

1 **Short title: Function and structure of the ankyrin of AKT1**

2  
3 *\*Author for Contact details*

4 **Armando Albert** Instituto de Química Física "Rocasolano", Consejo Superior de  
5 Investigaciones Científicas, Serrano 119, E-28006 Madrid, Spain Tel. +345619400

6 **Jose M. Pardo** Instituto de Bioquímica Vegetal y Fotosíntesis, CSIC-Universidad de  
7 Sevilla, Américo Vespucio 49, E-41092 Sevilla, Spain

8  
9 **Title: Recognition and activation of the plant AKT1 potassium channel by the**  
10 **kinase CIPK23**

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12 **Author names and affiliations:** María José Sánchez-Barrena<sup>1</sup>, Antonio Chaves-  
13 Sanjuan<sup>1</sup>, Natalia Raddatz<sup>2</sup>, Imelda Mendoza<sup>2</sup>, Álvaro Cortés<sup>3</sup>, Federico Gago<sup>3</sup>, Juana  
14 María González-Rubio<sup>1</sup>, Juan Luis Benavente<sup>1</sup>, Francisco J. Quintero<sup>2</sup>, José M. Pardo<sup>2\*</sup>  
15 and Armando Albert<sup>1\*</sup>

16  
17 <sup>1</sup>*Departamento de Cristalografía y Biología Estructural, Instituto de Química Física*  
18 *"Rocasolano", Consejo Superior de Investigaciones Científicas, Serrano 119, E-28006*  
19 *Madrid, Spain*

20  
21 <sup>2</sup>*Instituto de Bioquímica Vegetal y Fotosíntesis, CSIC-Universidad de Sevilla, Américo*  
22 *Vespucio 49, E-41092 Sevilla, Spain*

23  
24 <sup>3</sup>*Área de Farmacología, Departamento de Ciencias Biomédicas, Unidad Asociada al*  
25 *IQM-CSIC, Universidad de Alcalá, E-28805 Alcalá de Henares, Madrid, Spain.*

26  
27 **One sentence summary:** The regulatory kinase CIPK23 is specifically assembled to  
28 the ankyrin domain of the AKT1 channel to fulfill cell requirements for K<sup>+</sup>.

29  
30 **Authors Contributions:** AC-S, M-JS-B, J-MG-R, J-LB, A-C, NR, IM performed  
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40  
41 **Email address for Author for Contact:** [xalbert@iqfr.csic.es](mailto:xalbert@iqfr.csic.es) and [jose.pardo@csic.es](mailto:jose.pardo@csic.es)

42

43 **Abstract**

44

45 Plant growth largely depends on the maintenance of the adequate intracellular levels of  
46 potassium (K<sup>+</sup>). The families of 10 Calcineurin B-like (CBL) calcium sensors and 26  
47 CBL-Interacting Protein Kinases (CIPK) of Arabidopsis decode the calcium signals  
48 elicited by environmental inputs to regulate different ion channels and transporters  
49 involved in the control of K<sup>+</sup> fluxes by phosphorylation-dependent and independent  
50 events. However, the detailed molecular mechanisms governing target specificity  
51 require investigation. Here, we show that the physical interaction between CIPK23 and  
52 the non-canonical ankyrin domain in the cytosolic side of the inward-rectifier K<sup>+</sup> channel  
53 AKT1 regulates kinase docking and channel activation. Point mutations on this domain  
54 alter specifically the binding to CIPK23, enhancing or impairing the ability of CIPK23 to  
55 regulate channel activity. Our data demonstrate the relevance of this protein-protein  
56 interaction that contributes to the formation of a complex between CIPK23/CBL1 and  
57 AKT1 in the membrane for the proper regulation of K<sup>+</sup> transport.

58

59 **Keywords:** Abiotic Stress; Plant Proteins; Potassium Channels; Protein-Serine-  
60 Threonine Kinases; Structure of Protein-Protein Complexes

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62

## 63 **Introduction**

64

65 Potassium ( $K^+$ ) serves important roles in plants for the control of cellular pH, regulation  
66 of membrane electric potentials, cell turgor, and as co-factor in essential metabolic  
67 processes including protein synthesis (Leigh and Wyn Jones, 1984; Rodriguez-  
68 Navarro, 2000; Pardo, 2010; Cherel and Gaillard, 2019; Ragel et al., 2019). Several ion  
69 transporters mediating  $K^+$  fluxes in plants have been characterized, and the knowledge  
70 of their activity in response to environmental stresses and the molecular mechanisms  
71 underlying their regulation has been central for understanding the adaptation to  $K^+$   
72 starvation (Cherel et al., 2014; Ragel et al., 2015; Lefoulon et al., 2016; Behera et al.,  
73 2017), high salinity (Aleman et al., 2014), drought (Maierhofer et al., 2014), and to  
74 pathogen attack or herbivore mediated wounding (Forster et al., 2019)

75

76 The family of plasma membrane voltage-gated (VG)  $K^+$  channels is crucial for  $K^+$   
77 uptake, release and distribution at the cellular and whole plant levels. In Arabidopsis,  
78 this channel family comprises nine members that display different roles in  $K^+$  nutrition  
79 and cellular physiology (Pilot et al., 2003). For instance, the Guard cell Outward-  
80 Rectifying  $K^+$  (GORK) channel is crucial for mediating  $K^+$  efflux from guard cells,  
81 thereby reducing cell turgor and inducing stomatal closure (Ache et al., 2000; Hosy et  
82 al., 2003; Hedrich and Geiger, 2017), whereas the inward-rectifier  $K^+$  channel AKT1 is  
83 highly expressed in root epidermal cells and is a major contributor to  $K^+$  uptake at  
84 intermediate to high  $K^+$  concentrations (Lagarde et al., 1996; Hirsch et al., 1998; Xu et  
85 al., 2006; Wang et al., 2010; Aleman et al., 2011; Jegla et al., 2018). Functional  
86 GORK1 and AKT1 are tetramers whose subunits display a N-terminal transmembrane  
87 domain that is homologous to the animal VG *Shaker* channels, and a large cytoplasmic  
88 domain that consists of a cyclic nucleotide binding homologous domain (CNBHD),  
89 followed by an ankyrin repeat (ANK) domain and a characteristic family-conserved  
90 (KHA) motif at the C-terminal end (Daram et al., 1997; Pilot et al., 2003; Jegla et al.,  
91 2018). While the transmembrane domain harbors the ion transport activity, the  
92 cytosolic moiety is involved in channel regulation. Available data suggest a common  
93 regulatory mechanism for GORK and AKT1 in which a protein complex between a  
94 Calcineurin B-like (CBL) and a CBL-Interacting Protein Kinase (CIPK) (Shi et al., 1999;  
95 Albrecht et al., 2001) decodes a specific calcium signature to phosphorylate and  
96 activate  $K^+$  transport. While the CIPK5/CBL1 pair is responsible for GORK1 activation  
97 in response to wounding (Forster et al., 2019), CIPK23/CBL1 or CIPK23/CBL9 pairs  
98 activate AKT1 upon a signal elicited by  $K^+$  starvation (Xu et al., 2006). Depending on  
99 the  $K^+$  status, the protein phosphatases AIP1 and ABI2 would revert this process and

100 dephosphorylate AKT1 and GORK1, respectively (Lee et al., 2007; Lan et al., 2011;  
101 Lefoulon et al., 2016).

102

103 To achieve the necessary specificity of protein-protein interactions, the CIPK/CBL  
104 modules and their targets have co-evolved discrete scaffold domains or small  
105 sequence motifs that mediate and control the interactions (Lan et al., 2011; Sanchez-  
106 Barrena et al., 2013). For instance, the interaction between CIPKs and CBLs occurs  
107 through a conserved 21 amino acid NAF motif, which is self-inhibitory to the kinase  
108 activity (Albrecht et al., 2001; Guo et al., 2001; Sanchez-Barrena et al., 2007). CBL  
109 binding releases the NAF domain from the substrate binding site of CIPKs making it  
110 accessible to phosphorylate their substrate channels (Chaves-Sanjuan et al., 2014).  
111 CIPKs also harbor a Protein Phosphatase Interaction (PPI) motif that constitutes a  
112 structural domain mediating the interaction with PP2C protein phosphatases (Gong et  
113 al., 2004; Luan, 2009) (Sanchez-Barrena et al., 2007). Full activation of K<sup>+</sup> transport by  
114 AKT1 requires the physical interaction with the CIPK23/CBL1-9 module (Xu et al.,  
115 2006), and phosphorylation of CBL1 by CIPK23 further stabilizes the complex  
116 (Hashimoto et al., 2012). Moreover, CBL1 and CBL9 have a myristoylation site in the  
117 N-terminus that recruits these complexes to the cell membrane in the vicinity of AKT1  
118 (Batistic et al., 2010). In addition, the physical interaction between the CIPK23/CBL1-9  
119 complex and AKT1 is required to achieve the necessary target specificity and  
120 regulation of the system (Xu et al., 2006). We have reported structural and biochemical  
121 studies demonstrating that CIPK23 is intrinsically inactive (Chaves-Sanjuan et al.,  
122 2014). Presumably, the co-localization of the kinase and its substrate channel may  
123 favor kinase activation, with the subsequent phosphorylation and activation of the  
124 channel. Together, these data indicate that AKT1, and likely GORK also, are held  
125 together with their regulatory proteins into a large macromolecular complex with  
126 variable composition and stoichiometry, which is necessary to achieve specificity of the  
127 signal and to develop the physiological role of these channels.

128

129 The interaction between CIPK23 and AKT1 is known to involve the ankyrin domain of  
130 AKT1 and the kinase domain of CIPK23, and it has been suggested that this  
131 interaction could be a factor to determine which specific CIPKs attach to the AKT1  
132 channel (Lee et al., 2007). ANK motifs are well known protein-protein interaction  
133 modules that usually play a passive regulatory role in the formation of protein  
134 complexes (Sedgwick and Smerdon, 1999). However, the discovery of  
135 phosphomimetic mutations in or at the vicinity of the ANK domain of GORK that  
136 increase the activity of the channel (Lefoulon et al., 2016) suggests that the ANK

137 domain of plant VG channels may display a regulatory role in the activity of the  
138 channel. To gain insights into the function of the ANK domain of AKT1, and more  
139 specifically on the regulation of AKT1 by CIPKs, we carried out biochemical and  
140 structural studies, including the X-ray structure of the ANK domain of AKT1 and  
141 measuring the channel activity resulting from structure-guided mutations altering the  
142 ANK domain. Our results show that the ANK domain of AKT1 functions as a platform  
143 for the docking of the catalytic domain of CIPK23, and that this interaction contributes  
144 to the activation of the channel by promoting the formation of a productive CIPK-AKT1  
145 complex.

146  
147  
148

149 **Results**

150  
151 **The structure of the ANK domain of AKT1**

152 The ankyrin (ANK) domain typically comprises several tandemly repeated ANK motifs  
153 consisting of two  $\alpha$ -helices separated by loops that together form a slightly curved  
154 solenoid structure. To define the molecular architecture and the surface properties of  
155 the ANK domain of AKT1, we determined the X-ray structure of the AKT1 fragment  
156 comprising residues 516 to 706 at 2.0 Å resolution (Fig. 1, Supplemental Table 1 and  
157 the Methods section for further details). The ANK domain fragment folds as a single  
158 domain formed by six ANK-unit repeats. Of them, the ANK repeats 1, 2, 4 and 5 are  
159 canonical and display the characteristic  $\alpha$ -helix/ $\alpha$ -helix/ $\beta$ -hairpin structure while the  
160 ANK repeats 3 and 6 lack the  $\beta$ -hairpin. This feature is common to other known C-  
161 terminal capping ANK repeats (Mosavi et al., 2002) but was not expected from the  
162 amino acid sequence analysis of ANK repeat 3 (Daram et al., 1997). Those amino  
163 acids predicted to form the  $\beta$ -hairpin of ANK repeat 3 constitute an extra turn at the N-  
164 terminal helix of the ANK repeat 4. This arrangement renders an elongated and curved  
165 structure formed by two layers of six antiparallel  $\alpha$ -helices and a sheet formed by four  
166 (instead of five)  $\beta$ -hairpins projected perpendicularly from the concave side. The  
167 association of canonical ANK repeats produce a characteristic and conserved domain  
168 curvature that leaves the concave side available for binding partners (Michaely et al.,  
169 2002). In the ANK domain of AKT1, this structure is distorted and a more concave  
170 surface is observed due to the lack of the  $\beta$ -hairpin at ANK repeat 3 (Supplemental Fig.  
171 1).

172  
173 With the exception of the mentioned singularities, all the repeats show homology with  
174 the ANK-repeat consensus sequence. This conservation includes mainly those  
175 residues involved in the boundaries of the secondary structural elements, in the core of  
176 the individual repeats and in the repeat-repeat stabilization (Fig. 1C) (Michaely et al.,  
177 2002; Mosavi et al., 2002). On the contrary, those residues known to be variable in  
178 ANK repeats are solvent-accessible, among them those facing inwards the concave  
179 side of the domain involved in the interaction with the binding partners (residues at  
180 position 1 to 5 in Fig. 1C) (Sedgwick and Smerdon, 1999; Mosavi et al., 2002). These  
181 amino acids define the nature of the protein-protein interaction surface and are  
182 therefore responsible for the specificity of the interaction (Tamaskovic et al., 2012).  
183 Interestingly, the basic residues Arg528 and Lys561 at position 1 of ANK repeats 1 and  
184 2 oppose the acidic residues Glu594 and Glu659 at the equivalent position of ANK  
185 repeats 3 and 5. This amino acid distribution yields a highly asymmetric charge

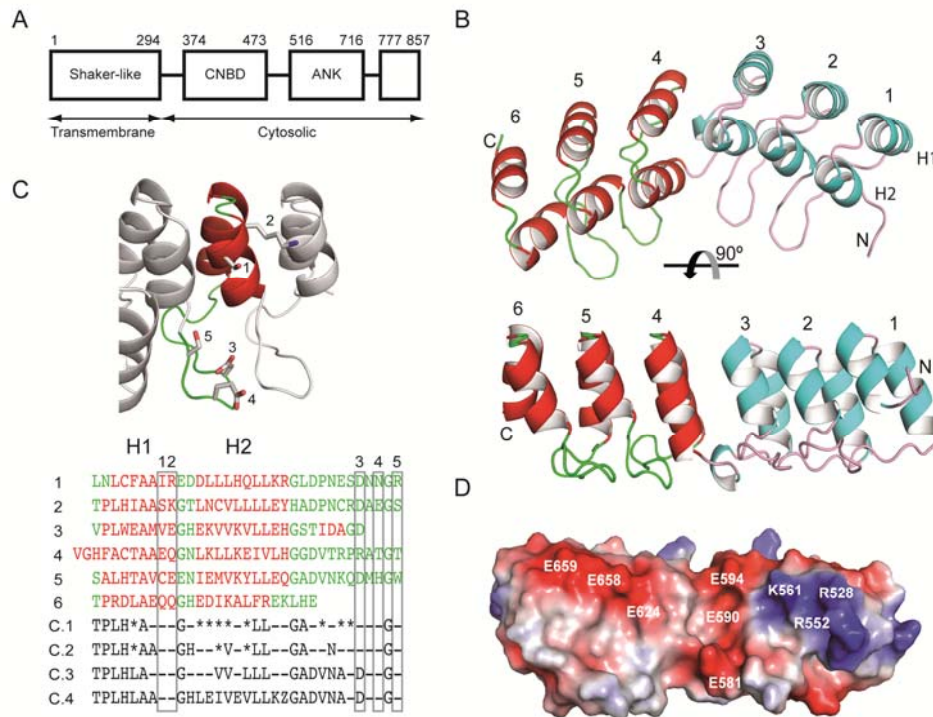


Figure 1. The structure of the ANK domain of AKT1. (A) Functional and structural domains of AKT1. (B) Two views of a ribbon representation of the crystal structure of the ANK domain. The ANK repeats are numbered. H1 and H2 helices stand for those helices facing inwards or outwards of the concave side of the structure respectively (C) (Up) A detailed view of the structure of the ANK repeat 2. The variable side chains are highlighted in stick mode (Down) Sequence alignment of the six ANK repeats of AKT1 together with the ANK consensus sequences according to different authors C1 (Mosavi et al., 2002), C2 (Michaely et al., 2002), C3 (Sedgwick and Smerdon, 1999) and C4 (Kohl et al., 2003). (D) Molecular surface representation showing the charge distribution on the ANK domain. The red and blue colors correspond to negative and positive charges respectively. The view is taken as in the lower part of (B)

186 distribution in the surface of the ANK domain that is reinforced by Arg552 versus  
 187 Asp581, Glu624 and Glu690, in stark contrast with the symmetric architecture of the  
 188 tertiary structure of the domain (Fig. 1D).

189

190 We reasoned that these structural peculiarities could provide the basis for the ANK  
 191 function in the protein-interaction specificity of AKT1. To analyze this issue, we aligned  
 192 the protein sequences of the ANK domains of seven *Arabidopsis* K<sup>+</sup> channels and  
 193 compared the result to the alignment of protein sequences annotated as AKT1-like  
 194 channels from other plant species (Supplemental Fig. 2). The comparison showed that  
 195 the overall architecture of the ANK domain should be preserved in all the channels, as  
 196 there are no residue insertions or gap regions with the exception of the last ANK repeat  
 197 of AtAKT2. However, the alignment also shows that while the nature of the key  
 198 residues configuring the surface properties of the concave side of the AKT1 domain  
 199 are conserved among different plant species, they diverge between the different

200 *Arabidopsis* K<sup>+</sup> channels. This suggests that the ANK domain of individual channels is  
201 likely to play an active role providing specificity to the interaction with protein partners  
202 involved in their regulation.

203

204 The crystal packing of the ANK domain does not reveal any interaction suggestive of  
205 self-association (Krissinel and Henrick, 2007). To examine the oligomeric state of the  
206 ANK domain in solution, we determined the ANK peptide size in solution by size  
207 exclusion chromatography. Results showed the monomeric nature of the ANK domain  
208 (Supplemental Fig. 3A), and suggested that the ANK domain of AKT1 is fully available  
209 to interact with CIPK23.

210

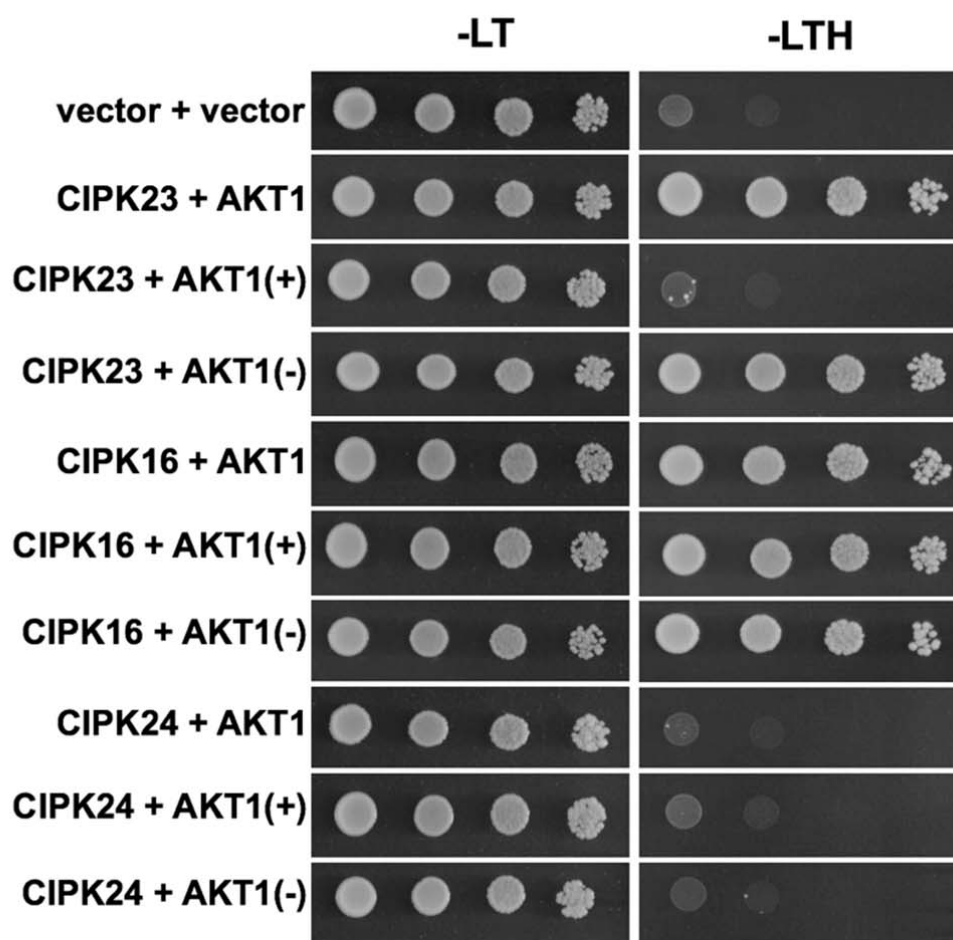
### 211 **The properties of the complex between the ANK domain of AKT1 and the** 212 **catalytic domain of CIPKs**

213 The structure of the ANK domain of AKT1 provides the basis to investigate the nature  
214 of CIPK23-AKT1 association. We performed yeast two-hybrid (Y2H) assays using the  
215 full-length CIPK23 protein, the complete cytosolic domain of AKT1 (AKT1<sub>cyt</sub>; residues  
216 296-857) and two mutated versions changing the polarity of the concave side of the  
217 ANK domain, namely (AKT1(-) (Arg528Glu and Lys561Glu double mutant), and  
218 AKT1(+)) (Glu624Lys, Glu658Lys and Glu659Lys triple mutant) (Fig. 2). The results  
219 confirmed that CIPK23 interacts with AKT1<sub>cyt</sub> (Lee et al., 2007). Interestingly, the  
220 replacement of the basic residues at the concave side of the ANK domain with acidic  
221 residues in AKT1(-) did not affect the interaction of the AKT1 fragment with the kinase  
222 in the Y2H assay, whereas the replacement of the acidic residues with basic residues  
223 in AKT1(+) disrupted the interaction. These findings corroborate the involvement of the  
224 concave side of the ANK domain in the interaction with CIPK23 and demonstrate the  
225 electrostatic nature of the interaction.

226

227 To investigate whether the properties of the ANK domain provides specificity for  
228 CIPK23 versus other CIPKs, we repeated the Y2H assays using CIPK16 and CIPK24.  
229 CIPK16 has been shown to interact with the C-terminal tail of AKT1 and also to  
230 activate AKT1 transport in a CBL1-dependent manner, although the induced K<sup>+</sup> current  
231 was much lower than the one elicited by CIPK23 co-expression (Lee et al., 2007) (Fig.  
232 2). By contrast, CIPK24 did not interact with AKT1 (Li et al 2006). Our data confirm  
233 these previous results and show that the mutations on the concave side of the ANK  
234 domain affecting formation of the AKT1/CIPK23 complex do not alter significantly the  
235 interaction with CIPK16, thus proving that the structure of the ANK domain in AKT1  
236 provides specificity to the CIPK23-AKT1 interaction.





**Figure 2.** Electrostatic interactions are critical for CIPK23/AKT1 complex stability. Yeast two-hybrid assay of full-length CIPK23, CIPK16 or CIPK24 and the wild-type AKT1 C-terminal domain (residues 296 to 857) or mutant versions AKT1(+) (Glu624Lys, Glu658Lys and Glu659Lys), and AKT1(-) (Arg528Glu and Lys561Glu). Five microliters of serial decimal dilutions of yeast cultures were spotted onto SD plates minus leucine, tryptophan (-LT) or minus leucine, tryptophan, histidine (-LTH). Growth on SD -LTH medium indicates protein–protein interaction

237 Next, we determined the dissociation constant ( $K_d$ ) of the complex between the ANK  
 238 domain of AKT1 and its mutated versions with the catalytic domain of CIPK23. For the  
 239 binding assay, the purified and uncleaved versions AKT1(-) and AKT1(+) of the His-  
 240 tagged ANK domain were immobilized on a nickel-chelated biosensor tip, and the  
 241 binding of the constitutively activated form of the CIPK23 catalytic domain (residues 1  
 242 to 331, harboring phosphomimetic mutation Thr190Asp in the activation loop;

243 CIPK23HA) (Chaves-Sanjuan et al., 2014) was recorded by biolayer interferometry. In  
244 this technique, as CIPK23HA binds to the immobilized ANK domain, incident light  
245 directed through the biosensor shifts and creates a quantifiable interference pattern. A  
246 quantitative equilibrium constant,  $K_d$ , can be measured by analyzing this response at  
247 different ligand concentrations (Sultana and Lee, 2015). Our data show that the  $K_d$  of  
248 the wild type ANK domain and AKT1(-) with CIPK23HA are  $0.98 \pm 0.05 \mu\text{M}$  and  $0.68 \pm$   
249  $0.05 \mu\text{M}$  respectively (Supplemental Fig. 3B). These values are consistent with those  
250 reported for other physiologically relevant but weak non-obligate protein-protein  
251 interactions involved in signal transduction processes (Nooren and Thornton, 2003;  
252 Keskin et al., 2008; Perkins et al., 2010). These results signify that mutations leading to  
253 AKT1(-) fragment improve the interaction with CIPK23. Conversely, as observed in the  
254 Y2H assays, we were not able to detect AKT1(+) binding to CIPK23HA by biolayer  
255 interferometry (Supplemental Fig. 3B).

256

### 257 **Strengthening the interaction between CIPK23 and the ANK domain of AKT1** 258 **contributes to channel activation**

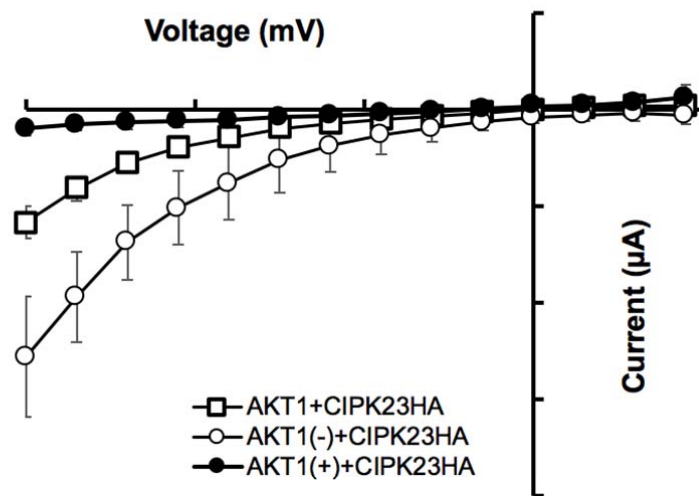
259 Previous studies have shown that the physical interaction between AKT1 and CIPK23  
260 is absolutely required for channel activation (Xu et al., 2006; Lee et al., 2007), and that  
261 the ANK domain of AKT1 is central for this interaction (Lee et al., 2007). To investigate  
262 whether the ANK domain mediates the recruitment of CIPK23 prior to channel  
263 phosphorylation and activation, we co-expressed full-length AKT1 channels harboring  
264 the mutated AKT1(-) and AKT(+) domains, together with the catalytically activated  
265 version of CIPK23, CIPK23HA, in *Xenopus* oocytes and measured AKT1 activity (Fig.  
266 3). CIPK23HA was able to activate wild-type AKT1 to the same level as previously  
267 shown (Lee et al 2007). Notably, while AKT1(-) variant increased channel activity  
268 above that of the wild-type AKT1, whereas the AKT1(+) mutation almost abolished it.  
269 These results correlate well with the Y2H data and the calculated  $K_d$  values for the  
270 ANK domain and CIPK23 interaction and demonstrate that (i) the interaction of CIPK23  
271 with the ANK domain of AKT1 not only facilitates but is essential for the CIPK23  
272 mediated activation of the channel, and that (ii) the strength of this interaction  
273 correlates with channel activation *in vivo*.

274

### 275 **The ANK domain of AKT1 is not essential for $\text{K}^+$ transport**

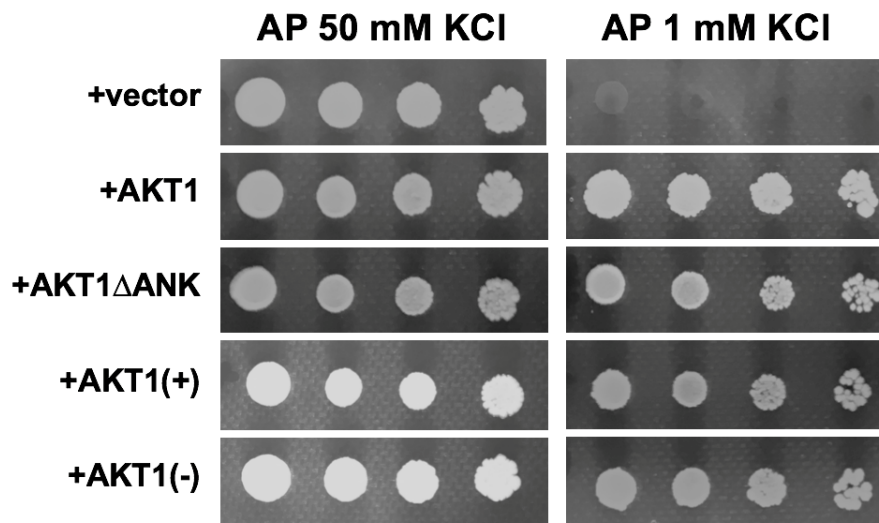
276

277 The presence of ANK domains is a feature common to several tetrameric cation  
278 channels with known structure, among them the non-selective cation channels TRPA1  
279 (Paulsen et al., 2015) and TRPV1 (Gao et al., 2016), the voltage-gated potassium (Kv)



**Figure 3.** The strength of the binding of the catalytic domain of activated CIPK23 (CIPK23HA) to the ANK domain of AKT1 influences channel activity. Current–voltage relationships recorded from oocytes expressing wild type-AKT1+CIPK23HA (n=5), AKT1(+)+CIPK23HA (n=4), and AKT1(-)+CIPK23HA (n=4). The bath solution contained 100 mM KCl. Holding potential was -20 mV. Clamp potentials ranged from +45 to -150 mV with 15 mV decrements during 150 ms, separated by intervals of 2 seconds. Average currents from water-injected oocytes at each voltage have been subtracted. Data are shown as mean±SD.

280 channels, and the lipid-gated cation channel TRPC3 (Tang et al., 2018). Despite this  
 281 structural commonality, the role of the ANK domains in the function and/or the  
 282 regulation of these channels remains to be elucidated. Their high-resolution structures  
 283 showed that these ANK domains are likely essential for channel activity since they  
 284 display intermolecular interactions between them and with other domains of different  
 285 protomers making up the channels, thus contributing to macromolecule stabilization,  
 286 and/or being involved in the transduction of information from the cytosolic domain to  
 287 the transmembrane pore. On the contrary, previously reported Y2H analysis showed  
 288 that while the cytosolic domain of AKT1 is self-assembled into tetramers, the ANK  
 289 domain does not interact with the other domains comprising the protein structure of  
 290 AKT1 (Daram et al., 1997). To determine whether the ANK domain of AKT1 is required  
 291 for K<sup>+</sup> transport, we tested the functionality of full-length AKT1 in a yeast mutant  
 292 defective in K<sup>+</sup> uptake and compared it to that of a mutated AKT1 protein lacking the  
 293 ANK domain. This assay has the advantage that the basal AKT1 transport activity in



**Figure 4.** The ANK domain of AKT1 is not required for K<sup>+</sup> transport and mutations in AKT1(+) or AKT1(-) do not affect channel transport activity. Cells of yeast strain 9.3 ( $\Delta trk1$ ,  $\Delta trk2$ ) were transformed with the empty vector pFL61 (+vector), the wild-type *AKT1* cDNA (+AKT1), the mutant *AKT1* allele lacking the ankyrin repeat coding region (+AKT1 $\Delta$ ANK) or the mutated versions of *AKT1* (+AKT1(+)) and (+AKT1(-)). Transformed yeast cells were grown overnight in Arginine Phosphate (AP) medium with 50 mM KCl. Five microliters of serial decimal dilutions were spotted onto AP plates supplemented with the indicated KCl concentration

294 the absence of CIPK23 is robust enough to support yeast growth at low external K<sup>+</sup>  
 295 concentrations, likely due to large negative membrane potentials in K<sup>+</sup>-starved yeast  
 296 cells. Our results showed that the AKT1 channel lacking the ANK domain was  
 297 functionally expressed in yeast and restored cell growth at low K<sup>+</sup> concentrations  
 298 similarly to the wild-type channel (Fig. 4). Next, we tested the functionality of the  
 299 mutated forms of the channel leading to AKT1(-) and AKT1(+). Both mutated channels  
 300 behaved as the wild type channel, indicating that the mutated proteins were expressed  
 301 and that the change in the polarity of the ANK domain did not affect the transport  
 302 mechanism of the channel (Fig. 4). Together, these results show that the ANK domain  
 303 is not essential for AKT1 function or stability and suggests that it would be mostly  
 304 involved in the recruitment of regulatory proteins, e.g. CIPK23, to the vicinity of the  
 305 channel.  
 306

307 **The structure of the complex between the ANK domain of AKT1 and the catalytic**  
308 **domain of CIPK23**

309

310 Attempts to crystallize the protein complex between the ANK domain of AKT1 and the  
311 CIPK23 kinase were unsuccessful. Instead, we took advantage of the structural  
312 knowledge of the ANK domain of AKT1 and of the catalytic domain of CIPK23  
313 (Chaves-Sanjuan et al., 2014) to define an integrative three-dimensional working  
314 model of this complex. Previous Y2H data (Lee et al., 2007) showed that the helical  
315 lobe of the kinase domain was responsible for the interaction with the ANK domain,  
316 and we have shown earlier that residues at both ends of this lobe cluster together on  
317 the structure of CIPK23 (Chaves-Sanjuan et al., 2014) (Fig. 5A and Supplemental Fig.  
318 S4). This experimental information substantially improved the performance of the  
319 computational work, as it provided an experimental criterion to define the resulting  
320 structure.

321

322 To build *de-novo* the three-dimensional structure of the CIPK23-ANK domain complex,  
323 we first generated a set of models based on the crystal structure of CIPK23 and of the  
324 ANK domain that accounted for the predicted conformational variability of the proteins.  
325 Then, we selected those docking solutions that correctly involved the experimentally  
326 determined residues as participants in the interaction. Finally, we performed molecular  
327 dynamics simulations on the best solution to optimize the geometry of the amino acid  
328 side chains involved in the interaction. The modeled CIPK23-ANK complex displays a  
329 rocking chair shape in which the kinase active site and the regulatory activation-loop of  
330 CIPK23 remain unaltered and solvent accessible upon complex formation. This  
331 indicates that the CIPK23 function would be unaffected upon complex formation and  
332 that a regulatory role for the ANK domain on the kinase activity is not expected.

333

334 The modeled structure indicates that CIPK23 and the ANK domain interact through the  
335 concave side of the ANK domain. The total buried accessible area per protomer is  
336  $1050 \text{ \AA}^2$  and 90% of this occluded area corresponds to polar residues (Wallance et al.  
337 1995). These values are similar to those expected for non-obligate oligomers in  
338 solution (Nooren and Thornton, 2003; Krissinel and Henrick, 2007; Perkins et al.,  
339 2010).

340

341 According to this model, Glu624 and Glu658 are totally buried in the CIPK23/ANK  
342 interface making polar contacts with CIPK23 (Fig. 5B). This agrees with our  
343 biochemical data showing that mutation of both residues to lysine in AKT1(+) abolishes

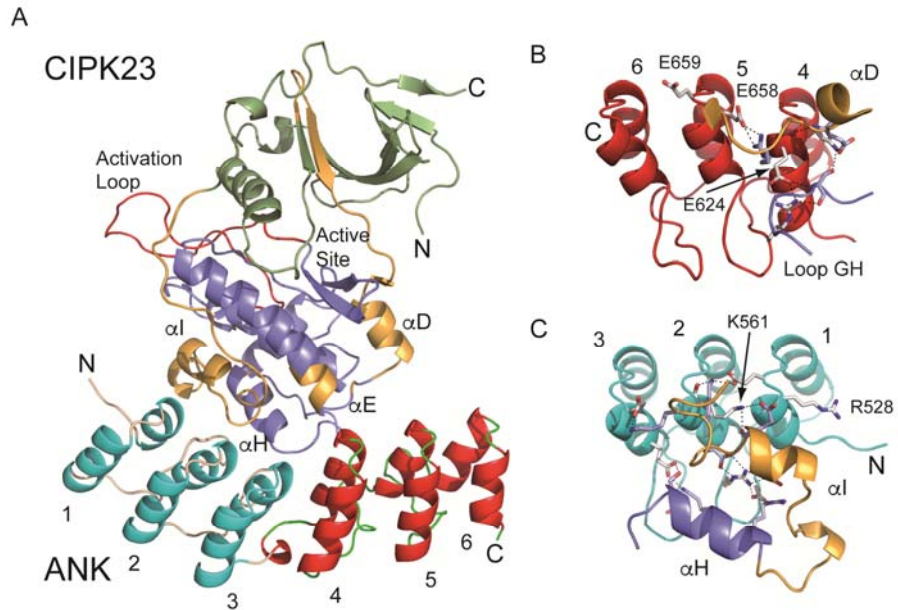


Figure 5. The structure of the complex between the ANK domain of AKT1 and CIPK23. (A) A ribbon representation of the predicted model for the CIPK23 and ANK domain of AKT1. Those residues of CIPK23 experimentally determined to be essential for the interaction with AKT1 are displayed in gold color (Lee et al., 2009) (B) and (C) Ribbon representations of the CIPK23 binding site on the ANK domain. Residues involved in the interaction are displayed in stick mode. Those residues leading to the AKT1(+) and AKT1(-) are labeled.

344 CIPK23/ANK interaction and subsequent activation of AKT1. Conversely, the effect of  
 345 mutations Arg528Glu and Lys561Glu leading to the AKT1(-) variant is more difficult to  
 346 rationale in terms of our model, since Arg528 is not involved in the interaction with  
 347 CIPK23, while Lys561 is hydrogen bonded to the kinase (Fig. 5C).  
 348  
 349



350 **Discussion**  
351

352 The automatic analysis of the AKT1 protein sequence (Kelley et al., 2015) suggests  
353 that the overall structure of the channel is similar to those of the voltage-gated K<sup>+</sup> Eag1  
354 channel (Whicher and MacKinnon, 2016) and the HCN1 hyperpolarization-activated  
355 channel (Lee and MacKinnon, 2017). These structures display a homotetrameric  
356 arrangement of six transmembrane segments divided into the voltage-sensing module  
357 and the pore-forming module. The last transmembrane helix connects to a CNBD  
358 domain through a helical region that couples motions of the CNBD with those of the  
359 channel machinery. Both the helical region and the CNBD display a tetrameric  
360 quaternary structure forming two consecutive layers below the transmembrane moiety  
361 (Fig. 6). Although there are no high-resolution structures of homologous channels with  
362 a C-terminal end containing ANK and KHA domains, it has been shown that the KHA  
363 domain is involved in the maintenance of the tetrameric structure of the cytosolic part  
364 of the channel through interactions with the CNBHD from a neighboring subunit, while  
365 the ANK domain neither interacts with other domains of the channel nor self-associates  
366 (Daram et al., 1997) (Supplemental Fig. S3). Indeed, we have shown that deletion of  
367 the ANK domain did not suppress channel activity *in vivo* (Fig. 4). Together, these data  
368 indicate that the ANK domain would be fully available to interact with CIPK23 and that  
369 this interaction would not affect the tetrameric globular structure made up by the  
370 transmembrane domain, the CNBHD and the KHA domains. This provides a model in  
371 which the ANK domain functions as a structural platform for the transitory docking of  
372 the CIPK23 kinase domain to the vicinity of the channel. According to earlier  
373 biochemical evidence (Lee et al., 2007) and our structural data (Fig. 5A), this  
374 association would not hinder the catalytic activity of CIPK23, but it could enhance it.  
375 We have shown before that the kinase is constitutively inactive (Chaves-Sanjuan et al.,  
376 2014) or displays weak activity in comparison with other kinases of the family  
377 (Hashimoto et al., 2012). Reconstitution of the AKT1-CIPK23 module in *Xenopus*  
378 oocytes showed that the strength of the physical interaction between the ANK domain  
379 of AKT1 and CIPK23 ultimately determined the ability of the kinase to activate the  
380 channel (Fig. 3). Hence, we suggest that the physical interaction with the ANK domain  
381 and the proximity to the channel substrate would promote AKT1 phosphorylation by  
382 increasing locally the enzyme and substrate concentration.

383

384 While CIPK23, CIPK6 and CIPK16 interact with AKT1 (Xu et al., 2006; Lee et al.,  
385 2007), only CIPK15 is responsible for GORK activation (Forster et al., 2019). Our data  
386 suggest that the sequence variability of the residues making up the interaction surface

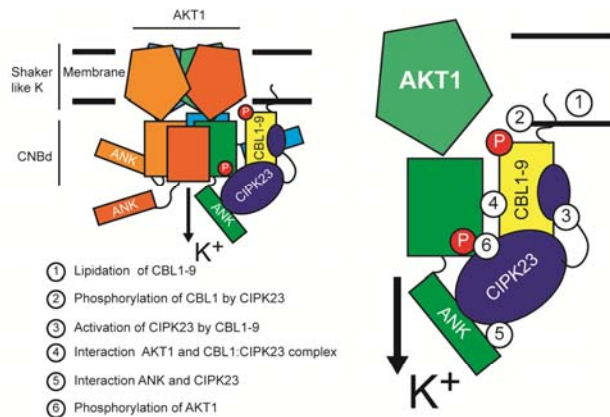


Figure 6. Working model for AKT1 regulation. The effective regulation of AKT1 is achieved when all the interaction partner met nearby AKT1. The reported structural requirements to activate K<sup>+</sup> transport are listed from 1 to 6 in the Fig. 1. 1. Lipidation of CBL1/CBL9 (Batistic et al., 2010); 2. phosphorylation of CBL1 by CIPK23 (Hashimoto et al., 2012); 3. activation of CIPK23 by CBL1/CBL9 (Albrecht et al., 2001); 4. interaction between AKT1 and CIPK23/CBL1-9 complex (Xu et al., 2006; Lee et al., 2007); 5. interaction of ANK and CIPK23 (Lee et al., 2007) and this work; 6. phosphorylation of AKT1(Xu et al., 2006; Hashimoto et al., 2012)

387 of the ANK domain of plant VG channels may provide the basis for such specificity  
 388 (Fig. 2 and 3; Supplemental Fig. 2). The regulation of AKT1, and also GORK, includes  
 389 many different molecular partners, hormones, ions and posttranslational modifications  
 390 that ensure a finely tuned signal output in response to a particular input (Sanchez-  
 391 Barrena et al., 2013; Xia et al., 2014; Edel and Kudla, 2016; Lefoulon et al., 2016;  
 392 Behera et al., 2017; Cherel and Gaillard, 2019; Forster et al., 2019). Hence, the CIPK-  
 393 ANK domain interaction may represent an additional component of a complex and  
 394 multivalent set of interactions required to achieve specificity for channel activation (Fig.  
 395 6).

396  
 397 The joined analysis of our structural and biochemical data shows that the shallow  
 398 nature of the concave side of ANK domain of AKT1 provides an almost flat interface to  
 399 interact with the catalytic domain of CIPK23 (Fig. 1 and 5A). This topology and the  
 400 electrostatic nature of the interface (Fig. 2) suggest that the protein-protein interaction  
 401 would not be restrictive (Krissinel and Henrick, 2007). However, our data show that the  
 402 properties of the CIPK23 binding site at the ANK domain provides specificity for this  
 403 kinase versus other CIPKs (Fig. 2). However, it should be noted that previous  
 404 biochemical data show that the specificity of the interaction between AKT1 and  
 405 different CIPKs may not lay exclusively in the interaction between individual CIPKs and  
 406 AKT1. Instead, the physical interaction between a particular CBL-CIPK complex and  
 407 AKT1 could be the key to selectively activate the target channel (Xu et al., 2006; Lee et  
 408 al., 2007). Phosphorylation of CBLs by their interacting CIPKs is a common event



409 needed for the full competence of the CIPK-CBL module to regulate their target  
410 proteins (Du et al., 2011) (Hashimoto et al., 2012), and could also help to stabilize the  
411 CIPK-CBL complex (Lin et al., 2009; Du et al., 2011). Accordingly, phosphorylation of  
412 CBL1 by CIPK23 is absolutely required for the CBL1-dependent enhancement of  
413 CIPK23 activity toward its substrate and the *in vivo* activation of the AKT1 channel in  
414 oocytes (Hashimoto et al., 2012). However, CBL9 can itself interact with AKT1  
415 independently of CIPK23 (Grefen and Blatt, 2012), although the binding site has not  
416 been identified. Because CIPK23 uses different domains to interact with partners, i.e.  
417 the catalytic kinase domain to bind the ANK domain of AKT1, and the FISL/NAF  
418 domain to bind with CBL1/9, conceivably, AKT1, CIPK23 and CBL1/9 could form a  
419 multiprotein complex via one-to-one interactions, thereby providing enhanced target  
420 specificity to the CIPK-CBL module. However, CBL4 and CBL10, which do not bind  
421 CIPK23, also interacted with AKT1 (Grefen and Blatt, 2012; Ren et al., 2013) and  
422 structural analyses of CIPK-CBL complexes have shown that the FISL/NAF domain of  
423 the bound CIPK occupies the hydrophobic cleft that enables the CBL to bind partners  
424 (Sanchez-Barrena et al., 2007; Akaboshi et al., 2008). This suggests that binding of  
425 CIPK23 and of AKT1 to CBL1/9 could be mutually exclusive. Supporting this view,  
426 CBL10 competed with CIPK23 for binding to AKT1 and negatively modulated AKT1  
427 activity (Ren et al., 2013). In conclusion, how the required specificity is achieved to  
428 ensure non-promiscuous interactions between CIPK23 and the various Arabidopsis  
429 channels containing the ANK domain deserves further research. All together, data  
430 available suggests that the CIPK23-ANK domain interaction, together with other sets of  
431 multiple and simultaneous low-affinity interactions (Fig. 6), could provide a regulation of  
432 K<sup>+</sup> homeostasis that would occur only when the interacting partners meet at the cell  
433 membrane in the vicinity of AKT1. This situation ensures an effective activation of the  
434 channel and warrants the versatility of the interacting partners to participate in different  
435 regulatory process.

436

437 Finally, the discovery of point mutations in the surface of the ANK domain of AKT1 that  
438 improves K<sup>+</sup> transport activity by strengthening the interaction with CIPK23, may  
439 represent a relevant biotechnological tool for the generation of plant crops with  
440 enhanced performance under K<sup>+</sup> nutrient limitation or other environmental stresses.

441

## 442 **Materials and Methods**

443

### 444 **Bio-layer interferometry**

445 The interaction between the ANK domain of AKT1 and the catalytic domain of CIPK23  
446 was measured by bio-layer interferometry using a single channel BLItz system  
447 (ForteBio). Histidine-tagged ANK domain and the mutated domains AKT1(-) (R528E  
448 K561E) and AKT1(+) (E624K, E658K E659K) at 0.1 mg/ml were immobilized on a Ni  
449 chelated biosensor tips, and the purified domain of CIPK23 at three was added to the  
450 biosensor at different concentrations to estimate the affinity constant at room  
451 temperature. Each binding reaction was carried out in 50mM Tris HCl pH7.5, 50mM  
452 NaCl and consisted of a 30 s baseline, followed by a 300 s association phase and a  
453 300 s dissociation phase. BLItz Pro software was used to determine rate constants for  
454 net association and dissociation, the equilibrium dissociation constant as the ratio of  
455 these values, and goodness of overall fit. Kinetic and affinity constants were calculated  
456 at CIPK23 concentrations of 16, 8, 4 and 2  $\mu$ M; only those binding reactions producing  
457 goodness of fit values of  $X^2$  and  $R^2$  lower than 4 and greater than 0.99 respectively  
458 were selected for the calculations.

459

#### 460 **Size Exclusion Chromatography (SEC)**

461 The oligomeric state of the ANK domain of AKT1 was determined by SEC using a Bio-  
462 Silect SEC 250-5 Column (BioRad Lab, USA) equilibrated in 20 mM Tris HCl pH 8.0,  
463 200 mM NaCl, 1 mM DTT and comparing the elution time with that of the Gel Filtration  
464 Standard (BioRad Lab, USA).

465

#### 466 **Yeast Two-Hybrid Experiments**

467 *CIPK23* and *AKT1*cyt cDNAs subcloned into the pGBT9.BS and the pGAD.GH vectors  
468 respectively, have been described elsewhere (Geiger et al., 2009). cDNAs of CIPK16  
469 and CIPK24 in pGAD.GH (Kim et al 2000) were isolated and transferred to pGBT9.BS.  
470 The AKT1cyt mutants AKT1(+) (E624K E658K E659K) and AKT1(-) (R528E K561E)  
471 were generated by PCR using pGAD.GH AKT1cyt as template. Plasmids were  
472 cotransformed into *Saccharomyces cerevisiae* AH109 strain (*MATa trp1-901 leu2-*  
473 *3,112 ura3-52 his3-200 gal4 gal80 URA3::MEL1UAS-MEL1TATALacZ*  
474 *LYS2::GAL1UAS-GAL1TATA-HIS3 GAL2UAS-GAL2TATA-ADE2*) following standard  
475 PEG/LiAc methods and colonies were selected on yeast synthetic dextrose (SD)  
476 minimal medium lacking leucine and tryptophan (SD-LT). To test interaction,  
477 transformant colonies of each combination of plasmids were grown in liquid SD-LT  
478 medium and 10-fold serial dilutions were spotted on SD plates lacking leucine and  
479 Tryptophan and histidine (SD-LTH). Yeast cells were incubated at 30°C for 4 days.  
480 Empty vectors were cotransformed as negative controls.

481

## 482 **Functional expression of AKT1 in yeast**

483 AKT1 was expressed in the *Saccharomyces cerevisiae* strain 9.3 (*MATa*,  
484 *ena1Δ::HIS3::ena4Δ, leu2, ura3, trp1, ade2, trk1Δ, trk2::pCK64*)(Banuelos et al., 1995).  
485 Wild-type AKT1 and mutant *AKT1ΔANK* cDNAs subcloned in the yeast expression  
486 vector pFL61 (Sentenac et al., 1992) were transformed in the strain 9.3 following  
487 standard PEG/LiAc methods and colonies were selected on yeast synthetic minimal  
488 medium lacking uracil. Yeast cells were routinely grown in yeast peptone dextrose  
489 medium, 1% (w/v) yeast extract, 2% (w/v) peptone, and 2% (w/v) glucose or SD  
490 minimal medium supplemented with 50 mM KCl. Growth tests in low-K<sup>+</sup> were  
491 performed in the alkali cation-free medium AP (Rodriguez-Navarro and Ramos, 1984)  
492 solidified with 2% (w/v) noble agar (Difco) and supplemented with KCl at the  
493 concentrations indicated.

494

## 495 **Crystallography**

496 Details in Gene cloning, protein expression, purification and crystallization of the  
497 ankyrin domain of Arabidopsis AKT1 (residues from 516 to 706) can be found in  
498 Chaves-Sajuan et al. 2014 (Chaves-Sanjuan et al., 2014). To summarize, amplified  
499 gene product was cloned into pET-28a vector, overexpressed in *Escherichia coli* strain  
500 Rosetta 2(DE3) pLysS (Novagen) and purified by Ni<sup>2+</sup>-NTA agarose beads affinity  
501 chromatography followed by size exclusion chromatography. Pure protein was  
502 concentrated to 14 mg ml<sup>-1</sup> in a buffer containing 20 mM Hepes pH 7.0, 150 mM NaCl  
503 and 0.5 mM TCEP and crystallized by sitting-drop vapor-diffusion techniques by  
504 equilibrating a mixture of 1 ml of protein solution and 1 ml of precipitant solution  
505 containing 25% PEG4000, 0.1 M Tris (pH 8.5) and 0.3 M MgCl<sub>2</sub>. Crystals grew in three  
506 days at room temperature. Crystals were cryoprotected with the crystallization solution  
507 supplemented with 10% (v/v) glycerol.

508 A complete diffraction data set was collected at ESRF beamline ID14-1 (see details in  
509 Supplemental Table 1). Diffraction data were processed with XDS (Kabsch, 2010) and  
510 merged with SCALA from the CCP4 package (Collaborative Computational Project,  
511 Number 4, 1994).

512 The strategy used to solve ANK domain of AKT1 structure was molecular replacement  
513 with the program PHASER (McCoy et al., 2007) using the coordinates from a designed  
514 Ankyrin domain (PDB code: 2XEH) (Kramer et al., 2010). Several cycles of restrained  
515 refinement with PHENIX (Adams et al., 2010) and iterative model building with COOT  
516 (Emsley and Cowtan, 2004) were required to obtain the final models where the waters  
517 were also modelled. Data collection, data processing and model refinement statistics  
518 are summarized in Supplemental Table 1. The stereochemistry of the models was

519 verified with MolProbity and Figures of molecular models were produced using PyMOL  
520 (The PyMOL Molecular Graphics System, Version 1.6.0.0 Schrödinger, LLC).

521

### 522 **Expression of recombinant proteins in *Xenopus* oocytes and** 523 **electrophysiological procedures**

524 The cDNAs of AKT1, AKT1(+), AKT1(-) and CIPK23HA, subcloned downstream of the  
525 T7 promoter in the vector pNB1u (MacAulay et al., 2001), were used to synthesize  
526 cRNA in vitro using the mMessage mMachine T7 polymerase kit (Ambion Europe Ltd.,  
527 UK). 1 µg of cDNAs AKT1, AKT1(+) and AKT1(-) were linearized with the restriction  
528 enzyme *NotI* whereas that of CIPK23HA was linearized with *NdeI*. The quality and  
529 purity of cRNAs were determined by absorbance at 260 and 280 nm (NanoDrop ND-  
530 1000, NanoDrop Technologies, Wilmington, USA). The integrity and size of the purified  
531 RNAs were checked by agarose gel electrophoresis (0.7%) under denaturing  
532 conditions.

533 For electrical recordings of AKT1 activity, 50 nl of a cRNA mixture containing 14 ng of  
534 wild type or mutant versions of AKT1 and 14 ng of CIPK23HA or 50 nl of distilled water  
535 (control) were injected in defolliculated oocytes of *Xenopus laevis* using a Nanoliter  
536 2010 Automatic Injector (World Precision Instruments Inc., USA). Injected oocytes  
537 were maintained at 18°C in ND96 solution (96 mM NaCl, 2 mM KCl, 1 mM CaCl<sub>2</sub>, 1  
538 mM MgCl<sub>2</sub>, 10 mM Hepes/NaOH pH7.4). Two to three days after injection, the currents  
539 were measured at 20°C (room temperature) in two-electrode voltage-clamp (TEVC)  
540 experiments using the Geneclamp 500 amplifier (Axon Instruments, USA). Voltage  
541 control, data acquisition and data analyses were carried out with the software Pulse/  
542 Pulsefit (HEKA, Lambrecht / Pfalz, Germany). All electrodes were filled with 3M KCl  
543 solution. TEVC recordings were obtained using a bath solution containing 2 mM MgCl<sub>2</sub>,  
544 1 mM CaCl<sub>2</sub> and 10 mM Tris-HCl, pH 7.4 with the addition of 100 mM KCl. Pulse  
545 protocols used a holding potential of -20 mV, followed by a test pulse to different  
546 voltage steps from -150 to +45 mV in 15 mV increments during 150 ms, separated by  
547 intervals of 2 seconds.

548

### 549 **Protein-protein docking**

550

551 *Activated CIPK23 kinase model.* Starting from the crystallographic structure of the  
552 CIPK23 kinase domain in the inactive conformation (PDB id. 4CZT) (Chaves-Sanjuan  
553 et al., 2014), we employed MODELLER (Webb and Sali, 2016) to generate an active  
554 form of the enzyme based on the structure of the *Rattus norvegicus* 5'-AMP activated  
555 protein kinase α1 subunit (PDB id. 4CFH). Only activation-related motifs were modeled

556 (i.e. the glycine-rich loop, the hydrophobic spine, the activation loop and the  
557 electrostatic lock). The resulting model was superimposed onto the structure of the  
558  $Mn^{2+}$ -ATP-human PKA complex (PDB ID 1ATP) to model the bound ATP and  
559 magnesium ions. The reconstructed activated  $Mg^{2+}$ -ATP-CIPK23 structure was refined  
560 using a standard protocol of energy minimization and molecular dynamics (MD)  
561 simulation using the AMBER10 force field and optimized polyphosphate parameters.  
562 Briefly, the complex was immersed in a TIP3P water box (12 Å distance to the edge  
563 from any atom of the protein) and refined by means of 2,000 steps of steepest descent  
564 followed by 2,000 steps of conjugate gradient energy minimization. The energy-  
565 minimized structure was then heated to a temperature of 300 K while harmonically  
566 restraining the positions of the ATP molecule, the  $Mg^{2+}$  ions and the  $C\alpha$  atoms of the  
567 protein. Thereafter, a production run spanning 40 ns allowed adaptation and relaxation  
568 of the amino acid side chains.

569

570 *Protein-protein docking.* An ensemble of activated CIPK23 conformations was obtained  
571 by clustering the structures generated during the MD simulation protocol. The  
572 structures were superimposed using their  $C\alpha$  atoms and their root-mean-square  
573 deviation (RMSD) was used as the similarity metric for an average linkage clustering  
574 algorithm (10 Å cutoff). The centroids of the top 10 most populated clusters were  
575 selected for protein-protein docking to account for kinase flexibility. Z-dock (Pierce et  
576 al., 2014) was employed to perform rigid docking of AKT1 on the ensemble of CIPK23  
577 conformations, only considering the kinase amino acids described to be essential for  
578 binding (residues 97-132 and 267-300) (Lee et al., 2007). A total of 2,000 solutions  
579 were extracted for each of the 10 kinase conformations. These solutions were re-  
580 ranked using the Z-rank (Pierce and Weng, 2007) scoring function (20,000 modeled  
581 complexes) to select a final list of 1,000 solutions which were subsequently clustered  
582 according to their RMSD values. The top 10 clusters, according to the best energy  
583 value and top 10 most populated clusters, were selected for visual inspection. The final  
584 complex was selected using a combination of the score and degree of agreement with  
585 the catalytic function of the enzyme and experimental evidence available (essential  
586 regions for ankyrin domain binding).

587 The Protein Data Bank (PDB) formatted file of the calculated complex between the  
588 ANK domain of AKT1 and CIPK23 is provided as supplementary material  
589 (Supplemental Table 2).

590

591 **Accession number**

592 The atomic coordinates and structure factors have been deposited in the protein Data  
593 Bank, [www.pdb.org](http://www.pdb.org) [PDB ID code of Ankyrin domain of AKT1 (5AAR)].

594

### 595 **Acknowledgements**

596

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600 Regional (FEDER, European Union). A. Albert thanks the ESRF and ALBA (beamlines  
601 ID23-2 and XALOC) for the access to the synchrotron radiation source.

602

### 603 **Supplemental Data**

604

605 **Figure S1** Representation of the crystal structures of the ANK domain of AKT1 and  
606 human Ankyrin-R

607 **Figure S2.** Amino acid sequence alignment of the ANK domain of AKT1 and those  
608 sequences of representative plant species annotated as AKT1 and those Shaker-like  
609 ANK containing K<sup>+</sup> channels from Arabidopsis.

610 **Figure S3.** Size exclusion chromatography and Biolayer interferometry

611 **Figure S4.** Two views of a section of the predicted model for the complex between  
612 CIPK23 and the ANK domain of AKT1. The residues of CIPK23 predicted to interact  
613 with the ANK domain are displayed in a cartoon mode and the ANK domain is  
614 represented as a molecular surface. Coloring scheme is as in figure 5

615 **Table S1.** Crystallographic data collection and refinement statistics

616 **Table S2.** The atomic coordinates of the calculated complex between the ANK domain  
617 of AKT1 and CIPK23

618

619

### 620 **Figure legends**

621

622 **Figure 1.** Structure of the ANK domain of AKT1. (A) Functional and structural domains  
623 of AKT1. (B) Two views of a ribbon representation of the crystal structure of the ANK  
624 domain. The ANK repeats are numbered. H1 and H2 helices stand for those helices  
625 facing inwards or outwards of the concave side of the structure respectively (C) (Up) A  
626 detailed view of the structure of the ANK repeat 2. The variable side chains are  
627 highlighted in stick mode (Down) Sequence alignment of the six ANK repeats of AKT1  
628 together with the ANK consensus sequences according to different authors C1 (Mosavi

629 et al., 2002), C2 (Michaely et al., 2002), C3 (Sedgwick and Smerdon, 1999) and C4  
630 (Kohl et al., 2003). (D) Molecular surface representation showing the charge  
631 distribution on the ANK domain. The red and blue colors correspond to negative and  
632 positive charges respectively. The view is taken as in the lower part of (B)

633

634 **Figure 2.** Electrostatic interactions are critical for CIPK23/AKT1 complex stability.  
635 Yeast two-hybrid assay of full-length CIPK23, CIPK16 or CIPK24 and the wild-type  
636 AKT1 C-terminal domain (residues 296 to 857) or mutant versions AKT1(+)  
637 (Glu624Lys, Glu658Lys and Glu659Lys), and AKT1(-) (Arg528Glu and Lys561Glu).  
638 Five microliters of serial decimal dilutions of yeast cultures were spotted onto SD plates  
639 minus leucine, tryptophan (-LT) or minus leucine, tryptophan, histidine (-LTH). Growth  
640 on SD -LTH medium indicates protein–protein interaction.

641

642 **Figure 3.** The strength of the binding of the catalytic domain of activated CIPK23  
643 (CIPK23HA) to the ANK domain of AKT1 influences channel activity. Current–voltage  
644 relationships recorded from oocytes expressing wild type-AKT1+CIPK23HA (n=5),  
645 AKT1(+)+CIPK23HA (n=4), and AKT1(-)+CIPK23HA (n=4). The bath solution  
646 contained 100 mM KCl. Holding potential was -20 mV. Clamp potentials ranged from  
647 +45 to -150 mV with 15 mV decrements during 150 ms, separated by intervals of 2  
648 seconds. Average currents from water-injected oocytes at each voltage have been  
649 subtracted. Data are shown as mean±SD.

650

651 **Figure 4.** The ANK domain of AKT1 is not required for K<sup>+</sup> transport and mutations in  
652 AKT1(+) or AKT1(-) do not affect channel transport activity. Cells of yeast strain 9.3  
653 ( $\Delta trk1$ ,  $\Delta trk2$ ) were transformed with the empty vector pFL61 (+vector), the wild-type  
654 *AKT1* cDNA (+AKT1), the mutant *AKT1* allele lacking the ankyrin repeat coding region  
655 (+AKT1 $\Delta$ ANK) or the mutated versions of *AKT1* (+AKT1(+)) and (+AKT1(-)).  
656 Transformed yeast cells were grown overnight in Arginine Phosphate (AP) medium  
657 with 50 mM KCl. Five microliters of serial decimal dilutions were spotted onto AP plates  
658 supplemented with the indicated KCl concentration

659

660 **Figure 5.** The structure of the complex between the ANK domain of AKT1 and CIPK23.  
661 (A) A ribbon representation of the predicted model for the CIPK23 and ANK domain of  
662 AKT1. Those residues of CIPK23 experimentally determined to be essential for the  
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666 AKT1(-) are labeled.

667

668 **Figure 6.** Working model for AKT1 regulation. The effective regulation of AKT1 is  
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672 et al., 2012); 3. activation of CIPK23 by CBL1/CBL9 (Albrecht et al., 2001); 4.  
673 interaction between AKT1 and CIPK23/CBL1-9 complex (Xu et al., 2006; Lee et al.,  
674 2007); 5. interaction of ANK and CIPK23 (Lee et al., 2007) and this work; 6.  
675 phosphorylation of AKT1(Xu et al., 2006; Hashimoto et al., 2012)

676

677



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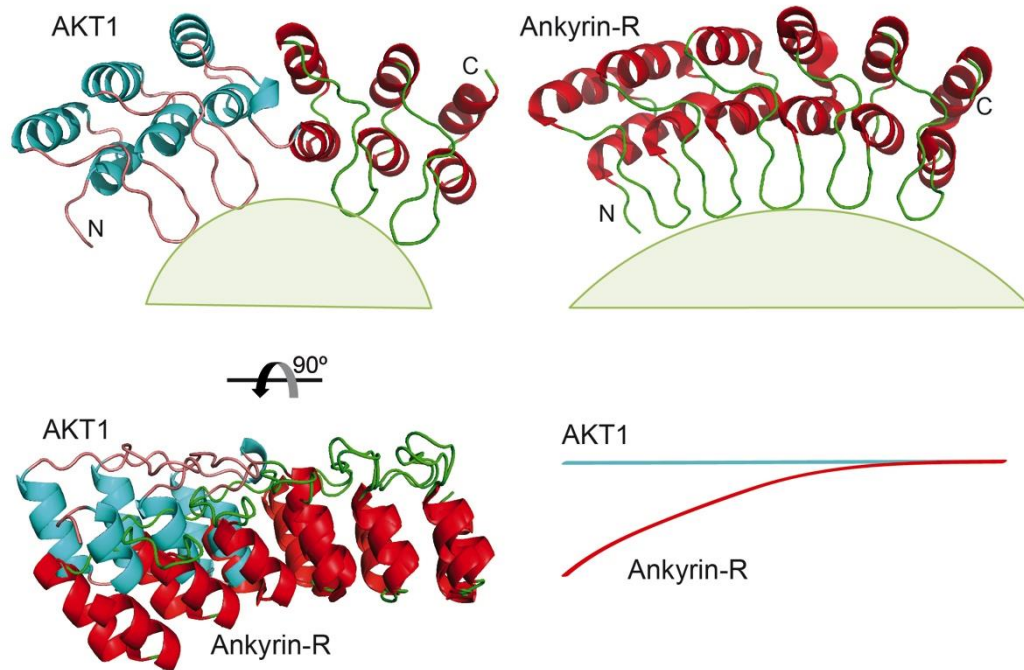
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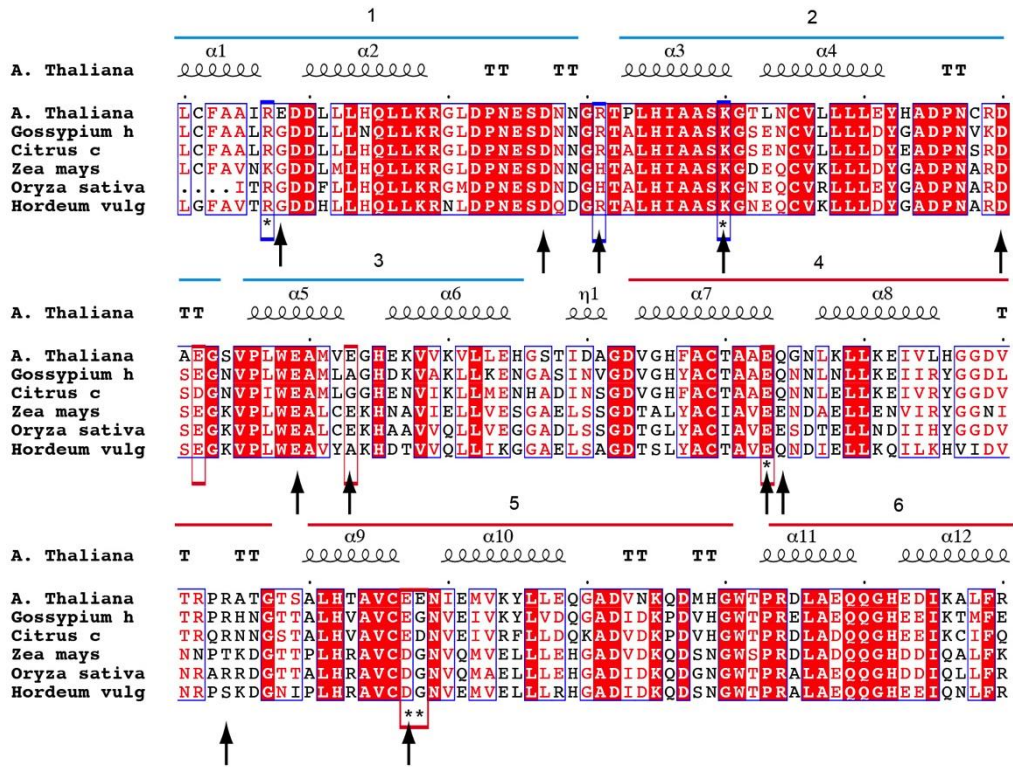
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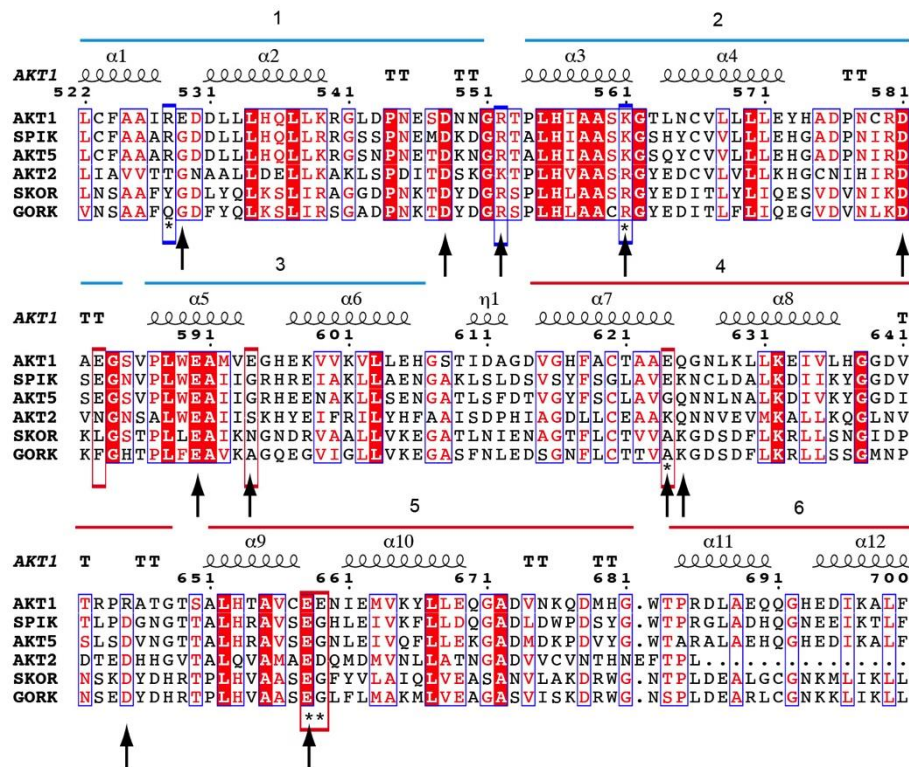
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**Supplemental Figure S1.** Representation of the crystal structures of the ANK domain of AKT1 and human Ankyrin-R (PDB code: 1N11) (38). The figure highlights the different curvature of the domain.

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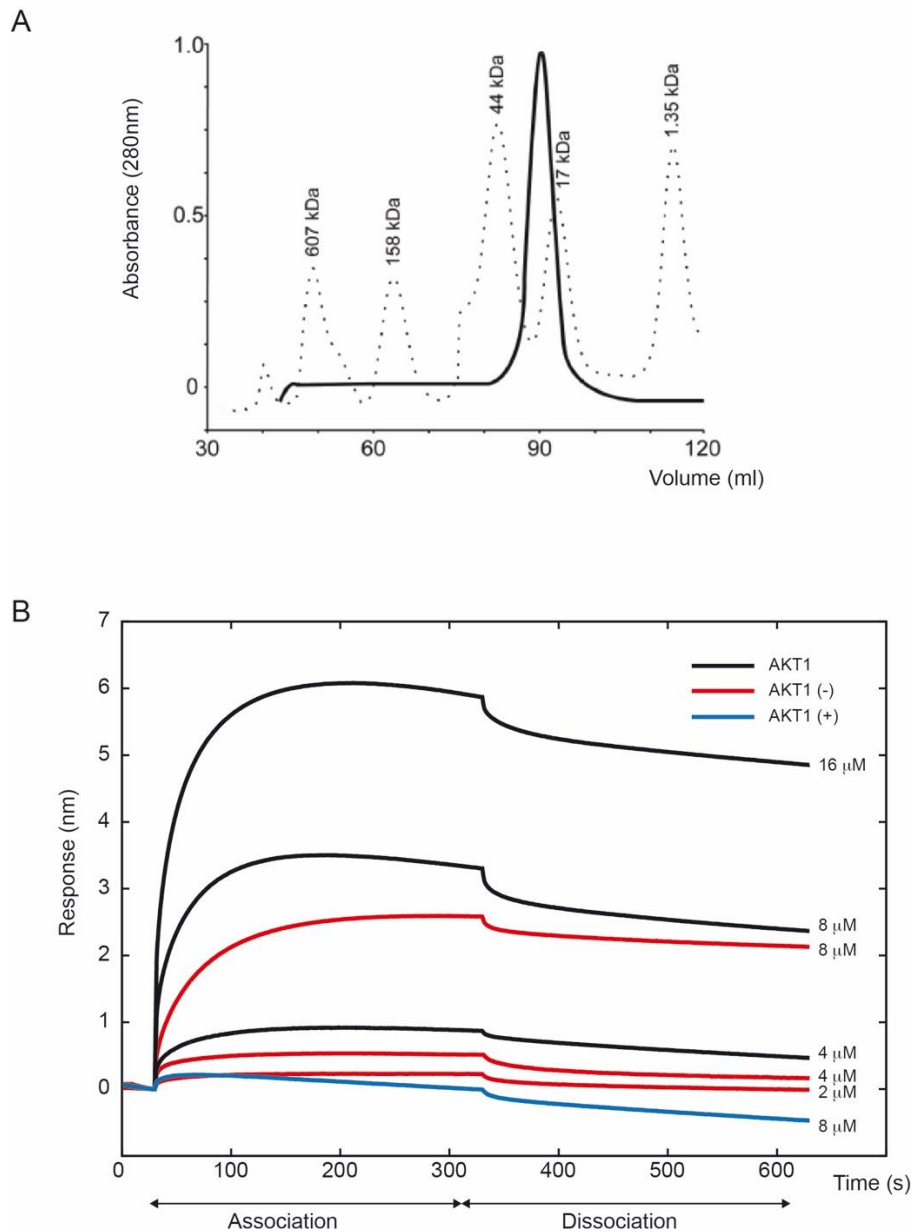
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11 **Supplemental Figure S2.** Amino acid sequence alignment of the ANK domain of

12 AKT1 and other plant protein homologs. (A) Arabidopsis ANK domain sequence and

13 those sequences of representative plant species annotated as AKT1. (B) Arabidopsis  
14 ANK domain sequence and those Shaker-like ANK containing K<sup>+</sup> channels from  
15 Arabidopsis. ANK repeats are highlighted and numbered. Residues conforming the  
16 acidic and basic patches at molecular surface are highlighted with a red or blue  
17 rectangle, respectively. Arrows indicate residues predicted to interact with CIPK23.  
18 Residues 701 and 72 at the C-terminal of ANK domain of AKT1 has been excluded  
19 from the alignment (72).  
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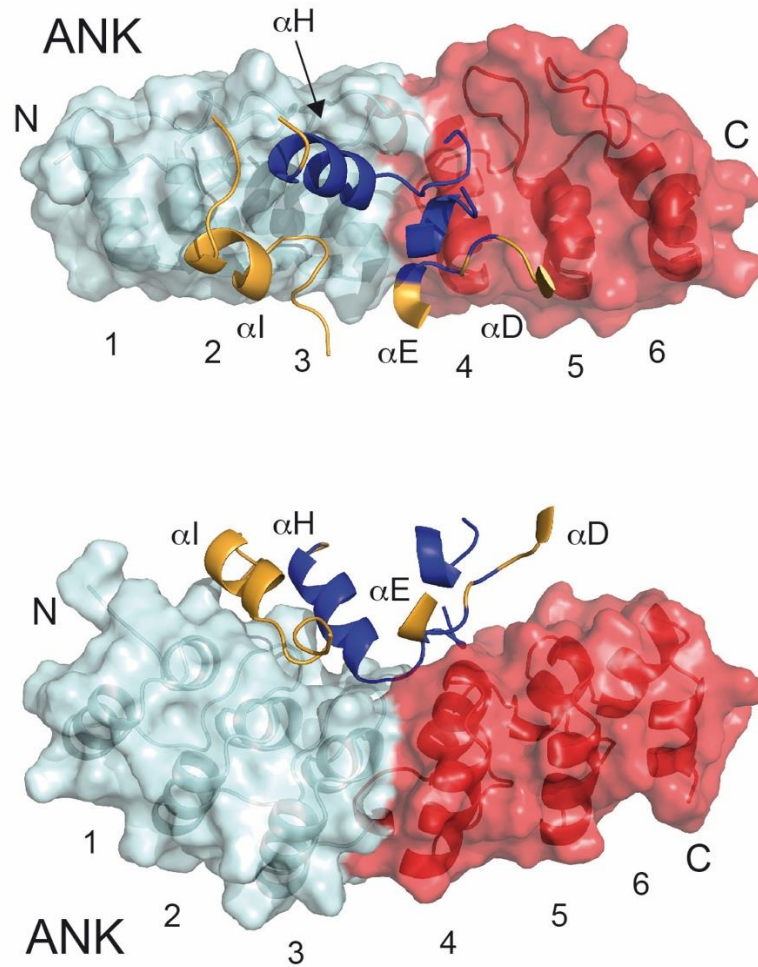




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23 **Supplemental Figure S3.** Biophysical characterization of ANK domain of AKT1. (A)  
 24 Size exclusion chromatography profiles showing the monomeric character of the ANK  
 25 domain. (B) The ANK domain of AKT1 and the mutated ANK domain AKT1(-) interact  
 26 with the catalytic domain of CIPK23 *in vitro*. Bi-layer Interferometry analysis of the  
 27 interaction. The measurements were performed at three different concentrations, as it  
 28 is indicated in the figure, to ensure a concentration dependent response and to  
 29 produce a good estimation of the rate constants for net association, dissociation and  
 30 the equilibrium dissociation constant. The corresponding measurements for the  
 31 mutated ANK domain AKT1(+) cannot be adjusted to the model, indicating lack of  
 32 binding to CIPK23 within the experimental conditions.

