	1479	VAL	4.6
7	Q	305	ALA	4.6
3	d	1492	LYS	4.6
5	G	87	GLN	4.6
8	Z	324	LEU	4.6
1	A	215	ALA	4.6
7	Q	284	ALA	4.6
8	z	1185	PRO	4.6
8	z	1273	LYS	4.6
4	e	1536	PRO	4.6
6	h	1212	ALA	4.6
7	Q	79	GLN	4.6
4	E	72	ASN	4.6
6	H	287	LYS	4.6
2	b	1492	GLY	4.6
4	e	1052	LEU	4.6
7	q	1413	GLY	4.6
3	D	303	ILE	4.6
5	G	294	LYS	4.6
7	q	1371	ALA	4.6
6	H	361	PHE	4.6
2	b	1206	GLY	4.5
8	Z	335	SER	4.5
7	Q	185	GLN	4.5

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Mol	Chain	Res	Type	RSRZ
6	H	477	VAL	4.5
1	a	1047	ASP	4.5
2	B	91	GLN	4.5
7	q	1376	VAL	4.5
7	Q	461	ASN	4.5
5	g	1088	ASP	4.5
2	b	1469	HIS	4.5
7	q	1415	THR	4.5
4	e	1535	LYS	4.5
1	A	144	GLY	4.5
3	d	1417	CYS	4.5
6	h	1168	ILE	4.5
7	Q	312	LEU	4.5
5	G	12	GLN	4.5
7	Q	148	CYS	4.5
7	Q	478	VAL	4.5
7	q	1188	VAL	4.5
1	A	328	LEU	4.5
7	Q	325	CYS	4.5
5	G	60	THR	4.5
2	B	48	MET	4.5
5	G	391	LEU	4.5
2	B	339	GLU	4.5
3	d	1158	VAL	4.5
6	H	141	VAL	4.5
2	B	320	VAL	4.5
5	G	411	GLY	4.5
3	D	230	LEU	4.5
1	a	1051	ASP	4.5
6	H	493	TRP	4.5
3	d	1166	LEU	4.5
5	G	383	ILE	4.5
4	e	1091	MET	4.5
2	B	305	GLY	4.5
8	Z	348	GLY	4.5
2	B	160	MET	4.5
1	A	241	LEU	4.5
8	z	1335	SER	4.5
7	Q	410	PRO	4.5
2	b	1138	ARG	4.5
3	d	1189	MET	4.4
7	Q	302	LEU	4.4

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Mol	Chain	Res	Type	RSRZ
8	z	1180	LYS	4.4
3	D	301	LEU	4.4
1	A	235	ALA	4.4
1	a	1192	VAL	4.4
8	Z	169	THR	4.4
6	H	196	GLY	4.4
7	Q	408	LEU	4.4
1	a	1505	GLU	4.4
6	H	405	VAL	4.4
4	E	491	ILE	4.4
7	q	1377	LEU	4.4
8	z	1314	ARG	4.4
1	A	179	ILE	4.4
2	B	240	ALA	4.4
6	H	186	LEU	4.4
5	G	169	SER	4.4
2	b	1400	THR	4.4
2	b	1447	PRO	4.4
2	b	1401	VAL	4.4
3	d	1194	VAL	4.4
1	A	196	ASN	4.4
4	E	257	PRO	4.4
5	g	1398	CYS	4.4
1	A	193	ASN	4.4
4	E	421	GLY	4.4
1	a	1087	GLY	4.4
1	a	1449	PRO	4.4
7	Q	238	LYS	4.4
5	G	292	THR	4.4
5	G	316	ARG	4.4
4	e	1389	GLY	4.3
4	e	1193	VAL	4.3
6	H	406	VAL	4.3
2	b	1159	LEU	4.3
4	E	359	VAL	4.3
5	G	241	LEU	4.3
6	H	458	THR	4.3
2	B	326	VAL	4.3
5	G	362	PHE	4.3
3	D	323	MET	4.3
4	e	1051	SER	4.3
5	G	376	LEU	4.3

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Mol	Chain	Res	Type	RSRZ
8	z	1277	LEU	4.3
4	e	1421	GLY	4.3
6	H	86	GLN	4.3
6	H	232	TYR	4.3
3	D	335	ASP	4.3
7	Q	184	ALA	4.3
8	z	1478	GLY	4.3
5	g	1214	VAL	4.3
7	Q	246	PHE	4.3
8	Z	524	ALA	4.3
5	G	323	ILE	4.3
3	D	405	GLU	4.3
5	G	480	VAL	4.3
6	H	350	GLU	4.3
2	B	162	ILE	4.3
8	Z	342	ASP	4.3
8	Z	395	LEU	4.3
5	G	302	HIS	4.3
8	Z	290	VAL	4.3
1	A	4	PRO	4.3
6	H	198	LYS	4.3
2	b	1488	MET	4.3
7	q	1403	THR	4.3
2	b	1162	ILE	4.3
7	q	1218	LEU	4.3
3	d	1167	LEU	4.3
5	G	88	ASP	4.3
2	b	1017	ASP	4.3
5	G	247	TYR	4.3
1	a	1175	ALA	4.3
1	a	1412	GLY	4.3
5	g	1434	GLN	4.2
8	Z	143	MET	4.2
8	z	1367	ASN	4.2
2	B	363	SER	4.2
3	D	171	ALA	4.2
6	H	285	GLY	4.2
6	h	1150	GLU	4.2
5	G	228	ARG	4.2
8	Z	208	ARG	4.2
2	B	306	ALA	4.2
6	h	1013	THR	4.2

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Mol	Chain	Res	Type	RSRZ
2	B	364	GLY	4.2
7	q	1372	ILE	4.2
1	a	1415	VAL	4.2
5	G	388	GLU	4.2
6	h	1094	THR	4.2
7	q	1187	CYS	4.2
7	q	1471	HIS	4.2
2	B	65	ASN	4.2
3	D	339	ILE	4.2
5	G	313	ARG	4.2
8	Z	304	ALA	4.2
3	D	242	THR	4.2
3	d	1208	LEU	4.2
1	a	1178	ALA	4.2
3	D	169	SER	4.2
7	Q	471	HIS	4.2
1	a	1434	GLU	4.2
3	d	1227	VAL	4.2
4	e	1533	ILE	4.2
7	q	1180	ALA	4.2
7	Q	212	VAL	4.2
8	Z	412	GLY	4.2
3	D	316	ALA	4.2
5	G	10	LEU	4.2
7	Q	217	VAL	4.2
5	G	387	VAL	4.1
2	B	172	LEU	4.1
3	d	1215	LYS	4.1
2	B	323	LEU	4.1
4	e	1160	LYS	4.1
3	D	107	ASP	4.1
7	Q	221	MET	4.1
1	a	1495	PRO	4.1
5	G	295	GLY	4.1
6	H	362	THR	4.1
7	Q	362	VAL	4.1
6	h	1092	ASP	4.1
8	Z	39	GLY	4.1
8	Z	498	TYR	4.1
7	Q	164	LEU	4.1
5	g	1506	TYR	4.1
2	b	1183	ALA	4.1

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Mol	Chain	Res	Type	RSRZ
8	Z	170	GLU	4.1
8	z	1411	ALA	4.1
3	d	1193	ALA	4.1
8	Z	188	LEU	4.1
2	B	165	THR	4.1
7	Q	228	GLU	4.1
1	A	280	ALA	4.1
1	a	1071	ALA	4.1
1	a	1468	ARG	4.1
1	A	209	MET	4.1
3	d	1141	GLN	4.1
6	H	484	ILE	4.1
4	E	360	LYS	4.1
3	D	104	GLU	4.1
3	D	23	GLY	4.1
7	q	1024	GLY	4.1
2	B	299	TYR	4.1
2	b	1160	MET	4.1
7	q	1409	VAL	4.1
1	A	86	VAL	4.1
6	h	1205	LEU	4.1
5	G	301	GLN	4.1
8	Z	355	LEU	4.1
5	G	204	ILE	4.1
6	H	359	ASN	4.1
7	q	1185	GLN	4.1
8	z	1369	PRO	4.1
7	q	1017	GLU	4.0
3	D	343	ILE	4.0
3	D	380	THR	4.0
6	H	282	HIS	4.0
4	e	1083	VAL	4.0
8	Z	352	GLU	4.0
5	G	356	GLY	4.0
6	H	325	ALA	4.0
4	e	1492	ASP	4.0
6	H	284	SER	4.0
2	B	474	THR	4.0
7	Q	301	ALA	4.0
1	A	374	SER	4.0
2	B	333	SER	4.0
2	b	1047	GLY	4.0