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**Supplemental Figure S4.** Two views of a section of the predicted model for the complex between CIPK23 and the ANK domain of AKT1. The residues of CIPK23 predicted to interact with the ANK domain are displayed in a cartoon mode and the ANK domain is represented as a molecular surface. Coloring scheme is as in figure 5

43

44 **Table S1. Data collection and refinement statistics.**

<b>Resolution range</b>	42.78 - 1.9 (1.968 - 1.9)
<b>Space group</b>	P 21 21 2
<b>Unit cell</b>	34.921 85.57 65.989 90 90 90
<b>Total reflections</b>	31820 (2841)
<b>Unique reflections</b>	16142 (1535)
<b>Multiplicity</b>	2.0 (1.9)
<b>Completeness (%)</b>	99.35 (95.57)
<b>Mean I/sigma(I)</b>	15.11 (1.59)
<b>Wilson B-factor</b>	28.38
<b>R-merge</b>	0.03192 (0.5094)
<b>R-meas</b>	0.04514 (0.7204)
<b>R-pim</b>	0.03192 (0.5094)
<b>CC1/2</b>	0.999 (0.6)
<b>CC*</b>	1 (0.866)
<b>Reflections used in refinement</b>	16140 (1533)
<b>Reflections used for R-free</b>	812 (73)
<b>R-work</b>	0.1865 (0.3297)
<b>R-free</b>	0.2195 (0.3165)
<b>CC(work)</b>	0.968 (0.734)

<b>CC(free)</b>	0.948 (0.620)
<b>Number of non-hydrogen atoms</b>	1568
<b>macromolecules</b>	1429
<b>ligands</b>	2
<b>solvent</b>	137
<b>Protein residues</b>	185
<b>RMS(bonds)</b>	0.005
<b>RMS(angles)</b>	1.01
<b>Ramachandran favored (%)</b>	98.36
<b>Ramachandran allowed (%)</b>	1.64
<b>Ramachandran outliers (%)</b>	0.00
<b>Rotamer outliers (%)</b>	3.25
<b>Clashscore</b>	3.53
<b>Average B-factor</b>	37.81
<b>macromolecules</b>	37.56
<b>ligands</b>	32.65
<b>solvent</b>	40.40
<b>Number of TLS groups</b>	9

45    Statistics for the highest-resolution shell are shown in parentheses.

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Supplemental Table S2. The atomic coordinates of the calculated complex between the ANK domain of

ATOM	1	N	PRO	19	3,983	-46,350	46,743	1.00	0.00
ATOM	2	CA	PRO	19	4,722	-46,893	45,573	1.00	0.00
ATOM	3	C	PRO	19	5,047	-48,311	45,727	1.00	0.00
ATOM	4	O	PRO	19	6,105	-48,638	46,320	1.00	0.00
ATOM	5	CB	PRO	19	5,906	-45,970	45,208	1.00	0.00
ATOM	6	CG	PRO	19	5,432	-44,645	45,704	1.00	0.00
ATOM	7	CD	PRO	19	4,246	-44,881	46,630	1.00	0.00
ATOM	8	HA	PRO	19	4,066	-46,781	44,709	1.00	0.00
ATOM	9	HB2	PRO	19	6,793	-46,316	45,737	1.00	0.00
ATOM	10	HB3	PRO	19	6,099	-46,134	44,148	1.00	0.00
ATOM	11	HG2	PRO	19	6,170	-44,157	46,341	1.00	0.00
ATOM	12	HG3	PRO	19	5,324	-43,884	44,931	1.00	0.00
ATOM	13	HD2	PRO	19	4,412	-44,603	47,671	1.00	0.00
ATOM	14	HD3	PRO	19	3,358	-44,375	46,249	1.00	0.00
ATOM	15	H2	PRO	19	3,013	-46,631	46,704	1.00	0.00
ATOM	16	H3	PRO	19	4,367	-46,775	47,574	1.00	0.00
ATOM	17	N	GLY	20	4,199	-49,233	45,241	1.00	0.00
ATOM	18	CA	GLY	20	4,345	-50,667	45,644	1.00	0.00
ATOM	19	C	GLY	20	3,512	-50,934	46,934	1.00	0.00
ATOM	20	O	GLY	20	3,061	-49,998	47,580	1.00	0.00
ATOM	21	H	GLY	20	3,291	-48,978	44,880	1.00	0.00
ATOM	22	HA2	GLY	20	3,938	-51,348	44,897	1.00	0.00
ATOM	23	HA3	GLY	20	5,344	-51,026	45,888	1.00	0.00
ATOM	24	N	ILE	21	3,185	-52,196	47,327	1.00	0.00
ATOM	25	CA	ILE	21	2,410	-52,505	48,592	1.00	0.00
ATOM	26	C	ILE	21	3,394	-52,788	49,780	1.00	0.00
ATOM	27	O	ILE	21	4,443	-53,404	49,585	1.00	0.00
ATOM	28	CB	ILE	21	1,487	-53,773	48,562	1.00	0.00
ATOM	29	CG1	ILE	21	2,229	-55,076	48,146	1.00	0.00
ATOM	30	CG2	ILE	21	0.317	-53,439	47,631	1.00	0.00
ATOM	31	CD1	ILE	21	1,292	-56,287	48,039	1.00	0.00
ATOM	32	H	ILE	21	3,541	-52,990	46,814	1.00	0.00
ATOM	33	HA	ILE	21	1,791	-51,633	48,803	1.00	0.00
ATOM	34	HB	ILE	21	1,070	-53,937	49,555	1.00	0.00
ATOM	35	HG12	ILE	21	2,577	-54,791	47,154	1.00	0.00
ATOM	36	HG13	ILE	21	3,012	-55,244	48,886	1.00	0.00
ATOM	37	HG21	ILE	21	-0.432	-54,231	47,641	1.00	0.00
ATOM	38	HG22	ILE	21	0.687	-53,328	46,611	1.00	0.00
ATOM	39	HG23	ILE	21	-0.159	-52,492	47,883	1.00	0.00
ATOM	40	HD11	ILE	21	0.715	-56,135	47,126	1.00	0.00
ATOM	41	HD12	ILE	21	0.545	-56,358	48,830	1.00	0.00
ATOM	42	HD13	ILE	21	1,812	-57,244	47,984	1.00	0.00

ATOM	43	N	HID	22	2,951	-52,528	51,001	1.00	0.00
ATOM	44	CA	HID	22	3,602	-52,938	52,249	1.00	0.00
ATOM	45	C	HID	22	3,129	-54,330	52,777	1.00	0.00
ATOM	46	O	HID	22	3,980	-55,000	53,320	1.00	0.00
ATOM	47	CB	HID	22	3,601	-51,820	53,355	1.00	0.00
ATOM	48	CG	HID	22	4,239	-50,532	52,868	1.00	0.00
ATOM	49	CD2	HID	22	3,672	-49,353	52,607	1.00	0.00
ATOM	50	ND1	HID	22	5,568	-50,308	52,971	1.00	0.00
ATOM	51	CE1	HID	22	5,795	-49,023	52,710	1.00	0.00
ATOM	52	NE2	HID	22	4,658	-48,439	52,381	1.00	0.00
ATOM	53	H	HID	22	1,998	-52,201	51,065	1.00	0.00
ATOM	54	HA	HID	22	4,634	-53,229	52,047	1.00	0.00
ATOM	55	HB2	HID	22	2,589	-51,563	53,671	1.00	0.00
ATOM	56	HB3	HID	22	4,129	-52,274	54,193	1.00	0.00
ATOM	57	HD1	HID	22	6,277	-50,934	53,326	1.00	0.00
ATOM	58	HD2	HID	22	2,606	-49,209	52,519	1.00	0.00
ATOM	59	HE1	HID	22	6,768	-48,555	52,750	1.00	0.00
ATOM	60	N	SER	23	1,919	-54,692	52,446	1.00	0.00
ATOM	61	CA	SER	23	1,574	-56,133	52,515	1.00	0.00
ATOM	62	C	SER	23	0.416	-56,576	51,605	1.00	0.00
ATOM	63	O	SER	23	-0.317	-55,681	51,152	1.00	0.00
ATOM	64	CB	SER	23	1,178	-56,444	53,986	1.00	0.00
ATOM	65	OG	SER	23	0.065	-55,595	54,329	1.00	0.00
ATOM	66	H	SER	23	1,280	-54,064	51,981	1.00	0.00
ATOM	67	HA	SER	23	2,467	-56,704	52,262	1.00	0.00
ATOM	68	HB2	SER	23	0.947	-57,506	54,077	1.00	0.00
ATOM	69	HB3	SER	23	1,998	-56,199	54,662	1.00	0.00
ATOM	70	HG	SER	23	0.424	-54,721	54,499	1.00	0.00
ATOM	71	N	GLY	24	0.390	-57,884	51,346	1.00	0.00
ATOM	72	CA	GLY	24	-0.659	-58,522	50,583	1.00	0.00
ATOM	73	C	GLY	24	-2,004	-58,766	51,329	1.00	0.00
ATOM	74	O	GLY	24	-1,994	-58,853	52,615	1.00	0.00
ATOM	75	H	GLY	24	1,172	-58,427	51,681	1.00	0.00
ATOM	76	HA2	GLY	24	-0.791	-57,981	49,646	1.00	0.00
ATOM	77	HA3	GLY	24	-0.338	-59,542	50,376	1.00	0.00
ATOM	78	N	ARG	25	-3,128	-58,859	50,659	1.00	0.00
ATOM	79	CA	ARG	25	-4,532	-59,048	51,149	1.00	0.00
ATOM	80	C	ARG	25	-5,295	-60,192	50,407	1.00	0.00
ATOM	81	O	ARG	25	-6,070	-60,920	51,033	1.00	0.00
ATOM	82	CB	ARG	25	-5,351	-57,694	50,991	1.00	0.00
ATOM	83	CG	ARG	25	-6,782	-57,780	51,573	1.00	0.00
ATOM	84	CD	ARG	25	-6,583	-57,833	53,054	1.00	0.00
ATOM	85	NE	ARG	25	-7,817	-57,789	53,776	1.00	0.00

ATOM	86	CZ	ARG	25	-8,064	-58,366	54,977	1.00	0.00
ATOM	87	NH1	ARG	25	-7,151	-58,907	55,739	1.00	0.00
ATOM	88	NH2	ARG	25	-9,284	-58,379	55,444	1.00	0.00
ATOM	89	H	ARG	25	-3,048	-58,428	49,748	1.00	0.00
ATOM	90	HA	ARG	25	-4,413	-59,326	52,196	1.00	0.00
ATOM	91	HB2	ARG	25	-4,814	-56,865	51,452	1.00	0.00
ATOM	92	HB3	ARG	25	-5,561	-57,514	49,938	1.00	0.00
ATOM	93	HG2	ARG	25	-7,289	-56,901	51,173	1.00	0.00
ATOM	94	HG3	ARG	25	-7,389	-58,654	51,337	1.00	0.00
ATOM	95	HD2	ARG	25	-6,198	-58,824	53,292	1.00	0.00
ATOM	96	HD3	ARG	25	-6,006	-56,991	53,434	1.00	0.00
ATOM	97	HE	ARG	25	-8,660	-57,531	53,284	1.00	0.00
ATOM	98	HH11	ARG	25	-6,170	-58,794	55,528	1.00	0.00
ATOM	99	HH12	ARG	25	-7,329	-59,352	56,627	1.00	0.00
ATOM	100	HH21	ARG	25	-10,020	-57,983	54,876	1.00	0.00
ATOM	101	HH22	ARG	25	-9,449	-59,040	56,190	1.00	0.00
ATOM	102	N	THR	26	-5,075	-60,290	49,064	1.00	0.00
ATOM	103	CA	THR	26	-5,611	-61,370	48,219	1.00	0.00
ATOM	104	C	THR	26	-4,390	-62,147	47,705	1.00	0.00
ATOM	105	O	THR	26	-3,416	-61,514	47,271	1.00	0.00
ATOM	106	CB	THR	26	-6,507	-60,945	47,021	1.00	0.00
ATOM	107	CG2	THR	26	-7,090	-61,961	46,012	1.00	0.00
ATOM	108	OG1	THR	26	-7,572	-60,192	47,541	1.00	0.00
ATOM	109	H	THR	26	-4,388	-59,630	48,730	1.00	0.00
ATOM	110	HA	THR	26	-6,186	-62,036	48,865	1.00	0.00
ATOM	111	HB	THR	26	-5,926	-60,253	46,412	1.00	0.00
ATOM	112	HG1	THR	26	-7,513	-59,339	47,106	1.00	0.00
ATOM	113	HG21	THR	26	-7,860	-62,601	46,441	1.00	0.00
ATOM	114	HG22	THR	26	-6,272	-62,550	45,595	1.00	0.00
ATOM	115	HG23	THR	26	-7,581	-61,442	45,190	1.00	0.00
ATOM	116	N	ARG	27	-4,412	-63,464	47,731	1.00	0.00
ATOM	117	CA	ARG	27	-3,367	-64,279	46,980	1.00	0.00
ATOM	118	C	ARG	27	-3,844	-65,098	45,743	1.00	0.00
ATOM	119	O	ARG	27	-4,800	-65,853	45,821	1.00	0.00
ATOM	120	CB	ARG	27	-2,513	-65,111	47,980	1.00	0.00
ATOM	121	CG	ARG	27	-1,142	-65,612	47,501	1.00	0.00
ATOM	122	CD	ARG	27	-0.468	-66,706	48,421	1.00	0.00
ATOM	123	NE	ARG	27	-1,351	-67,756	48,877	1.00	0.00
ATOM	124	CZ	ARG	27	-1,489	-68,978	48,336	1.00	0.00
ATOM	125	NH1	ARG	27	-0.829	-69,548	47,336	1.00	0.00
ATOM	126	NH2	ARG	27	-2,339	-69,687	48,936	1.00	0.00
ATOM	127	H	ARG	27	-5,214	-63,887	48,176	1.00	0.00
ATOM	128	HA	ARG	27	-2,552	-63,627	46,664	1.00	0.00

ATOM	129	HB2	ARG	27	-2,335	-64,496	48,862	1.00	0.00
ATOM	130	HB3	ARG	27	-3,154	-65,946	48,264	1.00	0.00
ATOM	131	HG2	ARG	27	-1,198	-66,076	46,517	1.00	0.00
ATOM	132	HG3	ARG	27	-0.457	-64,764	47,480	1.00	0.00
ATOM	133	HD2	ARG	27	0.423	-67,134	47,963	1.00	0.00
ATOM	134	HD3	ARG	27	-0.178	-66,217	49,351	1.00	0.00
ATOM	135	HE	ARG	27	-1,940	-67,554	49,674	1.00	0.00
ATOM	136	HH11	ARG	27	-0.084	-69,075	46,846	1.00	0.00
ATOM	137	HH12	ARG	27	-1,020	-70,534	47,227	1.00	0.00
ATOM	138	HH21	ARG	27	-2,892	-69,270	49,672	1.00	0.00
ATOM	139	HH22	ARG	27	-2,717	-70,410	48,341	1.00	0.00
ATOM	140	N	VAL	28	-3,060	-65,041	44,673	1.00	0.00
ATOM	141	CA	VAL	28	-3,143	-65,992	43,610	1.00	0.00
ATOM	142	C	VAL	28	-1,815	-66,722	43,332	1.00	0.00
ATOM	143	O	VAL	28	-0.840	-66,184	42,895	1.00	0.00
ATOM	144	CB	VAL	28	-3,564	-65,300	42,283	1.00	0.00
ATOM	145	CG1	VAL	28	-5,090	-65,226	42,339	1.00	0.00
ATOM	146	CG2	VAL	28	-2,943	-63,842	42,111	1.00	0.00
ATOM	147	H	VAL	28	-2,235	-64,462	44,721	1.00	0.00
ATOM	148	HA	VAL	28	-3,897	-66,761	43,784	1.00	0.00
ATOM	149	HB	VAL	28	-3,318	-65,879	41,393	1.00	0.00
ATOM	150	HG11	VAL	28	-5,571	-66,195	42,208	1.00	0.00
ATOM	151	HG12	VAL	28	-5,464	-64,789	43,265	1.00	0.00
ATOM	152	HG13	VAL	28	-5,389	-64,584	41,511	1.00	0.00
ATOM	153	HG21	VAL	28	-3,173	-63,162	42,932	1.00	0.00
ATOM	154	HG22	VAL	28	-3,291	-63,431	41,164	1.00	0.00
ATOM	155	HG23	VAL	28	-1,859	-63,818	42,004	1.00	0.00
ATOM	156	N	GLY	29	-1,777	-68,049	43,721	1.00	0.00
ATOM	157	CA	GLY	29	-0.567	-68,852	43,623	1.00	0.00
ATOM	158	C	GLY	29	0.685	-68,107	44,213	1.00	0.00
ATOM	159	O	GLY	29	0.680	-67,901	45,393	1.00	0.00
ATOM	160	H	GLY	29	-2,687	-68,416	43,960	1.00	0.00
ATOM	161	HA2	GLY	29	-0.691	-69,753	44,224	1.00	0.00
ATOM	162	HA3	GLY	29	-0.444	-69,034	42,556	1.00	0.00
ATOM	163	N	LYS	30	1,715	-67,838	43,395	1.00	0.00
ATOM	164	CA	LYS	30	3,058	-67,246	43,738	1.00	0.00
ATOM	165	C	LYS	30	2,958	-65,767	44,075	1.00	0.00
ATOM	166	O	LYS	30	4,047	-65,240	44,379	1.00	0.00
ATOM	167	CB	LYS	30	4,004	-67,480	42,536	1.00	0.00
ATOM	168	CG	LYS	30	5,491	-67,095	42,669	1.00	0.00
ATOM	169	CD	LYS	30	6,394	-67,682	41,575	1.00	0.00
ATOM	170	CE	LYS	30	6,139	-66,874	40,253	1.00	0.00
ATOM	171	NZ	LYS	30	6,749	-67,499	39,104	1.00	0.00



ATOM	172	H	LYS	30	1,527	-68,068	42,430	1.00	0.00
ATOM	173	HA	LYS	30	3,453	-67,766	44,611	1.00	0.00
ATOM	174	HB2	LYS	30	3,859	-68,553	42,404	1.00	0.00
ATOM	175	HB3	LYS	30	3,529	-67,008	41,676	1.00	0.00
ATOM	176	HG2	LYS	30	5,660	-66,035	42,861	1.00	0.00
ATOM	177	HG3	LYS	30	5,715	-67,737	43,520	1.00	0.00
ATOM	178	HD2	LYS	30	7,442	-67,671	41,874	1.00	0.00
ATOM	179	HD3	LYS	30	6,047	-68,701	41,400	1.00	0.00
ATOM	180	HE2	LYS	30	5,056	-66,868	40,129	1.00	0.00
ATOM	181	HE3	LYS	30	6,483	-65,844	40,348	1.00	0.00
ATOM	182	HZ1	LYS	30	6,458	-68,452	38,943	1.00	0.00
ATOM	183	HZ2	LYS	30	7,751	-67,569	39,210	1.00	0.00
ATOM	184	HZ3	LYS	30	6,529	-66,916	38,309	1.00	0.00
ATOM	185	N	TYR	31	1,801	-65,165	44,000	1.00	0.00
ATOM	186	CA	TYR	31	1,640	-63,650	44,022	1.00	0.00
ATOM	187	C	TYR	31	0.562	-63,214	45,091	1.00	0.00
ATOM	188	O	TYR	31	-0.590	-63,700	45,085	1.00	0.00
ATOM	189	CB	TYR	31	1,329	-63,182	42,600	1.00	0.00
ATOM	190	CG	TYR	31	2,542	-63,220	41,724	1.00	0.00
ATOM	191	CD1	TYR	31	3,613	-62,368	41,933	1.00	0.00
ATOM	192	CD2	TYR	31	2,620	-64,285	40,870	1.00	0.00
ATOM	193	CE1	TYR	31	4,794	-62,589	41,161	1.00	0.00
ATOM	194	CE2	TYR	31	3,690	-64,445	40,053	1.00	0.00
ATOM	195	CZ	TYR	31	4,781	-63,567	40,112	1.00	0.00
ATOM	196	OH	TYR	31	5,774	-63,712	39,260	1.00	0.00
ATOM	197	H	TYR	31	0.991	-65,724	43,776	1.00	0.00
ATOM	198	HA	TYR	31	2,545	-63,092	44,261	1.00	0.00
ATOM	199	HB2	TYR	31	0.522	-63,792	42,193	1.00	0.00
ATOM	200	HB3	TYR	31	0.953	-62,159	42,588	1.00	0.00
ATOM	201	HD1	TYR	31	3,589	-61,609	42,701	1.00	0.00
ATOM	202	HD2	TYR	31	1,809	-64,991	40,773	1.00	0.00
ATOM	203	HE1	TYR	31	5,695	-62,027	41,353	1.00	0.00
ATOM	204	HE2	TYR	31	3,697	-65,260	39,345	1.00	0.00
ATOM	205	HH	TYR	31	5,628	-64,342	38,550	1.00	0.00
ATOM	206	N	GLU	32	0.907	-62,224	45,926	1.00	0.00
ATOM	207	CA	GLU	32	-0.066	-61,551	46,762	1.00	0.00
ATOM	208	C	GLU	32	-0.370	-60,163	46,192	1.00	0.00
ATOM	209	O	GLU	32	0.540	-59,549	45,617	1.00	0.00
ATOM	210	CB	GLU	32	0.450	-61,471	48,188	1.00	0.00
ATOM	211	CG	GLU	32	1,854	-60,865	48,485	1.00	0.00
ATOM	212	CD	GLU	32	2,034	-60,567	49,942	1.00	0.00
ATOM	213	OE1	GLU	32	1,628	-61,396	50,769	1.00	0.00
ATOM	214	OE2	GLU	32	2,455	-59,420	50,251	1.00	0.00

ATOM	215	H	GLU	32	1,860	-61,912	45,800	1.00	0.00
ATOM	216	HA	GLU	32	-0.998	-62,116	46,784	1.00	0.00
ATOM	217	HB2	GLU	32	-0.311	-60,876	48,694	1.00	0.00
ATOM	218	HB3	GLU	32	0.398	-62,461	48,640	1.00	0.00
ATOM	219	HG2	GLU	32	2,649	-61,555	48,202	1.00	0.00
ATOM	220	HG3	GLU	32	1,882	-59,878	48,024	1.00	0.00
ATOM	221	N	LEU	33	-1,611	-59,672	46,392	1.00	0.00
ATOM	222	CA	LEU	33	-2,264	-58,463	45,846	1.00	0.00
ATOM	223	C	LEU	33	-2,642	-57,554	47,100	1.00	0.00
ATOM	224	O	LEU	33	-3,242	-58,079	48,039	1.00	0.00
ATOM	225	CB	LEU	33	-3,534	-58,763	45,113	1.00	0.00
ATOM	226	CG	LEU	33	-3,227	-59,797	44,070	1.00	0.00
ATOM	227	CD1	LEU	33	-4,501	-60,002	43,164	1.00	0.00
ATOM	228	CD2	LEU	33	-2,117	-59,643	42,992	1.00	0.00
ATOM	229	H	LEU	33	-2,223	-60,218	46,981	1.00	0.00
ATOM	230	HA	LEU	33	-1,518	-57,901	45,284	1.00	0.00
ATOM	231	HB2	LEU	33	-4,197	-59,174	45,875	1.00	0.00
ATOM	232	HB3	LEU	33	-3,874	-57,841	44,641	1.00	0.00
ATOM	233	HG	LEU	33	-3,017	-60,769	44,517	1.00	0.00
ATOM	234	HD11	LEU	33	-5,271	-60,299	43,877	1.00	0.00
ATOM	235	HD12	LEU	33	-4,324	-60,795	42,438	1.00	0.00
ATOM	236	HD13	LEU	33	-4,712	-59,085	42,615	1.00	0.00
ATOM	237	HD21	LEU	33	-1,259	-59,129	43,424	1.00	0.00
ATOM	238	HD22	LEU	33	-1,890	-60,600	42,524	1.00	0.00
ATOM	239	HD23	LEU	33	-2,449	-59,024	42,158	1.00	0.00
ATOM	240	N	GLY	34	-2,580	-56,220	47,040	1.00	0.00
ATOM	241	CA	GLY	34	-3,062	-55,304	48,048	1.00	0.00
ATOM	242	C	GLY	34	-4,555	-55,147	48,065	1.00	0.00
ATOM	243	O	GLY	34	-5,275	-55,816	47,306	1.00	0.00
ATOM	244	H	GLY	34	-2,217	-55,855	46,172	1.00	0.00
ATOM	245	HA2	GLY	34	-2,847	-55,800	48,995	1.00	0.00
ATOM	246	HA3	GLY	34	-2,658	-54,292	48,012	1.00	0.00
ATOM	247	N	ARG	35	-5,015	-54,250	48,988	1.00	0.00
ATOM	248	CA	ARG	35	-6,419	-53,878	49,193	1.00	0.00
ATOM	249	C	ARG	35	-6,980	-53,181	47,945	1.00	0.00
ATOM	250	O	ARG	35	-6,323	-52,455	47,185	1.00	0.00
ATOM	251	CB	ARG	35	-6,659	-52,923	50,430	1.00	0.00
ATOM	252	CG	ARG	35	-6,389	-53,686	51,734	1.00	0.00
ATOM	253	CD	ARG	35	-6,680	-52,871	52,999	1.00	0.00
ATOM	254	NE	ARG	35	-6,411	-53,638	54,247	1.00	0.00
ATOM	255	CZ	ARG	35	-7,312	-54,342	54,941	1.00	0.00
ATOM	256	NH1	ARG	35	-8,530	-54,541	54,575	1.00	0.00
ATOM	257	NH2	ARG	35	-6,954	-54,702	56,106	1.00	0.00

ATOM	258	H	ARG	35	-4,323	-53,915	49,644	1.00	0.00
ATOM	259	HA	ARG	35	-6,937	-54,830	49,303	1.00	0.00
ATOM	260	HB2	ARG	35	-5,971	-52,078	50,404	1.00	0.00
ATOM	261	HB3	ARG	35	-7,653	-52,478	50,448	1.00	0.00
ATOM	262	HG2	ARG	35	-7,042	-54,552	51,847	1.00	0.00
ATOM	263	HG3	ARG	35	-5,364	-54,055	51,782	1.00	0.00
ATOM	264	HD2	ARG	35	-6,062	-51,976	53,071	1.00	0.00
ATOM	265	HD3	ARG	35	-7,711	-52,516	52,986	1.00	0.00
ATOM	266	HE	ARG	35	-5,506	-53,545	54,687	1.00	0.00
ATOM	267	HH11	ARG	35	-8,969	-54,089	53,785	1.00	0.00
ATOM	268	HH12	ARG	35	-9,162	-54,900	55,276	1.00	0.00
ATOM	269	HH21	ARG	35	-6,059	-54,438	56,493	1.00	0.00
ATOM	270	HH22	ARG	35	-7,437	-55,434	56,608	1.00	0.00
ATOM	271	N	THR	36	-8,290	-53,364	47,706	1.00	0.00
ATOM	272	CA	THR	36	-8,946	-52,971	46,480	1.00	0.00
ATOM	273	C	THR	36	-8,888	-51,432	46,354	1.00	0.00
ATOM	274	O	THR	36	-9,193	-50,708	47,307	1.00	0.00
ATOM	275	CB	THR	36	-10,353	-53,471	46,281	1.00	0.00
ATOM	276	CG2	THR	36	-10,318	-54,965	45,875	1.00	0.00
ATOM	277	OG1	THR	36	-11,126	-53,343	47,411	1.00	0.00
ATOM	278	H	THR	36	-8,813	-53,985	48,307	1.00	0.00
ATOM	279	HA	THR	36	-8,299	-53,346	45,686	1.00	0.00
ATOM	280	HB	THR	36	-10,785	-52,912	45,451	1.00	0.00
ATOM	281	HG1	THR	36	-12,026	-53,171	47,125	1.00	0.00
ATOM	282	HG21	THR	36	-9,797	-55,086	44,926	1.00	0.00
ATOM	283	HG22	THR	36	-11,376	-55,215	45,806	1.00	0.00
ATOM	284	HG23	THR	36	-9,786	-55,594	46,589	1.00	0.00
ATOM	285	N	LEU	37	-8,620	-50,915	45,151	1.00	0.00
ATOM	286	CA	LEU	37	-8,525	-49,530	44,741	1.00	0.00
ATOM	287	C	LEU	37	-9,658	-48,964	43,864	1.00	0.00
ATOM	288	O	LEU	37	-9,819	-47,720	43,762	1.00	0.00
ATOM	289	CB	LEU	37	-7,205	-49,575	43,970	1.00	0.00
ATOM	290	CG	LEU	37	-6,461	-48,242	43,548	1.00	0.00
ATOM	291	CD1	LEU	37	-5,900	-47,605	44,794	1.00	0.00
ATOM	292	CD2	LEU	37	-5,323	-48,490	42,594	1.00	0.00
ATOM	293	H	LEU	37	-8,519	-51,574	44,392	1.00	0.00
ATOM	294	HA	LEU	37	-8,304	-48,961	45,645	1.00	0.00
ATOM	295	HB2	LEU	37	-6,422	-50,099	44,517	1.00	0.00
ATOM	296	HB3	LEU	37	-7,479	-50,068	43,038	1.00	0.00
ATOM	297	HG	LEU	37	-7,193	-47,618	43,037	1.00	0.00
ATOM	298	HD11	LEU	37	-6,755	-47,326	45,409	1.00	0.00
ATOM	299	HD12	LEU	37	-5,539	-46,603	44,556	1.00	0.00
ATOM	300	HD13	LEU	37	-5,131	-48,231	45,247	1.00	0.00

ATOM	301	HD21	LEU	37	-4,557	-49,117	43,052	1.00	0.00
ATOM	302	HD22	LEU	37	-5,672	-49,051	41,726	1.00	0.00
ATOM	303	HD23	LEU	37	-4,786	-47,592	42,292	1.00	0.00
ATOM	304	N	GLY	38	-10,473	-49,834	43,261	1.00	0.00
ATOM	305	CA	GLY	38	-11,611	-49,433	42,405	1.00	0.00
ATOM	306	C	GLY	38	-11,202	-48,845	41,107	1.00	0.00
ATOM	307	O	GLY	38	-11,567	-47,750	40,748	1.00	0.00
ATOM	308	H	GLY	38	-10,274	-50,811	43,423	1.00	0.00
ATOM	309	HA2	GLY	38	-12,272	-50,281	42,231	1.00	0.00
ATOM	310	HA3	GLY	38	-12,202	-48,698	42,952	1.00	0.00
ATOM	311	N	GLU	39	-10,316	-49,562	40,394	1.00	0.00
ATOM	312	CA	GLU	39	-9,660	-49,180	39,125	1.00	0.00
ATOM	313	C	GLU	39	-10,133	-49,906	37,885	1.00	0.00
ATOM	314	O	GLU	39	-10,888	-50,801	37,948	1.00	0.00
ATOM	315	CB	GLU	39	-8,168	-49,415	39,363	1.00	0.00
ATOM	316	CG	GLU	39	-7,575	-50,778	39,077	1.00	0.00
ATOM	317	CD	GLU	39	-8,174	-52,050	39,757	1.00	0.00
ATOM	318	OE1	GLU	39	-8,521	-52,063	40,967	1.00	0.00
ATOM	319	OE2	GLU	39	-8,049	-53,157	39,163	1.00	0.00
ATOM	320	H	GLU	39	-10,068	-50,459	40,787	1.00	0.00
ATOM	321	HA	GLU	39	-9,810	-48,111	38,975	1.00	0.00
ATOM	322	HB2	GLU	39	-7,612	-48,787	38,667	1.00	0.00
ATOM	323	HB3	GLU	39	-7,876	-49,036	40,342	1.00	0.00
ATOM	324	HG2	GLU	39	-7,704	-50,990	38,016	1.00	0.00
ATOM	325	HG3	GLU	39	-6,489	-50,696	39,091	1.00	0.00
ATOM	326	N	GLY	40	-9,916	-49,367	36,683	1.00	0.00
ATOM	327	CA	GLY	40	-10,057	-50,022	35,403	1.00	0.00
ATOM	328	C	GLY	40	-11,364	-49,860	34,729	1.00	0.00
ATOM	329	O	GLY	40	-12,297	-50,448	35,245	1.00	0.00
ATOM	330	H	GLY	40	-9,342	-48,537	36,731	1.00	0.00
ATOM	331	HA2	GLY	40	-9,260	-49,647	34,762	1.00	0.00
ATOM	332	HA3	GLY	40	-9,860	-51,074	35,608	1.00	0.00
ATOM	333	N	THR	41	-11,541	-49,264	33,523	1.00	0.00
ATOM	334	CA	THR	41	-12,813	-49,248	32,721	1.00	0.00
ATOM	335	C	THR	41	-13,269	-50,574	32,172	1.00	0.00
ATOM	336	O	THR	41	-14,490	-50,842	32,222	1.00	0.00
ATOM	337	CB	THR	41	-12,631	-48,293	31,566	1.00	0.00
ATOM	338	CG2	THR	41	-12,685	-46,882	32,114	1.00	0.00
ATOM	339	OG1	THR	41	-11,462	-48,453	30,747	1.00	0.00
ATOM	340	H	THR	41	-10,769	-48,778	33,088	1.00	0.00
ATOM	341	HA	THR	41	-13,656	-48,971	33,355	1.00	0.00
ATOM	342	HB	THR	41	-13,533	-48,414	30,968	1.00	0.00
ATOM	343	HG1	THR	41	-11,766	-48,191	29,874	1.00	0.00

ATOM	344	HG21	THR	41	-13,621	-46,775	32,662	1.00	0.00
ATOM	345	HG22	THR	41	-12,527	-46,231	31,254	1.00	0.00
ATOM	346	HG23	THR	41	-11,854	-46,708	32,799	1.00	0.00
ATOM	347	N	PHE	42	-12,333	-51,396	31,826	1.00	0.00
ATOM	348	CA	PHE	42	-12,626	-52,730	31,222	1.00	0.00
ATOM	349	C	PHE	42	-11,797	-53,884	31,878	1.00	0.00
ATOM	350	O	PHE	42	-12,379	-54,968	32,049	1.00	0.00
ATOM	351	CB	PHE	42	-12,309	-52,634	29,741	1.00	0.00
ATOM	352	CG	PHE	42	-12,834	-53,644	28,776	1.00	0.00
ATOM	353	CD1	PHE	42	-14,190	-54,102	28,866	1.00	0.00
ATOM	354	CD2	PHE	42	-12,003	-54,272	27,753	1.00	0.00
ATOM	355	CE1	PHE	42	-14,718	-54,927	27,855	1.00	0.00
ATOM	356	CE2	PHE	42	-12,480	-55,198	26,834	1.00	0.00
ATOM	357	CZ	PHE	42	-13,891	-55,546	26,906	1.00	0.00
ATOM	358	H	PHE	42	-11,367	-51,100	31,810	1.00	0.00
ATOM	359	HA	PHE	42	-13,665	-53,014	31,384	1.00	0.00
ATOM	360	HB2	PHE	42	-12,605	-51,667	29,336	1.00	0.00
ATOM	361	HB3	PHE	42	-11,226	-52,720	29,652	1.00	0.00
ATOM	362	HD1	PHE	42	-14,834	-53,801	29,679	1.00	0.00
ATOM	363	HD2	PHE	42	-10,965	-53,978	27,722	1.00	0.00
ATOM	364	HE1	PHE	42	-15,738	-55,276	27,919	1.00	0.00
ATOM	365	HE2	PHE	42	-11,820	-55,650	26,107	1.00	0.00
ATOM	366	HZ	PHE	42	-14,292	-56,288	26,231	1.00	0.00
ATOM	367	N	ALA	43	-10,567	-53,671	32,337	1.00	0.00
ATOM	368	CA	ALA	43	-9,709	-54,650	32,900	1.00	0.00
ATOM	369	C	ALA	43	-9,174	-54,102	34,224	1.00	0.00
ATOM	370	O	ALA	43	-9,218	-52,902	34,526	1.00	0.00
ATOM	371	CB	ALA	43	-8,510	-54,908	31,901	1.00	0.00
ATOM	372	H	ALA	43	-10,216	-52,728	32,253	1.00	0.00
ATOM	373	HA	ALA	43	-10,217	-55,603	33,037	1.00	0.00
ATOM	374	HB1	ALA	43	-8,853	-55,288	30,940	1.00	0.00
ATOM	375	HB2	ALA	43	-7,752	-55,542	32,361	1.00	0.00
ATOM	376	HB3	ALA	43	-8,103	-53,936	31,623	1.00	0.00
ATOM	377	N	LYS	44	-8,554	-54,981	34,991	1.00	0.00
ATOM	378	CA	LYS	44	-8,159	-54,645	36,372	1.00	0.00
ATOM	379	C	LYS	44	-6,624	-54,650	36,480	1.00	0.00
ATOM	380	O	LYS	44	-5,947	-55,479	35,825	1.00	0.00
ATOM	381	CB	LYS	44	-8,849	-55,672	37,251	1.00	0.00
ATOM	382	CG	LYS	44	-10,389	-55,456	37,359	1.00	0.00
ATOM	383	CD	LYS	44	-10,978	-54,055	37,712	1.00	0.00
ATOM	384	CE	LYS	44	-12,523	-54,025	37,468	1.00	0.00
ATOM	385	NZ	LYS	44	-13,214	-52,836	38,067	1.00	0.00
ATOM	386	H	LYS	44	-8,452	-55,967	34,799	1.00	0.00

ATOM	387	HA	LYS	44	-8,535	-53,643	36,577	1.00	0.00
ATOM	388	HB2	LYS	44	-8,730	-56,635	36,756	1.00	0.00
ATOM	389	HB3	LYS	44	-8,376	-55,665	38,233	1.00	0.00
ATOM	390	HG2	LYS	44	-10,861	-55,807	36,441	1.00	0.00
ATOM	391	HG3	LYS	44	-10,768	-56,158	38,102	1.00	0.00
ATOM	392	HD2	LYS	44	-10,806	-53,797	38,757	1.00	0.00
ATOM	393	HD3	LYS	44	-10,647	-53,286	37,015	1.00	0.00
ATOM	394	HE2	LYS	44	-12,794	-54,153	36,420	1.00	0.00
ATOM	395	HE3	LYS	44	-12,953	-54,922	37,915	1.00	0.00
ATOM	396	HZ1	LYS	44	-13,390	-53,018	39,045	1.00	0.00
ATOM	397	HZ2	LYS	44	-14,073	-52,544	37,625	1.00	0.00
ATOM	398	HZ3	LYS	44	-12,613	-52,025	38,101	1.00	0.00
ATOM	399	N	VAL	45	-6,106	-53,870	37,376	1.00	0.00
ATOM	400	CA	VAL	45	-4,673	-53,855	37,771	1.00	0.00
ATOM	401	C	VAL	45	-4,518	-53,876	39,300	1.00	0.00
ATOM	402	O	VAL	45	-5,085	-52,966	39,959	1.00	0.00
ATOM	403	CB	VAL	45	-3,870	-52,670	37,107	1.00	0.00
ATOM	404	CG1	VAL	45	-2,403	-52,530	37,520	1.00	0.00
ATOM	405	CG2	VAL	45	-3,846	-52,899	35,617	1.00	0.00
ATOM	406	H	VAL	45	-6,716	-53,155	37,745	1.00	0.00
ATOM	407	HA	VAL	45	-4,182	-54,746	37,380	1.00	0.00
ATOM	408	HB	VAL	45	-4,408	-51,731	37,246	1.00	0.00
ATOM	409	HG11	VAL	45	-1,852	-51,789	36,941	1.00	0.00
ATOM	410	HG12	VAL	45	-2,316	-52,247	38,569	1.00	0.00
ATOM	411	HG13	VAL	45	-1,892	-53,484	37,392	1.00	0.00
ATOM	412	HG21	VAL	45	-3,331	-53,830	35,378	1.00	0.00
ATOM	413	HG22	VAL	45	-3,307	-52,080	35,141	1.00	0.00
ATOM	414	HG23	VAL	45	-4,835	-53,067	35,194	1.00	0.00
ATOM	415	N	LYS	46	-3,576	-54,654	39,795	1.00	0.00
ATOM	416	CA	LYS	46	-3,117	-54,727	41,156	1.00	0.00
ATOM	417	C	LYS	46	-1,554	-54,628	41,262	1.00	0.00
ATOM	418	O	LYS	46	-0.871	-55,327	40,541	1.00	0.00
ATOM	419	CB	LYS	46	-3,646	-56,011	41,825	1.00	0.00
ATOM	420	CG	LYS	46	-5,150	-56,022	42,080	1.00	0.00
ATOM	421	CD	LYS	46	-5,990	-56,507	40,878	1.00	0.00
ATOM	422	CE	LYS	46	-7,482	-56,351	41,232	1.00	0.00
ATOM	423	NZ	LYS	46	-7,933	-54,932	41,353	1.00	0.00
ATOM	424	H	LYS	46	-3,127	-55,185	39,063	1.00	0.00
ATOM	425	HA	LYS	46	-3,490	-53,811	41,613	1.00	0.00
ATOM	426	HB2	LYS	46	-3,397	-56,844	41,167	1.00	0.00
ATOM	427	HB3	LYS	46	-3,198	-56,141	42,809	1.00	0.00
ATOM	428	HG2	LYS	46	-5,405	-56,729	42,869	1.00	0.00
ATOM	429	HG3	LYS	46	-5,526	-55,067	42,446	1.00	0.00

ATOM	430	HD2	LYS	46	-5,810	-55,871	40,012	1.00	0.00
ATOM	431	HD3	LYS	46	-5,786	-57,537	40,588	1.00	0.00
ATOM	432	HE2	LYS	46	-8,080	-56,731	40,403	1.00	0.00
ATOM	433	HE3	LYS	46	-7,595	-56,824	42,207	1.00	0.00
ATOM	434	HZ1	LYS	46	-8,011	-54,484	40,451	1.00	0.00
ATOM	435	HZ2	LYS	46	-7,365	-54,305	41,906	1.00	0.00
ATOM	436	HZ3	LYS	46	-8,885	-54,807	41,666	1.00	0.00
ATOM	437	N	PHE	47	-1,057	-53,772	42,151	1.00	0.00
ATOM	438	CA	PHE	47	0.281	-53,905	42,696	1.00	0.00
ATOM	439	C	PHE	47	0.453	-55,096	43,633	1.00	0.00
ATOM	440	O	PHE	47	-0.249	-55,330	44,615	1.00	0.00
ATOM	441	CB	PHE	47	0.638	-52,480	43,373	1.00	0.00
ATOM	442	CG	PHE	47	0.840	-51,427	42,412	1.00	0.00
ATOM	443	CD1	PHE	47	-0.132	-50,441	42,255	1.00	0.00
ATOM	444	CD2	PHE	47	1,955	-51,450	41,547	1.00	0.00
ATOM	445	CE1	PHE	47	-0.063	-49,441	41,264	1.00	0.00
ATOM	446	CE2	PHE	47	2,070	-50,461	40,566	1.00	0.00
ATOM	447	CZ	PHE	47	1,119	-49,439	40,462	1.00	0.00
ATOM	448	H	PHE	47	-1,715	-53,183	42,642	1.00	0.00
ATOM	449	HA	PHE	47	0.977	-54,184	41,906	1.00	0.00
ATOM	450	HB2	PHE	47	-0.050	-52,095	44,125	1.00	0.00
ATOM	451	HB3	PHE	47	1,577	-52,673	43,892	1.00	0.00
ATOM	452	HD1	PHE	47	-1,022	-50,551	42,859	1.00	0.00
ATOM	453	HD2	PHE	47	2,672	-52,257	41,589	1.00	0.00
ATOM	454	HE1	PHE	47	-0.882	-48,758	41,089	1.00	0.00
ATOM	455	HE2	PHE	47	2,988	-50,435	39,999	1.00	0.00
ATOM	456	HZ	PHE	47	1,281	-48,595	39,809	1.00	0.00
ATOM	457	N	ALA	48	1,429	-55,917	43,269	1.00	0.00
ATOM	458	CA	ALA	48	1,692	-57,298	43,703	1.00	0.00
ATOM	459	C	ALA	48	3,145	-57,608	44,120	1.00	0.00
ATOM	460	O	ALA	48	4,098	-56,841	43,857	1.00	0.00
ATOM	461	CB	ALA	48	1,277	-58,252	42,533	1.00	0.00
ATOM	462	H	ALA	48	2,001	-55,606	42,496	1.00	0.00
ATOM	463	HA	ALA	48	1,055	-57,516	44,561	1.00	0.00
ATOM	464	HB1	ALA	48	0.210	-58,127	42,352	1.00	0.00
ATOM	465	HB2	ALA	48	1,363	-59,312	42,771	1.00	0.00
ATOM	466	HB3	ALA	48	1,793	-58,006	41,605	1.00	0.00
ATOM	467	N	ARG	49	3,320	-58,691	44,921	1.00	0.00
ATOM	468	CA	ARG	49	4,637	-59,201	45,317	1.00	0.00
ATOM	469	C	ARG	49	4,730	-60,673	45,207	1.00	0.00
ATOM	470	O	ARG	49	3,801	-61,381	45,625	1.00	0.00
ATOM	471	CB	ARG	49	4,866	-58,740	46,763	1.00	0.00
ATOM	472	CG	ARG	49	5,481	-57,331	46,828	1.00	0.00

ATOM	473	CD	ARG	49	5,709	-56,862	48,277	1.00	0.00
ATOM	474	NE	ARG	49	5,903	-55,431	48,241	1.00	0.00
ATOM	475	CZ	ARG	49	7,050	-54,776	48,168	1.00	0.00
ATOM	476	NH1	ARG	49	8,177	-55,295	47,725	1.00	0.00
ATOM	477	NH2	ARG	49	7,113	-53,541	48,554	1.00	0.00
ATOM	478	H	ARG	49	2,486	-59,233	45,096	1.00	0.00
ATOM	479	HA	ARG	49	5,370	-58,749	44,649	1.00	0.00
ATOM	480	HB2	ARG	49	3,895	-58,676	47,254	1.00	0.00
ATOM	481	HB3	ARG	49	5,504	-59,480	47,244	1.00	0.00
ATOM	482	HG2	ARG	49	6,400	-57,413	46,248	1.00	0.00
ATOM	483	HG3	ARG	49	4,664	-56,710	46,462	1.00	0.00
ATOM	484	HD2	ARG	49	4,884	-57,096	48,949	1.00	0.00
ATOM	485	HD3	ARG	49	6,595	-57,333	48,702	1.00	0.00
ATOM	486	HE	ARG	49	5,129	-54,801	48,395	1.00	0.00
ATOM	487	HH11	ARG	49	8,267	-56,298	47,649	1.00	0.00
ATOM	488	HH12	ARG	49	9,003	-54,745	47,534	1.00	0.00
ATOM	489	HH21	ARG	49	6,301	-53,205	49,054	1.00	0.00
ATOM	490	HH22	ARG	49	7,988	-53,044	48,639	1.00	0.00
ATOM	491	N	ASN	50	5,864	-61,191	44,739	1.00	0.00
ATOM	492	CA	ASN	50	6,108	-62,590	44,764	1.00	0.00
ATOM	493	C	ASN	50	6,154	-63,014	46,308	1.00	0.00
ATOM	494	O	ASN	50	6,514	-62,298	47,224	1.00	0.00
ATOM	495	CB	ASN	50	7,444	-62,826	43,969	1.00	0.00
ATOM	496	CG	ASN	50	7,984	-64,259	44,026	1.00	0.00
ATOM	497	ND2	ASN	50	8,732	-64,688	42,995	1.00	0.00
ATOM	498	OD1	ASN	50	7,777	-64,887	45,048	1.00	0.00
ATOM	499	H	ASN	50	6,661	-60,582	44,622	1.00	0.00
ATOM	500	HA	ASN	50	5,249	-63,012	44,243	1.00	0.00
ATOM	501	HB2	ASN	50	7,294	-62,558	42,922	1.00	0.00
ATOM	502	HB3	ASN	50	8,176	-62,158	44,422	1.00	0.00
ATOM	503	HD21	ASN	50	8,998	-64,001	42,303	1.00	0.00
ATOM	504	HD22	ASN	50	8,964	-65,666	42,894	1.00	0.00
ATOM	505	N	VAL	51	5,539	-64,176	46,539	1.00	0.00
ATOM	506	CA	VAL	51	5,315	-64,778	47,917	1.00	0.00
ATOM	507	C	VAL	51	6,462	-65,666	48,419	1.00	0.00
ATOM	508	O	VAL	51	6,257	-66,153	49,493	1.00	0.00
ATOM	509	CB	VAL	51	3,971	-65,541	47,984	1.00	0.00
ATOM	510	CG1	VAL	51	2,842	-64,556	47,544	1.00	0.00
ATOM	511	CG2	VAL	51	3,936	-66,825	47,152	1.00	0.00
ATOM	512	H	VAL	51	5,214	-64,673	45,721	1.00	0.00
ATOM	513	HA	VAL	51	5,194	-63,962	48,630	1.00	0.00
ATOM	514	HB	VAL	51	3,800	-65,816	49,025	1.00	0.00
ATOM	515	HG11	VAL	51	1,898	-65,081	47,692	1.00	0.00



ATOM	516	HG12	VAL	51	2,918	-63,610	48,081	1.00	0.00
ATOM	517	HG13	VAL	51	2,966	-64,336	46,482	1.00	0.00
ATOM	518	HG21	VAL	51	4,411	-67,629	47,714	1.00	0.00
ATOM	519	HG22	VAL	51	4,534	-66,618	46,265	1.00	0.00
ATOM	520	HG23	VAL	51	2,913	-67,089	46,885	1.00	0.00
ATOM	521	N	GLU	52	7,622	-65,710	47,790	1.00	0.00
ATOM	522	CA	GLU	52	8,820	-66,460	48,214	1.00	0.00
ATOM	523	C	GLU	52	10,017	-65,561	48,489	1.00	0.00
ATOM	524	O	GLU	52	11,002	-66,016	48,989	1.00	0.00
ATOM	525	CB	GLU	52	9,304	-67,482	47,123	1.00	0.00
ATOM	526	CG	GLU	52	8,177	-68,552	46,808	1.00	0.00
ATOM	527	CD	GLU	52	8,499	-69,646	45,771	1.00	0.00
ATOM	528	OE1	GLU	52	9,322	-69,430	44,892	1.00	0.00
ATOM	529	OE2	GLU	52	7,814	-70,692	45,904	1.00	0.00
ATOM	530	H	GLU	52	7,535	-65,533	46,800	1.00	0.00
ATOM	531	HA	GLU	52	8,587	-66,952	49,159	1.00	0.00
ATOM	532	HB2	GLU	52	9,433	-66,973	46,168	1.00	0.00
ATOM	533	HB3	GLU	52	10,173	-68,056	47,443	1.00	0.00
ATOM	534	HG2	GLU	52	8,057	-69,032	47,778	1.00	0.00
ATOM	535	HG3	GLU	52	7,207	-68,086	46,631	1.00	0.00
ATOM	536	N	ASN	53	9,965	-64,262	48,093	1.00	0.00
ATOM	537	CA	ASN	53	11,087	-63,340	48,028	1.00	0.00
ATOM	538	C	ASN	53	10,677	-61,823	48,072	1.00	0.00
ATOM	539	O	ASN	53	11,466	-60,994	48,428	1.00	0.00
ATOM	540	CB	ASN	53	11,972	-63,666	46,778	1.00	0.00
ATOM	541	CG	ASN	53	11,255	-63,634	45,415	1.00	0.00
ATOM	542	ND2	ASN	53	11,587	-64,347	44,406	1.00	0.00
ATOM	543	OD1	ASN	53	10,329	-62,901	45,279	1.00	0.00
ATOM	544	H	ASN	53	9,098	-63,981	47,659	1.00	0.00
ATOM	545	HA	ASN	53	11,611	-63,483	48,973	1.00	0.00
ATOM	546	HB2	ASN	53	12,881	-63,072	46,689	1.00	0.00
ATOM	547	HB3	ASN	53	12,391	-64,662	46,930	1.00	0.00
ATOM	548	HD21	ASN	53	12,257	-65,100	44,479	1.00	0.00
ATOM	549	HD22	ASN	53	10,999	-64,245	43,591	1.00	0.00
ATOM	550	N	GLY	54	9,433	-61,539	47,728	1.00	0.00
ATOM	551	CA	GLY	54	8,869	-60,175	47,801	1.00	0.00
ATOM	552	C	GLY	54	9,285	-59,185	46,724	1.00	0.00
ATOM	553	O	GLY	54	9,205	-57,986	46,930	1.00	0.00
ATOM	554	H	GLY	54	8,754	-62,283	47,656	1.00	0.00
ATOM	555	HA2	GLY	54	7,785	-60,246	47,712	1.00	0.00
ATOM	556	HA3	GLY	54	9,147	-59,769	48,773	1.00	0.00
ATOM	557	N	ASP	55	9,935	-59,572	45,621	1.00	0.00
ATOM	558	CA	ASP	55	10,054	-58,855	44,393	1.00	0.00

ATOM	559	C	ASP	55	8,726	-58,221	43,946	1.00	0.00
ATOM	560	O	ASP	55	7,696	-58,884	44,103	1.00	0.00
ATOM	561	CB	ASP	55	10,590	-59,771	43,280	1.00	0.00
ATOM	562	CG	ASP	55	10,937	-59,153	41,889	1.00	0.00
ATOM	563	OD1	ASP	55	11,831	-58,278	41,893	1.00	0.00
ATOM	564	OD2	ASP	55	10,500	-59,693	40,872	1.00	0.00
ATOM	565	H	ASP	55	10,052	-60,559	45,442	1.00	0.00
ATOM	566	HA	ASP	55	10,777	-58,052	44,530	1.00	0.00
ATOM	567	HB2	ASP	55	11,556	-60,231	43,486	1.00	0.00
ATOM	568	HB3	ASP	55	9,909	-60,612	43,151	1.00	0.00
ATOM	569	N	ASN	56	8,775	-56,926	43,602	1.00	0.00
ATOM	570	CA	ASN	56	7,694	-55,931	43,487	1.00	0.00
ATOM	571	C	ASN	56	7,332	-55,841	42,030	1.00	0.00
ATOM	572	O	ASN	56	8,202	-55,592	41,181	1.00	0.00
ATOM	573	CB	ASN	56	8,075	-54,632	44,185	1.00	0.00
ATOM	574	CG	ASN	56	7,080	-53,515	43,859	1.00	0.00
ATOM	575	ND2	ASN	56	7,617	-52,341	43,873	1.00	0.00
ATOM	576	OD1	ASN	56	5,908	-53,661	43,478	1.00	0.00
ATOM	577	H	ASN	56	9,701	-56,597	43,371	1.00	0.00
ATOM	578	HA	ASN	56	6,829	-56,332	44,015	1.00	0.00
ATOM	579	HB2	ASN	56	7,978	-54,823	45,254	1.00	0.00
ATOM	580	HB3	ASN	56	9,099	-54,309	43,998	1.00	0.00
ATOM	581	HD21	ASN	56	8,606	-52,239	44,052	1.00	0.00
ATOM	582	HD22	ASN	56	6,977	-51,657	43,495	1.00	0.00
ATOM	583	N	VAL	57	6,047	-56,110	41,740	1.00	0.00
ATOM	584	CA	VAL	57	5,527	-56,271	40,423	1.00	0.00
ATOM	585	C	VAL	57	4,105	-55,730	40,279	1.00	0.00
ATOM	586	O	VAL	57	3,416	-55,342	41,277	1.00	0.00
ATOM	587	CB	VAL	57	5,560	-57,805	40,022	1.00	0.00
ATOM	588	CG1	VAL	57	6,887	-58,256	39,434	1.00	0.00
ATOM	589	CG2	VAL	57	5,095	-58,782	41,121	1.00	0.00
ATOM	590	H	VAL	57	5,465	-56,372	42,523	1.00	0.00
ATOM	591	HA	VAL	57	6,190	-55,784	39,709	1.00	0.00
ATOM	592	HB	VAL	57	4,863	-57,954	39,198	1.00	0.00
ATOM	593	HG11	VAL	57	6,707	-59,202	38,925	1.00	0.00
ATOM	594	HG12	VAL	57	7,138	-57,474	38,717	1.00	0.00
ATOM	595	HG13	VAL	57	7,679	-58,230	40,182	1.00	0.00
ATOM	596	HG21	VAL	57	5,735	-58,598	41,984	1.00	0.00
ATOM	597	HG22	VAL	57	5,165	-59,832	40,836	1.00	0.00
ATOM	598	HG23	VAL	57	4,057	-58,579	41,385	1.00	0.00
ATOM	599	N	ALA	58	3,621	-55,538	39,072	1.00	0.00
ATOM	600	CA	ALA	58	2,212	-55,243	38,790	1.00	0.00
ATOM	601	C	ALA	58	1,550	-56,596	38,297	1.00	0.00

ATOM	602	O	ALA	58	2,303	-57,358	37,691	1.00	0.00
ATOM	603	CB	ALA	58	2,036	-54,003	37,787	1.00	0.00
ATOM	604	H	ALA	58	4,146	-55,853	38,269	1.00	0.00
ATOM	605	HA	ALA	58	1,730	-54,876	39,695	1.00	0.00
ATOM	606	HB1	ALA	58	2,287	-53,081	38,313	1.00	0.00
ATOM	607	HB2	ALA	58	0.965	-53,977	37,588	1.00	0.00
ATOM	608	HB3	ALA	58	2,648	-54,215	36,911	1.00	0.00
ATOM	609	N	ILE	59	0.259	-56,889	38,503	1.00	0.00
ATOM	610	CA	ILE	59	-0.414	-57,970	37,670	1.00	0.00
ATOM	611	C	ILE	59	-1,585	-57,288	36,958	1.00	0.00
ATOM	612	O	ILE	59	-2,219	-56,478	37,563	1.00	0.00
ATOM	613	CB	ILE	59	-0.847	-59,119	38,592	1.00	0.00
ATOM	614	CG1	ILE	59	0.452	-59,911	38,930	1.00	0.00
ATOM	615	CG2	ILE	59	-1,815	-60,022	37,886	1.00	0.00
ATOM	616	CD1	ILE	59	0.151	-61,193	39,751	1.00	0.00
ATOM	617	H	ILE	59	-0.291	-56,271	39,083	1.00	0.00
ATOM	618	HA	ILE	59	0.148	-58,424	36,854	1.00	0.00
ATOM	619	HB	ILE	59	-1,311	-58,639	39,454	1.00	0.00
ATOM	620	HG12	ILE	59	0.969	-60,237	38,028	1.00	0.00
ATOM	621	HG13	ILE	59	1,125	-59,229	39,451	1.00	0.00
ATOM	622	HG21	ILE	59	-2,704	-59,492	37,546	1.00	0.00
ATOM	623	HG22	ILE	59	-2,100	-60,845	38,541	1.00	0.00
ATOM	624	HG23	ILE	59	-1,364	-60,385	36,962	1.00	0.00
ATOM	625	HD11	ILE	59	-0.475	-61,919	39,234	1.00	0.00
ATOM	626	HD12	ILE	59	-0.257	-60,896	40,718	1.00	0.00
ATOM	627	HD13	ILE	59	1,109	-61,660	39,979	1.00	0.00
ATOM	628	N	LYS	60	-1,792	-57,554	35,686	1.00	0.00
ATOM	629	CA	LYS	60	-2,995	-57,159	34,941	1.00	0.00
ATOM	630	C	LYS	60	-3,910	-58,369	34,722	1.00	0.00
ATOM	631	O	LYS	60	-3,485	-59,526	34,709	1.00	0.00
ATOM	632	CB	LYS	60	-2,595	-56,458	33,613	1.00	0.00
ATOM	633	CG	LYS	60	-3,865	-55,821	32,886	1.00	0.00
ATOM	634	CD	LYS	60	-3,347	-54,961	31,726	1.00	0.00
ATOM	635	CE	LYS	60	-4,468	-54,324	30,913	1.00	0.00
ATOM	636	NZ	LYS	60	-4,045	-53,470	29,825	1.00	0.00
ATOM	637	H	LYS	60	-1,098	-58,159	35,271	1.00	0.00
ATOM	638	HA	LYS	60	-3,565	-56,418	35,501	1.00	0.00
ATOM	639	HB2	LYS	60	-1,872	-55,667	33,809	1.00	0.00
ATOM	640	HB3	LYS	60	-2,141	-57,236	32,997	1.00	0.00
ATOM	641	HG2	LYS	60	-4,558	-56,554	32,473	1.00	0.00
ATOM	642	HG3	LYS	60	-4,401	-55,253	33,646	1.00	0.00
ATOM	643	HD2	LYS	60	-2,782	-54,134	32,158	1.00	0.00
ATOM	644	HD3	LYS	60	-2,628	-55,451	31,071	1.00	0.00

ATOM	645	HE2	LYS	60	-4,942	-55,167	30,410	1.00	0.00
ATOM	646	HE3	LYS	60	-5,101	-53,768	31,603	1.00	0.00
ATOM	647	HZ1	LYS	60	-4,826	-53,015	29,374	1.00	0.00
ATOM	648	HZ2	LYS	60	-3,516	-53,949	29,111	1.00	0.00
ATOM	649	HZ3	LYS	60	-3,558	-52,619	30,072	1.00	0.00
ATOM	650	N	VAL	61	-5,205	-58,110	34,810	1.00	0.00
ATOM	651	CA	VAL	61	-6,251	-59,197	34,867	1.00	0.00
ATOM	652	C	VAL	61	-7,605	-58,753	34,286	1.00	0.00
ATOM	653	O	VAL	61	-8,143	-57,651	34,468	1.00	0.00
ATOM	654	CB	VAL	61	-6,434	-59,777	36,268	1.00	0.00
ATOM	655	CG1	VAL	61	-6,353	-58,665	37,402	1.00	0.00
ATOM	656	CG2	VAL	61	-7,681	-60,662	36,469	1.00	0.00
ATOM	657	H	VAL	61	-5,537	-57,197	35,085	1.00	0.00
ATOM	658	HA	VAL	61	-5,905	-60,025	34,248	1.00	0.00
ATOM	659	HB	VAL	61	-5,552	-60,378	36,489	1.00	0.00
ATOM	660	HG11	VAL	61	-7,038	-57,923	36,992	1.00	0.00
ATOM	661	HG12	VAL	61	-6,762	-59,081	38,323	1.00	0.00
ATOM	662	HG13	VAL	61	-5,317	-58,365	37,556	1.00	0.00
ATOM	663	HG21	VAL	61	-7,566	-61,526	35,815	1.00	0.00
ATOM	664	HG22	VAL	61	-8,651	-60,203	36,274	1.00	0.00
ATOM	665	HG23	VAL	61	-7,628	-61,142	37,447	1.00	0.00
ATOM	666	N	ILE	62	-8,275	-59,762	33,611	1.00	0.00
ATOM	667	CA	ILE	62	-9,685	-59,537	33,214	1.00	0.00
ATOM	668	C	ILE	62	-10,525	-60,710	33,337	1.00	0.00
ATOM	669	O	ILE	62	-10,059	-61,866	33,247	1.00	0.00
ATOM	670	CB	ILE	62	-9,790	-58,949	31,715	1.00	0.00
ATOM	671	CG1	ILE	62	-11,201	-58,354	31,423	1.00	0.00
ATOM	672	CG2	ILE	62	-9,303	-59,956	30,613	1.00	0.00
ATOM	673	CD1	ILE	62	-11,295	-57,471	30,097	1.00	0.00
ATOM	674	H	ILE	62	-7,762	-60,600	33,378	1.00	0.00
ATOM	675	HA	ILE	62	-10,179	-58,775	33,815	1.00	0.00
ATOM	676	HB	ILE	62	-9,140	-58,075	31,761	1.00	0.00
ATOM	677	HG12	ILE	62	-11,947	-59,128	31,241	1.00	0.00
ATOM	678	HG13	ILE	62	-11,698	-57,728	32,165	1.00	0.00
ATOM	679	HG21	ILE	62	-9,483	-59,492	29,642	1.00	0.00
ATOM	680	HG22	ILE	62	-9,982	-60,804	30,693	1.00	0.00
ATOM	681	HG23	ILE	62	-8,270	-60,269	30,765	1.00	0.00
ATOM	682	HD11	ILE	62	-10,692	-58,002	29,361	1.00	0.00
ATOM	683	HD12	ILE	62	-10,847	-56,501	30,309	1.00	0.00
ATOM	684	HD13	ILE	62	-12,343	-57,321	29,838	1.00	0.00
ATOM	685	N	ASP	63	-11,852	-60,557	33,502	1.00	0.00
ATOM	686	CA	ASP	63	-12,732	-61,712	33,511	1.00	0.00
ATOM	687	C	ASP	63	-13,258	-61,970	32,107	1.00	0.00

ATOM	688	O	ASP	63	-13,787	-61,062	31,440	1.00	0.00
ATOM	689	CB	ASP	63	-13,744	-61,500	34,572	1.00	0.00
ATOM	690	CG	ASP	63	-14,612	-62,755	34,845	1.00	0.00
ATOM	691	OD1	ASP	63	-15,679	-62,960	34,196	1.00	0.00
ATOM	692	OD2	ASP	63	-14,205	-63,578	35,714	1.00	0.00
ATOM	693	H	ASP	63	-12,250	-59,632	33,581	1.00	0.00
ATOM	694	HA	ASP	63	-12,139	-62,619	33,632	1.00	0.00
ATOM	695	HB2	ASP	63	-13,256	-61,239	35,511	1.00	0.00
ATOM	696	HB3	ASP	63	-14,290	-60,612	34,252	1.00	0.00
ATOM	697	N	LYS	64	-12,931	-63,143	31,524	1.00	0.00
ATOM	698	CA	LYS	64	-12,879	-63,388	30,125	1.00	0.00
ATOM	699	C	LYS	64	-14,221	-63,296	29,483	1.00	0.00
ATOM	700	O	LYS	64	-14,314	-63,237	28,257	1.00	0.00
ATOM	701	CB	LYS	64	-12,294	-64,760	30,072	1.00	0.00
ATOM	702	CG	LYS	64	-10,728	-64,765	29,970	1.00	0.00
ATOM	703	CD	LYS	64	-10,090	-66,074	29,596	1.00	0.00
ATOM	704	CE	LYS	64	-10,632	-66,532	28,192	1.00	0.00
ATOM	705	NZ	LYS	64	-9,952	-67,762	27,770	1.00	0.00
ATOM	706	H	LYS	64	-12,423	-63,792	32,109	1.00	0.00
ATOM	707	HA	LYS	64	-12,195	-62,667	29,677	1.00	0.00
ATOM	708	HB2	LYS	64	-12,617	-65,392	30,899	1.00	0.00
ATOM	709	HB3	LYS	64	-12,714	-65,354	29,259	1.00	0.00
ATOM	710	HG2	LYS	64	-10,428	-63,997	29,256	1.00	0.00
ATOM	711	HG3	LYS	64	-10,321	-64,453	30,933	1.00	0.00
ATOM	712	HD2	LYS	64	-9,013	-65,909	29,571	1.00	0.00
ATOM	713	HD3	LYS	64	-10,408	-66,760	30,380	1.00	0.00
ATOM	714	HE2	LYS	64	-11,710	-66,659	28,290	1.00	0.00
ATOM	715	HE3	LYS	64	-10,424	-65,743	27,468	1.00	0.00
ATOM	716	HZ1	LYS	64	-10,185	-68,032	26,824	1.00	0.00
ATOM	717	HZ2	LYS	64	-10,346	-68,440	28,406	1.00	0.00
ATOM	718	HZ3	LYS	64	-8,949	-67,727	27,880	1.00	0.00
ATOM	719	N	GLU	65	-15,334	-63,380	30,187	1.00	0.00
ATOM	720	CA	GLU	65	-16,666	-63,090	29,735	1.00	0.00
ATOM	721	C	GLU	65	-16,699	-61,742	28,995	1.00	0.00
ATOM	722	O	GLU	65	-17,294	-61,742	27,929	1.00	0.00
ATOM	723	CB	GLU	65	-17,629	-63,138	30,958	1.00	0.00
ATOM	724	CG	GLU	65	-19,120	-63,020	30,491	1.00	0.00
ATOM	725	CD	GLU	65	-20,101	-62,812	31,683	1.00	0.00
ATOM	726	OE1	GLU	65	-20,727	-63,781	32,092	1.00	0.00
ATOM	727	OE2	GLU	65	-20,158	-61,671	32,256	1.00	0.00
ATOM	728	H	GLU	65	-15,098	-63,557	31,154	1.00	0.00
ATOM	729	HA	GLU	65	-16,939	-63,904	29,063	1.00	0.00
ATOM	730	HB2	GLU	65	-17,404	-64,060	31,495	1.00	0.00

ATOM	731	HB3	GLU	65	-17,361	-62,353	31,665	1.00	0.00
ATOM	732	HG2	GLU	65	-19,251	-62,144	29,854	1.00	0.00
ATOM	733	HG3	GLU	65	-19,392	-63,904	29,913	1.00	0.00
ATOM	734	N	LYS	66	-15,935	-60,733	29,393	1.00	0.00
ATOM	735	CA	LYS	66	-15,887	-59,371	28,768	1.00	0.00
ATOM	736	C	LYS	66	-15,315	-59,433	27,360	1.00	0.00
ATOM	737	O	LYS	66	-15,554	-58,516	26,605	1.00	0.00
ATOM	738	CB	LYS	66	-15,117	-58,439	29,713	1.00	0.00
ATOM	739	CG	LYS	66	-15,676	-58,303	31,085	1.00	0.00
ATOM	740	CD	LYS	66	-15,178	-57,058	31,808	1.00	0.00
ATOM	741	CE	LYS	66	-16,036	-56,735	32,998	1.00	0.00
ATOM	742	NZ	LYS	66	-16,021	-57,715	34,098	1.00	0.00
ATOM	743	H	LYS	66	-15,481	-60,946	30,270	1.00	0.00
ATOM	744	HA	LYS	66	-16,883	-58,935	28,701	1.00	0.00
ATOM	745	HB2	LYS	66	-14,072	-58,744	29,774	1.00	0.00
ATOM	746	HB3	LYS	66	-15,183	-57,465	29,226	1.00	0.00
ATOM	747	HG2	LYS	66	-16,765	-58,333	31,045	1.00	0.00
ATOM	748	HG3	LYS	66	-15,335	-59,155	31,671	1.00	0.00
ATOM	749	HD2	LYS	66	-14,194	-57,229	32,244	1.00	0.00
ATOM	750	HD3	LYS	66	-15,245	-56,279	31,049	1.00	0.00
ATOM	751	HE2	LYS	66	-15,582	-55,826	33,393	1.00	0.00
ATOM	752	HE3	LYS	66	-17,057	-56,634	32,629	1.00	0.00
ATOM	753	HZ1	LYS	66	-16,687	-57,450	34,810	1.00	0.00
ATOM	754	HZ2	LYS	66	-15,161	-57,803	34,621	1.00	0.00
ATOM	755	HZ3	LYS	66	-16,312	-58,609	33,728	1.00	0.00
ATOM	756	N	VAL	67	-14,681	-60,516	26,970	1.00	0.00
ATOM	757	CA	VAL	67	-14,188	-60,831	25,621	1.00	0.00
ATOM	758	C	VAL	67	-14,831	-62,029	24,864	1.00	0.00
ATOM	759	O	VAL	67	-14,538	-62,345	23,713	1.00	0.00
ATOM	760	CB	VAL	67	-12,692	-60,894	25,546	1.00	0.00
ATOM	761	CG1	VAL	67	-12,148	-59,524	26,008	1.00	0.00
ATOM	762	CG2	VAL	67	-12,094	-62,019	26,466	1.00	0.00
ATOM	763	H	VAL	67	-14,465	-61,204	27,677	1.00	0.00
ATOM	764	HA	VAL	67	-14,469	-59,963	25,026	1.00	0.00
ATOM	765	HB	VAL	67	-12,409	-60,881	24,494	1.00	0.00
ATOM	766	HG11	VAL	67	-12,260	-59,279	27,064	1.00	0.00
ATOM	767	HG12	VAL	67	-11,114	-59,433	25,678	1.00	0.00
ATOM	768	HG13	VAL	67	-12,782	-58,776	25,532	1.00	0.00
ATOM	769	HG21	VAL	67	-12,378	-62,018	27,518	1.00	0.00
ATOM	770	HG22	VAL	67	-11,019	-61,843	26,444	1.00	0.00
ATOM	771	HG23	VAL	67	-12,296	-62,972	25,977	1.00	0.00
ATOM	772	N	LEU	68	-15,876	-62,662	25,414	1.00	0.00
ATOM	773	CA	LEU	68	-16,509	-63,933	24,993	1.00	0.00

ATOM	774	C	LEU	68	-17,246	-63,839	23,631	1.00	0.00
ATOM	775	O	LEU	68	-17,405	-64,857	22,959	1.00	0.00
ATOM	776	CB	LEU	68	-17,390	-64,462	26,143	1.00	0.00
ATOM	777	CG	LEU	68	-17,970	-65,876	25,783	1.00	0.00
ATOM	778	CD1	LEU	68	-16,981	-67,021	25,812	1.00	0.00
ATOM	779	CD2	LEU	68	-19,147	-66,245	26,709	1.00	0.00
ATOM	780	H	LEU	68	-16,106	-62,369	26,352	1.00	0.00
ATOM	781	HA	LEU	68	-15,671	-64,624	24,889	1.00	0.00
ATOM	782	HB2	LEU	68	-16,751	-64,610	27,013	1.00	0.00
ATOM	783	HB3	LEU	68	-18,242	-63,791	26,249	1.00	0.00
ATOM	784	HG	LEU	68	-18,451	-65,869	24,806	1.00	0.00
ATOM	785	HD11	LEU	68	-16,767	-67,228	26,860	1.00	0.00
ATOM	786	HD12	LEU	68	-16,012	-66,915	25,323	1.00	0.00
ATOM	787	HD13	LEU	68	-17,448	-67,908	25,383	1.00	0.00
ATOM	788	HD21	LEU	68	-18,820	-66,476	27,723	1.00	0.00
ATOM	789	HD22	LEU	68	-19,844	-65,414	26,814	1.00	0.00
ATOM	790	HD23	LEU	68	-19,668	-67,117	26,313	1.00	0.00
ATOM	791	N	LYS	69	-17,623	-62,609	23,224	1.00	0.00
ATOM	792	CA	LYS	69	-18,496	-62,198	22,088	1.00	0.00
ATOM	793	C	LYS	69	-17,927	-60,843	21,499	1.00	0.00
ATOM	794	O	LYS	69	-18,696	-60,086	20,986	1.00	0.00
ATOM	795	CB	LYS	69	-19,941	-62,159	22,507	1.00	0.00
ATOM	796	CG	LYS	69	-20,522	-63,458	23,027	1.00	0.00
ATOM	797	CD	LYS	69	-22,090	-63,238	23,212	1.00	0.00
ATOM	798	CE	LYS	69	-22,677	-64,344	23,962	1.00	0.00
ATOM	799	NZ	LYS	69	-24,142	-64,201	24,076	1.00	0.00
ATOM	800	H	LYS	69	-17,395	-61,976	23,976	1.00	0.00
ATOM	801	HA	LYS	69	-18,269	-62,848	21,243	1.00	0.00
ATOM	802	HB2	LYS	69	-19,861	-61,416	23,301	1.00	0.00
ATOM	803	HB3	LYS	69	-20,450	-61,645	21,691	1.00	0.00
ATOM	804	HG2	LYS	69	-20,455	-64,299	22,338	1.00	0.00
ATOM	805	HG3	LYS	69	-19,999	-63,660	23,961	1.00	0.00
ATOM	806	HD2	LYS	69	-22,213	-62,348	23,830	1.00	0.00
ATOM	807	HD3	LYS	69	-22,569	-63,102	22,242	1.00	0.00
ATOM	808	HE2	LYS	69	-22,420	-65,244	23,403	1.00	0.00
ATOM	809	HE3	LYS	69	-22,235	-64,499	24,947	1.00	0.00
ATOM	810	HZ1	LYS	69	-24,444	-63,242	24,176	1.00	0.00
ATOM	811	HZ2	LYS	69	-24,445	-64,706	24,897	1.00	0.00
ATOM	812	HZ3	LYS	69	-24,639	-64,522	23,257	1.00	0.00
ATOM	813	N	ASN	70	-16,654	-60,551	21,715	1.00	0.00
ATOM	814	CA	ASN	70	-15,975	-59,390	21,130	1.00	0.00
ATOM	815	C	ASN	70	-14,663	-59,736	20,385	1.00	0.00
ATOM	816	O	ASN	70	-13,692	-60,267	20,964	1.00	0.00

ATOM	817	CB	ASN	70	-15,626	-58,423	22,337	1.00	0.00
ATOM	818	CG	ASN	70	-15,328	-56,996	21,879	1.00	0.00
ATOM	819	ND2	ASN	70	-15,604	-56,020	22,687	1.00	0.00
ATOM	820	OD1	ASN	70	-14,800	-56,815	20,760	1.00	0.00
ATOM	821	H	ASN	70	-16,001	-61,227	22,084	1.00	0.00
ATOM	822	HA	ASN	70	-16,653	-58,858	20,463	1.00	0.00
ATOM	823	HB2	ASN	70	-16,530	-58,438	22,945	1.00	0.00
ATOM	824	HB3	ASN	70	-14,854	-58,959	22,890	1.00	0.00
ATOM	825	HD21	ASN	70	-16,160	-56,107	23,526	1.00	0.00
ATOM	826	HD22	ASN	70	-15,511	-55,088	22,312	1.00	0.00
ATOM	827	N	LYS	71	-14,580	-59,263	19,090	1.00	0.00
ATOM	828	CA	LYS	71	-13,264	-59,246	18,295	1.00	0.00
ATOM	829	C	LYS	71	-12,028	-58,742	19,010	1.00	0.00
ATOM	830	O	LYS	71	-10,876	-58,913	18,579	1.00	0.00
ATOM	831	CB	LYS	71	-13,565	-58,611	16,970	1.00	0.00
ATOM	832	CG	LYS	71	-13,922	-57,114	16,766	1.00	0.00
ATOM	833	CD	LYS	71	-14,220	-56,681	15,306	1.00	0.00
ATOM	834	CE	LYS	71	-13,088	-56,997	14,282	1.00	0.00
ATOM	835	NZ	LYS	71	-11,717	-56,455	14,487	1.00	0.00
ATOM	836	H	LYS	71	-15,328	-58,675	18,751	1.00	0.00
ATOM	837	HA	LYS	71	-12,953	-60,281	18,156	1.00	0.00
ATOM	838	HB2	LYS	71	-12,741	-58,802	16,283	1.00	0.00
ATOM	839	HB3	LYS	71	-14,379	-59,145	16,481	1.00	0.00
ATOM	840	HG2	LYS	71	-14,851	-56,955	17,315	1.00	0.00
ATOM	841	HG3	LYS	71	-13,207	-56,427	17,217	1.00	0.00
ATOM	842	HD2	LYS	71	-15,100	-57,243	14,993	1.00	0.00
ATOM	843	HD3	LYS	71	-14,441	-55,615	15,356	1.00	0.00
ATOM	844	HE2	LYS	71	-12,992	-58,080	14,212	1.00	0.00
ATOM	845	HE3	LYS	71	-13,454	-56,723	13,293	1.00	0.00
ATOM	846	HZ1	LYS	71	-11,815	-55,453	14,565	1.00	0.00
ATOM	847	HZ2	LYS	71	-11,091	-56,579	13,703	1.00	0.00
ATOM	848	HZ3	LYS	71	-11,265	-56,788	15,327	1.00	0.00
ATOM	849	N	MET	72	-12,219	-57,927	20,033	1.00	0.00
ATOM	850	CA	MET	72	-11,151	-57,278	20,796	1.00	0.00
ATOM	851	C	MET	72	-10,199	-58,209	21,616	1.00	0.00
ATOM	852	O	MET	72	-9,191	-57,881	22,141	1.00	0.00
ATOM	853	CB	MET	72	-11,880	-56,176	21,569	1.00	0.00
ATOM	854	CG	MET	72	-10,966	-55,375	22,546	1.00	0.00
ATOM	855	SD	MET	72	-11,745	-54,023	23,536	1.00	0.00
ATOM	856	CE	MET	72	-12,313	-52,804	22,282	1.00	0.00
ATOM	857	H	MET	72	-13,172	-57,785	20,335	1.00	0.00
ATOM	858	HA	MET	72	-10,602	-56,669	20,075	1.00	0.00
ATOM	859	HB2	MET	72	-12,253	-55,500	20,800	1.00	0.00



ATOM	860	HB3	MET	72	-12,725	-56,604	22,109	1.00	0.00
ATOM	861	HG2	MET	72	-10,577	-56,049	23,309	1.00	0.00
ATOM	862	HG3	MET	72	-10,159	-54,920	21,970	1.00	0.00
ATOM	863	HE1	MET	72	-13,274	-53,074	21,843	1.00	0.00
ATOM	864	HE2	MET	72	-12,383	-51,829	22,765	1.00	0.00
ATOM	865	HE3	MET	72	-11,566	-52,733	21,490	1.00	0.00
ATOM	866	N	ILE	73	-10,575	-59,452	21,750	1.00	0.00
ATOM	867	CA	ILE	73	-9,792	-60,547	22,328	1.00	0.00
ATOM	868	C	ILE	73	-8,340	-60,705	21,658	1.00	0.00
ATOM	869	O	ILE	73	-7,326	-60,666	22,428	1.00	0.00
ATOM	870	CB	ILE	73	-10,580	-61,904	22,332	1.00	0.00
ATOM	871	CG1	ILE	73	-9,909	-62,960	23,292	1.00	0.00
ATOM	872	CG2	ILE	73	-10,747	-62,512	20,955	1.00	0.00
ATOM	873	CD1	ILE	73	-10,611	-64,304	23,416	1.00	0.00
ATOM	874	H	ILE	73	-11,522	-59,692	21,491	1.00	0.00
ATOM	875	HA	ILE	73	-9,794	-60,325	23,395	1.00	0.00
ATOM	876	HB	ILE	73	-11,637	-61,773	22,564	1.00	0.00
ATOM	877	HG12	ILE	73	-8,895	-63,168	22,949	1.00	0.00
ATOM	878	HG13	ILE	73	-9,931	-62,558	24,305	1.00	0.00
ATOM	879	HG21	ILE	73	-11,010	-61,767	20,204	1.00	0.00
ATOM	880	HG22	ILE	73	-11,561	-63,231	21,045	1.00	0.00
ATOM	881	HG23	ILE	73	-9,895	-63,104	20,625	1.00	0.00
ATOM	882	HD11	ILE	73	-11,680	-64,095	23,457	1.00	0.00
ATOM	883	HD12	ILE	73	-10,349	-64,828	24,335	1.00	0.00
ATOM	884	HD13	ILE	73	-10,461	-64,898	22,514	1.00	0.00
ATOM	885	N	ALA	74	-8,253	-60,642	20,359	1.00	0.00
ATOM	886	CA	ALA	74	-7,000	-60,656	19,550	1.00	0.00
ATOM	887	C	ALA	74	-6,066	-59,473	19,862	1.00	0.00
ATOM	888	O	ALA	74	-4,878	-59,564	19,421	1.00	0.00
ATOM	889	CB	ALA	74	-7,564	-60,627	18,178	1.00	0.00
ATOM	890	H	ALA	74	-9,120	-60,371	19,917	1.00	0.00
ATOM	891	HA	ALA	74	-6,414	-61,556	19,744	1.00	0.00
ATOM	892	HB1	ALA	74	-8,109	-59,699	18,005	1.00	0.00
ATOM	893	HB2	ALA	74	-8,177	-61,527	18,145	1.00	0.00
ATOM	894	HB3	ALA	74	-6,735	-60,725	17,475	1.00	0.00
ATOM	895	N	GLN	75	-6,584	-58,346	20,448	1.00	0.00
ATOM	896	CA	GLN	75	-5,980	-57,025	20,544	1.00	0.00
ATOM	897	C	GLN	75	-5,390	-56,853	21,951	1.00	0.00
ATOM	898	O	GLN	75	-4,251	-56,422	22,173	1.00	0.00
ATOM	899	CB	GLN	75	-7,026	-55,953	20,089	1.00	0.00
ATOM	900	CG	GLN	75	-7,881	-56,268	18,863	1.00	0.00
ATOM	901	CD	GLN	75	-8,736	-55,096	18,469	1.00	0.00
ATOM	902	NE2	GLN	75	-9,641	-55,378	17,559	1.00	0.00

ATOM	903	OE1	GLN	75	-8,707	-53,973	18,922	1.00	0.00
ATOM	904	H	GLN	75	-7,520	-58,367	20,826	1.00	0.00
ATOM	905	HA	GLN	75	-5,060	-56,948	19,964	1.00	0.00
ATOM	906	HB2	GLN	75	-7,708	-55,739	20,911	1.00	0.00
ATOM	907	HB3	GLN	75	-6,536	-54,990	19,938	1.00	0.00
ATOM	908	HG2	GLN	75	-7,254	-56,382	17,978	1.00	0.00
ATOM	909	HG3	GLN	75	-8,400	-57,204	19,065	1.00	0.00
ATOM	910	HE21	GLN	75	-10,288	-54,627	17,360	1.00	0.00
ATOM	911	HE22	GLN	75	-9,784	-56,273	17,114	1.00	0.00
ATOM	912	N	ILE	76	-6,133	-57,276	23,043	1.00	0.00
ATOM	913	CA	ILE	76	-5,560	-57,755	24,305	1.00	0.00
ATOM	914	C	ILE	76	-4,419	-58,706	24,049	1.00	0.00
ATOM	915	O	ILE	76	-3,323	-58,549	24,641	1.00	0.00
ATOM	916	CB	ILE	76	-6,722	-58,293	25,229	1.00	0.00
ATOM	917	CG1	ILE	76	-7,501	-57,020	25,705	1.00	0.00
ATOM	918	CG2	ILE	76	-6,083	-58,943	26,489	1.00	0.00
ATOM	919	CD1	ILE	76	-8,829	-57,231	26,422	1.00	0.00
ATOM	920	H	ILE	76	-7,082	-57,532	22,813	1.00	0.00
ATOM	921	HA	ILE	76	-5,075	-56,927	24,823	1.00	0.00
ATOM	922	HB	ILE	76	-7,385	-59,004	24,735	1.00	0.00
ATOM	923	HG12	ILE	76	-6,859	-56,322	26,241	1.00	0.00
ATOM	924	HG13	ILE	76	-7,737	-56,479	24,788	1.00	0.00
ATOM	925	HG21	ILE	76	-5,507	-59,838	26,252	1.00	0.00
ATOM	926	HG22	ILE	76	-6,889	-59,315	27,123	1.00	0.00
ATOM	927	HG23	ILE	76	-5,501	-58,182	27,007	1.00	0.00
ATOM	928	HD11	ILE	76	-9,412	-56,317	26,541	1.00	0.00
ATOM	929	HD12	ILE	76	-8,558	-57,601	27,410	1.00	0.00
ATOM	930	HD13	ILE	76	-9,474	-58,008	26,010	1.00	0.00
ATOM	931	N	LYS	77	-4,582	-59,684	23,162	1.00	0.00
ATOM	932	CA	LYS	77	-3,499	-60,677	22,805	1.00	0.00
ATOM	933	C	LYS	77	-2,297	-59,905	22,174	1.00	0.00
ATOM	934	O	LYS	77	-1,153	-60,157	22,569	1.00	0.00
ATOM	935	CB	LYS	77	-4,015	-61,817	21,909	1.00	0.00
ATOM	936	CG	LYS	77	-4,771	-62,968	22,624	1.00	0.00
ATOM	937	CD	LYS	77	-4,974	-64,153	21,624	1.00	0.00
ATOM	938	CE	LYS	77	-5,854	-65,121	22,434	1.00	0.00
ATOM	939	NZ	LYS	77	-6,383	-66,074	21,411	1.00	0.00
ATOM	940	H	LYS	77	-5,528	-59,938	22,917	1.00	0.00
ATOM	941	HA	LYS	77	-3,067	-61,117	23,704	1.00	0.00
ATOM	942	HB2	LYS	77	-4,629	-61,495	21,068	1.00	0.00
ATOM	943	HB3	LYS	77	-3,118	-62,304	21,525	1.00	0.00
ATOM	944	HG2	LYS	77	-4,153	-63,274	23,467	1.00	0.00
ATOM	945	HG3	LYS	77	-5,683	-62,642	23,124	1.00	0.00