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Mol	Chain	Res	Type	RSRZ
7	Q	482	ILE	4.0
8	Z	176	ILE	4.0
1	A	233	LYS	4.0
6	h	1070	ASP	4.0
3	D	211	ILE	4.0
6	H	411	ALA	4.0
8	Z	408	VAL	4.0
8	z	1270	ARG	4.0
7	Q	143	LEU	4.0
8	Z	367	ASN	4.0
6	h	1438	TYR	4.0
7	q	1397	ASN	4.0
8	Z	410	GLY	4.0
7	q	1423	ILE	4.0
1	A	375	VAL	4.0
3	D	186	LEU	4.0
5	g	1522	ILE	4.0
6	h	1521	LYS	4.0
7	Q	285	ASP	4.0
4	E	490	GLY	4.0
7	q	1051	GLY	4.0
2	b	1524	ALA	4.0
8	Z	220	ASP	4.0
4	e	1177	VAL	4.0
2	B	64	THR	4.0
1	a	1414	ALA	4.0
1	a	1469	ALA	4.0
4	E	325	VAL	4.0
8	z	1412	GLY	4.0
7	Q	303	HIS	4.0
7	Q	304	TYR	4.0
3	D	379	ILE	4.0
6	H	371	THR	4.0
7	Q	203	ARG	4.0
4	e	1181	CYS	4.0
1	a	1207	GLU	4.0
2	b	1096	GLY	4.0
7	q	1176	GLU	4.0
1	a	1395	ALA	4.0
2	b	1198	ALA	4.0
4	E	241	LYS	4.0
6	H	412	ILE	4.0

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Mol	Chain	Res	Type	RSRZ
3	D	187	SER	4.0
5	g	1198	TYR	4.0
3	D	342	THR	3.9
8	z	1349	LEU	3.9
6	h	1494	GLU	3.9
6	H	199	LYS	3.9
4	e	1164	PRO	3.9
5	g	1371	ALA	3.9
8	Z	190	MET	3.9
8	Z	303	ASP	3.9
5	G	381	LYS	3.9
1	A	208	SER	3.9
2	B	168	SER	3.9
4	e	1188	ILE	3.9
2	B	493	ILE	3.9
1	A	6	SER	3.9
3	D	393	VAL	3.9
4	E	240	PRO	3.9
2	B	195	ASN	3.9
3	d	1387	LYS	3.9
5	g	1402	LEU	3.9
5	G	220	ILE	3.9
8	Z	186	ILE	3.9
8	Z	152	ALA	3.9
7	Q	64	PHE	3.9
2	B	410	GLY	3.9
8	z	1365	LYS	3.9
1	a	1005	LEU	3.9
2	B	346	CYS	3.9
3	D	362	ALA	3.9
7	q	1069	ALA	3.9
2	b	1412	CYS	3.9
7	q	1477	ASN	3.9
3	D	225	GLU	3.9
4	e	1219	LEU	3.9
1	A	371	THR	3.9
2	b	1046	LYS	3.9
1	A	396	LEU	3.9
8	Z	523	ARG	3.9
2	B	523	ALA	3.9
1	A	364	ILE	3.9
8	z	1374	LEU	3.9

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Mol	Chain	Res	Type	RSRZ
2	B	439	TYR	3.9
8	z	1303	ASP	3.9
2	B	275	MET	3.9
1	A	36	LEU	3.9
1	A	234	ILE	3.9
1	A	367	THR	3.9
3	D	387	LYS	3.9
5	g	1437	TYR	3.9
8	z	1232	THR	3.9
4	E	21	ASP	3.9
8	Z	393	ASP	3.9
2	B	283	LEU	3.8
6	H	197	ILE	3.8
7	q	1163	LEU	3.8
3	d	1414	VAL	3.8
8	z	1008	ASN	3.8
1	a	1419	LEU	3.8
7	Q	404	ARG	3.8
4	e	1167	GLN	3.8
6	H	403	ASP	3.8
8	Z	309	GLY	3.8
3	d	1415	ILE	3.8
5	G	238	ILE	3.8
4	e	1162	THR	3.8
6	H	15	SER	3.8
3	D	317	LEU	3.8
6	h	1406	VAL	3.8
8	z	1324	LEU	3.8
7	Q	168	VAL	3.8
4	E	320	PRO	3.8
4	E	420	TYR	3.8
3	D	106	GLY	3.8
3	D	331	ILE	3.8
4	e	1208	LEU	3.8
1	a	1121	TYR	3.8
4	e	1217	GLY	3.8
4	e	1481	GLN	3.8
8	Z	327	ALA	3.8
7	Q	498	LEU	3.8
4	e	1395	ILE	3.8
1	A	47	ASP	3.8
5	G	225	THR	3.8

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Mol	Chain	Res	Type	RSRZ
2	b	1397	LEU	3.8
7	q	1420	ALA	3.8
1	a	1392	LEU	3.8
3	d	1066	ASP	3.8
5	g	1376	LEU	3.8
8	Z	269	ASP	3.8
4	E	456	GLU	3.8
5	G	382	GLU	3.8
6	h	1184	MET	3.8
2	b	1097	ASP	3.8
5	G	92	GLY	3.8
8	Z	325	THR	3.8
1	A	296	CYS	3.8
6	H	195	ILE	3.8
6	h	1183	VAL	3.8
8	Z	406	CYS	3.8
1	A	207	GLU	3.8
1	a	1486	ILE	3.8
7	q	1399	PHE	3.8
7	Q	56	VAL	3.8
7	Q	222	VAL	3.8
4	e	1048	MET	3.8
5	G	42	GLY	3.8
7	Q	226	GLU	3.8
3	d	1105	ALA	3.7
7	q	1416	GLU	3.7
1	A	315	ASP	3.7
5	G	229	MET	3.7
8	Z	155	SER	3.7
3	d	1192	ASP	3.7
3	d	1391	ILE	3.7
4	e	1184	GLN	3.7
3	D	370	LEU	3.7
3	D	240	GLY	3.7
8	Z	478	GLY	3.7
4	e	1057	LEU	3.7
5	g	1137	LEU	3.7
4	e	1221	ASP	3.7
7	Q	135	ALA	3.7
1	a	1378	ARG	3.7
4	E	239	MET	3.7
4	E	314	LEU	3.7

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Mol	Chain	Res	Type	RSRZ
4	e	1507	ILE	3.7
5	G	350	LEU	3.7
1	a	1417	ALA	3.7
6	H	495	PRO	3.7
7	q	1391	ALA	3.7
3	D	471	ASN	3.7
7	Q	229	GLY	3.7
8	Z	8	ASN	3.7
3	d	1504	SER	3.7
3	d	1195	MET	3.7
3	d	1416	ARG	3.7
2	B	81	ALA	3.7
7	q	1504	LYS	3.7
5	G	336	GLU	3.7
2	b	1214	LEU	3.7
3	D	257	SER	3.7
5	g	1388	GLU	3.7
7	Q	349	SER	3.7
8	z	1159	LYS	3.7
8	z	1347	ALA	3.7
2	B	49	ASP	3.7
3	D	226	LEU	3.7
6	h	1197	ILE	3.7
7	q	1056	VAL	3.7
3	D	299	ASN	3.7
8	z	1395	LEU	3.7
5	G	278	LEU	3.7
1	A	318	ARG	3.7
7	Q	409	VAL	3.7
2	b	1413	SER	3.7
6	H	217	LYS	3.7
6	H	346	GLN	3.7
7	q	1527	ALA	3.7
2	B	12	PHE	3.7
5	G	209	ILE	3.7
8	z	1366	CYS	3.7
2	b	1428	THR	3.7
2	B	431	LYS	3.7
4	e	1194	LEU	3.7
7	Q	418	GLU	3.7
1	a	1467	LEU	3.6
7	q	1392	VAL	3.6