ATOM	946	HD2	LYS	77	-5,469	-63,901	20,687	1.00	0.00
ATOM	947	HD3	LYS	77	-4,021	-64,647	21,439	1.00	0.00
ATOM	948	HE2	LYS	77	-5,336	-65,508	23,311	1.00	0.00
ATOM	949	HE3	LYS	77	-6,696	-64,537	22,808	1.00	0.00
ATOM	950	HZ1	LYS	77	-7,118	-65,580	20,924	1.00	0.00
ATOM	951	HZ2	LYS	77	-6,828	-66,866	21,851	1.00	0.00
ATOM	952	HZ3	LYS	77	-5,651	-66,405	20,800	1.00	0.00
ATOM	953	N	ARG	78	-2,534	-58,909	21,316	1.00	0.00
ATOM	954	CA	ARG	78	-1,380	-58,103	20,741	1.00	0.00
ATOM	955	C	ARG	78	-0.557	-57,366	21,867	1.00	0.00
ATOM	956	O	ARG	78	0.691	-57,264	21,781	1.00	0.00
ATOM	957	CB	ARG	78	-1,989	-57,024	19,793	1.00	0.00
ATOM	958	CG	ARG	78	-0.874	-56,265	18,941	1.00	0.00
ATOM	959	CD	ARG	78	-1,394	-55,318	17,846	1.00	0.00
ATOM	960	NE	ARG	78	-1,739	-56,097	16,619	1.00	0.00
ATOM	961	CZ	ARG	78	-2,118	-55,654	15,417	1.00	0.00
ATOM	962	NH1	ARG	78	-2,333	-54,429	15,084	1.00	0.00
ATOM	963	NH2	ARG	78	-2,414	-56,450	14,415	1.00	0.00
ATOM	964	H	ARG	78	-3,451	-58,789	20,909	1.00	0.00
ATOM	965	HA	ARG	78	-0.672	-58,717	20,183	1.00	0.00
ATOM	966	HB2	ARG	78	-2,697	-57,536	19,142	1.00	0.00
ATOM	967	HB3	ARG	78	-2,518	-56,301	20,414	1.00	0.00
ATOM	968	HG2	ARG	78	-0.406	-55,626	19,690	1.00	0.00
ATOM	969	HG3	ARG	78	-0.118	-56,914	18,499	1.00	0.00
ATOM	970	HD2	ARG	78	-2,267	-54,800	18,243	1.00	0.00
ATOM	971	HD3	ARG	78	-0.697	-54,555	17,501	1.00	0.00
ATOM	972	HE	ARG	78	-1,579	-57,095	16,601	1.00	0.00
ATOM	973	HH11	ARG	78	-2,175	-53,711	15,777	1.00	0.00
ATOM	974	HH12	ARG	78	-2,894	-54,232	14,267	1.00	0.00
ATOM	975	HH21	ARG	78	-2,279	-57,432	14,608	1.00	0.00
ATOM	976	HH22	ARG	78	-2,450	-56,120	13,460	1.00	0.00
ATOM	977	N	GLU	79	-1,207	-56,840	22,883	1.00	0.00
ATOM	978	CA	GLU	79	-0.507	-56,166	23,951	1.00	0.00
ATOM	979	C	GLU	79	0.421	-57,118	24,682	1.00	0.00
ATOM	980	O	GLU	79	1,563	-56,783	24,977	1.00	0.00
ATOM	981	CB	GLU	79	-1,535	-55,498	24,900	1.00	0.00
ATOM	982	CG	GLU	79	-0.797	-54,857	26,153	1.00	0.00
ATOM	983	CD	GLU	79	-1,875	-54,030	26,955	1.00	0.00
ATOM	984	OE1	GLU	79	-2,381	-54,556	27,999	1.00	0.00
ATOM	985	OE2	GLU	79	-2,296	-52,871	26,564	1.00	0.00
ATOM	986	H	GLU	79	-2,215	-56,858	22,829	1.00	0.00
ATOM	987	HA	GLU	79	0.225	-55,431	23,618	1.00	0.00
ATOM	988	HB2	GLU	79	-2,056	-54,713	24,355	1.00	0.00

ATOM	989	HB3	GLU	79	-2,273	-56,248	25,187	1.00	0.00
ATOM	990	HG2	GLU	79	-0.530	-55,621	26,882	1.00	0.00
ATOM	991	HG3	GLU	79	0.098	-54,309	25,854	1.00	0.00
ATOM	992	N	ILE	80	-0.039	-58,365	24,990	1.00	0.00
ATOM	993	CA	ILE	80	0.639	-59,320	25,868	1.00	0.00
ATOM	994	C	ILE	80	1,881	-59,950	25,056	1.00	0.00
ATOM	995	O	ILE	80	2,939	-60,144	25,660	1.00	0.00
ATOM	996	CB	ILE	80	-0.336	-60,371	26,396	1.00	0.00
ATOM	997	CG1	ILE	80	-1,421	-59,611	27,193	1.00	0.00
ATOM	998	CG2	ILE	80	0.363	-61,437	27,375	1.00	0.00
ATOM	999	CD1	ILE	80	-2,697	-60,422	27,417	1.00	0.00
ATOM	1000	H	ILE	80	-0.919	-58,597	24,552	1.00	0.00
ATOM	1001	HA	ILE	80	1,006	-58,775	26,737	1.00	0.00
ATOM	1002	HB	ILE	80	-0.969	-60,872	25,664	1.00	0.00
ATOM	1003	HG12	ILE	80	-1,050	-59,223	28,141	1.00	0.00
ATOM	1004	HG13	ILE	80	-1,743	-58,756	26,599	1.00	0.00
ATOM	1005	HG21	ILE	80	-0.425	-62,066	27,790	1.00	0.00
ATOM	1006	HG22	ILE	80	0.861	-60,950	28,213	1.00	0.00
ATOM	1007	HG23	ILE	80	1,085	-62,020	26,804	1.00	0.00
ATOM	1008	HD11	ILE	80	-2,586	-61,023	28,319	1.00	0.00
ATOM	1009	HD12	ILE	80	-2,964	-61,057	26,571	1.00	0.00
ATOM	1010	HD13	ILE	80	-3,492	-59,683	27,517	1.00	0.00
ATOM	1011	N	SER	81	1,770	-60,190	23,740	1.00	0.00
ATOM	1012	CA	SER	81	3,031	-60,427	23,008	1.00	0.00
ATOM	1013	C	SER	81	4,077	-59,219	22,803	1.00	0.00
ATOM	1014	O	SER	81	5,258	-59,419	22,672	1.00	0.00
ATOM	1015	CB	SER	81	2,671	-60,849	21,613	1.00	0.00
ATOM	1016	OG	SER	81	1,902	-59,905	20,891	1.00	0.00
ATOM	1017	H	SER	81	0.917	-60,011	23,228	1.00	0.00
ATOM	1018	HA	SER	81	3,638	-61,170	23,527	1.00	0.00
ATOM	1019	HB2	SER	81	3,577	-61,071	21,048	1.00	0.00
ATOM	1020	HB3	SER	81	2,111	-61,773	21,755	1.00	0.00
ATOM	1021	HG	SER	81	1,391	-60,392	20,240	1.00	0.00
ATOM	1022	N	THR	82	3,568	-57,973	22,770	1.00	0.00
ATOM	1023	CA	THR	82	4,423	-56,766	22,576	1.00	0.00
ATOM	1024	C	THR	82	5,309	-56,462	23,791	1.00	0.00
ATOM	1025	O	THR	82	6,517	-56,257	23,758	1.00	0.00
ATOM	1026	CB	THR	82	3,637	-55,612	22,008	1.00	0.00
ATOM	1027	CG2	THR	82	4,359	-54,358	21,491	1.00	0.00
ATOM	1028	OG1	THR	82	2,912	-55,994	20,869	1.00	0.00
ATOM	1029	H	THR	82	2,569	-57,872	22,874	1.00	0.00
ATOM	1030	HA	THR	82	5,098	-56,979	21,747	1.00	0.00
ATOM	1031	HB	THR	82	2,897	-55,401	22,779	1.00	0.00

ATOM	1032	HG1	THR	82	2,204	-56,463	21,316	1.00	0.00
ATOM	1033	HG21	THR	82	3,661	-53,543	21,304	1.00	0.00
ATOM	1034	HG22	THR	82	4,959	-54,690	20,643	1.00	0.00
ATOM	1035	HG23	THR	82	5,013	-54,030	22,299	1.00	0.00
ATOM	1036	N	MET	83	4,785	-56,650	25,025	1.00	0.00
ATOM	1037	CA	MET	83	5,551	-56,519	26,324	1.00	0.00
ATOM	1038	C	MET	83	6,635	-57,587	26,632	1.00	0.00
ATOM	1039	O	MET	83	7,167	-57,536	27,742	1.00	0.00
ATOM	1040	CB	MET	83	4,469	-56,590	27,420	1.00	0.00
ATOM	1041	CG	MET	83	3,584	-55,307	27,305	1.00	0.00
ATOM	1042	SD	MET	83	2,196	-55,628	28,385	1.00	0.00
ATOM	1043	CE	MET	83	1,447	-54,002	28,413	1.00	0.00
ATOM	1044	H	MET	83	3,801	-56,874	25,014	1.00	0.00
ATOM	1045	HA	MET	83	6,051	-55,563	26,480	1.00	0.00
ATOM	1046	HB2	MET	83	3,844	-57,471	27,273	1.00	0.00
ATOM	1047	HB3	MET	83	4,987	-56,470	28,372	1.00	0.00
ATOM	1048	HG2	MET	83	4,116	-54,378	27,511	1.00	0.00
ATOM	1049	HG3	MET	83	3,233	-55,125	26,290	1.00	0.00
ATOM	1050	HE1	MET	83	2,141	-53,273	28,832	1.00	0.00
ATOM	1051	HE2	MET	83	1,278	-53,641	27,398	1.00	0.00
ATOM	1052	HE3	MET	83	0.457	-54,049	28,865	1.00	0.00
ATOM	1053	N	LYS	84	7,004	-58,491	25,733	1.00	0.00
ATOM	1054	CA	LYS	84	8,284	-59,207	25,693	1.00	0.00
ATOM	1055	C	LYS	84	8,817	-59,345	24,245	1.00	0.00
ATOM	1056	O	LYS	84	9,519	-60,317	24,015	1.00	0.00
ATOM	1057	CB	LYS	84	8,100	-60,582	26,375	1.00	0.00
ATOM	1058	CG	LYS	84	7,115	-61,615	25,839	1.00	0.00
ATOM	1059	CD	LYS	84	7,131	-62,991	26,543	1.00	0.00
ATOM	1060	CE	LYS	84	6,917	-62,882	28,022	1.00	0.00
ATOM	1061	NZ	LYS	84	6,776	-64,222	28,643	1.00	0.00
ATOM	1062	H	LYS	84	6,388	-58,635	24,945	1.00	0.00
ATOM	1063	HA	LYS	84	9,063	-58,734	26,289	1.00	0.00
ATOM	1064	HB2	LYS	84	9,091	-61,035	26,434	1.00	0.00
ATOM	1065	HB3	LYS	84	7,863	-60,420	27,426	1.00	0.00
ATOM	1066	HG2	LYS	84	6,111	-61,240	26,034	1.00	0.00
ATOM	1067	HG3	LYS	84	7,281	-61,643	24,761	1.00	0.00
ATOM	1068	HD2	LYS	84	6,406	-63,634	26,042	1.00	0.00
ATOM	1069	HD3	LYS	84	8,060	-63,538	26,384	1.00	0.00
ATOM	1070	HE2	LYS	84	7,732	-62,309	28,465	1.00	0.00
ATOM	1071	HE3	LYS	84	5,959	-62,381	28,162	1.00	0.00
ATOM	1072	HZ1	LYS	84	6,677	-64,135	29,645	1.00	0.00
ATOM	1073	HZ2	LYS	84	7,666	-64,699	28,606	1.00	0.00
ATOM	1074	HZ3	LYS	84	6,015	-64,702	28,185	1.00	0.00

ATOM	1075	N	LEU	85	8,616	-58,369	23,358	1.00	0.00
ATOM	1076	CA	LEU	85	9,105	-58,439	21,987	1.00	0.00
ATOM	1077	C	LEU	85	10,069	-57,343	21,456	1.00	0.00
ATOM	1078	O	LEU	85	10,903	-57,589	20,636	1.00	0.00
ATOM	1079	CB	LEU	85	7,905	-58,607	21,055	1.00	0.00
ATOM	1080	CG	LEU	85	8,119	-58,701	19,563	1.00	0.00
ATOM	1081	CD1	LEU	85	9,118	-59,803	19,074	1.00	0.00
ATOM	1082	CD2	LEU	85	6,850	-58,692	18,769	1.00	0.00
ATOM	1083	H	LEU	85	8,002	-57,624	23,652	1.00	0.00
ATOM	1084	HA	LEU	85	9,784	-59,292	21,996	1.00	0.00
ATOM	1085	HB2	LEU	85	7,481	-59,564	21,358	1.00	0.00
ATOM	1086	HB3	LEU	85	7,202	-57,819	21,326	1.00	0.00
ATOM	1087	HG	LEU	85	8,634	-57,761	19,363	1.00	0.00
ATOM	1088	HD11	LEU	85	9,197	-60,646	19,762	1.00	0.00
ATOM	1089	HD12	LEU	85	10,104	-59,341	19,010	1.00	0.00
ATOM	1090	HD13	LEU	85	8,826	-60,186	18,096	1.00	0.00
ATOM	1091	HD21	LEU	85	6,387	-59,677	18,821	1.00	0.00
ATOM	1092	HD22	LEU	85	6,064	-57,977	19,014	1.00	0.00
ATOM	1093	HD23	LEU	85	7,038	-58,557	17,703	1.00	0.00
ATOM	1094	N	ILE	86	9,861	-56,126	21,905	1.00	0.00
ATOM	1095	CA	ILE	86	10,589	-54,930	21,457	1.00	0.00
ATOM	1096	C	ILE	86	12,084	-54,987	21,840	1.00	0.00
ATOM	1097	O	ILE	86	12,300	-55,038	23,069	1.00	0.00
ATOM	1098	CB	ILE	86	9,938	-53,610	21,706	1.00	0.00
ATOM	1099	CG1	ILE	86	10,712	-52,433	21,031	1.00	0.00
ATOM	1100	CG2	ILE	86	9,499	-53,309	23,216	1.00	0.00
ATOM	1101	CD1	ILE	86	10,143	-51,014	21,062	1.00	0.00
ATOM	1102	H	ILE	86	9,057	-55,970	22,495	1.00	0.00
ATOM	1103	HA	ILE	86	10,622	-54,905	20,368	1.00	0.00
ATOM	1104	HB	ILE	86	9,006	-53,658	21,142	1.00	0.00
ATOM	1105	HG12	ILE	86	11,695	-52,414	21,502	1.00	0.00
ATOM	1106	HG13	ILE	86	10,861	-52,803	20,017	1.00	0.00
ATOM	1107	HG21	ILE	86	8,937	-52,376	23,172	1.00	0.00
ATOM	1108	HG22	ILE	86	10,312	-53,214	23,937	1.00	0.00
ATOM	1109	HG23	ILE	86	8,913	-54,183	23,500	1.00	0.00
ATOM	1110	HD11	ILE	86	10,806	-50,351	20,507	1.00	0.00
ATOM	1111	HD12	ILE	86	10,110	-50,592	22,067	1.00	0.00
ATOM	1112	HD13	ILE	86	9,135	-50,975	20,646	1.00	0.00
ATOM	1113	N	LYS	87	13,020	-54,714	20,920	1.00	0.00
ATOM	1114	CA	LYS	87	14,519	-54,609	21,204	1.00	0.00
ATOM	1115	C	LYS	87	14,942	-53,304	21,860	1.00	0.00
ATOM	1116	O	LYS	87	16,015	-52,747	21,537	1.00	0.00
ATOM	1117	CB	LYS	87	15,344	-54,931	19,937	1.00	0.00

ATOM	1118	CG	LYS	87	15,092	-56,388	19,462	1.00	0.00
ATOM	1119	CD	LYS	87	16,170	-56,900	18,509	1.00	0.00
ATOM	1120	CE	LYS	87	15,528	-57,843	17,549	1.00	0.00
ATOM	1121	NZ	LYS	87	16,489	-58,321	16,586	1.00	0.00
ATOM	1122	H	LYS	87	12,696	-54,526	19,982	1.00	0.00
ATOM	1123	HA	LYS	87	14,810	-55,423	21,868	1.00	0.00
ATOM	1124	HB2	LYS	87	15,061	-54,209	19,172	1.00	0.00
ATOM	1125	HB3	LYS	87	16,386	-54,822	20,239	1.00	0.00
ATOM	1126	HG2	LYS	87	14,954	-57,112	20,265	1.00	0.00
ATOM	1127	HG3	LYS	87	14,166	-56,425	18,888	1.00	0.00
ATOM	1128	HD2	LYS	87	16,505	-56,038	17,931	1.00	0.00
ATOM	1129	HD3	LYS	87	17,012	-57,377	19,010	1.00	0.00
ATOM	1130	HE2	LYS	87	14,956	-58,671	17,967	1.00	0.00
ATOM	1131	HE3	LYS	87	14,834	-57,234	16,971	1.00	0.00
ATOM	1132	HZ1	LYS	87	16,235	-59,188	16,136	1.00	0.00
ATOM	1133	HZ2	LYS	87	17,350	-58,470	17,091	1.00	0.00
ATOM	1134	HZ3	LYS	87	16,730	-57,651	15,869	1.00	0.00
ATOM	1135	N	HID	88	14,031	-52,740	22,661	1.00	0.00
ATOM	1136	CA	HID	88	14,167	-51,484	23,417	1.00	0.00
ATOM	1137	C	HID	88	13,470	-51,498	24,745	1.00	0.00
ATOM	1138	O	HID	88	12,433	-52,152	24,860	1.00	0.00
ATOM	1139	CB	HID	88	13,675	-50,270	22,577	1.00	0.00
ATOM	1140	CG	HID	88	14,224	-50,075	21,161	1.00	0.00
ATOM	1141	CD2	HID	88	13,753	-50,610	20,007	1.00	0.00
ATOM	1142	ND1	HID	88	15,283	-49,272	20,796	1.00	0.00
ATOM	1143	CE1	HID	88	15,420	-49,308	19,472	1.00	0.00
ATOM	1144	NE2	HID	88	14,480	-50,124	18,893	1.00	0.00
ATOM	1145	H	HID	88	13,196	-53,277	22,844	1.00	0.00
ATOM	1146	HA	HID	88	15,222	-51,303	23,621	1.00	0.00
ATOM	1147	HB2	HID	88	12,615	-50,455	22,401	1.00	0.00
ATOM	1148	HB3	HID	88	13,775	-49,393	23,215	1.00	0.00
ATOM	1149	HD1	HID	88	15,685	-48,599	21,432	1.00	0.00
ATOM	1150	HD2	HID	88	12,965	-51,339	19,894	1.00	0.00
ATOM	1151	HE1	HID	88	16,179	-48,760	18,932	1.00	0.00
ATOM	1152	N	PRO	89	13,909	-50,656	25,742	1.00	0.00
ATOM	1153	CA	PRO	89	13,349	-50,509	27,062	1.00	0.00
ATOM	1154	C	PRO	89	12,010	-49,759	27,237	1.00	0.00
ATOM	1155	O	PRO	89	11,491	-49,875	28,364	1.00	0.00
ATOM	1156	CB	PRO	89	14,405	-49,965	27,985	1.00	0.00
ATOM	1157	CG	PRO	89	15,179	-49,080	27,023	1.00	0.00
ATOM	1158	CD	PRO	89	15,201	-49,964	25,787	1.00	0.00
ATOM	1159	HA	PRO	89	13,220	-51,520	27,449	1.00	0.00
ATOM	1160	HB2	PRO	89	13,987	-49,328	28,765	1.00	0.00

ATOM	1161	HB3	PRO	89	15,042	-50,766	28,360	1.00	0.00
ATOM	1162	HG2	PRO	89	14,773	-48,098	26,776	1.00	0.00
ATOM	1163	HG3	PRO	89	16,175	-48,854	27,404	1.00	0.00
ATOM	1164	HD2	PRO	89	15,387	-49,351	24,906	1.00	0.00
ATOM	1165	HD3	PRO	89	16,047	-50,621	25,986	1.00	0.00
ATOM	1166	N	ASN	90	11,484	-49,097	26,187	1.00	0.00
ATOM	1167	CA	ASN	90	10,540	-48,013	26,426	1.00	0.00
ATOM	1168	C	ASN	90	9,064	-48,476	26,575	1.00	0.00
ATOM	1169	O	ASN	90	8,090	-47,808	26,146	1.00	0.00
ATOM	1170	CB	ASN	90	10,744	-46,837	25,444	1.00	0.00
ATOM	1171	CG	ASN	90	12,168	-46,352	25,405	1.00	0.00
ATOM	1172	ND2	ASN	90	12,477	-45,546	26,361	1.00	0.00
ATOM	1173	OD1	ASN	90	12,918	-46,672	24,491	1.00	0.00
ATOM	1174	H	ASN	90	11,885	-49,224	25,270	1.00	0.00
ATOM	1175	HA	ASN	90	10,655	-47,663	27,451	1.00	0.00
ATOM	1176	HB2	ASN	90	10,563	-47,277	24,462	1.00	0.00
ATOM	1177	HB3	ASN	90	9,973	-46,081	25,588	1.00	0.00
ATOM	1178	HD21	ASN	90	11,726	-45,212	26,947	1.00	0.00
ATOM	1179	HD22	ASN	90	13,404	-45,154	26,454	1.00	0.00
ATOM	1180	N	VAL	91	8,937	-49,638	27,185	1.00	0.00
ATOM	1181	CA	VAL	91	7,611	-50,289	27,431	1.00	0.00
ATOM	1182	C	VAL	91	7,612	-50,982	28,790	1.00	0.00
ATOM	1183	O	VAL	91	8,650	-51,101	29,475	1.00	0.00
ATOM	1184	CB	VAL	91	7,315	-51,436	26,392	1.00	0.00
ATOM	1185	CG1	VAL	91	7,349	-50,750	24,946	1.00	0.00
ATOM	1186	CG2	VAL	91	8,399	-52,543	26,376	1.00	0.00
ATOM	1187	H	VAL	91	9,735	-50,201	27,443	1.00	0.00
ATOM	1188	HA	VAL	91	6,856	-49,503	27,430	1.00	0.00
ATOM	1189	HB	VAL	91	6,383	-51,945	26,637	1.00	0.00
ATOM	1190	HG11	VAL	91	8,377	-50,522	24,663	1.00	0.00
ATOM	1191	HG12	VAL	91	7,013	-51,536	24,269	1.00	0.00
ATOM	1192	HG13	VAL	91	6,748	-49,857	24,772	1.00	0.00
ATOM	1193	HG21	VAL	91	9,359	-52,041	26,255	1.00	0.00
ATOM	1194	HG22	VAL	91	8,188	-53,215	25,544	1.00	0.00
ATOM	1195	HG23	VAL	91	8,412	-53,142	27,287	1.00	0.00
ATOM	1196	N	ILE	92	6,464	-51,405	29,220	1.00	0.00
ATOM	1197	CA	ILE	92	6,312	-52,280	30,387	1.00	0.00
ATOM	1198	C	ILE	92	6,671	-53,765	30,044	1.00	0.00
ATOM	1199	O	ILE	92	6,008	-54,353	29,183	1.00	0.00
ATOM	1200	CB	ILE	92	4,918	-52,022	31,027	1.00	0.00
ATOM	1201	CG1	ILE	92	4,731	-50,514	31,534	1.00	0.00
ATOM	1202	CG2	ILE	92	4,573	-52,993	32,187	1.00	0.00
ATOM	1203	CD1	ILE	92	5,865	-50,051	32,556	1.00	0.00



ATOM	1204	H	ILE	92	5,617	-51,340	28,672	1.00	0.00
ATOM	1205	HA	ILE	92	6,995	-52,044	31,203	1.00	0.00
ATOM	1206	HB	ILE	92	4,179	-52,112	30,230	1.00	0.00
ATOM	1207	HG12	ILE	92	4,663	-49,843	30,679	1.00	0.00
ATOM	1208	HG13	ILE	92	3,842	-50,354	32,145	1.00	0.00
ATOM	1209	HG21	ILE	92	3,785	-52,558	32,801	1.00	0.00
ATOM	1210	HG22	ILE	92	5,464	-53,167	32,791	1.00	0.00
ATOM	1211	HG23	ILE	92	4,234	-53,922	31,729	1.00	0.00
ATOM	1212	HD11	ILE	92	5,498	-49,126	33,000	1.00	0.00
ATOM	1213	HD12	ILE	92	6,652	-49,742	31,866	1.00	0.00
ATOM	1214	HD13	ILE	92	6,174	-50,732	33,349	1.00	0.00
ATOM	1215	N	ARG	93	7,663	-54,318	30,714	1.00	0.00
ATOM	1216	CA	ARG	93	7,919	-55,736	30,598	1.00	0.00
ATOM	1217	C	ARG	93	6,818	-56,631	31,181	1.00	0.00
ATOM	1218	O	ARG	93	6,128	-56,232	32,141	1.00	0.00
ATOM	1219	CB	ARG	93	9,302	-56,166	31,160	1.00	0.00
ATOM	1220	CG	ARG	93	10,305	-56,736	30,147	1.00	0.00
ATOM	1221	CD	ARG	93	10,608	-55,690	29,082	1.00	0.00
ATOM	1222	NE	ARG	93	11,207	-56,213	27,819	1.00	0.00
ATOM	1223	CZ	ARG	93	11,553	-55,443	26,827	1.00	0.00
ATOM	1224	NH1	ARG	93	11,357	-54,144	26,813	1.00	0.00
ATOM	1225	NH2	ARG	93	11,921	-55,994	25,719	1.00	0.00
ATOM	1226	H	ARG	93	8,226	-53,705	31,286	1.00	0.00
ATOM	1227	HA	ARG	93	7,823	-56,036	29,553	1.00	0.00
ATOM	1228	HB2	ARG	93	9,770	-55,291	31,612	1.00	0.00
ATOM	1229	HB3	ARG	93	9,169	-56,893	31,961	1.00	0.00
ATOM	1230	HG2	ARG	93	11,208	-56,996	30,700	1.00	0.00
ATOM	1231	HG3	ARG	93	9,903	-57,599	29,619	1.00	0.00
ATOM	1232	HD2	ARG	93	9,672	-55,207	28,801	1.00	0.00
ATOM	1233	HD3	ARG	93	11,304	-54,953	29,482	1.00	0.00
ATOM	1234	HE	ARG	93	11,441	-57,188	27,699	1.00	0.00
ATOM	1235	HH11	ARG	93	11,192	-53,576	27,632	1.00	0.00
ATOM	1236	HH12	ARG	93	11,642	-53,661	25,973	1.00	0.00
ATOM	1237	HH21	ARG	93	11,974	-57,002	25,701	1.00	0.00
ATOM	1238	HH22	ARG	93	12,172	-55,456	24,901	1.00	0.00
ATOM	1239	N	MET	94	6,664	-57,751	30,527	1.00	0.00
ATOM	1240	CA	MET	94	5,782	-58,881	30,919	1.00	0.00
ATOM	1241	C	MET	94	6,589	-60,093	31,141	1.00	0.00
ATOM	1242	O	MET	94	7,290	-60,431	30,201	1.00	0.00
ATOM	1243	CB	MET	94	4,627	-59,038	29,940	1.00	0.00
ATOM	1244	CG	MET	94	3,630	-60,133	30,274	1.00	0.00
ATOM	1245	SD	MET	94	4,138	-61,840	29,778	1.00	0.00
ATOM	1246	CE	MET	94	3,866	-61,578	27,997	1.00	0.00

ATOM	1247	H	MET	94	7,100	-57,796	29,617	1.00	0.00
ATOM	1248	HA	MET	94	5,309	-58,609	31,862	1.00	0.00
ATOM	1249	HB2	MET	94	4,071	-58,104	29,856	1.00	0.00
ATOM	1250	HB3	MET	94	5,175	-59,356	29,053	1.00	0.00
ATOM	1251	HG2	MET	94	3,321	-60,070	31,317	1.00	0.00
ATOM	1252	HG3	MET	94	2,723	-59,915	29,711	1.00	0.00
ATOM	1253	HE1	MET	94	3,832	-62,522	27,452	1.00	0.00
ATOM	1254	HE2	MET	94	2,899	-61,075	28,007	1.00	0.00
ATOM	1255	HE3	MET	94	4,606	-60,856	27,652	1.00	0.00
ATOM	1256	N	PHE	95	6,414	-60,796	32,271	1.00	0.00
ATOM	1257	CA	PHE	95	7,378	-61,893	32,631	1.00	0.00
ATOM	1258	C	PHE	95	6,742	-63,267	32,336	1.00	0.00
ATOM	1259	O	PHE	95	7,282	-64,125	31,660	1.00	0.00
ATOM	1260	CB	PHE	95	7,855	-61,775	34,121	1.00	0.00
ATOM	1261	CG	PHE	95	8,746	-60,576	34,516	1.00	0.00
ATOM	1262	CD1	PHE	95	8,199	-59,464	35,202	1.00	0.00
ATOM	1263	CD2	PHE	95	10,029	-60,457	33,988	1.00	0.00
ATOM	1264	CE1	PHE	95	9,007	-58,277	35,463	1.00	0.00
ATOM	1265	CE2	PHE	95	10,831	-59,297	34,190	1.00	0.00
ATOM	1266	CZ	PHE	95	10,346	-58,219	34,967	1.00	0.00
ATOM	1267	H	PHE	95	5,716	-60,523	32,949	1.00	0.00
ATOM	1268	HA	PHE	95	8,212	-61,816	31,934	1.00	0.00
ATOM	1269	HB2	PHE	95	7,055	-61,791	34,861	1.00	0.00
ATOM	1270	HB3	PHE	95	8,471	-62,652	34,318	1.00	0.00
ATOM	1271	HD1	PHE	95	7,170	-59,582	35,509	1.00	0.00
ATOM	1272	HD2	PHE	95	10,421	-61,260	33,382	1.00	0.00
ATOM	1273	HE1	PHE	95	8,603	-57,569	36,172	1.00	0.00
ATOM	1274	HE2	PHE	95	11,821	-59,243	33,763	1.00	0.00
ATOM	1275	HZ	PHE	95	10,900	-57,306	35,120	1.00	0.00
ATOM	1276	N	GLU	96	5,509	-63,525	32,824	1.00	0.00
ATOM	1277	CA	GLU	96	4,827	-64,766	32,689	1.00	0.00
ATOM	1278	C	GLU	96	3,298	-64,483	32,493	1.00	0.00
ATOM	1279	O	GLU	96	2,736	-63,409	32,848	1.00	0.00
ATOM	1280	CB	GLU	96	5,073	-65,561	33,985	1.00	0.00
ATOM	1281	CG	GLU	96	4,696	-64,871	35,290	1.00	0.00
ATOM	1282	CD	GLU	96	5,102	-65,787	36,428	1.00	0.00
ATOM	1283	OE1	GLU	96	5,958	-65,338	37,232	1.00	0.00
ATOM	1284	OE2	GLU	96	4,565	-66,912	36,572	1.00	0.00
ATOM	1285	H	GLU	96	5,002	-62,764	33,252	1.00	0.00
ATOM	1286	HA	GLU	96	5,193	-65,349	31,843	1.00	0.00
ATOM	1287	HB2	GLU	96	4,665	-66,557	33,816	1.00	0.00
ATOM	1288	HB3	GLU	96	6,133	-65,814	34,028	1.00	0.00
ATOM	1289	HG2	GLU	96	5,164	-63,896	35,429	1.00	0.00

ATOM	1290	HG3	GLU	96	3,630	-64,657	35,226	1.00	0.00
ATOM	1291	N	VAL	97	2,583	-65,544	32,002	1.00	0.00
ATOM	1292	CA	VAL	97	1,167	-65,490	31,811	1.00	0.00
ATOM	1293	C	VAL	97	0.461	-66,789	32,186	1.00	0.00
ATOM	1294	O	VAL	97	1,011	-67,843	31,928	1.00	0.00
ATOM	1295	CB	VAL	97	0.881	-65,161	30,338	1.00	0.00
ATOM	1296	CG1	VAL	97	-0.593	-64,738	30,155	1.00	0.00
ATOM	1297	CG2	VAL	97	1,782	-64,028	29,659	1.00	0.00
ATOM	1298	H	VAL	97	3,008	-66,408	31,699	1.00	0.00
ATOM	1299	HA	VAL	97	0.807	-64,593	32,315	1.00	0.00
ATOM	1300	HB	VAL	97	1,046	-66,014	29,678	1.00	0.00
ATOM	1301	HG11	VAL	97	-0.754	-64,213	29,213	1.00	0.00
ATOM	1302	HG12	VAL	97	-1,278	-65,583	30,227	1.00	0.00
ATOM	1303	HG13	VAL	97	-0.782	-64,040	30,970	1.00	0.00
ATOM	1304	HG21	VAL	97	1,522	-64,050	28,600	1.00	0.00
ATOM	1305	HG22	VAL	97	2,848	-64,247	29,712	1.00	0.00
ATOM	1306	HG23	VAL	97	1,482	-63,101	30,147	1.00	0.00
ATOM	1307	N	MET	98	-0.752	-66,700	32,727	1.00	0.00
ATOM	1308	CA	MET	98	-1,423	-67,785	33,431	1.00	0.00
ATOM	1309	C	MET	98	-2,954	-67,552	33,314	1.00	0.00
ATOM	1310	O	MET	98	-3,472	-66,412	33,289	1.00	0.00
ATOM	1311	CB	MET	98	-0.936	-67,905	34,860	1.00	0.00
ATOM	1312	CG	MET	98	-0.894	-66,719	35,769	1.00	0.00
ATOM	1313	SD	MET	98	-0.302	-67,047	37,475	1.00	0.00
ATOM	1314	CE	MET	98	-0.452	-65,319	38,099	1.00	0.00
ATOM	1315	H	MET	98	-1,188	-65,799	32,861	1.00	0.00
ATOM	1316	HA	MET	98	-1,133	-68,707	32,926	1.00	0.00
ATOM	1317	HB2	MET	98	-1,563	-68,652	35,346	1.00	0.00
ATOM	1318	HB3	MET	98	0.084	-68,291	34,855	1.00	0.00
ATOM	1319	HG2	MET	98	-0.167	-66,032	35,336	1.00	0.00
ATOM	1320	HG3	MET	98	-1,894	-66,287	35,811	1.00	0.00
ATOM	1321	HE1	MET	98	0.435	-64,706	37,943	1.00	0.00
ATOM	1322	HE2	MET	98	-1,292	-64,787	37,654	1.00	0.00
ATOM	1323	HE3	MET	98	-0.688	-65,332	39,163	1.00	0.00
ATOM	1324	N	ALA	99	-3,667	-68,648	33,209	1.00	0.00
ATOM	1325	CA	ALA	99	-5,085	-68,720	32,940	1.00	0.00
ATOM	1326	C	ALA	99	-5,862	-69,755	33,773	1.00	0.00
ATOM	1327	O	ALA	99	-5,337	-70,808	34,136	1.00	0.00
ATOM	1328	CB	ALA	99	-5,365	-68,757	31,470	1.00	0.00
ATOM	1329	H	ALA	99	-3,254	-69,566	33,299	1.00	0.00
ATOM	1330	HA	ALA	99	-5,511	-67,761	33,238	1.00	0.00
ATOM	1331	HB1	ALA	99	-4,948	-67,967	30,845	1.00	0.00
ATOM	1332	HB2	ALA	99	-6,436	-68,695	31,281	1.00	0.00

ATOM	1333	HB3	ALA	99	-4,927	-69,684	31,101	1.00	0.00
ATOM	1334	N	SER	100	-7,143	-69,482	34,136	1.00	0.00
ATOM	1335	CA	SER	100	-8,036	-70,431	34,810	1.00	0.00
ATOM	1336	C	SER	100	-9,120	-70,686	33,806	1.00	0.00
ATOM	1337	O	SER	100	-8,960	-70,380	32,647	1.00	0.00
ATOM	1338	CB	SER	100	-8,555	-69,785	36,134	1.00	0.00
ATOM	1339	OG	SER	100	-9,273	-68,636	35,810	1.00	0.00
ATOM	1340	H	SER	100	-7,493	-68,630	33,722	1.00	0.00
ATOM	1341	HA	SER	100	-7,649	-71,441	34,949	1.00	0.00
ATOM	1342	HB2	SER	100	-9,247	-70,399	36,708	1.00	0.00
ATOM	1343	HB3	SER	100	-7,744	-69,508	36,809	1.00	0.00
ATOM	1344	HG	SER	100	-9,340	-68,228	36,677	1.00	0.00
ATOM	1345	N	LYS	101	-10,261	-71,181	34,228	1.00	0.00
ATOM	1346	CA	LYS	101	-11,411	-71,517	33,402	1.00	0.00
ATOM	1347	C	LYS	101	-12,170	-70,158	33,187	1.00	0.00
ATOM	1348	O	LYS	101	-13,118	-70,180	32,431	1.00	0.00
ATOM	1349	CB	LYS	101	-12,249	-72,705	33,910	1.00	0.00
ATOM	1350	CG	LYS	101	-11,704	-74,044	33,372	1.00	0.00
ATOM	1351	CD	LYS	101	-11,754	-74,242	31,838	1.00	0.00
ATOM	1352	CE	LYS	101	-11,126	-75,532	31,309	1.00	0.00
ATOM	1353	NZ	LYS	101	-11,028	-75,525	29,908	1.00	0.00
ATOM	1354	H	LYS	101	-10,195	-71,617	35,137	1.00	0.00
ATOM	1355	HA	LYS	101	-11,042	-71,736	32,400	1.00	0.00
ATOM	1356	HB2	LYS	101	-12,315	-72,783	34,995	1.00	0.00
ATOM	1357	HB3	LYS	101	-13,268	-72,454	33,614	1.00	0.00
ATOM	1358	HG2	LYS	101	-10,724	-74,240	33,807	1.00	0.00
ATOM	1359	HG3	LYS	101	-12,252	-74,891	33,785	1.00	0.00
ATOM	1360	HD2	LYS	101	-12,821	-74,270	31,625	1.00	0.00
ATOM	1361	HD3	LYS	101	-11,124	-73,525	31,310	1.00	0.00
ATOM	1362	HE2	LYS	101	-10,135	-75,613	31,757	1.00	0.00
ATOM	1363	HE3	LYS	101	-11,728	-76,385	31,621	1.00	0.00
ATOM	1364	HZ1	LYS	101	-11,963	-75,294	29,603	1.00	0.00
ATOM	1365	HZ2	LYS	101	-10,618	-76,374	29,545	1.00	0.00
ATOM	1366	HZ3	LYS	101	-10,518	-74,723	29,567	1.00	0.00
ATOM	1367	N	THR	102	-11,913	-69,038	33,882	1.00	0.00
ATOM	1368	CA	THR	102	-12,732	-67,781	33,889	1.00	0.00
ATOM	1369	C	THR	102	-11,850	-66,475	33,925	1.00	0.00
ATOM	1370	O	THR	102	-12,352	-65,444	33,482	1.00	0.00
ATOM	1371	CB	THR	102	-13,760	-67,653	34,985	1.00	0.00
ATOM	1372	CG2	THR	102	-14,849	-68,661	34,762	1.00	0.00
ATOM	1373	OG1	THR	102	-13,203	-67,724	36,245	1.00	0.00
ATOM	1374	H	THR	102	-11,147	-69,146	34,532	1.00	0.00
ATOM	1375	HA	THR	102	-13,223	-67,780	32,917	1.00	0.00

ATOM	1376	HB	THR	102	-14,145	-66,653	34,784	1.00	0.00
ATOM	1377	HG1	THR	102	-12,925	-68,639	36,329	1.00	0.00
ATOM	1378	HG21	THR	102	-14,415	-69,646	34,938	1.00	0.00
ATOM	1379	HG22	THR	102	-15,023	-68,581	33,689	1.00	0.00
ATOM	1380	HG23	THR	102	-15,765	-68,458	35,317	1.00	0.00
ATOM	1381	N	LYS	103	-10,582	-66,438	34,388	1.00	0.00
ATOM	1382	CA	LYS	103	-9,791	-65,290	34,465	1.00	0.00
ATOM	1383	C	LYS	103	-8,536	-65,526	33,668	1.00	0.00
ATOM	1384	O	LYS	103	-8,219	-66,661	33,394	1.00	0.00
ATOM	1385	CB	LYS	103	-9,509	-64,963	35,969	1.00	0.00
ATOM	1386	CG	LYS	103	-10,729	-64,259	36,592	1.00	0.00
ATOM	1387	CD	LYS	103	-10,506	-63,687	37,968	1.00	0.00
ATOM	1388	CE	LYS	103	-11,573	-62,585	38,276	1.00	0.00
ATOM	1389	NZ	LYS	103	-12,960	-63,079	38,629	1.00	0.00
ATOM	1390	H	LYS	103	-10,107	-67,326	34,468	1.00	0.00
ATOM	1391	HA	LYS	103	-10,273	-64,402	34,057	1.00	0.00
ATOM	1392	HB2	LYS	103	-9,210	-65,874	36,488	1.00	0.00
ATOM	1393	HB3	LYS	103	-8,699	-64,237	36,027	1.00	0.00
ATOM	1394	HG2	LYS	103	-10,842	-63,432	35,891	1.00	0.00
ATOM	1395	HG3	LYS	103	-11,571	-64,950	36,627	1.00	0.00
ATOM	1396	HD2	LYS	103	-10,624	-64,456	38,731	1.00	0.00
ATOM	1397	HD3	LYS	103	-9,481	-63,349	38,110	1.00	0.00
ATOM	1398	HE2	LYS	103	-11,316	-61,909	39,092	1.00	0.00
ATOM	1399	HE3	LYS	103	-11,582	-61,892	37,435	1.00	0.00
ATOM	1400	HZ1	LYS	103	-13,667	-62,411	38,899	1.00	0.00
ATOM	1401	HZ2	LYS	103	-12,974	-63,712	39,416	1.00	0.00
ATOM	1402	HZ3	LYS	103	-13,328	-63,503	37,790	1.00	0.00
ATOM	1403	N	ILE	104	-7,723	-64,471	33,386	1.00	0.00
ATOM	1404	CA	ILE	104	-6,377	-64,559	32,834	1.00	0.00
ATOM	1405	C	ILE	104	-5,568	-63,412	33,483	1.00	0.00
ATOM	1406	O	ILE	104	-6,086	-62,330	33,689	1.00	0.00
ATOM	1407	CB	ILE	104	-6,317	-64,358	31,319	1.00	0.00
ATOM	1408	CG1	ILE	104	-4,884	-64,533	30,871	1.00	0.00
ATOM	1409	CG2	ILE	104	-7,009	-63,098	30,793	1.00	0.00
ATOM	1410	CD1	ILE	104	-4,668	-64,436	29,356	1.00	0.00
ATOM	1411	H	ILE	104	-8,062	-63,600	33,767	1.00	0.00
ATOM	1412	HA	ILE	104	-6,005	-65,557	33,065	1.00	0.00
ATOM	1413	HB	ILE	104	-6,818	-65,228	30,894	1.00	0.00
ATOM	1414	HG12	ILE	104	-4,210	-63,817	31,344	1.00	0.00
ATOM	1415	HG13	ILE	104	-4,574	-65,560	31,061	1.00	0.00
ATOM	1416	HG21	ILE	104	-6,520	-62,211	31,195	1.00	0.00
ATOM	1417	HG22	ILE	104	-8,054	-63,109	31,103	1.00	0.00
ATOM	1418	HG23	ILE	104	-7,050	-63,137	29,705	1.00	0.00

ATOM	1419	HD11	ILE	104	-3,593	-64,403	29,182	1.00	0.00
ATOM	1420	HD12	ILE	104	-5,082	-63,530	28,911	1.00	0.00
ATOM	1421	HD13	ILE	104	-5,023	-65,347	28,875	1.00	0.00
ATOM	1422	N	TYR	105	-4,317	-63,672	33,799	1.00	0.00
ATOM	1423	CA	TYR	105	-3,350	-62,802	34,515	1.00	0.00
ATOM	1424	C	TYR	105	-1,991	-62,818	33,810	1.00	0.00
ATOM	1425	O	TYR	105	-1,581	-63,877	33,345	1.00	0.00
ATOM	1426	CB	TYR	105	-3,119	-63,259	35,952	1.00	0.00
ATOM	1427	CG	TYR	105	-4,289	-63,585	36,807	1.00	0.00
ATOM	1428	CD1	TYR	105	-4,785	-62,669	37,758	1.00	0.00
ATOM	1429	CD2	TYR	105	-4,882	-64,899	36,810	1.00	0.00
ATOM	1430	CE1	TYR	105	-5,822	-63,042	38,633	1.00	0.00
ATOM	1431	CE2	TYR	105	-5,918	-65,241	37,646	1.00	0.00
ATOM	1432	CZ	TYR	105	-6,498	-64,273	38,529	1.00	0.00
ATOM	1433	OH	TYR	105	-7,571	-64,506	39,286	1.00	0.00
ATOM	1434	H	TYR	105	-3,903	-64,584	33,665	1.00	0.00
ATOM	1435	HA	TYR	105	-3,712	-61,776	34,563	1.00	0.00
ATOM	1436	HB2	TYR	105	-2,483	-64,144	35,985	1.00	0.00
ATOM	1437	HB3	TYR	105	-2,550	-62,466	36,437	1.00	0.00
ATOM	1438	HD1	TYR	105	-4,414	-61,654	37,777	1.00	0.00
ATOM	1439	HD2	TYR	105	-4,382	-65,659	36,228	1.00	0.00
ATOM	1440	HE1	TYR	105	-6,242	-62,256	39,241	1.00	0.00
ATOM	1441	HE2	TYR	105	-6,398	-66,192	37,465	1.00	0.00
ATOM	1442	HH	TYR	105	-7,732	-65,427	39,502	1.00	0.00
ATOM	1443	N	PHE	106	-1,402	-61,634	33,732	1.00	0.00
ATOM	1444	CA	PHE	106	-0.043	-61,500	33,248	1.00	0.00
ATOM	1445	C	PHE	106	0.775	-60,605	34,170	1.00	0.00
ATOM	1446	O	PHE	106	0.288	-59,647	34,722	1.00	0.00
ATOM	1447	CB	PHE	106	0.036	-61,215	31,694	1.00	0.00
ATOM	1448	CG	PHE	106	-0.985	-60,176	31,189	1.00	0.00
ATOM	1449	CD1	PHE	106	-0.563	-58,884	30,834	1.00	0.00
ATOM	1450	CD2	PHE	106	-2,367	-60,518	31,087	1.00	0.00
ATOM	1451	CE1	PHE	106	-1,522	-57,964	30,305	1.00	0.00
ATOM	1452	CE2	PHE	106	-3,323	-59,629	30,584	1.00	0.00
ATOM	1453	CZ	PHE	106	-2,879	-58,377	30,194	1.00	0.00
ATOM	1454	H	PHE	106	-1,802	-60,895	34,294	1.00	0.00
ATOM	1455	HA	PHE	106	0.419	-62,473	33,411	1.00	0.00
ATOM	1456	HB2	PHE	106	1,007	-60,767	31,479	1.00	0.00
ATOM	1457	HB3	PHE	106	-0.045	-62,152	31,144	1.00	0.00
ATOM	1458	HD1	PHE	106	0.491	-58,647	30,831	1.00	0.00
ATOM	1459	HD2	PHE	106	-2,619	-61,543	31,316	1.00	0.00
ATOM	1460	HE1	PHE	106	-1,204	-56,958	30,076	1.00	0.00
ATOM	1461	HE2	PHE	106	-4,385	-59,825	30,625	1.00	0.00

ATOM	1462	HZ	PHE	106	-3,613	-57,649	29,880	1.00	0.00
ATOM	1463	N	VAL	107	2,021	-60,964	34,430	1.00	0.00
ATOM	1464	CA	VAL	107	2,828	-60,301	35,499	1.00	0.00
ATOM	1465	C	VAL	107	3,813	-59,309	34,880	1.00	0.00
ATOM	1466	O	VAL	107	4,575	-59,766	34,103	1.00	0.00
ATOM	1467	CB	VAL	107	3,536	-61,320	36,418	1.00	0.00
ATOM	1468	CG1	VAL	107	4,141	-60,615	37,631	1.00	0.00
ATOM	1469	CG2	VAL	107	2,639	-62,458	36,929	1.00	0.00
ATOM	1470	H	VAL	107	2,532	-61,707	33,976	1.00	0.00
ATOM	1471	HA	VAL	107	2,156	-59,765	36,169	1.00	0.00
ATOM	1472	HB	VAL	107	4,343	-61,831	35,893	1.00	0.00
ATOM	1473	HG11	VAL	107	4,724	-61,311	38,235	1.00	0.00
ATOM	1474	HG12	VAL	107	4,860	-59,897	37,234	1.00	0.00
ATOM	1475	HG13	VAL	107	3,352	-60,165	38,233	1.00	0.00
ATOM	1476	HG21	VAL	107	3,262	-63,239	37,364	1.00	0.00
ATOM	1477	HG22	VAL	107	2,073	-62,847	36,082	1.00	0.00
ATOM	1478	HG23	VAL	107	2,016	-62,031	37,714	1.00	0.00
ATOM	1479	N	LEU	108	3,744	-58,060	35,281	1.00	0.00
ATOM	1480	CA	LEU	108	4,342	-56,862	34,625	1.00	0.00
ATOM	1481	C	LEU	108	5,521	-56,239	35,474	1.00	0.00
ATOM	1482	O	LEU	108	5,464	-56,273	36,743	1.00	0.00
ATOM	1483	CB	LEU	108	3,201	-55,816	34,351	1.00	0.00
ATOM	1484	CG	LEU	108	2,119	-56,381	33,417	1.00	0.00
ATOM	1485	CD1	LEU	108	1,016	-55,342	33,143	1.00	0.00
ATOM	1486	CD2	LEU	108	2,689	-56,674	32,030	1.00	0.00
ATOM	1487	H	LEU	108	3,119	-57,828	36,039	1.00	0.00
ATOM	1488	HA	LEU	108	4,704	-57,199	33,654	1.00	0.00
ATOM	1489	HB2	LEU	108	2,684	-55,607	35,288	1.00	0.00
ATOM	1490	HB3	LEU	108	3,724	-54,955	33,933	1.00	0.00
ATOM	1491	HG	LEU	108	1,667	-57,223	33,941	1.00	0.00
ATOM	1492	HD11	LEU	108	0.262	-55,203	33,919	1.00	0.00
ATOM	1493	HD12	LEU	108	0.297	-55,578	32,358	1.00	0.00
ATOM	1494	HD13	LEU	108	1,307	-54,299	33,015	1.00	0.00
ATOM	1495	HD21	LEU	108	3,470	-57,435	32,008	1.00	0.00
ATOM	1496	HD22	LEU	108	1,936	-57,081	31,355	1.00	0.00
ATOM	1497	HD23	LEU	108	3,063	-55,762	31,565	1.00	0.00
ATOM	1498	N	GLU	109	6,533	-55,653	34,883	1.00	0.00
ATOM	1499	CA	GLU	109	7,534	-54,895	35,670	1.00	0.00
ATOM	1500	C	GLU	109	6,856	-53,734	36,415	1.00	0.00
ATOM	1501	O	GLU	109	5,957	-53,110	35,854	1.00	0.00
ATOM	1502	CB	GLU	109	8,694	-54,377	34,708	1.00	0.00
ATOM	1503	CG	GLU	109	8,416	-53,043	34,001	1.00	0.00
ATOM	1504	CD	GLU	109	9,619	-52,600	33,187	1.00	0.00

ATOM	1505	OE1	GLU	109	10,705	-52,425	33,712	1.00	0.00
ATOM	1506	OE2	GLU	109	9,481	-52,559	31,907	1.00	0.00
ATOM	1507	H	GLU	109	6,482	-55,574	33,877	1.00	0.00
ATOM	1508	HA	GLU	109	7,888	-55,615	36,408	1.00	0.00
ATOM	1509	HB2	GLU	109	9,530	-54,208	35,388	1.00	0.00
ATOM	1510	HB3	GLU	109	8,937	-55,129	33,957	1.00	0.00
ATOM	1511	HG2	GLU	109	7,628	-53,228	33,270	1.00	0.00
ATOM	1512	HG3	GLU	109	8,227	-52,284	34,761	1.00	0.00
ATOM	1513	N	PHE	110	7,341	-53,452	37,637	1.00	0.00
ATOM	1514	CA	PHE	110	7,072	-52,269	38,379	1.00	0.00
ATOM	1515	C	PHE	110	8,118	-51,212	38,021	1.00	0.00
ATOM	1516	O	PHE	110	9,311	-51,519	37,838	1.00	0.00
ATOM	1517	CB	PHE	110	7,294	-52,671	39,873	1.00	0.00
ATOM	1518	CG	PHE	110	7,075	-51,512	40,838	1.00	0.00
ATOM	1519	CD1	PHE	110	5,766	-51,301	41,295	1.00	0.00
ATOM	1520	CD2	PHE	110	8,077	-50,647	41,340	1.00	0.00
ATOM	1521	CE1	PHE	110	5,367	-50,132	42,002	1.00	0.00
ATOM	1522	CE2	PHE	110	7,670	-49,562	42,138	1.00	0.00
ATOM	1523	CZ	PHE	110	6,342	-49,293	42,452	1.00	0.00
ATOM	1524	H	PHE	110	7,848	-54,208	38,077	1.00	0.00
ATOM	1525	HA	PHE	110	6,040	-51,930	38,286	1.00	0.00
ATOM	1526	HB2	PHE	110	6,689	-53,505	40,230	1.00	0.00
ATOM	1527	HB3	PHE	110	8,295	-53,079	40,012	1.00	0.00
ATOM	1528	HD1	PHE	110	5,010	-51,933	40,852	1.00	0.00
ATOM	1529	HD2	PHE	110	9,106	-50,774	41,040	1.00	0.00
ATOM	1530	HE1	PHE	110	4,348	-49,953	42,313	1.00	0.00
ATOM	1531	HE2	PHE	110	8,446	-48,932	42,547	1.00	0.00
ATOM	1532	HZ	PHE	110	6,088	-48,434	43,058	1.00	0.00
ATOM	1533	N	VAL	111	7,838	-49,934	38,037	1.00	0.00
ATOM	1534	CA	VAL	111	8,751	-48,821	37,769	1.00	0.00
ATOM	1535	C	VAL	111	8,759	-47,811	38,907	1.00	0.00
ATOM	1536	O	VAL	111	7,733	-47,500	39,505	1.00	0.00
ATOM	1537	CB	VAL	111	8,666	-48,130	36,384	1.00	0.00
ATOM	1538	CG1	VAL	111	9,298	-48,949	35,322	1.00	0.00
ATOM	1539	CG2	VAL	111	7,267	-47,777	35,936	1.00	0.00
ATOM	1540	H	VAL	111	6,910	-49,701	38,360	1.00	0.00
ATOM	1541	HA	VAL	111	9,754	-49,246	37,748	1.00	0.00
ATOM	1542	HB	VAL	111	9,141	-47,152	36,456	1.00	0.00
ATOM	1543	HG11	VAL	111	10,383	-48,999	35,409	1.00	0.00
ATOM	1544	HG12	VAL	111	8,944	-49,974	35,426	1.00	0.00
ATOM	1545	HG13	VAL	111	9,129	-48,531	34,329	1.00	0.00
ATOM	1546	HG21	VAL	111	7,191	-47,438	34,902	1.00	0.00
ATOM	1547	HG22	VAL	111	6,881	-46,962	36,548	1.00	0.00



ATOM	1548	HG23	VAL	111	6,569	-48,614	35,974	1.00	0.00
ATOM	1549	N	THR	112	9,931	-47,269	39,211	1.00	0.00
ATOM	1550	CA	THR	112	10,119	-46,363	40,365	1.00	0.00
ATOM	1551	C	THR	112	9,646	-44,933	40,223	1.00	0.00
ATOM	1552	O	THR	112	9,182	-44,399	41,201	1.00	0.00
ATOM	1553	CB	THR	112	11,505	-46,298	40,979	1.00	0.00
ATOM	1554	CG2	THR	112	12,064	-47,580	41,403	1.00	0.00
ATOM	1555	OG1	THR	112	12,414	-45,664	40,242	1.00	0.00
ATOM	1556	H	THR	112	10,737	-47,493	38,645	1.00	0.00
ATOM	1557	HA	THR	112	9,361	-46,708	41,069	1.00	0.00
ATOM	1558	HB	THR	112	11,432	-45,645	41,849	1.00	0.00
ATOM	1559	HG1	THR	112	13,272	-45,785	40,656	1.00	0.00
ATOM	1560	HG21	THR	112	11,415	-47,978	42,183	1.00	0.00
ATOM	1561	HG22	THR	112	13,076	-47,560	41,808	1.00	0.00
ATOM	1562	HG23	THR	112	12,112	-48,280	40,570	1.00	0.00
ATOM	1563	N	GLY	113	9,677	-44,334	39,041	1.00	0.00
ATOM	1564	CA	GLY	113	9,068	-43,031	38,952	1.00	0.00
ATOM	1565	C	GLY	113	7,617	-43,095	38,515	1.00	0.00
ATOM	1566	O	GLY	113	6,925	-42,143	38,987	1.00	0.00
ATOM	1567	H	GLY	113	9,951	-44,889	38,243	1.00	0.00
ATOM	1568	HA2	GLY	113	9,193	-42,391	39,827	1.00	0.00
ATOM	1569	HA3	GLY	113	9,643	-42,437	38,242	1.00	0.00
ATOM	1570	N	GLY	114	6,989	-44,095	37,802	1.00	0.00
ATOM	1571	CA	GLY	114	5,519	-44,113	37,623	1.00	0.00
ATOM	1572	C	GLY	114	5,024	-42,929	36,825	1.00	0.00
ATOM	1573	O	GLY	114	5,713	-42,362	35,992	1.00	0.00
ATOM	1574	H	GLY	114	7,502	-44,934	37,571	1.00	0.00
ATOM	1575	HA2	GLY	114	5,073	-45,021	37,217	1.00	0.00
ATOM	1576	HA3	GLY	114	5,110	-43,974	38,624	1.00	0.00
ATOM	1577	N	GLU	115	3,731	-42,611	37,063	1.00	0.00
ATOM	1578	CA	GLU	115	2,898	-41,675	36,343	1.00	0.00
ATOM	1579	C	GLU	115	3,582	-40,380	35,809	1.00	0.00
ATOM	1580	O	GLU	115	3,784	-39,404	36,490	1.00	0.00
ATOM	1581	CB	GLU	115	1,729	-41,266	37,311	1.00	0.00
ATOM	1582	CG	GLU	115	0.686	-42,401	37,568	1.00	0.00
ATOM	1583	CD	GLU	115	-0.202	-42,828	36,388	1.00	0.00
ATOM	1584	OE1	GLU	115	-0.912	-41,928	35,813	1.00	0.00
ATOM	1585	OE2	GLU	115	-0.010	-43,974	35,922	1.00	0.00
ATOM	1586	H	GLU	115	3,327	-43,065	37,870	1.00	0.00
ATOM	1587	HA	GLU	115	2,500	-42,208	35,480	1.00	0.00
ATOM	1588	HB2	GLU	115	2,107	-40,878	38,258	1.00	0.00
ATOM	1589	HB3	GLU	115	1,148	-40,507	36,788	1.00	0.00
ATOM	1590	HG2	GLU	115	1,092	-43,254	38,110	1.00	0.00

ATOM	1591	HG3	GLU	115	-0.038	-41,992	38,274	1.00	0.00
ATOM	1592	N	LEU	116	3,841	-40,313	34,429	1.00	0.00
ATOM	1593	CA	LEU	116	4,748	-39,198	33,946	1.00	0.00
ATOM	1594	C	LEU	116	4,079	-37,869	33,701	1.00	0.00
ATOM	1595	O	LEU	116	4,706	-36,856	33,920	1.00	0.00
ATOM	1596	CB	LEU	116	5,335	-39,700	32,603	1.00	0.00
ATOM	1597	CG	LEU	116	6,402	-38,791	31,752	1.00	0.00
ATOM	1598	CD1	LEU	116	7,561	-38,324	32,699	1.00	0.00
ATOM	1599	CD2	LEU	116	7,048	-39,624	30,678	1.00	0.00
ATOM	1600	H	LEU	116	3,526	-41,068	33,838	1.00	0.00
ATOM	1601	HA	LEU	116	5,520	-39,026	34,696	1.00	0.00
ATOM	1602	HB2	LEU	116	5,861	-40,622	32,844	1.00	0.00
ATOM	1603	HB3	LEU	116	4,488	-39,873	31,941	1.00	0.00
ATOM	1604	HG	LEU	116	5,966	-37,882	31,336	1.00	0.00
ATOM	1605	HD11	LEU	116	7,197	-37,642	33,467	1.00	0.00
ATOM	1606	HD12	LEU	116	8,343	-37,801	32,147	1.00	0.00
ATOM	1607	HD13	LEU	116	7,945	-39,188	33,241	1.00	0.00
ATOM	1608	HD21	LEU	116	7,775	-38,984	30,178	1.00	0.00
ATOM	1609	HD22	LEU	116	7,536	-40,501	31,103	1.00	0.00
ATOM	1610	HD23	LEU	116	6,329	-39,925	29,915	1.00	0.00
ATOM	1611	N	PHE	117	2,804	-37,843	33,212	1.00	0.00
ATOM	1612	CA	PHE	117	2,026	-36,652	32,998	1.00	0.00
ATOM	1613	C	PHE	117	1,639	-36,007	34,335	1.00	0.00
ATOM	1614	O	PHE	117	1,389	-34,850	34,361	1.00	0.00
ATOM	1615	CB	PHE	117	0.738	-37,014	32,166	1.00	0.00
ATOM	1616	CG	PHE	117	-0.249	-35,973	31,766	1.00	0.00
ATOM	1617	CD1	PHE	117	0.178	-34,649	31,519	1.00	0.00
ATOM	1618	CD2	PHE	117	-1,621	-36,336	31,638	1.00	0.00
ATOM	1619	CE1	PHE	117	-0.807	-33,677	31,193	1.00	0.00
ATOM	1620	CE2	PHE	117	-2,563	-35,353	31,202	1.00	0.00
ATOM	1621	CZ	PHE	117	-2,171	-34,005	31,040	1.00	0.00
ATOM	1622	H	PHE	117	2,413	-38,731	32,927	1.00	0.00
ATOM	1623	HA	PHE	117	2,576	-35,856	32,495	1.00	0.00
ATOM	1624	HB2	PHE	117	1,181	-37,331	31,223	1.00	0.00
ATOM	1625	HB3	PHE	117	0.273	-37,939	32,509	1.00	0.00
ATOM	1626	HD1	PHE	117	1,216	-34,350	31,553	1.00	0.00
ATOM	1627	HD2	PHE	117	-1,920	-37,364	31,775	1.00	0.00
ATOM	1628	HE1	PHE	117	-0.482	-32,656	31,057	1.00	0.00
ATOM	1629	HE2	PHE	117	-3,562	-35,726	31,026	1.00	0.00
ATOM	1630	HZ	PHE	117	-2,845	-33,176	30,876	1.00	0.00
ATOM	1631	N	ASP	118	1,519	-36,777	35,413	1.00	0.00
ATOM	1632	CA	ASP	118	1,347	-36,159	36,721	1.00	0.00
ATOM	1633	C	ASP	118	2,681	-35,520	37,138	1.00	0.00

ATOM	1634	O	ASP	118	2,638	-34,350	37,514	1.00	0.00
ATOM	1635	CB	ASP	118	0.895	-37,262	37,630	1.00	0.00
ATOM	1636	CG	ASP	118	0.963	-36,788	39,114	1.00	0.00
ATOM	1637	OD1	ASP	118	-0.103	-36,517	39,732	1.00	0.00
ATOM	1638	OD2	ASP	118	2,064	-36,638	39,658	1.00	0.00
ATOM	1639	H	ASP	118	1,473	-37,780	35,306	1.00	0.00
ATOM	1640	HA	ASP	118	0.517	-35,452	36,703	1.00	0.00
ATOM	1641	HB2	ASP	118	-0.148	-37,476	37,393	1.00	0.00
ATOM	1642	HB3	ASP	118	1,495	-38,159	37,484	1.00	0.00
ATOM	1643	N	LYS	119	3,803	-36,185	36,985	1.00	0.00
ATOM	1644	CA	LYS	119	5,069	-35,507	37,213	1.00	0.00
ATOM	1645	C	LYS	119	5,266	-34,278	36,333	1.00	0.00
ATOM	1646	O	LYS	119	5,733	-33,215	36,798	1.00	0.00
ATOM	1647	CB	LYS	119	6,298	-36,463	36,972	1.00	0.00
ATOM	1648	CG	LYS	119	7,564	-35,874	37,574	1.00	0.00
ATOM	1649	CD	LYS	119	8,937	-36,655	37,360	1.00	0.00
ATOM	1650	CE	LYS	119	10,085	-35,793	37,786	1.00	0.00
ATOM	1651	NZ	LYS	119	11,367	-36,490	37,807	1.00	0.00
ATOM	1652	H	LYS	119	3,728	-37,189	36,907	1.00	0.00
ATOM	1653	HA	LYS	119	5,005	-35,205	38,258	1.00	0.00
ATOM	1654	HB2	LYS	119	6,157	-37,478	37,347	1.00	0.00
ATOM	1655	HB3	LYS	119	6,414	-36,618	35,899	1.00	0.00
ATOM	1656	HG2	LYS	119	7,729	-34,880	37,158	1.00	0.00
ATOM	1657	HG3	LYS	119	7,467	-35,696	38,645	1.00	0.00
ATOM	1658	HD2	LYS	119	8,959	-37,639	37,829	1.00	0.00
ATOM	1659	HD3	LYS	119	8,971	-36,820	36,283	1.00	0.00
ATOM	1660	HE2	LYS	119	10,169	-34,882	37,194	1.00	0.00
ATOM	1661	HE3	LYS	119	10,027	-35,581	38,853	1.00	0.00
ATOM	1662	HZ1	LYS	119	11,260	-37,274	38,436	1.00	0.00
ATOM	1663	HZ2	LYS	119	12,088	-35,851	38,113	1.00	0.00
ATOM	1664	HZ3	LYS	119	11,589	-36,904	36,912	1.00	0.00
ATOM	1665	N	ILE	120	4,733	-34,298	35,109	1.00	0.00
ATOM	1666	CA	ILE	120	4,836	-33,143	34,117	1.00	0.00
ATOM	1667	C	ILE	120	3,854	-32,035	34,647	1.00	0.00
ATOM	1668	O	ILE	120	4,242	-30,901	34,894	1.00	0.00
ATOM	1669	CB	ILE	120	4,699	-33,507	32,650	1.00	0.00
ATOM	1670	CG1	ILE	120	5,966	-34,238	32,133	1.00	0.00
ATOM	1671	CG2	ILE	120	4,440	-32,266	31,849	1.00	0.00
ATOM	1672	CD1	ILE	120	5,830	-34,747	30,697	1.00	0.00
ATOM	1673	H	ILE	120	4,509	-35,212	34,740	1.00	0.00
ATOM	1674	HA	ILE	120	5,824	-32,681	34,116	1.00	0.00
ATOM	1675	HB	ILE	120	3,802	-34,109	32,507	1.00	0.00
ATOM	1676	HG12	ILE	120	6,835	-33,580	32,150	1.00	0.00

ATOM	1677	HG13	ILE	120	6,162	-35,132	32,724	1.00	0.00
ATOM	1678	HG21	ILE	120	5,301	-31,611	31,985	1.00	0.00
ATOM	1679	HG22	ILE	120	3,509	-31,719	31,999	1.00	0.00
ATOM	1680	HG23	ILE	120	4,646	-32,529	30,812	1.00	0.00
ATOM	1681	HD11	ILE	120	6,646	-35,454	30,542	1.00	0.00
ATOM	1682	HD12	ILE	120	5,834	-33,934	29,973	1.00	0.00
ATOM	1683	HD13	ILE	120	4,913	-35,307	30,511	1.00	0.00
ATOM	1684	N	SER	121	2,634	-32,369	35,042	1.00	0.00
ATOM	1685	CA	SER	121	1,700	-31,432	35,693	1.00	0.00
ATOM	1686	C	SER	121	2,186	-30,884	37,037	1.00	0.00
ATOM	1687	O	SER	121	1,632	-29,952	37,571	1.00	0.00
ATOM	1688	CB	SER	121	0.428	-32,206	35,876	1.00	0.00
ATOM	1689	OG	SER	121	-0.130	-32,344	34,638	1.00	0.00
ATOM	1690	H	SER	121	2,294	-33,313	34,929	1.00	0.00
ATOM	1691	HA	SER	121	1,567	-30,583	35,021	1.00	0.00
ATOM	1692	HB2	SER	121	0.614	-33,187	36,312	1.00	0.00
ATOM	1693	HB3	SER	121	-0.320	-31,716	36,500	1.00	0.00
ATOM	1694	HG	SER	121	0.176	-33,209	34,353	1.00	0.00
ATOM	1695	N	SER	122	3,196	-31,514	37,602	1.00	0.00
ATOM	1696	CA	SER	122	3,876	-31,182	38,871	1.00	0.00
ATOM	1697	C	SER	122	5,086	-30,275	38,731	1.00	0.00
ATOM	1698	O	SER	122	5,358	-29,436	39,535	1.00	0.00
ATOM	1699	CB	SER	122	4,135	-32,421	39,671	1.00	0.00
ATOM	1700	OG	SER	122	2,922	-33,079	39,986	1.00	0.00
ATOM	1701	H	SER	122	3,596	-32,343	37,186	1.00	0.00
ATOM	1702	HA	SER	122	3,184	-30,565	39,441	1.00	0.00
ATOM	1703	HB2	SER	122	4,914	-33,041	39,229	1.00	0.00
ATOM	1704	HB3	SER	122	4,536	-31,988	40,588	1.00	0.00
ATOM	1705	HG	SER	122	2,737	-33,609	39,207	1.00	0.00
ATOM	1706	N	ASN	123	5,813	-30,571	37,671	1.00	0.00
ATOM	1707	CA	ASN	123	7,090	-29,920	37,463	1.00	0.00
ATOM	1708	C	ASN	123	6,936	-28,748	36,429	1.00	0.00
ATOM	1709	O	ASN	123	7,677	-27,789	36,481	1.00	0.00
ATOM	1710	CB	ASN	123	8,102	-30,992	37,144	1.00	0.00
ATOM	1711	CG	ASN	123	8,494	-31,768	38,371	1.00	0.00
ATOM	1712	ND2	ASN	123	9,619	-32,419	38,438	1.00	0.00
ATOM	1713	OD1	ASN	123	7,877	-31,818	39,374	1.00	0.00
ATOM	1714	H	ASN	123	5,613	-31,431	37,180	1.00	0.00
ATOM	1715	HA	ASN	123	7,478	-29,440	38,361	1.00	0.00
ATOM	1716	HB2	ASN	123	7,754	-31,724	36,416	1.00	0.00
ATOM	1717	HB3	ASN	123	8,995	-30,482	36,784	1.00	0.00
ATOM	1718	HD21	ASN	123	10,171	-32,532	37,601	1.00	0.00
ATOM	1719	HD22	ASN	123	9,942	-32,705	39,352	1.00	0.00

ATOM	1720	N	GLY	124	5,914	-28,777	35,565	1.00	0.00
ATOM	1721	CA	GLY	124	5,666	-27,898	34,385	1.00	0.00
ATOM	1722	C	GLY	124	6,383	-28,357	33,097	1.00	0.00
ATOM	1723	O	GLY	124	6,848	-29,468	32,939	1.00	0.00
ATOM	1724	H	GLY	124	5,297	-29,578	35,602	1.00	0.00
ATOM	1725	HA2	GLY	124	4,598	-28,023	34,205	1.00	0.00
ATOM	1726	HA3	GLY	124	5,933	-26,859	34,569	1.00	0.00
ATOM	1727	N	ARG	125	6,500	-27,375	32,162	1.00	0.00
ATOM	1728	CA	ARG	125	6,992	-27,642	30,816	1.00	0.00
ATOM	1729	C	ARG	125	8,430	-28,091	30,685	1.00	0.00
ATOM	1730	O	ARG	125	9,299	-27,509	31,277	1.00	0.00
ATOM	1731	CB	ARG	125	6,725	-26,392	29,896	1.00	0.00
ATOM	1732	CG	ARG	125	7,489	-25,086	30,203	1.00	0.00
ATOM	1733	CD	ARG	125	8,786	-24,995	29,418	1.00	0.00
ATOM	1734	NE	ARG	125	9,703	-23,952	29,844	1.00	0.00
ATOM	1735	CZ	ARG	125	10,851	-24,058	30,538	1.00	0.00
ATOM	1736	NH1	ARG	125	11,365	-25,158	30,988	1.00	0.00
ATOM	1737	NH2	ARG	125	11,514	-22,982	30,836	1.00	0.00
ATOM	1738	H	ARG	125	5,977	-26,534	32,365	1.00	0.00
ATOM	1739	HA	ARG	125	6,422	-28,472	30,397	1.00	0.00
ATOM	1740	HB2	ARG	125	6,761	-26,557	28,820	1.00	0.00
ATOM	1741	HB3	ARG	125	5,663	-26,228	30,078	1.00	0.00
ATOM	1742	HG2	ARG	125	6,793	-24,289	29,940	1.00	0.00
ATOM	1743	HG3	ARG	125	7,624	-25,121	31,284	1.00	0.00
ATOM	1744	HD2	ARG	125	9,299	-25,953	29,506	1.00	0.00
ATOM	1745	HD3	ARG	125	8,482	-24,836	28,383	1.00	0.00
ATOM	1746	HE	ARG	125	9,458	-23,025	29,526	1.00	0.00
ATOM	1747	HH11	ARG	125	10,798	-25,962	30,758	1.00	0.00
ATOM	1748	HH12	ARG	125	12,026	-25,074	31,747	1.00	0.00
ATOM	1749	HH21	ARG	125	11,003	-22,121	30,695	1.00	0.00
ATOM	1750	HH22	ARG	125	12,294	-23,089	31,469	1.00	0.00
ATOM	1751	N	LEU	126	8,700	-29,057	29,910	1.00	0.00
ATOM	1752	CA	LEU	126	10,108	-29,438	29,749	1.00	0.00
ATOM	1753	C	LEU	126	10,979	-28,419	28,992	1.00	0.00
ATOM	1754	O	LEU	126	10,461	-27,712	28,112	1.00	0.00
ATOM	1755	CB	LEU	126	10,170	-30,779	29,044	1.00	0.00
ATOM	1756	CG	LEU	126	9,818	-31,980	29,930	1.00	0.00
ATOM	1757	CD1	LEU	126	9,660	-33,204	29,045	1.00	0.00
ATOM	1758	CD2	LEU	126	10,913	-32,302	30,983	1.00	0.00
ATOM	1759	H	LEU	126	7,954	-29,580	29,474	1.00	0.00
ATOM	1760	HA	LEU	126	10,562	-29,521	30,737	1.00	0.00
ATOM	1761	HB2	LEU	126	9,488	-30,797	28,194	1.00	0.00
ATOM	1762	HB3	LEU	126	11,193	-30,849	28,675	1.00	0.00

ATOM	1763	HG	LEU	126	8,808	-31,796	30,294	1.00	0.00
ATOM	1764	HD11	LEU	126	9,124	-32,989	28,121	1.00	0.00
ATOM	1765	HD12	LEU	126	9,139	-33,998	29,579	1.00	0.00
ATOM	1766	HD13	LEU	126	10,635	-33,571	28,721	1.00	0.00
ATOM	1767	HD21	LEU	126	10,977	-31,470	31,683	1.00	0.00
ATOM	1768	HD22	LEU	126	10,612	-33,217	31,492	1.00	0.00
ATOM	1769	HD23	LEU	126	11,894	-32,413	30,521	1.00	0.00
ATOM	1770	N	LYS	127	12,284	-28,458	29,254	1.00	0.00
ATOM	1771	CA	LYS	127	13,232	-27,823	28,327	1.00	0.00
ATOM	1772	C	LYS	127	13,269	-28,635	27,028	1.00	0.00
ATOM	1773	O	LYS	127	13,102	-29,857	27,021	1.00	0.00
ATOM	1774	CB	LYS	127	14,621	-27,747	29,027	1.00	0.00
ATOM	1775	CG	LYS	127	14,681	-26,647	30,106	1.00	0.00
ATOM	1776	CD	LYS	127	16,118	-26,553	30,725	1.00	0.00
ATOM	1777	CE	LYS	127	16,463	-27,587	31,793	1.00	0.00
ATOM	1778	NZ	LYS	127	16,870	-28,904	31,273	1.00	0.00
ATOM	1779	H	LYS	127	12,603	-28,897	30,106	1.00	0.00
ATOM	1780	HA	LYS	127	12,827	-26,858	28,021	1.00	0.00
ATOM	1781	HB2	LYS	127	14,772	-28,693	29,547	1.00	0.00
ATOM	1782	HB3	LYS	127	15,365	-27,570	28,250	1.00	0.00
ATOM	1783	HG2	LYS	127	14,446	-25,709	29,602	1.00	0.00
ATOM	1784	HG3	LYS	127	13,954	-26,865	30,887	1.00	0.00
ATOM	1785	HD2	LYS	127	16,922	-26,536	29,989	1.00	0.00
ATOM	1786	HD3	LYS	127	16,197	-25,553	31,154	1.00	0.00
ATOM	1787	HE2	LYS	127	17,314	-27,198	32,352	1.00	0.00
ATOM	1788	HE3	LYS	127	15,661	-27,666	32,527	1.00	0.00
ATOM	1789	HZ1	LYS	127	17,365	-28,852	30,394	1.00	0.00
ATOM	1790	HZ2	LYS	127	16,085	-29,533	31,186	1.00	0.00
ATOM	1791	HZ3	LYS	127	17,512	-29,422	31,856	1.00	0.00
ATOM	1792	N	GLU	128	13,579	-27,955	25,907	1.00	0.00
ATOM	1793	CA	GLU	128	13,455	-28,513	24,586	1.00	0.00
ATOM	1794	C	GLU	128	14,223	-29,865	24,291	1.00	0.00
ATOM	1795	O	GLU	128	13,645	-30,754	23,665	1.00	0.00
ATOM	1796	CB	GLU	128	14,019	-27,461	23,603	1.00	0.00
ATOM	1797	CG	GLU	128	13,766	-27,726	22,099	1.00	0.00
ATOM	1798	CD	GLU	128	14,432	-26,760	21,177	1.00	0.00
ATOM	1799	OE1	GLU	128	15,358	-27,248	20,438	1.00	0.00
ATOM	1800	OE2	GLU	128	14,086	-25,597	21,160	1.00	0.00
ATOM	1801	H	GLU	128	13,675	-26,962	26,058	1.00	0.00
ATOM	1802	HA	GLU	128	12,403	-28,671	24,347	1.00	0.00
ATOM	1803	HB2	GLU	128	13,597	-26,475	23,795	1.00	0.00
ATOM	1804	HB3	GLU	128	15,081	-27,560	23,826	1.00	0.00
ATOM	1805	HG2	GLU	128	14,063	-28,769	21,991	1.00	0.00

ATOM	1806	HG3	GLU	128	12,732	-27,837	21,773	1.00	0.00
ATOM	1807	N	ASP	129	15,494	-30,029	24,717	1.00	0.00
ATOM	1808	CA	ASP	129	16,209	-31,253	24,465	1.00	0.00
ATOM	1809	C	ASP	129	15,740	-32,422	25,335	1.00	0.00
ATOM	1810	O	ASP	129	15,848	-33,599	24,950	1.00	0.00
ATOM	1811	CB	ASP	129	17,725	-30,939	24,551	1.00	0.00
ATOM	1812	CG	ASP	129	18,431	-32,191	24,034	1.00	0.00
ATOM	1813	OD1	ASP	129	18,367	-32,515	22,827	1.00	0.00
ATOM	1814	OD2	ASP	129	19,213	-32,797	24,777	1.00	0.00
ATOM	1815	H	ASP	129	16,002	-29,245	25,101	1.00	0.00
ATOM	1816	HA	ASP	129	15,896	-31,463	23,442	1.00	0.00
ATOM	1817	HB2	ASP	129	17,863	-30,100	23,870	1.00	0.00
ATOM	1818	HB3	ASP	129	17,970	-30,669	25,579	1.00	0.00
ATOM	1819	N	GLU	130	15,123	-32,145	26,432	1.00	0.00
ATOM	1820	CA	GLU	130	14,456	-33,126	27,275	1.00	0.00
ATOM	1821	C	GLU	130	13,066	-33,563	26,721	1.00	0.00
ATOM	1822	O	GLU	130	12,763	-34,785	26,721	1.00	0.00
ATOM	1823	CB	GLU	130	14,237	-32,653	28,713	1.00	0.00
ATOM	1824	CG	GLU	130	15,524	-32,416	29,493	1.00	0.00
ATOM	1825	CD	GLU	130	15,224	-32,045	30,963	1.00	0.00
ATOM	1826	OE1	GLU	130	15,324	-32,891	31,877	1.00	0.00
ATOM	1827	OE2	GLU	130	15,035	-30,822	31,192	1.00	0.00
ATOM	1828	H	GLU	130	14,981	-31,197	26,748	1.00	0.00
ATOM	1829	HA	GLU	130	15,109	-33,989	27,402	1.00	0.00
ATOM	1830	HB2	GLU	130	13,665	-31,724	28,690	1.00	0.00
ATOM	1831	HB3	GLU	130	13,740	-33,469	29,237	1.00	0.00
ATOM	1832	HG2	GLU	130	16,196	-33,271	29,578	1.00	0.00
ATOM	1833	HG3	GLU	130	16,091	-31,585	29,077	1.00	0.00
ATOM	1834	N	ALA	131	12,229	-32,654	26,224	1.00	0.00
ATOM	1835	CA	ALA	131	10,991	-32,967	25,468	1.00	0.00
ATOM	1836	C	ALA	131	11,290	-33,759	24,210	1.00	0.00
ATOM	1837	O	ALA	131	10,757	-34,818	23,926	1.00	0.00
ATOM	1838	CB	ALA	131	10,304	-31,641	25,190	1.00	0.00
ATOM	1839	H	ALA	131	12,709	-31,807	25,953	1.00	0.00
ATOM	1840	HA	ALA	131	10,270	-33,478	26,107	1.00	0.00
ATOM	1841	HB1	ALA	131	10,214	-31,016	26,078	1.00	0.00
ATOM	1842	HB2	ALA	131	9,339	-31,886	24,746	1.00	0.00
ATOM	1843	HB3	ALA	131	10,913	-31,085	24,478	1.00	0.00
ATOM	1844	N	ARG	132	12,319	-33,307	23,507	1.00	0.00
ATOM	1845	CA	ARG	132	12,896	-34,044	22,336	1.00	0.00
ATOM	1846	C	ARG	132	13,203	-35,518	22,719	1.00	0.00
ATOM	1847	O	ARG	132	12,783	-36,374	21,903	1.00	0.00
ATOM	1848	CB	ARG	132	14,082	-33,399	21,724	1.00	0.00

ATOM	1849	CG	ARG	132	14,551	-34,040	20,375	1.00	0.00
ATOM	1850	CD	ARG	132	15,873	-33,342	19,861	1.00	0.00
ATOM	1851	NE	ARG	132	15,601	-31,919	19,502	1.00	0.00
ATOM	1852	CZ	ARG	132	15,845	-30,815	20,142	1.00	0.00
ATOM	1853	NH1	ARG	132	16,430	-30,829	21,268	1.00	0.00
ATOM	1854	NH2	ARG	132	15,592	-29,700	19,504	1.00	0.00
ATOM	1855	H	ARG	132	12,690	-32,382	23,675	1.00	0.00
ATOM	1856	HA	ARG	132	12,087	-34,141	21,612	1.00	0.00
ATOM	1857	HB2	ARG	132	13,706	-32,391	21,547	1.00	0.00
ATOM	1858	HB3	ARG	132	14,919	-33,379	22,422	1.00	0.00
ATOM	1859	HG2	ARG	132	14,769	-35,089	20,580	1.00	0.00
ATOM	1860	HG3	ARG	132	13,695	-34,081	19,700	1.00	0.00
ATOM	1861	HD2	ARG	132	16,608	-33,474	20,655	1.00	0.00
ATOM	1862	HD3	ARG	132	16,342	-33,874	19,034	1.00	0.00
ATOM	1863	HE	ARG	132	15,281	-31,746	18,559	1.00	0.00
ATOM	1864	HH11	ARG	132	16,864	-31,656	21,652	1.00	0.00
ATOM	1865	HH12	ARG	132	16,682	-29,905	21,590	1.00	0.00
ATOM	1866	HH21	ARG	132	15,144	-29,820	18,606	1.00	0.00
ATOM	1867	HH22	ARG	132	15,780	-28,768	19,844	1.00	0.00
ATOM	1868	N	LYS	133	13,647	-35,804	23,955	1.00	0.00
ATOM	1869	CA	LYS	133	14,198	-37,119	24,320	1.00	0.00
ATOM	1870	C	LYS	133	13,019	-38,042	24,681	1.00	0.00
ATOM	1871	O	LYS	133	13,070	-39,189	24,221	1.00	0.00
ATOM	1872	CB	LYS	133	15,212	-36,928	25,451	1.00	0.00
ATOM	1873	CG	LYS	133	16,109	-38,164	25,640	1.00	0.00
ATOM	1874	CD	LYS	133	17,141	-37,988	26,694	1.00	0.00
ATOM	1875	CE	LYS	133	17,981	-39,293	26,676	1.00	0.00
ATOM	1876	NZ	LYS	133	18,909	-39,370	27,783	1.00	0.00
ATOM	1877	H	LYS	133	13,623	-35,119	24,697	1.00	0.00
ATOM	1878	HA	LYS	133	14,736	-37,622	23,516	1.00	0.00
ATOM	1879	HB2	LYS	133	15,811	-36,032	25,288	1.00	0.00
ATOM	1880	HB3	LYS	133	14,664	-36,750	26,376	1.00	0.00
ATOM	1881	HG2	LYS	133	15,421	-38,988	25,826	1.00	0.00
ATOM	1882	HG3	LYS	133	16,644	-38,359	24,711	1.00	0.00
ATOM	1883	HD2	LYS	133	17,819	-37,153	26,518	1.00	0.00
ATOM	1884	HD3	LYS	133	16,695	-37,763	27,663	1.00	0.00
ATOM	1885	HE2	LYS	133	17,254	-40,107	26,689	1.00	0.00
ATOM	1886	HE3	LYS	133	18,548	-39,370	25,748	1.00	0.00
ATOM	1887	HZ1	LYS	133	19,275	-38,430	27,833	1.00	0.00
ATOM	1888	HZ2	LYS	133	19,656	-39,993	27,512	1.00	0.00
ATOM	1889	HZ3	LYS	133	18,445	-39,562	28,660	1.00	0.00
ATOM	1890	N	TYR	134	12,017	-37,595	25,383	1.00	0.00
ATOM	1891	CA	TYR	134	10,772	-38,369	25,578	1.00	0.00