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Mol	Chain	Res	Type	RSRZ
2	B	197	GLU	3.6
6	H	523	PRO	3.6
1	A	37	GLY	3.6
7	Q	233	SER	3.6
7	Q	445	PHE	3.6
3	d	1058	LYS	3.6
7	q	1206	LYS	3.6
1	A	504	PHE	3.6
5	g	1212	SER	3.6
5	g	1374	ILE	3.6
8	Z	391	ILE	3.6
8	z	1344	LEU	3.6
2	b	1468	ALA	3.6
3	d	1197	VAL	3.6
8	z	1409	PRO	3.6
4	E	324	TRP	3.6
4	E	310	ALA	3.6
7	Q	442	ALA	3.6
7	q	1183	ILE	3.6
7	q	1389	GLU	3.6
8	Z	276	GLU	3.6
4	E	345	PHE	3.6
2	b	1185	GLU	3.6
2	b	1429	PRO	3.6
7	Q	452	LEU	3.6
7	q	1211	GLY	3.6
4	e	1466	SER	3.6
1	A	303	ALA	3.6
4	E	478	ARG	3.6
5	G	56	GLY	3.6
4	E	448	MET	3.6
7	Q	65	VAL	3.6
3	D	404	ALA	3.6
4	e	1478	ARG	3.6
1	a	1402	VAL	3.6
3	d	1390	THR	3.6
2	b	1156	ARG	3.6
2	b	1486	GLY	3.6
8	Z	172	VAL	3.6
7	Q	441	PHE	3.6
3	d	1144	LEU	3.6
7	Q	245	PRO	3.6

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Mol	Chain	Res	Type	RSRZ
1	A	189	ARG	3.6
2	B	389	SER	3.6
7	q	1149	CYS	3.6
7	Q	292	VAL	3.6
1	a	1038	PRO	3.6
7	q	1526	MET	3.6
8	z	1050	GLY	3.6
6	H	90	VAL	3.6
7	Q	375	ILE	3.6
8	z	1362	PHE	3.5
3	d	1424	LEU	3.5
4	e	1059	LYS	3.5
7	Q	173	TYR	3.5
1	a	1518	THR	3.5
4	e	1103	GLY	3.5
7	Q	423	ILE	3.5
2	B	277	GLU	3.5
5	G	280	GLU	3.5
4	e	1462	LEU	3.5
7	Q	97	VAL	3.5
8	Z	409	PRO	3.5
1	A	300	PHE	3.5
2	b	1498	GLN	3.5
6	h	1098	THR	3.5
1	a	1085	GLU	3.5
2	B	97	ASP	3.5
7	Q	406	LYS	3.5
7	Q	59	HIS	3.5
4	e	1171	THR	3.5
4	e	1218	ARG	3.5
3	D	194	VAL	3.5
7	Q	328	VAL	3.5
1	a	1390	ARG	3.5
3	D	382	CYS	3.5
2	B	50	LYS	3.5
2	b	1161	ASN	3.5
1	A	495	PRO	3.5
1	a	1191	PRO	3.5
1	a	1506	PRO	3.5
2	B	285	HIS	3.5
4	E	375	GLU	3.5
8	z	1337	ASP	3.5

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Mol	Chain	Res	Type	RSRZ
2	B	42	THR	3.5
8	z	1084	GLN	3.5
3	D	391	ILE	3.5
4	e	1419	VAL	3.5
4	e	1049	LYS	3.5
7	q	1155	ARG	3.5
2	B	242	THR	3.5
3	d	1179	VAL	3.5
5	G	352	ILE	3.5
6	H	183	VAL	3.5
7	Q	456	SER	3.5
3	D	193	ALA	3.5
7	q	1103	PHE	3.5
8	Z	89	GLY	3.5
5	G	50	LEU	3.5
2	B	369	GLU	3.5
5	G	395	MET	3.5
1	A	211	ILE	3.5
2	B	234	ASN	3.5
6	h	1015	SER	3.5
5	G	41	LEU	3.5
3	D	191	VAL	3.5
8	Z	156	LEU	3.5
8	z	1070	GLN	3.5
1	A	326	THR	3.5
2	b	1463	ALA	3.5
2	B	302	GLN	3.5
5	G	521	ASP	3.5
8	z	1190	MET	3.5
1	a	1400	LYS	3.5
7	Q	205	CYS	3.5
4	e	1216	GLY	3.4
6	h	1473	MET	3.4
7	Q	183	ILE	3.4
8	Z	173	VAL	3.4
8	z	1175	SER	3.4
7	Q	165	HIS	3.4
5	G	307	ALA	3.4
2	B	180	THR	3.4
5	G	314	ARG	3.4
3	d	1191	VAL	3.4
6	h	1090	VAL	3.4

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Mol	Chain	Res	Type	RSRZ
2	b	1443	LEU	3.4
3	D	300	VAL	3.4
6	H	407	ALA	3.4
7	Q	504	LYS	3.4
8	Z	501	LYS	3.4
3	d	1143	ALA	3.4
5	g	1401	VAL	3.4
5	G	161	THR	3.4
6	H	290	LEU	3.4
7	q	1146	LEU	3.4
5	G	522	ILE	3.4
7	q	1448	ILE	3.4
7	q	1147	VAL	3.4
4	E	372	LEU	3.4
8	z	1041	LYS	3.4
5	G	37	ILE	3.4
8	Z	479	VAL	3.4
1	a	1190	TYR	3.4
5	g	1092	GLY	3.4
6	H	245	GLU	3.4
7	Q	241	VAL	3.4
8	z	1191	VAL	3.4
5	g	1521	ASP	3.4
3	d	1210	ASP	3.4
2	B	161	ASN	3.4
7	Q	346	HIS	3.4
5	G	298	ASP	3.4
7	q	1170	SER	3.4
3	d	1168	ASN	3.4
3	d	1190	SER	3.4
4	E	59	LYS	3.4
1	a	1007	VAL	3.4
6	H	413	GLU	3.4
8	Z	525	GLY	3.4
6	h	1372	ILE	3.4
8	Z	443	ALA	3.4
1	A	282	GLY	3.4
4	E	433	VAL	3.4
2	B	469	HIS	3.4
5	G	57	ILE	3.4
7	q	1386	ASP	3.4
1	A	197	VAL	3.4