ATOM	1892	C	TYR	134	10,054	-38,683	24,214	1.00	0.00
ATOM	1893	O	TYR	134	9,636	-39,794	23,996	1.00	0.00
ATOM	1894	CB	TYR	134	9,942	-37,674	26,669	1.00	0.00
ATOM	1895	CG	TYR	134	10,388	-37,680	28,132	1.00	0.00
ATOM	1896	CD1	TYR	134	9,860	-36,725	28,991	1.00	0.00
ATOM	1897	CD2	TYR	134	11,321	-38,641	28,613	1.00	0.00
ATOM	1898	CE1	TYR	134	10,204	-36,708	30,368	1.00	0.00
ATOM	1899	CE2	TYR	134	11,601	-38,654	29,992	1.00	0.00
ATOM	1900	CZ	TYR	134	11,017	-37,724	30,847	1.00	0.00
ATOM	1901	OH	TYR	134	11,276	-37,777	32,238	1.00	0.00
ATOM	1902	H	TYR	134	12,064	-36,636	25,695	1.00	0.00
ATOM	1903	HA	TYR	134	11,001	-39,351	25,996	1.00	0.00
ATOM	1904	HB2	TYR	134	9,867	-36,608	26,452	1.00	0.00
ATOM	1905	HB3	TYR	134	8,956	-38,138	26,630	1.00	0.00
ATOM	1906	HD1	TYR	134	9,066	-36,093	28,621	1.00	0.00
ATOM	1907	HD2	TYR	134	11,780	-39,460	28,079	1.00	0.00
ATOM	1908	HE1	TYR	134	9,775	-36,080	31,135	1.00	0.00
ATOM	1909	HE2	TYR	134	12,185	-39,452	30,426	1.00	0.00
ATOM	1910	HH	TYR	134	11,003	-37,021	32,763	1.00	0.00
ATOM	1911	N	PHE	135	10,018	-37,739	23,268	1.00	0.00
ATOM	1912	CA	PHE	135	9,433	-37,918	21,962	1.00	0.00
ATOM	1913	C	PHE	135	10,238	-38,901	21,140	1.00	0.00
ATOM	1914	O	PHE	135	9,688	-39,836	20,481	1.00	0.00
ATOM	1915	CB	PHE	135	9,239	-36,495	21,265	1.00	0.00
ATOM	1916	CG	PHE	135	8,285	-36,504	20,071	1.00	0.00
ATOM	1917	CD1	PHE	135	6,935	-36,353	20,230	1.00	0.00
ATOM	1918	CD2	PHE	135	8,826	-36,759	18,796	1.00	0.00
ATOM	1919	CE1	PHE	135	6,073	-36,337	19,141	1.00	0.00
ATOM	1920	CE2	PHE	135	7,970	-36,784	17,650	1.00	0.00
ATOM	1921	CZ	PHE	135	6,611	-36,546	17,847	1.00	0.00
ATOM	1922	H	PHE	135	10,313	-36,841	23,627	1.00	0.00
ATOM	1923	HA	PHE	135	8,433	-38,344	22,042	1.00	0.00
ATOM	1924	HB2	PHE	135	8,861	-35,847	22,056	1.00	0.00
ATOM	1925	HB3	PHE	135	10,194	-36,075	20,949	1.00	0.00
ATOM	1926	HD1	PHE	135	6,549	-36,210	21,230	1.00	0.00
ATOM	1927	HD2	PHE	135	9,893	-36,849	18,652	1.00	0.00
ATOM	1928	HE1	PHE	135	5,030	-36,068	19,229	1.00	0.00
ATOM	1929	HE2	PHE	135	8,415	-36,914	16,674	1.00	0.00
ATOM	1930	HZ	PHE	135	5,892	-36,632	17,046	1.00	0.00
ATOM	1931	N	GLN	136	11,558	-38,898	21,109	1.00	0.00
ATOM	1932	CA	GLN	136	12,418	-39,916	20,475	1.00	0.00
ATOM	1933	C	GLN	136	12,160	-41,319	21,050	1.00	0.00
ATOM	1934	O	GLN	136	12,057	-42,304	20,268	1.00	0.00

ATOM	1935	CB	GLN	136	13,850	-39,511	20,552	1.00	0.00
ATOM	1936	CG	GLN	136	14,186	-38,359	19,553	1.00	0.00
ATOM	1937	CD	GLN	136	15,592	-37,802	19,662	1.00	0.00
ATOM	1938	NE2	GLN	136	15,909	-36,870	18,777	1.00	0.00
ATOM	1939	OE1	GLN	136	16,413	-38,154	20,537	1.00	0.00
ATOM	1940	H	GLN	136	11,932	-38,249	21,785	1.00	0.00
ATOM	1941	HA	GLN	136	12,055	-39,903	19,447	1.00	0.00
ATOM	1942	HB2	GLN	136	13,946	-39,031	21,526	1.00	0.00
ATOM	1943	HB3	GLN	136	14,494	-40,371	20,371	1.00	0.00
ATOM	1944	HG2	GLN	136	14,242	-38,720	18,527	1.00	0.00
ATOM	1945	HG3	GLN	136	13,528	-37,492	19,623	1.00	0.00
ATOM	1946	HE21	GLN	136	16,828	-36,455	18,832	1.00	0.00
ATOM	1947	HE22	GLN	136	15,340	-36,768	17,949	1.00	0.00
ATOM	1948	N	GLN	137	12,121	-41,471	22,415	1.00	0.00
ATOM	1949	CA	GLN	137	11,825	-42,758	23,136	1.00	0.00
ATOM	1950	C	GLN	137	10,423	-43,278	22,888	1.00	0.00
ATOM	1951	O	GLN	137	10,265	-44,451	22,679	1.00	0.00
ATOM	1952	CB	GLN	137	12,043	-42,444	24,582	1.00	0.00
ATOM	1953	CG	GLN	137	13,522	-42,301	24,970	1.00	0.00
ATOM	1954	CD	GLN	137	13,923	-41,981	26,461	1.00	0.00
ATOM	1955	NE2	GLN	137	15,203	-41,798	26,778	1.00	0.00
ATOM	1956	OE1	GLN	137	13,058	-41,785	27,327	1.00	0.00
ATOM	1957	H	GLN	137	12,416	-40,698	22,997	1.00	0.00
ATOM	1958	HA	GLN	137	12,579	-43,496	22,864	1.00	0.00
ATOM	1959	HB2	GLN	137	11,464	-41,534	24,743	1.00	0.00
ATOM	1960	HB3	GLN	137	11,595	-43,261	25,146	1.00	0.00
ATOM	1961	HG2	GLN	137	14,042	-43,234	24,749	1.00	0.00
ATOM	1962	HG3	GLN	137	13,895	-41,514	24,315	1.00	0.00
ATOM	1963	HE21	GLN	137	15,492	-41,797	27,747	1.00	0.00
ATOM	1964	HE22	GLN	137	15,857	-41,755	26,011	1.00	0.00
ATOM	1965	N	LEU	138	9,507	-42,379	22,654	1.00	0.00
ATOM	1966	CA	LEU	138	8,176	-42,756	22,390	1.00	0.00
ATOM	1967	C	LEU	138	7,946	-43,250	20,951	1.00	0.00
ATOM	1968	O	LEU	138	7,449	-44,356	20,694	1.00	0.00
ATOM	1969	CB	LEU	138	7,177	-41,570	22,660	1.00	0.00
ATOM	1970	CG	LEU	138	5,618	-41,847	22,335	1.00	0.00
ATOM	1971	CD1	LEU	138	5,050	-42,877	23,305	1.00	0.00
ATOM	1972	CD2	LEU	138	4,808	-40,543	22,640	1.00	0.00
ATOM	1973	H	LEU	138	9,758	-41,404	22,740	1.00	0.00
ATOM	1974	HA	LEU	138	7,938	-43,666	22,941	1.00	0.00
ATOM	1975	HB2	LEU	138	7,352	-41,148	23,650	1.00	0.00
ATOM	1976	HB3	LEU	138	7,427	-40,806	21,923	1.00	0.00
ATOM	1977	HG	LEU	138	5,525	-42,219	21,315	1.00	0.00

ATOM	1978	HD11	LEU	138	5,375	-43,802	22,828	1.00	0.00
ATOM	1979	HD12	LEU	138	3,977	-42,695	23,237	1.00	0.00
ATOM	1980	HD13	LEU	138	5,399	-42,584	24,294	1.00	0.00
ATOM	1981	HD21	LEU	138	5,231	-39,626	22,230	1.00	0.00
ATOM	1982	HD22	LEU	138	3,807	-40,612	22,213	1.00	0.00
ATOM	1983	HD23	LEU	138	4,877	-40,338	23,708	1.00	0.00
ATOM	1984	N	ILE	139	8,424	-42,419	19,977	1.00	0.00
ATOM	1985	CA	ILE	139	8,098	-42,592	18,577	1.00	0.00
ATOM	1986	C	ILE	139	9,015	-43,588	17,914	1.00	0.00
ATOM	1987	O	ILE	139	8,598	-44,151	16,869	1.00	0.00
ATOM	1988	CB	ILE	139	7,965	-41,196	17,932	1.00	0.00
ATOM	1989	CG1	ILE	139	7,008	-41,183	16,729	1.00	0.00
ATOM	1990	CG2	ILE	139	9,339	-40,613	17,502	1.00	0.00
ATOM	1991	CD1	ILE	139	5,521	-41,372	17,171	1.00	0.00
ATOM	1992	H	ILE	139	8,807	-41,506	20,178	1.00	0.00
ATOM	1993	HA	ILE	139	7,108	-43,050	18,568	1.00	0.00
ATOM	1994	HB	ILE	139	7,552	-40,506	18,667	1.00	0.00
ATOM	1995	HG12	ILE	139	7,077	-40,256	16,159	1.00	0.00
ATOM	1996	HG13	ILE	139	7,282	-42,047	16,124	1.00	0.00
ATOM	1997	HG21	ILE	139	9,123	-39,564	17,302	1.00	0.00
ATOM	1998	HG22	ILE	139	9,704	-41,165	16,635	1.00	0.00
ATOM	1999	HG23	ILE	139	10,020	-40,730	18,345	1.00	0.00
ATOM	2000	HD11	ILE	139	4,857	-41,519	16,318	1.00	0.00
ATOM	2001	HD12	ILE	139	5,192	-40,636	17,904	1.00	0.00
ATOM	2002	HD13	ILE	139	5,437	-42,345	17,655	1.00	0.00
ATOM	2003	N	ASN	140	10,204	-43,880	18,396	1.00	0.00
ATOM	2004	CA	ASN	140	10,950	-45,002	17,937	1.00	0.00
ATOM	2005	C	ASN	140	10,230	-46,358	18,154	1.00	0.00
ATOM	2006	O	ASN	140	10,254	-47,138	17,195	1.00	0.00
ATOM	2007	CB	ASN	140	12,317	-44,999	18,653	1.00	0.00
ATOM	2008	CG	ASN	140	13,077	-46,254	18,306	1.00	0.00
ATOM	2009	ND2	ASN	140	12,985	-47,221	19,120	1.00	0.00
ATOM	2010	OD1	ASN	140	13,765	-46,346	17,306	1.00	0.00
ATOM	2011	H	ASN	140	10,543	-43,497	19,267	1.00	0.00
ATOM	2012	HA	ASN	140	11,195	-44,937	16,877	1.00	0.00
ATOM	2013	HB2	ASN	140	12,838	-44,081	18,380	1.00	0.00
ATOM	2014	HB3	ASN	140	12,127	-44,947	19,724	1.00	0.00
ATOM	2015	HD21	ASN	140	12,507	-47,154	20,007	1.00	0.00
ATOM	2016	HD22	ASN	140	13,673	-47,922	18,888	1.00	0.00
ATOM	2017	N	ALA	141	9,544	-46,547	19,297	1.00	0.00
ATOM	2018	CA	ALA	141	8,821	-47,772	19,622	1.00	0.00
ATOM	2019	C	ALA	141	7,564	-47,941	18,758	1.00	0.00
ATOM	2020	O	ALA	141	7,056	-49,066	18,526	1.00	0.00

ATOM	2021	CB	ALA	141	8,542	-47,809	21,093	1.00	0.00
ATOM	2022	H	ALA	141	9,545	-45,844	20,024	1.00	0.00
ATOM	2023	HA	ALA	141	9,449	-48,633	19,394	1.00	0.00
ATOM	2024	HB1	ALA	141	9,475	-47,698	21,644	1.00	0.00
ATOM	2025	HB2	ALA	141	8,021	-48,709	21,414	1.00	0.00
ATOM	2026	HB3	ALA	141	7,855	-47,007	21,364	1.00	0.00
ATOM	2027	N	VAL	142	7,051	-46,846	18,234	1.00	0.00
ATOM	2028	CA	VAL	142	5,905	-46,868	17,287	1.00	0.00
ATOM	2029	C	VAL	142	6,343	-47,203	15,837	1.00	0.00
ATOM	2030	O	VAL	142	5,861	-48,142	15,211	1.00	0.00
ATOM	2031	CB	VAL	142	5,012	-45,580	17,362	1.00	0.00
ATOM	2032	CG1	VAL	142	3,665	-45,821	16,660	1.00	0.00
ATOM	2033	CG2	VAL	142	4,693	-45,099	18,805	1.00	0.00
ATOM	2034	H	VAL	142	7,381	-45,957	18,581	1.00	0.00
ATOM	2035	HA	VAL	142	5,227	-47,660	17,606	1.00	0.00
ATOM	2036	HB	VAL	142	5,560	-44,785	16,855	1.00	0.00
ATOM	2037	HG11	VAL	142	2,951	-45,043	16,929	1.00	0.00
ATOM	2038	HG12	VAL	142	3,761	-45,795	15,574	1.00	0.00
ATOM	2039	HG13	VAL	142	3,282	-46,714	17,154	1.00	0.00
ATOM	2040	HG21	VAL	142	5,615	-44,760	19,278	1.00	0.00
ATOM	2041	HG22	VAL	142	4,260	-45,899	19,407	1.00	0.00
ATOM	2042	HG23	VAL	142	4,021	-44,251	18,672	1.00	0.00
ATOM	2043	N	ASP	143	7,329	-46,495	15,299	1.00	0.00
ATOM	2044	CA	ASP	143	7,810	-46,842	13,996	1.00	0.00
ATOM	2045	C	ASP	143	8,442	-48,228	13,909	1.00	0.00
ATOM	2046	O	ASP	143	8,238	-48,949	12,923	1.00	0.00
ATOM	2047	CB	ASP	143	8,953	-45,888	13,641	1.00	0.00
ATOM	2048	CG	ASP	143	9,356	-46,053	12,125	1.00	0.00
ATOM	2049	OD1	ASP	143	8,446	-45,950	11,291	1.00	0.00
ATOM	2050	OD2	ASP	143	10,567	-46,219	11,849	1.00	0.00
ATOM	2051	H	ASP	143	7,721	-45,792	15,908	1.00	0.00
ATOM	2052	HA	ASP	143	7,008	-46,847	13,257	1.00	0.00
ATOM	2053	HB2	ASP	143	8,639	-44,847	13,719	1.00	0.00
ATOM	2054	HB3	ASP	143	9,810	-46,146	14,263	1.00	0.00
ATOM	2055	N	TYR	144	9,162	-48,622	14,986	1.00	0.00
ATOM	2056	CA	TYR	144	9,678	-50,006	15,104	1.00	0.00
ATOM	2057	C	TYR	144	8,533	-51,059	15,037	1.00	0.00
ATOM	2058	O	TYR	144	8,561	-51,998	14,231	1.00	0.00
ATOM	2059	CB	TYR	144	10,462	-50,009	16,404	1.00	0.00
ATOM	2060	CG	TYR	144	11,109	-51,359	16,700	1.00	0.00
ATOM	2061	CD1	TYR	144	12,459	-51,556	16,367	1.00	0.00
ATOM	2062	CD2	TYR	144	10,378	-52,485	17,181	1.00	0.00
ATOM	2063	CE1	TYR	144	13,103	-52,786	16,510	1.00	0.00

ATOM	2064	CE2	TYR	144	10,971	-53,745	17,347	1.00	0.00
ATOM	2065	CZ	TYR	144	12,347	-53,893	16,970	1.00	0.00
ATOM	2066	OH	TYR	144	12,908	-55,138	17,112	1.00	0.00
ATOM	2067	H	TYR	144	9,364	-47,994	15,750	1.00	0.00
ATOM	2068	HA	TYR	144	10,326	-50,137	14,237	1.00	0.00
ATOM	2069	HB2	TYR	144	11,218	-49,236	16,261	1.00	0.00
ATOM	2070	HB3	TYR	144	9,808	-49,664	17,204	1.00	0.00
ATOM	2071	HD1	TYR	144	12,965	-50,737	15,878	1.00	0.00
ATOM	2072	HD2	TYR	144	9,323	-52,370	17,376	1.00	0.00
ATOM	2073	HE1	TYR	144	14,093	-53,032	16,155	1.00	0.00
ATOM	2074	HE2	TYR	144	10,399	-54,591	17,696	1.00	0.00
ATOM	2075	HH	TYR	144	12,296	-55,841	17,345	1.00	0.00
ATOM	2076	N	CYS	145	7,451	-50,951	15,802	1.00	0.00
ATOM	2077	CA	CYS	145	6,236	-51,803	15,862	1.00	0.00
ATOM	2078	C	CYS	145	5,463	-51,844	14,510	1.00	0.00
ATOM	2079	O	CYS	145	5,188	-52,960	14,080	1.00	0.00
ATOM	2080	CB	CYS	145	5,425	-51,186	16,981	1.00	0.00
ATOM	2081	SG	CYS	145	5,985	-51,775	18,670	1.00	0.00
ATOM	2082	H	CYS	145	7,477	-50,182	16,457	1.00	0.00
ATOM	2083	HA	CYS	145	6,557	-52,828	16,047	1.00	0.00
ATOM	2084	HB2	CYS	145	5,417	-50,099	16,911	1.00	0.00
ATOM	2085	HB3	CYS	145	4,352	-51,307	16,835	1.00	0.00
ATOM	2086	HG	CYS	145	5,111	-50,985	19,301	1.00	0.00
ATOM	2087	N	HID	146	5,138	-50,727	13,864	1.00	0.00
ATOM	2088	CA	HID	146	4,559	-50,614	12,483	1.00	0.00
ATOM	2089	C	HID	146	5,455	-51,232	11,343	1.00	0.00
ATOM	2090	O	HID	146	4,944	-51,890	10,494	1.00	0.00
ATOM	2091	CB	HID	146	4,414	-49,125	12,073	1.00	0.00
ATOM	2092	CG	HID	146	3,464	-48,333	12,925	1.00	0.00
ATOM	2093	CD2	HID	146	3,390	-46,995	12,998	1.00	0.00
ATOM	2094	ND1	HID	146	2,485	-48,828	13,787	1.00	0.00
ATOM	2095	CE1	HID	146	1,876	-47,810	14,382	1.00	0.00
ATOM	2096	NE2	HID	146	2,343	-46,636	13,876	1.00	0.00
ATOM	2097	H	HID	146	5,431	-49,845	14,258	1.00	0.00
ATOM	2098	HA	HID	146	3,558	-51,044	12,549	1.00	0.00
ATOM	2099	HB2	HID	146	5,415	-48,703	12,163	1.00	0.00
ATOM	2100	HB3	HID	146	4,079	-49,003	11,043	1.00	0.00
ATOM	2101	HD1	HID	146	2,448	-49,793	14,081	1.00	0.00
ATOM	2102	HD2	HID	146	3,960	-46,285	12,416	1.00	0.00
ATOM	2103	HE1	HID	146	1,139	-47,926	15,164	1.00	0.00
ATOM	2104	N	SER	147	6,777	-51,177	11,483	1.00	0.00
ATOM	2105	CA	SER	147	7,735	-51,827	10,613	1.00	0.00
ATOM	2106	C	SER	147	7,841	-53,327	10,786	1.00	0.00

ATOM	2107	O	SER	147	8,712	-53,929	10,123	1.00	0.00
ATOM	2108	CB	SER	147	9,150	-51,148	10,675	1.00	0.00
ATOM	2109	OG	SER	147	9,218	-49,781	10,426	1.00	0.00
ATOM	2110	H	SER	147	7,101	-50,634	12,271	1.00	0.00
ATOM	2111	HA	SER	147	7,323	-51,651	9,619	1.00	0.00
ATOM	2112	HB2	SER	147	9,556	-51,293	11,676	1.00	0.00
ATOM	2113	HB3	SER	147	9,805	-51,567	9,911	1.00	0.00
ATOM	2114	HG	SER	147	8,910	-49,391	11,246	1.00	0.00
ATOM	2115	N	ARG	148	6,966	-53,879	11,635	1.00	0.00
ATOM	2116	CA	ARG	148	6,833	-55,270	12,020	1.00	0.00
ATOM	2117	C	ARG	148	5,376	-55,744	12,159	1.00	0.00
ATOM	2118	O	ARG	148	5,055	-56,746	12,748	1.00	0.00
ATOM	2119	CB	ARG	148	7,632	-55,632	13,337	1.00	0.00
ATOM	2120	CG	ARG	148	9,198	-55,310	13,314	1.00	0.00
ATOM	2121	CD	ARG	148	9,991	-55,737	14,510	1.00	0.00
ATOM	2122	NE	ARG	148	11,447	-55,799	14,136	1.00	0.00
ATOM	2123	CZ	ARG	148	12,156	-54,774	13,627	1.00	0.00
ATOM	2124	NH1	ARG	148	11,751	-53,623	13,422	1.00	0.00
ATOM	2125	NH2	ARG	148	13,368	-54,987	13,268	1.00	0.00
ATOM	2126	H	ARG	148	6,304	-53,228	12,033	1.00	0.00
ATOM	2127	HA	ARG	148	7,158	-55,971	11,251	1.00	0.00
ATOM	2128	HB2	ARG	148	7,222	-55,052	14,163	1.00	0.00
ATOM	2129	HB3	ARG	148	7,426	-56,672	13,586	1.00	0.00
ATOM	2130	HG2	ARG	148	9,622	-55,839	12,460	1.00	0.00
ATOM	2131	HG3	ARG	148	9,304	-54,231	13,202	1.00	0.00
ATOM	2132	HD2	ARG	148	9,847	-55,036	15,333	1.00	0.00
ATOM	2133	HD3	ARG	148	9,875	-56,793	14,758	1.00	0.00
ATOM	2134	HE	ARG	148	11,993	-56,589	14,447	1.00	0.00
ATOM	2135	HH11	ARG	148	10,825	-53,451	13,790	1.00	0.00
ATOM	2136	HH12	ARG	148	12,408	-52,858	13,383	1.00	0.00
ATOM	2137	HH21	ARG	148	13,788	-55,870	13,517	1.00	0.00
ATOM	2138	HH22	ARG	148	13,994	-54,267	12,936	1.00	0.00
ATOM	2139	N	GLY	149	4,382	-54,907	11,701	1.00	0.00
ATOM	2140	CA	GLY	149	2,958	-55,206	11,702	1.00	0.00
ATOM	2141	C	GLY	149	2,055	-54,926	12,896	1.00	0.00
ATOM	2142	O	GLY	149	0.931	-55,326	12,988	1.00	0.00
ATOM	2143	H	GLY	149	4,664	-54,135	11,114	1.00	0.00
ATOM	2144	HA2	GLY	149	2,480	-54,607	10,928	1.00	0.00
ATOM	2145	HA3	GLY	149	2,846	-56,253	11,420	1.00	0.00
ATOM	2146	N	VAL	150	2,645	-54,314	13,960	1.00	0.00
ATOM	2147	CA	VAL	150	1,913	-54,011	15,281	1.00	0.00
ATOM	2148	C	VAL	150	1,523	-52,487	15,325	1.00	0.00
ATOM	2149	O	VAL	150	2,315	-51,567	15,338	1.00	0.00

ATOM	2150	CB	VAL	150	2,777	-54,333	16,470	1.00	0.00
ATOM	2151	CG1	VAL	150	2,196	-53,765	17,797	1.00	0.00
ATOM	2152	CG2	VAL	150	3,137	-55,814	16,623	1.00	0.00
ATOM	2153	H	VAL	150	3,588	-53,965	13,862	1.00	0.00
ATOM	2154	HA	VAL	150	1,031	-54,650	15,333	1.00	0.00
ATOM	2155	HB	VAL	150	3,661	-53,735	16,247	1.00	0.00
ATOM	2156	HG11	VAL	150	2,778	-54,155	18,631	1.00	0.00
ATOM	2157	HG12	VAL	150	2,306	-52,681	17,800	1.00	0.00
ATOM	2158	HG13	VAL	150	1,169	-54,096	17,951	1.00	0.00
ATOM	2159	HG21	VAL	150	3,897	-55,937	17,396	1.00	0.00
ATOM	2160	HG22	VAL	150	3,579	-56,164	15,690	1.00	0.00
ATOM	2161	HG23	VAL	150	2,327	-56,501	16,865	1.00	0.00
ATOM	2162	N	TYR	151	0.201	-52,336	15,190	1.00	0.00
ATOM	2163	CA	TYR	151	-0.468	-51,046	15,251	1.00	0.00
ATOM	2164	C	TYR	151	-1,560	-51,016	16,366	1.00	0.00
ATOM	2165	O	TYR	151	-2,287	-52,012	16,510	1.00	0.00
ATOM	2166	CB	TYR	151	-1,166	-50,858	13,876	1.00	0.00
ATOM	2167	CG	TYR	151	-0.385	-50,784	12,580	1.00	0.00
ATOM	2168	CD1	TYR	151	-0.263	-52,058	11,913	1.00	0.00
ATOM	2169	CD2	TYR	151	0.104	-49,641	11,954	1.00	0.00
ATOM	2170	CE1	TYR	151	0.488	-52,180	10,711	1.00	0.00
ATOM	2171	CE2	TYR	151	0.804	-49,723	10,726	1.00	0.00
ATOM	2172	CZ	TYR	151	0.995	-50,987	10,049	1.00	0.00
ATOM	2173	OH	TYR	151	1,516	-51,088	8,811	1.00	0.00
ATOM	2174	H	TYR	151	-0.303	-53,181	14,961	1.00	0.00
ATOM	2175	HA	TYR	151	0.198	-50,196	15,390	1.00	0.00
ATOM	2176	HB2	TYR	151	-2,027	-51,524	13,818	1.00	0.00
ATOM	2177	HB3	TYR	151	-1,662	-49,895	13,996	1.00	0.00
ATOM	2178	HD1	TYR	151	-0.572	-52,952	12,434	1.00	0.00
ATOM	2179	HD2	TYR	151	-0.055	-48,684	12,428	1.00	0.00
ATOM	2180	HE1	TYR	151	0.705	-53,153	10,293	1.00	0.00
ATOM	2181	HE2	TYR	151	1,085	-48,801	10,237	1.00	0.00
ATOM	2182	HH	TYR	151	1,404	-50,260	8,337	1.00	0.00
ATOM	2183	N	HID	152	-1,524	-49,939	17,112	1.00	0.00
ATOM	2184	CA	HID	152	-2,365	-49,762	18,330	1.00	0.00
ATOM	2185	C	HID	152	-2,751	-48,303	18,397	1.00	0.00
ATOM	2186	O	HID	152	-2,120	-47,414	17,817	1.00	0.00
ATOM	2187	CB	HID	152	-1,590	-50,019	19,666	1.00	0.00
ATOM	2188	CG	HID	152	-0.396	-49,109	19,981	1.00	0.00
ATOM	2189	CD2	HID	152	0.748	-48,919	19,290	1.00	0.00
ATOM	2190	ND1	HID	152	-0.386	-48,249	21,061	1.00	0.00
ATOM	2191	CE1	HID	152	0.719	-47,504	20,966	1.00	0.00
ATOM	2192	NE2	HID	152	1,448	-47,861	19,912	1.00	0.00

ATOM	2193	H	HID	152	-1,043	-49,137	16,730	1.00	0.00
ATOM	2194	HA	HID	152	-3,281	-50,341	18,221	1.00	0.00
ATOM	2195	HB2	HID	152	-2,288	-49,943	20,499	1.00	0.00
ATOM	2196	HB3	HID	152	-1,295	-51,068	19,642	1.00	0.00
ATOM	2197	HD1	HID	152	-1,066	-48,267	21,807	1.00	0.00
ATOM	2198	HD2	HID	152	1,008	-49,467	18,397	1.00	0.00
ATOM	2199	HE1	HID	152	1,044	-46,683	21,589	1.00	0.00
ATOM	2200	N	ARG	153	-3,892	-48,059	19,075	1.00	0.00
ATOM	2201	CA	ARG	153	-4,704	-46,828	19,013	1.00	0.00
ATOM	2202	C	ARG	153	-4,940	-46,268	20,392	1.00	0.00
ATOM	2203	O	ARG	153	-4,779	-46,892	21,450	1.00	0.00
ATOM	2204	CB	ARG	153	-6,067	-47,066	18,375	1.00	0.00
ATOM	2205	CG	ARG	153	-6,089	-47,404	16,875	1.00	0.00
ATOM	2206	CD	ARG	153	-7,577	-47,317	16,245	1.00	0.00
ATOM	2207	NE	ARG	153	-8,524	-48,124	17,059	1.00	0.00
ATOM	2208	CZ	ARG	153	-9,530	-47,746	17,812	1.00	0.00
ATOM	2209	NH1	ARG	153	-9,710	-46,438	17,981	1.00	0.00
ATOM	2210	NH2	ARG	153	-10,326	-48,577	18,389	1.00	0.00
ATOM	2211	H	ARG	153	-4,302	-48,883	19,488	1.00	0.00
ATOM	2212	HA	ARG	153	-4,227	-45,988	18,508	1.00	0.00
ATOM	2213	HB2	ARG	153	-6,588	-47,836	18,944	1.00	0.00
ATOM	2214	HB3	ARG	153	-6,764	-46,237	18,504	1.00	0.00
ATOM	2215	HG2	ARG	153	-5,423	-46,769	16,291	1.00	0.00
ATOM	2216	HG3	ARG	153	-5,736	-48,424	16,723	1.00	0.00
ATOM	2217	HD2	ARG	153	-7,851	-46,273	16,094	1.00	0.00
ATOM	2218	HD3	ARG	153	-7,505	-47,651	15,209	1.00	0.00
ATOM	2219	HE	ARG	153	-8,501	-49,103	16,811	1.00	0.00
ATOM	2220	HH11	ARG	153	-9,244	-45,791	17,362	1.00	0.00
ATOM	2221	HH12	ARG	153	-10,312	-46,146	18,738	1.00	0.00
ATOM	2222	HH21	ARG	153	-10,173	-49,571	18,296	1.00	0.00
ATOM	2223	HH22	ARG	153	-10,916	-48,237	19,134	1.00	0.00
ATOM	2224	N	ASP	154	-5,523	-45,069	20,376	1.00	0.00
ATOM	2225	CA	ASP	154	-5,898	-44,287	21,518	1.00	0.00
ATOM	2226	C	ASP	154	-4,720	-44,120	22,490	1.00	0.00
ATOM	2227	O	ASP	154	-4,734	-44,459	23,659	1.00	0.00
ATOM	2228	CB	ASP	154	-7,136	-44,905	22,159	1.00	0.00
ATOM	2229	CG	ASP	154	-7,937	-44,089	23,135	1.00	0.00
ATOM	2230	OD1	ASP	154	-8,602	-44,708	24,021	1.00	0.00
ATOM	2231	OD2	ASP	154	-8,042	-42,869	22,905	1.00	0.00
ATOM	2232	H	ASP	154	-5,566	-44,609	19,478	1.00	0.00
ATOM	2233	HA	ASP	154	-6,177	-43,277	21,219	1.00	0.00
ATOM	2234	HB2	ASP	154	-7,789	-45,166	21,326	1.00	0.00
ATOM	2235	HB3	ASP	154	-6,816	-45,823	22,652	1.00	0.00



ATOM	2236	N	LEU	155	-3,554	-43,658	21,915	1.00	0.00
ATOM	2237	CA	LEU	155	-2,232	-43,474	22,584	1.00	0.00
ATOM	2238	C	LEU	155	-2,194	-42,149	23,367	1.00	0.00
ATOM	2239	O	LEU	155	-2,429	-41,093	22,766	1.00	0.00
ATOM	2240	CB	LEU	155	-1,158	-43,444	21,429	1.00	0.00
ATOM	2241	CG	LEU	155	0.207	-43,004	21,837	1.00	0.00
ATOM	2242	CD1	LEU	155	0.740	-43,794	23,077	1.00	0.00
ATOM	2243	CD2	LEU	155	1,121	-42,916	20,698	1.00	0.00
ATOM	2244	H	LEU	155	-3,643	-43,342	20,960	1.00	0.00
ATOM	2245	HA	LEU	155	-1,896	-44,324	23,179	1.00	0.00
ATOM	2246	HB2	LEU	155	-1,149	-44,445	20,999	1.00	0.00
ATOM	2247	HB3	LEU	155	-1,492	-42,723	20,683	1.00	0.00
ATOM	2248	HG	LEU	155	0.174	-41,965	22,167	1.00	0.00
ATOM	2249	HD11	LEU	155	0.188	-43,422	23,940	1.00	0.00
ATOM	2250	HD12	LEU	155	1,756	-43,500	23,341	1.00	0.00
ATOM	2251	HD13	LEU	155	0.599	-44,872	22,997	1.00	0.00
ATOM	2252	HD21	LEU	155	0.848	-42,033	20,119	1.00	0.00
ATOM	2253	HD22	LEU	155	2,167	-42,922	21,004	1.00	0.00
ATOM	2254	HD23	LEU	155	1,013	-43,837	20,127	1.00	0.00
ATOM	2255	N	LYS	156	-1,948	-42,137	24,706	1.00	0.00
ATOM	2256	CA	LYS	156	-2,395	-41,026	25,582	1.00	0.00
ATOM	2257	C	LYS	156	-1,581	-40,798	26,832	1.00	0.00
ATOM	2258	O	LYS	156	-0.973	-41,737	27,261	1.00	0.00
ATOM	2259	CB	LYS	156	-3,937	-41,200	25,949	1.00	0.00
ATOM	2260	CG	LYS	156	-4,310	-42,484	26,535	1.00	0.00
ATOM	2261	CD	LYS	156	-5,861	-42,565	26,576	1.00	0.00
ATOM	2262	CE	LYS	156	-6,363	-43,907	27,028	1.00	0.00
ATOM	2263	NZ	LYS	156	-5,637	-45,032	26,378	1.00	0.00
ATOM	2264	H	LYS	156	-1,476	-42,910	25,156	1.00	0.00
ATOM	2265	HA	LYS	156	-2,349	-40,171	24,908	1.00	0.00
ATOM	2266	HB2	LYS	156	-4,298	-40,421	26,620	1.00	0.00
ATOM	2267	HB3	LYS	156	-4,446	-40,987	25,009	1.00	0.00
ATOM	2268	HG2	LYS	156	-3,947	-43,318	25,935	1.00	0.00
ATOM	2269	HG3	LYS	156	-3,913	-42,593	27,545	1.00	0.00
ATOM	2270	HD2	LYS	156	-6,269	-41,829	27,270	1.00	0.00
ATOM	2271	HD3	LYS	156	-6,278	-42,411	25,580	1.00	0.00
ATOM	2272	HE2	LYS	156	-6,304	-44,115	28,096	1.00	0.00
ATOM	2273	HE3	LYS	156	-7,380	-43,945	26,639	1.00	0.00
ATOM	2274	HZ1	LYS	156	-5,482	-44,772	25,414	1.00	0.00
ATOM	2275	HZ2	LYS	156	-6,119	-45,913	26,490	1.00	0.00
ATOM	2276	HZ3	LYS	156	-4,766	-45,231	26,848	1.00	0.00
ATOM	2277	N	PRO	157	-1,528	-39,568	27,433	1.00	0.00
ATOM	2278	CA	PRO	157	-0.528	-39,300	28,429	1.00	0.00

ATOM	2279	C	PRO	157	-0.905	-39,796	29,784	1.00	0.00
ATOM	2280	O	PRO	157	-0.027	-39,971	30,622	1.00	0.00
ATOM	2281	CB	PRO	157	-0.340	-37,787	28,369	1.00	0.00
ATOM	2282	CG	PRO	157	-1,736	-37,294	27,988	1.00	0.00
ATOM	2283	CD	PRO	157	-2,193	-38,349	26,918	1.00	0.00
ATOM	2284	HA	PRO	157	0.425	-39,660	28,038	1.00	0.00
ATOM	2285	HB2	PRO	157	-0.054	-37,452	29,367	1.00	0.00
ATOM	2286	HB3	PRO	157	0.391	-37,508	27,610	1.00	0.00
ATOM	2287	HG2	PRO	157	-2,384	-37,318	28,865	1.00	0.00
ATOM	2288	HG3	PRO	157	-1,703	-36,327	27,486	1.00	0.00
ATOM	2289	HD2	PRO	157	-3,282	-38,318	26,889	1.00	0.00
ATOM	2290	HD3	PRO	157	-1,794	-38,018	25,959	1.00	0.00
ATOM	2291	N	GLU	158	-2,117	-40,229	30,017	1.00	0.00
ATOM	2292	CA	GLU	158	-2,358	-41,177	31,147	1.00	0.00
ATOM	2293	C	GLU	158	-1,488	-42,466	31,142	1.00	0.00
ATOM	2294	O	GLU	158	-1,055	-42,847	32,204	1.00	0.00
ATOM	2295	CB	GLU	158	-3,810	-41,539	31,116	1.00	0.00
ATOM	2296	CG	GLU	158	-4,361	-42,597	32,180	1.00	0.00
ATOM	2297	CD	GLU	158	-4,225	-42,111	33,648	1.00	0.00
ATOM	2298	OE1	GLU	158	-4,434	-40,918	33,964	1.00	0.00
ATOM	2299	OE2	GLU	158	-3,749	-42,994	34,447	1.00	0.00
ATOM	2300	H	GLU	158	-2,830	-40,105	29,314	1.00	0.00
ATOM	2301	HA	GLU	158	-2,208	-40,568	32,039	1.00	0.00
ATOM	2302	HB2	GLU	158	-4,441	-40,671	31,306	1.00	0.00
ATOM	2303	HB3	GLU	158	-4,034	-41,863	30,100	1.00	0.00
ATOM	2304	HG2	GLU	158	-5,428	-42,715	31,988	1.00	0.00
ATOM	2305	HG3	GLU	158	-3,957	-43,578	31,931	1.00	0.00
ATOM	2306	N	ASN	159	-1,247	-43,095	29,984	1.00	0.00
ATOM	2307	CA	ASN	159	-0.527	-44,387	29,907	1.00	0.00
ATOM	2308	C	ASN	159	0.972	-44,310	29,733	1.00	0.00
ATOM	2309	O	ASN	159	1,608	-45,287	29,242	1.00	0.00
ATOM	2310	CB	ASN	159	-1,183	-45,293	28,820	1.00	0.00
ATOM	2311	CG	ASN	159	-2,700	-45,471	28,865	1.00	0.00
ATOM	2312	ND2	ASN	159	-3,175	-46,222	29,829	1.00	0.00
ATOM	2313	OD1	ASN	159	-3,510	-45,127	27,985	1.00	0.00
ATOM	2314	H	ASN	159	-1,622	-42,596	29,191	1.00	0.00
ATOM	2315	HA	ASN	159	-0.646	-44,814	30,903	1.00	0.00
ATOM	2316	HB2	ASN	159	-0.952	-44,798	27,877	1.00	0.00
ATOM	2317	HB3	ASN	159	-0.804	-46,312	28,900	1.00	0.00
ATOM	2318	HD21	ASN	159	-2,594	-46,585	30,570	1.00	0.00
ATOM	2319	HD22	ASN	159	-4,169	-46,387	29,763	1.00	0.00
ATOM	2320	N	LEU	160	1,595	-43,190	30,058	1.00	0.00
ATOM	2321	CA	LEU	160	3,047	-43,003	29,992	1.00	0.00

ATOM	2322	C	LEU	160	3,676	-42,936	31,396	1.00	0.00
ATOM	2323	O	LEU	160	3,183	-42,235	32,308	1.00	0.00
ATOM	2324	CB	LEU	160	3,349	-41,726	29,201	1.00	0.00
ATOM	2325	CG	LEU	160	2,896	-41,778	27,724	1.00	0.00
ATOM	2326	CD1	LEU	160	3,362	-40,580	26,900	1.00	0.00
ATOM	2327	CD2	LEU	160	3,586	-42,903	26,911	1.00	0.00
ATOM	2328	H	LEU	160	1,007	-42,411	30,321	1.00	0.00
ATOM	2329	HA	LEU	160	3,419	-43,898	29,496	1.00	0.00
ATOM	2330	HB2	LEU	160	2,896	-40,855	29,674	1.00	0.00
ATOM	2331	HB3	LEU	160	4,415	-41,592	29,390	1.00	0.00
ATOM	2332	HG	LEU	160	1,813	-41,875	27,663	1.00	0.00
ATOM	2333	HD11	LEU	160	2,843	-39,679	27,225	1.00	0.00
ATOM	2334	HD12	LEU	160	3,022	-40,648	25,866	1.00	0.00
ATOM	2335	HD13	LEU	160	4,441	-40,436	26,950	1.00	0.00
ATOM	2336	HD21	LEU	160	3,344	-43,897	27,284	1.00	0.00
ATOM	2337	HD22	LEU	160	3,284	-42,790	25,869	1.00	0.00
ATOM	2338	HD23	LEU	160	4,644	-42,664	27,023	1.00	0.00
ATOM	2339	N	LEU	161	4,754	-43,659	31,578	1.00	0.00
ATOM	2340	CA	LEU	161	5,345	-43,791	32,901	1.00	0.00
ATOM	2341	C	LEU	161	6,830	-43,595	32,889	1.00	0.00
ATOM	2342	O	LEU	161	7,453	-43,401	31,855	1.00	0.00
ATOM	2343	CB	LEU	161	5,066	-45,169	33,463	1.00	0.00
ATOM	2344	CG	LEU	161	3,593	-45,724	33,506	1.00	0.00
ATOM	2345	CD1	LEU	161	3,738	-46,969	34,368	1.00	0.00
ATOM	2346	CD2	LEU	161	2,579	-44,861	34,184	1.00	0.00
ATOM	2347	H	LEU	161	5,026	-44,268	30,819	1.00	0.00
ATOM	2348	HA	LEU	161	4,987	-43,051	33,616	1.00	0.00
ATOM	2349	HB2	LEU	161	5,680	-45,886	32,917	1.00	0.00
ATOM	2350	HB3	LEU	161	5,500	-45,273	34,458	1.00	0.00
ATOM	2351	HG	LEU	161	3,252	-45,985	32,503	1.00	0.00
ATOM	2352	HD11	LEU	161	4,076	-46,776	35,387	1.00	0.00
ATOM	2353	HD12	LEU	161	4,344	-47,753	33,913	1.00	0.00
ATOM	2354	HD13	LEU	161	2,768	-47,446	34,507	1.00	0.00
ATOM	2355	HD21	LEU	161	1,742	-45,489	34,492	1.00	0.00
ATOM	2356	HD22	LEU	161	2,973	-44,402	35,090	1.00	0.00
ATOM	2357	HD23	LEU	161	2,205	-44,112	33,485	1.00	0.00
ATOM	2358	N	LEU	162	7,412	-43,479	34,042	1.00	0.00
ATOM	2359	CA	LEU	162	8,805	-42,949	34,259	1.00	0.00
ATOM	2360	C	LEU	162	9,761	-43,967	34,910	1.00	0.00
ATOM	2361	O	LEU	162	9,542	-44,324	36,061	1.00	0.00
ATOM	2362	CB	LEU	162	8,625	-41,647	35,108	1.00	0.00
ATOM	2363	CG	LEU	162	10,002	-41,030	35,379	1.00	0.00
ATOM	2364	CD1	LEU	162	10,795	-40,595	34,123	1.00	0.00

ATOM	2365	CD2	LEU	162	9,812	-39,760	36,237	1.00	0.00
ATOM	2366	H	LEU	162	6,808	-43,490	34,852	1.00	0.00
ATOM	2367	HA	LEU	162	9,197	-42,568	33,316	1.00	0.00
ATOM	2368	HB2	LEU	162	7,924	-41,019	34,559	1.00	0.00
ATOM	2369	HB3	LEU	162	8,207	-41,969	36,062	1.00	0.00
ATOM	2370	HG	LEU	162	10,599	-41,740	35,950	1.00	0.00
ATOM	2371	HD11	LEU	162	11,613	-39,928	34,395	1.00	0.00
ATOM	2372	HD12	LEU	162	10,145	-40,059	33,432	1.00	0.00
ATOM	2373	HD13	LEU	162	11,136	-41,477	33,581	1.00	0.00
ATOM	2374	HD21	LEU	162	9,131	-39,079	35,725	1.00	0.00
ATOM	2375	HD22	LEU	162	9,488	-40,006	37,248	1.00	0.00
ATOM	2376	HD23	LEU	162	10,717	-39,183	36,427	1.00	0.00
ATOM	2377	N	ASP	163	10,784	-44,471	34,161	1.00	0.00
ATOM	2378	CA	ASP	163	11,713	-45,473	34,814	1.00	0.00
ATOM	2379	C	ASP	163	12,697	-44,743	35,776	1.00	0.00
ATOM	2380	O	ASP	163	13,086	-43,563	35,557	1.00	0.00
ATOM	2381	CB	ASP	163	12,548	-46,154	33,734	1.00	0.00
ATOM	2382	CG	ASP	163	13,485	-47,204	34,152	1.00	0.00
ATOM	2383	OD1	ASP	163	14,717	-46,991	34,087	1.00	0.00
ATOM	2384	OD2	ASP	163	12,934	-48,198	34,665	1.00	0.00
ATOM	2385	H	ASP	163	10,882	-44,227	33,186	1.00	0.00
ATOM	2386	HA	ASP	163	11,154	-46,263	35,314	1.00	0.00
ATOM	2387	HB2	ASP	163	11,839	-46,511	32,987	1.00	0.00
ATOM	2388	HB3	ASP	163	13,088	-45,320	33,286	1.00	0.00
ATOM	2389	N	ALA	164	13,323	-45,525	36,682	1.00	0.00
ATOM	2390	CA	ALA	164	14,499	-45,230	37,556	1.00	0.00
ATOM	2391	C	ALA	164	15,827	-44,768	36,814	1.00	0.00
ATOM	2392	O	ALA	164	16,602	-44,113	37,478	1.00	0.00
ATOM	2393	CB	ALA	164	14,939	-46,447	38,410	1.00	0.00
ATOM	2394	H	ALA	164	12,884	-46,427	36,800	1.00	0.00
ATOM	2395	HA	ALA	164	14,169	-44,456	38,249	1.00	0.00
ATOM	2396	HB1	ALA	164	15,472	-47,185	37,814	1.00	0.00
ATOM	2397	HB2	ALA	164	14,222	-46,916	39,085	1.00	0.00
ATOM	2398	HB3	ALA	164	15,664	-46,017	39,101	1.00	0.00
ATOM	2399	N	ASN	165	16,025	-45,026	35,546	1.00	0.00
ATOM	2400	CA	ASN	165	16,997	-44,383	34,672	1.00	0.00
ATOM	2401	C	ASN	165	16,611	-42,965	34,144	1.00	0.00
ATOM	2402	O	ASN	165	17,418	-42,297	33,450	1.00	0.00
ATOM	2403	CB	ASN	165	17,456	-45,371	33,588	1.00	0.00
ATOM	2404	CG	ASN	165	18,161	-46,590	34,088	1.00	0.00
ATOM	2405	ND2	ASN	165	17,478	-47,665	34,344	1.00	0.00
ATOM	2406	OD1	ASN	165	19,376	-46,546	34,381	1.00	0.00
ATOM	2407	H	ASN	165	15,429	-45,713	35,107	1.00	0.00

ATOM	2408	HA	ASN	165	17,917	-44,207	35,229	1.00	0.00
ATOM	2409	HB2	ASN	165	16,616	-45,710	32,982	1.00	0.00
ATOM	2410	HB3	ASN	165	18,173	-44,934	32,895	1.00	0.00
ATOM	2411	HD21	ASN	165	16,471	-47,655	34,262	1.00	0.00
ATOM	2412	HD22	ASN	165	17,997	-48,401	34,800	1.00	0.00
ATOM	2413	N	GLY	166	15,375	-42,528	34,397	1.00	0.00
ATOM	2414	CA	GLY	166	14,902	-41,200	33,905	1.00	0.00
ATOM	2415	C	GLY	166	14,297	-41,282	32,502	1.00	0.00
ATOM	2416	O	GLY	166	14,027	-40,238	31,869	1.00	0.00
ATOM	2417	H	GLY	166	14,705	-43,029	34,963	1.00	0.00
ATOM	2418	HA2	GLY	166	14,050	-40,838	34,482	1.00	0.00
ATOM	2419	HA3	GLY	166	15,697	-40,458	33,970	1.00	0.00
ATOM	2420	N	ALA	167	14,081	-42,472	31,930	1.00	0.00
ATOM	2421	CA	ALA	167	13,565	-42,546	30,580	1.00	0.00
ATOM	2422	C	ALA	167	12,086	-42,915	30,584	1.00	0.00
ATOM	2423	O	ALA	167	11,566	-43,649	31,494	1.00	0.00
ATOM	2424	CB	ALA	167	14,364	-43,609	29,880	1.00	0.00
ATOM	2425	H	ALA	167	14,351	-43,325	32,398	1.00	0.00
ATOM	2426	HA	ALA	167	13,812	-41,650	30,012	1.00	0.00
ATOM	2427	HB1	ALA	167	14,216	-44,552	30,407	1.00	0.00
ATOM	2428	HB2	ALA	167	15,432	-43,391	29,864	1.00	0.00
ATOM	2429	HB3	ALA	167	14,057	-43,762	28,845	1.00	0.00
ATOM	2430	N	LEU	168	11,363	-42,413	29,578	1.00	0.00
ATOM	2431	CA	LEU	168	9,960	-42,732	29,239	1.00	0.00
ATOM	2432	C	LEU	168	9,692	-44,255	28,971	1.00	0.00
ATOM	2433	O	LEU	168	10,449	-44,829	28,212	1.00	0.00
ATOM	2434	CB	LEU	168	9,518	-41,931	27,961	1.00	0.00
ATOM	2435	CG	LEU	168	8,147	-42,286	27,389	1.00	0.00
ATOM	2436	CD1	LEU	168	7,568	-40,994	26,745	1.00	0.00
ATOM	2437	CD2	LEU	168	8,239	-43,288	26,209	1.00	0.00
ATOM	2438	H	LEU	168	11,912	-41,835	28,959	1.00	0.00
ATOM	2439	HA	LEU	168	9,278	-42,400	30,022	1.00	0.00
ATOM	2440	HB2	LEU	168	9,382	-40,893	28,263	1.00	0.00
ATOM	2441	HB3	LEU	168	10,217	-41,915	27,125	1.00	0.00
ATOM	2442	HG	LEU	168	7,486	-42,607	28,193	1.00	0.00
ATOM	2443	HD11	LEU	168	8,207	-40,666	25,925	1.00	0.00
ATOM	2444	HD12	LEU	168	7,517	-40,178	27,465	1.00	0.00
ATOM	2445	HD13	LEU	168	6,547	-41,176	26,412	1.00	0.00
ATOM	2446	HD21	LEU	168	8,827	-43,017	25,332	1.00	0.00
ATOM	2447	HD22	LEU	168	8,624	-44,269	26,489	1.00	0.00
ATOM	2448	HD23	LEU	168	7,258	-43,465	25,769	1.00	0.00
ATOM	2449	N	LYS	169	8,618	-44,818	29,551	1.00	0.00
ATOM	2450	CA	LYS	169	7,969	-46,075	29,192	1.00	0.00

ATOM	2451	C	LYS	169	6,473	-45,890	28,789	1.00	0.00
ATOM	2452	O	LYS	169	5,779	-45,035	29,286	1.00	0.00
ATOM	2453	CB	LYS	169	8,171	-47,025	30,399	1.00	0.00
ATOM	2454	CG	LYS	169	9,606	-47,628	30,347	1.00	0.00
ATOM	2455	CD	LYS	169	9,831	-48,359	31,670	1.00	0.00
ATOM	2456	CE	LYS	169	11,230	-49,008	31,779	1.00	0.00
ATOM	2457	NZ	LYS	169	11,273	-50,314	31,076	1.00	0.00
ATOM	2458	H	LYS	169	8,184	-44,357	30,338	1.00	0.00
ATOM	2459	HA	LYS	169	8,481	-46,515	28,337	1.00	0.00
ATOM	2460	HB2	LYS	169	7,983	-46,546	31,360	1.00	0.00
ATOM	2461	HB3	LYS	169	7,495	-47,879	30,375	1.00	0.00
ATOM	2462	HG2	LYS	169	9,646	-48,363	29,544	1.00	0.00
ATOM	2463	HG3	LYS	169	10,389	-46,879	30,229	1.00	0.00
ATOM	2464	HD2	LYS	169	9,786	-47,578	32,431	1.00	0.00
ATOM	2465	HD3	LYS	169	9,046	-49,092	31,854	1.00	0.00
ATOM	2466	HE2	LYS	169	12,008	-48,407	31,309	1.00	0.00
ATOM	2467	HE3	LYS	169	11,456	-49,023	32,845	1.00	0.00
ATOM	2468	HZ1	LYS	169	11,367	-50,188	30,079	1.00	0.00
ATOM	2469	HZ2	LYS	169	10,508	-50,939	31,287	1.00	0.00
ATOM	2470	HZ3	LYS	169	12,155	-50,724	31,350	1.00	0.00
ATOM	2471	N	VAL	170	5,984	-46,777	27,863	1.00	0.00
ATOM	2472	CA	VAL	170	4,654	-46,743	27,396	1.00	0.00
ATOM	2473	C	VAL	170	3,877	-47,965	28,004	1.00	0.00
ATOM	2474	O	VAL	170	4,508	-48,969	28,308	1.00	0.00
ATOM	2475	CB	VAL	170	4,613	-46,967	25,875	1.00	0.00
ATOM	2476	CG1	VAL	170	3,186	-47,206	25,256	1.00	0.00
ATOM	2477	CG2	VAL	170	5,329	-45,834	25,085	1.00	0.00
ATOM	2478	H	VAL	170	6,579	-47,455	27,408	1.00	0.00
ATOM	2479	HA	VAL	170	4,200	-45,808	27,724	1.00	0.00
ATOM	2480	HB	VAL	170	5,181	-47,884	25,720	1.00	0.00
ATOM	2481	HG11	VAL	170	2,539	-46,427	25,656	1.00	0.00
ATOM	2482	HG12	VAL	170	3,361	-47,090	24,186	1.00	0.00
ATOM	2483	HG13	VAL	170	2,904	-48,206	25,587	1.00	0.00
ATOM	2484	HG21	VAL	170	5,455	-46,161	24,052	1.00	0.00
ATOM	2485	HG22	VAL	170	6,313	-45,597	25,489	1.00	0.00
ATOM	2486	HG23	VAL	170	4,653	-44,987	25,201	1.00	0.00
ATOM	2487	N	SER	171	2,561	-47,896	28,304	1.00	0.00
ATOM	2488	CA	SER	171	1,927	-48,841	29,222	1.00	0.00
ATOM	2489	C	SER	171	0.539	-49,392	28,784	1.00	0.00
ATOM	2490	O	SER	171	-0.041	-50,240	29,462	1.00	0.00
ATOM	2491	CB	SER	171	1,811	-48,327	30,721	1.00	0.00
ATOM	2492	OG	SER	171	0.915	-47,223	30,770	1.00	0.00
ATOM	2493	H	SER	171	2,251	-46,946	28,156	1.00	0.00

ATOM	2494	HA	SER	171	2,539	-49,741	29,280	1.00	0.00
ATOM	2495	HB2	SER	171	1,623	-49,178	31,376	1.00	0.00
ATOM	2496	HB3	SER	171	2,833	-48,070	31,000	1.00	0.00
ATOM	2497	HG	SER	171	1,228	-46,534	30,181	1.00	0.00
ATOM	2498	N	ASP	172	0.024	-49,009	27,580	1.00	0.00
ATOM	2499	CA	ASP	172	-1,171	-49,592	26,979	1.00	0.00
ATOM	2500	C	ASP	172	-0.913	-49,722	25,440	1.00	0.00
ATOM	2501	O	ASP	172	-0.214	-48,858	24,866	1.00	0.00
ATOM	2502	CB	ASP	172	-2,369	-48,703	27,200	1.00	0.00
ATOM	2503	CG	ASP	172	-3,525	-48,913	26,285	1.00	0.00
ATOM	2504	OD1	ASP	172	-4,164	-49,992	26,339	1.00	0.00
ATOM	2505	OD2	ASP	172	-3,775	-48,014	25,437	1.00	0.00
ATOM	2506	H	ASP	172	0.617	-48,385	27,053	1.00	0.00
ATOM	2507	HA	ASP	172	-1,377	-50,569	27,415	1.00	0.00
ATOM	2508	HB2	ASP	172	-2,742	-48,953	28,193	1.00	0.00
ATOM	2509	HB3	ASP	172	-2,112	-47,657	27,366	1.00	0.00
ATOM	2510	N	PHE	173	-1,343	-50,868	24,869	1.00	0.00
ATOM	2511	CA	PHE	173	-1,182	-51,225	23,462	1.00	0.00
ATOM	2512	C	PHE	173	-2,470	-52,051	22,977	1.00	0.00
ATOM	2513	O	PHE	173	-2,573	-52,400	21,816	1.00	0.00
ATOM	2514	CB	PHE	173	0.090	-52,173	23,107	1.00	0.00
ATOM	2515	CG	PHE	173	1,424	-51,523	23,324	1.00	0.00
ATOM	2516	CD1	PHE	173	2,091	-51,628	24,577	1.00	0.00
ATOM	2517	CD2	PHE	173	2,146	-50,930	22,264	1.00	0.00
ATOM	2518	CE1	PHE	173	3,366	-51,051	24,726	1.00	0.00
ATOM	2519	CE2	PHE	173	3,293	-50,131	22,494	1.00	0.00
ATOM	2520	CZ	PHE	173	3,895	-50,183	23,709	1.00	0.00
ATOM	2521	H	PHE	173	-1,762	-51,522	25,516	1.00	0.00
ATOM	2522	HA	PHE	173	-1,196	-50,257	22,963	1.00	0.00
ATOM	2523	HB2	PHE	173	-0.023	-53,094	23,681	1.00	0.00
ATOM	2524	HB3	PHE	173	0.039	-52,578	22,096	1.00	0.00
ATOM	2525	HD1	PHE	173	1,709	-52,232	25,387	1.00	0.00
ATOM	2526	HD2	PHE	173	1,677	-50,892	21,291	1.00	0.00
ATOM	2527	HE1	PHE	173	3,806	-51,216	25,698	1.00	0.00
ATOM	2528	HE2	PHE	173	3,518	-49,419	21,713	1.00	0.00
ATOM	2529	HZ	PHE	173	4,804	-49,655	23,959	1.00	0.00
ATOM	2530	N	GLY	174	-3,413	-52,446	23,841	1.00	0.00
ATOM	2531	CA	GLY	174	-4,362	-53,442	23,553	1.00	0.00
ATOM	2532	C	GLY	174	-5,742	-53,109	22,786	1.00	0.00
ATOM	2533	O	GLY	174	-6,800	-53,757	22,946	1.00	0.00
ATOM	2534	H	GLY	174	-3,293	-52,109	24,785	1.00	0.00
ATOM	2535	HA2	GLY	174	-3,894	-54,275	23,030	1.00	0.00
ATOM	2536	HA3	GLY	174	-4,738	-53,704	24,542	1.00	0.00

ATOM	2537	N	LEU	175	-5,653	-52,069	21,943	1.00	0.00
ATOM	2538	CA	LEU	175	-6,613	-51,546	20,979	1.00	0.00
ATOM	2539	C	LEU	175	-6,060	-51,392	19,548	1.00	0.00
ATOM	2540	O	LEU	175	-5,272	-50,457	19,417	1.00	0.00
ATOM	2541	CB	LEU	175	-7,288	-50,230	21,555	1.00	0.00
ATOM	2542	CG	LEU	175	-8,512	-49,662	20,854	1.00	0.00
ATOM	2543	CD1	LEU	175	-9,696	-50,618	21,070	1.00	0.00
ATOM	2544	CD2	LEU	175	-8,725	-48,265	21,410	1.00	0.00
ATOM	2545	H	LEU	175	-4,776	-51,570	22,003	1.00	0.00
ATOM	2546	HA	LEU	175	-7,381	-52,309	20,853	1.00	0.00
ATOM	2547	HB2	LEU	175	-7,601	-50,281	22,597	1.00	0.00
ATOM	2548	HB3	LEU	175	-6,456	-49,527	21,505	1.00	0.00
ATOM	2549	HG	LEU	175	-8,367	-49,551	19,780	1.00	0.00
ATOM	2550	HD11	LEU	175	-9,620	-51,483	20,409	1.00	0.00
ATOM	2551	HD12	LEU	175	-10,591	-50,026	20,881	1.00	0.00
ATOM	2552	HD13	LEU	175	-9,740	-50,961	22,103	1.00	0.00
ATOM	2553	HD21	LEU	175	-9,477	-47,739	20,822	1.00	0.00
ATOM	2554	HD22	LEU	175	-8,909	-48,197	22,482	1.00	0.00
ATOM	2555	HD23	LEU	175	-7,851	-47,639	21,236	1.00	0.00
ATOM	2556	N	SER	176	-6,325	-52,275	18,611	1.00	0.00
ATOM	2557	CA	SER	176	-5,524	-52,442	17,411	1.00	0.00
ATOM	2558	C	SER	176	-6,011	-51,567	16,223	1.00	0.00
ATOM	2559	O	SER	176	-7,072	-50,991	16,276	1.00	0.00
ATOM	2560	CB	SER	176	-5,455	-53,882	17,015	1.00	0.00
ATOM	2561	OG	SER	176	-4,603	-54,497	17,929	1.00	0.00
ATOM	2562	H	SER	176	-6,786	-53,122	18,914	1.00	0.00
ATOM	2563	HA	SER	176	-4,512	-52,101	17,631	1.00	0.00
ATOM	2564	HB2	SER	176	-6,459	-54,300	17,078	1.00	0.00
ATOM	2565	HB3	SER	176	-5,008	-54,074	16,039	1.00	0.00
ATOM	2566	HG	SER	176	-4,575	-55,440	17,750	1.00	0.00
ATOM	2567	N	ALA	177	-5,125	-51,513	15,239	1.00	0.00
ATOM	2568	CA	ALA	177	-5,489	-51,046	13,904	1.00	0.00
ATOM	2569	C	ALA	177	-4,844	-51,928	12,783	1.00	0.00
ATOM	2570	O	ALA	177	-4,133	-52,873	13,121	1.00	0.00
ATOM	2571	CB	ALA	177	-5,179	-49,581	13,649	1.00	0.00
ATOM	2572	H	ALA	177	-4,222	-51,952	15,341	1.00	0.00
ATOM	2573	HA	ALA	177	-6,565	-51,100	13,739	1.00	0.00
ATOM	2574	HB1	ALA	177	-4,205	-49,328	14,069	1.00	0.00
ATOM	2575	HB2	ALA	177	-5,875	-48,997	14,252	1.00	0.00
ATOM	2576	HB3	ALA	177	-5,307	-49,238	12,622	1.00	0.00
ATOM	2577	N	LEU	178	-5,159	-51,635	11,476	1.00	0.00
ATOM	2578	CA	LEU	178	-4,750	-52,368	10,187	1.00	0.00
ATOM	2579	C	LEU	178	-5,310	-53,825	10,194	1.00	0.00



ATOM	2580	O	LEU	178	-5,445	-54,444	11,253	1.00	0.00
ATOM	2581	CB	LEU	178	-3,219	-52,221	9,797	1.00	0.00
ATOM	2582	CG	LEU	178	-2,773	-50,891	9,133	1.00	0.00
ATOM	2583	CD1	LEU	178	-3,458	-50,633	7,784	1.00	0.00
ATOM	2584	CD2	LEU	178	-2,932	-49,709	10,146	1.00	0.00
ATOM	2585	H	LEU	178	-5,781	-50,845	11,377	1.00	0.00
ATOM	2586	HA	LEU	178	-5,368	-51,963	9,386	1.00	0.00
ATOM	2587	HB2	LEU	178	-2,527	-52,400	10,620	1.00	0.00
ATOM	2588	HB3	LEU	178	-3,018	-53,065	9,136	1.00	0.00
ATOM	2589	HG	LEU	178	-1,710	-51,077	8,985	1.00	0.00
ATOM	2590	HD11	LEU	178	-3,081	-49,681	7,407	1.00	0.00
ATOM	2591	HD12	LEU	178	-4,547	-50,676	7,827	1.00	0.00
ATOM	2592	HD13	LEU	178	-3,126	-51,439	7,131	1.00	0.00
ATOM	2593	HD21	LEU	178	-2,253	-48,903	9,867	1.00	0.00
ATOM	2594	HD22	LEU	178	-3,981	-49,462	10,310	1.00	0.00
ATOM	2595	HD23	LEU	178	-2,645	-50,157	11,097	1.00	0.00
ATOM	2596	N	PRO	179	-5,655	-54,353	9,006	1.00	0.00
ATOM	2597	CA	PRO	179	-6,147	-55,735	8,875	1.00	0.00
ATOM	2598	C	PRO	179	-5,140	-56,825	9,301	1.00	0.00
ATOM	2599	O	PRO	179	-3,921	-56,694	9,301	1.00	0.00
ATOM	2600	CB	PRO	179	-6,538	-55,924	7,414	1.00	0.00
ATOM	2601	CG	PRO	179	-5,725	-54,890	6,625	1.00	0.00
ATOM	2602	CD	PRO	179	-5,524	-53,820	7,679	1.00	0.00
ATOM	2603	HA	PRO	179	-7,043	-55,805	9,492	1.00	0.00
ATOM	2604	HB2	PRO	179	-6,238	-56,887	7,003	1.00	0.00
ATOM	2605	HB3	PRO	179	-7,598	-55,757	7,224	1.00	0.00
ATOM	2606	HG2	PRO	179	-4,761	-55,388	6,521	1.00	0.00
ATOM	2607	HG3	PRO	179	-6,181	-54,597	5,679	1.00	0.00
ATOM	2608	HD2	PRO	179	-4,509	-53,439	7,561	1.00	0.00
ATOM	2609	HD3	PRO	179	-6,232	-53,011	7,502	1.00	0.00
ATOM	2610	N	GLN	180	-5,660	-58,005	9,638	1.00	0.00
ATOM	2611	CA	GLN	180	-4,985	-59,200	10,204	1.00	0.00
ATOM	2612	C	GLN	180	-5,190	-60,423	9,398	1.00	0.00
ATOM	2613	O	GLN	180	-4,478	-61,397	9,493	1.00	0.00
ATOM	2614	CB	GLN	180	-5,391	-59,431	11,619	1.00	0.00
ATOM	2615	CG	GLN	180	-5,160	-58,272	12,662	1.00	0.00
ATOM	2616	CD	GLN	180	-5,067	-58,776	14,090	1.00	0.00
ATOM	2617	NE2	GLN	180	-4,021	-59,473	14,394	1.00	0.00
ATOM	2618	OE1	GLN	180	-5,920	-58,585	14,949	1.00	0.00
ATOM	2619	H	GLN	180	-6,668	-58,033	9,684	1.00	0.00
ATOM	2620	HA	GLN	180	-3,914	-59,002	10,211	1.00	0.00
ATOM	2621	HB2	GLN	180	-6,463	-59,604	11,727	1.00	0.00
ATOM	2622	HB3	GLN	180	-4,907	-60,336	11,986	1.00	0.00

ATOM	2623	HG2	GLN	180	-4,147	-57,887	12,548	1.00	0.00
ATOM	2624	HG3	GLN	180	-5,998	-57,575	12,643	1.00	0.00
ATOM	2625	HE21	GLN	180	-3,998	-59,858	15,328	1.00	0.00
ATOM	2626	HE22	GLN	180	-3,282	-59,719	13,753	1.00	0.00
ATOM	2627	N	GLN	181	-6,046	-60,369	8,404	1.00	0.00
ATOM	2628	CA	GLN	181	-6,155	-61,280	7,319	1.00	0.00
ATOM	2629	C	GLN	181	-5,894	-60,663	5,998	1.00	0.00
ATOM	2630	O	GLN	181	-5,947	-59,400	5,761	1.00	0.00
ATOM	2631	CB	GLN	181	-7,502	-61,921	7,308	1.00	0.00
ATOM	2632	CG	GLN	181	-7,890	-62,751	8,521	1.00	0.00
ATOM	2633	CD	GLN	181	-7,121	-64,015	8,709	1.00	0.00
ATOM	2634	NE2	GLN	181	-5,820	-63,861	8,980	1.00	0.00
ATOM	2635	OE1	GLN	181	-7,581	-65,084	8,563	1.00	0.00
ATOM	2636	H	GLN	181	-6,634	-59,552	8,330	1.00	0.00
ATOM	2637	HA	GLN	181	-5,383	-62,047	7,382	1.00	0.00
ATOM	2638	HB2	GLN	181	-8,224	-61,106	7,257	1.00	0.00
ATOM	2639	HB3	GLN	181	-7,659	-62,489	6,391	1.00	0.00
ATOM	2640	HG2	GLN	181	-7,819	-62,230	9,476	1.00	0.00
ATOM	2641	HG3	GLN	181	-8,906	-63,124	8,391	1.00	0.00
ATOM	2642	HE21	GLN	181	-5,276	-64,710	9,053	1.00	0.00
ATOM	2643	HE22	GLN	181	-5,397	-62,953	9,103	1.00	0.00
ATOM	2644	N	VAL	182	-5,712	-61,488	4,948	1.00	0.00
ATOM	2645	CA	VAL	182	-5,176	-61,057	3,670	1.00	0.00
ATOM	2646	C	VAL	182	-6,334	-60,682	2,692	1.00	0.00
ATOM	2647	O	VAL	182	-7,133	-61,522	2,315	1.00	0.00
ATOM	2648	CB	VAL	182	-4,242	-62,049	3,115	1.00	0.00
ATOM	2649	CG1	VAL	182	-3,914	-61,871	1,589	1.00	0.00
ATOM	2650	CG2	VAL	182	-2,980	-62,069	3,928	1.00	0.00
ATOM	2651	H	VAL	182	-5,644	-62,478	5,140	1.00	0.00
ATOM	2652	HA	VAL	182	-4,619	-60,123	3,740	1.00	0.00
ATOM	2653	HB	VAL	182	-4,693	-63,036	3,216	1.00	0.00
ATOM	2654	HG11	VAL	182	-3,368	-62,725	1,188	1.00	0.00
ATOM	2655	HG12	VAL	182	-4,847	-61,917	1,026	1.00	0.00
ATOM	2656	HG13	VAL	182	-3,421	-60,912	1,438	1.00	0.00
ATOM	2657	HG21	VAL	182	-3,102	-62,393	4,961	1.00	0.00
ATOM	2658	HG22	VAL	182	-2,456	-61,114	3,892	1.00	0.00
ATOM	2659	HG23	VAL	182	-2,306	-62,819	3,513	1.00	0.00
ATOM	2660	N	ARG	183	-6,548	-59,387	2,527	1.00	0.00
ATOM	2661	CA	ARG	183	-7,759	-58,670	2,026	1.00	0.00
ATOM	2662	C	ARG	183	-7,474	-57,568	0.966	1.00	0.00
ATOM	2663	O	ARG	183	-6,393	-57,028	0.843	1.00	0.00
ATOM	2664	CB	ARG	183	-8,455	-58,060	3,235	1.00	0.00
ATOM	2665	CG	ARG	183	-8,949	-59,040	4,278	1.00	0.00

ATOM	2666	CD	ARG	183	-10,117	-59,779	3,670	1.00	0.00
ATOM	2667	NE	ARG	183	-10,652	-60,832	4,573	1.00	0.00
ATOM	2668	CZ	ARG	183	-10,135	-61,990	4,831	1.00	0.00
ATOM	2669	NH1	ARG	183	-9,240	-62,513	4,120	1.00	0.00
ATOM	2670	NH2	ARG	183	-10,690	-62,716	5,788	1.00	0.00
ATOM	2671	H	ARG	183	-5,807	-58,811	2,897	1.00	0.00
ATOM	2672	HA	ARG	183	-8,417	-59,334	1,465	1.00	0.00
ATOM	2673	HB2	ARG	183	-7,858	-57,312	3,758	1.00	0.00
ATOM	2674	HB3	ARG	183	-9,350	-57,564	2,859	1.00	0.00
ATOM	2675	HG2	ARG	183	-8,101	-59,685	4,509	1.00	0.00
ATOM	2676	HG3	ARG	183	-9,360	-58,568	5,171	1.00	0.00
ATOM	2677	HD2	ARG	183	-10,842	-59,010	3,404	1.00	0.00
ATOM	2678	HD3	ARG	183	-9,753	-60,230	2,747	1.00	0.00
ATOM	2679	HE	ARG	183	-11,429	-60,511	5,134	1.00	0.00
ATOM	2680	HH11	ARG	183	-8,748	-61,983	3,415	1.00	0.00
ATOM	2681	HH12	ARG	183	-8,805	-63,386	4,385	1.00	0.00
ATOM	2682	HH21	ARG	183	-11,378	-62,228	6,343	1.00	0.00
ATOM	2683	HH22	ARG	183	-10,555	-63,693	6,006	1.00	0.00
ATOM	2684	N	GLU	184	-8,511	-57,094	0.301	1.00	0.00
ATOM	2685	CA	GLU	184	-8,464	-55,949	-0.640	1.00	0.00
ATOM	2686	C	GLU	184	-9,725	-55,062	-0.596	1.00	0.00
ATOM	2687	O	GLU	184	-9,615	-53,880	-1,084	1.00	0.00
ATOM	2688	CB	GLU	184	-8,257	-56,594	-2,038	1.00	0.00
ATOM	2689	CG	GLU	184	-6,875	-57,163	-2,249	1.00	0.00
ATOM	2690	CD	GLU	184	-6,704	-57,659	-3,638	1.00	0.00
ATOM	2691	OE1	GLU	184	-6,594	-56,829	-4,542	1.00	0.00
ATOM	2692	OE2	GLU	184	-6,811	-58,846	-3,825	1.00	0.00
ATOM	2693	H	GLU	184	-9,385	-57,552	0.516	1.00	0.00
ATOM	2694	HA	GLU	184	-7,617	-55,309	-0.394	1.00	0.00
ATOM	2695	HB2	GLU	184	-9,025	-57,338	-2,247	1.00	0.00
ATOM	2696	HB3	GLU	184	-8,351	-55,725	-2,689	1.00	0.00
ATOM	2697	HG2	GLU	184	-6,167	-56,338	-2,172	1.00	0.00
ATOM	2698	HG3	GLU	184	-6,694	-58,011	-1,590	1.00	0.00
ATOM	2699	N	ASP	185	-10,793	-55,523	-0.008	1.00	0.00
ATOM	2700	CA	ASP	185	-12,096	-54,794	-0.049	1.00	0.00
ATOM	2701	C	ASP	185	-12,465	-54,180	1,307	1.00	0.00
ATOM	2702	O	ASP	185	-12,147	-54,670	2,383	1.00	0.00
ATOM	2703	CB	ASP	185	-13,205	-55,557	-0.720	1.00	0.00
ATOM	2704	CG	ASP	185	-14,405	-54,742	-1,019	1.00	0.00
ATOM	2705	OD1	ASP	185	-15,375	-54,842	-0.247	1.00	0.00
ATOM	2706	OD2	ASP	185	-14,348	-54,094	-2,090	1.00	0.00
ATOM	2707	H	ASP	185	-10,630	-56,297	0.620	1.00	0.00
ATOM	2708	HA	ASP	185	-11,924	-53,915	-0.670	1.00	0.00

ATOM	2709	HB2	ASP	185	-12,735	-55,821	-1,667	1.00	0.00
ATOM	2710	HB3	ASP	185	-13,391	-56,443	-0.113	1.00	0.00
ATOM	2711	N	GLY	186	-13,178	-53,069	1,237	1.00	0.00
ATOM	2712	CA	GLY	186	-13,872	-52,559	2,443	1.00	0.00
ATOM	2713	C	GLY	186	-12,930	-52,085	3,594	1.00	0.00
ATOM	2714	O	GLY	186	-13,102	-52,401	4,794	1.00	0.00
ATOM	2715	H	GLY	186	-13,377	-52,677	0.328	1.00	0.00
ATOM	2716	HA2	GLY	186	-14,438	-51,679	2,136	1.00	0.00
ATOM	2717	HA3	GLY	186	-14,571	-53,322	2,787	1.00	0.00
ATOM	2718	N	LEU	187	-11,807	-51,471	3,137	1.00	0.00
ATOM	2719	CA	LEU	187	-10,670	-51,174	3,987	1.00	0.00
ATOM	2720	C	LEU	187	-10,777	-49,859	4,746	1.00	0.00
ATOM	2721	O	LEU	187	-10,265	-48,807	4,377	1.00	0.00
ATOM	2722	CB	LEU	187	-9,397	-51,208	3,109	1.00	0.00
ATOM	2723	CG	LEU	187	-9,093	-52,600	2,484	1.00	0.00
ATOM	2724	CD1	LEU	187	-7,735	-52,571	1,719	1.00	0.00
ATOM	2725	CD2	LEU	187	-9,100	-53,776	3,506	1.00	0.00
ATOM	2726	H	LEU	187	-11,699	-51,302	2,147	1.00	0.00
ATOM	2727	HA	LEU	187	-10,670	-51,952	4,749	1.00	0.00
ATOM	2728	HB2	LEU	187	-9,529	-50,511	2,281	1.00	0.00
ATOM	2729	HB3	LEU	187	-8,556	-51,015	3,774	1.00	0.00
ATOM	2730	HG	LEU	187	-9,873	-52,762	1,740	1.00	0.00
ATOM	2731	HD11	LEU	187	-6,969	-52,525	2,493	1.00	0.00
ATOM	2732	HD12	LEU	187	-7,714	-51,698	1,067	1.00	0.00
ATOM	2733	HD13	LEU	187	-7,657	-53,426	1,048	1.00	0.00
ATOM	2734	HD21	LEU	187	-9,002	-54,762	3,051	1.00	0.00
ATOM	2735	HD22	LEU	187	-8,200	-53,663	4,111	1.00	0.00
ATOM	2736	HD23	LEU	187	-10,049	-53,833	4,039	1.00	0.00
ATOM	2737	N	LEU	188	-11,495	-49,975	5,858	1.00	0.00
ATOM	2738	CA	LEU	188	-11,988	-48,817	6,641	1.00	0.00
ATOM	2739	C	LEU	188	-11,930	-49,066	8,194	1.00	0.00
ATOM	2740	O	LEU	188	-12,345	-50,147	8,692	1.00	0.00
ATOM	2741	CB	LEU	188	-13,414	-48,602	6,206	1.00	0.00
ATOM	2742	CG	LEU	188	-14,199	-47,559	7,047	1.00	0.00
ATOM	2743	CD1	LEU	188	-13,641	-46,213	7,004	1.00	0.00
ATOM	2744	CD2	LEU	188	-15,698	-47,531	6,520	1.00	0.00
ATOM	2745	H	LEU	188	-11,889	-50,878	6,079	1.00	0.00
ATOM	2746	HA	LEU	188	-11,366	-47,951	6,413	1.00	0.00
ATOM	2747	HB2	LEU	188	-13,365	-48,304	5,159	1.00	0.00
ATOM	2748	HB3	LEU	188	-14,041	-49,476	6,389	1.00	0.00
ATOM	2749	HG	LEU	188	-14,274	-47,898	8,079	1.00	0.00
ATOM	2750	HD11	LEU	188	-14,403	-45,517	7,356	1.00	0.00
ATOM	2751	HD12	LEU	188	-13,400	-45,904	5,986	1.00	0.00

ATOM	2752	HD13	LEU	188	-12,831	-46,124	7,727	1.00	0.00
ATOM	2753	HD21	LEU	188	-15,681	-47,189	5,485	1.00	0.00
ATOM	2754	HD22	LEU	188	-16,107	-48,537	6,608	1.00	0.00
ATOM	2755	HD23	LEU	188	-16,290	-46,869	7,151	1.00	0.00
ATOM	2756	N	HID	189	-11,516	-48,084	9,001	1.00	0.00
ATOM	2757	CA	HID	189	-11,478	-48,040	10,416	1.00	0.00
ATOM	2758	C	HID	189	-12,803	-47,544	11,085	1.00	0.00
ATOM	2759	O	HID	189	-12,854	-46,405	11,557	1.00	0.00
ATOM	2760	CB	HID	189	-10,241	-47,284	10,899	1.00	0.00
ATOM	2761	CG	HID	189	-9,013	-48,049	10,579	1.00	0.00
ATOM	2762	CD2	HID	189	-8,376	-48,910	11,443	1.00	0.00
ATOM	2763	ND1	HID	189	-8,303	-48,025	9,361	1.00	0.00
ATOM	2764	CE1	HID	189	-7,259	-48,870	9,540	1.00	0.00
ATOM	2765	NE2	HID	189	-7,315	-49,492	10,728	1.00	0.00
ATOM	2766	H	HID	189	-11,410	-47,206	8,513	1.00	0.00
ATOM	2767	HA	HID	189	-11,248	-49,042	10,779	1.00	0.00
ATOM	2768	HB2	HID	189	-10,221	-46,331	10,370	1.00	0.00
ATOM	2769	HB3	HID	189	-10,174	-47,232	11,985	1.00	0.00
ATOM	2770	HD1	HID	189	-8,575	-47,602	8,484	1.00	0.00
ATOM	2771	HD2	HID	189	-8,747	-49,098	12,440	1.00	0.00
ATOM	2772	HE1	HID	189	-6,517	-49,009	8,769	1.00	0.00
ATOM	2773	N	ASP	190	-13,915	-48,358	11,094	1.00	0.00
ATOM	2774	CA	ASP	190	-15,171	-47,804	11,481	1.00	0.00
ATOM	2775	C	ASP	190	-15,573	-47,961	13,003	1.00	0.00
ATOM	2776	O	ASP	190	-16,550	-47,384	13,453	1.00	0.00
ATOM	2777	CB	ASP	190	-16,281	-48,240	10,593	1.00	0.00
ATOM	2778	CG	ASP	190	-17,551	-47,396	10,826	1.00	0.00
ATOM	2779	OD1	ASP	190	-17,446	-46,151	11,098	1.00	0.00
ATOM	2780	OD2	ASP	190	-18,655	-47,898	10,718	1.00	0.00
ATOM	2781	H	ASP	190	-13,877	-49,296	10,723	1.00	0.00
ATOM	2782	HA	ASP	190	-15,111	-46,717	11,434	1.00	0.00
ATOM	2783	HB2	ASP	190	-15,918	-48,174	9,567	1.00	0.00
ATOM	2784	HB3	ASP	190	-16,563	-49,262	10,842	1.00	0.00
ATOM	2785	N	THR	191	-14,958	-48,929	13,693	1.00	0.00
ATOM	2786	CA	THR	191	-15,153	-49,254	15,133	1.00	0.00
ATOM	2787	C	THR	191	-14,314	-48,366	16,023	1.00	0.00
ATOM	2788	O	THR	191	-13,268	-48,762	16,590	1.00	0.00
ATOM	2789	CB	THR	191	-14,858	-50,796	15,321	1.00	0.00
ATOM	2790	CG2	THR	191	-15,335	-51,232	16,666	1.00	0.00
ATOM	2791	OG1	THR	191	-15,427	-51,616	14,306	1.00	0.00
ATOM	2792	H	THR	191	-14,298	-49,501	13,187	1.00	0.00
ATOM	2793	HA	THR	191	-16,191	-49,071	15,410	1.00	0.00
ATOM	2794	HB	THR	191	-13,771	-50,875	15,295	1.00	0.00