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Mol	Chain	Res	Type	RSRZ
2	B	477	GLY	3.4
8	Z	9	PRO	3.4
8	z	1497	ASN	3.4
1	A	293	ASP	3.4
1	A	277	LYS	3.4
4	E	498	THR	3.4
8	Z	444	LEU	3.4
6	H	446	PRO	3.3
3	d	1503	ILE	3.3
2	B	314	HIS	3.3
8	Z	319	ARG	3.3
4	e	1489	LEU	3.3
3	d	1214	VAL	3.3
2	B	45	PRO	3.3
3	D	319	PHE	3.3
8	z	1040	PRO	3.3
2	B	476	ALA	3.3
5	G	170	SER	3.3
5	G	380	SER	3.3
5	G	179	ALA	3.3
4	E	71	THR	3.3
1	a	1209	MET	3.3
7	q	1449	PRO	3.3
8	Z	388	LYS	3.3
2	b	1158	ASP	3.3
2	b	1501	ARG	3.3
6	H	357	ARG	3.3
8	z	1523	ARG	3.3
2	b	1201	VAL	3.3
2	B	179	PHE	3.3
2	b	1182	LEU	3.3
1	A	176	VAL	3.3
1	a	1171	LEU	3.3
3	D	390	THR	3.3
2	B	330	GLU	3.3
3	D	101	GLN	3.3
6	H	457	ALA	3.3
3	d	1418	LEU	3.3
6	H	190	LEU	3.3
8	Z	495	TRP	3.3
8	z	1193	ILE	3.3
2	b	1446	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
6	H	91	GLY	3.3
1	A	48	ASP	3.3
2	B	292	ASN	3.3
7	Q	247	ASP	3.3
4	E	166	ILE	3.3
8	z	1085	ASP	3.3
2	B	19	GLU	3.3
1	a	1428	THR	3.3
8	z	1495	TRP	3.3
1	A	148	LEU	3.3
2	b	1196	LEU	3.3
2	B	351	GLU	3.3
5	G	276	GLN	3.3
7	q	1068	ASP	3.3
6	H	239	LEU	3.3
8	Z	396	ARG	3.3
2	B	276	LYS	3.3
3	D	258	ALA	3.3
6	h	1119	GLN	3.3
1	a	1410	PRO	3.3
6	h	1413	GLU	3.3
5	G	305	MET	3.3
3	D	416	ARG	3.3
4	E	308	ASP	3.3
1	A	279	LEU	3.3
7	Q	167	SER	3.3
5	G	231	ARG	3.3
8	z	1331	ILE	3.3
2	B	159	LEU	3.3
8	z	1306	ALA	3.2
8	z	1370	ARG	3.2
1	A	366	ASN	3.2
1	a	1143	LEU	3.2
1	A	343	SER	3.2
3	D	57	PRO	3.2
3	d	1514	PRO	3.2
5	G	158	SER	3.2
8	z	1332	ALA	3.2
8	Z	368	ASN	3.2
2	b	1399	GLN	3.2
7	Q	283	ILE	3.2
2	B	386	ALA	3.2

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Mol	Chain	Res	Type	RSRZ
6	H	150	GLU	3.2
2	B	77	ASP	3.2
3	D	221	ILE	3.2
1	a	1004	PRO	3.2
2	b	1431	LYS	3.2
3	d	1425	ILE	3.2
4	e	1444	GLU	3.2
1	A	410	PRO	3.2
2	B	492	GLY	3.2
6	H	303	PHE	3.2
8	Z	370	ARG	3.2
8	z	1276	GLU	3.2
8	Z	362	PHE	3.2
1	A	51	ASP	3.2
5	G	346	GLY	3.2
8	Z	302	LEU	3.2
6	H	187	ASP	3.2
6	H	358	TYR	3.2
1	A	365	LYS	3.2
6	h	1442	LEU	3.2
2	b	1141	LEU	3.2
5	G	63	GLY	3.2
7	Q	98	GLY	3.2
7	Q	502	LEU	3.2
4	E	23	ASP	3.2
6	h	1010	LYS	3.2
8	Z	224	ARG	3.2
5	G	199	ALA	3.2
2	b	1187	VAL	3.2
5	g	1519	ILE	3.2
1	a	1504	PHE	3.2
3	D	427	GLY	3.2
2	b	1370	ALA	3.2
5	G	506	TYR	3.2
3	d	1431	PRO	3.2
4	e	1027	ARG	3.2
7	q	1385	MET	3.2
8	Z	494	ILE	3.2
1	a	1206	MET	3.2
4	e	1534	ARG	3.2
1	A	325	ALA	3.2
8	z	1376	ILE	3.2

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Mol	Chain	Res	Type	RSRZ
6	h	1211	VAL	3.2
8	Z	415	GLU	3.2
2	B	367	LEU	3.2
4	e	1407	CYS	3.2
6	h	1180	VAL	3.2
1	A	91	THR	3.2
1	a	1048	ASP	3.2
6	H	473	MET	3.2
5	G	172	ALA	3.2
1	A	236	CYS	3.1
4	e	1058	ASP	3.1
3	d	1106	GLY	3.1
6	h	1472	GLY	3.1
2	B	184	VAL	3.1
3	d	1406	ARG	3.1
5	G	53	PRO	3.1
6	H	231	LYS	3.1
8	z	1298	ASP	3.1
3	d	1205	SER	3.1
5	G	279	CYS	3.1
8	z	1296	GLY	3.1
7	Q	103	PHE	3.1
5	g	1133	MET	3.1
5	g	1390	ASN	3.1
2	B	44	GLY	3.1
2	b	1134	THR	3.1
6	h	1132	ALA	3.1
1	a	1003	GLY	3.1
6	h	1186	LEU	3.1
2	B	156	ARG	3.1
4	E	18	ILE	3.1
4	E	344	ARG	3.1
4	E	103	GLY	3.1
2	b	1402	LYS	3.1
6	h	1195	ILE	3.1
2	B	447	PRO	3.1
6	H	363	GLY	3.1
7	Q	419	LEU	3.1
8	Z	226	GLU	3.1
3	D	302	LEU	3.1
1	A	292	ILE	3.1
4	e	1021	ASP	3.1

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Mol	Chain	Res	Type	RSRZ
5	G	176	ALA	3.1
7	q	1159	GLU	3.1
8	z	1359	LYS	3.1
1	a	1050	GLY	3.1
8	Z	219	PRO	3.1
5	g	1159	SER	3.1
6	h	1520	ILE	3.1
7	Q	139	ALA	3.1
5	G	386	GLU	3.1
1	A	3	GLY	3.1
8	Z	6	THR	3.1
7	Q	181	LYS	3.1
3	D	172	THR	3.1
7	q	1023	SER	3.1
2	B	202	ILE	3.1
6	H	398	ARG	3.1
8	Z	207	ILE	3.1
7	q	1408	LEU	3.1
8	z	1340	ASN	3.1
1	a	1181	TYR	3.1
3	D	228	GLU	3.1
6	H	79	LEU	3.1
7	q	1168	VAL	3.1
8	Z	298	ASP	3.1
4	E	25	LYS	3.1
2	b	1018	GLU	3.1
2	B	316	ASP	3.1
2	b	1211	ASP	3.1
4	E	348	LEU	3.1
6	H	368	LYS	3.1
1	A	242	GLN	3.1
7	Q	314	ARG	3.1
5	G	233	ILE	3.1
6	h	1369	THR	3.1
8	Z	369	PRO	3.1
3	d	1067	GLY	3.1
7	q	1388	ILE	3.1
4	E	497	GLY	3.1
5	G	378	GLY	3.1
1	A	276	GLN	3.0
4	e	1458	ILE	3.0
3	D	199	ASP	3.0

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Mol	Chain	Res	Type	RSRZ
4	e	1087	ILE	3.0
1	A	69	HIS	3.0
2	B	394	LEU	3.0
7	Q	163	LEU	3.0
1	A	351	VAL	3.0
3	D	351	VAL	3.0
7	Q	276	MET	3.0
6	H	353	ILE	3.0
2	b	1193	SER	3.0
3	D	293	ILE	3.0
3	D	388	THR	3.0
5	G	379	ALA	3.0
1	A	323	SER	3.0
8	z	1090	ASP	3.0
1	A	284	ASN	3.0
6	h	1370	CYS	3.0
3	d	1427	GLY	3.0
3	D	249	ILE	3.0
4	E	318	ASP	3.0
4	E	319	LEU	3.0
8	Z	397	ALA	3.0
8	z	1014	ALA	3.0
1	A	62	LEU	3.0
6	H	158	CYS	3.0
1	A	329	SER	3.0
7	q	1192	PRO	3.0
5	G	277	GLN	3.0
5	G	303	TYR	3.0
1	A	228	ARG	3.0
1	a	1409	VAL	3.0
5	g	1391	LEU	3.0
6	H	326	CYS	3.0
6	h	1190	LEU	3.0
8	z	1475	GLN	3.0
7	Q	300	MET	3.0
8	z	1317	LYS	3.0
2	b	1450	ILE	3.0
4	e	1180	SER	3.0
1	a	1435	GLN	3.0
2	B	368	GLY	3.0
3	D	363	GLU	3.0
2	B	415	MET	3.0

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Mol	Chain	Res	Type	RSRZ
3	d	1172	THR	3.0
4	E	60	MET	3.0
7	Q	361	VAL	3.0
7	Q	400	LYS	3.0
8	z	1351	TYR	3.0
3	d	1435	LEU	3.0
8	z	1341	PRO	3.0
1	A	409	VAL	3.0
4	E	474	MET	3.0
1	a	1075	LEU	3.0
4	e	1037	HIS	3.0
6	h	1163	LEU	3.0
3	d	1175	ASN	3.0
5	g	1017	GLU	3.0
1	A	322	ALA	3.0
6	H	306	ARG	3.0
2	B	328	GLY	3.0
6	H	521	LYS	3.0
6	H	370	CYS	3.0
8	Z	93	THR	3.0
5	G	55	GLY	3.0
7	Q	323	ARG	3.0
2	B	480	MET	3.0
5	G	153	LEU	3.0
1	a	1438	ILE	3.0
5	G	240	LEU	3.0
4	e	1215	VAL	2.9
3	d	1439	LEU	2.9
4	e	1468	MET	2.9
4	e	1498	THR	2.9
8	z	1155	SER	2.9
5	G	320	ASN	2.9
6	H	328	GLY	2.9
1	a	1049	ILE	2.9
2	b	1515	LEU	2.9
6	h	1396	VAL	2.9
8	Z	374	LEU	2.9
1	A	400	LYS	2.9
2	b	1475	THR	2.9
6	h	1012	GLY	2.9
5	G	393	ASP	2.9
2	B	465	LEU	2.9

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Mol	Chain	Res	Type	RSRZ
6	H	435	ILE	2.9
4	e	1071	THR	2.9
7	q	1479	GLY	2.9
7	Q	178	PHE	2.9
1	A	505	GLU	2.9
4	E	422	GLY	2.9
5	G	398	CYS	2.9
2	b	1212	SER	2.9
2	b	1396	VAL	2.9
8	z	1152	ALA	2.9
2	B	80	ALA	2.9
2	B	390	LEU	2.9
3	d	1025	SER	2.9
1	A	203	ARG	2.9
1	a	1431	GLY	2.9
7	q	1445	PHE	2.9
6	H	289	VAL	2.9
3	D	415	ILE	2.9
3	d	1196	LYS	2.9
7	Q	417	ILE	2.9
2	b	1439	TYR	2.9
2	B	76	VAL	2.9
1	a	1072	ALA	2.9
5	g	1037	ILE	2.9
4	E	204	VAL	2.9
2	b	1467	ALA	2.9
7	Q	374	THR	2.9
6	H	92	ASP	2.9
7	Q	330	ALA	2.9
7	q	1467	LEU	2.9
1	A	405	SER	2.9
6	h	1410	GLY	2.9
7	Q	350	VAL	2.9
4	e	1026	SER	2.9
8	z	1218	HIS	2.9
2	B	103	THR	2.9
2	b	1209	LEU	2.9
3	d	1515	LEU	2.9
4	e	1099	ASP	2.9
2	B	387	GLU	2.9
8	z	1360	PHE	2.9
2	B	318	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
3	D	386	GLY	2.9
3	d	1421	LYS	2.9
3	d	1225	GLU	2.9
6	H	89	GLU	2.9
8	Z	392	ARG	2.9
4	e	1490	GLY	2.9
1	A	352	VAL	2.9
5	g	1523	VAL	2.9
6	h	1386	GLU	2.9
7	Q	378	ARG	2.9
3	d	1069	GLY	2.9
1	A	370	ARG	2.8
5	g	1072	VAL	2.8
7	q	1199	VAL	2.8
8	Z	64	LEU	2.8
6	h	1125	PHE	2.8
1	a	1418	ALA	2.8
6	H	235	PRO	2.8
3	D	58	LYS	2.8
6	h	1063	ALA	2.8
7	Q	48	GLY	2.8
7	q	1501	TYR	2.8
3	D	355	THR	2.8
7	Q	216	SER	2.8
8	z	1481	LEU	2.8
8	Z	376	ILE	2.8
8	Z	475	GLN	2.8
2	B	295	LEU	2.8
3	d	1224	CYS	2.8
7	Q	339	PRO	2.8
7	Q	497	VAL	2.8
8	z	1233	CYS	2.8
3	d	1186	LEU	2.8
7	Q	145	ASP	2.8
1	A	327	VAL	2.8
4	E	237	PRO	2.8
8	Z	306	ALA	2.8
1	A	488	LEU	2.8
4	e	1454	ALA	2.8
6	H	425	ARG	2.8
1	A	213	GLY	2.8
5	g	1209	ILE	2.8

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Mol	Chain	Res	Type	RSRZ
5	G	180	VAL	2.8
7	Q	43	THR	2.8
7	q	1401	VAL	2.8
2	b	1063	VAL	2.8
5	g	1126	TYR	2.8
4	E	252	THR	2.8
4	E	309	GLU	2.8
4	e	1220	GLU	2.8
2	B	245	ASP	2.8
2	B	186	ALA	2.8
7	q	1402	LEU	2.8
5	G	61	ASN	2.8
3	d	1494	THR	2.8
4	e	1400	ARG	2.8
5	g	1395	MET	2.8
2	B	18	GLU	2.8
3	D	24	LYS	2.8
8	Z	360	PHE	2.8
3	d	1162	ASP	2.8
8	z	1034	LEU	2.8
1	a	1388	MET	2.8
3	D	241	ILE	2.8
3	d	1419	VAL	2.8
6	h	1086	GLN	2.8
7	Q	446	GLU	2.8
5	g	1152	MET	2.8
8	z	1302	LEU	2.8
7	Q	172	GLN	2.8
7	q	1090	SER	2.8
8	z	1160	VAL	2.8
4	E	169	ALA	2.8
1	A	5	LEU	2.8
3	D	354	PHE	2.8
8	Z	329	GLY	2.8
1	A	319	ILE	2.8
2	B	43	LEU	2.8
1	a	1490	LEU	2.8
2	b	1444	ARG	2.8
6	H	464	LEU	2.8
4	E	251	LEU	2.8
6	H	295	ILE	2.8
2	b	1378	ALA	2.7

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Mol	Chain	Res	Type	RSRZ
3	d	1165	THR	2.7
5	g	1394	ALA	2.7
6	H	414	MET	2.8
6	H	415	GLU	2.7
7	q	1175	ASN	2.7
6	h	1414	MET	2.7
4	E	101	GLU	2.7
5	G	96	THR	2.7
7	Q	186	ALA	2.7
1	a	1062	LEU	2.7
6	H	420	LEU	2.7
2	b	1011	ILE	2.7
8	Z	407	VAL	2.7
1	A	152	ALA	2.7
2	b	1009	VAL	2.7
7	q	1055	MET	2.7
7	q	1198	ASN	2.7
7	q	1393	ASP	2.7
8	z	1328	CYS	2.7
2	b	1418	ALA	2.7
7	q	1020	LYS	2.7
8	z	1377	LYS	2.7
4	E	55	ASN	2.7
7	q	1046	ALA	2.7
7	q	1419	LEU	2.7
2	b	1517	VAL	2.7
5	G	476	GLU	2.7
8	Z	448	PRO	2.7
1	A	67	VAL	2.7
1	a	1079	ALA	2.7
1	a	1139	ASN	2.7
4	E	449	ARG	2.7
4	E	374	ILE	2.7
4	e	1050	THR	2.7
5	G	171	LEU	2.7
6	H	355	GLY	2.7
1	A	175	ALA	2.7
2	b	1025	ARG	2.7
6	H	399	ALA	2.7
1	a	1045	LEU	2.7
3	d	1407	SER	2.7
7	Q	402	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
2	b	1398	ALA	2.7
2	b	1504	LEU	2.7
4	E	317	ASN	2.7
4	E	515	GLN	2.7
4	e	1210	LYS	2.7
8	z	1038	LEU	2.7
8	Z	322	GLU	2.7
1	A	401	ARG	2.7
6	H	321	ARG	2.7
2	B	183	ALA	2.7
5	G	385	SER	2.7
6	H	322	THR	2.7
7	Q	160	VAL	2.7
5	G	357	ASP	2.7
2	b	1167	LEU	2.7
5	G	84	SER	2.7
8	Z	401	ALA	2.7
3	D	84	MET	2.7
1	A	506	PRO	2.7
2	b	1168	SER	2.7
5	G	243	SER	2.7
8	Z	63	LEU	2.7
6	H	450	CYS	2.7
8	z	1343	CYS	2.7
6	H	312	GLY	2.7
2	B	464	GLN	2.7
3	d	1449	MET	2.7
4	e	1398	ALA	2.7
7	q	1480	LEU	2.7
3	D	375	LYS	2.7
6	h	1198	LYS	2.7
7	Q	58	ASN	2.7
3	d	1163	ARG	2.7
8	z	1161	HIS	2.7
3	d	1429	GLY	2.7
4	E	512	GLY	2.7
6	h	1170	GLN	2.7
3	d	1405	GLU	2.7
3	D	392	VAL	2.7
3	D	484	ARG	2.7
7	Q	200	ASP	2.7
8	z	1333	LEU	2.7