ATOM	2795	HG1	THR	191	-16,363	-51,405	14,265	1.00	0.00
ATOM	2796	HG21	THR	191	-14,814	-50,616	17,399	1.00	0.00
ATOM	2797	HG22	THR	191	-15,077	-52,277	16,842	1.00	0.00
ATOM	2798	HG23	THR	191	-16,411	-51,059	16,664	1.00	0.00
ATOM	2799	N	CYS	192	-14,746	-47,099	16,042	1.00	0.00
ATOM	2800	CA	CYS	192	-14,038	-45,915	16,626	1.00	0.00
ATOM	2801	C	CYS	192	-15,167	-44,892	16,980	1.00	0.00
ATOM	2802	O	CYS	192	-16,344	-45,013	16,499	1.00	0.00
ATOM	2803	CB	CYS	192	-13,257	-45,219	15,500	1.00	0.00
ATOM	2804	SG	CYS	192	-11,761	-46,134	15,012	1.00	0.00
ATOM	2805	H	CYS	192	-15,551	-46,830	15,495	1.00	0.00
ATOM	2806	HA	CYS	192	-13,370	-46,135	17,458	1.00	0.00
ATOM	2807	HB2	CYS	192	-13,919	-45,067	14,647	1.00	0.00
ATOM	2808	HB3	CYS	192	-12,954	-44,207	15,769	1.00	0.00
ATOM	2809	HG	CYS	192	-11,088	-45,097	14,505	1.00	0.00
ATOM	2810	N	GLY	193	-14,803	-43,866	17,779	1.00	0.00
ATOM	2811	CA	GLY	193	-15,791	-42,983	18,275	1.00	0.00
ATOM	2812	C	GLY	193	-15,276	-42,007	19,329	1.00	0.00
ATOM	2813	O	GLY	193	-16,059	-41,440	20,081	1.00	0.00
ATOM	2814	H	GLY	193	-13,845	-43,740	18,072	1.00	0.00
ATOM	2815	HA2	GLY	193	-16,144	-42,334	17,474	1.00	0.00
ATOM	2816	HA3	GLY	193	-16,673	-43,426	18,736	1.00	0.00
ATOM	2817	N	THR	194	-13,967	-41,708	19,347	1.00	0.00
ATOM	2818	CA	THR	194	-13,396	-40,850	20,333	1.00	0.00
ATOM	2819	C	THR	194	-13,206	-39,411	19,792	1.00	0.00
ATOM	2820	O	THR	194	-13,126	-39,233	18,543	1.00	0.00
ATOM	2821	CB	THR	194	-12,017	-41,467	20,776	1.00	0.00
ATOM	2822	CG2	THR	194	-11,553	-41,141	22,139	1.00	0.00
ATOM	2823	OG1	THR	194	-12,089	-42,872	20,789	1.00	0.00
ATOM	2824	H	THR	194	-13,304	-41,951	18,625	1.00	0.00
ATOM	2825	HA	THR	194	-14,019	-40,985	21,216	1.00	0.00
ATOM	2826	HB	THR	194	-11,265	-41,293	20,006	1.00	0.00
ATOM	2827	HG1	THR	194	-12,584	-43,075	21,587	1.00	0.00
ATOM	2828	HG21	THR	194	-10,985	-40,212	22,063	1.00	0.00
ATOM	2829	HG22	THR	194	-10,872	-41,884	22,555	1.00	0.00
ATOM	2830	HG23	THR	194	-12,444	-40,970	22,743	1.00	0.00
ATOM	2831	N	PRO	195	-13,298	-38,416	20,673	1.00	0.00
ATOM	2832	CA	PRO	195	-12,922	-37,051	20,350	1.00	0.00
ATOM	2833	C	PRO	195	-11,379	-36,678	20,594	1.00	0.00
ATOM	2834	O	PRO	195	-10,890	-35,763	19,957	1.00	0.00
ATOM	2835	CB	PRO	195	-13,894	-36,307	21,279	1.00	0.00
ATOM	2836	CG	PRO	195	-13,840	-37,052	22,651	1.00	0.00
ATOM	2837	CD	PRO	195	-13,702	-38,498	22,056	1.00	0.00

ATOM	2838	HA	PRO	195	-13,155	-36,842	19,306	1.00	0.00
ATOM	2839	HB2	PRO	195	-13,590	-35,262	21,317	1.00	0.00
ATOM	2840	HB3	PRO	195	-14,920	-36,426	20,931	1.00	0.00
ATOM	2841	HG2	PRO	195	-12,938	-36,738	23,175	1.00	0.00
ATOM	2842	HG3	PRO	195	-14,691	-36,870	23,308	1.00	0.00
ATOM	2843	HD2	PRO	195	-12,868	-38,927	22,612	1.00	0.00
ATOM	2844	HD3	PRO	195	-14,595	-39,124	22,054	1.00	0.00
ATOM	2845	N	ASN	196	-10,694	-37,458	21,398	1.00	0.00
ATOM	2846	CA	ASN	196	-9,386	-37,147	21,852	1.00	0.00
ATOM	2847	C	ASN	196	-8,260	-38,045	21,344	1.00	0.00
ATOM	2848	O	ASN	196	-8,492	-39,183	20,926	1.00	0.00
ATOM	2849	CB	ASN	196	-9,443	-37,133	23,369	1.00	0.00
ATOM	2850	CG	ASN	196	-8,371	-36,228	23,951	1.00	0.00
ATOM	2851	ND2	ASN	196	-8,275	-36,260	25,219	1.00	0.00
ATOM	2852	OD1	ASN	196	-7,755	-35,394	23,349	1.00	0.00
ATOM	2853	H	ASN	196	-11,149	-38,244	21,840	1.00	0.00
ATOM	2854	HA	ASN	196	-9,123	-36,131	21,556	1.00	0.00
ATOM	2855	HB2	ASN	196	-10,443	-36,834	23,685	1.00	0.00
ATOM	2856	HB3	ASN	196	-9,266	-38,151	23,713	1.00	0.00
ATOM	2857	HD21	ASN	196	-8,726	-36,998	25,739	1.00	0.00
ATOM	2858	HD22	ASN	196	-7,560	-35,699	25,660	1.00	0.00
ATOM	2859	N	TYR	197	-7,050	-37,518	21,218	1.00	0.00
ATOM	2860	CA	TYR	197	-5,809	-38,101	20,532	1.00	0.00
ATOM	2861	C	TYR	197	-5,983	-38,498	19,066	1.00	0.00
ATOM	2862	O	TYR	197	-5,183	-39,195	18,490	1.00	0.00
ATOM	2863	CB	TYR	197	-5,432	-39,336	21,281	1.00	0.00
ATOM	2864	CG	TYR	197	-5,463	-39,038	22,792	1.00	0.00
ATOM	2865	CD1	TYR	197	-4,541	-38,187	23,405	1.00	0.00
ATOM	2866	CD2	TYR	197	-6,540	-39,604	23,573	1.00	0.00
ATOM	2867	CE1	TYR	197	-4,758	-37,714	24,733	1.00	0.00
ATOM	2868	CE2	TYR	197	-6,653	-39,322	24,944	1.00	0.00
ATOM	2869	CZ	TYR	197	-5,863	-38,271	25,546	1.00	0.00
ATOM	2870	OH	TYR	197	-5,930	-38,054	26,852	1.00	0.00
ATOM	2871	H	TYR	197	-6,987	-36,559	21,530	1.00	0.00
ATOM	2872	HA	TYR	197	-4,940	-37,455	20,652	1.00	0.00
ATOM	2873	HB2	TYR	197	-6,010	-40,224	21,025	1.00	0.00
ATOM	2874	HB3	TYR	197	-4,380	-39,497	21,046	1.00	0.00
ATOM	2875	HD1	TYR	197	-3,731	-37,816	22,795	1.00	0.00
ATOM	2876	HD2	TYR	197	-7,280	-40,262	23,142	1.00	0.00
ATOM	2877	HE1	TYR	197	-4,051	-36,971	25,071	1.00	0.00
ATOM	2878	HE2	TYR	197	-7,430	-39,806	25,516	1.00	0.00
ATOM	2879	HH	TYR	197	-6,691	-38,412	27,316	1.00	0.00
ATOM	2880	N	VAL	198	-7,048	-38,079	18,362	1.00	0.00

ATOM	2881	CA	VAL	198	-7,509	-38,516	17,060	1.00	0.00
ATOM	2882	C	VAL	198	-8,014	-37,318	16,203	1.00	0.00
ATOM	2883	O	VAL	198	-8,622	-36,381	16,756	1.00	0.00
ATOM	2884	CB	VAL	198	-8,540	-39,604	17,182	1.00	0.00
ATOM	2885	CG1	VAL	198	-9,870	-39,145	17,758	1.00	0.00
ATOM	2886	CG2	VAL	198	-8,812	-40,365	15,845	1.00	0.00
ATOM	2887	H	VAL	198	-7,473	-37,257	18,768	1.00	0.00
ATOM	2888	HA	VAL	198	-6,599	-38,940	16,635	1.00	0.00
ATOM	2889	HB	VAL	198	-8,082	-40,313	17,872	1.00	0.00
ATOM	2890	HG11	VAL	198	-9,780	-38,947	18,827	1.00	0.00
ATOM	2891	HG12	VAL	198	-10,219	-38,295	17,173	1.00	0.00
ATOM	2892	HG13	VAL	198	-10,599	-39,956	17,743	1.00	0.00
ATOM	2893	HG21	VAL	198	-9,261	-39,733	15,078	1.00	0.00
ATOM	2894	HG22	VAL	198	-9,388	-41,259	16,083	1.00	0.00
ATOM	2895	HG23	VAL	198	-7,829	-40,646	15,472	1.00	0.00
ATOM	2896	N	ALA	199	-7,718	-37,484	14,940	1.00	0.00
ATOM	2897	CA	ALA	199	-7,923	-36,451	13,936	1.00	0.00
ATOM	2898	C	ALA	199	-9,486	-36,239	13,617	1.00	0.00
ATOM	2899	O	ALA	199	-10,349	-37,117	13,846	1.00	0.00
ATOM	2900	CB	ALA	199	-6,911	-36,804	12,706	1.00	0.00
ATOM	2901	H	ALA	199	-7,194	-38,321	14,731	1.00	0.00
ATOM	2902	HA	ALA	199	-7,594	-35,508	14,372	1.00	0.00
ATOM	2903	HB1	ALA	199	-7,362	-37,595	12,108	1.00	0.00
ATOM	2904	HB2	ALA	199	-5,935	-37,125	13,067	1.00	0.00
ATOM	2905	HB3	ALA	199	-6,807	-35,967	12,015	1.00	0.00
ATOM	2906	N	PRO	200	-9,903	-35,070	13,091	1.00	0.00
ATOM	2907	CA	PRO	200	-11,307	-34,799	12,851	1.00	0.00
ATOM	2908	C	PRO	200	-12,055	-35,671	11,842	1.00	0.00
ATOM	2909	O	PRO	200	-13,297	-35,685	11,896	1.00	0.00
ATOM	2910	CB	PRO	200	-11,502	-33,288	12,577	1.00	0.00
ATOM	2911	CG	PRO	200	-10,262	-32,774	13,355	1.00	0.00
ATOM	2912	CD	PRO	200	-9,202	-33,848	13,038	1.00	0.00
ATOM	2913	HA	PRO	200	-11,810	-34,944	13,808	1.00	0.00
ATOM	2914	HB2	PRO	200	-11,423	-33,073	11,512	1.00	0.00
ATOM	2915	HB3	PRO	200	-12,460	-32,871	12,886	1.00	0.00
ATOM	2916	HG2	PRO	200	-9,954	-31,754	13,127	1.00	0.00
ATOM	2917	HG3	PRO	200	-10,501	-32,846	14,417	1.00	0.00
ATOM	2918	HD2	PRO	200	-8,750	-33,769	12,048	1.00	0.00
ATOM	2919	HD3	PRO	200	-8,388	-33,748	13,756	1.00	0.00
ATOM	2920	N	GLU	201	-11,409	-36,516	11,022	1.00	0.00
ATOM	2921	CA	GLU	201	-11,996	-37,367	9,955	1.00	0.00
ATOM	2922	C	GLU	201	-13,000	-38,363	10,608	1.00	0.00
ATOM	2923	O	GLU	201	-14,047	-38,638	9,993	1.00	0.00



ATOM	2924	CB	GLU	201	-10,846	-38,236	9,288	1.00	0.00
ATOM	2925	CG	GLU	201	-9,996	-37,394	8,313	1.00	0.00
ATOM	2926	CD	GLU	201	-8,707	-36,808	8,964	1.00	0.00
ATOM	2927	OE1	GLU	201	-7,594	-37,323	8,746	1.00	0.00
ATOM	2928	OE2	GLU	201	-8,823	-35,836	9,775	1.00	0.00
ATOM	2929	H	GLU	201	-10,399	-36,529	11,052	1.00	0.00
ATOM	2930	HA	GLU	201	-12,534	-36,801	9,195	1.00	0.00
ATOM	2931	HB2	GLU	201	-10,248	-38,702	10,071	1.00	0.00
ATOM	2932	HB3	GLU	201	-11,362	-38,977	8,677	1.00	0.00
ATOM	2933	HG2	GLU	201	-9,643	-38,110	7,572	1.00	0.00
ATOM	2934	HG3	GLU	201	-10,557	-36,640	7,761	1.00	0.00
ATOM	2935	N	VAL	202	-12,718	-38,869	11,791	1.00	0.00
ATOM	2936	CA	VAL	202	-13,482	-39,956	12,452	1.00	0.00
ATOM	2937	C	VAL	202	-14,856	-39,441	12,900	1.00	0.00
ATOM	2938	O	VAL	202	-15,815	-40,179	12,669	1.00	0.00
ATOM	2939	CB	VAL	202	-12,584	-40,459	13,593	1.00	0.00
ATOM	2940	CG1	VAL	202	-13,208	-41,591	14,354	1.00	0.00
ATOM	2941	CG2	VAL	202	-11,255	-40,988	13,010	1.00	0.00
ATOM	2942	H	VAL	202	-11,861	-38,525	12,201	1.00	0.00
ATOM	2943	HA	VAL	202	-13,614	-40,769	11,738	1.00	0.00
ATOM	2944	HB	VAL	202	-12,353	-39,682	14,322	1.00	0.00
ATOM	2945	HG11	VAL	202	-12,775	-41,737	15,344	1.00	0.00
ATOM	2946	HG12	VAL	202	-14,232	-41,324	14,613	1.00	0.00
ATOM	2947	HG13	VAL	202	-13,120	-42,453	13,693	1.00	0.00
ATOM	2948	HG21	VAL	202	-10,591	-40,209	12,637	1.00	0.00
ATOM	2949	HG22	VAL	202	-11,417	-41,723	12,220	1.00	0.00
ATOM	2950	HG23	VAL	202	-10,818	-41,539	13,843	1.00	0.00
ATOM	2951	N	ILE	203	-14,991	-38,182	13,352	1.00	0.00
ATOM	2952	CA	ILE	203	-16,377	-37,623	13,469	1.00	0.00
ATOM	2953	C	ILE	203	-16,924	-36,967	12,173	1.00	0.00
ATOM	2954	O	ILE	203	-18,106	-36,901	11,863	1.00	0.00
ATOM	2955	CB	ILE	203	-16,465	-36,607	14,629	1.00	0.00
ATOM	2956	CG1	ILE	203	-17,842	-36,046	14,947	1.00	0.00
ATOM	2957	CG2	ILE	203	-15,436	-35,473	14,428	1.00	0.00
ATOM	2958	CD1	ILE	203	-18,788	-37,131	15,464	1.00	0.00
ATOM	2959	H	ILE	203	-14,229	-37,560	13,579	1.00	0.00
ATOM	2960	HA	ILE	203	-17,149	-38,357	13,705	1.00	0.00
ATOM	2961	HB	ILE	203	-16,209	-37,147	15,541	1.00	0.00
ATOM	2962	HG12	ILE	203	-17,816	-35,252	15,693	1.00	0.00
ATOM	2963	HG13	ILE	203	-18,225	-35,609	14,026	1.00	0.00
ATOM	2964	HG21	ILE	203	-15,622	-34,964	13,482	1.00	0.00
ATOM	2965	HG22	ILE	203	-14,398	-35,784	14,535	1.00	0.00
ATOM	2966	HG23	ILE	203	-15,589	-34,704	15,184	1.00	0.00

ATOM	2967	HD11	ILE	203	-18,305	-37,596	16,323	1.00	0.00
ATOM	2968	HD12	ILE	203	-19,109	-37,813	14,677	1.00	0.00
ATOM	2969	HD13	ILE	203	-19,647	-36,587	15,856	1.00	0.00
ATOM	2970	N	ASN	204	-16,082	-36,366	11,339	1.00	0.00
ATOM	2971	CA	ASN	204	-16,528	-35,425	10,309	1.00	0.00
ATOM	2972	C	ASN	204	-16,550	-36,014	8,882	1.00	0.00
ATOM	2973	O	ASN	204	-16,848	-35,310	7,937	1.00	0.00
ATOM	2974	CB	ASN	204	-15,595	-34,203	10,398	1.00	0.00
ATOM	2975	CG	ASN	204	-15,941	-33,007	9,536	1.00	0.00
ATOM	2976	ND2	ASN	204	-15,197	-32,654	8,519	1.00	0.00
ATOM	2977	OD1	ASN	204	-17,035	-32,491	9,791	1.00	0.00
ATOM	2978	H	ASN	204	-15,098	-36,377	11,563	1.00	0.00
ATOM	2979	HA	ASN	204	-17,547	-35,066	10,455	1.00	0.00
ATOM	2980	HB2	ASN	204	-15,389	-33,901	11,425	1.00	0.00
ATOM	2981	HB3	ASN	204	-14,606	-34,594	10,163	1.00	0.00
ATOM	2982	HD21	ASN	204	-14,432	-33,270	8,280	1.00	0.00
ATOM	2983	HD22	ASN	204	-15,486	-31,945	7,860	1.00	0.00
ATOM	2984	N	ASN	205	-16,069	-37,220	8,671	1.00	0.00
ATOM	2985	CA	ASN	205	-15,941	-37,795	7,309	1.00	0.00
ATOM	2986	C	ASN	205	-16,010	-39,355	7,463	1.00	0.00
ATOM	2987	O	ASN	205	-15,001	-40,047	7,255	1.00	0.00
ATOM	2988	CB	ASN	205	-14,633	-37,360	6,612	1.00	0.00
ATOM	2989	CG	ASN	205	-14,451	-37,823	5,150	1.00	0.00
ATOM	2990	ND2	ASN	205	-13,398	-37,436	4,530	1.00	0.00
ATOM	2991	OD1	ASN	205	-15,298	-38,458	4,539	1.00	0.00
ATOM	2992	H	ASN	205	-15,806	-37,825	9,437	1.00	0.00
ATOM	2993	HA	ASN	205	-16,820	-37,473	6,751	1.00	0.00
ATOM	2994	HB2	ASN	205	-14,610	-36,288	6,417	1.00	0.00
ATOM	2995	HB3	ASN	205	-13,773	-37,706	7,187	1.00	0.00
ATOM	2996	HD21	ASN	205	-12,683	-36,919	5,021	1.00	0.00
ATOM	2997	HD22	ASN	205	-13,305	-37,886	3,630	1.00	0.00
ATOM	2998	N	LYS	206	-17,185	-39,852	7,795	1.00	0.00
ATOM	2999	CA	LYS	206	-17,517	-41,295	7,716	1.00	0.00
ATOM	3000	C	LYS	206	-17,097	-41,936	6,347	1.00	0.00
ATOM	3001	O	LYS	206	-17,274	-41,300	5,273	1.00	0.00
ATOM	3002	CB	LYS	206	-19,012	-41,554	8,094	1.00	0.00
ATOM	3003	CG	LYS	206	-19,399	-40,979	9,439	1.00	0.00
ATOM	3004	CD	LYS	206	-18,499	-41,378	10,636	1.00	0.00
ATOM	3005	CE	LYS	206	-19,097	-40,722	11,897	1.00	0.00
ATOM	3006	NZ	LYS	206	-18,346	-40,966	13,182	1.00	0.00
ATOM	3007	H	LYS	206	-17,916	-39,224	8,097	1.00	0.00
ATOM	3008	HA	LYS	206	-16,916	-41,867	8,423	1.00	0.00
ATOM	3009	HB2	LYS	206	-19,629	-41,058	7,346	1.00	0.00

ATOM	3010	HB3	LYS	206	-19,234	-42,622	8,087	1.00	0.00
ATOM	3011	HG2	LYS	206	-19,393	-39,896	9,309	1.00	0.00
ATOM	3012	HG3	LYS	206	-20,398	-41,366	9,642	1.00	0.00
ATOM	3013	HD2	LYS	206	-18,477	-42,466	10,694	1.00	0.00
ATOM	3014	HD3	LYS	206	-17,452	-41,095	10,522	1.00	0.00
ATOM	3015	HE2	LYS	206	-19,236	-39,651	11,749	1.00	0.00
ATOM	3016	HE3	LYS	206	-20,059	-41,189	12,106	1.00	0.00
ATOM	3017	HZ1	LYS	206	-18,692	-40,369	13,919	1.00	0.00
ATOM	3018	HZ2	LYS	206	-17,364	-40,771	13,055	1.00	0.00
ATOM	3019	HZ3	LYS	206	-18,307	-41,946	13,426	1.00	0.00
ATOM	3020	N	GLY	207	-16,691	-43,194	6,373	1.00	0.00
ATOM	3021	CA	GLY	207	-16,234	-43,845	5,112	1.00	0.00
ATOM	3022	C	GLY	207	-14,904	-43,380	4,504	1.00	0.00
ATOM	3023	O	GLY	207	-14,480	-43,915	3,490	1.00	0.00
ATOM	3024	H	GLY	207	-16,651	-43,751	7,214	1.00	0.00
ATOM	3025	HA2	GLY	207	-16,113	-44,904	5,338	1.00	0.00
ATOM	3026	HA3	GLY	207	-17,044	-43,789	4,385	1.00	0.00
ATOM	3027	N	TYR	208	-14,195	-42,472	5,197	1.00	0.00
ATOM	3028	CA	TYR	208	-12,779	-42,300	4,865	1.00	0.00
ATOM	3029	C	TYR	208	-11,926	-43,326	5,609	1.00	0.00
ATOM	3030	O	TYR	208	-12,193	-43,617	6,778	1.00	0.00
ATOM	3031	CB	TYR	208	-12,368	-40,856	5,324	1.00	0.00
ATOM	3032	CG	TYR	208	-10,898	-40,563	5,313	1.00	0.00
ATOM	3033	CD1	TYR	208	-10,273	-40,049	4,140	1.00	0.00
ATOM	3034	CD2	TYR	208	-10,115	-40,877	6,426	1.00	0.00
ATOM	3035	CE1	TYR	208	-8,828	-39,807	4,033	1.00	0.00
ATOM	3036	CE2	TYR	208	-8,737	-40,675	6,282	1.00	0.00
ATOM	3037	CZ	TYR	208	-8,055	-40,101	5,158	1.00	0.00
ATOM	3038	OH	TYR	208	-6,689	-39,921	5,128	1.00	0.00
ATOM	3039	H	TYR	208	-14,553	-42,022	6,028	1.00	0.00
ATOM	3040	HA	TYR	208	-12,585	-42,387	3,796	1.00	0.00
ATOM	3041	HB2	TYR	208	-12,848	-40,230	4,572	1.00	0.00
ATOM	3042	HB3	TYR	208	-12,723	-40,738	6,348	1.00	0.00
ATOM	3043	HD1	TYR	208	-10,997	-39,717	3,411	1.00	0.00
ATOM	3044	HD2	TYR	208	-10,583	-41,135	7,365	1.00	0.00
ATOM	3045	HE1	TYR	208	-8,454	-39,308	3,151	1.00	0.00
ATOM	3046	HE2	TYR	208	-8,102	-40,797	7,147	1.00	0.00
ATOM	3047	HH	TYR	208	-6,406	-39,395	4,376	1.00	0.00
ATOM	3048	N	ASP	209	-10,890	-43,762	4,951	1.00	0.00
ATOM	3049	CA	ASP	209	-10,182	-45,035	5,377	1.00	0.00
ATOM	3050	C	ASP	209	-9,691	-45,030	6,804	1.00	0.00
ATOM	3051	O	ASP	209	-9,580	-46,095	7,503	1.00	0.00
ATOM	3052	CB	ASP	209	-9,053	-45,356	4,407	1.00	0.00

ATOM	3053	CG	ASP	209	-7,914	-44,369	4,400	1.00	0.00
ATOM	3054	OD1	ASP	209	-8,084	-43,454	3,553	1.00	0.00
ATOM	3055	OD2	ASP	209	-6,828	-44,559	5,015	1.00	0.00
ATOM	3056	H	ASP	209	-10,666	-43,456	4,015	1.00	0.00
ATOM	3057	HA	ASP	209	-10,846	-45,875	5,170	1.00	0.00
ATOM	3058	HB2	ASP	209	-8,762	-46,372	4,672	1.00	0.00
ATOM	3059	HB3	ASP	209	-9,533	-45,367	3,429	1.00	0.00
ATOM	3060	N	GLY	210	-9,228	-43,878	7,373	1.00	0.00
ATOM	3061	CA	GLY	210	-8,804	-43,774	8,758	1.00	0.00
ATOM	3062	C	GLY	210	-7,486	-44,603	9,135	1.00	0.00
ATOM	3063	O	GLY	210	-7,320	-44,913	10,355	1.00	0.00
ATOM	3064	H	GLY	210	-9,090	-43,026	6,847	1.00	0.00
ATOM	3065	HA2	GLY	210	-8,577	-42,720	8,914	1.00	0.00
ATOM	3066	HA3	GLY	210	-9,637	-44,026	9,415	1.00	0.00
ATOM	3067	N	ALA	211	-6,572	-44,984	8,191	1.00	0.00
ATOM	3068	CA	ALA	211	-5,445	-45,864	8,486	1.00	0.00
ATOM	3069	C	ALA	211	-4,531	-45,321	9,610	1.00	0.00
ATOM	3070	O	ALA	211	-4,043	-46,072	10,495	1.00	0.00
ATOM	3071	CB	ALA	211	-4,696	-46,044	7,214	1.00	0.00
ATOM	3072	H	ALA	211	-6,822	-44,913	7,214	1.00	0.00
ATOM	3073	HA	ALA	211	-5,813	-46,835	8,818	1.00	0.00
ATOM	3074	HB1	ALA	211	-3,751	-46,551	7,405	1.00	0.00
ATOM	3075	HB2	ALA	211	-4,538	-45,061	6,771	1.00	0.00
ATOM	3076	HB3	ALA	211	-5,275	-46,568	6,452	1.00	0.00
ATOM	3077	N	LYS	212	-4,358	-43,995	9,678	1.00	0.00
ATOM	3078	CA	LYS	212	-3,449	-43,269	10,576	1.00	0.00
ATOM	3079	C	LYS	212	-4,173	-42,150	11,311	1.00	0.00
ATOM	3080	O	LYS	212	-3,502	-41,305	11,912	1.00	0.00
ATOM	3081	CB	LYS	212	-2,184	-42,770	9,869	1.00	0.00
ATOM	3082	CG	LYS	212	-1,215	-43,893	9,482	1.00	0.00
ATOM	3083	CD	LYS	212	-0.635	-44,731	10,639	1.00	0.00
ATOM	3084	CE	LYS	212	-0.170	-43,965	11,877	1.00	0.00
ATOM	3085	NZ	LYS	212	0.246	-44,881	12,919	1.00	0.00
ATOM	3086	H	LYS	212	-4,931	-43,440	9,059	1.00	0.00
ATOM	3087	HA	LYS	212	-3,204	-43,940	11,399	1.00	0.00
ATOM	3088	HB2	LYS	212	-2,425	-42,137	9,015	1.00	0.00
ATOM	3089	HB3	LYS	212	-1,699	-42,092	10,571	1.00	0.00
ATOM	3090	HG2	LYS	212	-1,689	-44,503	8,713	1.00	0.00
ATOM	3091	HG3	LYS	212	-0.323	-43,480	9,010	1.00	0.00
ATOM	3092	HD2	LYS	212	-1,454	-45,388	10,930	1.00	0.00
ATOM	3093	HD3	LYS	212	0.185	-45,406	10,395	1.00	0.00
ATOM	3094	HE2	LYS	212	0.701	-43,358	11,631	1.00	0.00
ATOM	3095	HE3	LYS	212	-0.965	-43,285	12,179	1.00	0.00

ATOM	3096	HZ1	LYS	212	1,018	-45,453	12,605	1.00	0.00
ATOM	3097	HZ2	LYS	212	-0.512	-45,533	13,061	1.00	0.00
ATOM	3098	HZ3	LYS	212	0.456	-44,482	13,823	1.00	0.00
ATOM	3099	N	ALA	213	-5,509	-42,148	11,515	1.00	0.00
ATOM	3100	CA	ALA	213	-6,199	-41,084	12,141	1.00	0.00
ATOM	3101	C	ALA	213	-5,815	-40,818	13,591	1.00	0.00
ATOM	3102	O	ALA	213	-5,940	-39,690	14,071	1.00	0.00
ATOM	3103	CB	ALA	213	-7,755	-41,318	12,067	1.00	0.00
ATOM	3104	H	ALA	213	-6,119	-42,892	11,209	1.00	0.00
ATOM	3105	HA	ALA	213	-5,935	-40,177	11,598	1.00	0.00
ATOM	3106	HB1	ALA	213	-8,237	-40,581	12,709	1.00	0.00
ATOM	3107	HB2	ALA	213	-7,992	-42,315	12,440	1.00	0.00
ATOM	3108	HB3	ALA	213	-8,113	-41,291	11,037	1.00	0.00
ATOM	3109	N	ASP	214	-5,274	-41,881	14,222	1.00	0.00
ATOM	3110	CA	ASP	214	-4,847	-41,900	15,608	1.00	0.00
ATOM	3111	C	ASP	214	-3,450	-41,290	15,861	1.00	0.00
ATOM	3112	O	ASP	214	-3,070	-40,939	16,959	1.00	0.00
ATOM	3113	CB	ASP	214	-4,923	-43,346	16,090	1.00	0.00
ATOM	3114	CG	ASP	214	-3,860	-44,200	15,327	1.00	0.00
ATOM	3115	OD1	ASP	214	-4,179	-44,730	14,242	1.00	0.00
ATOM	3116	OD2	ASP	214	-2,744	-44,273	15,810	1.00	0.00
ATOM	3117	H	ASP	214	-5,292	-42,750	13,708	1.00	0.00
ATOM	3118	HA	ASP	214	-5,518	-41,305	16,228	1.00	0.00
ATOM	3119	HB2	ASP	214	-4,633	-43,427	17,137	1.00	0.00
ATOM	3120	HB3	ASP	214	-5,892	-43,823	15,935	1.00	0.00
ATOM	3121	N	LEU	215	-2,741	-40,889	14,746	1.00	0.00
ATOM	3122	CA	LEU	215	-1,394	-40,400	14,802	1.00	0.00
ATOM	3123	C	LEU	215	-1,376	-38,974	15,424	1.00	0.00
ATOM	3124	O	LEU	215	-0.329	-38,472	15,886	1.00	0.00
ATOM	3125	CB	LEU	215	-0.842	-40,384	13,411	1.00	0.00
ATOM	3126	CG	LEU	215	0.691	-39,918	13,280	1.00	0.00
ATOM	3127	CD1	LEU	215	1,533	-40,863	13,979	1.00	0.00
ATOM	3128	CD2	LEU	215	1,035	-39,736	11,841	1.00	0.00
ATOM	3129	H	LEU	215	-2,989	-41,305	13,860	1.00	0.00
ATOM	3130	HA	LEU	215	-0.695	-41,042	15,338	1.00	0.00
ATOM	3131	HB2	LEU	215	-0.881	-41,318	12,850	1.00	0.00
ATOM	3132	HB3	LEU	215	-1,426	-39,694	12,801	1.00	0.00
ATOM	3133	HG	LEU	215	0.844	-38,901	13,641	1.00	0.00
ATOM	3134	HD11	LEU	215	1,353	-41,851	13,555	1.00	0.00
ATOM	3135	HD12	LEU	215	1,464	-40,802	15,065	1.00	0.00
ATOM	3136	HD13	LEU	215	2,528	-40,550	13,663	1.00	0.00
ATOM	3137	HD21	LEU	215	0.263	-39,142	11,351	1.00	0.00
ATOM	3138	HD22	LEU	215	2,035	-39,331	11,687	1.00	0.00

ATOM	3139	HD23	LEU	215	1,082	-40,713	11,360	1.00	0.00
ATOM	3140	N	TRP	216	-2,563	-38,305	15,497	1.00	0.00
ATOM	3141	CA	TRP	216	-2,763	-37,149	16,346	1.00	0.00
ATOM	3142	C	TRP	216	-2,303	-37,268	17,753	1.00	0.00
ATOM	3143	O	TRP	216	-2,057	-36,249	18,439	1.00	0.00
ATOM	3144	CB	TRP	216	-4,185	-36,694	16,167	1.00	0.00
ATOM	3145	CG	TRP	216	-4,460	-35,501	15,306	1.00	0.00
ATOM	3146	CD1	TRP	216	-3,797	-35,149	14,175	1.00	0.00
ATOM	3147	CD2	TRP	216	-5,416	-34,390	15,531	1.00	0.00
ATOM	3148	CE2	TRP	216	-5,282	-33,442	14,515	1.00	0.00
ATOM	3149	CE3	TRP	216	-6,487	-34,138	16,445	1.00	0.00
ATOM	3150	NE1	TRP	216	-4,335	-34,021	13,688	1.00	0.00
ATOM	3151	CZ2	TRP	216	-6,165	-32,315	14,321	1.00	0.00
ATOM	3152	CZ3	TRP	216	-7,186	-32,954	16,500	1.00	0.00
ATOM	3153	CH2	TRP	216	-7,074	-32,093	15,393	1.00	0.00
ATOM	3154	H	TRP	216	-3,385	-38,811	15,198	1.00	0.00
ATOM	3155	HA	TRP	216	-2,241	-36,265	15,981	1.00	0.00
ATOM	3156	HB2	TRP	216	-4,809	-37,540	15,880	1.00	0.00
ATOM	3157	HB3	TRP	216	-4,587	-36,398	17,136	1.00	0.00
ATOM	3158	HD1	TRP	216	-3,057	-35,787	13,715	1.00	0.00
ATOM	3159	HE1	TRP	216	-4,053	-33,617	12,806	1.00	0.00
ATOM	3160	HE3	TRP	216	-6,596	-34,866	17,235	1.00	0.00
ATOM	3161	HZ2	TRP	216	-6,161	-31,751	13,400	1.00	0.00
ATOM	3162	HZ3	TRP	216	-7,916	-32,710	17,257	1.00	0.00
ATOM	3163	HH2	TRP	216	-7,730	-31,250	15,234	1.00	0.00
ATOM	3164	N	SER	217	-2,204	-38,510	18,321	1.00	0.00
ATOM	3165	CA	SER	217	-1,688	-38,775	19,694	1.00	0.00
ATOM	3166	C	SER	217	-0.357	-38,118	19,856	1.00	0.00
ATOM	3167	O	SER	217	-0.220	-37,412	20,892	1.00	0.00
ATOM	3168	CB	SER	217	-1,574	-40,292	19,861	1.00	0.00
ATOM	3169	OG	SER	217	-0.875	-40,922	18,830	1.00	0.00
ATOM	3170	H	SER	217	-2,371	-39,301	17,715	1.00	0.00
ATOM	3171	HA	SER	217	-2,406	-38,314	20,372	1.00	0.00
ATOM	3172	HB2	SER	217	-1,021	-40,389	20,795	1.00	0.00
ATOM	3173	HB3	SER	217	-2,593	-40,667	19,961	1.00	0.00
ATOM	3174	HG	SER	217	-1,488	-41,592	18,517	1.00	0.00
ATOM	3175	N	CYS	218	0.563	-38,138	18,879	1.00	0.00
ATOM	3176	CA	CYS	218	1,860	-37,630	19,080	1.00	0.00
ATOM	3177	C	CYS	218	1,937	-36,147	19,158	1.00	0.00
ATOM	3178	O	CYS	218	2,720	-35,634	19,916	1.00	0.00
ATOM	3179	CB	CYS	218	2,961	-38,256	18,208	1.00	0.00
ATOM	3180	SG	CYS	218	2,791	-37,732	16,524	1.00	0.00
ATOM	3181	H	CYS	218	0.244	-38,739	18,134	1.00	0.00

ATOM	3182	HA	CYS	218	2,074	-37,924	20,107	1.00	0.00
ATOM	3183	HB2	CYS	218	3,955	-38,031	18,594	1.00	0.00
ATOM	3184	HB3	CYS	218	2,849	-39,339	18,257	1.00	0.00
ATOM	3185	HG	CYS	218	1,594	-38,325	16,545	1.00	0.00
ATOM	3186	N	GLY	219	1,056	-35,451	18,492	1.00	0.00
ATOM	3187	CA	GLY	219	0.970	-34,001	18,657	1.00	0.00
ATOM	3188	C	GLY	219	0.387	-33,521	19,981	1.00	0.00
ATOM	3189	O	GLY	219	0.751	-32,488	20,550	1.00	0.00
ATOM	3190	H	GLY	219	0.310	-35,893	17,974	1.00	0.00
ATOM	3191	HA2	GLY	219	1,972	-33,584	18,557	1.00	0.00
ATOM	3192	HA3	GLY	219	0.314	-33,536	17,921	1.00	0.00
ATOM	3193	N	VAL	220	-0.596	-34,276	20,483	1.00	0.00
ATOM	3194	CA	VAL	220	-1,271	-33,979	21,736	1.00	0.00
ATOM	3195	C	VAL	220	-0.261	-34,244	22,850	1.00	0.00
ATOM	3196	O	VAL	220	-0.164	-33,449	23,764	1.00	0.00
ATOM	3197	CB	VAL	220	-2,513	-34,917	21,996	1.00	0.00
ATOM	3198	CG1	VAL	220	-2,981	-34,538	23,450	1.00	0.00
ATOM	3199	CG2	VAL	220	-3,648	-34,596	21,046	1.00	0.00
ATOM	3200	H	VAL	220	-0.743	-35,173	20,046	1.00	0.00
ATOM	3201	HA	VAL	220	-1,612	-32,946	21,817	1.00	0.00
ATOM	3202	HB	VAL	220	-2,324	-35,985	21,889	1.00	0.00
ATOM	3203	HG11	VAL	220	-2,403	-35,015	24,240	1.00	0.00
ATOM	3204	HG12	VAL	220	-3,012	-33,450	23,528	1.00	0.00
ATOM	3205	HG13	VAL	220	-4,004	-34,893	23,572	1.00	0.00
ATOM	3206	HG21	VAL	220	-4,140	-33,641	21,226	1.00	0.00
ATOM	3207	HG22	VAL	220	-4,379	-35,403	21,104	1.00	0.00
ATOM	3208	HG23	VAL	220	-3,354	-34,604	19,996	1.00	0.00
ATOM	3209	N	ILE	221	0.593	-35,242	22,714	1.00	0.00
ATOM	3210	CA	ILE	221	1,688	-35,557	23,610	1.00	0.00
ATOM	3211	C	ILE	221	2,843	-34,552	23,373	1.00	0.00
ATOM	3212	O	ILE	221	3,440	-34,203	24,391	1.00	0.00
ATOM	3213	CB	ILE	221	2,130	-36,978	23,489	1.00	0.00
ATOM	3214	CG1	ILE	221	1,022	-37,842	24,137	1.00	0.00
ATOM	3215	CG2	ILE	221	3,484	-37,343	24,119	1.00	0.00
ATOM	3216	CD1	ILE	221	1,060	-39,315	23,670	1.00	0.00
ATOM	3217	H	ILE	221	0.356	-35,984	22,072	1.00	0.00
ATOM	3218	HA	ILE	221	1,388	-35,395	24,646	1.00	0.00
ATOM	3219	HB	ILE	221	2,161	-37,166	22,416	1.00	0.00
ATOM	3220	HG12	ILE	221	1,040	-37,879	25,226	1.00	0.00
ATOM	3221	HG13	ILE	221	0.070	-37,453	23,775	1.00	0.00
ATOM	3222	HG21	ILE	221	3,594	-38,426	24,185	1.00	0.00
ATOM	3223	HG22	ILE	221	3,602	-36,878	25,099	1.00	0.00
ATOM	3224	HG23	ILE	221	4,216	-36,917	23,433	1.00	0.00

ATOM	3225	HD11	ILE	221	2,003	-39,745	24,006	1.00	0.00
ATOM	3226	HD12	ILE	221	1,077	-39,291	22,580	1.00	0.00
ATOM	3227	HD13	ILE	221	0.207	-39,863	24,071	1.00	0.00
ATOM	3228	N	LEU	222	3,201	-34,087	22,188	1.00	0.00
ATOM	3229	CA	LEU	222	4,241	-33,094	22,117	1.00	0.00
ATOM	3230	C	LEU	222	3,814	-31,741	22,627	1.00	0.00
ATOM	3231	O	LEU	222	4,549	-31,120	23,339	1.00	0.00
ATOM	3232	CB	LEU	222	4,795	-33,063	20,719	1.00	0.00
ATOM	3233	CG	LEU	222	5,961	-32,119	20,449	1.00	0.00
ATOM	3234	CD1	LEU	222	7,206	-32,637	21,235	1.00	0.00
ATOM	3235	CD2	LEU	222	6,469	-32,138	18,998	1.00	0.00
ATOM	3236	H	LEU	222	2,616	-34,337	21,403	1.00	0.00
ATOM	3237	HA	LEU	222	5,097	-33,389	22,724	1.00	0.00
ATOM	3238	HB2	LEU	222	5,125	-34,067	20,453	1.00	0.00
ATOM	3239	HB3	LEU	222	3,996	-32,819	20,020	1.00	0.00
ATOM	3240	HG	LEU	222	5,739	-31,090	20,736	1.00	0.00
ATOM	3241	HD11	LEU	222	7,265	-33,708	21,043	1.00	0.00
ATOM	3242	HD12	LEU	222	7,159	-32,596	22,324	1.00	0.00
ATOM	3243	HD13	LEU	222	8,116	-32,123	20,925	1.00	0.00
ATOM	3244	HD21	LEU	222	6,890	-33,073	18,628	1.00	0.00
ATOM	3245	HD22	LEU	222	5,595	-31,830	18,424	1.00	0.00
ATOM	3246	HD23	LEU	222	7,281	-31,414	18,936	1.00	0.00
ATOM	3247	N	PHE	223	2,591	-31,253	22,280	1.00	0.00
ATOM	3248	CA	PHE	223	1,939	-30,178	23,067	1.00	0.00
ATOM	3249	C	PHE	223	2,085	-30,431	24,612	1.00	0.00
ATOM	3250	O	PHE	223	2,902	-29,767	25,250	1.00	0.00
ATOM	3251	CB	PHE	223	0.507	-29,833	22,592	1.00	0.00
ATOM	3252	CG	PHE	223	-0.119	-28,491	23,058	1.00	0.00
ATOM	3253	CD1	PHE	223	-0.442	-27,471	22,137	1.00	0.00
ATOM	3254	CD2	PHE	223	-0.563	-28,365	24,387	1.00	0.00
ATOM	3255	CE1	PHE	223	-1,114	-26,301	22,531	1.00	0.00
ATOM	3256	CE2	PHE	223	-1,234	-27,131	24,832	1.00	0.00
ATOM	3257	CZ	PHE	223	-1,371	-26,081	23,869	1.00	0.00
ATOM	3258	H	PHE	223	2,078	-31,776	21,585	1.00	0.00
ATOM	3259	HA	PHE	223	2,530	-29,345	22,687	1.00	0.00
ATOM	3260	HB2	PHE	223	0.547	-29,775	21,504	1.00	0.00
ATOM	3261	HB3	PHE	223	-0.186	-30,640	22,828	1.00	0.00
ATOM	3262	HD1	PHE	223	-0.105	-27,713	21,140	1.00	0.00
ATOM	3263	HD2	PHE	223	-0.355	-29,195	25,046	1.00	0.00
ATOM	3264	HE1	PHE	223	-1,309	-25,593	21,738	1.00	0.00
ATOM	3265	HE2	PHE	223	-1,527	-27,005	25,864	1.00	0.00
ATOM	3266	HZ	PHE	223	-1,782	-25,137	24,191	1.00	0.00
ATOM	3267	N	VAL	224	1,561	-31,540	25,207	1.00	0.00



ATOM	3268	CA	VAL	224	1,781	-31,822	26,653	1.00	0.00
ATOM	3269	C	VAL	224	3,270	-31,714	27,143	1.00	0.00
ATOM	3270	O	VAL	224	3,427	-31,015	28,175	1.00	0.00
ATOM	3271	CB	VAL	224	1,253	-33,183	27,137	1.00	0.00
ATOM	3272	CG1	VAL	224	1,666	-33,615	28,575	1.00	0.00
ATOM	3273	CG2	VAL	224	-0.245	-33,038	27,333	1.00	0.00
ATOM	3274	H	VAL	224	0.967	-32,213	24,743	1.00	0.00
ATOM	3275	HA	VAL	224	1,228	-31,000	27,109	1.00	0.00
ATOM	3276	HB	VAL	224	1,493	-33,927	26,378	1.00	0.00
ATOM	3277	HG11	VAL	224	1,247	-34,604	28,759	1.00	0.00
ATOM	3278	HG12	VAL	224	2,745	-33,745	28,660	1.00	0.00
ATOM	3279	HG13	VAL	224	1,524	-32,885	29,372	1.00	0.00
ATOM	3280	HG21	VAL	224	-0.606	-33,999	27,699	1.00	0.00
ATOM	3281	HG22	VAL	224	-0.635	-32,774	26,349	1.00	0.00
ATOM	3282	HG23	VAL	224	-0.541	-32,301	28,079	1.00	0.00
ATOM	3283	N	LEU	225	4,303	-32,186	26,437	1.00	0.00
ATOM	3284	CA	LEU	225	5,747	-32,168	26,856	1.00	0.00
ATOM	3285	C	LEU	225	6,285	-30,701	27,049	1.00	0.00
ATOM	3286	O	LEU	225	7,131	-30,462	27,907	1.00	0.00
ATOM	3287	CB	LEU	225	6,619	-32,887	25,881	1.00	0.00
ATOM	3288	CG	LEU	225	6,413	-34,488	25,858	1.00	0.00
ATOM	3289	CD1	LEU	225	7,407	-35,136	24,892	1.00	0.00
ATOM	3290	CD2	LEU	225	6,801	-35,011	27,300	1.00	0.00
ATOM	3291	H	LEU	225	4,066	-32,671	25,583	1.00	0.00
ATOM	3292	HA	LEU	225	5,735	-32,683	27,817	1.00	0.00
ATOM	3293	HB2	LEU	225	6,514	-32,463	24,883	1.00	0.00
ATOM	3294	HB3	LEU	225	7,645	-32,685	26,188	1.00	0.00
ATOM	3295	HG	LEU	225	5,399	-34,791	25,596	1.00	0.00
ATOM	3296	HD11	LEU	225	8,446	-34,826	25,002	1.00	0.00
ATOM	3297	HD12	LEU	225	7,028	-34,894	23,899	1.00	0.00
ATOM	3298	HD13	LEU	225	7,427	-36,226	24,907	1.00	0.00
ATOM	3299	HD21	LEU	225	7,739	-34,573	27,641	1.00	0.00
ATOM	3300	HD22	LEU	225	5,945	-34,748	27,923	1.00	0.00
ATOM	3301	HD23	LEU	225	6,886	-36,097	27,328	1.00	0.00
ATOM	3302	N	MET	226	5,762	-29,764	26,273	1.00	0.00
ATOM	3303	CA	MET	226	6,230	-28,366	26,313	1.00	0.00
ATOM	3304	C	MET	226	5,061	-27,409	26,521	1.00	0.00
ATOM	3305	O	MET	226	5,182	-26,218	26,423	1.00	0.00
ATOM	3306	CB	MET	226	7,112	-28,057	25,094	1.00	0.00
ATOM	3307	CG	MET	226	8,553	-28,669	25,167	1.00	0.00
ATOM	3308	SD	MET	226	9,648	-28,169	23,851	1.00	0.00
ATOM	3309	CE	MET	226	10,253	-26,537	24,302	1.00	0.00
ATOM	3310	H	MET	226	5,087	-30,015	25,566	1.00	0.00

ATOM	3311	HA	MET	226	6,782	-28,280	27,248	1.00	0.00
ATOM	3312	HB2	MET	226	6,662	-28,319	24,137	1.00	0.00
ATOM	3313	HB3	MET	226	7,246	-26,976	25,069	1.00	0.00
ATOM	3314	HG2	MET	226	8,942	-28,394	26,147	1.00	0.00
ATOM	3315	HG3	MET	226	8,376	-29,741	25,081	1.00	0.00
ATOM	3316	HE1	MET	226	10,716	-26,684	25,277	1.00	0.00
ATOM	3317	HE2	MET	226	10,867	-26,170	23,479	1.00	0.00
ATOM	3318	HE3	MET	226	9,357	-25,931	24,428	1.00	0.00
ATOM	3319	N	ALA	227	3,921	-27,914	27,060	1.00	0.00
ATOM	3320	CA	ALA	227	2,705	-27,237	27,446	1.00	0.00
ATOM	3321	C	ALA	227	2,338	-27,405	28,936	1.00	0.00
ATOM	3322	O	ALA	227	1,928	-26,429	29,575	1.00	0.00
ATOM	3323	CB	ALA	227	1,535	-27,586	26,590	1.00	0.00
ATOM	3324	H	ALA	227	3,749	-28,906	26,967	1.00	0.00
ATOM	3325	HA	ALA	227	2,906	-26,165	27,429	1.00	0.00
ATOM	3326	HB1	ALA	227	1,081	-28,573	26,685	1.00	0.00
ATOM	3327	HB2	ALA	227	1,910	-27,542	25,567	1.00	0.00
ATOM	3328	HB3	ALA	227	0.754	-26,826	26,561	1.00	0.00
ATOM	3329	N	GLY	228	2,399	-28,619	29,488	1.00	0.00
ATOM	3330	CA	GLY	228	1,790	-28,917	30,825	1.00	0.00
ATOM	3331	C	GLY	228	0.261	-29,118	30,868	1.00	0.00
ATOM	3332	O	GLY	228	-0.195	-29,643	31,862	1.00	0.00
ATOM	3333	H	GLY	228	2,797	-29,369	28,941	1.00	0.00
ATOM	3334	HA2	GLY	228	2,192	-29,892	31,102	1.00	0.00
ATOM	3335	HA3	GLY	228	2,054	-28,120	31,520	1.00	0.00
ATOM	3336	N	TYR	229	-0.482	-28,839	29,790	1.00	0.00
ATOM	3337	CA	TYR	229	-1,968	-29,043	29,616	1.00	0.00
ATOM	3338	C	TYR	229	-2,372	-29,590	28,162	1.00	0.00
ATOM	3339	O	TYR	229	-1,638	-29,307	27,244	1.00	0.00
ATOM	3340	CB	TYR	229	-2,804	-27,796	30,052	1.00	0.00
ATOM	3341	CG	TYR	229	-2,527	-26,493	29,268	1.00	0.00
ATOM	3342	CD1	TYR	229	-3,193	-26,160	28,049	1.00	0.00
ATOM	3343	CD2	TYR	229	-1,460	-25,641	29,701	1.00	0.00
ATOM	3344	CE1	TYR	229	-2,817	-25,067	27,291	1.00	0.00
ATOM	3345	CE2	TYR	229	-1,056	-24,603	28,909	1.00	0.00
ATOM	3346	CZ	TYR	229	-1,714	-24,294	27,688	1.00	0.00
ATOM	3347	OH	TYR	229	-1,395	-23,173	27,059	1.00	0.00
ATOM	3348	H	TYR	229	-0.005	-28,487	28,972	1.00	0.00
ATOM	3349	HA	TYR	229	-2,198	-29,853	30,309	1.00	0.00
ATOM	3350	HB2	TYR	229	-3,859	-28,056	29,968	1.00	0.00
ATOM	3351	HB3	TYR	229	-2,710	-27,650	31,129	1.00	0.00
ATOM	3352	HD1	TYR	229	-4,013	-26,788	27,733	1.00	0.00
ATOM	3353	HD2	TYR	229	-0.833	-25,898	30,542	1.00	0.00

ATOM	3354	HE1	TYR	229	-3,427	-24,804	26,439	1.00	0.00
ATOM	3355	HE2	TYR	229	-0.212	-23,996	29,200	1.00	0.00
ATOM	3356	HH	TYR	229	-0.663	-22,662	27,414	1.00	0.00
ATOM	3357	N	LEU	230	-3,522	-30,237	28,067	1.00	0.00
ATOM	3358	CA	LEU	230	-4,055	-30,801	26,812	1.00	0.00
ATOM	3359	C	LEU	230	-4,562	-29,688	25,891	1.00	0.00
ATOM	3360	O	LEU	230	-5,180	-28,681	26,355	1.00	0.00
ATOM	3361	CB	LEU	230	-5,130	-31,918	27,121	1.00	0.00
ATOM	3362	CG	LEU	230	-4,435	-33,104	27,791	1.00	0.00
ATOM	3363	CD1	LEU	230	-5,370	-33,762	28,868	1.00	0.00
ATOM	3364	CD2	LEU	230	-4,134	-34,100	26,647	1.00	0.00
ATOM	3365	H	LEU	230	-4,181	-30,028	28,803	1.00	0.00
ATOM	3366	HA	LEU	230	-3,237	-31,288	26,284	1.00	0.00
ATOM	3367	HB2	LEU	230	-5,778	-31,477	27,878	1.00	0.00
ATOM	3368	HB3	LEU	230	-5,712	-32,181	26,238	1.00	0.00
ATOM	3369	HG	LEU	230	-3,528	-32,834	28,332	1.00	0.00
ATOM	3370	HD11	LEU	230	-6,380	-33,833	28,465	1.00	0.00
ATOM	3371	HD12	LEU	230	-5,467	-33,098	29,728	1.00	0.00
ATOM	3372	HD13	LEU	230	-5,063	-34,759	29,184	1.00	0.00
ATOM	3373	HD21	LEU	230	-4,995	-34,533	26,138	1.00	0.00
ATOM	3374	HD22	LEU	230	-3,488	-33,687	25,873	1.00	0.00
ATOM	3375	HD23	LEU	230	-3,543	-34,905	27,083	1.00	0.00
ATOM	3376	N	PRO	231	-4,444	-29,901	24,584	1.00	0.00
ATOM	3377	CA	PRO	231	-4,892	-28,992	23,531	1.00	0.00
ATOM	3378	C	PRO	231	-6,435	-28,835	23,269	1.00	0.00
ATOM	3379	O	PRO	231	-6,940	-27,929	22,641	1.00	0.00
ATOM	3380	CB	PRO	231	-4,125	-29,377	22,228	1.00	0.00
ATOM	3381	CG	PRO	231	-3,706	-30,828	22,434	1.00	0.00
ATOM	3382	CD	PRO	231	-3,628	-30,932	23,940	1.00	0.00
ATOM	3383	HA	PRO	231	-4,647	-27,977	23,843	1.00	0.00
ATOM	3384	HB2	PRO	231	-4,621	-29,114	21,293	1.00	0.00
ATOM	3385	HB3	PRO	231	-3,206	-28,793	22,176	1.00	0.00
ATOM	3386	HG2	PRO	231	-4,448	-31,491	21,986	1.00	0.00
ATOM	3387	HG3	PRO	231	-2,755	-31,046	21,948	1.00	0.00
ATOM	3388	HD2	PRO	231	-3,972	-31,918	24,253	1.00	0.00
ATOM	3389	HD3	PRO	231	-2,612	-30,837	24,322	1.00	0.00
ATOM	3390	N	PHE	232	-7,187	-29,936	23,413	1.00	0.00
ATOM	3391	CA	PHE	232	-8,652	-29,908	23,349	1.00	0.00
ATOM	3392	C	PHE	232	-9,350	-30,417	24,638	1.00	0.00
ATOM	3393	O	PHE	232	-9,155	-31,611	24,918	1.00	0.00
ATOM	3394	CB	PHE	232	-9,154	-30,650	22,108	1.00	0.00
ATOM	3395	CG	PHE	232	-8,230	-30,616	20,914	1.00	0.00
ATOM	3396	CD1	PHE	232	-8,415	-29,625	19,936	1.00	0.00

ATOM	3397	CD2	PHE	232	-7,258	-31,570	20,653	1.00	0.00
ATOM	3398	CE1	PHE	232	-7,631	-29,636	18,745	1.00	0.00
ATOM	3399	CE2	PHE	232	-6,492	-31,577	19,487	1.00	0.00
ATOM	3400	CZ	PHE	232	-6,648	-30,578	18,532	1.00	0.00
ATOM	3401	H	PHE	232	-6,706	-30,802	23,604	1.00	0.00
ATOM	3402	HA	PHE	232	-9,023	-28,901	23,154	1.00	0.00
ATOM	3403	HB2	PHE	232	-9,259	-31,704	22,368	1.00	0.00
ATOM	3404	HB3	PHE	232	-10,161	-30,361	21,806	1.00	0.00
ATOM	3405	HD1	PHE	232	-9,279	-28,984	20,020	1.00	0.00
ATOM	3406	HD2	PHE	232	-7,080	-32,269	21,456	1.00	0.00
ATOM	3407	HE1	PHE	232	-7,875	-28,917	17,977	1.00	0.00
ATOM	3408	HE2	PHE	232	-5,849	-32,416	19,272	1.00	0.00
ATOM	3409	HZ	PHE	232	-6,046	-30,604	17,635	1.00	0.00
ATOM	3410	N	GLU	233	-9,972	-29,546	25,435	1.00	0.00
ATOM	3411	CA	GLU	233	-10,579	-29,799	26,737	1.00	0.00
ATOM	3412	C	GLU	233	-12,014	-29,124	26,723	1.00	0.00
ATOM	3413	O	GLU	233	-12,059	-27,900	26,540	1.00	0.00
ATOM	3414	CB	GLU	233	-9,611	-29,446	27,905	1.00	0.00
ATOM	3415	CG	GLU	233	-10,326	-29,806	29,188	1.00	0.00
ATOM	3416	CD	GLU	233	-9,466	-29,924	30,459	1.00	0.00
ATOM	3417	OE1	GLU	233	-9,798	-29,245	31,456	1.00	0.00
ATOM	3418	OE2	GLU	233	-8,579	-30,779	30,468	1.00	0.00
ATOM	3419	H	GLU	233	-10,005	-28,584	25,128	1.00	0.00
ATOM	3420	HA	GLU	233	-10,820	-30,859	26,833	1.00	0.00
ATOM	3421	HB2	GLU	233	-8,709	-30,056	27,849	1.00	0.00
ATOM	3422	HB3	GLU	233	-9,312	-28,399	27,843	1.00	0.00
ATOM	3423	HG2	GLU	233	-11,157	-29,117	29,330	1.00	0.00
ATOM	3424	HG3	GLU	233	-10,689	-30,811	28,973	1.00	0.00
ATOM	3425	N	ASP	234	-13,085	-29,777	26,982	1.00	0.00
ATOM	3426	CA	ASP	234	-14,360	-29,253	27,342	1.00	0.00
ATOM	3427	C	ASP	234	-15,123	-30,359	28,087	1.00	0.00
ATOM	3428	O	ASP	234	-14,694	-31,536	28,212	1.00	0.00
ATOM	3429	CB	ASP	234	-15,061	-28,792	26,038	1.00	0.00
ATOM	3430	CG	ASP	234	-16,156	-27,699	26,323	1.00	0.00
ATOM	3431	OD1	ASP	234	-16,042	-26,677	25,613	1.00	0.00
ATOM	3432	OD2	ASP	234	-17,241	-27,974	26,873	1.00	0.00
ATOM	3433	H	ASP	234	-13,065	-30,752	27,247	1.00	0.00
ATOM	3434	HA	ASP	234	-14,263	-28,413	28,030	1.00	0.00
ATOM	3435	HB2	ASP	234	-14,389	-28,373	25,287	1.00	0.00
ATOM	3436	HB3	ASP	234	-15,560	-29,669	25,627	1.00	0.00
ATOM	3437	N	SER	235	-16,245	-29,961	28,678	1.00	0.00
ATOM	3438	CA	SER	235	-17,077	-30,664	29,642	1.00	0.00
ATOM	3439	C	SER	235	-18,423	-30,996	28,868	1.00	0.00

ATOM	3440	O	SER	235	-19,093	-31,984	29,179	1.00	0.00
ATOM	3441	CB	SER	235	-17,236	-29,746	30,891	1.00	0.00
ATOM	3442	OG	SER	235	-16,023	-29,223	31,382	1.00	0.00
ATOM	3443	H	SER	235	-16,452	-28,979	28,569	1.00	0.00
ATOM	3444	HA	SER	235	-16,575	-31,591	29,921	1.00	0.00
ATOM	3445	HB2	SER	235	-17,919	-28,929	30,655	1.00	0.00
ATOM	3446	HB3	SER	235	-17,679	-30,341	31,689	1.00	0.00
ATOM	3447	HG	SER	235	-15,812	-28,535	30,747	1.00	0.00
ATOM	3448	N	ASN	236	-18,778	-30,150	27,815	1.00	0.00
ATOM	3449	CA	ASN	236	-19,763	-30,590	26,817	1.00	0.00
ATOM	3450	C	ASN	236	-19,132	-31,216	25,525	1.00	0.00
ATOM	3451	O	ASN	236	-18,226	-30,699	24,903	1.00	0.00
ATOM	3452	CB	ASN	236	-20,726	-29,362	26,519	1.00	0.00
ATOM	3453	CG	ASN	236	-21,648	-29,587	25,396	1.00	0.00
ATOM	3454	ND2	ASN	236	-22,822	-30,094	25,715	1.00	0.00
ATOM	3455	OD1	ASN	236	-21,318	-29,417	24,239	1.00	0.00
ATOM	3456	H	ASN	236	-18,244	-29,389	27,421	1.00	0.00
ATOM	3457	HA	ASN	236	-20,441	-31,320	27,257	1.00	0.00
ATOM	3458	HB2	ASN	236	-21,419	-28,988	27,273	1.00	0.00
ATOM	3459	HB3	ASN	236	-20,103	-28,480	26,368	1.00	0.00
ATOM	3460	HD21	ASN	236	-23,165	-30,171	26,662	1.00	0.00
ATOM	3461	HD22	ASN	236	-23,517	-30,238	24,996	1.00	0.00
ATOM	3462	N	LEU	237	-19,484	-32,481	25,317	1.00	0.00
ATOM	3463	CA	LEU	237	-18,838	-33,268	24,341	1.00	0.00
ATOM	3464	C	LEU	237	-19,037	-32,656	22,957	1.00	0.00
ATOM	3465	O	LEU	237	-18,111	-32,672	22,155	1.00	0.00
ATOM	3466	CB	LEU	237	-19,449	-34,739	24,417	1.00	0.00
ATOM	3467	CG	LEU	237	-18,927	-35,737	23,355	1.00	0.00
ATOM	3468	CD1	LEU	237	-17,411	-35,855	23,400	1.00	0.00
ATOM	3469	CD2	LEU	237	-19,509	-37,108	23,628	1.00	0.00
ATOM	3470	H	LEU	237	-20,143	-32,915	25,948	1.00	0.00
ATOM	3471	HA	LEU	237	-17,760	-33,340	24,489	1.00	0.00
ATOM	3472	HB2	LEU	237	-19,244	-35,088	25,429	1.00	0.00
ATOM	3473	HB3	LEU	237	-20,518	-34,685	24,208	1.00	0.00
ATOM	3474	HG	LEU	237	-19,225	-35,446	22,347	1.00	0.00
ATOM	3475	HD11	LEU	237	-16,970	-34,984	22,915	1.00	0.00
ATOM	3476	HD12	LEU	237	-17,006	-36,495	22,615	1.00	0.00
ATOM	3477	HD13	LEU	237	-16,987	-36,131	24,366	1.00	0.00
ATOM	3478	HD21	LEU	237	-19,140	-37,437	24,600	1.00	0.00
ATOM	3479	HD22	LEU	237	-20,581	-37,079	23,822	1.00	0.00
ATOM	3480	HD23	LEU	237	-19,366	-37,876	22,868	1.00	0.00
ATOM	3481	N	THR	238	-20,238	-32,036	22,724	1.00	0.00
ATOM	3482	CA	THR	238	-20,605	-31,391	21,475	1.00	0.00

ATOM	3483	C	THR	238	-19,650	-30,231	21,121	1.00	0.00
ATOM	3484	O	THR	238	-19,163	-30,082	19,991	1.00	0.00
ATOM	3485	CB	THR	238	-22,075	-31,001	21,413	1.00	0.00
ATOM	3486	CG2	THR	238	-22,427	-30,570	19,988	1.00	0.00
ATOM	3487	OG1	THR	238	-22,986	-32,040	21,701	1.00	0.00
ATOM	3488	H	THR	238	-20,932	-32,092	23,456	1.00	0.00
ATOM	3489	HA	THR	238	-20,417	-32,085	20,657	1.00	0.00
ATOM	3490	HB	THR	238	-22,246	-30,179	22,107	1.00	0.00
ATOM	3491	HG1	THR	238	-22,874	-32,154	22,647	1.00	0.00
ATOM	3492	HG21	THR	238	-22,366	-31,463	19,365	1.00	0.00
ATOM	3493	HG22	THR	238	-21,741	-29,821	19,591	1.00	0.00
ATOM	3494	HG23	THR	238	-23,438	-30,178	20,099	1.00	0.00
ATOM	3495	N	SER	239	-19,400	-29,413	22,135	1.00	0.00
ATOM	3496	CA	SER	239	-18,445	-28,308	22,180	1.00	0.00
ATOM	3497	C	SER	239	-16,999	-28,816	22,087	1.00	0.00
ATOM	3498	O	SER	239	-16,172	-28,420	21,262	1.00	0.00
ATOM	3499	CB	SER	239	-18,723	-27,446	23,410	1.00	0.00
ATOM	3500	OG	SER	239	-17,761	-26,412	23,387	1.00	0.00
ATOM	3501	H	SER	239	-20,016	-29,593	22,916	1.00	0.00
ATOM	3502	HA	SER	239	-18,684	-27,753	21,273	1.00	0.00
ATOM	3503	HB2	SER	239	-19,743	-27,073	23,508	1.00	0.00
ATOM	3504	HB3	SER	239	-18,580	-28,090	24,277	1.00	0.00
ATOM	3505	HG	SER	239	-17,197	-26,556	24,150	1.00	0.00
ATOM	3506	N	LEU	240	-16,632	-29,903	22,785	1.00	0.00
ATOM	3507	CA	LEU	240	-15,296	-30,557	22,506	1.00	0.00
ATOM	3508	C	LEU	240	-15,130	-30,926	21,039	1.00	0.00
ATOM	3509	O	LEU	240	-14,079	-30,726	20,378	1.00	0.00
ATOM	3510	CB	LEU	240	-15,104	-31,734	23,382	1.00	0.00
ATOM	3511	CG	LEU	240	-13,770	-32,465	23,357	1.00	0.00
ATOM	3512	CD1	LEU	240	-12,500	-31,583	23,399	1.00	0.00
ATOM	3513	CD2	LEU	240	-13,762	-33,474	24,554	1.00	0.00
ATOM	3514	H	LEU	240	-17,242	-30,294	23,489	1.00	0.00
ATOM	3515	HA	LEU	240	-14,436	-29,955	22,803	1.00	0.00
ATOM	3516	HB2	LEU	240	-15,312	-31,393	24,396	1.00	0.00
ATOM	3517	HB3	LEU	240	-15,881	-32,441	23,093	1.00	0.00
ATOM	3518	HG	LEU	240	-13,646	-33,115	22,491	1.00	0.00
ATOM	3519	HD11	LEU	240	-11,593	-32,161	23,225	1.00	0.00
ATOM	3520	HD12	LEU	240	-12,455	-31,097	24,373	1.00	0.00
ATOM	3521	HD13	LEU	240	-12,536	-30,724	22,728	1.00	0.00
ATOM	3522	HD21	LEU	240	-12,829	-34,007	24,379	1.00	0.00
ATOM	3523	HD22	LEU	240	-13,716	-32,994	25,532	1.00	0.00
ATOM	3524	HD23	LEU	240	-14,640	-34,113	24,457	1.00	0.00
ATOM	3525	N	TYR	241	-16,221	-31,481	20,384	1.00	0.00

ATOM	3526	CA	TYR	241	-16,297	-31,855	18,999	1.00	0.00
ATOM	3527	C	TYR	241	-16,330	-30,715	17,944	1.00	0.00
ATOM	3528	O	TYR	241	-15,982	-30,923	16,799	1.00	0.00
ATOM	3529	CB	TYR	241	-17,445	-32,882	18,808	1.00	0.00
ATOM	3530	CG	TYR	241	-17,055	-34,414	18,930	1.00	0.00
ATOM	3531	CD1	TYR	241	-17,729	-35,211	19,867	1.00	0.00
ATOM	3532	CD2	TYR	241	-16,025	-34,949	18,038	1.00	0.00
ATOM	3533	CE1	TYR	241	-17,531	-36,606	19,857	1.00	0.00
ATOM	3534	CE2	TYR	241	-15,823	-36,333	18,079	1.00	0.00
ATOM	3535	CZ	TYR	241	-16,545	-37,172	18,950	1.00	0.00
ATOM	3536	OH	TYR	241	-16,398	-38,586	18,937	1.00	0.00
ATOM	3537	H	TYR	241	-17,032	-31,772	20,910	1.00	0.00
ATOM	3538	HA	TYR	241	-15,423	-32,440	18,713	1.00	0.00
ATOM	3539	HB2	TYR	241	-18,235	-32,554	19,484	1.00	0.00
ATOM	3540	HB3	TYR	241	-17,825	-32,699	17,803	1.00	0.00
ATOM	3541	HD1	TYR	241	-18,464	-34,718	20,485	1.00	0.00
ATOM	3542	HD2	TYR	241	-15,475	-34,397	17,292	1.00	0.00
ATOM	3543	HE1	TYR	241	-18,144	-37,360	20,330	1.00	0.00
ATOM	3544	HE2	TYR	241	-15,182	-36,758	17,321	1.00	0.00
ATOM	3545	HH	TYR	241	-15,933	-38,950	18,180	1.00	0.00
ATOM	3546	N	LYS	242	-16,589	-29,485	18,389	1.00	0.00
ATOM	3547	CA	LYS	242	-16,291	-28,174	17,680	1.00	0.00
ATOM	3548	C	LYS	242	-14,788	-27,815	17,824	1.00	0.00
ATOM	3549	O	LYS	242	-14,212	-27,308	16,887	1.00	0.00
ATOM	3550	CB	LYS	242	-17,236	-27,068	18,154	1.00	0.00
ATOM	3551	CG	LYS	242	-17,175	-25,752	17,295	1.00	0.00
ATOM	3552	CD	LYS	242	-18,130	-26,006	16,086	1.00	0.00
ATOM	3553	CE	LYS	242	-18,199	-24,780	15,115	1.00	0.00
ATOM	3554	NZ	LYS	242	-19,283	-24,903	14,108	1.00	0.00
ATOM	3555	H	LYS	242	-16,935	-29,363	19,330	1.00	0.00
ATOM	3556	HA	LYS	242	-16,437	-28,369	16,618	1.00	0.00
ATOM	3557	HB2	LYS	242	-18,274	-27,401	18,154	1.00	0.00
ATOM	3558	HB3	LYS	242	-16,952	-26,794	19,169	1.00	0.00
ATOM	3559	HG2	LYS	242	-17,579	-24,904	17,850	1.00	0.00
ATOM	3560	HG3	LYS	242	-16,125	-25,583	17,056	1.00	0.00
ATOM	3561	HD2	LYS	242	-17,903	-26,905	15,512	1.00	0.00
ATOM	3562	HD3	LYS	242	-19,145	-26,050	16,482	1.00	0.00
ATOM	3563	HE2	LYS	242	-18,392	-23,916	15,750	1.00	0.00
ATOM	3564	HE3	LYS	242	-17,237	-24,667	14,613	1.00	0.00
ATOM	3565	HZ1	LYS	242	-19,318	-24,195	13,390	1.00	0.00
ATOM	3566	HZ2	LYS	242	-20,165	-25,128	14,545	1.00	0.00
ATOM	3567	HZ3	LYS	242	-19,139	-25,781	13,631	1.00	0.00
ATOM	3568	N	LYS	243	-14,163	-27,972	19,030	1.00	0.00

ATOM	3569	CA	LYS	243	-12,774	-27,661	19,184	1.00	0.00
ATOM	3570	C	LYS	243	-11,773	-28,462	18,336	1.00	0.00
ATOM	3571	O	LYS	243	-10,723	-27,960	17,873	1.00	0.00
ATOM	3572	CB	LYS	243	-12,372	-27,887	20,646	1.00	0.00
ATOM	3573	CG	LYS	243	-13,039	-26,956	21,662	1.00	0.00
ATOM	3574	CD	LYS	243	-12,423	-26,809	23,076	1.00	0.00
ATOM	3575	CE	LYS	243	-13,133	-25,742	23,967	1.00	0.00
ATOM	3576	NZ	LYS	243	-12,365	-25,471	25,246	1.00	0.00
ATOM	3577	H	LYS	243	-14,676	-28,368	19,805	1.00	0.00
ATOM	3578	HA	LYS	243	-12,652	-26,588	19,037	1.00	0.00
ATOM	3579	HB2	LYS	243	-12,590	-28,895	20,997	1.00	0.00
ATOM	3580	HB3	LYS	243	-11,310	-27,658	20,745	1.00	0.00
ATOM	3581	HG2	LYS	243	-12,956	-25,948	21,257	1.00	0.00
ATOM	3582	HG3	LYS	243	-14,095	-27,230	21,656	1.00	0.00
ATOM	3583	HD2	LYS	243	-12,421	-27,773	23,585	1.00	0.00
ATOM	3584	HD3	LYS	243	-11,411	-26,431	22,936	1.00	0.00
ATOM	3585	HE2	LYS	243	-13,299	-24,793	23,458	1.00	0.00
ATOM	3586	HE3	LYS	243	-14,116	-26,134	24,226	1.00	0.00
ATOM	3587	HZ1	LYS	243	-12,050	-26,205	25,864	1.00	0.00
ATOM	3588	HZ2	LYS	243	-12,951	-24,855	25,790	1.00	0.00
ATOM	3589	HZ3	LYS	243	-11,462	-25,053	25,076	1.00	0.00
ATOM	3590	N	ILE	244	-12,049	-29,732	18,094	1.00	0.00
ATOM	3591	CA	ILE	244	-11,144	-30,595	17,345	1.00	0.00
ATOM	3592	C	ILE	244	-11,285	-30,312	15,833	1.00	0.00
ATOM	3593	O	ILE	244	-10,232	-30,201	15,182	1.00	0.00
ATOM	3594	CB	ILE	244	-11,464	-32,050	17,665	1.00	0.00
ATOM	3595	CG1	ILE	244	-12,941	-32,481	17,522	1.00	0.00
ATOM	3596	CG2	ILE	244	-10,941	-32,283	19,132	1.00	0.00
ATOM	3597	CD1	ILE	244	-13,134	-33,086	16,111	1.00	0.00
ATOM	3598	H	ILE	244	-12,807	-30,135	18,624	1.00	0.00
ATOM	3599	HA	ILE	244	-10,077	-30,559	17,566	1.00	0.00
ATOM	3600	HB	ILE	244	-10,850	-32,644	16,987	1.00	0.00
ATOM	3601	HG12	ILE	244	-13,250	-33,183	18,296	1.00	0.00
ATOM	3602	HG13	ILE	244	-13,496	-31,543	17,537	1.00	0.00
ATOM	3603	HG21	ILE	244	-11,152	-33,342	19,278	1.00	0.00
ATOM	3604	HG22	ILE	244	-11,411	-31,636	19,873	1.00	0.00
ATOM	3605	HG23	ILE	244	-9,859	-32,146	19,135	1.00	0.00
ATOM	3606	HD11	ILE	244	-12,491	-32,627	15,361	1.00	0.00
ATOM	3607	HD12	ILE	244	-14,133	-32,777	15,802	1.00	0.00
ATOM	3608	HD13	ILE	244	-13,023	-34,169	16,060	1.00	0.00
ATOM	3609	N	PHE	245	-12,448	-29,943	15,354	1.00	0.00
ATOM	3610	CA	PHE	245	-12,711	-29,558	13,961	1.00	0.00
ATOM	3611	C	PHE	245	-12,095	-28,192	13,721	1.00	0.00



ATOM	3612	O	PHE	245	-11,337	-28,037	12,696	1.00	0.00
ATOM	3613	CB	PHE	245	-14,219	-29,602	13,742	1.00	0.00
ATOM	3614	CG	PHE	245	-14,796	-29,435	12,301	1.00	0.00
ATOM	3615	CD1	PHE	245	-13,941	-29,495	11,192	1.00	0.00
ATOM	3616	CD2	PHE	245	-16,185	-29,480	12,118	1.00	0.00
ATOM	3617	CE1	PHE	245	-14,502	-29,388	9,887	1.00	0.00
ATOM	3618	CE2	PHE	245	-16,809	-29,270	10,833	1.00	0.00
ATOM	3619	CZ	PHE	245	-15,873	-29,296	9,737	1.00	0.00
ATOM	3620	H	PHE	245	-13,283	-29,916	15,921	1.00	0.00
ATOM	3621	HA	PHE	245	-12,246	-30,307	13,320	1.00	0.00
ATOM	3622	HB2	PHE	245	-14,637	-30,546	14,091	1.00	0.00
ATOM	3623	HB3	PHE	245	-14,660	-28,871	14,421	1.00	0.00
ATOM	3624	HD1	PHE	245	-12,866	-29,567	11,258	1.00	0.00
ATOM	3625	HD2	PHE	245	-16,867	-29,466	12,957	1.00	0.00
ATOM	3626	HE1	PHE	245	-13,839	-29,333	9,036	1.00	0.00
ATOM	3627	HE2	PHE	245	-17,868	-29,347	10,639	1.00	0.00
ATOM	3628	HZ	PHE	245	-16,239	-29,147	8,733	1.00	0.00
ATOM	3629	N	LYS	246	-12,341	-27,084	14,504	1.00	0.00
ATOM	3630	CA	LYS	246	-11,856	-25,734	14,255	1.00	0.00
ATOM	3631	C	LYS	246	-10,373	-25,535	14,582	1.00	0.00
ATOM	3632	O	LYS	246	-9,674	-24,823	13,886	1.00	0.00
ATOM	3633	CB	LYS	246	-12,743	-24,807	15,101	1.00	0.00
ATOM	3634	CG	LYS	246	-14,228	-24,807	14,743	1.00	0.00
ATOM	3635	CD	LYS	246	-14,419	-24,310	13,309	1.00	0.00
ATOM	3636	CE	LYS	246	-13,844	-22,970	12,971	1.00	0.00
ATOM	3637	NZ	LYS	246	-14,309	-21,897	13,895	1.00	0.00
ATOM	3638	H	LYS	246	-12,966	-27,229	15,284	1.00	0.00
ATOM	3639	HA	LYS	246	-11,930	-25,626	13,173	1.00	0.00
ATOM	3640	HB2	LYS	246	-12,677	-25,086	16,152	1.00	0.00
ATOM	3641	HB3	LYS	246	-12,436	-23,763	15,038	1.00	0.00
ATOM	3642	HG2	LYS	246	-14,573	-25,840	14,786	1.00	0.00
ATOM	3643	HG3	LYS	246	-14,690	-24,129	15,460	1.00	0.00
ATOM	3644	HD2	LYS	246	-14,006	-25,091	12,670	1.00	0.00
ATOM	3645	HD3	LYS	246	-15,508	-24,321	13,306	1.00	0.00
ATOM	3646	HE2	LYS	246	-12,759	-22,963	13,071	1.00	0.00
ATOM	3647	HE3	LYS	246	-14,143	-22,719	11,954	1.00	0.00
ATOM	3648	HZ1	LYS	246	-14,069	-22,137	14,846	1.00	0.00
ATOM	3649	HZ2	LYS	246	-15,305	-21,755	13,800	1.00	0.00
ATOM	3650	HZ3	LYS	246	-13,903	-20,992	13,705	1.00	0.00
ATOM	3651	N	ALA	247	-9,843	-26,241	15,624	1.00	0.00
ATOM	3652	CA	ALA	247	-8,509	-26,022	16,195	1.00	0.00
ATOM	3653	C	ALA	247	-8,098	-24,563	16,447	1.00	0.00
ATOM	3654	O	ALA	247	-6,926	-24,086	16,323	1.00	0.00

ATOM	3655	CB	ALA	247	-7,451	-26,821	15,309	1.00	0.00
ATOM	3656	H	ALA	247	-10,474	-26,837	16,140	1.00	0.00
ATOM	3657	HA	ALA	247	-8,445	-26,468	17,188	1.00	0.00
ATOM	3658	HB1	ALA	247	-6,484	-26,699	15,799	1.00	0.00
ATOM	3659	HB2	ALA	247	-7,558	-26,430	14,297	1.00	0.00
ATOM	3660	HB3	ALA	247	-7,848	-27,836	15,286	1.00	0.00
ATOM	3661	N	GLU	248	-9,030	-23,719	16,975	1.00	0.00
ATOM	3662	CA	GLU	248	-8,831	-22,314	17,388	1.00	0.00
ATOM	3663	C	GLU	248	-7,923	-21,999	18,556	1.00	0.00
ATOM	3664	O	GLU	248	-8,139	-20,991	19,290	1.00	0.00
ATOM	3665	CB	GLU	248	-10,228	-21,723	17,554	1.00	0.00
ATOM	3666	CG	GLU	248	-10,851	-21,424	16,149	1.00	0.00
ATOM	3667	CD	GLU	248	-12,284	-20,851	16,436	1.00	0.00
ATOM	3668	OE1	GLU	248	-13,307	-21,482	16,306	1.00	0.00
ATOM	3669	OE2	GLU	248	-12,327	-19,677	16,941	1.00	0.00
ATOM	3670	H	GLU	248	-9,875	-24,179	17,283	1.00	0.00
ATOM	3671	HA	GLU	248	-8,318	-21,662	16,681	1.00	0.00
ATOM	3672	HB2	GLU	248	-10,817	-22,343	18,228	1.00	0.00
ATOM	3673	HB3	GLU	248	-10,182	-20,710	17,954	1.00	0.00
ATOM	3674	HG2	GLU	248	-10,294	-20,653	15,615	1.00	0.00
ATOM	3675	HG3	GLU	248	-10,998	-22,349	15,592	1.00	0.00
ATOM	3676	N	PHE	249	-6,908	-22,898	18,868	1.00	0.00
ATOM	3677	CA	PHE	249	-5,931	-22,680	19,930	1.00	0.00
ATOM	3678	C	PHE	249	-4,736	-21,819	19,550	1.00	0.00
ATOM	3679	O	PHE	249	-4,151	-22,008	18,474	1.00	0.00
ATOM	3680	CB	PHE	249	-5,526	-24,049	20,532	1.00	0.00
ATOM	3681	CG	PHE	249	-4,742	-25,069	19,702	1.00	0.00
ATOM	3682	CD1	PHE	249	-5,437	-26,078	18,988	1.00	0.00
ATOM	3683	CD2	PHE	249	-3,298	-25,088	19,652	1.00	0.00
ATOM	3684	CE1	PHE	249	-4,622	-26,995	18,209	1.00	0.00
ATOM	3685	CE2	PHE	249	-2,587	-25,909	18,758	1.00	0.00
ATOM	3686	CZ	PHE	249	-3,289	-26,852	18,030	1.00	0.00
ATOM	3687	H	PHE	249	-6,690	-23,586	18,161	1.00	0.00
ATOM	3688	HA	PHE	249	-6,350	-22,089	20,743	1.00	0.00
ATOM	3689	HB2	PHE	249	-4,957	-23,939	21,454	1.00	0.00
ATOM	3690	HB3	PHE	249	-6,390	-24,586	20,924	1.00	0.00
ATOM	3691	HD1	PHE	249	-6,513	-26,169	19,000	1.00	0.00
ATOM	3692	HD2	PHE	249	-2,745	-24,341	20,202	1.00	0.00
ATOM	3693	HE1	PHE	249	-5,170	-27,795	17,732	1.00	0.00
ATOM	3694	HE2	PHE	249	-1,518	-25,839	18,630	1.00	0.00
ATOM	3695	HZ	PHE	249	-2,797	-27,527	17,345	1.00	0.00
ATOM	3696	N	THR	250	-4,244	-20,934	20,478	1.00	0.00
ATOM	3697	CA	THR	250	-2,859	-20,415	20,406	1.00	0.00