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Mol	Chain	Res	Type	RSRZ
1	a	1053	THR	2.7
6	H	421	ARG	2.7
2	B	47	GLY	2.6
3	d	1472	ALA	2.6
5	g	1436	PRO	2.6
2	B	396	VAL	2.6
1	a	1120	GLY	2.6
2	b	1147	ASP	2.6
2	b	1480	MET	2.6
5	G	201	VAL	2.6
5	G	214	VAL	2.6
8	Z	339	LEU	2.6
3	d	1413	CYS	2.6
6	h	1475	TYR	2.6
3	d	1207	ASP	2.6
8	Z	138	LYS	2.6
1	a	1380	ALA	2.6
5	g	1130	LEU	2.6
6	h	1011	GLU	2.6
6	h	1493	TRP	2.6
7	Q	388	ILE	2.6
7	Q	242	TYR	2.6
2	B	397	LEU	2.6
8	z	1013	VAL	2.6
4	e	1163	GLU	2.6
4	e	1390	GLY	2.6
7	q	1418	GLU	2.6
8	Z	356	GLY	2.6
8	Z	147	THR	2.6
5	G	286	LYS	2.6
1	a	1189	ARG	2.6
2	b	1430	GLY	2.6
3	D	255	CYS	2.6
5	g	1386	GLU	2.6
1	a	1058	GLY	2.6
2	B	436	MET	2.6
4	e	1506	VAL	2.6
6	h	1519	THR	2.6
5	g	1093	ASP	2.6
6	h	1188	ASP	2.6
7	Q	329	GLY	2.6
5	g	1026	ASN	2.6

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Mol	Chain	Res	Type	RSRZ
5	g	1053	PRO	2.6
1	a	1088	ASP	2.6
8	z	1151	VAL	2.6
8	z	1322	GLU	2.6
8	z	1346	HIS	2.6
3	D	109	THR	2.6
4	E	509	THR	2.6
4	e	1041	ALA	2.6
6	h	1367	ALA	2.6
8	Z	228	ALA	2.6
2	B	391	HIS	2.6
6	H	281	ILE	2.6
7	Q	77	GLU	2.6
4	E	144	ALA	2.6
6	h	1047	LYS	2.6
5	G	36	ILE	2.6
2	B	9	VAL	2.6
2	B	182	LEU	2.6
4	E	66	GLY	2.6
2	B	284	LYS	2.6
2	b	1523	ALA	2.6
3	D	205	SER	2.6
7	Q	483	GLU	2.6
7	Q	144	PRO	2.6
6	H	430	LYS	2.6
2	b	1514	ILE	2.6
3	D	243	ARG	2.6
6	h	1412	ILE	2.6
8	Z	432	ARG	2.6
4	e	1427	ILE	2.6
2	b	1462	VAL	2.6
8	Z	151	VAL	2.6
8	Z	272	LYS	2.6
2	b	1044	GLY	2.6
2	b	1394	LEU	2.6
3	d	1471	ASN	2.6
4	e	1195	THR	2.6
6	H	291	SER	2.6
8	Z	77	ILE	2.6
8	z	1187	ASP	2.6
3	d	1151	LEU	2.6
7	q	1396	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
3	D	462	GLU	2.6
7	q	1205	CYS	2.6
1	A	305	ALA	2.5
2	b	1172	LEU	2.5
5	g	1524	SER	2.5
7	Q	481	ASP	2.5
4	e	1086	GLN	2.5
2	b	1483	GLY	2.5
8	Z	7	LEU	2.5
3	D	102	ASP	2.5
3	d	1410	ASP	2.5
6	H	396	VAL	2.5
1	A	321	LYS	2.5
1	a	1131	TYR	2.5
2	b	1049	ASP	2.5
3	d	1507	LEU	2.5
6	H	143	VAL	2.5
4	E	78	LEU	2.5
6	h	1087	ASP	2.5
7	q	1148	CYS	2.5
3	D	371	ASN	2.5
6	H	42	PRO	2.5
7	q	1151	ALA	2.5
1	A	304	GLY	2.5
2	b	1207	GLY	2.5
5	G	293	GLU	2.5
5	g	1387	VAL	2.5
6	H	83	ALA	2.5
6	H	159	ALA	2.5
7	Q	53	ASN	2.5
7	q	1422	GLN	2.5
2	b	1028	SER	2.5
4	E	160	LYS	2.5
1	A	363	LEU	2.5
2	b	1464	GLN	2.5
3	D	417	CYS	2.5
3	D	425	ILE	2.5
6	h	1390	HIS	2.5
7	q	1482	ILE	2.5
2	B	349	ILE	2.5
3	D	402	GLU	2.5
6	H	419	TYR	2.5