ATOM	3698	C	THR	250	-1,864	-21,370	21,049	1.00	0.00
ATOM	3699	O	THR	250	-2,248	-22,320	21,745	1.00	0.00
ATOM	3700	CB	THR	250	-2,660	-18,986	20,782	1.00	0.00
ATOM	3701	CG2	THR	250	-3,427	-18,090	19,752	1.00	0.00
ATOM	3702	OG1	THR	250	-3,230	-18,742	22,085	1.00	0.00
ATOM	3703	H	THR	250	-4,648	-20,929	21,403	1.00	0.00
ATOM	3704	HA	THR	250	-2,618	-20,499	19,347	1.00	0.00
ATOM	3705	HB	THR	250	-1,575	-18,880	20,792	1.00	0.00
ATOM	3706	HG1	THR	250	-2,952	-19,423	22,702	1.00	0.00
ATOM	3707	HG21	THR	250	-4,458	-17,977	20,084	1.00	0.00
ATOM	3708	HG22	THR	250	-3,271	-18,450	18,734	1.00	0.00
ATOM	3709	HG23	THR	250	-2,908	-17,131	19,743	1.00	0.00
ATOM	3710	N	CYS	251	-0.617	-21,304	20,643	1.00	0.00
ATOM	3711	CA	CYS	251	0.448	-22,177	21,165	1.00	0.00
ATOM	3712	C	CYS	251	0.993	-21,617	22,473	1.00	0.00
ATOM	3713	O	CYS	251	1,000	-20,389	22,698	1.00	0.00
ATOM	3714	CB	CYS	251	1,558	-22,329	20,071	1.00	0.00
ATOM	3715	SG	CYS	251	0.929	-23,419	18,726	1.00	0.00
ATOM	3716	H	CYS	251	-0.390	-20,522	20,045	1.00	0.00
ATOM	3717	HA	CYS	251	0.030	-23,169	21,342	1.00	0.00
ATOM	3718	HB2	CYS	251	1,926	-21,362	19,728	1.00	0.00
ATOM	3719	HB3	CYS	251	2,439	-22,828	20,476	1.00	0.00
ATOM	3720	HG	CYS	251	-0.263	-22,912	18,396	1.00	0.00
ATOM	3721	N	PRO	252	1,557	-22,454	23,364	1.00	0.00
ATOM	3722	CA	PRO	252	1,974	-21,896	24,664	1.00	0.00
ATOM	3723	C	PRO	252	3,241	-20,902	24,485	1.00	0.00
ATOM	3724	O	PRO	252	4,095	-21,212	23,693	1.00	0.00
ATOM	3725	CB	PRO	252	2,441	-23,154	25,487	1.00	0.00
ATOM	3726	CG	PRO	252	1,450	-24,198	24,969	1.00	0.00
ATOM	3727	CD	PRO	252	1,386	-23,867	23,462	1.00	0.00
ATOM	3728	HA	PRO	252	1,124	-21,457	25,188	1.00	0.00
ATOM	3729	HB2	PRO	252	3,435	-23,456	25,155	1.00	0.00
ATOM	3730	HB3	PRO	252	2,378	-23,044	26,569	1.00	0.00
ATOM	3731	HG2	PRO	252	1,873	-25,192	25,109	1.00	0.00
ATOM	3732	HG3	PRO	252	0.439	-24,008	25,330	1.00	0.00
ATOM	3733	HD2	PRO	252	2,241	-24,249	22,905	1.00	0.00
ATOM	3734	HD3	PRO	252	0.425	-24,176	23,051	1.00	0.00
ATOM	3735	N	PRO	253	3,271	-19,788	25,214	1.00	0.00
ATOM	3736	CA	PRO	253	4,262	-18,752	24,929	1.00	0.00
ATOM	3737	C	PRO	253	5,716	-19,245	24,975	1.00	0.00
ATOM	3738	O	PRO	253	6,423	-19,080	23,986	1.00	0.00
ATOM	3739	CB	PRO	253	3,969	-17,668	26,002	1.00	0.00
ATOM	3740	CG	PRO	253	2,458	-17,800	26,362	1.00	0.00

ATOM	3741	CD	PRO	253	2,302	-19,297	26,163	1.00	0.00
ATOM	3742	HA	PRO	253	4,104	-18,396	23,911	1.00	0.00
ATOM	3743	HB2	PRO	253	4,495	-17,893	26,929	1.00	0.00
ATOM	3744	HB3	PRO	253	4,307	-16,684	25,676	1.00	0.00
ATOM	3745	HG2	PRO	253	2,191	-17,584	27,396	1.00	0.00
ATOM	3746	HG3	PRO	253	1,908	-17,173	25,660	1.00	0.00
ATOM	3747	HD2	PRO	253	2,192	-19,910	27,057	1.00	0.00
ATOM	3748	HD3	PRO	253	1,326	-19,270	25,678	1.00	0.00
ATOM	3749	N	TRP	254	6,028	-20,014	26,010	1.00	0.00
ATOM	3750	CA	TRP	254	7,331	-20,690	26,322	1.00	0.00
ATOM	3751	C	TRP	254	7,712	-21,899	25,438	1.00	0.00
ATOM	3752	O	TRP	254	8,629	-22,636	25,762	1.00	0.00
ATOM	3753	CB	TRP	254	7,192	-21,133	27,777	1.00	0.00
ATOM	3754	CG	TRP	254	6,056	-22,037	28,108	1.00	0.00
ATOM	3755	CD1	TRP	254	5,849	-23,332	27,741	1.00	0.00
ATOM	3756	CD2	TRP	254	4,918	-21,694	28,905	1.00	0.00
ATOM	3757	CE2	TRP	254	3,993	-22,771	28,940	1.00	0.00
ATOM	3758	CE3	TRP	254	4,617	-20,512	29,538	1.00	0.00
ATOM	3759	NE1	TRP	254	4,678	-23,821	28,318	1.00	0.00
ATOM	3760	CZ2	TRP	254	2,823	-22,692	29,737	1.00	0.00
ATOM	3761	CZ3	TRP	254	3,404	-20,385	30,172	1.00	0.00
ATOM	3762	CH2	TRP	254	2,504	-21,463	30,343	1.00	0.00
ATOM	3763	H	TRP	254	5,283	-20,067	26,689	1.00	0.00
ATOM	3764	HA	TRP	254	8,103	-19,936	26,172	1.00	0.00
ATOM	3765	HB2	TRP	254	8,084	-21,688	28,069	1.00	0.00
ATOM	3766	HB3	TRP	254	7,240	-20,211	28,356	1.00	0.00
ATOM	3767	HD1	TRP	254	6,564	-23,926	27,189	1.00	0.00
ATOM	3768	HE1	TRP	254	4,345	-24,774	28,308	1.00	0.00
ATOM	3769	HE3	TRP	254	5,224	-19,619	29,513	1.00	0.00
ATOM	3770	HZ2	TRP	254	2,091	-23,480	29,819	1.00	0.00
ATOM	3771	HZ3	TRP	254	3,082	-19,409	30,502	1.00	0.00
ATOM	3772	HH2	TRP	254	1,557	-21,352	30,850	1.00	0.00
ATOM	3773	N	PHE	255	6,989	-22,258	24,346	1.00	0.00
ATOM	3774	CA	PHE	255	7,269	-23,444	23,557	1.00	0.00
ATOM	3775	C	PHE	255	8,386	-23,210	22,503	1.00	0.00
ATOM	3776	O	PHE	255	8,296	-23,674	21,371	1.00	0.00
ATOM	3777	CB	PHE	255	5,940	-23,824	22,811	1.00	0.00
ATOM	3778	CG	PHE	255	5,657	-25,350	22,588	1.00	0.00
ATOM	3779	CD1	PHE	255	4,682	-25,890	23,426	1.00	0.00
ATOM	3780	CD2	PHE	255	6,130	-25,991	21,494	1.00	0.00
ATOM	3781	CE1	PHE	255	4,315	-27,255	23,144	1.00	0.00
ATOM	3782	CE2	PHE	255	5,775	-27,300	21,213	1.00	0.00
ATOM	3783	CZ	PHE	255	4,929	-27,950	22,069	1.00	0.00

ATOM	3784	H	PHE	255	6,347	-21,589	23,946	1.00	0.00
ATOM	3785	HA	PHE	255	7,563	-24,304	24,159	1.00	0.00
ATOM	3786	HB2	PHE	255	5,077	-23,400	23,325	1.00	0.00
ATOM	3787	HB3	PHE	255	5,970	-23,325	21,841	1.00	0.00
ATOM	3788	HD1	PHE	255	4,322	-25,370	24,302	1.00	0.00
ATOM	3789	HD2	PHE	255	6,849	-25,477	20,873	1.00	0.00
ATOM	3790	HE1	PHE	255	3,588	-27,779	23,747	1.00	0.00
ATOM	3791	HE2	PHE	255	6,233	-27,860	20,411	1.00	0.00
ATOM	3792	HZ	PHE	255	4,680	-28,996	21,962	1.00	0.00
ATOM	3793	N	SER	256	9,581	-22,619	22,836	1.00	0.00
ATOM	3794	CA	SER	256	10,728	-22,430	21,845	1.00	0.00
ATOM	3795	C	SER	256	10,297	-21,730	20,608	1.00	0.00
ATOM	3796	O	SER	256	9,409	-20,859	20,707	1.00	0.00
ATOM	3797	CB	SER	256	11,496	-23,733	21,733	1.00	0.00
ATOM	3798	OG	SER	256	12,606	-23,624	20,847	1.00	0.00
ATOM	3799	H	SER	256	9,839	-22,340	23,771	1.00	0.00
ATOM	3800	HA	SER	256	11,331	-21,692	22,377	1.00	0.00
ATOM	3801	HB2	SER	256	11,870	-24,069	22,700	1.00	0.00
ATOM	3802	HB3	SER	256	10,811	-24,540	21,469	1.00	0.00
ATOM	3803	HG	SER	256	13,101	-24,418	21,061	1.00	0.00
ATOM	3804	N	ALA	257	10,841	-22,119	19,420	1.00	0.00
ATOM	3805	CA	ALA	257	10,438	-21,576	18,139	1.00	0.00
ATOM	3806	C	ALA	257	10,256	-22,629	16,979	1.00	0.00
ATOM	3807	O	ALA	257	9,182	-22,758	16,417	1.00	0.00
ATOM	3808	CB	ALA	257	11,372	-20,389	17,750	1.00	0.00
ATOM	3809	H	ALA	257	11,630	-22,749	19,427	1.00	0.00
ATOM	3810	HA	ALA	257	9,482	-21,092	18,339	1.00	0.00
ATOM	3811	HB1	ALA	257	11,035	-19,828	16,879	1.00	0.00
ATOM	3812	HB2	ALA	257	12,356	-20,789	17,501	1.00	0.00
ATOM	3813	HB3	ALA	257	11,470	-19,740	18,620	1.00	0.00
ATOM	3814	N	SER	258	11,240	-23,511	16,741	1.00	0.00
ATOM	3815	CA	SER	258	11,225	-24,539	15,623	1.00	0.00
ATOM	3816	C	SER	258	10,100	-25,511	15,842	1.00	0.00
ATOM	3817	O	SER	258	9,388	-25,893	14,894	1.00	0.00
ATOM	3818	CB	SER	258	12,516	-25,210	15,542	1.00	0.00
ATOM	3819	OG	SER	258	12,776	-25,973	14,336	1.00	0.00
ATOM	3820	H	SER	258	11,998	-23,347	17,388	1.00	0.00
ATOM	3821	HA	SER	258	11,121	-24,112	14,625	1.00	0.00
ATOM	3822	HB2	SER	258	13,334	-24,511	15,717	1.00	0.00
ATOM	3823	HB3	SER	258	12,505	-25,880	16,401	1.00	0.00
ATOM	3824	HG	SER	258	13,194	-25,418	13,674	1.00	0.00
ATOM	3825	N	ALA	259	9,934	-25,907	17,145	1.00	0.00
ATOM	3826	CA	ALA	259	8,958	-26,885	17,529	1.00	0.00

ATOM	3827	C	ALA	259	7,506	-26,494	17,373	1.00	0.00
ATOM	3828	O	ALA	259	6,687	-27,404	17,157	1.00	0.00
ATOM	3829	CB	ALA	259	9,131	-27,083	19,027	1.00	0.00
ATOM	3830	H	ALA	259	10,577	-25,622	17,870	1.00	0.00
ATOM	3831	HA	ALA	259	9,237	-27,849	17,103	1.00	0.00
ATOM	3832	HB1	ALA	259	8,854	-26,137	19,493	1.00	0.00
ATOM	3833	HB2	ALA	259	10,172	-27,259	19,297	1.00	0.00
ATOM	3834	HB3	ALA	259	8,523	-27,887	19,442	1.00	0.00
ATOM	3835	N	LYS	260	7,146	-25,194	17,472	1.00	0.00
ATOM	3836	CA	LYS	260	5,737	-24,777	17,274	1.00	0.00
ATOM	3837	C	LYS	260	5,251	-25,241	15,881	1.00	0.00
ATOM	3838	O	LYS	260	4,143	-25,740	15,677	1.00	0.00
ATOM	3839	CB	LYS	260	5,579	-23,214	17,410	1.00	0.00
ATOM	3840	CG	LYS	260	5,838	-22,766	18,865	1.00	0.00
ATOM	3841	CD	LYS	260	5,684	-21,228	19,044	1.00	0.00
ATOM	3842	CE	LYS	260	5,644	-20,930	20,522	1.00	0.00
ATOM	3843	NZ	LYS	260	5,625	-19,463	20,863	1.00	0.00
ATOM	3844	H	LYS	260	7,792	-24,508	17,834	1.00	0.00
ATOM	3845	HA	LYS	260	5,134	-25,303	18,014	1.00	0.00
ATOM	3846	HB2	LYS	260	6,312	-22,692	16,795	1.00	0.00
ATOM	3847	HB3	LYS	260	4,567	-22,936	17,115	1.00	0.00
ATOM	3848	HG2	LYS	260	5,094	-23,160	19,556	1.00	0.00
ATOM	3849	HG3	LYS	260	6,837	-22,978	19,245	1.00	0.00
ATOM	3850	HD2	LYS	260	6,572	-20,745	18,636	1.00	0.00
ATOM	3851	HD3	LYS	260	4,780	-20,855	18,562	1.00	0.00
ATOM	3852	HE2	LYS	260	4,729	-21,431	20,836	1.00	0.00
ATOM	3853	HE3	LYS	260	6,422	-21,387	21,133	1.00	0.00
ATOM	3854	HZ1	LYS	260	5,721	-19,218	21,838	1.00	0.00
ATOM	3855	HZ2	LYS	260	4,887	-19,014	20,339	1.00	0.00
ATOM	3856	HZ3	LYS	260	6,375	-18,988	20,382	1.00	0.00
ATOM	3857	N	LYS	261	6,139	-25,238	14,881	1.00	0.00
ATOM	3858	CA	LYS	261	5,762	-25,599	13,445	1.00	0.00
ATOM	3859	C	LYS	261	5,327	-27,055	13,226	1.00	0.00
ATOM	3860	O	LYS	261	4,398	-27,450	12,534	1.00	0.00
ATOM	3861	CB	LYS	261	6,965	-25,264	12,592	1.00	0.00
ATOM	3862	CG	LYS	261	7,130	-23,740	12,364	1.00	0.00
ATOM	3863	CD	LYS	261	8,418	-23,244	11,618	1.00	0.00
ATOM	3864	CE	LYS	261	9,714	-23,351	12,429	1.00	0.00
ATOM	3865	NZ	LYS	261	10,600	-22,166	12,169	1.00	0.00
ATOM	3866	H	LYS	261	7,000	-24,729	15,021	1.00	0.00
ATOM	3867	HA	LYS	261	4,906	-25,003	13,128	1.00	0.00
ATOM	3868	HB2	LYS	261	7,793	-25,636	13,195	1.00	0.00
ATOM	3869	HB3	LYS	261	6,994	-25,717	11,600	1.00	0.00

ATOM	3870	HG2	LYS	261	6,283	-23,354	11,796	1.00	0.00
ATOM	3871	HG3	LYS	261	7,108	-23,245	13,334	1.00	0.00
ATOM	3872	HD2	LYS	261	8,568	-23,762	10,672	1.00	0.00
ATOM	3873	HD3	LYS	261	8,205	-22,199	11,389	1.00	0.00
ATOM	3874	HE2	LYS	261	9,333	-23,293	13,449	1.00	0.00
ATOM	3875	HE3	LYS	261	10,153	-24,341	12,304	1.00	0.00
ATOM	3876	HZ1	LYS	261	10,860	-22,034	11,201	1.00	0.00
ATOM	3877	HZ2	LYS	261	11,423	-22,333	12,728	1.00	0.00
ATOM	3878	HZ3	LYS	261	10,140	-21,296	12,400	1.00	0.00
ATOM	3879	N	LEU	262	5,974	-27,899	14,113	1.00	0.00
ATOM	3880	CA	LEU	262	5,772	-29,311	14,284	1.00	0.00
ATOM	3881	C	LEU	262	4,459	-29,551	15,006	1.00	0.00
ATOM	3882	O	LEU	262	3,573	-30,161	14,455	1.00	0.00
ATOM	3883	CB	LEU	262	7,016	-29,952	14,928	1.00	0.00
ATOM	3884	CG	LEU	262	6,841	-31,407	15,283	1.00	0.00
ATOM	3885	CD1	LEU	262	6,442	-32,254	14,097	1.00	0.00
ATOM	3886	CD2	LEU	262	8,182	-31,908	15,729	1.00	0.00
ATOM	3887	H	LEU	262	6,724	-27,461	14,627	1.00	0.00
ATOM	3888	HA	LEU	262	5,699	-29,668	13,256	1.00	0.00
ATOM	3889	HB2	LEU	262	7,877	-29,788	14,279	1.00	0.00
ATOM	3890	HB3	LEU	262	7,131	-29,408	15,865	1.00	0.00
ATOM	3891	HG	LEU	262	6,069	-31,496	16,048	1.00	0.00
ATOM	3892	HD11	LEU	262	6,601	-33,289	14,399	1.00	0.00
ATOM	3893	HD12	LEU	262	7,008	-32,127	13,175	1.00	0.00
ATOM	3894	HD13	LEU	262	5,456	-31,979	13,723	1.00	0.00
ATOM	3895	HD21	LEU	262	8,963	-31,844	14,972	1.00	0.00
ATOM	3896	HD22	LEU	262	8,509	-31,295	16,568	1.00	0.00
ATOM	3897	HD23	LEU	262	8,105	-32,892	16,191	1.00	0.00
ATOM	3898	N	ILE	263	4,211	-28,956	16,162	1.00	0.00
ATOM	3899	CA	ILE	263	2,848	-29,140	16,854	1.00	0.00
ATOM	3900	C	ILE	263	1,727	-28,620	15,966	1.00	0.00
ATOM	3901	O	ILE	263	0.652	-29,253	15,971	1.00	0.00
ATOM	3902	CB	ILE	263	2,777	-28,728	18,321	1.00	0.00
ATOM	3903	CG1	ILE	263	3,268	-27,296	18,602	1.00	0.00
ATOM	3904	CG2	ILE	263	3,599	-29,701	19,222	1.00	0.00
ATOM	3905	CD1	ILE	263	2,724	-26,509	19,827	1.00	0.00
ATOM	3906	H	ILE	263	4,981	-28,412	16,522	1.00	0.00
ATOM	3907	HA	ILE	263	2,628	-30,204	16,769	1.00	0.00
ATOM	3908	HB	ILE	263	1,712	-28,696	18,548	1.00	0.00
ATOM	3909	HG12	ILE	263	4,349	-27,306	18,741	1.00	0.00
ATOM	3910	HG13	ILE	263	2,910	-26,659	17,793	1.00	0.00
ATOM	3911	HG21	ILE	263	4,663	-29,467	19,220	1.00	0.00
ATOM	3912	HG22	ILE	263	3,426	-30,731	18,912	1.00	0.00

ATOM	3913	HG23	ILE	263	3,251	-29,658	20,255	1.00	0.00
ATOM	3914	HD11	ILE	263	1,791	-26,020	19,549	1.00	0.00
ATOM	3915	HD12	ILE	263	3,462	-25,733	20,035	1.00	0.00
ATOM	3916	HD13	ILE	263	2,507	-27,126	20,699	1.00	0.00
ATOM	3917	N	LYS	264	2,061	-27,552	15,209	1.00	0.00
ATOM	3918	CA	LYS	264	1,023	-27,023	14,305	1.00	0.00
ATOM	3919	C	LYS	264	0.752	-27,944	13,112	1.00	0.00
ATOM	3920	O	LYS	264	-0.363	-28,236	12,810	1.00	0.00
ATOM	3921	CB	LYS	264	1,372	-25,616	13,743	1.00	0.00
ATOM	3922	CG	LYS	264	0.978	-24,629	14,797	1.00	0.00
ATOM	3923	CD	LYS	264	1,424	-23,143	14,509	1.00	0.00
ATOM	3924	CE	LYS	264	0.351	-22,157	14,896	1.00	0.00
ATOM	3925	NZ	LYS	264	0.871	-20,769	14,683	1.00	0.00
ATOM	3926	H	LYS	264	3,008	-27,203	15,194	1.00	0.00
ATOM	3927	HA	LYS	264	0.119	-26,930	14,906	1.00	0.00
ATOM	3928	HB2	LYS	264	2,454	-25,507	13,671	1.00	0.00
ATOM	3929	HB3	LYS	264	0.864	-25,401	12,803	1.00	0.00
ATOM	3930	HG2	LYS	264	-0.093	-24,762	14,951	1.00	0.00
ATOM	3931	HG3	LYS	264	1,382	-24,796	15,794	1.00	0.00
ATOM	3932	HD2	LYS	264	2,383	-22,900	14,966	1.00	0.00
ATOM	3933	HD3	LYS	264	1,585	-23,113	13,431	1.00	0.00
ATOM	3934	HE2	LYS	264	-0.559	-22,267	14,305	1.00	0.00
ATOM	3935	HE3	LYS	264	0.029	-22,160	15,937	1.00	0.00
ATOM	3936	HZ1	LYS	264	0.141	-20,089	14,845	1.00	0.00
ATOM	3937	HZ2	LYS	264	1,189	-20,651	13,732	1.00	0.00
ATOM	3938	HZ3	LYS	264	1,658	-20,619	15,298	1.00	0.00
ATOM	3939	N	ARG	265	1,788	-28,556	12,476	1.00	0.00
ATOM	3940	CA	ARG	265	1,616	-29,627	11,397	1.00	0.00
ATOM	3941	C	ARG	265	0.996	-30,912	11,901	1.00	0.00
ATOM	3942	O	ARG	265	0.395	-31,638	11,139	1.00	0.00
ATOM	3943	CB	ARG	265	2,938	-29,948	10,701	1.00	0.00
ATOM	3944	CG	ARG	265	2,716	-30,174	9,242	1.00	0.00
ATOM	3945	CD	ARG	265	4,019	-30,097	8,446	1.00	0.00
ATOM	3946	NE	ARG	265	3,791	-29,700	7,033	1.00	0.00
ATOM	3947	CZ	ARG	265	3,270	-30,476	6,042	1.00	0.00
ATOM	3948	NH1	ARG	265	3,099	-31,698	6,274	1.00	0.00
ATOM	3949	NH2	ARG	265	2,756	-29,939	4,999	1.00	0.00
ATOM	3950	H	ARG	265	2,740	-28,373	12,760	1.00	0.00
ATOM	3951	HA	ARG	265	0.931	-29,224	10,651	1.00	0.00
ATOM	3952	HB2	ARG	265	3,472	-28,998	10,701	1.00	0.00
ATOM	3953	HB3	ARG	265	3,569	-30,677	11,209	1.00	0.00
ATOM	3954	HG2	ARG	265	2,122	-31,063	9,026	1.00	0.00
ATOM	3955	HG3	ARG	265	2,113	-29,392	8,781	1.00	0.00



ATOM	3956	HD2	ARG	265	4,549	-29,306	8,977	1.00	0.00
ATOM	3957	HD3	ARG	265	4,578	-31,034	8,455	1.00	0.00
ATOM	3958	HE	ARG	265	3,991	-28,725	6,861	1.00	0.00
ATOM	3959	HH11	ARG	265	3,898	-32,199	6,636	1.00	0.00
ATOM	3960	HH12	ARG	265	2,460	-32,249	5,719	1.00	0.00
ATOM	3961	HH21	ARG	265	2,932	-28,958	4,833	1.00	0.00
ATOM	3962	HH22	ARG	265	2,199	-30,542	4,411	1.00	0.00
ATOM	3963	N	ILE	266	1,207	-31,324	13,142	1.00	0.00
ATOM	3964	CA	ILE	266	0.610	-32,534	13,651	1.00	0.00
ATOM	3965	C	ILE	266	-0.856	-32,255	13,984	1.00	0.00
ATOM	3966	O	ILE	266	-1,676	-33,001	13,565	1.00	0.00
ATOM	3967	CB	ILE	266	1,440	-33,133	14,858	1.00	0.00
ATOM	3968	CG1	ILE	266	2,943	-33,422	14,658	1.00	0.00
ATOM	3969	CG2	ILE	266	0.785	-34,519	15,188	1.00	0.00
ATOM	3970	CD1	ILE	266	3,793	-33,498	15,968	1.00	0.00
ATOM	3971	H	ILE	266	1,791	-30,788	13,768	1.00	0.00
ATOM	3972	HA	ILE	266	0.694	-33,266	12,848	1.00	0.00
ATOM	3973	HB	ILE	266	1,368	-32,438	15,695	1.00	0.00
ATOM	3974	HG12	ILE	266	3,052	-34,447	14,304	1.00	0.00
ATOM	3975	HG13	ILE	266	3,462	-32,745	13,979	1.00	0.00
ATOM	3976	HG21	ILE	266	-0.217	-34,329	15,572	1.00	0.00
ATOM	3977	HG22	ILE	266	1,369	-35,124	15,880	1.00	0.00
ATOM	3978	HG23	ILE	266	0.581	-35,039	14,253	1.00	0.00
ATOM	3979	HD11	ILE	266	3,112	-33,908	16,713	1.00	0.00
ATOM	3980	HD12	ILE	266	4,033	-32,526	16,400	1.00	0.00
ATOM	3981	HD13	ILE	266	4,681	-34,113	15,827	1.00	0.00
ATOM	3982	N	LEU	267	-1,160	-31,109	14,621	1.00	0.00
ATOM	3983	CA	LEU	267	-2,494	-30,734	15,064	1.00	0.00
ATOM	3984	C	LEU	267	-3,279	-29,883	14,057	1.00	0.00
ATOM	3985	O	LEU	267	-3,966	-29,001	14,441	1.00	0.00
ATOM	3986	CB	LEU	267	-2,439	-30,151	16,515	1.00	0.00
ATOM	3987	CG	LEU	267	-1,898	-31,049	17,692	1.00	0.00
ATOM	3988	CD1	LEU	267	-1,676	-30,140	18,868	1.00	0.00
ATOM	3989	CD2	LEU	267	-2,861	-32,170	18,008	1.00	0.00
ATOM	3990	H	LEU	267	-0.424	-30,501	14,952	1.00	0.00
ATOM	3991	HA	LEU	267	-3,083	-31,649	15,126	1.00	0.00
ATOM	3992	HB2	LEU	267	-1,863	-29,249	16,312	1.00	0.00
ATOM	3993	HB3	LEU	267	-3,460	-29,889	16,792	1.00	0.00
ATOM	3994	HG	LEU	267	-0.950	-31,518	17,429	1.00	0.00
ATOM	3995	HD11	LEU	267	-2,575	-29,578	19,127	1.00	0.00
ATOM	3996	HD12	LEU	267	-0.903	-29,415	18,613	1.00	0.00
ATOM	3997	HD13	LEU	267	-1,337	-30,754	19,702	1.00	0.00
ATOM	3998	HD21	LEU	267	-2,476	-32,925	18,694	1.00	0.00

ATOM	3999	HD22	LEU	267	-3,825	-31,819	18,376	1.00	0.00
ATOM	4000	HD23	LEU	267	-2,977	-32,712	17,069	1.00	0.00
ATOM	4001	N	ASP	268	-3,171	-30,229	12,753	1.00	0.00
ATOM	4002	CA	ASP	268	-3,838	-29,564	11,635	1.00	0.00
ATOM	4003	C	ASP	268	-5,050	-30,457	11,257	1.00	0.00
ATOM	4004	O	ASP	268	-4,867	-31,649	10,960	1.00	0.00
ATOM	4005	CB	ASP	268	-2,875	-29,419	10,462	1.00	0.00
ATOM	4006	CG	ASP	268	-3,359	-28,394	9,382	1.00	0.00
ATOM	4007	OD1	ASP	268	-2,502	-27,858	8,673	1.00	0.00
ATOM	4008	OD2	ASP	268	-4,598	-28,099	9,357	1.00	0.00
ATOM	4009	H	ASP	268	-2,575	-31,014	12,536	1.00	0.00
ATOM	4010	HA	ASP	268	-4,256	-28,606	11,942	1.00	0.00
ATOM	4011	HB2	ASP	268	-1,855	-29,135	10,718	1.00	0.00
ATOM	4012	HB3	ASP	268	-2,819	-30,406	10,004	1.00	0.00
ATOM	4013	N	PRO	269	-6,265	-29,922	11,207	1.00	0.00
ATOM	4014	CA	PRO	269	-7,374	-30,636	10,718	1.00	0.00
ATOM	4015	C	PRO	269	-7,407	-30,965	9,251	1.00	0.00
ATOM	4016	O	PRO	269	-7,884	-32,041	8,898	1.00	0.00
ATOM	4017	CB	PRO	269	-8,643	-29,820	11,142	1.00	0.00
ATOM	4018	CG	PRO	269	-8,171	-29,094	12,355	1.00	0.00
ATOM	4019	CD	PRO	269	-6,721	-28,824	12,047	1.00	0.00
ATOM	4020	HA	PRO	269	-7,350	-31,557	11,301	1.00	0.00
ATOM	4021	HB2	PRO	269	-8,951	-29,061	10,423	1.00	0.00
ATOM	4022	HB3	PRO	269	-9,388	-30,543	11,475	1.00	0.00
ATOM	4023	HG2	PRO	269	-8,828	-28,262	12,608	1.00	0.00
ATOM	4024	HG3	PRO	269	-8,117	-29,739	13,233	1.00	0.00
ATOM	4025	HD2	PRO	269	-6,669	-27,862	11,536	1.00	0.00
ATOM	4026	HD3	PRO	269	-6,239	-28,831	13,024	1.00	0.00
ATOM	4027	N	ASN	270	-6,759	-30,145	8,443	1.00	0.00
ATOM	4028	CA	ASN	270	-6,645	-30,368	6,998	1.00	0.00
ATOM	4029	C	ASN	270	-5,754	-31,611	6,620	1.00	0.00
ATOM	4030	O	ASN	270	-4,535	-31,564	6,853	1.00	0.00
ATOM	4031	CB	ASN	270	-6,225	-29,058	6,316	1.00	0.00
ATOM	4032	CG	ASN	270	-6,356	-29,055	4,800	1.00	0.00
ATOM	4033	ND2	ASN	270	-5,600	-28,322	4,020	1.00	0.00
ATOM	4034	OD1	ASN	270	-7,227	-29,740	4,285	1.00	0.00
ATOM	4035	H	ASN	270	-6,296	-29,310	8,775	1.00	0.00
ATOM	4036	HA	ASN	270	-7,673	-30,625	6,742	1.00	0.00
ATOM	4037	HB2	ASN	270	-6,805	-28,254	6,771	1.00	0.00
ATOM	4038	HB3	ASN	270	-5,177	-28,934	6,589	1.00	0.00
ATOM	4039	HD21	ASN	270	-4,870	-27,760	4,432	1.00	0.00
ATOM	4040	HD22	ASN	270	-5,773	-28,318	3,025	1.00	0.00
ATOM	4041	N	PRO	271	-6,301	-32,744	6,037	1.00	0.00

ATOM	4042	CA	PRO	271	-5,556	-34,067	5,895	1.00	0.00
ATOM	4043	C	PRO	271	-4,496	-33,913	4,771	1.00	0.00
ATOM	4044	O	PRO	271	-3,420	-34,447	4,852	1.00	0.00
ATOM	4045	CB	PRO	271	-6,606	-35,105	5,533	1.00	0.00
ATOM	4046	CG	PRO	271	-7,937	-34,491	6,037	1.00	0.00
ATOM	4047	CD	PRO	271	-7,725	-33,001	5,964	1.00	0.00
ATOM	4048	HA	PRO	271	-4,988	-34,286	6,798	1.00	0.00
ATOM	4049	HB2	PRO	271	-6,790	-35,327	4,482	1.00	0.00
ATOM	4050	HB3	PRO	271	-6,505	-35,946	6,219	1.00	0.00
ATOM	4051	HG2	PRO	271	-8,857	-34,772	5,524	1.00	0.00
ATOM	4052	HG3	PRO	271	-8,065	-34,754	7,087	1.00	0.00
ATOM	4053	HD2	PRO	271	-7,978	-32,680	4,953	1.00	0.00
ATOM	4054	HD3	PRO	271	-8,396	-32,606	6,727	1.00	0.00
ATOM	4055	N	ALA	272	-4,769	-33,133	3,727	1.00	0.00
ATOM	4056	CA	ALA	272	-3,844	-32,719	2,640	1.00	0.00
ATOM	4057	C	ALA	272	-2,586	-31,900	3,217	1.00	0.00
ATOM	4058	O	ALA	272	-1,499	-32,023	2,682	1.00	0.00
ATOM	4059	CB	ALA	272	-4,625	-31,839	1,645	1.00	0.00
ATOM	4060	H	ALA	272	-5,705	-32,756	3,777	1.00	0.00
ATOM	4061	HA	ALA	272	-3,511	-33,605	2,100	1.00	0.00
ATOM	4062	HB1	ALA	272	-4,820	-30,838	2,030	1.00	0.00
ATOM	4063	HB2	ALA	272	-5,570	-32,346	1,445	1.00	0.00
ATOM	4064	HB3	ALA	272	-4,127	-31,712	0.685	1.00	0.00
ATOM	4065	N	THR	273	-2,662	-31,118	4,323	1.00	0.00
ATOM	4066	CA	THR	273	-1,563	-30,297	4,866	1.00	0.00
ATOM	4067	C	THR	273	-1,000	-30,842	6,175	1.00	0.00
ATOM	4068	O	THR	273	0.115	-30,497	6,583	1.00	0.00
ATOM	4069	CB	THR	273	-1,938	-28,793	5,031	1.00	0.00
ATOM	4070	CG2	THR	273	-2,154	-28,065	3,705	1.00	0.00
ATOM	4071	OG1	THR	273	-3,009	-28,601	5,883	1.00	0.00
ATOM	4072	H	THR	273	-3,589	-31,005	4,707	1.00	0.00
ATOM	4073	HA	THR	273	-0.691	-30,416	4,224	1.00	0.00
ATOM	4074	HB	THR	273	-1,055	-28,298	5,433	1.00	0.00
ATOM	4075	HG1	THR	273	-2,774	-28,495	6,808	1.00	0.00
ATOM	4076	HG21	THR	273	-2,129	-26,978	3,780	1.00	0.00
ATOM	4077	HG22	THR	273	-3,108	-28,427	3,320	1.00	0.00
ATOM	4078	HG23	THR	273	-1,505	-28,481	2,934	1.00	0.00
ATOM	4079	N	ARG	274	-1,630	-31,783	6,851	1.00	0.00
ATOM	4080	CA	ARG	274	-1,123	-32,395	8,125	1.00	0.00
ATOM	4081	C	ARG	274	0.148	-33,296	7,854	1.00	0.00
ATOM	4082	O	ARG	274	0.499	-33,673	6,725	1.00	0.00
ATOM	4083	CB	ARG	274	-2,254	-33,218	8,753	1.00	0.00
ATOM	4084	CG	ARG	274	-2,001	-33,660	10,242	1.00	0.00

ATOM	4085	CD	ARG	274	-2,986	-34,760	10,591	1.00	0.00
ATOM	4086	NE	ARG	274	-4,360	-34,278	10,447	1.00	0.00
ATOM	4087	CZ	ARG	274	-5,316	-34,963	9,939	1.00	0.00
ATOM	4088	NH1	ARG	274	-5,282	-36,244	9,682	1.00	0.00
ATOM	4089	NH2	ARG	274	-6,466	-34,382	9,625	1.00	0.00
ATOM	4090	H	ARG	274	-2,569	-32,010	6,560	1.00	0.00
ATOM	4091	HA	ARG	274	-0.922	-31,533	8,760	1.00	0.00
ATOM	4092	HB2	ARG	274	-3,128	-32,569	8,723	1.00	0.00
ATOM	4093	HB3	ARG	274	-2,577	-34,010	8,077	1.00	0.00
ATOM	4094	HG2	ARG	274	-1,025	-34,128	10,370	1.00	0.00
ATOM	4095	HG3	ARG	274	-2,169	-32,906	11,011	1.00	0.00
ATOM	4096	HD2	ARG	274	-2,724	-35,605	9,954	1.00	0.00
ATOM	4097	HD3	ARG	274	-2,726	-34,970	11,628	1.00	0.00
ATOM	4098	HE	ARG	274	-4,549	-33,296	10,589	1.00	0.00
ATOM	4099	HH11	ARG	274	-4,507	-36,799	10,015	1.00	0.00
ATOM	4100	HH12	ARG	274	-6,136	-36,703	9,400	1.00	0.00
ATOM	4101	HH21	ARG	274	-6,523	-33,374	9,667	1.00	0.00
ATOM	4102	HH22	ARG	274	-7,310	-34,904	9,436	1.00	0.00
ATOM	4103	N	ILE	275	0.912	-33,522	8,900	1.00	0.00
ATOM	4104	CA	ILE	275	2,144	-34,361	8,847	1.00	0.00
ATOM	4105	C	ILE	275	1,912	-35,832	8,401	1.00	0.00
ATOM	4106	O	ILE	275	0.810	-36,272	8,616	1.00	0.00
ATOM	4107	CB	ILE	275	2,905	-34,174	10,157	1.00	0.00
ATOM	4108	CG1	ILE	275	4,424	-34,199	10,093	1.00	0.00
ATOM	4109	CG2	ILE	275	2,397	-35,148	11,226	1.00	0.00
ATOM	4110	CD1	ILE	275	5,061	-33,458	11,238	1.00	0.00
ATOM	4111	H	ILE	275	0.621	-33,002	9,715	1.00	0.00
ATOM	4112	HA	ILE	275	2,700	-33,906	8,027	1.00	0.00
ATOM	4113	HB	ILE	275	2,640	-33,143	10,393	1.00	0.00
ATOM	4114	HG12	ILE	275	4,885	-35,177	9,948	1.00	0.00
ATOM	4115	HG13	ILE	275	4,625	-33,600	9,205	1.00	0.00
ATOM	4116	HG21	ILE	275	2,720	-36,168	11,014	1.00	0.00
ATOM	4117	HG22	ILE	275	1,323	-35,047	11,385	1.00	0.00
ATOM	4118	HG23	ILE	275	2,793	-34,862	12,200	1.00	0.00
ATOM	4119	HD11	ILE	275	4,997	-33,955	12,206	1.00	0.00
ATOM	4120	HD12	ILE	275	4,634	-32,455	11,285	1.00	0.00
ATOM	4121	HD13	ILE	275	6,127	-33,266	11,109	1.00	0.00
ATOM	4122	N	THR	276	2,953	-36,516	8,093	1.00	0.00
ATOM	4123	CA	THR	276	3,001	-37,987	7,929	1.00	0.00
ATOM	4124	C	THR	276	4,171	-38,544	8,687	1.00	0.00
ATOM	4125	O	THR	276	5,160	-37,846	8,979	1.00	0.00
ATOM	4126	CB	THR	276	2,952	-38,375	6,397	1.00	0.00
ATOM	4127	CG2	THR	276	4,217	-37,944	5,747	1.00	0.00

ATOM	4128	OG1	THR	276	2,917	-39,782	6,222	1.00	0.00
ATOM	4129	H	THR	276	3,827	-36,010	8,079	1.00	0.00
ATOM	4130	HA	THR	276	2,082	-38,406	8,341	1.00	0.00
ATOM	4131	HB	THR	276	2,100	-37,903	5,907	1.00	0.00
ATOM	4132	HG1	THR	276	3,065	-39,969	5,293	1.00	0.00
ATOM	4133	HG21	THR	276	4,996	-38,649	6,035	1.00	0.00
ATOM	4134	HG22	THR	276	4,460	-36,912	6,004	1.00	0.00
ATOM	4135	HG23	THR	276	4,204	-38,085	4,666	1.00	0.00
ATOM	4136	N	PHE	277	4,192	-39,870	8,893	1.00	0.00
ATOM	4137	CA	PHE	277	5,281	-40,462	9,746	1.00	0.00
ATOM	4138	C	PHE	277	6,706	-40,312	9,090	1.00	0.00
ATOM	4139	O	PHE	277	7,600	-39,947	9,845	1.00	0.00
ATOM	4140	CB	PHE	277	4,744	-41,907	9,990	1.00	0.00
ATOM	4141	CG	PHE	277	4,942	-42,427	11,399	1.00	0.00
ATOM	4142	CD1	PHE	277	4,017	-43,258	12,049	1.00	0.00
ATOM	4143	CD2	PHE	277	6,103	-42,139	12,096	1.00	0.00
ATOM	4144	CE1	PHE	277	4,127	-43,686	13,332	1.00	0.00
ATOM	4145	CE2	PHE	277	6,285	-42,623	13,370	1.00	0.00
ATOM	4146	CZ	PHE	277	5,275	-43,354	14,022	1.00	0.00
ATOM	4147	H	PHE	277	3,440	-40,391	8,465	1.00	0.00
ATOM	4148	HA	PHE	277	5,304	-39,856	10,651	1.00	0.00
ATOM	4149	HB2	PHE	277	3,661	-41,901	9,875	1.00	0.00
ATOM	4150	HB3	PHE	277	5,250	-42,554	9,273	1.00	0.00
ATOM	4151	HD1	PHE	277	3,104	-43,359	11,481	1.00	0.00
ATOM	4152	HD2	PHE	277	6,810	-41,471	11,629	1.00	0.00
ATOM	4153	HE1	PHE	277	3,329	-44,251	13,792	1.00	0.00
ATOM	4154	HE2	PHE	277	7,142	-42,351	13,966	1.00	0.00
ATOM	4155	HZ	PHE	277	5,351	-43,723	15,035	1.00	0.00
ATOM	4156	N	ALA	278	6,721	-40,426	7,731	1.00	0.00
ATOM	4157	CA	ALA	278	7,922	-40,024	6,949	1.00	0.00
ATOM	4158	C	ALA	278	8,369	-38,521	7,139	1.00	0.00
ATOM	4159	O	ALA	278	9,442	-38,272	6,624	1.00	0.00
ATOM	4160	CB	ALA	278	7,680	-40,285	5,491	1.00	0.00
ATOM	4161	H	ALA	278	5,865	-40,614	7,230	1.00	0.00
ATOM	4162	HA	ALA	278	8,805	-40,629	7,155	1.00	0.00
ATOM	4163	HB1	ALA	278	8,551	-40,327	4,835	1.00	0.00
ATOM	4164	HB2	ALA	278	6,876	-39,668	5,090	1.00	0.00
ATOM	4165	HB3	ALA	278	7,085	-41,190	5,381	1.00	0.00
ATOM	4166	N	GLU	279	7,582	-37,636	7,743	1.00	0.00
ATOM	4167	CA	GLU	279	7,991	-36,289	8,083	1.00	0.00
ATOM	4168	C	GLU	279	8,450	-36,245	9,564	1.00	0.00
ATOM	4169	O	GLU	279	9,589	-35,823	9,873	1.00	0.00
ATOM	4170	CB	GLU	279	6,938	-35,306	7,609	1.00	0.00

ATOM	4171	CG	GLU	279	7,318	-33,806	7,951	1.00	0.00
ATOM	4172	CD	GLU	279	6,457	-32,790	7,213	1.00	0.00
ATOM	4173	OE1	GLU	279	6,872	-31,639	7,031	1.00	0.00
ATOM	4174	OE2	GLU	279	5,361	-33,191	6,776	1.00	0.00
ATOM	4175	H	GLU	279	6,748	-38,000	8,181	1.00	0.00
ATOM	4176	HA	GLU	279	8,875	-36,025	7,502	1.00	0.00
ATOM	4177	HB2	GLU	279	6,772	-35,454	6,542	1.00	0.00
ATOM	4178	HB3	GLU	279	6,017	-35,470	8,169	1.00	0.00
ATOM	4179	HG2	GLU	279	7,212	-33,653	9,025	1.00	0.00
ATOM	4180	HG3	GLU	279	8,317	-33,563	7,588	1.00	0.00
ATOM	4181	N	VAL	280	7,626	-36,772	10,494	1.00	0.00
ATOM	4182	CA	VAL	280	7,885	-36,776	11,906	1.00	0.00
ATOM	4183	C	VAL	280	9,340	-37,234	12,261	1.00	0.00
ATOM	4184	O	VAL	280	10,032	-36,626	13,073	1.00	0.00
ATOM	4185	CB	VAL	280	6,812	-37,632	12,608	1.00	0.00
ATOM	4186	CG1	VAL	280	7,174	-37,984	14,001	1.00	0.00
ATOM	4187	CG2	VAL	280	5,490	-36,935	12,610	1.00	0.00
ATOM	4188	H	VAL	280	6,861	-37,340	10,155	1.00	0.00
ATOM	4189	HA	VAL	280	7,707	-35,760	12,257	1.00	0.00
ATOM	4190	HB	VAL	280	6,645	-38,550	12,043	1.00	0.00
ATOM	4191	HG11	VAL	280	6,416	-38,361	14,687	1.00	0.00
ATOM	4192	HG12	VAL	280	8,097	-38,559	13,937	1.00	0.00
ATOM	4193	HG13	VAL	280	7,421	-37,005	14,414	1.00	0.00
ATOM	4194	HG21	VAL	280	4,782	-37,658	13,015	1.00	0.00
ATOM	4195	HG22	VAL	280	5,192	-36,557	11,633	1.00	0.00
ATOM	4196	HG23	VAL	280	5,545	-36,101	13,310	1.00	0.00
ATOM	4197	N	ILE	281	9,738	-38,436	11,785	1.00	0.00
ATOM	4198	CA	ILE	281	11,054	-39,117	12,201	1.00	0.00
ATOM	4199	C	ILE	281	12,317	-38,637	11,405	1.00	0.00
ATOM	4200	O	ILE	281	13,389	-39,252	11,409	1.00	0.00
ATOM	4201	CB	ILE	281	10,843	-40,646	12,166	1.00	0.00
ATOM	4202	CG1	ILE	281	10,834	-41,211	10,673	1.00	0.00
ATOM	4203	CG2	ILE	281	9,549	-40,974	13,010	1.00	0.00
ATOM	4204	CD1	ILE	281	10,289	-42,651	10,734	1.00	0.00
ATOM	4205	H	ILE	281	9,090	-39,005	11,259	1.00	0.00
ATOM	4206	HA	ILE	281	11,266	-38,898	13,247	1.00	0.00
ATOM	4207	HB	ILE	281	11,630	-41,225	12,648	1.00	0.00
ATOM	4208	HG12	ILE	281	10,190	-40,577	10,063	1.00	0.00
ATOM	4209	HG13	ILE	281	11,833	-41,333	10,254	1.00	0.00
ATOM	4210	HG21	ILE	281	9,469	-40,381	13,920	1.00	0.00
ATOM	4211	HG22	ILE	281	9,512	-42,045	13,209	1.00	0.00
ATOM	4212	HG23	ILE	281	8,727	-40,665	12,364	1.00	0.00
ATOM	4213	HD11	ILE	281	10,698	-43,237	11,557	1.00	0.00

ATOM	4214	HD12	ILE	281	10,559	-43,123	9,790	1.00	0.00
ATOM	4215	HD13	ILE	281	9,201	-42,664	10,676	1.00	0.00
ATOM	4216	N	GLU	282	12,097	-37,544	10,676	1.00	0.00
ATOM	4217	CA	GLU	282	13,021	-36,836	9,830	1.00	0.00
ATOM	4218	C	GLU	282	12,995	-35,321	10,065	1.00	0.00
ATOM	4219	O	GLU	282	13,615	-34,565	9,301	1.00	0.00
ATOM	4220	CB	GLU	282	12,809	-37,160	8,339	1.00	0.00
ATOM	4221	CG	GLU	282	12,946	-38,669	8,078	1.00	0.00
ATOM	4222	CD	GLU	282	14,410	-39,256	8,114	1.00	0.00
ATOM	4223	OE1	GLU	282	15,431	-38,501	7,984	1.00	0.00
ATOM	4224	OE2	GLU	282	14,517	-40,499	8,184	1.00	0.00
ATOM	4225	H	GLU	282	11,130	-37,287	10,536	1.00	0.00
ATOM	4226	HA	GLU	282	14,019	-37,219	10,044	1.00	0.00
ATOM	4227	HB2	GLU	282	11,797	-36,842	8,090	1.00	0.00
ATOM	4228	HB3	GLU	282	13,618	-36,609	7,861	1.00	0.00
ATOM	4229	HG2	GLU	282	12,208	-39,215	8,666	1.00	0.00
ATOM	4230	HG3	GLU	282	12,563	-38,785	7,065	1.00	0.00
ATOM	4231	N	ASN	283	12,210	-34,796	11,054	1.00	0.00
ATOM	4232	CA	ASN	283	11,836	-33,330	11,110	1.00	0.00
ATOM	4233	C	ASN	283	12,978	-32,425	11,608	1.00	0.00
ATOM	4234	O	ASN	283	13,876	-32,824	12,421	1.00	0.00
ATOM	4235	CB	ASN	283	10,461	-33,138	11,860	1.00	0.00
ATOM	4236	CG	ASN	283	10,061	-31,678	12,180	1.00	0.00
ATOM	4237	ND2	ASN	283	9,365	-31,106	11,251	1.00	0.00
ATOM	4238	OD1	ASN	283	10,503	-31,044	13,074	1.00	0.00
ATOM	4239	H	ASN	283	11,649	-35,470	11,555	1.00	0.00
ATOM	4240	HA	ASN	283	11,680	-33,031	10,073	1.00	0.00
ATOM	4241	HB2	ASN	283	9,732	-33,645	11,227	1.00	0.00
ATOM	4242	HB3	ASN	283	10,426	-33,728	12,777	1.00	0.00
ATOM	4243	HD21	ASN	283	9,124	-31,542	10,372	1.00	0.00
ATOM	4244	HD22	ASN	283	9,263	-30,102	11,296	1.00	0.00
ATOM	4245	N	GLU	284	13,013	-31,162	11,224	1.00	0.00
ATOM	4246	CA	GLU	284	13,989	-30,093	11,641	1.00	0.00
ATOM	4247	C	GLU	284	14,208	-30,100	13,163	1.00	0.00
ATOM	4248	O	GLU	284	15,357	-30,006	13,615	1.00	0.00
ATOM	4249	CB	GLU	284	13,625	-28,706	11,122	1.00	0.00
ATOM	4250	CG	GLU	284	13,253	-28,643	9,649	1.00	0.00
ATOM	4251	CD	GLU	284	11,838	-29,134	9,510	1.00	0.00
ATOM	4252	OE1	GLU	284	11,630	-30,272	9,012	1.00	0.00
ATOM	4253	OE2	GLU	284	10,884	-28,383	9,927	1.00	0.00
ATOM	4254	H	GLU	284	12,458	-30,976	10,401	1.00	0.00
ATOM	4255	HA	GLU	284	14,949	-30,241	11,145	1.00	0.00
ATOM	4256	HB2	GLU	284	12,878	-28,282	11,793	1.00	0.00

ATOM	4257	HB3	GLU	284	14,569	-28,182	11,274	1.00	0.00
ATOM	4258	HG2	GLU	284	13,331	-27,643	9,224	1.00	0.00
ATOM	4259	HG3	GLU	284	13,903	-29,272	9,038	1.00	0.00
ATOM	4260	N	TRP	285	13,132	-30,122	13,936	1.00	0.00
ATOM	4261	CA	TRP	285	13,222	-30,298	15,418	1.00	0.00
ATOM	4262	C	TRP	285	13,734	-31,638	15,989	1.00	0.00
ATOM	4263	O	TRP	285	14,388	-31,628	17,022	1.00	0.00
ATOM	4264	CB	TRP	285	11,795	-30,014	15,966	1.00	0.00
ATOM	4265	CG	TRP	285	11,823	-29,835	17,421	1.00	0.00
ATOM	4266	CD1	TRP	285	12,307	-28,742	18,049	1.00	0.00
ATOM	4267	CD2	TRP	285	11,346	-30,684	18,514	1.00	0.00
ATOM	4268	CE2	TRP	285	11,660	-30,028	19,780	1.00	0.00
ATOM	4269	CE3	TRP	285	10,758	-31,954	18,596	1.00	0.00
ATOM	4270	NE1	TRP	285	12,302	-28,851	19,445	1.00	0.00
ATOM	4271	CZ2	TRP	285	11,332	-30,534	21,023	1.00	0.00
ATOM	4272	CZ3	TRP	285	10,497	-32,557	19,838	1.00	0.00
ATOM	4273	CH2	TRP	285	10,756	-31,798	21,036	1.00	0.00
ATOM	4274	H	TRP	285	12,185	-29,974	13,619	1.00	0.00
ATOM	4275	HA	TRP	285	13,862	-29,480	15,752	1.00	0.00
ATOM	4276	HB2	TRP	285	11,421	-29,105	15,495	1.00	0.00
ATOM	4277	HB3	TRP	285	11,155	-30,873	15,761	1.00	0.00
ATOM	4278	HD1	TRP	285	12,820	-27,913	17,585	1.00	0.00
ATOM	4279	HE1	TRP	285	12,733	-28,169	20,053	1.00	0.00
ATOM	4280	HE3	TRP	285	10,529	-32,583	17,748	1.00	0.00
ATOM	4281	HZ2	TRP	285	11,538	-30,039	21,960	1.00	0.00
ATOM	4282	HZ3	TRP	285	9,993	-33,510	19,878	1.00	0.00
ATOM	4283	HH2	TRP	285	10,607	-32,351	21,953	1.00	0.00
ATOM	4284	N	PHE	286	13,457	-32,766	15,243	1.00	0.00
ATOM	4285	CA	PHE	286	13,603	-34,138	15,696	1.00	0.00
ATOM	4286	C	PHE	286	14,999	-34,637	15,525	1.00	0.00
ATOM	4287	O	PHE	286	15,408	-35,544	16,260	1.00	0.00
ATOM	4288	CB	PHE	286	12,503	-34,961	14,971	1.00	0.00
ATOM	4289	CG	PHE	286	12,511	-36,444	15,374	1.00	0.00
ATOM	4290	CD1	PHE	286	13,228	-37,352	14,573	1.00	0.00
ATOM	4291	CD2	PHE	286	11,763	-36,867	16,509	1.00	0.00
ATOM	4292	CE1	PHE	286	13,308	-38,683	14,946	1.00	0.00
ATOM	4293	CE2	PHE	286	11,777	-38,245	16,764	1.00	0.00
ATOM	4294	CZ	PHE	286	12,604	-39,135	16,091	1.00	0.00
ATOM	4295	H	PHE	286	13,065	-32,550	14,337	1.00	0.00
ATOM	4296	HA	PHE	286	13,331	-34,129	16,752	1.00	0.00
ATOM	4297	HB2	PHE	286	11,514	-34,568	15,206	1.00	0.00
ATOM	4298	HB3	PHE	286	12,655	-34,844	13,898	1.00	0.00
ATOM	4299	HD1	PHE	286	13,764	-36,928	13,736	1.00	0.00



ATOM	4300	HD2	PHE	286	11,216	-36,118	17,063	1.00	0.00
ATOM	4301	HE1	PHE	286	13,960	-39,334	14,385	1.00	0.00
ATOM	4302	HE2	PHE	286	11,370	-38,657	17,676	1.00	0.00
ATOM	4303	HZ	PHE	286	12,744	-40,134	16,478	1.00	0.00
ATOM	4304	N	LYS	287	15,722	-34,244	14,433	1.00	0.00
ATOM	4305	CA	LYS	287	16,819	-35,036	13,892	1.00	0.00
ATOM	4306	C	LYS	287	17,935	-35,296	14,878	1.00	0.00
ATOM	4307	O	LYS	287	18,462	-36,394	14,913	1.00	0.00
ATOM	4308	CB	LYS	287	17,249	-34,252	12,609	1.00	0.00
ATOM	4309	CG	LYS	287	18,508	-34,768	11,890	1.00	0.00
ATOM	4310	CD	LYS	287	19,056	-33,831	10,764	1.00	0.00
ATOM	4311	CE	LYS	287	20,442	-34,397	10,191	1.00	0.00
ATOM	4312	NZ	LYS	287	20,781	-33,791	8,893	1.00	0.00
ATOM	4313	H	LYS	287	15,348	-33,500	13,861	1.00	0.00
ATOM	4314	HA	LYS	287	16,353	-35,972	13,586	1.00	0.00
ATOM	4315	HB2	LYS	287	16,363	-34,292	11,974	1.00	0.00
ATOM	4316	HB3	LYS	287	17,335	-33,217	12,940	1.00	0.00
ATOM	4317	HG2	LYS	287	19,378	-34,913	12,533	1.00	0.00
ATOM	4318	HG3	LYS	287	18,329	-35,764	11,485	1.00	0.00
ATOM	4319	HD2	LYS	287	18,230	-33,881	10,056	1.00	0.00
ATOM	4320	HD3	LYS	287	19,153	-32,834	11,196	1.00	0.00
ATOM	4321	HE2	LYS	287	21,249	-34,265	10,911	1.00	0.00
ATOM	4322	HE3	LYS	287	20,305	-35,471	10,066	1.00	0.00
ATOM	4323	HZ1	LYS	287	21,646	-34,222	8,597	1.00	0.00
ATOM	4324	HZ2	LYS	287	20,815	-32,786	8,973	1.00	0.00
ATOM	4325	HZ3	LYS	287	20,089	-34,044	8,201	1.00	0.00
ATOM	4326	N	LYS	288	18,276	-34,292	15,751	1.00	0.00
ATOM	4327	CA	LYS	288	19,470	-34,390	16,562	1.00	0.00
ATOM	4328	C	LYS	288	19,490	-35,445	17,662	1.00	0.00
ATOM	4329	O	LYS	288	18,558	-35,609	18,402	1.00	0.00
ATOM	4330	CB	LYS	288	19,965	-32,945	17,038	1.00	0.00
ATOM	4331	CG	LYS	288	18,941	-32,399	18,050	1.00	0.00
ATOM	4332	CD	LYS	288	19,119	-30,997	18,488	1.00	0.00
ATOM	4333	CE	LYS	288	19,857	-30,985	19,841	1.00	0.00
ATOM	4334	NZ	LYS	288	20,246	-29,602	20,245	1.00	0.00
ATOM	4335	H	LYS	288	17,917	-33,397	15,451	1.00	0.00
ATOM	4336	HA	LYS	288	20,168	-34,725	15,794	1.00	0.00
ATOM	4337	HB2	LYS	288	20,965	-33,051	17,461	1.00	0.00
ATOM	4338	HB3	LYS	288	20,038	-32,337	16,136	1.00	0.00
ATOM	4339	HG2	LYS	288	17,965	-32,350	17,569	1.00	0.00
ATOM	4340	HG3	LYS	288	18,895	-33,114	18,872	1.00	0.00
ATOM	4341	HD2	LYS	288	19,590	-30,389	17,715	1.00	0.00
ATOM	4342	HD3	LYS	288	18,127	-30,582	18,665	1.00	0.00

ATOM	4343	HE2	LYS	288	19,259	-31,375	20,665	1.00	0.00
ATOM	4344	HE3	LYS	288	20,779	-31,552	19,717	1.00	0.00
ATOM	4345	HZ1	LYS	288	20,919	-29,198	19,610	1.00	0.00
ATOM	4346	HZ2	LYS	288	20,668	-29,639	21,161	1.00	0.00
ATOM	4347	HZ3	LYS	288	19,389	-29,083	20,370	1.00	0.00
ATOM	4348	N	GLY	289	20,604	-36,174	17,647	1.00	0.00
ATOM	4349	CA	GLY	289	20,788	-37,275	18,602	1.00	0.00
ATOM	4350	C	GLY	289	20,097	-38,625	18,456	1.00	0.00
ATOM	4351	O	GLY	289	20,415	-39,532	19,208	1.00	0.00
ATOM	4352	H	GLY	289	21,331	-35,913	16,996	1.00	0.00
ATOM	4353	HA2	GLY	289	21,850	-37,458	18,765	1.00	0.00
ATOM	4354	HA3	GLY	289	20,372	-36,994	19,569	1.00	0.00
ATOM	4355	N	TYR	290	19,179	-38,768	17,500	1.00	0.00
ATOM	4356	CA	TYR	290	18,548	-40,080	17,122	1.00	0.00
ATOM	4357	C	TYR	290	19,379	-40,784	16,068	1.00	0.00
ATOM	4358	O	TYR	290	20,020	-40,172	15,228	1.00	0.00
ATOM	4359	CB	TYR	290	17,045	-39,920	16,748	1.00	0.00
ATOM	4360	CG	TYR	290	16,255	-41,199	16,357	1.00	0.00
ATOM	4361	CD1	TYR	290	16,050	-42,178	17,313	1.00	0.00
ATOM	4362	CD2	TYR	290	15,841	-41,455	15,003	1.00	0.00
ATOM	4363	CE1	TYR	290	15,471	-43,357	16,962	1.00	0.00
ATOM	4364	CE2	TYR	290	15,269	-42,671	14,625	1.00	0.00
ATOM	4365	CZ	TYR	290	15,131	-43,641	15,632	1.00	0.00
ATOM	4366	OH	TYR	290	14,696	-44,843	15,291	1.00	0.00
ATOM	4367	H	TYR	290	19,022	-37,979	16,890	1.00	0.00
ATOM	4368	HA	TYR	290	18,500	-40,712	18,009	1.00	0.00
ATOM	4369	HB2	TYR	290	16,418	-39,520	17,545	1.00	0.00
ATOM	4370	HB3	TYR	290	16,946	-39,175	15,959	1.00	0.00
ATOM	4371	HD1	TYR	290	16,237	-41,971	18,357	1.00	0.00
ATOM	4372	HD2	TYR	290	16,064	-40,691	14,272	1.00	0.00
ATOM	4373	HE1	TYR	290	15,313	-44,123	17,706	1.00	0.00
ATOM	4374	HE2	TYR	290	14,992	-42,859	13,598	1.00	0.00
ATOM	4375	HH	TYR	290	14,515	-45,292	16,119	1.00	0.00
ATOM	4376	N	LYS	291	19,452	-42,144	16,081	1.00	0.00
ATOM	4377	CA	LYS	291	19,594	-42,935	14,845	1.00	0.00
ATOM	4378	C	LYS	291	18,779	-44,219	14,879	1.00	0.00
ATOM	4379	O	LYS	291	18,594	-44,911	15,861	1.00	0.00
ATOM	4380	CB	LYS	291	21,091	-43,226	14,600	1.00	0.00
ATOM	4381	CG	LYS	291	21,699	-44,331	15,566	1.00	0.00
ATOM	4382	CD	LYS	291	23,110	-44,790	15,183	1.00	0.00
ATOM	4383	CE	LYS	291	23,918	-43,569	15,332	1.00	0.00
ATOM	4384	NZ	LYS	291	25,372	-43,965	15,159	1.00	0.00
ATOM	4385	H	LYS	291	19,014	-42,627	16,852	1.00	0.00

ATOM	4386	HA	LYS	291	19,327	-42,277	14,019	1.00	0.00
ATOM	4387	HB2	LYS	291	21,126	-43,574	13,567	1.00	0.00
ATOM	4388	HB3	LYS	291	21,665	-42,299	14,607	1.00	0.00
ATOM	4389	HG2	LYS	291	21,751	-44,000	16,603	1.00	0.00
ATOM	4390	HG3	LYS	291	21,117	-45,252	15,535	1.00	0.00
ATOM	4391	HD2	LYS	291	23,505	-45,512	15,898	1.00	0.00
ATOM	4392	HD3	LYS	291	23,045	-45,171	14,164	1.00	0.00
ATOM	4393	HE2	LYS	291	23,650	-42,752	14,664	1.00	0.00
ATOM	4394	HE3	LYS	291	23,900	-43,301	16,389	1.00	0.00
ATOM	4395	HZ1	LYS	291	25,635	-44,251	14,228	1.00	0.00
ATOM	4396	HZ2	LYS	291	25,644	-44,678	15,821	1.00	0.00
ATOM	4397	HZ3	LYS	291	25,969	-43,156	15,262	1.00	0.00
ATOM	4398	N	ALA	292	18,353	-44,585	13,703	1.00	0.00
ATOM	4399	CA	ALA	292	17,385	-45,729	13,486	1.00	0.00
ATOM	4400	C	ALA	292	18,189	-47,001	13,491	1.00	0.00
ATOM	4401	O	ALA	292	19,317	-47,083	12,997	1.00	0.00
ATOM	4402	CB	ALA	292	16,619	-45,532	12,209	1.00	0.00
ATOM	4403	H	ALA	292	18,625	-43,984	12,938	1.00	0.00
ATOM	4404	HA	ALA	292	16,675	-45,646	14,309	1.00	0.00
ATOM	4405	HB1	ALA	292	16,005	-44,637	12,301	1.00	0.00
ATOM	4406	HB2	ALA	292	15,961	-46,381	12,021	1.00	0.00
ATOM	4407	HB3	ALA	292	17,288	-45,350	11,367	1.00	0.00
ATOM	4408	N	PRO	293	17,516	-48,123	13,899	1.00	0.00
ATOM	4409	CA	PRO	293	18,249	-49,416	14,082	1.00	0.00
ATOM	4410	C	PRO	293	18,579	-50,065	12,715	1.00	0.00
ATOM	4411	O	PRO	293	18,164	-49,558	11,698	1.00	0.00
ATOM	4412	CB	PRO	293	17,204	-50,272	14,788	1.00	0.00
ATOM	4413	CG	PRO	293	15,842	-49,695	14,458	1.00	0.00
ATOM	4414	CD	PRO	293	16,164	-48,191	14,426	1.00	0.00
ATOM	4415	HA	PRO	293	19,094	-49,398	14,769	1.00	0.00
ATOM	4416	HB2	PRO	293	17,353	-51,300	14,460	1.00	0.00
ATOM	4417	HB3	PRO	293	17,447	-50,184	15,848	1.00	0.00
ATOM	4418	HG2	PRO	293	15,520	-50,177	13,535	1.00	0.00
ATOM	4419	HG3	PRO	293	15,299	-50,034	15,340	1.00	0.00
ATOM	4420	HD2	PRO	293	15,453	-47,730	13,741	1.00	0.00
ATOM	4421	HD3	PRO	293	16,142	-47,903	15,477	1.00	0.00
ATOM	4422	N	LYS	294	19,505	-51,049	12,670	1.00	0.00
ATOM	4423	CA	LYS	294	20,059	-51,783	11,482	1.00	0.00
ATOM	4424	C	LYS	294	18,920	-52,624	10,746	1.00	0.00
ATOM	4425	O	LYS	294	17,835	-52,904	11,342	1.00	0.00
ATOM	4426	CB	LYS	294	21,272	-52,611	11,920	1.00	0.00
ATOM	4427	CG	LYS	294	22,184	-51,903	12,997	1.00	0.00
ATOM	4428	CD	LYS	294	23,452	-52,771	13,288	1.00	0.00

ATOM	4429	CE	LYS	294	24,522	-52,318	14,239	1.00	0.00
ATOM	4430	NZ	LYS	294	25,182	-51,097	13,647	1.00	0.00
ATOM	4431	H	LYS	294	19,748	-51,395	13,587	1.00	0.00
ATOM	4432	HA	LYS	294	20,388	-51,005	10,794	1.00	0.00
ATOM	4433	HB2	LYS	294	20,905	-53,496	12,440	1.00	0.00
ATOM	4434	HB3	LYS	294	21,826	-53,121	11,132	1.00	0.00
ATOM	4435	HG2	LYS	294	22,495	-50,946	12,575	1.00	0.00
ATOM	4436	HG3	LYS	294	21,620	-51,683	13,903	1.00	0.00
ATOM	4437	HD2	LYS	294	23,275	-53,832	13,466	1.00	0.00
ATOM	4438	HD3	LYS	294	23,888	-52,764	12,288	1.00	0.00
ATOM	4439	HE2	LYS	294	24,081	-52,103	15,212	1.00	0.00
ATOM	4440	HE3	LYS	294	25,283	-53,079	14,408	1.00	0.00
ATOM	4441	HZ1	LYS	294	25,599	-51,285	12,745	1.00	0.00
ATOM	4442	HZ2	LYS	294	25,914	-50,791	14,272	1.00	0.00
ATOM	4443	HZ3	LYS	294	24,495	-50,360	13,708	1.00	0.00
ATOM	4444	N	PHE	295	19,313	-53,033	9,567	1.00	0.00
ATOM	4445	CA	PHE	295	18,482	-53,799	8,668	1.00	0.00
ATOM	4446	C	PHE	295	18,090	-55,176	9,299	1.00	0.00
ATOM	4447	O	PHE	295	19,050	-55,914	9,717	1.00	0.00
ATOM	4448	CB	PHE	295	19,164	-53,814	7,344	1.00	0.00
ATOM	4449	CG	PHE	295	18,593	-54,690	6,350	1.00	0.00
ATOM	4450	CD1	PHE	295	17,187	-54,643	6,105	1.00	0.00
ATOM	4451	CD2	PHE	295	19,315	-55,807	5,895	1.00	0.00
ATOM	4452	CE1	PHE	295	16,535	-55,577	5,218	1.00	0.00
ATOM	4453	CE2	PHE	295	18,699	-56,757	5,058	1.00	0.00
ATOM	4454	CZ	PHE	295	17,345	-56,638	4,731	1.00	0.00
ATOM	4455	H	PHE	295	20,193	-52,616	9,297	1.00	0.00
ATOM	4456	HA	PHE	295	17,592	-53,237	8,383	1.00	0.00
ATOM	4457	HB2	PHE	295	19,136	-52,788	6,973	1.00	0.00
ATOM	4458	HB3	PHE	295	20,233	-54,030	7,371	1.00	0.00
ATOM	4459	HD1	PHE	295	16,573	-53,901	6,595	1.00	0.00
ATOM	4460	HD2	PHE	295	20,356	-55,992	6,111	1.00	0.00
ATOM	4461	HE1	PHE	295	15,490	-55,537	4,947	1.00	0.00
ATOM	4462	HE2	PHE	295	19,286	-57,585	4,688	1.00	0.00
ATOM	4463	HZ	PHE	295	16,916	-57,412	4,113	1.00	0.00
ATOM	4464	N	GLU	296	16,767	-55,545	9,402	1.00	0.00
ATOM	4465	CA	GLU	296	16,243	-56,726	10,037	1.00	0.00
ATOM	4466	C	GLU	296	14,972	-57,263	9,297	1.00	0.00
ATOM	4467	O	GLU	296	14,108	-56,481	8,966	1.00	0.00
ATOM	4468	CB	GLU	296	15,994	-56,590	11,558	1.00	0.00
ATOM	4469	CG	GLU	296	17,250	-56,369	12,364	1.00	0.00
ATOM	4470	CD	GLU	296	17,084	-56,658	13,907	1.00	0.00
ATOM	4471	OE1	GLU	296	15,990	-56,314	14,428	1.00	0.00

ATOM	4472	OE2	GLU	296	17,979	-57,344	14,461	1.00	0.00
ATOM	4473	H	GLU	296	16,074	-54,842	9,190	1.00	0.00
ATOM	4474	HA	GLU	296	17,029	-57,476	9,950	1.00	0.00
ATOM	4475	HB2	GLU	296	15,344	-55,750	11,800	1.00	0.00
ATOM	4476	HB3	GLU	296	15,509	-57,487	11,943	1.00	0.00
ATOM	4477	HG2	GLU	296	18,020	-57,044	11,990	1.00	0.00
ATOM	4478	HG3	GLU	296	17,496	-55,312	12,270	1.00	0.00
ATOM	4479	N	ASN	297	14,957	-58,591	8,979	1.00	0.00
ATOM	4480	CA	ASN	297	13,694	-59,272	8,747	1.00	0.00
ATOM	4481	C	ASN	297	12,828	-59,448	10,023	1.00	0.00
ATOM	4482	O	ASN	297	13,322	-59,768	11,124	1.00	0.00
ATOM	4483	CB	ASN	297	14,100	-60,613	8,247	1.00	0.00
ATOM	4484	CG	ASN	297	12,978	-61,388	7,549	1.00	0.00
ATOM	4485	ND2	ASN	297	13,170	-62,706	7,343	1.00	0.00
ATOM	4486	OD1	ASN	297	11,979	-60,886	7,106	1.00	0.00
ATOM	4487	H	ASN	297	15,778	-59,102	9,272	1.00	0.00
ATOM	4488	HA	ASN	297	13,108	-58,668	8,054	1.00	0.00
ATOM	4489	HB2	ASN	297	14,984	-60,559	7,611	1.00	0.00
ATOM	4490	HB3	ASN	297	14,303	-61,282	9,083	1.00	0.00
ATOM	4491	HD21	ASN	297	13,951	-63,183	7,771	1.00	0.00
ATOM	4492	HD22	ASN	297	12,537	-63,199	6,730	1.00	0.00
ATOM	4493	N	ALA	298	11,501	-59,233	9,821	1.00	0.00
ATOM	4494	CA	ALA	298	10,383	-59,316	10,812	1.00	0.00
ATOM	4495	C	ALA	298	10,098	-60,818	11,236	1.00	0.00
ATOM	4496	O	ALA	298	10,076	-61,663	10,367	1.00	0.00
ATOM	4497	CB	ALA	298	9,063	-58,627	10,308	1.00	0.00
ATOM	4498	H	ALA	298	11,224	-58,925	8,901	1.00	0.00
ATOM	4499	HA	ALA	298	10,639	-58,889	11,782	1.00	0.00
ATOM	4500	HB1	ALA	298	9,236	-57,567	10,116	1.00	0.00
ATOM	4501	HB2	ALA	298	8,207	-58,842	10,946	1.00	0.00
ATOM	4502	HB3	ALA	298	8,731	-59,053	9,361	1.00	0.00
ATOM	4503	N	ASP	299	9,954	-61,028	12,502	1.00	0.00
ATOM	4504	CA	ASP	299	9,892	-62,349	13,130	1.00	0.00
ATOM	4505	C	ASP	299	8,996	-62,342	14,427	1.00	0.00
ATOM	4506	O	ASP	299	9,090	-61,396	15,292	1.00	0.00
ATOM	4507	CB	ASP	299	11,351	-62,630	13,385	1.00	0.00
ATOM	4508	CG	ASP	299	11,571	-64,052	13,789	1.00	0.00
ATOM	4509	OD1	ASP	299	11,478	-64,471	14,975	1.00	0.00
ATOM	4510	OD2	ASP	299	11,872	-64,844	12,878	1.00	0.00
ATOM	4511	H	ASP	299	10,337	-60,286	13,071	1.00	0.00
ATOM	4512	HA	ASP	299	9,672	-63,097	12,370	1.00	0.00
ATOM	4513	HB2	ASP	299	11,931	-62,464	12,477	1.00	0.00
ATOM	4514	HB3	ASP	299	11,704	-61,978	14,184	1.00	0.00

ATOM	4515	N	VAL	300	7,953	-63,153	14,469	1.00	0.00
ATOM	4516	CA	VAL	300	6,941	-63,160	15,533	1.00	0.00
ATOM	4517	C	VAL	300	7,499	-63,428	16,929	1.00	0.00
ATOM	4518	O	VAL	300	8,622	-63,786	17,169	1.00	0.00
ATOM	4519	CB	VAL	300	5,822	-64,189	15,207	1.00	0.00
ATOM	4520	CG1	VAL	300	5,269	-64,148	13,819	1.00	0.00
ATOM	4521	CG2	VAL	300	6,352	-65,677	15,355	1.00	0.00
ATOM	4522	H	VAL	300	8,074	-63,984	13,907	1.00	0.00
ATOM	4523	HA	VAL	300	6,393	-62,218	15,557	1.00	0.00
ATOM	4524	HB	VAL	300	5,010	-64,054	15,922	1.00	0.00
ATOM	4525	HG11	VAL	300	5,013	-63,152	13,457	1.00	0.00
ATOM	4526	HG12	VAL	300	5,969	-64,547	13,085	1.00	0.00
ATOM	4527	HG13	VAL	300	4,286	-64,620	13,786	1.00	0.00
ATOM	4528	HG21	VAL	300	6,488	-65,804	16,430	1.00	0.00
ATOM	4529	HG22	VAL	300	7,239	-65,966	14,791	1.00	0.00
ATOM	4530	HG23	VAL	300	5,496	-66,331	15,189	1.00	0.00
ATOM	4531	N	SER	301	6,666	-63,268	17,926	1.00	0.00
ATOM	4532	CA	SER	301	7,015	-63,329	19,336	1.00	0.00
ATOM	4533	C	SER	301	7,315	-64,751	19,758	1.00	0.00
ATOM	4534	O	SER	301	6,678	-65,733	19,321	1.00	0.00
ATOM	4535	CB	SER	301	5,841	-62,801	20,108	1.00	0.00
ATOM	4536	OG	SER	301	6,261	-62,633	21,436	1.00	0.00
ATOM	4537	H	SER	301	5,733	-62,974	17,674	1.00	0.00
ATOM	4538	HA	SER	301	7,845	-62,669	19,590	1.00	0.00
ATOM	4539	HB2	SER	301	5,638	-61,811	19,700	1.00	0.00
ATOM	4540	HB3	SER	301	4,918	-63,378	20,061	1.00	0.00
ATOM	4541	HG	SER	301	5,441	-62,585	21,932	1.00	0.00
ATOM	4542	N	LEU	302	8,384	-64,861	20,523	1.00	0.00
ATOM	4543	CA	LEU	302	8,907	-66,138	20,961	1.00	0.00
ATOM	4544	C	LEU	302	8,293	-66,525	22,326	1.00	0.00
ATOM	4545	O	LEU	302	8,905	-67,142	23,182	1.00	0.00
ATOM	4546	CB	LEU	302	10,470	-66,152	20,928	1.00	0.00
ATOM	4547	CG	LEU	302	11,248	-65,564	19,734	1.00	0.00
ATOM	4548	CD1	LEU	302	12,711	-65,825	19,994	1.00	0.00
ATOM	4549	CD2	LEU	302	10,819	-66,108	18,383	1.00	0.00
ATOM	4550	H	LEU	302	8,834	-64,008	20,822	1.00	0.00
ATOM	4551	HA	LEU	302	8,545	-66,823	20,194	1.00	0.00
ATOM	4552	HB2	LEU	302	10,728	-65,760	21,912	1.00	0.00
ATOM	4553	HB3	LEU	302	10,721	-67,212	20,978	1.00	0.00
ATOM	4554	HG	LEU	302	11,181	-64,477	19,673	1.00	0.00
ATOM	4555	HD11	LEU	302	13,013	-65,665	21,028	1.00	0.00
ATOM	4556	HD12	LEU	302	13,225	-65,041	19,439	1.00	0.00
ATOM	4557	HD13	LEU	302	12,942	-66,826	19,630	1.00	0.00

ATOM	4558	HD21	LEU	302	10,493	-67,130	18,579	1.00	0.00
ATOM	4559	HD22	LEU	302	9,930	-65,515	18,172	1.00	0.00
ATOM	4560	HD23	LEU	302	11,623	-65,886	17,683	1.00	0.00
ATOM	4561	N	ASP	303	6,974	-66,312	22,478	1.00	0.00
ATOM	4562	CA	ASP	303	6,181	-66,957	23,469	1.00	0.00
ATOM	4563	C	ASP	303	4,705	-67,049	23,041	1.00	0.00
ATOM	4564	O	ASP	303	4,231	-66,195	22,275	1.00	0.00
ATOM	4565	CB	ASP	303	6,232	-66,042	24,691	1.00	0.00
ATOM	4566	CG	ASP	303	5,710	-66,713	26,006	1.00	0.00
ATOM	4567	OD1	ASP	303	5,830	-67,925	26,128	1.00	0.00
ATOM	4568	OD2	ASP	303	5,282	-65,932	26,916	1.00	0.00
ATOM	4569	H	ASP	303	6,436	-65,787	21,804	1.00	0.00
ATOM	4570	HA	ASP	303	6,488	-67,978	23,698	1.00	0.00
ATOM	4571	HB2	ASP	303	7,277	-65,770	24,842	1.00	0.00
ATOM	4572	HB3	ASP	303	5,718	-65,117	24,431	1.00	0.00
ATOM	4573	N	ASP	304	4,051	-68,155	23,453	1.00	0.00
ATOM	4574	CA	ASP	304	2,697	-68,453	23,176	1.00	0.00
ATOM	4575	C	ASP	304	1,783	-67,441	23,931	1.00	0.00
ATOM	4576	O	ASP	304	2,087	-67,086	25,074	1.00	0.00
ATOM	4577	CB	ASP	304	2,324	-69,954	23,546	1.00	0.00
ATOM	4578	CG	ASP	304	0.798	-70,187	23,553	1.00	0.00
ATOM	4579	OD1	ASP	304	0.177	-69,844	22,524	1.00	0.00
ATOM	4580	OD2	ASP	304	0.297	-70,576	24,634	1.00	0.00
ATOM	4581	H	ASP	304	4,584	-68,857	23,946	1.00	0.00
ATOM	4582	HA	ASP	304	2,548	-68,277	22,111	1.00	0.00
ATOM	4583	HB2	ASP	304	2,797	-70,570	22,783	1.00	0.00
ATOM	4584	HB3	ASP	304	2,727	-70,256	24,513	1.00	0.00
ATOM	4585	N	VAL	305	0.743	-66,904	23,339	1.00	0.00
ATOM	4586	CA	VAL	305	-0.272	-65,992	23,869	1.00	0.00
ATOM	4587	C	VAL	305	-1,763	-66,525	23,596	1.00	0.00
ATOM	4588	O	VAL	305	-2,718	-65,831	23,855	1.00	0.00
ATOM	4589	CB	VAL	305	0.033	-64,496	23,515	1.00	0.00
ATOM	4590	CG1	VAL	305	-0.421	-64,073	22,114	1.00	0.00
ATOM	4591	CG2	VAL	305	-0.701	-63,531	24,449	1.00	0.00
ATOM	4592	H	VAL	305	0.595	-67,238	22,397	1.00	0.00
ATOM	4593	HA	VAL	305	-0.129	-65,928	24,947	1.00	0.00
ATOM	4594	HB	VAL	305	1,087	-64,266	23,675	1.00	0.00
ATOM	4595	HG11	VAL	305	0.152	-63,158	21,957	1.00	0.00
ATOM	4596	HG12	VAL	305	-0.117	-64,843	21,405	1.00	0.00
ATOM	4597	HG13	VAL	305	-1,504	-64,006	22,017	1.00	0.00
ATOM	4598	HG21	VAL	305	-1,742	-63,555	24,126	1.00	0.00
ATOM	4599	HG22	VAL	305	-0.302	-62,575	24,109	1.00	0.00
ATOM	4600	HG23	VAL	305	-0.481	-63,792	25,483	1.00	0.00