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Mol	Chain	Res	Type	RSRZ
8	Z	84	GLN	2.5
8	z	1140	SER	2.5
8	z	1173	VAL	2.5
4	e	1098	GLN	2.5
4	e	1420	TYR	2.5
4	e	1443	LEU	2.5
8	z	1235	VAL	2.5
4	e	1463	ALA	2.5
5	G	40	CYS	2.5
1	a	1176	VAL	2.5
8	Z	500	VAL	2.5
2	b	1179	PHE	2.5
6	H	360	PHE	2.5
7	Q	331	THR	2.5
7	Q	526	MET	2.5
1	A	354	GLU	2.5
1	A	402	VAL	2.5
3	d	1222	ASP	2.5
5	g	1502	LYS	2.5
8	Z	499	CYS	2.5
8	z	1007	LEU	2.5
1	a	1441	PHE	2.5
4	e	1401	SER	2.5
8	z	1174	ASP	2.5
6	H	462	ASN	2.5
7	Q	455	ASN	2.5
7	q	1417	ILE	2.5
1	A	90	THR	2.5
1	a	1487	GLY	2.5
2	b	1417	MET	2.5
5	G	401	VAL	2.5
7	Q	177	VAL	2.5
8	z	1188	LEU	2.5
1	A	299	TYR	2.5
3	D	461	MET	2.5
4	e	1065	ASP	2.5
5	G	397	VAL	2.5
3	D	72	THR	2.5
1	A	378	ARG	2.5
5	g	1185	PHE	2.5
3	d	1057	PRO	2.5
4	E	455	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
7	Q	468	TYR	2.5
5	G	66	ILE	2.5
8	z	1493	GLY	2.5
7	q	1193	ASP	2.5
7	Q	136	CYS	2.4
4	E	250	ILE	2.4
4	e	1204	VAL	2.4
6	h	1465	ARG	2.4
7	Q	355	VAL	2.4
8	z	1172	VAL	2.4
1	a	1377	LEU	2.4
5	g	1373	THR	2.4
7	q	1066	THR	2.4
1	A	357	CYS	2.4
2	b	1186	ALA	2.4
6	H	213	GLY	2.4
8	Z	81	ALA	2.4
8	Z	472	GLU	2.4
1	a	1194	SER	2.4
2	B	78	ASN	2.4
2	B	187	VAL	2.4
4	E	341	ILE	2.4
2	b	1502	GLN	2.4
4	e	1107	THR	2.4
6	H	438	TYR	2.4
2	b	1194	GLY	2.4
3	D	223	ASP	2.4
4	E	430	ALA	2.4
5	G	194	ASP	2.4
3	D	55	LEU	2.4
5	g	1369	PRO	2.4
6	h	1166	LYS	2.4
7	Q	68	ASP	2.4
7	q	1502	LEU	2.4
4	E	242	GLN	2.4
6	H	125	PHE	2.4
3	d	1541	THR	2.4
4	e	1179	ASN	2.4
3	D	216	LYS	2.4
1	a	1376	ILE	2.4
4	E	303	GLN	2.4
7	q	1503	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
8	Z	38	LEU	2.4
6	h	1474	TRP	2.4
8	Z	365	LYS	2.4
1	A	65	LEU	2.4
1	a	1046	VAL	2.4
7	Q	525	ILE	2.4
8	z	1069	ILE	2.4
1	A	79	ALA	2.4
2	B	350	GLU	2.4
2	b	1079	PRO	2.4
4	E	537	GLY	2.4
2	B	450	ILE	2.4
2	b	1518	ASP	2.4
3	D	227	VAL	2.4
4	e	1110	VAL	2.4
4	e	1111	VAL	2.4
7	q	1143	LEU	2.4
3	D	449	MET	2.4
3	d	1516	LEU	2.4
3	D	184	SER	2.4
1	A	58	GLY	2.4
2	B	130	TRP	2.4
1	A	75	LEU	2.4
7	q	1450	ARG	2.4
4	E	300	ALA	2.4
6	H	73	HIS	2.4
6	H	466	ALA	2.4
5	G	236	PRO	2.4
5	G	322	ARG	2.4
8	Z	171	ALA	2.4
6	H	240	LEU	2.4
4	E	172	THR	2.4
5	g	1127	ARG	2.4
6	H	98	THR	2.4
2	b	1205	LEU	2.4
3	d	1180	SER	2.4
1	a	1114	PRO	2.4
3	d	1457	PHE	2.4
2	B	519	ASN	2.4
2	b	1421	VAL	2.4
7	Q	313	VAL	2.4
2	b	1520	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
5	G	374	ILE	2.4
2	B	194	GLY	2.4
7	Q	90	SER	2.4
3	D	208	LEU	2.4
8	Z	340	ASN	2.4
7	q	1086	ILE	2.4
6	H	206	GLU	2.4
7	q	1379	GLY	2.4
8	z	1058	LYS	2.4
5	G	62	ASP	2.4
6	H	479	ILE	2.4
3	D	389	VAL	2.4
8	Z	308	GLU	2.4
3	d	1412	LEU	2.4
5	G	227	PRO	2.4
6	h	1399	ALA	2.4
1	a	1389	GLU	2.4
7	q	1181	LYS	2.3
7	q	1054	LYS	2.3
7	q	1446	GLU	2.3
8	z	1012	GLU	2.3
1	a	1115	THR	2.3
2	b	1376	ARG	2.3
3	D	66	ASP	2.3
3	D	381	GLY	2.3
4	E	48	MET	2.3
3	D	496	ILE	2.3
5	G	178	ASP	2.3
5	g	1147	SER	2.3
2	B	231	ARG	2.3
6	H	337	LEU	2.3
1	A	399	VAL	2.3
8	z	1398	VAL	2.3
1	a	1076	CYS	2.3
1	a	1122	ARG	2.3
5	G	149	ARG	2.3
2	b	1180	THR	2.3
8	Z	387	ILE	2.3
4	E	82	ASP	2.3
8	z	1353	TYR	2.3
3	d	1392	VAL	2.3
7	Q	398	THR	2.3

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Mol	Chain	Res	Type	RSRZ
8	z	1141	LYS	2.3
1	a	1196	ASN	2.3
4	E	501	MET	2.3
3	D	140	PHE	2.3
1	a	1423	LEU	2.3
6	h	1144	LYS	2.3
6	h	1175	PHE	2.3
7	q	1064	PHE	2.3
7	q	1073	LEU	2.3
2	B	243	GLY	2.3
2	b	1516	ARG	2.3
7	Q	199	VAL	2.3
2	b	1403	ASP	2.3
3	d	1187	SER	2.3
4	e	1423	GLY	2.3
4	E	293	LYS	2.3
4	e	1530	ILE	2.3
8	Z	67	MET	2.3
2	b	1155	PHE	2.3
4	E	305	GLY	2.3
8	Z	168	LEU	2.3
1	a	1180	LYS	2.3
2	b	1200	HIS	2.3
6	H	139	ILE	2.3
8	Z	515	ILE	2.3
2	B	171	LEU	2.3
2	B	495	GLU	2.3
7	Q	377	LEU	2.3
3	d	1542	ARG	2.3
4	E	471	ILE	2.3
5	G	166	SER	2.3
6	h	1069	LEU	2.3
1	A	156	MET	2.3
4	e	1483	LYS	2.3
1	A	403	LEU	2.3
6	h	1499	ARG	2.3
7	q	1421	LYS	2.3
8	Z	134	LEU	2.3
2	b	1175	HIS	2.3
3	d	1072	THR	2.3
5	g	1071	GLN	2.3
7	Q	78	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
2	b	1142	LEU	2.3
6	h	1062	GLY	2.3
8	Z	141	LYS	2.3
1	a	1448	ILE	2.3
6	H	456	ASP	2.3
7	Q	394	ASP	2.3
4	e	1426	GLU	2.3
6	H	8	LEU	2.3
3	D	500	LYS	2.3
1	A	356	ILE	2.3
2	B	375	LEU	2.3
8	Z	349	LEU	2.3
2	B	414	GLU	2.3
8	Z	418	MET	2.3
2	b	1050	LYS	2.3
5	g	1517	LEU	2.2
1	A	353	GLN	2.2
5	G	162	THR	2.2
6	H	318	ASP	2.2
2	b	1189	ARG	2.2
6	H	136	ILE	2.2
7	Q	439	LYS	2.2
8	z	1396	ARG	2.2
2	B	428	THR	2.2
7	Q	472	GLN	2.2
7	q	1444	ALA	2.2
4	E	406	LEU	2.2
5	G	487	LEU	2.2
7	Q	337	ASN	2.2
8	Z	159	LYS	2.2
2	B	317	PHE	2.2
3	d	1462	GLU	2.2
6	h	1009	LEU	2.2
7	q	1166	THR	2.2
8	Z	447	ILE	2.2
8	z	1176	ILE	2.2
8	z	1358	GLU	2.2
2	B	522	LYS	2.2
3	D	498	VAL	2.2
8	Z	47	LEU	2.2
8	z	1330	GLY	2.2
1	a	1404	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
3	d	1182	TYR	2.2
4	e	1464	GLU	2.2
6	H	319	LEU	2.2
8	Z	445	LEU	2.2
1	A	499	LYS	2.2
2	B	99	THR	2.2
5	G	392	GLN	2.2
2	B	340	LEU	2.2
3	d	1408	ILE	2.2
6	h	1082	ILE	2.2
8	z	1156	LEU	2.2
3	D	304	GLN	2.2
1	a	1117	VAL	2.2
4	e	1418	VAL	2.2
7	Q	356	GLY	2.2
8	Z	400	ASN	2.2
2	B	87	MET	2.2
5	G	67	LEU	2.2
6	H	226	GLU	2.2
6	h	1066	LEU	2.2
7	Q	86	ILE	2.2
1	a	1422	TYR	2.2
1	a	1124	ALA	2.2
2	b	1074	ILE	2.2
2	b	1080	ALA	2.2
3	D	411	ALA	2.2
4	e	1474	MET	2.2
5	g	1095	THR	2.2
4	E	477	VAL	2.2
7	q	1424	THR	2.2
4	E	67	ASP	2.2
5	G	481	ASN	2.2
5	g	1091	VAL	2.2
5	g	1510	VAL	2.2
6	h	1371	THR	2.2
1	a	1195	ILE	2.2
8	Z	404	ASP	2.2
2	b	1019	GLU	2.2
4	e	1094	LEU	2.2
1	a	1112	ILE	2.2
6	H	29	CYS	2.2
7	q	1382	ASP	2.2

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Mol	Chain	Res	Type	RSRZ
8	Z	178	ALA	2.2
8	Z	520	GLU	2.2
8	z	1294	GLN	2.2
3	D	314	ASP	2.2
7	q	1094	GLU	2.2
6	H	237	ILE	2.2
5	g	1070	ILE	2.2
3	d	1155	SER	2.2
5	g	1444	LEU	2.2
8	z	1315	ARG	2.2
1	a	1154	THR	2.2
2	B	246	THR	2.2
3	d	1028	GLN	2.2
4	E	230	VAL	2.2
8	Z	511	ILE	2.2
4	e	1465	ASN	2.2
6	h	1522	ASN	2.2
4	e	1403	HIS	2.2
7	Q	420	ALA	2.2
7	q	1208	LEU	2.2
5	G	482	GLY	2.2
5	g	1156	ILE	2.2
5	G	18	SER	2.2
5	G	43	PRO	2.2
5	G	200	ARG	2.2
4	E	91	MET	2.2
5	G	215	LEU	2.2
7	Q	107	PHE	2.1
8	Z	34	LEU	2.1
7	Q	351	TYR	2.1
7	q	1139	ALA	2.1
3	D	179	VAL	2.1
8	Z	60	GLY	2.1
8	z	1334	ASN	2.1
3	d	1185	LEU	2.1
6	H	227	MET	2.1
3	d	1411	ALA	2.1
2	b	1377	GLY	2.1
8	z	1030	LEU	2.1
1	a	1426	TYR	2.1
1	a	1430	MET	2.1
6	H	184	MET	2.1

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Mol	Chain	Res	Type	RSRZ
2	B	100	THR	2.1
1	a	1052	VAL	2.1
3	d	1401	ILE	2.1
5	g	1098	VAL	2.1
3	d	1505	ASN	2.1
2	B	46	LYS	2.1
2	B	419	HIS	2.1
2	b	1029	PHE	2.1
4	E	506	VAL	2.1
7	Q	438	ILE	2.1
8	Z	317	LYS	2.1
8	z	1410	GLY	2.1
8	z	1204	THR	2.1
3	d	1448	GLY	2.1
4	e	1467	GLY	2.1
5	G	93	ASP	2.1
5	g	1393	ASP	2.1
8	z	1480	ASP	2.1
5	g	1476	GLU	2.1
8	z	1408	VAL	2.1
2	b	1419	HIS	2.1
7	q	1098	GLY	2.1
7	Q	401	VAL	2.1
8	Z	326	LEU	2.1
2	B	71	LEU	2.1
2	b	1022	GLU	2.1
5	G	354	LYS	2.1
3	d	1440	THR	2.1
5	G	151	THR	2.1
5	G	284	GLN	2.1
3	d	1498	VAL	2.1
5	g	1194	ASP	2.1
6	H	175	PHE	2.1
6	H	288	VAL	2.1
8	z	1327	ALA	2.1
2	B	388	ARG	2.1
5	g	1123	ILE	2.1
5	g	1397	VAL	2.1
6	h	1133	VAL	2.1
6	h	1446	PRO	2.1
6	h	1477	VAL	2.1
2	B	422	THR	2.1

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Mol	Chain	Res	Type	RSRZ
7	q	1102	ASN	2.1
8	z	1348	GLY	2.1
8	z	1494	ILE	2.1
6	h	1199	LYS	2.1
3	D	69	GLY	2.1
7	Q	467	LEU	2.1
2	B	39	VAL	2.1
8	Z	204	THR	2.1
2	b	1101	SER	2.1
3	D	394	ARG	2.1
1	A	306	MET	2.1
8	z	1391	ILE	2.1
1	a	1063	LYS	2.1
1	a	1202	GLY	2.1
5	G	48	LYS	2.1
8	Z	273	LYS	2.1
8	z	1345	GLY	2.1
2	B	444	ARG	2.1
5	g	1096	THR	2.1
3	d	1131	ILE	2.1
8	Z	307	LYS	2.1
1	A	172	VAL	2.1
3	d	1104	GLU	2.1
8	Z	195	GLU	2.1
1	A	237	LEU	2.1
3	d	1458	ALA	2.1
4	e	1394	ILE	2.1
6	h	1398	ARG	2.1
7	Q	295	GLY	2.1
6	H	76	ALA	2.1
5	G	359	TYR	2.1
6	h	1185	MET	2.1
1	A	68	GLU	2.1
2	b	1416	LEU	2.1
3	D	120	LEU	2.1
4	e	1101	GLU	2.1
8	Z	142	GLU	2.1
1	a	1437	ALA	2.1
7	q	1442	ALA	2.1
7	q	1461	ASN	2.1
3	d	1454	ILE	2.1
4	E	63	ASP	2.1

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Mol	Chain	Res	Type	RSRZ
1	a	1009	GLY	2.1
4	E	516	GLN	2.1
6	H	404	SER	2.1
1	a	1128	ALA	2.1
8	z	1393	ASP	2.1
3	D	315	LEU	2.1
3	d	1176	SER	2.1
6	h	1084	LYS	2.1
2	B	408	TYR	2.0
4	e	1456	GLU	2.1
7	Q	443	GLU	2.1
7	q	1475	ASN	2.1
1	A	216	LEU	2.0
6	H	385	THR	2.0
7	q	1179	LEU	2.0
2	B	74	ILE	2.0
6	H	212	ALA	2.0
6	h	1136	ILE	2.0
7	Q	488	ALA	2.0
6	H	185	MET	2.0
1	A	46	VAL	2.0
5	G	242	ASP	2.0
3	D	64	ILE	2.0
5	g	1076	ALA	2.0
5	g	1141	SER	2.0
7	q	1057	ILE	2.0
1	A	128	ALA	2.0
1	a	1179	ILE	2.0
4	E	301	ILE	2.0
8	z	1168	LEU	2.0
1	a	1502	GLY	2.0
4	E	297	ALA	2.0
5	g	1129	ALA	2.0
6	H	182	ALA	2.0
6	H	469	ALA	2.0
7	Q	69	ALA	2.0
7	q	1043	THR	2.0
7	q	1209	GLY	2.0
7	q	1441	PHE	2.0
4	e	1060	MET	2.0
5	g	1403	LEU	2.0
1	A	376	ILE	2.0

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Mol	Chain	Res	Type	RSRZ
4	E	229	ILE	2.0
7	Q	475	ASN	2.0
1	a	1148	LEU	2.0
2	b	1077	ASP	2.0
8	z	1448	PRO	2.0
7	Q	389	GLU	2.0
1	A	346	GLY	2.0
8	z	1157	ARG	2.0
3	D	514	PRO	2.0
6	h	1045	MET	2.0
6	h	1523	PRO	2.0
7	Q	244	CYS	2.0
1	a	1119	SER	2.0
1	a	1396	LEU	2.0
2	B	281	ARG	2.0
5	G	175	ILE	2.0
2	b	1386	ALA	2.0
6	H	374	LEU	2.0
8	z	1178	ALA	2.0
3	d	1540	ASN	2.0
1	a	1496	ARG	2.0
4	E	94	LEU	2.0
6	H	299	ALA	2.0
7	Q	159	GLU	2.0
6	H	423	TYR	2.0
7	q	1014	MET	2.0
1	a	1517	ALA	2.0
2	B	461	LEU	2.0
3	d	1430	ALA	2.0
7	q	1105	LEU	2.0
4	e	1513	LYS	2.0
3	D	178	VAL	2.0
8	z	1466	VAL	2.0

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands

There are no ligands in this entry.

6.5 Other polymers

There are no such residues in this entry.