ATOM	4601	N	ASP	306	-1,933	-67,735	23,066	1.00	0.00
ATOM	4602	CA	ASP	306	-3,146	-68,320	22,596	1.00	0.00
ATOM	4603	C	ASP	306	-3,518	-69,608	23,291	1.00	0.00
ATOM	4604	O	ASP	306	-4,610	-69,750	23,741	1.00	0.00
ATOM	4605	CB	ASP	306	-3,038	-68,367	21,049	1.00	0.00
ATOM	4606	CG	ASP	306	-4,268	-68,847	20,360	1.00	0.00
ATOM	4607	OD1	ASP	306	-5,052	-67,992	19,984	1.00	0.00
ATOM	4608	OD2	ASP	306	-4,428	-70,088	20,183	1.00	0.00
ATOM	4609	H	ASP	306	-1,082	-68,265	22,947	1.00	0.00
ATOM	4610	HA	ASP	306	-3,916	-67,596	22,863	1.00	0.00
ATOM	4611	HB2	ASP	306	-2,884	-67,349	20,693	1.00	0.00
ATOM	4612	HB3	ASP	306	-2,144	-68,944	20,815	1.00	0.00
ATOM	4613	N	ALA	307	-2,633	-70,560	23,333	1.00	0.00
ATOM	4614	CA	ALA	307	-3,029	-71,871	23,974	1.00	0.00
ATOM	4615	C	ALA	307	-2,912	-71,683	25,541	1.00	0.00
ATOM	4616	O	ALA	307	-3,734	-72,237	26,345	1.00	0.00
ATOM	4617	CB	ALA	307	-2,154	-73,042	23,535	1.00	0.00
ATOM	4618	H	ALA	307	-1,708	-70,470	22,938	1.00	0.00
ATOM	4619	HA	ALA	307	-4,065	-72,164	23,804	1.00	0.00
ATOM	4620	HB1	ALA	307	-1,135	-72,683	23,674	1.00	0.00
ATOM	4621	HB2	ALA	307	-2,487	-73,187	22,507	1.00	0.00
ATOM	4622	HB3	ALA	307	-2,320	-73,905	24,180	1.00	0.00
ATOM	4623	N	ILE	308	-2,009	-70,840	25,975	1.00	0.00
ATOM	4624	CA	ILE	308	-1,948	-70,489	27,421	1.00	0.00
ATOM	4625	C	ILE	308	-3,205	-69,648	27,795	1.00	0.00
ATOM	4626	O	ILE	308	-3,413	-69,361	28,978	1.00	0.00
ATOM	4627	CB	ILE	308	-0.713	-69,642	27,589	1.00	0.00
ATOM	4628	CG1	ILE	308	-0.300	-69,541	29,062	1.00	0.00
ATOM	4629	CG2	ILE	308	-0.886	-68,189	26,983	1.00	0.00
ATOM	4630	CD1	ILE	308	0.912	-70,415	29,336	1.00	0.00
ATOM	4631	H	ILE	308	-1,297	-70,486	25,352	1.00	0.00
ATOM	4632	HA	ILE	308	-1,805	-71,361	28,060	1.00	0.00
ATOM	4633	HB	ILE	308	0.166	-70,091	27,129	1.00	0.00
ATOM	4634	HG12	ILE	308	0.043	-68,516	29,197	1.00	0.00
ATOM	4635	HG13	ILE	308	-1,144	-69,661	29,741	1.00	0.00
ATOM	4636	HG21	ILE	308	-1,198	-68,248	25,940	1.00	0.00
ATOM	4637	HG22	ILE	308	0.107	-67,739	26,991	1.00	0.00
ATOM	4638	HG23	ILE	308	-1,536	-67,513	27,538	1.00	0.00
ATOM	4639	HD11	ILE	308	0.754	-71,489	29,238	1.00	0.00
ATOM	4640	HD12	ILE	308	1,204	-70,214	30,366	1.00	0.00
ATOM	4641	HD13	ILE	308	1,754	-70,104	28,719	1.00	0.00
ATOM	4642	N	PHE	309	-4,034	-69,145	26,837	1.00	0.00
ATOM	4643	CA	PHE	309	-5,152	-68,180	27,092	1.00	0.00



ATOM	4644	C	PHE	309	-6,273	-68,785	27,949	1.00	0.00
ATOM	4645	O	PHE	309	-7,119	-67,997	28,455	1.00	0.00
ATOM	4646	CB	PHE	309	-5,595	-67,551	25,745	1.00	0.00
ATOM	4647	CG	PHE	309	-5,978	-66,067	25,800	1.00	0.00
ATOM	4648	CD1	PHE	309	-7,269	-65,635	25,500	1.00	0.00
ATOM	4649	CD2	PHE	309	-4,928	-65,148	26,071	1.00	0.00
ATOM	4650	CE1	PHE	309	-7,511	-64,238	25,616	1.00	0.00
ATOM	4651	CE2	PHE	309	-5,262	-63,751	26,190	1.00	0.00
ATOM	4652	CZ	PHE	309	-6,546	-63,322	25,903	1.00	0.00
ATOM	4653	H	PHE	309	-3,898	-69,395	25,868	1.00	0.00
ATOM	4654	HA	PHE	309	-4,657	-67,434	27,714	1.00	0.00
ATOM	4655	HB2	PHE	309	-4,774	-67,583	25,030	1.00	0.00
ATOM	4656	HB3	PHE	309	-6,358	-68,277	25,461	1.00	0.00
ATOM	4657	HD1	PHE	309	-8,085	-66,259	25,169	1.00	0.00
ATOM	4658	HD2	PHE	309	-3,923	-65,504	26,247	1.00	0.00
ATOM	4659	HE1	PHE	309	-8,525	-63,899	25,471	1.00	0.00
ATOM	4660	HE2	PHE	309	-4,439	-63,071	26,349	1.00	0.00
ATOM	4661	HZ	PHE	309	-6,796	-62,272	25,940	1.00	0.00
ATOM	4662	N	ASP	310	-6,238	-70,040	28,316	1.00	0.00
ATOM	4663	CA	ASP	310	-7,247	-70,759	29,130	1.00	0.00
ATOM	4664	C	ASP	310	-6,544	-71,813	30,025	1.00	0.00
ATOM	4665	O	ASP	310	-5,661	-72,518	29,572	1.00	0.00
ATOM	4666	CB	ASP	310	-8,205	-71,526	28,158	1.00	0.00
ATOM	4667	CG	ASP	310	-9,196	-72,377	28,920	1.00	0.00
ATOM	4668	OD1	ASP	310	-9,958	-71,833	29,742	1.00	0.00
ATOM	4669	OD2	ASP	310	-9,318	-73,596	28,618	1.00	0.00
ATOM	4670	H	ASP	310	-5,560	-70,650	27,882	1.00	0.00
ATOM	4671	HA	ASP	310	-7,870	-70,033	29,652	1.00	0.00
ATOM	4672	HB2	ASP	310	-8,669	-70,800	27,491	1.00	0.00
ATOM	4673	HB3	ASP	310	-7,646	-72,178	27,485	1.00	0.00
ATOM	4674	N	ASP	311	-6,967	-71,976	31,281	1.00	0.00
ATOM	4675	CA	ASP	311	-6,632	-73,095	32,195	1.00	0.00
ATOM	4676	C	ASP	311	-5,133	-73,547	32,198	1.00	0.00
ATOM	4677	O	ASP	311	-4,800	-74,692	32,097	1.00	0.00
ATOM	4678	CB	ASP	311	-7,576	-74,307	32,021	1.00	0.00
ATOM	4679	CG	ASP	311	-7,933	-74,880	33,393	1.00	0.00
ATOM	4680	OD1	ASP	311	-7,763	-74,199	34,436	1.00	0.00
ATOM	4681	OD2	ASP	311	-8,073	-76,121	33,455	1.00	0.00
ATOM	4682	H	ASP	311	-7,782	-71,407	31,456	1.00	0.00
ATOM	4683	HA	ASP	311	-6,757	-72,631	33,173	1.00	0.00
ATOM	4684	HB2	ASP	311	-8,516	-73,962	31,591	1.00	0.00
ATOM	4685	HB3	ASP	311	-7,206	-75,100	31,372	1.00	0.00
ATOM	4686	N	SER	312	-4,222	-72,579	32,147	1.00	0.00

ATOM	4687	CA	SER	312	-2,746	-72,788	31,860	1.00	0.00
ATOM	4688	C	SER	312	-1,821	-71,792	32,575	1.00	0.00
ATOM	4689	O	SER	312	-2,182	-71,018	33,457	1.00	0.00
ATOM	4690	CB	SER	312	-2,558	-72,640	30,378	1.00	0.00
ATOM	4691	OG	SER	312	-3,261	-73,557	29,664	1.00	0.00
ATOM	4692	H	SER	312	-4,500	-71,611	32,238	1.00	0.00
ATOM	4693	HA	SER	312	-2,438	-73,778	32,196	1.00	0.00
ATOM	4694	HB2	SER	312	-2,824	-71,647	30,014	1.00	0.00
ATOM	4695	HB3	SER	312	-1,510	-72,776	30,111	1.00	0.00
ATOM	4696	HG	SER	312	-4,177	-73,438	29,926	1.00	0.00
ATOM	4697	N	GLY	313	-0.529	-71,920	32,257	1.00	0.00
ATOM	4698	CA	GLY	313	0.619	-71,176	32,863	1.00	0.00
ATOM	4699	C	GLY	313	1,215	-71,881	34,073	1.00	0.00
ATOM	4700	O	GLY	313	2,434	-72,159	34,072	1.00	0.00
ATOM	4701	H	GLY	313	-0.320	-72,787	31,783	1.00	0.00
ATOM	4702	HA2	GLY	313	1,414	-71,049	32,128	1.00	0.00
ATOM	4703	HA3	GLY	313	0.309	-70,180	33,176	1.00	0.00
ATOM	4704	N	GLU	314	0.309	-72,158	34,993	1.00	0.00
ATOM	4705	CA	GLU	314	0.531	-72,898	36,212	1.00	0.00
ATOM	4706	C	GLU	314	0.033	-74,346	36,032	1.00	0.00
ATOM	4707	O	GLU	314	-0.986	-74,579	35,392	1.00	0.00
ATOM	4708	CB	GLU	314	-0.055	-72,116	37,358	1.00	0.00
ATOM	4709	CG	GLU	314	0.486	-70,776	37,752	1.00	0.00
ATOM	4710	CD	GLU	314	1,963	-70,954	38,243	1.00	0.00
ATOM	4711	OE1	GLU	314	2,945	-70,434	37,619	1.00	0.00
ATOM	4712	OE2	GLU	314	2,197	-71,643	39,283	1.00	0.00
ATOM	4713	H	GLU	314	-0.652	-71,883	34,847	1.00	0.00
ATOM	4714	HA	GLU	314	1,605	-72,970	36,386	1.00	0.00
ATOM	4715	HB2	GLU	314	-1,142	-72,072	37,278	1.00	0.00
ATOM	4716	HB3	GLU	314	0.171	-72,651	38,281	1.00	0.00
ATOM	4717	HG2	GLU	314	0.267	-70,158	36,882	1.00	0.00
ATOM	4718	HG3	GLU	314	-0.196	-70,425	38,527	1.00	0.00
ATOM	4719	N	SER	315	0.807	-75,359	36,544	1.00	0.00
ATOM	4720	CA	SER	315	0.457	-76,757	36,391	1.00	0.00
ATOM	4721	C	SER	315	-0.638	-77,311	37,299	1.00	0.00
ATOM	4722	O	SER	315	-0.791	-78,547	37,400	1.00	0.00
ATOM	4723	CB	SER	315	1,750	-77,583	36,449	1.00	0.00
ATOM	4724	OG	SER	315	2,694	-77,216	35,468	1.00	0.00
ATOM	4725	H	SER	315	1,667	-75,156	37,032	1.00	0.00
ATOM	4726	HA	SER	315	0.072	-76,775	35,371	1.00	0.00
ATOM	4727	HB2	SER	315	2,177	-77,592	37,451	1.00	0.00
ATOM	4728	HB3	SER	315	1,433	-78,607	36,253	1.00	0.00
ATOM	4729	HG	SER	315	2,317	-77,162	34,587	1.00	0.00

ATOM	4730	N	LYS	316	-1,283	-76,402	38,046	1.00	0.00
ATOM	4731	CA	LYS	316	-2,455	-76,670	38,926	1.00	0.00
ATOM	4732	C	LYS	316	-3,559	-75,622	38,847	1.00	0.00
ATOM	4733	O	LYS	316	-3,295	-74,507	38,362	1.00	0.00
ATOM	4734	CB	LYS	316	-1,945	-76,742	40,362	1.00	0.00
ATOM	4735	CG	LYS	316	-1,075	-77,982	40,643	1.00	0.00
ATOM	4736	CD	LYS	316	-0.568	-78,080	42,099	1.00	0.00
ATOM	4737	CE	LYS	316	0.284	-79,337	42,337	1.00	0.00
ATOM	4738	NZ	LYS	316	1,512	-79,321	41,444	1.00	0.00
ATOM	4739	H	LYS	316	-1,056	-75,449	37,801	1.00	0.00
ATOM	4740	HA	LYS	316	-2,901	-77,627	38,656	1.00	0.00
ATOM	4741	HB2	LYS	316	-1,351	-75,843	40,521	1.00	0.00
ATOM	4742	HB3	LYS	316	-2,791	-76,698	41,047	1.00	0.00
ATOM	4743	HG2	LYS	316	-1,573	-78,890	40,303	1.00	0.00
ATOM	4744	HG3	LYS	316	-0.253	-77,757	39,963	1.00	0.00
ATOM	4745	HD2	LYS	316	0.052	-77,203	42,284	1.00	0.00
ATOM	4746	HD3	LYS	316	-1,450	-78,041	42,738	1.00	0.00
ATOM	4747	HE2	LYS	316	0.627	-79,341	43,372	1.00	0.00
ATOM	4748	HE3	LYS	316	-0.311	-80,218	42,092	1.00	0.00
ATOM	4749	HZ1	LYS	316	2,048	-80,166	41,585	1.00	0.00
ATOM	4750	HZ2	LYS	316	2,086	-78,500	41,570	1.00	0.00
ATOM	4751	HZ3	LYS	316	1,168	-79,333	40,495	1.00	0.00
ATOM	4752	N	ASN	317	-4,773	-75,946	39,317	1.00	0.00
ATOM	4753	CA	ASN	317	-5,986	-75,019	39,190	1.00	0.00
ATOM	4754	C	ASN	317	-5,710	-73,665	39,810	1.00	0.00
ATOM	4755	O	ASN	317	-5,228	-73,589	40,896	1.00	0.00
ATOM	4756	CB	ASN	317	-7,297	-75,650	39,721	1.00	0.00
ATOM	4757	CG	ASN	317	-8,550	-74,835	39,572	1.00	0.00
ATOM	4758	ND2	ASN	317	-9,532	-75,146	40,401	1.00	0.00
ATOM	4759	OD1	ASN	317	-8,670	-73,848	38,833	1.00	0.00
ATOM	4760	H	ASN	317	-4,893	-76,804	39,835	1.00	0.00
ATOM	4761	HA	ASN	317	-6,137	-74,940	38,114	1.00	0.00
ATOM	4762	HB2	ASN	317	-7,436	-76,624	39,251	1.00	0.00
ATOM	4763	HB3	ASN	317	-7,141	-75,980	40,748	1.00	0.00
ATOM	4764	HD21	ASN	317	-9,468	-75,918	41,049	1.00	0.00
ATOM	4765	HD22	ASN	317	-10,379	-74,619	40,247	1.00	0.00
ATOM	4766	N	LEU	318	-5,922	-72,550	39,099	1.00	0.00
ATOM	4767	CA	LEU	318	-5,529	-71,189	39,520	1.00	0.00
ATOM	4768	C	LEU	318	-6,765	-70,644	40,258	1.00	0.00
ATOM	4769	O	LEU	318	-7,696	-70,022	39,700	1.00	0.00
ATOM	4770	CB	LEU	318	-5,033	-70,406	38,302	1.00	0.00
ATOM	4771	CG	LEU	318	-4,503	-68,988	38,750	1.00	0.00
ATOM	4772	CD1	LEU	318	-3,548	-69,096	39,909	1.00	0.00

ATOM	4773	CD2	LEU	318	-3,731	-68,331	37,585	1.00	0.00
ATOM	4774	H	LEU	318	-6,262	-72,688	38,158	1.00	0.00
ATOM	4775	HA	LEU	318	-4,669	-71,315	40,177	1.00	0.00
ATOM	4776	HB2	LEU	318	-4,141	-70,860	37,870	1.00	0.00
ATOM	4777	HB3	LEU	318	-5,762	-70,315	37,497	1.00	0.00
ATOM	4778	HG	LEU	318	-5,259	-68,347	39,206	1.00	0.00
ATOM	4779	HD11	LEU	318	-4,042	-69,130	40,880	1.00	0.00
ATOM	4780	HD12	LEU	318	-2,969	-68,181	40,032	1.00	0.00
ATOM	4781	HD13	LEU	318	-2,735	-69,822	39,906	1.00	0.00
ATOM	4782	HD21	LEU	318	-4,489	-68,092	36,839	1.00	0.00
ATOM	4783	HD22	LEU	318	-3,151	-67,454	37,870	1.00	0.00
ATOM	4784	HD23	LEU	318	-3,143	-69,098	37,080	1.00	0.00
ATOM	4785	N	VAL	319	-6,794	-70,947	41,558	1.00	0.00
ATOM	4786	CA	VAL	319	-7,699	-70,406	42,617	1.00	0.00
ATOM	4787	C	VAL	319	-7,195	-69,087	43,297	1.00	0.00
ATOM	4788	O	VAL	319	-6,019	-68,737	43,257	1.00	0.00
ATOM	4789	CB	VAL	319	-7,943	-71,455	43,755	1.00	0.00
ATOM	4790	CG1	VAL	319	-8,719	-72,643	43,179	1.00	0.00
ATOM	4791	CG2	VAL	319	-6,777	-71,929	44,537	1.00	0.00
ATOM	4792	H	VAL	319	-5,981	-71,518	41,741	1.00	0.00
ATOM	4793	HA	VAL	319	-8,682	-70,238	42,177	1.00	0.00
ATOM	4794	HB	VAL	319	-8,567	-70,899	44,457	1.00	0.00
ATOM	4795	HG11	VAL	319	-9,633	-72,257	42,727	1.00	0.00
ATOM	4796	HG12	VAL	319	-8,086	-73,128	42,436	1.00	0.00
ATOM	4797	HG13	VAL	319	-8,987	-73,282	44,021	1.00	0.00
ATOM	4798	HG21	VAL	319	-5,912	-72,052	43,886	1.00	0.00
ATOM	4799	HG22	VAL	319	-7,034	-72,901	44,959	1.00	0.00
ATOM	4800	HG23	VAL	319	-6,540	-71,222	45,332	1.00	0.00
ATOM	4801	N	VAL	320	-8,172	-68,391	43,880	1.00	0.00
ATOM	4802	CA	VAL	320	-7,977	-67,111	44,547	1.00	0.00
ATOM	4803	C	VAL	320	-8,154	-67,190	46,011	1.00	0.00
ATOM	4804	O	VAL	320	-9,101	-67,941	46,499	1.00	0.00
ATOM	4805	CB	VAL	320	-8,921	-66,055	43,969	1.00	0.00
ATOM	4806	CG1	VAL	320	-8,541	-64,696	44,547	1.00	0.00
ATOM	4807	CG2	VAL	320	-8,850	-66,025	42,414	1.00	0.00
ATOM	4808	H	VAL	320	-9,117	-68,740	43,803	1.00	0.00
ATOM	4809	HA	VAL	320	-6,930	-66,830	44,425	1.00	0.00
ATOM	4810	HB	VAL	320	-9,917	-66,380	44,269	1.00	0.00
ATOM	4811	HG11	VAL	320	-8,449	-64,764	45,632	1.00	0.00
ATOM	4812	HG12	VAL	320	-7,529	-64,394	44,281	1.00	0.00
ATOM	4813	HG13	VAL	320	-9,216	-63,893	44,250	1.00	0.00
ATOM	4814	HG21	VAL	320	-9,608	-65,323	42,065	1.00	0.00
ATOM	4815	HG22	VAL	320	-9,162	-66,984	42,001	1.00	0.00

ATOM	4816	HG23	VAL	320	-7,951	-65,577	41,991	1.00	0.00
ATOM	4817	N	GLU	321	-7,294	-66,564	46,802	1.00	0.00
ATOM	4818	CA	GLU	321	-7,298	-66,687	48,322	1.00	0.00
ATOM	4819	C	GLU	321	-7,673	-65,284	48,857	1.00	0.00
ATOM	4820	O	GLU	321	-7,046	-64,309	48,417	1.00	0.00
ATOM	4821	CB	GLU	321	-5,936	-67,146	48,783	1.00	0.00
ATOM	4822	CG	GLU	321	-5,709	-66,914	50,269	1.00	0.00
ATOM	4823	CD	GLU	321	-4,803	-68,028	50,817	1.00	0.00
ATOM	4824	OE1	GLU	321	-5,361	-69,103	51,108	1.00	0.00
ATOM	4825	OE2	GLU	321	-3,535	-67,967	50,688	1.00	0.00
ATOM	4826	H	GLU	321	-6,568	-66,045	46,330	1.00	0.00
ATOM	4827	HA	GLU	321	-7,974	-67,482	48,636	1.00	0.00
ATOM	4828	HB2	GLU	321	-5,828	-68,197	48,517	1.00	0.00
ATOM	4829	HB3	GLU	321	-5,205	-66,545	48,241	1.00	0.00
ATOM	4830	HG2	GLU	321	-5,213	-65,946	50,328	1.00	0.00
ATOM	4831	HG3	GLU	321	-6,663	-66,956	50,794	1.00	0.00
ATOM	4832	N	ARG	322	-8,552	-65,131	49,845	1.00	0.00
ATOM	4833	CA	ARG	322	-8,622	-63,917	50,710	1.00	0.00
ATOM	4834	C	ARG	322	-7,997	-64,138	52,075	1.00	0.00
ATOM	4835	O	ARG	322	-7,858	-65,282	52,544	1.00	0.00
ATOM	4836	CB	ARG	322	-10,034	-63,291	50,822	1.00	0.00
ATOM	4837	CG	ARG	322	-11,290	-64,211	50,899	1.00	0.00
ATOM	4838	CD	ARG	322	-11,356	-65,242	52,044	1.00	0.00
ATOM	4839	NE	ARG	322	-11,429	-64,702	53,410	1.00	0.00
ATOM	4840	CZ	ARG	322	-10,964	-65,345	54,490	1.00	0.00
ATOM	4841	NH1	ARG	322	-10,533	-66,557	54,580	1.00	0.00
ATOM	4842	NH2	ARG	322	-10,867	-64,679	55,555	1.00	0.00
ATOM	4843	H	ARG	322	-9,016	-65,996	50,085	1.00	0.00
ATOM	4844	HA	ARG	322	-7,988	-63,111	50,338	1.00	0.00
ATOM	4845	HB2	ARG	322	-10,004	-62,666	51,715	1.00	0.00
ATOM	4846	HB3	ARG	322	-10,077	-62,641	49,948	1.00	0.00
ATOM	4847	HG2	ARG	322	-12,185	-63,592	50,967	1.00	0.00
ATOM	4848	HG3	ARG	322	-11,471	-64,751	49,969	1.00	0.00
ATOM	4849	HD2	ARG	322	-12,236	-65,859	51,860	1.00	0.00
ATOM	4850	HD3	ARG	322	-10,499	-65,911	51,960	1.00	0.00
ATOM	4851	HE	ARG	322	-11,717	-63,749	53,583	1.00	0.00
ATOM	4852	HH11	ARG	322	-10,612	-67,243	53,843	1.00	0.00
ATOM	4853	HH12	ARG	322	-10,269	-66,923	55,484	1.00	0.00
ATOM	4854	HH21	ARG	322	-11,180	-63,720	55,572	1.00	0.00
ATOM	4855	HH22	ARG	322	-10,597	-65,163	56,399	1.00	0.00
ATOM	4856	N	ARG	323	-7,616	-63,086	52,749	1.00	0.00
ATOM	4857	CA	ARG	323	-7,128	-62,951	54,124	1.00	0.00
ATOM	4858	C	ARG	323	-8,103	-62,288	55,099	1.00	0.00

ATOM	4859	O	ARG	323	-8,989	-61,643	54,609	1.00	0.00
ATOM	4860	CB	ARG	323	-5,793	-62,226	54,208	1.00	0.00
ATOM	4861	CG	ARG	323	-4,608	-63,132	53,772	1.00	0.00
ATOM	4862	CD	ARG	323	-3,343	-62,326	53,337	1.00	0.00
ATOM	4863	NE	ARG	323	-2,304	-63,106	52,652	1.00	0.00
ATOM	4864	CZ	ARG	323	-1,140	-62,667	52,244	1.00	0.00
ATOM	4865	NH1	ARG	323	-0.665	-61,491	52,540	1.00	0.00
ATOM	4866	NH2	ARG	323	-0.460	-63,360	51,327	1.00	0.00
ATOM	4867	H	ARG	323	-7,684	-62,195	52,277	1.00	0.00
ATOM	4868	HA	ARG	323	-6,927	-63,962	54,481	1.00	0.00
ATOM	4869	HB2	ARG	323	-5,829	-61,349	53,561	1.00	0.00
ATOM	4870	HB3	ARG	323	-5,463	-61,838	55,171	1.00	0.00
ATOM	4871	HG2	ARG	323	-4,446	-63,876	54,552	1.00	0.00
ATOM	4872	HG3	ARG	323	-4,905	-63,629	52,849	1.00	0.00
ATOM	4873	HD2	ARG	323	-3,706	-61,523	52,696	1.00	0.00
ATOM	4874	HD3	ARG	323	-2,833	-61,861	54,181	1.00	0.00
ATOM	4875	HE	ARG	323	-2,465	-64,071	52,403	1.00	0.00
ATOM	4876	HH11	ARG	323	-1,114	-60,852	53,180	1.00	0.00
ATOM	4877	HH12	ARG	323	0.220	-61,243	52,121	1.00	0.00
ATOM	4878	HH21	ARG	323	-0.742	-64,298	51,077	1.00	0.00
ATOM	4879	HH22	ARG	323	0.495	-63,051	51,220	1.00	0.00
ATOM	4880	N	GLU	324	-7,930	-62,494	56,393	1.00	0.00
ATOM	4881	CA	GLU	324	-8,880	-62,174	57,468	1.00	0.00
ATOM	4882	C	GLU	324	-8,936	-60,715	57,879	1.00	0.00
ATOM	4883	O	GLU	324	-10,013	-60,087	57,718	1.00	0.00
ATOM	4884	CB	GLU	324	-8,562	-63,129	58,665	1.00	0.00
ATOM	4885	CG	GLU	324	-9,640	-63,226	59,749	1.00	0.00
ATOM	4886	CD	GLU	324	-10,887	-63,972	59,185	1.00	0.00
ATOM	4887	OE1	GLU	324	-12,061	-63,611	59,389	1.00	0.00
ATOM	4888	OE2	GLU	324	-10,638	-64,991	58,446	1.00	0.00
ATOM	4889	OXT	GLU	324	-7,852	-60,193	58,217	1.00	0.00
ATOM	4890	H	GLU	324	-7,129	-63,079	56,582	1.00	0.00
ATOM	4891	HA	GLU	324	-9,899	-62,377	57,142	1.00	0.00
ATOM	4892	HB2	GLU	324	-8,290	-64,146	58,385	1.00	0.00
ATOM	4893	HB3	GLU	324	-7,595	-62,810	59,054	1.00	0.00
ATOM	4894	HG2	GLU	324	-9,247	-63,767	60,609	1.00	0.00
ATOM	4895	HG3	GLU	324	-9,820	-62,182	60,006	1.00	0.00
ATOM	4896	N	LEU	518	3,124	-38,967	-9,733	1.00	0.00
ATOM	4897	CA	LEU	518	2,569	-38,500	-8,422	1.00	0.00
ATOM	4898	C	LEU	518	3,369	-37,275	-8,012	1.00	0.00
ATOM	4899	O	LEU	518	4,591	-37,165	-8,288	1.00	0.00
ATOM	4900	CB	LEU	518	2,619	-39,707	-7,413	1.00	0.00
ATOM	4901	CG	LEU	518	1,667	-39,525	-6,235	1.00	0.00

ATOM	4902	CD1	LEU	518	0.185	-39,357	-6,579	1.00	0.00
ATOM	4903	CD2	LEU	518	1,914	-40,648	-5,211	1.00	0.00
ATOM	4904	HA	LEU	518	1,512	-38,288	-8,580	1.00	0.00
ATOM	4905	HB2	LEU	518	2,346	-40,624	-7,938	1.00	0.00
ATOM	4906	HB3	LEU	518	3,678	-39,816	-7,182	1.00	0.00
ATOM	4907	HG	LEU	518	2,018	-38,587	-5,803	1.00	0.00
ATOM	4908	HD11	LEU	518	-0.380	-38,977	-5,728	1.00	0.00
ATOM	4909	HD12	LEU	518	-0.205	-40,273	-7,022	1.00	0.00
ATOM	4910	HD13	LEU	518	0.054	-38,439	-7,151	1.00	0.00
ATOM	4911	HD21	LEU	518	1,762	-41,660	-5,585	1.00	0.00
ATOM	4912	HD22	LEU	518	2,993	-40,559	-5,086	1.00	0.00
ATOM	4913	HD23	LEU	518	1,378	-40,460	-4,282	1.00	0.00
ATOM	4914	H1	LEU	518	4,129	-39,062	-9,695	1.00	0.00
ATOM	4915	H2	LEU	518	2,916	-38,185	-10,338	1.00	0.00
ATOM	4916	H3	LEU	518	2,757	-39,835	-10,097	1.00	0.00
ATOM	4917	N	PRO	519	2,831	-36,183	-7,449	1.00	0.00
ATOM	4918	CA	PRO	519	3,509	-34,900	-7,258	1.00	0.00
ATOM	4919	C	PRO	519	4,394	-34,938	-5,986	1.00	0.00
ATOM	4920	O	PRO	519	4,025	-35,506	-4,962	1.00	0.00
ATOM	4921	CB	PRO	519	2,497	-33,804	-7,260	1.00	0.00
ATOM	4922	CG	PRO	519	1,176	-34,522	-6,784	1.00	0.00
ATOM	4923	CD	PRO	519	1,367	-35,959	-7,279	1.00	0.00
ATOM	4924	HA	PRO	519	4,209	-34,710	-8,073	1.00	0.00
ATOM	4925	HB2	PRO	519	2,746	-32,988	-6,582	1.00	0.00
ATOM	4926	HB3	PRO	519	2,479	-33,386	-8,267	1.00	0.00
ATOM	4927	HG2	PRO	519	1,053	-34,612	-5,705	1.00	0.00
ATOM	4928	HG3	PRO	519	0.273	-34,120	-7,247	1.00	0.00
ATOM	4929	HD2	PRO	519	0.898	-36,602	-6,533	1.00	0.00
ATOM	4930	HD3	PRO	519	0.807	-36,018	-8,212	1.00	0.00
ATOM	4931	N	LEU	520	5,580	-34,294	-6,015	1.00	0.00
ATOM	4932	CA	LEU	520	6,624	-34,147	-4,956	1.00	0.00
ATOM	4933	C	LEU	520	7,147	-32,748	-4,780	1.00	0.00
ATOM	4934	O	LEU	520	7,587	-32,175	-5,745	1.00	0.00
ATOM	4935	CB	LEU	520	7,730	-35,132	-5,280	1.00	0.00
ATOM	4936	CG	LEU	520	8,864	-35,292	-4,277	1.00	0.00
ATOM	4937	CD1	LEU	520	8,491	-35,971	-2,976	1.00	0.00
ATOM	4938	CD2	LEU	520	9,977	-36,020	-4,969	1.00	0.00
ATOM	4939	H	LEU	520	5,767	-33,726	-6,828	1.00	0.00
ATOM	4940	HA	LEU	520	6,081	-34,392	-4,043	1.00	0.00
ATOM	4941	HB2	LEU	520	7,203	-36,085	-5,329	1.00	0.00
ATOM	4942	HB3	LEU	520	8,167	-35,024	-6,273	1.00	0.00
ATOM	4943	HG	LEU	520	9,263	-34,308	-4,032	1.00	0.00
ATOM	4944	HD11	LEU	520	7,595	-35,473	-2,608	1.00	0.00

ATOM	4945	HD12	LEU	520	9,304	-35,870	-2,256	1.00	0.00
ATOM	4946	HD13	LEU	520	8,337	-37,019	-3,232	1.00	0.00
ATOM	4947	HD21	LEU	520	10,800	-36,124	-4,261	1.00	0.00
ATOM	4948	HD22	LEU	520	9,657	-36,968	-5,401	1.00	0.00
ATOM	4949	HD23	LEU	520	10,343	-35,393	-5,782	1.00	0.00
ATOM	4950	N	ASN	521	7,050	-32,106	-3,615	1.00	0.00
ATOM	4951	CA	ASN	521	7,603	-30,763	-3,477	1.00	0.00
ATOM	4952	C	ASN	521	9,131	-30,748	-3,154	1.00	0.00
ATOM	4953	O	ASN	521	9,695	-31,792	-2,895	1.00	0.00
ATOM	4954	CB	ASN	521	6,776	-30,017	-2,415	1.00	0.00
ATOM	4955	CG	ASN	521	6,912	-30,542	-0.963	1.00	0.00
ATOM	4956	ND2	ASN	521	5,963	-30,137	-0.184	1.00	0.00
ATOM	4957	OD1	ASN	521	7,756	-31,299	-0.563	1.00	0.00
ATOM	4958	H	ASN	521	6,718	-32,621	-2,813	1.00	0.00
ATOM	4959	HA	ASN	521	7,379	-30,241	-4,407	1.00	0.00
ATOM	4960	HB2	ASN	521	7,172	-29,002	-2,373	1.00	0.00
ATOM	4961	HB3	ASN	521	5,714	-30,037	-2,658	1.00	0.00
ATOM	4962	HD21	ASN	521	5,490	-29,283	-0.437	1.00	0.00
ATOM	4963	HD22	ASN	521	6,151	-30,366	0.783	1.00	0.00
ATOM	4964	N	LEU	522	9,779	-29,582	-3,129	1.00	0.00
ATOM	4965	CA	LEU	522	11,153	-29,445	-2,739	1.00	0.00
ATOM	4966	C	LEU	522	11,421	-29,689	-1,205	1.00	0.00
ATOM	4967	O	LEU	522	12,539	-30,249	-0.899	1.00	0.00
ATOM	4968	CB	LEU	522	11,609	-27,975	-3,133	1.00	0.00
ATOM	4969	CG	LEU	522	11,732	-27,732	-4,660	1.00	0.00
ATOM	4970	CD1	LEU	522	12,150	-26,265	-4,757	1.00	0.00
ATOM	4971	CD2	LEU	522	12,756	-28,626	-5,344	1.00	0.00
ATOM	4972	H	LEU	522	9,284	-28,723	-3,319	1.00	0.00
ATOM	4973	HA	LEU	522	11,822	-30,144	-3,240	1.00	0.00
ATOM	4974	HB2	LEU	522	10,847	-27,282	-2,776	1.00	0.00
ATOM	4975	HB3	LEU	522	12,615	-27,789	-2,754	1.00	0.00
ATOM	4976	HG	LEU	522	10,774	-27,860	-5,164	1.00	0.00
ATOM	4977	HD11	LEU	522	13,107	-26,098	-4,263	1.00	0.00
ATOM	4978	HD12	LEU	522	11,370	-25,621	-4,349	1.00	0.00
ATOM	4979	HD13	LEU	522	12,314	-26,033	-5,809	1.00	0.00
ATOM	4980	HD21	LEU	522	12,302	-29,568	-5,656	1.00	0.00
ATOM	4981	HD22	LEU	522	13,069	-28,176	-6,285	1.00	0.00
ATOM	4982	HD23	LEU	522	13,614	-28,769	-4,687	1.00	0.00
ATOM	4983	N	CYS	523	10,409	-29,406	-0.373	1.00	0.00
ATOM	4984	CA	CYS	523	10,411	-29,443	1,059	1.00	0.00
ATOM	4985	C	CYS	523	10,689	-30,872	1,601	1.00	0.00
ATOM	4986	O	CYS	523	11,514	-31,064	2,452	1.00	0.00
ATOM	4987	CB	CYS	523	9,038	-28,866	1,602	1.00	0.00



ATOM	4988	SG	CYS	523	8,936	-27,092	1,934	1.00	0.00
ATOM	4989	H	CYS	523	9,507	-29,151	-0.749	1.00	0.00
ATOM	4990	HA	CYS	523	11,263	-28,980	1,557	1.00	0.00
ATOM	4991	HB2	CYS	523	8,210	-29,020	0.911	1.00	0.00
ATOM	4992	HB3	CYS	523	8,749	-29,377	2,520	1.00	0.00
ATOM	4993	HG	CYS	523	7,624	-26,953	1,726	1.00	0.00
ATOM	4994	N	PHE	524	9,983	-31,831	0.975	1.00	0.00
ATOM	4995	CA	PHE	524	10,055	-33,229	1,203	1.00	0.00
ATOM	4996	C	PHE	524	11,403	-33,759	0.775	1.00	0.00
ATOM	4997	O	PHE	524	11,991	-34,634	1,416	1.00	0.00
ATOM	4998	CB	PHE	524	8,915	-34,057	0.588	1.00	0.00
ATOM	4999	CG	PHE	524	7,815	-34,448	1,558	1.00	0.00
ATOM	5000	CD1	PHE	524	6,547	-33,819	1,426	1.00	0.00
ATOM	5001	CD2	PHE	524	8,112	-35,238	2,673	1.00	0.00
ATOM	5002	CE1	PHE	524	5,539	-34,196	2,376	1.00	0.00
ATOM	5003	CE2	PHE	524	7,103	-35,622	3,548	1.00	0.00
ATOM	5004	CZ	PHE	524	5,796	-35,123	3,389	1.00	0.00
ATOM	5005	H	PHE	524	9,264	-31,502	0.347	1.00	0.00
ATOM	5006	HA	PHE	524	10,079	-33,422	2,276	1.00	0.00
ATOM	5007	HB2	PHE	524	8,512	-33,603	-0.317	1.00	0.00
ATOM	5008	HB3	PHE	524	9,392	-34,953	0.190	1.00	0.00
ATOM	5009	HD1	PHE	524	6,319	-33,224	0.555	1.00	0.00
ATOM	5010	HD2	PHE	524	9,144	-35,559	2,677	1.00	0.00
ATOM	5011	HE1	PHE	524	4,623	-33,627	2,440	1.00	0.00
ATOM	5012	HE2	PHE	524	7,426	-36,270	4,348	1.00	0.00
ATOM	5013	HZ	PHE	524	5,055	-35,244	4,166	1.00	0.00
ATOM	5014	N	ALA	525	11,961	-33,284	-0.360	1.00	0.00
ATOM	5015	CA	ALA	525	13,296	-33,661	-0.838	1.00	0.00
ATOM	5016	C	ALA	525	14,442	-33,241	0.176	1.00	0.00
ATOM	5017	O	ALA	525	15,341	-34,032	0.427	1.00	0.00
ATOM	5018	CB	ALA	525	13,629	-33,158	-2,243	1.00	0.00
ATOM	5019	H	ALA	525	11,433	-32,634	-0.925	1.00	0.00
ATOM	5020	HA	ALA	525	13,238	-34,750	-0.818	1.00	0.00
ATOM	5021	HB1	ALA	525	13,025	-33,710	-2,963	1.00	0.00
ATOM	5022	HB2	ALA	525	14,659	-33,354	-2,542	1.00	0.00
ATOM	5023	HB3	ALA	525	13,505	-32,077	-2,308	1.00	0.00
ATOM	5024	N	ALA	526	14,281	-32,048	0.751	1.00	0.00
ATOM	5025	CA	ALA	526	15,157	-31,477	1,800	1.00	0.00
ATOM	5026	C	ALA	526	14,945	-32,133	3,173	1.00	0.00
ATOM	5027	O	ALA	526	15,922	-32,396	3,849	1.00	0.00
ATOM	5028	CB	ALA	526	14,939	-30,002	1,752	1.00	0.00
ATOM	5029	H	ALA	526	13,519	-31,469	0.428	1.00	0.00
ATOM	5030	HA	ALA	526	16,184	-31,656	1,484	1.00	0.00

ATOM	5031	HB1	ALA	526	13,876	-29,790	1,868	1.00	0.00
ATOM	5032	HB2	ALA	526	15,468	-29,629	0.875	1.00	0.00
ATOM	5033	HB3	ALA	526	15,330	-29,492	2,634	1.00	0.00
ATOM	5034	N	ILE	527	13,727	-32,573	3,455	1.00	0.00
ATOM	5035	CA	ILE	527	13,435	-33,554	4,540	1.00	0.00
ATOM	5036	C	ILE	527	14,109	-34,934	4,332	1.00	0.00
ATOM	5037	O	ILE	527	14,899	-35,334	5,186	1.00	0.00
ATOM	5038	CB	ILE	527	11,949	-33,717	4,890	1.00	0.00
ATOM	5039	CG1	ILE	527	11,340	-32,385	5,335	1.00	0.00
ATOM	5040	CG2	ILE	527	11,703	-34,822	6,054	1.00	0.00
ATOM	5041	CD1	ILE	527	9,840	-32,442	5,224	1.00	0.00
ATOM	5042	H	ILE	527	12,973	-32,314	2,835	1.00	0.00
ATOM	5043	HA	ILE	527	13,769	-33,097	5,472	1.00	0.00
ATOM	5044	HB	ILE	527	11,392	-34,008	4,000	1.00	0.00
ATOM	5045	HG12	ILE	527	11,594	-32,165	6,372	1.00	0.00
ATOM	5046	HG13	ILE	527	11,766	-31,586	4,729	1.00	0.00
ATOM	5047	HG21	ILE	527	12,201	-35,769	5,847	1.00	0.00
ATOM	5048	HG22	ILE	527	10,628	-34,968	6,156	1.00	0.00
ATOM	5049	HG23	ILE	527	11,957	-34,416	7,033	1.00	0.00
ATOM	5050	HD11	ILE	527	9,428	-33,282	5,783	1.00	0.00
ATOM	5051	HD12	ILE	527	9,605	-32,557	4,165	1.00	0.00
ATOM	5052	HD13	ILE	527	9,422	-31,495	5,565	1.00	0.00
ATOM	5053	N	ARG	528	13,957	-35,593	3,192	1.00	0.00
ATOM	5054	CA	ARG	528	14,607	-36,900	2,777	1.00	0.00
ATOM	5055	C	ARG	528	16,129	-36,732	2,706	1.00	0.00
ATOM	5056	O	ARG	528	16,838	-37,728	2,568	1.00	0.00
ATOM	5057	CB	ARG	528	14,052	-37,349	1,362	1.00	0.00
ATOM	5058	CG	ARG	528	12,657	-37,885	1,288	1.00	0.00
ATOM	5059	CD	ARG	528	12,254	-38,391	-0.117	1.00	0.00
ATOM	5060	NE	ARG	528	10,922	-39,013	-0.220	1.00	0.00
ATOM	5061	CZ	ARG	528	10,361	-39,617	-1,225	1.00	0.00
ATOM	5062	NH1	ARG	528	10,988	-39,804	-2,397	1.00	0.00
ATOM	5063	NH2	ARG	528	9,114	-39,966	-1,140	1.00	0.00
ATOM	5064	H	ARG	528	13,181	-35,205	2,677	1.00	0.00
ATOM	5065	HA	ARG	528	14,484	-37,638	3,570	1.00	0.00
ATOM	5066	HB2	ARG	528	14,119	-36,496	0.686	1.00	0.00
ATOM	5067	HB3	ARG	528	14,735	-38,097	0.962	1.00	0.00
ATOM	5068	HG2	ARG	528	12,438	-38,679	2,002	1.00	0.00
ATOM	5069	HG3	ARG	528	11,954	-37,103	1,572	1.00	0.00
ATOM	5070	HD2	ARG	528	12,352	-37,520	-0.765	1.00	0.00
ATOM	5071	HD3	ARG	528	12,944	-39,132	-0.520	1.00	0.00
ATOM	5072	HE	ARG	528	10,274	-38,898	0.545	1.00	0.00
ATOM	5073	HH11	ARG	528	11,994	-39,728	-2,375	1.00	0.00

ATOM	5074	HH12	ARG	528	10,378	-40,054	-3,162	1.00	0.00
ATOM	5075	HH21	ARG	528	8,527	-39,862	-0.325	1.00	0.00
ATOM	5076	HH22	ARG	528	8,656	-40,569	-1,809	1.00	0.00
ATOM	5077	N	GLU	529	16,644	-35,548	2,651	1.00	0.00
ATOM	5078	CA	GLU	529	18,020	-35,109	2,298	1.00	0.00
ATOM	5079	C	GLU	529	18,520	-35,630	0.908	1.00	0.00
ATOM	5080	O	GLU	529	19,676	-35,991	0.774	1.00	0.00
ATOM	5081	CB	GLU	529	18,942	-35,244	3,543	1.00	0.00
ATOM	5082	CG	GLU	529	18,530	-34,343	4,759	1.00	0.00
ATOM	5083	CD	GLU	529	19,505	-34,474	5,945	1.00	0.00
ATOM	5084	OE1	GLU	529	20,609	-33,911	5,854	1.00	0.00
ATOM	5085	OE2	GLU	529	19,189	-35,031	7,076	1.00	0.00
ATOM	5086	H	GLU	529	15,968	-34,801	2,585	1.00	0.00
ATOM	5087	HA	GLU	529	18,015	-34,025	2,179	1.00	0.00
ATOM	5088	HB2	GLU	529	18,990	-36,288	3,851	1.00	0.00
ATOM	5089	HB3	GLU	529	19,985	-34,998	3,344	1.00	0.00
ATOM	5090	HG2	GLU	529	18,484	-33,288	4,487	1.00	0.00
ATOM	5091	HG3	GLU	529	17,528	-34,615	5,086	1.00	0.00
ATOM	5092	N	ASP	530	17,713	-35,571	-0.156	1.00	0.00
ATOM	5093	CA	ASP	530	17,908	-36,093	-1,448	1.00	0.00
ATOM	5094	C	ASP	530	18,600	-35,092	-2,347	1.00	0.00
ATOM	5095	O	ASP	530	17,922	-34,577	-3,252	1.00	0.00
ATOM	5096	CB	ASP	530	16,592	-36,659	-2,021	1.00	0.00
ATOM	5097	CG	ASP	530	16,877	-37,909	-2,879	1.00	0.00
ATOM	5098	OD1	ASP	530	17,420	-37,773	-4,026	1.00	0.00
ATOM	5099	OD2	ASP	530	16,435	-39,084	-2,578	1.00	0.00
ATOM	5100	H	ASP	530	16,812	-35,144	0.006	1.00	0.00
ATOM	5101	HA	ASP	530	18,584	-36,939	-1,326	1.00	0.00
ATOM	5102	HB2	ASP	530	15,911	-36,948	-1,221	1.00	0.00
ATOM	5103	HB3	ASP	530	16,024	-35,979	-2,657	1.00	0.00
ATOM	5104	N	ASP	531	19,842	-34,814	-2,152	1.00	0.00
ATOM	5105	CA	ASP	531	20,520	-33,815	-3,022	1.00	0.00
ATOM	5106	C	ASP	531	20,500	-34,106	-4,493	1.00	0.00
ATOM	5107	O	ASP	531	20,574	-33,193	-5,328	1.00	0.00
ATOM	5108	CB	ASP	531	21,957	-33,674	-2,420	1.00	0.00
ATOM	5109	CG	ASP	531	22,861	-34,891	-2,570	1.00	0.00
ATOM	5110	OD1	ASP	531	23,798	-34,811	-3,396	1.00	0.00
ATOM	5111	OD2	ASP	531	22,592	-35,896	-1,860	1.00	0.00
ATOM	5112	H	ASP	531	20,318	-35,152	-1,327	1.00	0.00
ATOM	5113	HA	ASP	531	19,963	-32,881	-2,946	1.00	0.00
ATOM	5114	HB2	ASP	531	22,474	-32,874	-2,950	1.00	0.00
ATOM	5115	HB3	ASP	531	21,895	-33,509	-1,345	1.00	0.00
ATOM	5116	N	LEU	532	20,196	-35,353	-4,864	1.00	0.00

ATOM	5117	CA	LEU	532	20,146	-35,790	-6,309	1.00	0.00
ATOM	5118	C	LEU	532	18,773	-35,414	-6,949	1.00	0.00
ATOM	5119	O	LEU	532	18,715	-34,665	-7,952	1.00	0.00
ATOM	5120	CB	LEU	532	20,434	-37,310	-6,394	1.00	0.00
ATOM	5121	CG	LEU	532	20,268	-37,983	-7,821	1.00	0.00
ATOM	5122	CD1	LEU	532	21,199	-37,330	-8,843	1.00	0.00
ATOM	5123	CD2	LEU	532	20,426	-39,474	-7,650	1.00	0.00
ATOM	5124	H	LEU	532	20,013	-36,018	-4,126	1.00	0.00
ATOM	5125	HA	LEU	532	20,928	-35,292	-6,882	1.00	0.00
ATOM	5126	HB2	LEU	532	21,425	-37,542	-6,002	1.00	0.00
ATOM	5127	HB3	LEU	532	19,695	-37,807	-5,765	1.00	0.00
ATOM	5128	HG	LEU	532	19,237	-37,839	-8,140	1.00	0.00
ATOM	5129	HD11	LEU	532	20,772	-36,361	-9,104	1.00	0.00
ATOM	5130	HD12	LEU	532	21,203	-37,907	-9,768	1.00	0.00
ATOM	5131	HD13	LEU	532	22,220	-37,126	-8,521	1.00	0.00
ATOM	5132	HD21	LEU	532	21,309	-39,586	-7,020	1.00	0.00
ATOM	5133	HD22	LEU	532	19,617	-39,853	-7,025	1.00	0.00
ATOM	5134	HD23	LEU	532	20,330	-40,059	-8,565	1.00	0.00
ATOM	5135	N	LEU	533	17,691	-35,851	-6,287	1.00	0.00
ATOM	5136	CA	LEU	533	16,355	-35,503	-6,623	1.00	0.00
ATOM	5137	C	LEU	533	16,058	-33,998	-6,387	1.00	0.00
ATOM	5138	O	LEU	533	15,273	-33,357	-7,118	1.00	0.00
ATOM	5139	CB	LEU	533	15,387	-36,369	-5,842	1.00	0.00
ATOM	5140	CG	LEU	533	13,883	-36,308	-6,314	1.00	0.00
ATOM	5141	CD1	LEU	533	13,664	-36,197	-7,827	1.00	0.00
ATOM	5142	CD2	LEU	533	13,207	-37,448	-5,625	1.00	0.00
ATOM	5143	H	LEU	533	17,735	-36,466	-5,487	1.00	0.00
ATOM	5144	HA	LEU	533	16,225	-35,651	-7,695	1.00	0.00
ATOM	5145	HB2	LEU	533	15,739	-37,398	-5,908	1.00	0.00
ATOM	5146	HB3	LEU	533	15,476	-36,127	-4,784	1.00	0.00
ATOM	5147	HG	LEU	533	13,495	-35,432	-5,795	1.00	0.00
ATOM	5148	HD11	LEU	533	13,961	-35,260	-8,299	1.00	0.00
ATOM	5149	HD12	LEU	533	12,630	-36,304	-8,151	1.00	0.00
ATOM	5150	HD13	LEU	533	14,244	-36,989	-8,301	1.00	0.00
ATOM	5151	HD21	LEU	533	13,382	-37,364	-4,552	1.00	0.00
ATOM	5152	HD22	LEU	533	12,156	-37,398	-5,915	1.00	0.00
ATOM	5153	HD23	LEU	533	13,554	-38,433	-5,937	1.00	0.00
ATOM	5154	N	LEU	534	16,747	-33,339	-5,486	1.00	0.00
ATOM	5155	CA	LEU	534	16,533	-31,974	-5,247	1.00	0.00
ATOM	5156	C	LEU	534	17,218	-31,090	-6,349	1.00	0.00
ATOM	5157	O	LEU	534	16,613	-30,063	-6,702	1.00	0.00
ATOM	5158	CB	LEU	534	17,052	-31,615	-3,837	1.00	0.00
ATOM	5159	CG	LEU	534	16,942	-30,109	-3,432	1.00	0.00

ATOM	5160	CD1	LEU	534	15,505	-29,779	-2,972	1.00	0.00
ATOM	5161	CD2	LEU	534	17,816	-29,842	-2,146	1.00	0.00
ATOM	5162	H	LEU	534	17,329	-33,730	-4,759	1.00	0.00
ATOM	5163	HA	LEU	534	15,458	-31,808	-5,321	1.00	0.00
ATOM	5164	HB2	LEU	534	16,602	-32,257	-3,080	1.00	0.00
ATOM	5165	HB3	LEU	534	18,114	-31,861	-3,801	1.00	0.00
ATOM	5166	HG	LEU	534	17,216	-29,456	-4,260	1.00	0.00
ATOM	5167	HD11	LEU	534	15,235	-28,728	-2,866	1.00	0.00
ATOM	5168	HD12	LEU	534	15,305	-30,309	-2,041	1.00	0.00
ATOM	5169	HD13	LEU	534	14,767	-30,274	-3,605	1.00	0.00
ATOM	5170	HD21	LEU	534	17,494	-30,446	-1,298	1.00	0.00
ATOM	5171	HD22	LEU	534	18,865	-30,035	-2,373	1.00	0.00
ATOM	5172	HD23	LEU	534	17,674	-28,824	-1,787	1.00	0.00
ATOM	5173	N	HID	535	18,306	-31,478	-6,887	1.00	0.00
ATOM	5174	CA	HID	535	18,838	-30,786	-8,107	1.00	0.00
ATOM	5175	C	HID	535	18,086	-31,022	-9,400	1.00	0.00
ATOM	5176	O	HID	535	17,750	-30,134	-10,213	1.00	0.00
ATOM	5177	CB	HID	535	20,328	-31,092	-8,207	1.00	0.00
ATOM	5178	CG	HID	535	21,127	-30,316	-9,229	1.00	0.00
ATOM	5179	CD2	HID	535	22,539	-30,342	-9,292	1.00	0.00
ATOM	5180	ND1	HID	535	20,624	-29,542	-10,210	1.00	0.00
ATOM	5181	CE1	HID	535	21,659	-29,000	-10,891	1.00	0.00
ATOM	5182	NE2	HID	535	22,850	-29,467	-10,296	1.00	0.00
ATOM	5183	H	HID	535	18,756	-32,298	-6,508	1.00	0.00
ATOM	5184	HA	HID	535	18,734	-29,712	-7,950	1.00	0.00
ATOM	5185	HB2	HID	535	20,765	-30,873	-7,233	1.00	0.00
ATOM	5186	HB3	HID	535	20,590	-32,125	-8,433	1.00	0.00
ATOM	5187	HD1	HID	535	19,640	-29,520	-10,438	1.00	0.00
ATOM	5188	HD2	HID	535	23,242	-30,888	-8,681	1.00	0.00
ATOM	5189	HE1	HID	535	21,610	-28,394	-11,783	1.00	0.00
ATOM	5190	N	GLN	536	17,746	-32,301	-9,696	1.00	0.00
ATOM	5191	CA	GLN	536	16,770	-32,711	-10,729	1.00	0.00
ATOM	5192	C	GLN	536	15,453	-31,881	-10,628	1.00	0.00
ATOM	5193	O	GLN	536	15,005	-31,403	-11,671	1.00	0.00
ATOM	5194	CB	GLN	536	16,398	-34,203	-10,511	1.00	0.00
ATOM	5195	CG	GLN	536	17,600	-35,155	-10,957	1.00	0.00
ATOM	5196	CD	GLN	536	17,357	-36,584	-10,460	1.00	0.00
ATOM	5197	NE2	GLN	536	18,219	-37,440	-10,856	1.00	0.00
ATOM	5198	OE1	GLN	536	16,331	-36,954	-9,868	1.00	0.00
ATOM	5199	H	GLN	536	18,089	-32,979	-9,030	1.00	0.00
ATOM	5200	HA	GLN	536	17,131	-32,577	-11,749	1.00	0.00
ATOM	5201	HB2	GLN	536	16,172	-34,297	-9,449	1.00	0.00
ATOM	5202	HB3	GLN	536	15,480	-34,433	-11,052	1.00	0.00

ATOM	5203	HG2	GLN	536	17,711	-35,247	-12,037	1.00	0.00
ATOM	5204	HG3	GLN	536	18,526	-34,725	-10,578	1.00	0.00
ATOM	5205	HE21	GLN	536	18,200	-38,399	-10,538	1.00	0.00
ATOM	5206	HE22	GLN	536	19,053	-37,061	-11,283	1.00	0.00
ATOM	5207	N	LEU	537	14,762	-31,730	-9,491	1.00	0.00
ATOM	5208	CA	LEU	537	13,490	-30,989	-9,354	1.00	0.00
ATOM	5209	C	LEU	537	13,617	-29,532	-9,731	1.00	0.00
ATOM	5210	O	LEU	537	12,747	-28,998	-10,382	1.00	0.00
ATOM	5211	CB	LEU	537	12,943	-31,086	-7,906	1.00	0.00
ATOM	5212	CG	LEU	537	12,198	-32,335	-7,491	1.00	0.00
ATOM	5213	CD1	LEU	537	11,640	-32,176	-6,030	1.00	0.00
ATOM	5214	CD2	LEU	537	11,061	-32,714	-8,422	1.00	0.00
ATOM	5215	H	LEU	537	15,071	-32,282	-8,703	1.00	0.00
ATOM	5216	HA	LEU	537	12,891	-31,508	-10,102	1.00	0.00
ATOM	5217	HB2	LEU	537	13,816	-30,892	-7,283	1.00	0.00
ATOM	5218	HB3	LEU	537	12,293	-30,216	-7,810	1.00	0.00
ATOM	5219	HG	LEU	537	12,858	-33,197	-7,393	1.00	0.00
ATOM	5220	HD11	LEU	537	11,139	-33,094	-5,721	1.00	0.00
ATOM	5221	HD12	LEU	537	10,880	-31,415	-5,857	1.00	0.00
ATOM	5222	HD13	LEU	537	12,458	-31,942	-5,350	1.00	0.00
ATOM	5223	HD21	LEU	537	10,380	-31,865	-8,474	1.00	0.00
ATOM	5224	HD22	LEU	537	11,413	-32,957	-9,424	1.00	0.00
ATOM	5225	HD23	LEU	537	10,621	-33,619	-8,002	1.00	0.00
ATOM	5226	N	LEU	538	14,833	-29,020	-9,435	1.00	0.00
ATOM	5227	CA	LEU	538	15,247	-27,634	-9,785	1.00	0.00
ATOM	5228	C	LEU	538	15,450	-27,450	-11,324	1.00	0.00
ATOM	5229	O	LEU	538	15,204	-26,371	-11,800	1.00	0.00
ATOM	5230	CB	LEU	538	16,437	-27,229	-8,827	1.00	0.00
ATOM	5231	CG	LEU	538	16,184	-27,074	-7,330	1.00	0.00
ATOM	5232	CD1	LEU	538	17,428	-27,058	-6,512	1.00	0.00
ATOM	5233	CD2	LEU	538	15,337	-25,847	-7,044	1.00	0.00
ATOM	5234	H	LEU	538	15,482	-29,615	-8,940	1.00	0.00
ATOM	5235	HA	LEU	538	14,389	-26,996	-9,576	1.00	0.00
ATOM	5236	HB2	LEU	538	17,307	-27,848	-9,045	1.00	0.00
ATOM	5237	HB3	LEU	538	16,862	-26,278	-9,148	1.00	0.00
ATOM	5238	HG	LEU	538	15,664	-27,944	-6,926	1.00	0.00
ATOM	5239	HD11	LEU	538	17,167	-27,059	-5,453	1.00	0.00
ATOM	5240	HD12	LEU	538	17,977	-26,150	-6,763	1.00	0.00
ATOM	5241	HD13	LEU	538	18,007	-27,956	-6,724	1.00	0.00
ATOM	5242	HD21	LEU	538	14,422	-25,964	-7,625	1.00	0.00
ATOM	5243	HD22	LEU	538	15,074	-25,838	-5,987	1.00	0.00
ATOM	5244	HD23	LEU	538	15,871	-24,950	-7,360	1.00	0.00
ATOM	5245	N	LYS	539	15,788	-28,496	-12,067	1.00	0.00

ATOM	5246	CA	LYS	539	15,692	-28,461	-13,529	1.00	0.00
ATOM	5247	C	LYS	539	14,278	-28,622	-14,086	1.00	0.00
ATOM	5248	O	LYS	539	13,962	-28,180	-15,166	1.00	0.00
ATOM	5249	CB	LYS	539	16,674	-29,518	-14,069	1.00	0.00
ATOM	5250	CG	LYS	539	18,125	-29,290	-13,620	1.00	0.00
ATOM	5251	CD	LYS	539	19,065	-30,090	-14,533	1.00	0.00
ATOM	5252	CE	LYS	539	20,536	-29,768	-14,284	1.00	0.00
ATOM	5253	NZ	LYS	539	21,362	-30,284	-15,422	1.00	0.00
ATOM	5254	H	LYS	539	16,023	-29,305	-11,511	1.00	0.00
ATOM	5255	HA	LYS	539	16,111	-27,540	-13,935	1.00	0.00
ATOM	5256	HB2	LYS	539	16,268	-30,483	-13,764	1.00	0.00
ATOM	5257	HB3	LYS	539	16,621	-29,387	-15,149	1.00	0.00
ATOM	5258	HG2	LYS	539	18,395	-28,236	-13,562	1.00	0.00
ATOM	5259	HG3	LYS	539	18,147	-29,692	-12,607	1.00	0.00
ATOM	5260	HD2	LYS	539	18,908	-31,153	-14,354	1.00	0.00
ATOM	5261	HD3	LYS	539	18,836	-29,836	-15,569	1.00	0.00
ATOM	5262	HE2	LYS	539	20,691	-28,726	-14,006	1.00	0.00
ATOM	5263	HE3	LYS	539	20,824	-30,317	-13,386	1.00	0.00
ATOM	5264	HZ1	LYS	539	21,165	-29,739	-16,249	1.00	0.00
ATOM	5265	HZ2	LYS	539	21,291	-31,287	-15,523	1.00	0.00
ATOM	5266	HZ3	LYS	539	22,344	-30,131	-15,242	1.00	0.00
ATOM	5267	N	ARG	540	13,391	-29,251	-13,341	1.00	0.00
ATOM	5268	CA	ARG	540	12,067	-29,801	-13,817	1.00	0.00
ATOM	5269	C	ARG	540	10,873	-28,895	-13,510	1.00	0.00
ATOM	5270	O	ARG	540	9,725	-29,378	-13,487	1.00	0.00
ATOM	5271	CB	ARG	540	11,910	-31,205	-13,356	1.00	0.00
ATOM	5272	CG	ARG	540	12,894	-32,237	-13,940	1.00	0.00
ATOM	5273	CD	ARG	540	12,686	-33,598	-13,222	1.00	0.00
ATOM	5274	NE	ARG	540	13,856	-34,428	-13,365	1.00	0.00
ATOM	5275	CZ	ARG	540	13,882	-35,703	-13,080	1.00	0.00
ATOM	5276	NH1	ARG	540	13,003	-36,251	-12,328	1.00	0.00
ATOM	5277	NH2	ARG	540	14,840	-36,446	-13,481	1.00	0.00
ATOM	5278	H	ARG	540	13,776	-29,669	-12,506	1.00	0.00
ATOM	5279	HA	ARG	540	12,117	-29,820	-14,906	1.00	0.00
ATOM	5280	HB2	ARG	540	11,952	-31,241	-12,267	1.00	0.00
ATOM	5281	HB3	ARG	540	10,885	-31,473	-13,611	1.00	0.00
ATOM	5282	HG2	ARG	540	12,722	-32,386	-15,006	1.00	0.00
ATOM	5283	HG3	ARG	540	13,902	-31,868	-13,751	1.00	0.00
ATOM	5284	HD2	ARG	540	12,564	-33,354	-12,167	1.00	0.00
ATOM	5285	HD3	ARG	540	11,914	-34,165	-13,742	1.00	0.00
ATOM	5286	HE	ARG	540	14,648	-34,035	-13,853	1.00	0.00
ATOM	5287	HH11	ARG	540	12,286	-35,654	-11,943	1.00	0.00
ATOM	5288	HH12	ARG	540	12,999	-37,246	-12,156	1.00	0.00

ATOM	5289	HH21	ARG	540	15,579	-36,023	-14,023	1.00	0.00
ATOM	5290	HH22	ARG	540	14,868	-37,354	-13,038	1.00	0.00
ATOM	5291	N	GLY	541	11,039	-27,549	-13,507	1.00	0.00
ATOM	5292	CA	GLY	541	9,921	-26,571	-13,441	1.00	0.00
ATOM	5293	C	GLY	541	9,344	-26,344	-12,040	1.00	0.00
ATOM	5294	O	GLY	541	8,172	-26,082	-11,974	1.00	0.00
ATOM	5295	H	GLY	541	11,975	-27,222	-13,700	1.00	0.00
ATOM	5296	HA2	GLY	541	10,202	-25,606	-13,861	1.00	0.00
ATOM	5297	HA3	GLY	541	9,183	-27,036	-14,095	1.00	0.00
ATOM	5298	N	LEU	542	10,239	-26,273	-11,102	1.00	0.00
ATOM	5299	CA	LEU	542	9,976	-25,968	-9,680	1.00	0.00
ATOM	5300	C	LEU	542	10,910	-24,868	-9,211	1.00	0.00
ATOM	5301	O	LEU	542	11,848	-24,453	-9,897	1.00	0.00
ATOM	5302	CB	LEU	542	10,266	-27,146	-8,801	1.00	0.00
ATOM	5303	CG	LEU	542	9,166	-28,231	-8,900	1.00	0.00
ATOM	5304	CD1	LEU	542	9,303	-29,188	-10,005	1.00	0.00
ATOM	5305	CD2	LEU	542	9,126	-29,099	-7,664	1.00	0.00
ATOM	5306	H	LEU	542	11,169	-26,625	-11,277	1.00	0.00
ATOM	5307	HA	LEU	542	8,933	-25,667	-9,590	1.00	0.00
ATOM	5308	HB2	LEU	542	11,278	-27,520	-8,947	1.00	0.00
ATOM	5309	HB3	LEU	542	10,257	-26,752	-7,785	1.00	0.00
ATOM	5310	HG	LEU	542	8,182	-27,760	-8,902	1.00	0.00
ATOM	5311	HD11	LEU	542	10,188	-29,826	-10,022	1.00	0.00
ATOM	5312	HD12	LEU	542	9,226	-28,674	-10,963	1.00	0.00
ATOM	5313	HD13	LEU	542	8,373	-29,740	-9,870	1.00	0.00
ATOM	5314	HD21	LEU	542	8,210	-29,690	-7,641	1.00	0.00
ATOM	5315	HD22	LEU	542	9,987	-29,760	-7,572	1.00	0.00
ATOM	5316	HD23	LEU	542	9,113	-28,464	-6,777	1.00	0.00
ATOM	5317	N	ASP	543	10,705	-24,324	-8,015	1.00	0.00
ATOM	5318	CA	ASP	543	11,489	-23,183	-7,578	1.00	0.00
ATOM	5319	C	ASP	543	11,489	-23,114	-5,985	1.00	0.00
ATOM	5320	O	ASP	543	10,447	-23,251	-5,372	1.00	0.00
ATOM	5321	CB	ASP	543	10,835	-21,913	-8,254	1.00	0.00
ATOM	5322	CG	ASP	543	11,556	-20,645	-7,843	1.00	0.00
ATOM	5323	OD1	ASP	543	12,553	-20,293	-8,487	1.00	0.00
ATOM	5324	OD2	ASP	543	11,280	-20,075	-6,767	1.00	0.00
ATOM	5325	H	ASP	543	9,952	-24,634	-7,418	1.00	0.00
ATOM	5326	HA	ASP	543	12,515	-23,317	-7,922	1.00	0.00
ATOM	5327	HB2	ASP	543	10,906	-22,014	-9,337	1.00	0.00
ATOM	5328	HB3	ASP	543	9,788	-21,965	-7,953	1.00	0.00
ATOM	5329	N	PRO	544	12,655	-22,757	-5,324	1.00	0.00
ATOM	5330	CA	PRO	544	12,895	-22,769	-3,815	1.00	0.00
ATOM	5331	C	PRO	544	11,944	-21,920	-2,980	1.00	0.00



ATOM	5332	O	PRO	544	11,898	-22,115	-1,758	1.00	0.00
ATOM	5333	CB	PRO	544	14,356	-22,161	-3,576	1.00	0.00
ATOM	5334	CG	PRO	544	15,105	-22,656	-4,864	1.00	0.00
ATOM	5335	CD	PRO	544	13,976	-22,563	-5,873	1.00	0.00
ATOM	5336	HA	PRO	544	12,907	-23,829	-3,563	1.00	0.00
ATOM	5337	HB2	PRO	544	14,232	-21,080	-3,513	1.00	0.00
ATOM	5338	HB3	PRO	544	14,665	-22,461	-2,575	1.00	0.00
ATOM	5339	HG2	PRO	544	15,976	-22,053	-5,120	1.00	0.00
ATOM	5340	HG3	PRO	544	15,501	-23,653	-4,667	1.00	0.00
ATOM	5341	HD2	PRO	544	14,039	-21,520	-6,186	1.00	0.00
ATOM	5342	HD3	PRO	544	14,101	-23,301	-6,666	1.00	0.00
ATOM	5343	N	ASN	545	11,303	-20,915	-3,532	1.00	0.00
ATOM	5344	CA	ASN	545	10,521	-19,894	-2,801	1.00	0.00
ATOM	5345	C	ASN	545	9,110	-20,309	-2,454	1.00	0.00
ATOM	5346	O	ASN	545	8,654	-19,937	-1,349	1.00	0.00
ATOM	5347	CB	ASN	545	10,483	-18,528	-3,509	1.00	0.00
ATOM	5348	CG	ASN	545	11,814	-17,926	-3,841	1.00	0.00
ATOM	5349	ND2	ASN	545	12,522	-18,395	-4,869	1.00	0.00
ATOM	5350	OD1	ASN	545	12,316	-17,036	-3,134	1.00	0.00
ATOM	5351	H	ASN	545	11,528	-20,706	-4,495	1.00	0.00
ATOM	5352	HA	ASN	545	11,044	-19,820	-1,847	1.00	0.00
ATOM	5353	HB2	ASN	545	9,931	-18,562	-4,447	1.00	0.00
ATOM	5354	HB3	ASN	545	9,980	-17,784	-2,892	1.00	0.00
ATOM	5355	HD21	ASN	545	12,023	-18,941	-5,555	1.00	0.00
ATOM	5356	HD22	ASN	545	13,363	-17,898	-5,128	1.00	0.00
ATOM	5357	N	GLU	546	8,545	-21,279	-3,135	1.00	0.00
ATOM	5358	CA	GLU	546	7,387	-21,949	-2,699	1.00	0.00
ATOM	5359	C	GLU	546	7,675	-22,632	-1,309	1.00	0.00
ATOM	5360	O	GLU	546	8,716	-23,338	-1,212	1.00	0.00
ATOM	5361	CB	GLU	546	7,049	-23,039	-3,726	1.00	0.00
ATOM	5362	CG	GLU	546	5,883	-23,971	-3,334	1.00	0.00
ATOM	5363	CD	GLU	546	5,579	-25,021	-4,399	1.00	0.00
ATOM	5364	OE1	GLU	546	5,414	-26,223	-4,093	1.00	0.00
ATOM	5365	OE2	GLU	546	5,312	-24,588	-5,575	1.00	0.00
ATOM	5366	H	GLU	546	9,078	-21,647	-3,911	1.00	0.00
ATOM	5367	HA	GLU	546	6,538	-21,270	-2,623	1.00	0.00
ATOM	5368	HB2	GLU	546	6,821	-22,643	-4,716	1.00	0.00
ATOM	5369	HB3	GLU	546	7,864	-23,740	-3,904	1.00	0.00
ATOM	5370	HG2	GLU	546	6,117	-24,444	-2,380	1.00	0.00
ATOM	5371	HG3	GLU	546	5,053	-23,268	-3,265	1.00	0.00
ATOM	5372	N	SER	547	6,746	-22,648	-0.360	1.00	0.00
ATOM	5373	CA	SER	547	6,958	-23,167	0.971	1.00	0.00
ATOM	5374	C	SER	547	5,888	-24,049	1,513	1.00	0.00

ATOM	5375	O	SER	547	4,785	-24,069	1,051	1.00	0.00
ATOM	5376	CB	SER	547	7,113	-21,976	1,928	1.00	0.00
ATOM	5377	OG	SER	547	6,085	-21,065	1,903	1.00	0.00
ATOM	5378	H	SER	547	5,898	-22,121	-0.513	1.00	0.00
ATOM	5379	HA	SER	547	7,897	-23,718	1,025	1.00	0.00
ATOM	5380	HB2	SER	547	7,205	-22,294	2,967	1.00	0.00
ATOM	5381	HB3	SER	547	8,062	-21,500	1,681	1.00	0.00
ATOM	5382	HG	SER	547	6,370	-20,308	2,422	1.00	0.00
ATOM	5383	N	ASP	548	6,261	-24,829	2,502	1.00	0.00
ATOM	5384	CA	ASP	548	5,277	-25,307	3,478	1.00	0.00
ATOM	5385	C	ASP	548	4,480	-24,153	4,166	1.00	0.00
ATOM	5386	O	ASP	548	5,047	-23,072	4,331	1.00	0.00
ATOM	5387	CB	ASP	548	6,009	-26,263	4,503	1.00	0.00
ATOM	5388	CG	ASP	548	4,914	-26,945	5,385	1.00	0.00
ATOM	5389	OD1	ASP	548	5,166	-27,153	6,602	1.00	0.00
ATOM	5390	OD2	ASP	548	3,742	-27,079	4,973	1.00	0.00
ATOM	5391	H	ASP	548	7,228	-24,880	2,789	1.00	0.00
ATOM	5392	HA	ASP	548	4,495	-25,842	2,940	1.00	0.00
ATOM	5393	HB2	ASP	548	6,510	-27,064	3,960	1.00	0.00
ATOM	5394	HB3	ASP	548	6,753	-25,780	5,136	1.00	0.00
ATOM	5395	N	ASN	549	3,230	-24,422	4,351	1.00	0.00
ATOM	5396	CA	ASN	549	2,248	-23,467	4,926	1.00	0.00
ATOM	5397	C	ASN	549	2,462	-23,091	6,466	1.00	0.00
ATOM	5398	O	ASN	549	2,013	-22,096	6,912	1.00	0.00
ATOM	5399	CB	ASN	549	0.903	-24,063	4,713	1.00	0.00
ATOM	5400	CG	ASN	549	-0.197	-23,077	5,121	1.00	0.00
ATOM	5401	ND2	ASN	549	-1,091	-23,460	5,969	1.00	0.00
ATOM	5402	OD1	ASN	549	-0.371	-22,010	4,616	1.00	0.00
ATOM	5403	H	ASN	549	3,010	-25,407	4,304	1.00	0.00
ATOM	5404	HA	ASN	549	2,307	-22,501	4,425	1.00	0.00
ATOM	5405	HB2	ASN	549	0.789	-24,390	3,680	1.00	0.00
ATOM	5406	HB3	ASN	549	0.947	-24,914	5,393	1.00	0.00
ATOM	5407	HD21	ASN	549	-1,076	-24,351	6,443	1.00	0.00
ATOM	5408	HD22	ASN	549	-1,924	-22,897	6,068	1.00	0.00
ATOM	5409	N	ASN	550	3,356	-23,757	7,147	1.00	0.00
ATOM	5410	CA	ASN	550	3,823	-23,572	8,531	1.00	0.00
ATOM	5411	C	ASN	550	4,905	-22,489	8,566	1.00	0.00
ATOM	5412	O	ASN	550	5,613	-22,337	9,555	1.00	0.00
ATOM	5413	CB	ASN	550	4,258	-24,784	9,183	1.00	0.00
ATOM	5414	CG	ASN	550	3,146	-25,796	9,425	1.00	0.00
ATOM	5415	ND2	ASN	550	3,061	-26,767	8,565	1.00	0.00
ATOM	5416	OD1	ASN	550	2,276	-25,612	10,272	1.00	0.00
ATOM	5417	H	ASN	550	3,985	-24,427	6,726	1.00	0.00

ATOM	5418	HA	ASN	550	3,016	-23,110	9,101	1.00	0.00
ATOM	5419	HB2	ASN	550	5,192	-25,198	8,805	1.00	0.00
ATOM	5420	HB3	ASN	550	4,466	-24,543	10,226	1.00	0.00
ATOM	5421	HD21	ASN	550	3,726	-26,798	7,806	1.00	0.00
ATOM	5422	HD22	ASN	550	2,196	-27,279	8,463	1.00	0.00
ATOM	5423	N	GLY	551	5,067	-21,703	7,476	1.00	0.00
ATOM	5424	CA	GLY	551	6,074	-20,605	7,429	1.00	0.00
ATOM	5425	C	GLY	551	7,475	-21,081	7,130	1.00	0.00
ATOM	5426	O	GLY	551	8,472	-20,687	7,813	1.00	0.00
ATOM	5427	H	GLY	551	4,373	-21,737	6,743	1.00	0.00
ATOM	5428	HA2	GLY	551	5,819	-19,935	6,608	1.00	0.00
ATOM	5429	HA3	GLY	551	6,044	-20,000	8,335	1.00	0.00
ATOM	5430	N	ARG	552	7,546	-22,066	6,252	1.00	0.00
ATOM	5431	CA	ARG	552	8,636	-23,069	6,351	1.00	0.00
ATOM	5432	C	ARG	552	9,149	-23,517	4,957	1.00	0.00
ATOM	5433	O	ARG	552	8,497	-24,270	4,304	1.00	0.00
ATOM	5434	CB	ARG	552	8,104	-24,158	7,277	1.00	0.00
ATOM	5435	CG	ARG	552	8,987	-25,394	7,429	1.00	0.00
ATOM	5436	CD	ARG	552	8,301	-26,341	8,387	1.00	0.00
ATOM	5437	NE	ARG	552	8,811	-27,736	8,292	1.00	0.00
ATOM	5438	CZ	ARG	552	8,262	-28,842	7,833	1.00	0.00
ATOM	5439	NH1	ARG	552	7,083	-28,897	7,518	1.00	0.00
ATOM	5440	NH2	ARG	552	8,854	-29,944	7,914	1.00	0.00
ATOM	5441	H	ARG	552	6,798	-22,317	5,622	1.00	0.00
ATOM	5442	HA	ARG	552	9,518	-22,599	6,782	1.00	0.00
ATOM	5443	HB2	ARG	552	7,881	-23,655	8,217	1.00	0.00
ATOM	5444	HB3	ARG	552	7,133	-24,432	6,867	1.00	0.00
ATOM	5445	HG2	ARG	552	8,994	-25,887	6,457	1.00	0.00
ATOM	5446	HG3	ARG	552	10,011	-25,225	7,761	1.00	0.00
ATOM	5447	HD2	ARG	552	8,319	-25,903	9,385	1.00	0.00
ATOM	5448	HD3	ARG	552	7,249	-26,369	8,103	1.00	0.00
ATOM	5449	HE	ARG	552	9,672	-27,933	8,780	1.00	0.00
ATOM	5450	HH11	ARG	552	6,472	-28,101	7,406	1.00	0.00
ATOM	5451	HH12	ARG	552	6,706	-29,765	7,168	1.00	0.00
ATOM	5452	HH21	ARG	552	9,800	-30,023	8,258	1.00	0.00
ATOM	5453	HH22	ARG	552	8,403	-30,713	7,441	1.00	0.00
ATOM	5454	N	THR	553	10,233	-22,890	4,435	1.00	0.00
ATOM	5455	CA	THR	553	10,668	-22,984	3,044	1.00	0.00
ATOM	5456	C	THR	553	11,608	-24,155	2,964	1.00	0.00
ATOM	5457	O	THR	553	12,208	-24,521	3,974	1.00	0.00
ATOM	5458	CB	THR	553	11,484	-21,701	2,558	1.00	0.00
ATOM	5459	CG2	THR	553	10,584	-20,487	2,535	1.00	0.00
ATOM	5460	OG1	THR	553	12,547	-21,417	3,453	1.00	0.00

ATOM	5461	H	THR	553	10,505	-22,102	5,006	1.00	0.00
ATOM	5462	HA	THR	553	9,839	-23,070	2,341	1.00	0.00
ATOM	5463	HB	THR	553	12,006	-21,927	1,628	1.00	0.00
ATOM	5464	HG1	THR	553	13,103	-20,796	2,977	1.00	0.00
ATOM	5465	HG21	THR	553	9,733	-20,617	3,203	1.00	0.00
ATOM	5466	HG22	THR	553	10,138	-20,424	1,544	1.00	0.00
ATOM	5467	HG23	THR	553	11,191	-19,597	2,709	1.00	0.00
ATOM	5468	N	PRO	554	11,902	-24,662	1,763	1.00	0.00
ATOM	5469	CA	PRO	554	12,979	-25,609	1,550	1.00	0.00
ATOM	5470	C	PRO	554	14,386	-25,251	2,207	1.00	0.00
ATOM	5471	O	PRO	554	15,108	-26,133	2,689	1.00	0.00
ATOM	5472	CB	PRO	554	13,079	-25,722	0.037	1.00	0.00
ATOM	5473	CG	PRO	554	11,693	-25,362	-0.484	1.00	0.00
ATOM	5474	CD	PRO	554	11,137	-24,412	0.549	1.00	0.00
ATOM	5475	HA	PRO	554	12,684	-26,583	1,942	1.00	0.00
ATOM	5476	HB2	PRO	554	13,808	-25,017	-0.361	1.00	0.00
ATOM	5477	HB3	PRO	554	13,356	-26,728	-0.280	1.00	0.00
ATOM	5478	HG2	PRO	554	11,831	-24,875	-1,449	1.00	0.00
ATOM	5479	HG3	PRO	554	11,116	-26,278	-0.605	1.00	0.00
ATOM	5480	HD2	PRO	554	11,289	-23,391	0.198	1.00	0.00
ATOM	5481	HD3	PRO	554	10,071	-24,519	0.750	1.00	0.00
ATOM	5482	N	LEU	555	14,776	-23,963	2,094	1.00	0.00
ATOM	5483	CA	LEU	555	16,051	-23,501	2,718	1.00	0.00
ATOM	5484	C	LEU	555	16,037	-23,501	4,188	1.00	0.00
ATOM	5485	O	LEU	555	17,022	-23,791	4,889	1.00	0.00
ATOM	5486	CB	LEU	555	16,388	-22,067	2,143	1.00	0.00
ATOM	5487	CG	LEU	555	17,573	-21,342	2,796	1.00	0.00
ATOM	5488	CD1	LEU	555	18,884	-22,057	2,472	1.00	0.00
ATOM	5489	CD2	LEU	555	17,731	-19,962	2,325	1.00	0.00
ATOM	5490	H	LEU	555	14,110	-23,342	1,657	1.00	0.00
ATOM	5491	HA	LEU	555	16,791	-24,268	2,489	1.00	0.00
ATOM	5492	HB2	LEU	555	16,527	-22,108	1,062	1.00	0.00
ATOM	5493	HB3	LEU	555	15,516	-21,458	2,379	1.00	0.00
ATOM	5494	HG	LEU	555	17,474	-21,444	3,877	1.00	0.00
ATOM	5495	HD11	LEU	555	19,055	-22,148	1,399	1.00	0.00
ATOM	5496	HD12	LEU	555	18,789	-23,062	2,881	1.00	0.00
ATOM	5497	HD13	LEU	555	19,707	-21,474	2,883	1.00	0.00
ATOM	5498	HD21	LEU	555	17,668	-19,987	1,237	1.00	0.00
ATOM	5499	HD22	LEU	555	16,969	-19,318	2,764	1.00	0.00
ATOM	5500	HD23	LEU	555	18,696	-19,568	2,643	1.00	0.00
ATOM	5501	N	HIE	556	14,881	-23,161	4,780	1.00	0.00
ATOM	5502	CA	HIE	556	14,745	-23,253	6,210	1.00	0.00
ATOM	5503	C	HIE	556	14,808	-24,684	6,768	1.00	0.00

ATOM	5504	O	HIE	556	15,391	-24,914	7,811	1.00	0.00
ATOM	5505	CB	HIE	556	13,528	-22,526	6,747	1.00	0.00
ATOM	5506	CG	HIE	556	13,557	-22,239	8,259	1.00	0.00
ATOM	5507	CD2	HIE	556	13,191	-23,100	9,273	1.00	0.00
ATOM	5508	ND1	HIE	556	13,879	-20,976	8,770	1.00	0.00
ATOM	5509	CE1	HIE	556	13,828	-21,106	10,152	1.00	0.00
ATOM	5510	NE2	HIE	556	13,345	-22,319	10,438	1.00	0.00
ATOM	5511	H	HIE	556	14,075	-22,983	4,197	1.00	0.00
ATOM	5512	HA	HIE	556	15,660	-22,814	6,605	1.00	0.00
ATOM	5513	HB2	HIE	556	13,407	-21,569	6,241	1.00	0.00
ATOM	5514	HB3	HIE	556	12,652	-23,159	6,608	1.00	0.00
ATOM	5515	HD2	HIE	556	13,036	-24,167	9,199	1.00	0.00
ATOM	5516	HE1	HIE	556	14,031	-20,337	10,883	1.00	0.00
ATOM	5517	HE2	HIE	556	13,311	-22,794	11,329	1.00	0.00
ATOM	5518	N	ILE	557	14,184	-25,620	6,088	1.00	0.00
ATOM	5519	CA	ILE	557	14,512	-27,027	6,303	1.00	0.00
ATOM	5520	C	ILE	557	16,036	-27,258	6,245	1.00	0.00
ATOM	5521	O	ILE	557	16,617	-27,867	7,179	1.00	0.00
ATOM	5522	CB	ILE	557	13,570	-27,923	5,469	1.00	0.00
ATOM	5523	CG1	ILE	557	12,077	-27,779	5,825	1.00	0.00
ATOM	5524	CG2	ILE	557	14,014	-29,405	5,596	1.00	0.00
ATOM	5525	CD1	ILE	557	11,100	-28,198	4,669	1.00	0.00
ATOM	5526	H	ILE	557	13,879	-25,283	5,185	1.00	0.00
ATOM	5527	HA	ILE	557	14,181	-27,222	7,323	1.00	0.00
ATOM	5528	HB	ILE	557	13,717	-27,620	4,432	1.00	0.00
ATOM	5529	HG12	ILE	557	11,853	-28,332	6,738	1.00	0.00
ATOM	5530	HG13	ILE	557	11,893	-26,739	6,092	1.00	0.00
ATOM	5531	HG21	ILE	557	13,242	-30,116	5,301	1.00	0.00
ATOM	5532	HG22	ILE	557	14,276	-29,564	6,642	1.00	0.00
ATOM	5533	HG23	ILE	557	14,930	-29,631	5,050	1.00	0.00
ATOM	5534	HD11	ILE	557	11,016	-29,284	4,669	1.00	0.00
ATOM	5535	HD12	ILE	557	11,288	-27,754	3,692	1.00	0.00
ATOM	5536	HD13	ILE	557	10,114	-27,993	5,086	1.00	0.00
ATOM	5537	N	ALA	558	16,683	-26,987	5,075	1.00	0.00
ATOM	5538	CA	ALA	558	18,129	-27,367	4,774	1.00	0.00
ATOM	5539	C	ALA	558	19,185	-26,819	5,845	1.00	0.00
ATOM	5540	O	ALA	558	20,181	-27,453	6,180	1.00	0.00
ATOM	5541	CB	ALA	558	18,571	-27,029	3,385	1.00	0.00
ATOM	5542	H	ALA	558	16,153	-26,786	4,239	1.00	0.00
ATOM	5543	HA	ALA	558	18,282	-28,446	4,760	1.00	0.00
ATOM	5544	HB1	ALA	558	18,540	-25,945	3,280	1.00	0.00
ATOM	5545	HB2	ALA	558	17,890	-27,495	2,672	1.00	0.00
ATOM	5546	HB3	ALA	558	19,593	-27,391	3,275	1.00	0.00

ATOM	5547	N	ALA	559	18,969	-25,616	6,331	1.00	0.00
ATOM	5548	CA	ALA	559	19,672	-24,952	7,473	1.00	0.00
ATOM	5549	C	ALA	559	19,326	-25,665	8,817	1.00	0.00
ATOM	5550	O	ALA	559	20,236	-26,031	9,606	1.00	0.00
ATOM	5551	CB	ALA	559	19,246	-23,431	7,615	1.00	0.00
ATOM	5552	H	ALA	559	18,209	-25,100	5,913	1.00	0.00
ATOM	5553	HA	ALA	559	20,755	-25,009	7,359	1.00	0.00
ATOM	5554	HB1	ALA	559	18,198	-23,185	7,790	1.00	0.00
ATOM	5555	HB2	ALA	559	19,511	-22,833	6,743	1.00	0.00
ATOM	5556	HB3	ALA	559	19,752	-23,028	8,493	1.00	0.00
ATOM	5557	N	SER	560	18,023	-25,921	9,004	1.00	0.00
ATOM	5558	CA	SER	560	17,522	-26,572	10,219	1.00	0.00
ATOM	5559	C	SER	560	17,817	-28,078	10,289	1.00	0.00
ATOM	5560	O	SER	560	17,547	-28,694	11,304	1.00	0.00
ATOM	5561	CB	SER	560	16,052	-26,161	10,492	1.00	0.00
ATOM	5562	OG	SER	560	15,693	-26,125	11,864	1.00	0.00
ATOM	5563	H	SER	560	17,339	-25,586	8,343	1.00	0.00
ATOM	5564	HA	SER	560	18,078	-26,114	11,038	1.00	0.00
ATOM	5565	HB2	SER	560	16,057	-25,100	10,248	1.00	0.00
ATOM	5566	HB3	SER	560	15,299	-26,574	9,821	1.00	0.00
ATOM	5567	HG	SER	560	15,132	-25,369	12,051	1.00	0.00
ATOM	5568	N	LYS	561	18,451	-28,714	9,315	1.00	0.00
ATOM	5569	CA	LYS	561	19,070	-30,043	9,380	1.00	0.00
ATOM	5570	C	LYS	561	20,598	-30,052	9,074	1.00	0.00
ATOM	5571	O	LYS	561	21,258	-31,119	9,054	1.00	0.00
ATOM	5572	CB	LYS	561	18,214	-31,046	8,545	1.00	0.00
ATOM	5573	CG	LYS	561	16,718	-31,016	8,887	1.00	0.00
ATOM	5574	CD	LYS	561	16,099	-32,435	8,820	1.00	0.00
ATOM	5575	CE	LYS	561	16,440	-33,231	7,521	1.00	0.00
ATOM	5576	NZ	LYS	561	16,119	-34,672	7,563	1.00	0.00
ATOM	5577	H	LYS	561	18,257	-28,213	8,460	1.00	0.00
ATOM	5578	HA	LYS	561	18,951	-30,331	10,426	1.00	0.00
ATOM	5579	HB2	LYS	561	18,448	-30,803	7,509	1.00	0.00
ATOM	5580	HB3	LYS	561	18,687	-32,017	8,686	1.00	0.00
ATOM	5581	HG2	LYS	561	16,635	-30,796	9,952	1.00	0.00
ATOM	5582	HG3	LYS	561	16,178	-30,313	8,254	1.00	0.00
ATOM	5583	HD2	LYS	561	16,254	-33,035	9,717	1.00	0.00
ATOM	5584	HD3	LYS	561	15,045	-32,157	8,809	1.00	0.00
ATOM	5585	HE2	LYS	561	15,830	-32,833	6,710	1.00	0.00
ATOM	5586	HE3	LYS	561	17,513	-33,274	7,335	1.00	0.00
ATOM	5587	HZ1	LYS	561	15,226	-34,843	8,003	1.00	0.00
ATOM	5588	HZ2	LYS	561	16,809	-35,163	8,114	1.00	0.00
ATOM	5589	HZ3	LYS	561	16,076	-34,954	6,594	1.00	0.00

ATOM	5590	N	GLY	562	21,237	-28,889	8,962	1.00	0.00
ATOM	5591	CA	GLY	562	22,651	-28,713	8,734	1.00	0.00
ATOM	5592	C	GLY	562	23,078	-29,371	7,436	1.00	0.00
ATOM	5593	O	GLY	562	24,169	-29,875	7,313	1.00	0.00
ATOM	5594	H	GLY	562	20,717	-28,026	8,889	1.00	0.00
ATOM	5595	HA2	GLY	562	22,764	-27,644	8,555	1.00	0.00
ATOM	5596	HA3	GLY	562	23,220	-29,131	9,564	1.00	0.00
ATOM	5597	N	THR	563	22,194	-29,409	6,425	1.00	0.00
ATOM	5598	CA	THR	563	22,449	-30,081	5,121	1.00	0.00
ATOM	5599	C	THR	563	23,221	-29,250	4,094	1.00	0.00
ATOM	5600	O	THR	563	22,736	-28,941	2,962	1.00	0.00
ATOM	5601	CB	THR	563	21,031	-30,440	4,609	1.00	0.00
ATOM	5602	CG2	THR	563	20,941	-31,356	3,438	1.00	0.00
ATOM	5603	OG1	THR	563	20,329	-31,073	5,637	1.00	0.00
ATOM	5604	H	THR	563	21,285	-28,976	6,511	1.00	0.00
ATOM	5605	HA	THR	563	22,894	-31,063	5,275	1.00	0.00
ATOM	5606	HB	THR	563	20,543	-29,480	4,440	1.00	0.00
ATOM	5607	HG1	THR	563	20,566	-32,002	5,593	1.00	0.00
ATOM	5608	HG21	THR	563	21,641	-31,084	2,649	1.00	0.00
ATOM	5609	HG22	THR	563	20,001	-31,427	2,891	1.00	0.00
ATOM	5610	HG23	THR	563	21,019	-32,329	3,923	1.00	0.00
ATOM	5611	N	LEU	564	24,421	-28,960	4,455	1.00	0.00
ATOM	5612	CA	LEU	564	25,278	-27,986	3,774	1.00	0.00
ATOM	5613	C	LEU	564	25,294	-27,982	2,229	1.00	0.00
ATOM	5614	O	LEU	564	25,223	-26,969	1,599	1.00	0.00
ATOM	5615	CB	LEU	564	26,630	-28,220	4,400	1.00	0.00
ATOM	5616	CG	LEU	564	27,818	-27,492	3,693	1.00	0.00
ATOM	5617	CD1	LEU	564	27,697	-25,958	3,668	1.00	0.00
ATOM	5618	CD2	LEU	564	29,174	-27,740	4,349	1.00	0.00
ATOM	5619	H	LEU	564	24,786	-29,425	5,274	1.00	0.00
ATOM	5620	HA	LEU	564	24,890	-27,002	4,036	1.00	0.00
ATOM	5621	HB2	LEU	564	26,614	-27,859	5,429	1.00	0.00
ATOM	5622	HB3	LEU	564	26,938	-29,265	4,418	1.00	0.00
ATOM	5623	HG	LEU	564	27,880	-27,831	2,659	1.00	0.00
ATOM	5624	HD11	LEU	564	26,723	-25,735	3,230	1.00	0.00
ATOM	5625	HD12	LEU	564	28,499	-25,540	3,060	1.00	0.00
ATOM	5626	HD13	LEU	564	27,590	-25,448	4,625	1.00	0.00
ATOM	5627	HD21	LEU	564	29,942	-27,219	3,775	1.00	0.00
ATOM	5628	HD22	LEU	564	29,212	-27,425	5,391	1.00	0.00
ATOM	5629	HD23	LEU	564	29,440	-28,795	4,280	1.00	0.00
ATOM	5630	N	ASN	565	25,455	-29,162	1,655	1.00	0.00
ATOM	5631	CA	ASN	565	25,559	-29,204	0.181	1.00	0.00
ATOM	5632	C	ASN	565	24,226	-28,817	-0.561	1.00	0.00

ATOM	5633	O	ASN	565	24,224	-27,994	-1,499	1.00	0.00
ATOM	5634	CB	ASN	565	25,927	-30,724	-0.127	1.00	0.00
ATOM	5635	CG	ASN	565	25,980	-30,860	-1,592	1.00	0.00
ATOM	5636	ND2	ASN	565	25,168	-31,733	-2,081	1.00	0.00
ATOM	5637	OD1	ASN	565	26,731	-30,169	-2,218	1.00	0.00
ATOM	5638	H	ASN	565	25,656	-29,981	2,210	1.00	0.00
ATOM	5639	HA	ASN	565	26,356	-28,582	-0.226	1.00	0.00
ATOM	5640	HB2	ASN	565	26,962	-30,885	0.173	1.00	0.00
ATOM	5641	HB3	ASN	565	25,156	-31,331	0.348	1.00	0.00
ATOM	5642	HD21	ASN	565	24,542	-32,152	-1,409	1.00	0.00
ATOM	5643	HD22	ASN	565	25,095	-31,890	-3,076	1.00	0.00
ATOM	5644	N	CYS	566	23,100	-29,104	0.040	1.00	0.00
ATOM	5645	CA	CYS	566	21,782	-28,613	-0.439	1.00	0.00
ATOM	5646	C	CYS	566	21,595	-27,116	-0.079	1.00	0.00
ATOM	5647	O	CYS	566	20,969	-26,371	-0.786	1.00	0.00
ATOM	5648	CB	CYS	566	20,680	-29,516	0.083	1.00	0.00
ATOM	5649	SG	CYS	566	20,704	-31,187	-0.713	1.00	0.00
ATOM	5650	H	CYS	566	23,080	-29,673	0.875	1.00	0.00
ATOM	5651	HA	CYS	566	21,805	-28,626	-1,529	1.00	0.00
ATOM	5652	HB2	CYS	566	20,752	-29,591	1,169	1.00	0.00
ATOM	5653	HB3	CYS	566	19,694	-29,129	-0.174	1.00	0.00
ATOM	5654	HG	CYS	566	21,819	-31,587	-0.096	1.00	0.00
ATOM	5655	N	VAL	567	22,222	-26,682	1,020	1.00	0.00
ATOM	5656	CA	VAL	567	22,154	-25,237	1,340	1.00	0.00
ATOM	5657	C	VAL	567	22,808	-24,343	0.332	1.00	0.00
ATOM	5658	O	VAL	567	22,202	-23,365	-0.171	1.00	0.00
ATOM	5659	CB	VAL	567	22,714	-24,784	2,756	1.00	0.00
ATOM	5660	CG1	VAL	567	22,367	-23,286	3,105	1.00	0.00
ATOM	5661	CG2	VAL	567	22,104	-25,745	3,832	1.00	0.00
ATOM	5662	H	VAL	567	22,763	-27,330	1,574	1.00	0.00
ATOM	5663	HA	VAL	567	21,109	-24,928	1,301	1.00	0.00
ATOM	5664	HB	VAL	567	23,789	-24,967	2,751	1.00	0.00
ATOM	5665	HG11	VAL	567	22,806	-22,555	2,425	1.00	0.00
ATOM	5666	HG12	VAL	567	21,307	-23,181	2,873	1.00	0.00
ATOM	5667	HG13	VAL	567	22,520	-22,962	4,134	1.00	0.00
ATOM	5668	HG21	VAL	567	22,522	-26,738	3,666	1.00	0.00
ATOM	5669	HG22	VAL	567	21,017	-25,820	3,834	1.00	0.00
ATOM	5670	HG23	VAL	567	22,086	-25,390	4,863	1.00	0.00
ATOM	5671	N	LEU	568	24,032	-24,750	-0.061	1.00	0.00
ATOM	5672	CA	LEU	568	24,816	-24,150	-1,192	1.00	0.00
ATOM	5673	C	LEU	568	24,000	-24,079	-2,486	1.00	0.00
ATOM	5674	O	LEU	568	23,884	-23,061	-3,129	1.00	0.00
ATOM	5675	CB	LEU	568	26,059	-24,965	-1,329	1.00	0.00



ATOM	5676	CG	LEU	568	27,250	-24,448	-0.416	1.00	0.00
ATOM	5677	CD1	LEU	568	28,430	-25,441	-0.451	1.00	0.00
ATOM	5678	CD2	LEU	568	27,642	-23,017	-0.843	1.00	0.00
ATOM	5679	H	LEU	568	24,443	-25,611	0.271	1.00	0.00
ATOM	5680	HA	LEU	568	24,983	-23,115	-0.895	1.00	0.00
ATOM	5681	HB2	LEU	568	25,894	-26,027	-1,148	1.00	0.00
ATOM	5682	HB3	LEU	568	26,418	-24,910	-2,357	1.00	0.00
ATOM	5683	HG	LEU	568	26,849	-24,453	0.597	1.00	0.00
ATOM	5684	HD11	LEU	568	28,750	-25,595	-1,482	1.00	0.00
ATOM	5685	HD12	LEU	568	28,057	-26,391	-0.067	1.00	0.00
ATOM	5686	HD13	LEU	568	29,216	-25,109	0.225	1.00	0.00
ATOM	5687	HD21	LEU	568	28,668	-22,802	-0.543	1.00	0.00
ATOM	5688	HD22	LEU	568	27,554	-22,841	-1,915	1.00	0.00
ATOM	5689	HD23	LEU	568	26,946	-22,376	-0.303	1.00	0.00
ATOM	5690	N	LEU	569	23,308	-25,186	-2,798	1.00	0.00
ATOM	5691	CA	LEU	569	22,412	-25,407	-3,917	1.00	0.00
ATOM	5692	C	LEU	569	21,082	-24,509	-3,852	1.00	0.00
ATOM	5693	O	LEU	569	20,685	-23,891	-4,885	1.00	0.00
ATOM	5694	CB	LEU	569	22,107	-26,920	-4,070	1.00	0.00
ATOM	5695	CG	LEU	569	21,197	-27,260	-5,286	1.00	0.00
ATOM	5696	CD1	LEU	569	21,834	-27,098	-6,635	1.00	0.00
ATOM	5697	CD2	LEU	569	20,756	-28,730	-5,077	1.00	0.00
ATOM	5698	H	LEU	569	23,304	-25,855	-2,041	1.00	0.00
ATOM	5699	HA	LEU	569	22,919	-25,084	-4,826	1.00	0.00
ATOM	5700	HB2	LEU	569	23,057	-27,418	-4,267	1.00	0.00
ATOM	5701	HB3	LEU	569	21,589	-27,357	-3,217	1.00	0.00
ATOM	5702	HG	LEU	569	20,270	-26,720	-5,095	1.00	0.00
ATOM	5703	HD11	LEU	569	22,738	-27,705	-6,674	1.00	0.00
ATOM	5704	HD12	LEU	569	22,091	-26,039	-6,628	1.00	0.00
ATOM	5705	HD13	LEU	569	21,226	-27,476	-7,458	1.00	0.00
ATOM	5706	HD21	LEU	569	20,059	-29,104	-5,826	1.00	0.00
ATOM	5707	HD22	LEU	569	21,701	-29,274	-5,077	1.00	0.00
ATOM	5708	HD23	LEU	569	20,215	-28,850	-4,138	1.00	0.00
ATOM	5709	N	LEU	570	20,480	-24,217	-2,699	1.00	0.00
ATOM	5710	CA	LEU	570	19,264	-23,403	-2,534	1.00	0.00
ATOM	5711	C	LEU	570	19,507	-21,882	-2,555	1.00	0.00
ATOM	5712	O	LEU	570	18,663	-21,108	-2,976	1.00	0.00
ATOM	5713	CB	LEU	570	18,511	-23,927	-1,287	1.00	0.00
ATOM	5714	CG	LEU	570	17,824	-25,288	-1,571	1.00	0.00
ATOM	5715	CD1	LEU	570	17,270	-25,672	-0.221	1.00	0.00
ATOM	5716	CD2	LEU	570	16,731	-25,065	-2,650	1.00	0.00
ATOM	5717	H	LEU	570	20,794	-24,678	-1,857	1.00	0.00
ATOM	5718	HA	LEU	570	18,621	-23,524	-3,405	1.00	0.00

ATOM	5719	HB2	LEU	570	19,289	-24,096	-0.543	1.00	0.00
ATOM	5720	HB3	LEU	570	17,831	-23,149	-0.939	1.00	0.00
ATOM	5721	HG	LEU	570	18,462	-26,088	-1,945	1.00	0.00
ATOM	5722	HD11	LEU	570	16,962	-26,710	-0.349	1.00	0.00
ATOM	5723	HD12	LEU	570	16,480	-24,980	0.071	1.00	0.00
ATOM	5724	HD13	LEU	570	18,042	-25,681	0.548	1.00	0.00
ATOM	5725	HD21	LEU	570	16,055	-24,270	-2,333	1.00	0.00
ATOM	5726	HD22	LEU	570	17,108	-24,885	-3,656	1.00	0.00
ATOM	5727	HD23	LEU	570	16,174	-25,992	-2,787	1.00	0.00
ATOM	5728	N	LEU	571	20,723	-21,550	-2,268	1.00	0.00
ATOM	5729	CA	LEU	571	21,223	-20,190	-2,623	1.00	0.00
ATOM	5730	C	LEU	571	21,743	-20,017	-4,041	1.00	0.00
ATOM	5731	O	LEU	571	21,557	-18,994	-4,666	1.00	0.00
ATOM	5732	CB	LEU	571	22,374	-19,823	-1,637	1.00	0.00
ATOM	5733	CG	LEU	571	21,796	-19,550	-0.296	1.00	0.00
ATOM	5734	CD1	LEU	571	22,771	-19,613	0.981	1.00	0.00
ATOM	5735	CD2	LEU	571	21,040	-18,245	-0.179	1.00	0.00
ATOM	5736	H	LEU	571	21,302	-22,203	-1,760	1.00	0.00
ATOM	5737	HA	LEU	571	20,380	-19,507	-2,525	1.00	0.00
ATOM	5738	HB2	LEU	571	23,153	-20,563	-1,459	1.00	0.00
ATOM	5739	HB3	LEU	571	22,905	-18,936	-1,982	1.00	0.00
ATOM	5740	HG	LEU	571	21,084	-20,339	-0.053	1.00	0.00
ATOM	5741	HD11	LEU	571	23,384	-18,717	1,074	1.00	0.00
ATOM	5742	HD12	LEU	571	23,514	-20,409	0.922	1.00	0.00
ATOM	5743	HD13	LEU	571	22,196	-19,803	1,887	1.00	0.00
ATOM	5744	HD21	LEU	571	20,244	-18,139	-0.918	1.00	0.00
ATOM	5745	HD22	LEU	571	20,640	-18,136	0.829	1.00	0.00
ATOM	5746	HD23	LEU	571	21,732	-17,427	-0.376	1.00	0.00
ATOM	5747	N	GLU	572	22,262	-21,073	-4,636	1.00	0.00
ATOM	5748	CA	GLU	572	22,474	-21,061	-6,077	1.00	0.00
ATOM	5749	C	GLU	572	21,210	-20,890	-6,854	1.00	0.00
ATOM	5750	O	GLU	572	21,179	-20,135	-7,841	1.00	0.00
ATOM	5751	CB	GLU	572	23,302	-22,362	-6,316	1.00	0.00
ATOM	5752	CG	GLU	572	23,496	-22,711	-7,807	1.00	0.00
ATOM	5753	CD	GLU	572	24,426	-21,716	-8,513	1.00	0.00
ATOM	5754	OE1	GLU	572	24,127	-21,247	-9,592	1.00	0.00
ATOM	5755	OE2	GLU	572	25,460	-21,304	-7,967	1.00	0.00
ATOM	5756	H	GLU	572	22,492	-21,832	-4,012	1.00	0.00
ATOM	5757	HA	GLU	572	23,155	-20,273	-6,396	1.00	0.00
ATOM	5758	HB2	GLU	572	24,264	-22,368	-5,802	1.00	0.00
ATOM	5759	HB3	GLU	572	22,702	-23,129	-5,827	1.00	0.00
ATOM	5760	HG2	GLU	572	23,846	-23,732	-7,955	1.00	0.00
ATOM	5761	HG3	GLU	572	22,531	-22,549	-8,287	1.00	0.00

ATOM	5762	N	TYR	573	20,147	-21,540	-6,457	1.00	0.00
ATOM	5763	CA	TYR	573	18,747	-21,391	-6,947	1.00	0.00
ATOM	5764	C	TYR	573	17,946	-20,188	-6,316	1.00	0.00
ATOM	5765	O	TYR	573	16,770	-20,058	-6,499	1.00	0.00
ATOM	5766	CB	TYR	573	18,009	-22,733	-6,903	1.00	0.00
ATOM	5767	CG	TYR	573	18,407	-23,631	-8,040	1.00	0.00
ATOM	5768	CD1	TYR	573	17,705	-23,585	-9,195	1.00	0.00
ATOM	5769	CD2	TYR	573	19,653	-24,401	-7,925	1.00	0.00
ATOM	5770	CE1	TYR	573	18,193	-24,303	-10,358	1.00	0.00
ATOM	5771	CE2	TYR	573	20,070	-25,114	-9,025	1.00	0.00
ATOM	5772	CZ	TYR	573	19,319	-25,150	-10,200	1.00	0.00
ATOM	5773	OH	TYR	573	19,793	-25,869	-11,305	1.00	0.00
ATOM	5774	H	TYR	573	20,351	-22,184	-5,706	1.00	0.00
ATOM	5775	HA	TYR	573	18,851	-20,990	-7,955	1.00	0.00
ATOM	5776	HB2	TYR	573	18,183	-23,163	-5,917	1.00	0.00
ATOM	5777	HB3	TYR	573	16,936	-22,578	-7,013	1.00	0.00
ATOM	5778	HD1	TYR	573	16,760	-23,065	-9,260	1.00	0.00
ATOM	5779	HD2	TYR	573	20,273	-24,414	-7,040	1.00	0.00
ATOM	5780	HE1	TYR	573	17,597	-24,303	-11,259	1.00	0.00
ATOM	5781	HE2	TYR	573	20,986	-25,668	-8,882	1.00	0.00
ATOM	5782	HH	TYR	573	19,220	-25,908	-12,074	1.00	0.00
ATOM	5783	N	HID	574	18,676	-19,207	-5,731	1.00	0.00
ATOM	5784	CA	HID	574	18,248	-17,893	-5,226	1.00	0.00
ATOM	5785	C	HID	574	16,928	-17,939	-4,364	1.00	0.00
ATOM	5786	O	HID	574	16,047	-17,037	-4,602	1.00	0.00
ATOM	5787	CB	HID	574	18,310	-16,878	-6,357	1.00	0.00
ATOM	5788	CG	HID	574	19,775	-16,546	-6,668	1.00	0.00
ATOM	5789	CD2	HID	574	20,575	-15,572	-6,172	1.00	0.00
ATOM	5790	ND1	HID	574	20,554	-17,264	-7,582	1.00	0.00
ATOM	5791	CE1	HID	574	21,853	-16,823	-7,543	1.00	0.00
ATOM	5792	NE2	HID	574	21,848	-15,691	-6,762	1.00	0.00
ATOM	5793	H	HID	574	19,656	-19,444	-5,663	1.00	0.00
ATOM	5794	HA	HID	574	19,067	-17,607	-4,567	1.00	0.00
ATOM	5795	HB2	HID	574	17,754	-17,137	-7,258	1.00	0.00
ATOM	5796	HB3	HID	574	17,818	-15,935	-6,124	1.00	0.00
ATOM	5797	HD1	HID	574	20,212	-18,115	-8,003	1.00	0.00
ATOM	5798	HD2	HID	574	20,299	-14,801	-5,468	1.00	0.00
ATOM	5799	HE1	HID	574	22,704	-17,283	-8,021	1.00	0.00
ATOM	5800	N	ALA	575	16,905	-18,766	-3,339	1.00	0.00
ATOM	5801	CA	ALA	575	16,002	-18,381	-2,176	1.00	0.00
ATOM	5802	C	ALA	575	16,466	-17,139	-1,390	1.00	0.00
ATOM	5803	O	ALA	575	17,611	-16,697	-1,440	1.00	0.00
ATOM	5804	CB	ALA	575	16,048	-19,638	-1,339	1.00	0.00

ATOM	5805	H	ALA	575	17,620	-19,457	-3,161	1.00	0.00
ATOM	5806	HA	ALA	575	15,007	-18,203	-2,585	1.00	0.00
ATOM	5807	HB1	ALA	575	15,567	-20,364	-1,996	1.00	0.00
ATOM	5808	HB2	ALA	575	15,561	-19,467	-0.378	1.00	0.00
ATOM	5809	HB3	ALA	575	17,085	-19,912	-1,149	1.00	0.00
ATOM	5810	N	ASP	576	15,553	-16,494	-0.634	1.00	0.00
ATOM	5811	CA	ASP	576	15,910	-15,428	0.354	1.00	0.00
ATOM	5812	C	ASP	576	16,296	-16,022	1,697	1.00	0.00
ATOM	5813	O	ASP	576	15,523	-16,692	2,340	1.00	0.00
ATOM	5814	CB	ASP	576	14,625	-14,561	0.572	1.00	0.00
ATOM	5815	CG	ASP	576	14,838	-13,485	1,707	1.00	0.00
ATOM	5816	OD1	ASP	576	15,993	-13,097	1,924	1.00	0.00
ATOM	5817	OD2	ASP	576	13,856	-13,104	2,397	1.00	0.00
ATOM	5818	H	ASP	576	14,610	-16,854	-0.577	1.00	0.00
ATOM	5819	HA	ASP	576	16,697	-14,760	0.003	1.00	0.00
ATOM	5820	HB2	ASP	576	14,406	-14,017	-0.347	1.00	0.00
ATOM	5821	HB3	ASP	576	13,745	-15,118	0.893	1.00	0.00
ATOM	5822	N	PRO	577	17,554	-15,783	2,168	1.00	0.00
ATOM	5823	CA	PRO	577	18,083	-16,218	3,450	1.00	0.00
ATOM	5824	C	PRO	577	17,399	-15,578	4,715	1.00	0.00
ATOM	5825	O	PRO	577	17,713	-15,850	5,834	1.00	0.00
ATOM	5826	CB	PRO	577	19,567	-15,861	3,427	1.00	0.00
ATOM	5827	CG	PRO	577	19,754	-14,754	2,391	1.00	0.00
ATOM	5828	CD	PRO	577	18,655	-15,069	1,364	1.00	0.00
ATOM	5829	HA	PRO	577	17,989	-17,302	3,520	1.00	0.00
ATOM	5830	HB2	PRO	577	19,903	-15,538	4,412	1.00	0.00
ATOM	5831	HB3	PRO	577	20,143	-16,750	3,170	1.00	0.00
ATOM	5832	HG2	PRO	577	19,554	-13,816	2,908	1.00	0.00
ATOM	5833	HG3	PRO	577	20,723	-14,869	1,903	1.00	0.00
ATOM	5834	HD2	PRO	577	18,292	-14,154	0.895	1.00	0.00
ATOM	5835	HD3	PRO	577	19,019	-15,735	0.581	1.00	0.00
ATOM	5836	N	ASN	578	16,445	-14,697	4,487	1.00	0.00
ATOM	5837	CA	ASN	578	15,779	-14,012	5,588	1.00	0.00
ATOM	5838	C	ASN	578	14,350	-14,504	5,846	1.00	0.00
ATOM	5839	O	ASN	578	13,583	-13,852	6,550	1.00	0.00
ATOM	5840	CB	ASN	578	15,850	-12,466	5,368	1.00	0.00
ATOM	5841	CG	ASN	578	17,250	-11,900	5,106	1.00	0.00
ATOM	5842	ND2	ASN	578	17,565	-11,894	3,841	1.00	0.00
ATOM	5843	OD1	ASN	578	18,046	-11,679	6,037	1.00	0.00
ATOM	5844	H	ASN	578	16,244	-14,286	3,587	1.00	0.00
ATOM	5845	HA	ASN	578	16,357	-14,248	6,483	1.00	0.00
ATOM	5846	HB2	ASN	578	15,143	-12,214	4,578	1.00	0.00
ATOM	5847	HB3	ASN	578	15,488	-11,909	6,233	1.00	0.00

ATOM	5848	HD21	ASN	578	16,816	-12,188	3,231	1.00	0.00
ATOM	5849	HD22	ASN	578	18,507	-11,773	3,498	1.00	0.00
ATOM	5850	N	CYS	579	13,987	-15,638	5,279	1.00	0.00
ATOM	5851	CA	CYS	579	12,550	-16,043	5,334	1.00	0.00
ATOM	5852	C	CYS	579	12,095	-16,299	6,765	1.00	0.00
ATOM	5853	O	CYS	579	12,858	-16,761	7,585	1.00	0.00
ATOM	5854	CB	CYS	579	12,257	-17,233	4,484	1.00	0.00
ATOM	5855	SG	CYS	579	13,323	-18,568	4,917	1.00	0.00
ATOM	5856	H	CYS	579	14,629	-16,198	4,737	1.00	0.00
ATOM	5857	HA	CYS	579	11,871	-15,283	4,948	1.00	0.00
ATOM	5858	HB2	CYS	579	11,222	-17,507	4,696	1.00	0.00
ATOM	5859	HB3	CYS	579	12,296	-17,015	3,417	1.00	0.00
ATOM	5860	HG	CYS	579	13,367	-19,052	3,673	1.00	0.00
ATOM	5861	N	ARG	580	10,826	-15,954	7,068	1.00	0.00
ATOM	5862	CA	ARG	580	10,120	-15,904	8,373	1.00	0.00
ATOM	5863	C	ARG	580	8,894	-16,699	8,645	1.00	0.00
ATOM	5864	O	ARG	580	8,375	-17,293	7,738	1.00	0.00
ATOM	5865	CB	ARG	580	9,933	-14,359	8,671	1.00	0.00
ATOM	5866	CG	ARG	580	11,203	-13,575	9,110	1.00	0.00
ATOM	5867	CD	ARG	580	10,866	-12,116	9,364	1.00	0.00
ATOM	5868	NE	ARG	580	10,217	-11,944	10,692	1.00	0.00
ATOM	5869	CZ	ARG	580	10,541	-11,087	11,573	1.00	0.00
ATOM	5870	NH1	ARG	580	11,660	-10,426	11,568	1.00	0.00
ATOM	5871	NH2	ARG	580	9,710	-10,792	12,519	1.00	0.00
ATOM	5872	H	ARG	580	10,254	-15,752	6,260	1.00	0.00
ATOM	5873	HA	ARG	580	10,847	-16,338	9,058	1.00	0.00
ATOM	5874	HB2	ARG	580	9,650	-13,855	7,746	1.00	0.00
ATOM	5875	HB3	ARG	580	9,087	-14,241	9,348	1.00	0.00
ATOM	5876	HG2	ARG	580	11,527	-14,066	10,027	1.00	0.00
ATOM	5877	HG3	ARG	580	11,952	-13,809	8,353	1.00	0.00
ATOM	5878	HD2	ARG	580	11,807	-11,564	9,345	1.00	0.00
ATOM	5879	HD3	ARG	580	10,342	-11,681	8,513	1.00	0.00
ATOM	5880	HE	ARG	580	9,298	-12,317	10,883	1.00	0.00
ATOM	5881	HH11	ARG	580	12,349	-10,583	10,846	1.00	0.00
ATOM	5882	HH12	ARG	580	11,987	-9,951	12,398	1.00	0.00
ATOM	5883	HH21	ARG	580	8,764	-11,139	12,455	1.00	0.00
ATOM	5884	HH22	ARG	580	9,899	-9,978	13,086	1.00	0.00
ATOM	5885	N	ASP	581	8,461	-16,859	9,863	1.00	0.00
ATOM	5886	CA	ASP	581	7,390	-17,744	10,356	1.00	0.00
ATOM	5887	C	ASP	581	6,481	-17,079	11,402	1.00	0.00
ATOM	5888	O	ASP	581	6,487	-15,829	11,426	1.00	0.00
ATOM	5889	CB	ASP	581	8,027	-19,027	10,950	1.00	0.00
ATOM	5890	CG	ASP	581	8,626	-18,862	12,396	1.00	0.00

ATOM	5891	OD1	ASP	581	8,686	-17,722	12,911	1.00	0.00
ATOM	5892	OD2	ASP	581	9,049	-19,866	12,925	1.00	0.00
ATOM	5893	H	ASP	581	8,963	-16,364	10,585	1.00	0.00
ATOM	5894	HA	ASP	581	6,847	-18,081	9,472	1.00	0.00
ATOM	5895	HB2	ASP	581	7,258	-19,799	10,944	1.00	0.00
ATOM	5896	HB3	ASP	581	8,766	-19,301	10,197	1.00	0.00
ATOM	5897	N	ALA	582	5,714	-17,758	12,280	1.00	0.00
ATOM	5898	CA	ALA	582	4,941	-17,100	13,367	1.00	0.00
ATOM	5899	C	ALA	582	5,678	-16,542	14,560	1.00	0.00
ATOM	5900	O	ALA	582	5,203	-15,580	15,208	1.00	0.00
ATOM	5901	CB	ALA	582	3,857	-18,081	13,829	1.00	0.00
ATOM	5902	H	ALA	582	5,831	-18,762	12,281	1.00	0.00
ATOM	5903	HA	ALA	582	4,393	-16,307	12,858	1.00	0.00
ATOM	5904	HB1	ALA	582	3,156	-18,388	13,053	1.00	0.00
ATOM	5905	HB2	ALA	582	3,261	-17,664	14,642	1.00	0.00
ATOM	5906	HB3	ALA	582	4,278	-18,957	14,323	1.00	0.00
ATOM	5907	N	GLU	583	6,883	-16,966	14,810	1.00	0.00
ATOM	5908	CA	GLU	583	7,842	-16,445	15,827	1.00	0.00
ATOM	5909	C	GLU	583	8,890	-15,432	15,269	1.00	0.00
ATOM	5910	O	GLU	583	9,425	-14,644	16,073	1.00	0.00
ATOM	5911	CB	GLU	583	8,582	-17,649	16,432	1.00	0.00
ATOM	5912	CG	GLU	583	7,799	-18,620	17,209	1.00	0.00
ATOM	5913	CD	GLU	583	7,160	-17,946	18,493	1.00	0.00
ATOM	5914	OE1	GLU	583	7,823	-17,898	19,540	1.00	0.00
ATOM	5915	OE2	GLU	583	5,992	-17,450	18,434	1.00	0.00
ATOM	5916	H	GLU	583	7,338	-17,580	14,149	1.00	0.00
ATOM	5917	HA	GLU	583	7,210	-15,970	16,578	1.00	0.00
ATOM	5918	HB2	GLU	583	9,073	-18,257	15,672	1.00	0.00
ATOM	5919	HB3	GLU	583	9,412	-17,315	17,053	1.00	0.00
ATOM	5920	HG2	GLU	583	6,969	-18,977	16,599	1.00	0.00
ATOM	5921	HG3	GLU	583	8,457	-19,418	17,556	1.00	0.00
ATOM	5922	N	GLY	584	8,982	-15,252	13,963	1.00	0.00
ATOM	5923	CA	GLY	584	10,001	-14,368	13,389	1.00	0.00
ATOM	5924	C	GLY	584	11,287	-15,201	13,071	1.00	0.00
ATOM	5925	O	GLY	584	12,419	-14,665	13,126	1.00	0.00
ATOM	5926	H	GLY	584	8,418	-15,826	13,352	1.00	0.00
ATOM	5927	HA2	GLY	584	9,869	-13,830	12,450	1.00	0.00
ATOM	5928	HA3	GLY	584	10,335	-13,620	14,107	1.00	0.00
ATOM	5929	N	SER	585	11,181	-16,509	12,866	1.00	0.00
ATOM	5930	CA	SER	585	12,356	-17,406	12,831	1.00	0.00
ATOM	5931	C	SER	585	12,996	-17,266	11,477	1.00	0.00
ATOM	5932	O	SER	585	12,223	-17,355	10,525	1.00	0.00
ATOM	5933	CB	SER	585	12,086	-18,908	13,047	1.00	0.00

ATOM	5934	OG	SER	585	13,281	-19,627	13,159	1.00	0.00
ATOM	5935	H	SER	585	10,285	-16,963	12,971	1.00	0.00
ATOM	5936	HA	SER	585	13,105	-17,140	13,576	1.00	0.00
ATOM	5937	HB2	SER	585	11,556	-19,019	13,993	1.00	0.00
ATOM	5938	HB3	SER	585	11,579	-19,267	12,152	1.00	0.00
ATOM	5939	HG	SER	585	13,164	-20,548	13,406	1.00	0.00
ATOM	5940	N	VAL	586	14,323	-17,163	11,406	1.00	0.00
ATOM	5941	CA	VAL	586	15,054	-17,109	10,156	1.00	0.00
ATOM	5942	C	VAL	586	15,905	-18,368	10,027	1.00	0.00
ATOM	5943	O	VAL	586	16,435	-18,824	11,010	1.00	0.00
ATOM	5944	CB	VAL	586	15,867	-15,810	9,998	1.00	0.00
ATOM	5945	CG1	VAL	586	14,924	-14,645	9,672	1.00	0.00
ATOM	5946	CG2	VAL	586	16,590	-15,363	11,286	1.00	0.00
ATOM	5947	H	VAL	586	14,833	-17,257	12,273	1.00	0.00
ATOM	5948	HA	VAL	586	14,324	-17,197	9,352	1.00	0.00
ATOM	5949	HB	VAL	586	16,558	-15,995	9,177	1.00	0.00
ATOM	5950	HG11	VAL	586	14,325	-14,374	10,542	1.00	0.00
ATOM	5951	HG12	VAL	586	15,478	-13,772	9,329	1.00	0.00
ATOM	5952	HG13	VAL	586	14,294	-14,923	8,827	1.00	0.00
ATOM	5953	HG21	VAL	586	17,303	-16,131	11,585	1.00	0.00
ATOM	5954	HG22	VAL	586	15,889	-15,194	12,103	1.00	0.00
ATOM	5955	HG23	VAL	586	17,116	-14,427	11,098	1.00	0.00
ATOM	5956	N	PRO	587	16,269	-18,815	8,798	1.00	0.00
ATOM	5957	CA	PRO	587	17,247	-19,920	8,644	1.00	0.00
ATOM	5958	C	PRO	587	18,653	-19,630	9,218	1.00	0.00
ATOM	5959	O	PRO	587	19,393	-20,504	9,635	1.00	0.00
ATOM	5960	CB	PRO	587	17,211	-20,169	7,142	1.00	0.00
ATOM	5961	CG	PRO	587	16,610	-18,958	6,434	1.00	0.00
ATOM	5962	CD	PRO	587	15,690	-18,335	7,553	1.00	0.00
ATOM	5963	HA	PRO	587	16,757	-20,779	9,101	1.00	0.00
ATOM	5964	HB2	PRO	587	18,214	-20,470	6,840	1.00	0.00
ATOM	5965	HB3	PRO	587	16,483	-20,956	6,951	1.00	0.00
ATOM	5966	HG2	PRO	587	17,417	-18,234	6,313	1.00	0.00
ATOM	5967	HG3	PRO	587	16,106	-19,212	5,502	1.00	0.00
ATOM	5968	HD2	PRO	587	15,796	-17,268	7,360	1.00	0.00
ATOM	5969	HD3	PRO	587	14,643	-18,637	7,582	1.00	0.00
ATOM	5970	N	LEU	588	18,988	-18,349	9,420	1.00	0.00
ATOM	5971	CA	LEU	588	20,087	-17,945	10,203	1.00	0.00
ATOM	5972	C	LEU	588	19,944	-18,439	11,646	1.00	0.00
ATOM	5973	O	LEU	588	20,880	-18,955	12,252	1.00	0.00
ATOM	5974	CB	LEU	588	20,396	-16,452	9,995	1.00	0.00
ATOM	5975	CG	LEU	588	21,563	-15,881	10,780	1.00	0.00
ATOM	5976	CD1	LEU	588	22,870	-16,586	10,378	1.00	0.00

ATOM	5977	CD2	LEU	588	21,708	-14,396	10,540	1.00	0.00
ATOM	5978	H	LEU	588	18,336	-17,614	9,185	1.00	0.00
ATOM	5979	HA	LEU	588	20,923	-18,458	9,727	1.00	0.00
ATOM	5980	HB2	LEU	588	20,549	-16,304	8,926	1.00	0.00
ATOM	5981	HB3	LEU	588	19,486	-15,967	10,347	1.00	0.00
ATOM	5982	HG	LEU	588	21,320	-15,970	11,839	1.00	0.00
ATOM	5983	HD11	LEU	588	23,743	-15,983	10,626	1.00	0.00
ATOM	5984	HD12	LEU	588	22,870	-16,766	9,301	1.00	0.00
ATOM	5985	HD13	LEU	588	22,919	-17,530	10,919	1.00	0.00
ATOM	5986	HD21	LEU	588	20,795	-13,890	10,856	1.00	0.00
ATOM	5987	HD22	LEU	588	22,571	-14,083	11,126	1.00	0.00
ATOM	5988	HD23	LEU	588	21,969	-14,223	9,496	1.00	0.00
ATOM	5989	N	TRP	589	18,818	-18,143	12,282	1.00	0.00
ATOM	5990	CA	TRP	589	18,521	-18,598	13,651	1.00	0.00
ATOM	5991	C	TRP	589	18,647	-20,091	13,827	1.00	0.00
ATOM	5992	O	TRP	589	19,350	-20,564	14,743	1.00	0.00
ATOM	5993	CB	TRP	589	17,152	-18,071	14,122	1.00	0.00
ATOM	5994	CG	TRP	589	16,804	-18,583	15,495	1.00	0.00
ATOM	5995	CD1	TRP	589	15,651	-19,226	15,880	1.00	0.00
ATOM	5996	CD2	TRP	589	17,593	-18,556	16,714	1.00	0.00
ATOM	5997	CE2	TRP	589	16,937	-19,262	17,727	1.00	0.00
ATOM	5998	CE3	TRP	589	18,773	-17,901	17,064	1.00	0.00
ATOM	5999	NE1	TRP	589	15,786	-19,779	17,139	1.00	0.00
ATOM	6000	CZ2	TRP	589	17,424	-19,335	19,032	1.00	0.00
ATOM	6001	CZ3	TRP	589	19,354	-17,965	18,359	1.00	0.00
ATOM	6002	CH2	TRP	589	18,640	-18,702	19,326	1.00	0.00
ATOM	6003	H	TRP	589	18,004	-17,919	11,728	1.00	0.00
ATOM	6004	HA	TRP	589	19,264	-18,136	14,300	1.00	0.00
ATOM	6005	HB2	TRP	589	17,213	-16,982	14,150	1.00	0.00
ATOM	6006	HB3	TRP	589	16,364	-18,455	13,475	1.00	0.00
ATOM	6007	HD1	TRP	589	14,828	-19,410	15,205	1.00	0.00
ATOM	6008	HE1	TRP	589	15,061	-20,300	17,610	1.00	0.00
ATOM	6009	HE3	TRP	589	19,218	-17,327	16,266	1.00	0.00
ATOM	6010	HZ2	TRP	589	16,848	-19,906	19,746	1.00	0.00
ATOM	6011	HZ3	TRP	589	20,230	-17,393	18,628	1.00	0.00
ATOM	6012	HH2	TRP	589	19,005	-18,698	20,343	1.00	0.00
ATOM	6013	N	GLU	590	17,862	-20,824	13,026	1.00	0.00
ATOM	6014	CA	GLU	590	17,938	-22,257	13,113	1.00	0.00
ATOM	6015	C	GLU	590	19,244	-22,942	12,552	1.00	0.00
ATOM	6016	O	GLU	590	19,323	-24,184	12,752	1.00	0.00
ATOM	6017	CB	GLU	590	16,574	-22,850	12,598	1.00	0.00
ATOM	6018	CG	GLU	590	15,418	-22,502	13,654	1.00	0.00
ATOM	6019	CD	GLU	590	14,138	-23,152	13,289	1.00	0.00



ATOM	6020	OE1	GLU	590	14,114	-24,319	12,823	1.00	0.00
ATOM	6021	OE2	GLU	590	13,092	-22,477	13,359	1.00	0.00
ATOM	6022	H	GLU	590	17,339	-20,333	12,315	1.00	0.00
ATOM	6023	HA	GLU	590	17,932	-22,585	14,152	1.00	0.00
ATOM	6024	HB2	GLU	590	16,290	-22,480	11,612	1.00	0.00
ATOM	6025	HB3	GLU	590	16,658	-23,922	12,419	1.00	0.00
ATOM	6026	HG2	GLU	590	15,691	-22,792	14,668	1.00	0.00
ATOM	6027	HG3	GLU	590	15,234	-21,428	13,612	1.00	0.00
ATOM	6028	N	ALA	591	20,208	-22,252	11,963	1.00	0.00
ATOM	6029	CA	ALA	591	21,627	-22,711	11,849	1.00	0.00
ATOM	6030	C	ALA	591	22,445	-22,481	13,167	1.00	0.00
ATOM	6031	O	ALA	591	23,095	-23,416	13,656	1.00	0.00
ATOM	6032	CB	ALA	591	22,194	-22,020	10,605	1.00	0.00
ATOM	6033	H	ALA	591	19,990	-21,343	11,583	1.00	0.00
ATOM	6034	HA	ALA	591	21,603	-23,762	11,559	1.00	0.00
ATOM	6035	HB1	ALA	591	22,264	-20,933	10,639	1.00	0.00
ATOM	6036	HB2	ALA	591	21,581	-22,381	9,779	1.00	0.00
ATOM	6037	HB3	ALA	591	23,226	-22,308	10,404	1.00	0.00
ATOM	6038	N	MET	592	22,312	-21,334	13,730	1.00	0.00
ATOM	6039	CA	MET	592	22,996	-20,943	14,972	1.00	0.00
ATOM	6040	C	MET	592	22,492	-21,717	16,217	1.00	0.00
ATOM	6041	O	MET	592	23,234	-22,000	17,137	1.00	0.00
ATOM	6042	CB	MET	592	22,745	-19,438	15,111	1.00	0.00
ATOM	6043	CG	MET	592	23,662	-18,769	16,191	1.00	0.00
ATOM	6044	SD	MET	592	23,183	-17,018	16,522	1.00	0.00
ATOM	6045	CE	MET	592	23,066	-16,302	14,846	1.00	0.00
ATOM	6046	H	MET	592	21,674	-20,648	13,351	1.00	0.00
ATOM	6047	HA	MET	592	24,069	-21,124	14,908	1.00	0.00
ATOM	6048	HB2	MET	592	22,754	-18,811	14,220	1.00	0.00
ATOM	6049	HB3	MET	592	21,687	-19,376	15,366	1.00	0.00
ATOM	6050	HG2	MET	592	23,533	-19,246	17,162	1.00	0.00
ATOM	6051	HG3	MET	592	24,663	-18,908	15,782	1.00	0.00
ATOM	6052	HE1	MET	592	22,179	-16,707	14,358	1.00	0.00
ATOM	6053	HE2	MET	592	23,109	-15,214	14,811	1.00	0.00
ATOM	6054	HE3	MET	592	23,871	-16,720	14,243	1.00	0.00
ATOM	6055	N	VAL	593	21,175	-22,122	16,276	1.00	0.00
ATOM	6056	CA	VAL	593	20,520	-22,859	17,339	1.00	0.00
ATOM	6057	C	VAL	593	21,203	-24,218	17,523	1.00	0.00
ATOM	6058	O	VAL	593	21,064	-24,713	18,631	1.00	0.00
ATOM	6059	CB	VAL	593	18,975	-22,959	17,136	1.00	0.00
ATOM	6060	CG1	VAL	593	18,613	-24,090	16,191	1.00	0.00
ATOM	6061	CG2	VAL	593	18,170	-23,087	18,465	1.00	0.00
ATOM	6062	H	VAL	593	20,496	-21,712	15,650	1.00	0.00

ATOM	6063	HA	VAL	593	20,642	-22,354	18,297	1.00	0.00
ATOM	6064	HB	VAL	593	18,499	-22,074	16,714	1.00	0.00
ATOM	6065	HG11	VAL	593	18,845	-25,009	16,728	1.00	0.00
ATOM	6066	HG12	VAL	593	17,565	-23,888	15,968	1.00	0.00
ATOM	6067	HG13	VAL	593	19,264	-23,963	15,324	1.00	0.00
ATOM	6068	HG21	VAL	593	18,802	-23,582	19,204	1.00	0.00
ATOM	6069	HG22	VAL	593	17,282	-23,708	18,349	1.00	0.00
ATOM	6070	HG23	VAL	593	17,834	-22,130	18,863	1.00	0.00
ATOM	6071	N	GLU	594	21,914	-24,723	16,508	1.00	0.00
ATOM	6072	CA	GLU	594	22,712	-25,968	16,539	1.00	0.00
ATOM	6073	C	GLU	594	24,235	-25,836	16,227	1.00	0.00
ATOM	6074	O	GLU	594	24,910	-26,814	15,941	1.00	0.00
ATOM	6075	CB	GLU	594	22,009	-27,007	15,669	1.00	0.00
ATOM	6076	CG	GLU	594	22,495	-28,506	15,655	1.00	0.00
ATOM	6077	CD	GLU	594	22,449	-29,137	17,082	1.00	0.00
ATOM	6078	OE1	GLU	594	23,236	-30,090	17,264	1.00	0.00
ATOM	6079	OE2	GLU	594	21,650	-28,662	17,981	1.00	0.00
ATOM	6080	H	GLU	594	21,908	-24,130	15,689	1.00	0.00
ATOM	6081	HA	GLU	594	22,765	-26,249	17,591	1.00	0.00
ATOM	6082	HB2	GLU	594	20,941	-27,092	15,871	1.00	0.00
ATOM	6083	HB3	GLU	594	22,156	-26,612	14,664	1.00	0.00
ATOM	6084	HG2	GLU	594	21,806	-29,126	15,081	1.00	0.00
ATOM	6085	HG3	GLU	594	23,493	-28,578	15,223	1.00	0.00
ATOM	6086	N	GLY	595	24,745	-24,588	16,220	1.00	0.00
ATOM	6087	CA	GLY	595	26,142	-24,348	15,941	1.00	0.00
ATOM	6088	C	GLY	595	26,672	-24,675	14,543	1.00	0.00
ATOM	6089	O	GLY	595	27,836	-25,103	14,496	1.00	0.00
ATOM	6090	H	GLY	595	24,139	-23,792	16,369	1.00	0.00
ATOM	6091	HA2	GLY	595	26,407	-23,298	16,060	1.00	0.00
ATOM	6092	HA3	GLY	595	26,580	-24,996	16,700	1.00	0.00
ATOM	6093	N	HIE	596	25,887	-24,667	13,482	1.00	0.00
ATOM	6094	CA	HIE	596	26,401	-24,817	12,135	1.00	0.00
ATOM	6095	C	HIE	596	26,891	-23,500	11,611	1.00	0.00
ATOM	6096	O	HIE	596	26,139	-22,783	10,929	1.00	0.00
ATOM	6097	CB	HIE	596	25,272	-25,472	11,329	1.00	0.00
ATOM	6098	CG	HIE	596	25,808	-26,181	10,126	1.00	0.00
ATOM	6099	CD2	HIE	596	25,588	-27,519	9,869	1.00	0.00
ATOM	6100	ND1	HIE	596	26,895	-25,747	9,334	1.00	0.00
ATOM	6101	CE1	HIE	596	27,204	-26,814	8,659	1.00	0.00
ATOM	6102	NE2	HIE	596	26,484	-27,877	8,931	1.00	0.00
ATOM	6103	H	HIE	596	24,943	-24,322	13,585	1.00	0.00
ATOM	6104	HA	HIE	596	27,261	-25,464	11,961	1.00	0.00
ATOM	6105	HB2	HIE	596	24,774	-26,188	11,983	1.00	0.00

ATOM	6106	HB3	HIE	596	24,541	-24,766	10,935	1.00	0.00
ATOM	6107	HD2	HIE	596	24,960	-28,249	10,358	1.00	0.00
ATOM	6108	HE1	HIE	596	27,986	-26,785	7,915	1.00	0.00
ATOM	6109	HE2	HIE	596	26,547	-28,774	8,470	1.00	0.00
ATOM	6110	N	GLU	597	28,080	-23,159	12,084	1.00	0.00
ATOM	6111	CA	GLU	597	28,862	-22,015	11,784	1.00	0.00
ATOM	6112	C	GLU	597	29,311	-21,870	10,303	1.00	0.00
ATOM	6113	O	GLU	597	29,526	-20,758	9,798	1.00	0.00
ATOM	6114	CB	GLU	597	30,049	-21,977	12,745	1.00	0.00
ATOM	6115	CG	GLU	597	29,662	-21,907	14,254	1.00	0.00
ATOM	6116	CD	GLU	597	30,873	-21,859	15,032	1.00	0.00
ATOM	6117	OE1	GLU	597	31,487	-22,955	15,308	1.00	0.00
ATOM	6118	OE2	GLU	597	31,301	-20,799	15,463	1.00	0.00
ATOM	6119	H	GLU	597	28,521	-23,775	12,751	1.00	0.00
ATOM	6120	HA	GLU	597	28,392	-21,058	12,011	1.00	0.00
ATOM	6121	HB2	GLU	597	30,702	-22,822	12,523	1.00	0.00
ATOM	6122	HB3	GLU	597	30,533	-21,052	12,432	1.00	0.00
ATOM	6123	HG2	GLU	597	29,012	-21,090	14,568	1.00	0.00
ATOM	6124	HG3	GLU	597	29,112	-22,789	14,582	1.00	0.00
ATOM	6125	N	LYS	598	29,215	-22,968	9,492	1.00	0.00
ATOM	6126	CA	LYS	598	29,451	-22,975	8,033	1.00	0.00
ATOM	6127	C	LYS	598	28,242	-22,536	7,229	1.00	0.00
ATOM	6128	O	LYS	598	28,359	-21,662	6,439	1.00	0.00
ATOM	6129	CB	LYS	598	30,125	-24,350	7,669	1.00	0.00
ATOM	6130	CG	LYS	598	30,400	-24,560	6,176	1.00	0.00
ATOM	6131	CD	LYS	598	31,427	-23,635	5,716	1.00	0.00
ATOM	6132	CE	LYS	598	31,931	-24,110	4,286	1.00	0.00
ATOM	6133	NZ	LYS	598	33,005	-23,207	3,830	1.00	0.00
ATOM	6134	H	LYS	598	28,946	-23,846	9,913	1.00	0.00
ATOM	6135	HA	LYS	598	30,111	-22,139	7,796	1.00	0.00
ATOM	6136	HB2	LYS	598	31,082	-24,449	8,182	1.00	0.00
ATOM	6137	HB3	LYS	598	29,556	-25,222	7,992	1.00	0.00
ATOM	6138	HG2	LYS	598	30,769	-25,580	6,067	1.00	0.00
ATOM	6139	HG3	LYS	598	29,455	-24,516	5,636	1.00	0.00
ATOM	6140	HD2	LYS	598	31,099	-22,607	5,563	1.00	0.00
ATOM	6141	HD3	LYS	598	32,337	-23,671	6,316	1.00	0.00
ATOM	6142	HE2	LYS	598	32,334	-25,123	4,321	1.00	0.00
ATOM	6143	HE3	LYS	598	31,107	-24,102	3,572	1.00	0.00
ATOM	6144	HZ1	LYS	598	32,736	-22,248	3,997	1.00	0.00
ATOM	6145	HZ2	LYS	598	33,227	-23,467	2,879	1.00	0.00
ATOM	6146	HZ3	LYS	598	33,844	-23,440	4,340	1.00	0.00
ATOM	6147	N	VAL	599	27,078	-23,095	7,569	1.00	0.00
ATOM	6148	CA	VAL	599	25,749	-22,553	7,128	1.00	0.00

ATOM	6149	C	VAL	599	25,578	-21,148	7,621	1.00	0.00
ATOM	6150	O	VAL	599	25,173	-20,273	6,790	1.00	0.00
ATOM	6151	CB	VAL	599	24,644	-23,529	7,470	1.00	0.00
ATOM	6152	CG1	VAL	599	23,302	-22,807	7,176	1.00	0.00
ATOM	6153	CG2	VAL	599	24,685	-24,869	6,734	1.00	0.00
ATOM	6154	H	VAL	599	27,097	-23,793	8,299	1.00	0.00
ATOM	6155	HA	VAL	599	25,812	-22,335	6,062	1.00	0.00
ATOM	6156	HB	VAL	599	24,764	-23,707	8,538	1.00	0.00
ATOM	6157	HG11	VAL	599	23,144	-22,529	6,135	1.00	0.00
ATOM	6158	HG12	VAL	599	22,504	-23,511	7,408	1.00	0.00
ATOM	6159	HG13	VAL	599	23,074	-21,954	7,816	1.00	0.00
ATOM	6160	HG21	VAL	599	23,995	-25,550	7,233	1.00	0.00
ATOM	6161	HG22	VAL	599	25,718	-25,193	6,858	1.00	0.00
ATOM	6162	HG23	VAL	599	24,523	-24,759	5,661	1.00	0.00
ATOM	6163	N	VAL	600	25,884	-20,783	8,896	1.00	0.00
ATOM	6164	CA	VAL	600	25,831	-19,380	9,398	1.00	0.00
ATOM	6165	C	VAL	600	26,763	-18,508	8,541	1.00	0.00
ATOM	6166	O	VAL	600	26,325	-17,470	8,154	1.00	0.00
ATOM	6167	CB	VAL	600	26,135	-19,204	10,963	1.00	0.00
ATOM	6168	CG1	VAL	600	26,475	-17,797	11,515	1.00	0.00
ATOM	6169	CG2	VAL	600	25,023	-19,769	11,827	1.00	0.00
ATOM	6170	H	VAL	600	26,083	-21,562	9,508	1.00	0.00
ATOM	6171	HA	VAL	600	24,815	-19,011	9,257	1.00	0.00
ATOM	6172	HB	VAL	600	27,011	-19,831	11,133	1.00	0.00
ATOM	6173	HG11	VAL	600	26,677	-17,846	12,585	1.00	0.00
ATOM	6174	HG12	VAL	600	27,479	-17,478	11,236	1.00	0.00
ATOM	6175	HG13	VAL	600	25,650	-17,125	11,278	1.00	0.00
ATOM	6176	HG21	VAL	600	25,512	-20,661	12,217	1.00	0.00
ATOM	6177	HG22	VAL	600	24,175	-20,012	11,185	1.00	0.00
ATOM	6178	HG23	VAL	600	24,802	-19,260	12,764	1.00	0.00
ATOM	6179	N	LYS	601	27,999	-18,945	8,198	1.00	0.00
ATOM	6180	CA	LYS	601	28,892	-18,124	7,378	1.00	0.00
ATOM	6181	C	LYS	601	28,359	-17,940	5,954	1.00	0.00
ATOM	6182	O	LYS	601	28,526	-16,807	5,405	1.00	0.00
ATOM	6183	CB	LYS	601	30,278	-18,735	7,481	1.00	0.00
ATOM	6184	CG	LYS	601	31,028	-18,263	8,782	1.00	0.00
ATOM	6185	CD	LYS	601	32,460	-18,884	8,892	1.00	0.00
ATOM	6186	CE	LYS	601	33,215	-18,359	10,098	1.00	0.00
ATOM	6187	NZ	LYS	601	33,700	-16,978	9,985	1.00	0.00
ATOM	6188	H	LYS	601	28,385	-19,787	8,603	1.00	0.00
ATOM	6189	HA	LYS	601	28,893	-17,201	7,958	1.00	0.00
ATOM	6190	HB2	LYS	601	30,269	-19,824	7,476	1.00	0.00
ATOM	6191	HB3	LYS	601	30,833	-18,381	6,611	1.00	0.00

ATOM	6192	HG2	LYS	601	31,186	-17,191	8,658	1.00	0.00
ATOM	6193	HG3	LYS	601	30,483	-18,460	9,705	1.00	0.00
ATOM	6194	HD2	LYS	601	32,363	-19,952	9,086	1.00	0.00
ATOM	6195	HD3	LYS	601	33,005	-18,700	7,967	1.00	0.00
ATOM	6196	HE2	LYS	601	32,682	-18,563	11,028	1.00	0.00
ATOM	6197	HE3	LYS	601	34,106	-18,984	10,137	1.00	0.00
ATOM	6198	HZ1	LYS	601	34,618	-16,857	10,386	1.00	0.00
ATOM	6199	HZ2	LYS	601	33,158	-16,333	10,544	1.00	0.00
ATOM	6200	HZ3	LYS	601	33,702	-16,616	9,042	1.00	0.00
ATOM	6201	N	VAL	602	27,686	-18,949	5,375	1.00	0.00
ATOM	6202	CA	VAL	602	27,124	-18,940	4,026	1.00	0.00
ATOM	6203	C	VAL	602	25,899	-18,035	3,947	1.00	0.00
ATOM	6204	O	VAL	602	25,729	-17,179	3,071	1.00	0.00
ATOM	6205	CB	VAL	602	26,740	-20,405	3,584	1.00	0.00
ATOM	6206	CG1	VAL	602	25,497	-20,520	2,667	1.00	0.00
ATOM	6207	CG2	VAL	602	27,966	-21,051	2,989	1.00	0.00
ATOM	6208	H	VAL	602	27,692	-19,853	5,826	1.00	0.00
ATOM	6209	HA	VAL	602	27,856	-18,516	3,338	1.00	0.00
ATOM	6210	HB	VAL	602	26,491	-20,937	4,501	1.00	0.00
ATOM	6211	HG11	VAL	602	24,592	-20,312	3,237	1.00	0.00
ATOM	6212	HG12	VAL	602	25,619	-19,925	1,762	1.00	0.00
ATOM	6213	HG13	VAL	602	25,371	-21,562	2,374	1.00	0.00
ATOM	6214	HG21	VAL	602	28,194	-20,704	1,981	1.00	0.00
ATOM	6215	HG22	VAL	602	27,751	-22,093	2,752	1.00	0.00
ATOM	6216	HG23	VAL	602	28,792	-20,922	3,690	1.00	0.00
ATOM	6217	N	LEU	603	25,015	-18,041	4,989	1.00	0.00
ATOM	6218	CA	LEU	603	23,900	-17,132	5,149	1.00	0.00
ATOM	6219	C	LEU	603	24,202	-15,621	5,403	1.00	0.00
ATOM	6220	O	LEU	603	23,525	-14,771	4,874	1.00	0.00
ATOM	6221	CB	LEU	603	22,954	-17,712	6,156	1.00	0.00
ATOM	6222	CG	LEU	603	22,309	-19,078	5,975	1.00	0.00
ATOM	6223	CD1	LEU	603	21,731	-19,553	7,359	1.00	0.00
ATOM	6224	CD2	LEU	603	21,112	-19,019	4,979	1.00	0.00
ATOM	6225	H	LEU	603	25,300	-18,689	5,709	1.00	0.00
ATOM	6226	HA	LEU	603	23,387	-17,085	4,188	1.00	0.00
ATOM	6227	HB2	LEU	603	23,582	-17,725	7,046	1.00	0.00
ATOM	6228	HB3	LEU	603	22,125	-17,008	6,237	1.00	0.00
ATOM	6229	HG	LEU	603	23,042	-19,810	5,635	1.00	0.00
ATOM	6230	HD11	LEU	603	22,472	-19,447	8,150	1.00	0.00
ATOM	6231	HD12	LEU	603	21,412	-20,596	7,399	1.00	0.00
ATOM	6232	HD13	LEU	603	20,836	-18,978	7,599	1.00	0.00
ATOM	6233	HD21	LEU	603	21,527	-18,847	3,986	1.00	0.00
ATOM	6234	HD22	LEU	603	20,444	-19,865	5,139	1.00	0.00

ATOM	6235	HD23	LEU	603	20,482	-18,163	5,224	1.00	0.00
ATOM	6236	N	LEU	604	25,255	-15,349	6,194	1.00	0.00
ATOM	6237	CA	LEU	604	25,799	-14,034	6,465	1.00	0.00
ATOM	6238	C	LEU	604	26,425	-13,443	5,213	1.00	0.00
ATOM	6239	O	LEU	604	26,026	-12,387	4,776	1.00	0.00
ATOM	6240	CB	LEU	604	26,843	-14,173	7,577	1.00	0.00
ATOM	6241	CG	LEU	604	26,313	-14,336	8,940	1.00	0.00
ATOM	6242	CD1	LEU	604	27,486	-14,822	9,749	1.00	0.00
ATOM	6243	CD2	LEU	604	25,578	-13,140	9,403	1.00	0.00
ATOM	6244	H	LEU	604	25,713	-16,140	6,624	1.00	0.00
ATOM	6245	HA	LEU	604	25,045	-13,367	6,882	1.00	0.00
ATOM	6246	HB2	LEU	604	27,435	-15,040	7,285	1.00	0.00
ATOM	6247	HB3	LEU	604	27,495	-13,299	7,620	1.00	0.00
ATOM	6248	HG	LEU	604	25,561	-15,123	8,892	1.00	0.00
ATOM	6249	HD11	LEU	604	28,288	-14,111	9,946	1.00	0.00
ATOM	6250	HD12	LEU	604	27,859	-15,769	9,357	1.00	0.00
ATOM	6251	HD13	LEU	604	27,141	-15,014	10,765	1.00	0.00
ATOM	6252	HD21	LEU	604	24,656	-13,035	8,831	1.00	0.00
ATOM	6253	HD22	LEU	604	25,329	-13,329	10,447	1.00	0.00
ATOM	6254	HD23	LEU	604	26,187	-12,245	9,276	1.00	0.00
ATOM	6255	N	GLU	605	27,342	-14,118	4,517	1.00	0.00
ATOM	6256	CA	GLU	605	27,961	-13,781	3,181	1.00	0.00
ATOM	6257	C	GLU	605	26,814	-13,674	2,113	1.00	0.00
ATOM	6258	O	GLU	605	27,073	-13,087	1,052	1.00	0.00
ATOM	6259	CB	GLU	605	28,978	-14,904	2,758	1.00	0.00
ATOM	6260	CG	GLU	605	29,670	-14,678	1,394	1.00	0.00
ATOM	6261	CD	GLU	605	30,773	-15,642	0.987	1.00	0.00
ATOM	6262	OE1	GLU	605	30,577	-16,506	0.115	1.00	0.00
ATOM	6263	OE2	GLU	605	31,979	-15,472	1,414	1.00	0.00
ATOM	6264	H	GLU	605	27,743	-14,947	4,931	1.00	0.00
ATOM	6265	HA	GLU	605	28,455	-12,813	3,261	1.00	0.00
ATOM	6266	HB2	GLU	605	29,702	-15,130	3,541	1.00	0.00
ATOM	6267	HB3	GLU	605	28,476	-15,870	2,694	1.00	0.00
ATOM	6268	HG2	GLU	605	28,959	-14,637	0.569	1.00	0.00
ATOM	6269	HG3	GLU	605	30,170	-13,710	1,427	1.00	0.00
ATOM	6270	N	HID	606	25,595	-14,208	2,162	1.00	0.00
ATOM	6271	CA	HID	606	24,476	-13,990	1,231	1.00	0.00
ATOM	6272	C	HID	606	23,491	-12,864	1,568	1.00	0.00
ATOM	6273	O	HID	606	22,464	-12,676	0.846	1.00	0.00
ATOM	6274	CB	HID	606	23,711	-15,342	0.985	1.00	0.00
ATOM	6275	CG	HID	606	24,468	-16,268	0.046	1.00	0.00
ATOM	6276	CD2	HID	606	24,039	-16,632	-1,168	1.00	0.00
ATOM	6277	ND1	HID	606	25,690	-16,916	0.290	1.00	0.00

ATOM	6278	CE1	HID	606	25,872	-17,720	-0.803	1.00	0.00
ATOM	6279	NE2	HID	606	24,937	-17,524	-1,785	1.00	0.00
ATOM	6280	H	HID	606	25,465	-14,901	2,885	1.00	0.00
ATOM	6281	HA	HID	606	24,970	-13,706	0.302	1.00	0.00
ATOM	6282	HB2	HID	606	23,450	-15,786	1,947	1.00	0.00
ATOM	6283	HB3	HID	606	22,741	-15,273	0.493	1.00	0.00
ATOM	6284	HD1	HID	606	26,068	-16,977	1,224	1.00	0.00
ATOM	6285	HD2	HID	606	23,107	-16,276	-1,583	1.00	0.00
ATOM	6286	HE1	HID	606	26,773	-18,307	-0.906	1.00	0.00
ATOM	6287	N	GLY	607	23,742	-12,192	2,642	1.00	0.00
ATOM	6288	CA	GLY	607	23,054	-10,984	3,083	1.00	0.00
ATOM	6289	C	GLY	607	21,881	-11,336	4,018	1.00	0.00
ATOM	6290	O	GLY	607	20,713	-11,491	3,602	1.00	0.00
ATOM	6291	H	GLY	607	24,492	-12,540	3,222	1.00	0.00
ATOM	6292	HA2	GLY	607	23,761	-10,428	3,697	1.00	0.00
ATOM	6293	HA3	GLY	607	22,618	-10,354	2,306	1.00	0.00
ATOM	6294	N	SER	608	22,176	-11,671	5,248	1.00	0.00
ATOM	6295	CA	SER	608	21,203	-11,944	6,335	1.00	0.00
ATOM	6296	C	SER	608	21,843	-11,535	7,678	1.00	0.00
ATOM	6297	O	SER	608	23,083	-11,381	7,764	1.00	0.00
ATOM	6298	CB	SER	608	20,580	-13,400	6,423	1.00	0.00
ATOM	6299	OG	SER	608	21,497	-14,369	6,831	1.00	0.00
ATOM	6300	H	SER	608	23,157	-11,616	5,483	1.00	0.00
ATOM	6301	HA	SER	608	20,409	-11,235	6,100	1.00	0.00
ATOM	6302	HB2	SER	608	19,680	-13,270	7,025	1.00	0.00
ATOM	6303	HB3	SER	608	20,320	-13,621	5,388	1.00	0.00
ATOM	6304	HG	SER	608	22,136	-14,495	6,125	1.00	0.00
ATOM	6305	N	THR	609	21,019	-11,274	8,646	1.00	0.00
ATOM	6306	CA	THR	609	21,411	-10,842	9,993	1.00	0.00
ATOM	6307	C	THR	609	20,446	-11,348	11,035	1.00	0.00
ATOM	6308	O	THR	609	19,342	-11,743	10,707	1.00	0.00
ATOM	6309	CB	THR	609	21,343	-9,247	10,110	1.00	0.00
ATOM	6310	CG2	THR	609	22,386	-8,611	9,191	1.00	0.00
ATOM	6311	OG1	THR	609	20,070	-8,807	9,758	1.00	0.00
ATOM	6312	H	THR	609	20,026	-11,343	8,468	1.00	0.00
ATOM	6313	HA	THR	609	22,399	-11,193	10,294	1.00	0.00
ATOM	6314	HB	THR	609	21,588	-8,939	11,126	1.00	0.00
ATOM	6315	HG1	THR	609	20,024	-7,848	9,771	1.00	0.00
ATOM	6316	HG21	THR	609	22,359	-7,536	9,365	1.00	0.00
ATOM	6317	HG22	THR	609	22,116	-8,833	8,158	1.00	0.00
ATOM	6318	HG23	THR	609	23,419	-8,891	9,393	1.00	0.00
ATOM	6319	N	ILE	610	20,863	-11,392	12,288	1.00	0.00
ATOM	6320	CA	ILE	610	19,932	-11,888	13,297	1.00	0.00

ATOM	6321	C	ILE	610	18,815	-10,869	13,647	1.00	0.00
ATOM	6322	O	ILE	610	17,681	-11,262	13,987	1.00	0.00
ATOM	6323	CB	ILE	610	20,737	-12,254	14,558	1.00	0.00
ATOM	6324	CG1	ILE	610	19,998	-13,350	15,316	1.00	0.00
ATOM	6325	CG2	ILE	610	21,172	-10,971	15,322	1.00	0.00
ATOM	6326	CD1	ILE	610	20,653	-13,704	16,683	1.00	0.00
ATOM	6327	H	ILE	610	21,746	-10,982	12,553	1.00	0.00
ATOM	6328	HA	ILE	610	19,458	-12,787	12,902	1.00	0.00
ATOM	6329	HB	ILE	610	21,657	-12,720	14,205	1.00	0.00
ATOM	6330	HG12	ILE	610	18,955	-13,097	15,502	1.00	0.00
ATOM	6331	HG13	ILE	610	19,967	-14,282	14,750	1.00	0.00
ATOM	6332	HG21	ILE	610	20,259	-10,584	15,774	1.00	0.00
ATOM	6333	HG22	ILE	610	21,610	-10,242	14,639	1.00	0.00
ATOM	6334	HG23	ILE	610	21,915	-11,208	16,084	1.00	0.00
ATOM	6335	HD11	ILE	610	20,326	-14,644	17,129	1.00	0.00
ATOM	6336	HD12	ILE	610	20,572	-12,878	17,390	1.00	0.00
ATOM	6337	HD13	ILE	610	21,731	-13,737	16,529	1.00	0.00
ATOM	6338	N	ASP	611	18,876	-9,605	13,199	1.00	0.00
ATOM	6339	CA	ASP	611	17,727	-8,629	13,149	1.00	0.00
ATOM	6340	C	ASP	611	16,724	-8,802	12,077	1.00	0.00
ATOM	6341	O	ASP	611	15,627	-8,206	12,142	1.00	0.00
ATOM	6342	CB	ASP	611	18,308	-7,185	13,128	1.00	0.00
ATOM	6343	CG	ASP	611	17,382	-6,070	13,466	1.00	0.00
ATOM	6344	OD1	ASP	611	17,099	-5,150	12,673	1.00	0.00
ATOM	6345	OD2	ASP	611	16,764	-6,136	14,546	1.00	0.00
ATOM	6346	H	ASP	611	19,706	-9,163	12,828	1.00	0.00
ATOM	6347	HA	ASP	611	17,135	-8,688	14,062	1.00	0.00
ATOM	6348	HB2	ASP	611	19,227	-7,020	13,690	1.00	0.00
ATOM	6349	HB3	ASP	611	18,726	-6,983	12,142	1.00	0.00
ATOM	6350	N	ALA	612	17,098	-9,615	11,101	1.00	0.00
ATOM	6351	CA	ALA	612	16,171	-10,127	10,111	1.00	0.00
ATOM	6352	C	ALA	612	14,980	-10,956	10,693	1.00	0.00
ATOM	6353	O	ALA	612	13,867	-11,040	10,191	1.00	0.00
ATOM	6354	CB	ALA	612	16,992	-10,902	9,019	1.00	0.00
ATOM	6355	H	ALA	612	18,022	-10,023	11,097	1.00	0.00
ATOM	6356	HA	ALA	612	15,684	-9,320	9,562	1.00	0.00
ATOM	6357	HB1	ALA	612	17,245	-11,857	9,482	1.00	0.00
ATOM	6358	HB2	ALA	612	17,860	-10,341	8,677	1.00	0.00
ATOM	6359	HB3	ALA	612	16,267	-11,187	8,255	1.00	0.00
ATOM	6360	N	GLY	613	15,250	-11,561	11,810	1.00	0.00
ATOM	6361	CA	GLY	613	14,320	-12,193	12,768	1.00	0.00
ATOM	6362	C	GLY	613	13,955	-11,328	13,966	1.00	0.00
ATOM	6363	O	GLY	613	14,157	-10,108	13,905	1.00	0.00



ATOM	6364	H	GLY	613	16,211	-11,582	12,122	1.00	0.00
ATOM	6365	HA2	GLY	613	13,451	-12,683	12,330	1.00	0.00
ATOM	6366	HA3	GLY	613	14,863	-13,057	13,149	1.00	0.00
ATOM	6367	N	ASP	614	13,495	-11,958	15,059	1.00	0.00
ATOM	6368	CA	ASP	614	13,198	-11,396	16,350	1.00	0.00
ATOM	6369	C	ASP	614	13,998	-11,966	17,535	1.00	0.00
ATOM	6370	O	ASP	614	13,728	-13,015	18,141	1.00	0.00
ATOM	6371	CB	ASP	614	11,671	-11,628	16,578	1.00	0.00
ATOM	6372	CG	ASP	614	11,156	-10,814	17,744	1.00	0.00
ATOM	6373	OD1	ASP	614	11,824	-10,395	18,718	1.00	0.00
ATOM	6374	OD2	ASP	614	9,947	-10,442	17,636	1.00	0.00
ATOM	6375	H	ASP	614	13,404	-12,964	15,054	1.00	0.00
ATOM	6376	HA	ASP	614	13,267	-10,308	16,353	1.00	0.00
ATOM	6377	HB2	ASP	614	11,036	-11,439	15,713	1.00	0.00
ATOM	6378	HB3	ASP	614	11,482	-12,659	16,877	1.00	0.00
ATOM	6379	N	VAL	615	15,009	-11,196	17,947	1.00	0.00
ATOM	6380	CA	VAL	615	15,932	-11,578	19,047	1.00	0.00
ATOM	6381	C	VAL	615	15,097	-11,661	20,334	1.00	0.00
ATOM	6382	O	VAL	615	15,475	-12,484	21,207	1.00	0.00
ATOM	6383	CB	VAL	615	17,099	-10,595	19,226	1.00	0.00
ATOM	6384	CG1	VAL	615	18,046	-11,238	20,280	1.00	0.00
ATOM	6385	CG2	VAL	615	17,930	-10,432	17,930	1.00	0.00
ATOM	6386	H	VAL	615	15,236	-10,375	17,403	1.00	0.00
ATOM	6387	HA	VAL	615	16,252	-12,595	18,817	1.00	0.00
ATOM	6388	HB	VAL	615	16,723	-9,648	19,613	1.00	0.00
ATOM	6389	HG11	VAL	615	18,995	-10,701	20,263	1.00	0.00
ATOM	6390	HG12	VAL	615	17,638	-11,129	21,285	1.00	0.00
ATOM	6391	HG13	VAL	615	18,205	-12,254	19,920	1.00	0.00
ATOM	6392	HG21	VAL	615	18,667	-9,646	18,099	1.00	0.00
ATOM	6393	HG22	VAL	615	17,345	-10,197	17,040	1.00	0.00
ATOM	6394	HG23	VAL	615	18,422	-11,346	17,596	1.00	0.00
ATOM	6395	N	GLY	616	13,988	-10,927	20,504	1.00	0.00
ATOM	6396	CA	GLY	616	12,998	-11,132	21,575	1.00	0.00
ATOM	6397	C	GLY	616	12,357	-12,556	21,626	1.00	0.00
ATOM	6398	O	GLY	616	12,190	-13,027	22,674	1.00	0.00
ATOM	6399	H	GLY	616	13,647	-10,453	19,682	1.00	0.00
ATOM	6400	HA2	GLY	616	13,604	-11,015	22,474	1.00	0.00
ATOM	6401	HA3	GLY	616	12,215	-10,380	21,473	1.00	0.00
ATOM	6402	N	HID	617	12,137	-13,193	20,502	1.00	0.00
ATOM	6403	CA	HID	617	11,799	-14,632	20,520	1.00	0.00
ATOM	6404	C	HID	617	13,003	-15,566	20,704	1.00	0.00
ATOM	6405	O	HID	617	12,940	-16,634	21,261	1.00	0.00
ATOM	6406	CB	HID	617	10,941	-14,944	19,254	1.00	0.00

ATOM	6407	CG	HID	617	9,572	-14,362	19,375	1.00	0.00
ATOM	6408	CD2	HID	617	9,197	-13,030	19,378	1.00	0.00
ATOM	6409	ND1	HID	617	8,432	-15,086	19,459	1.00	0.00
ATOM	6410	CE1	HID	617	7,337	-14,320	19,597	1.00	0.00
ATOM	6411	NE2	HID	617	7,740	-12,999	19,500	1.00	0.00
ATOM	6412	H	HID	617	12,359	-12,762	19,616	1.00	0.00
ATOM	6413	HA	HID	617	11,147	-14,852	21,365	1.00	0.00
ATOM	6414	HB2	HID	617	11,488	-14,635	18,363	1.00	0.00
ATOM	6415	HB3	HID	617	10,852	-16,029	19,230	1.00	0.00
ATOM	6416	HD1	HID	617	8,295	-16,077	19,319	1.00	0.00
ATOM	6417	HD2	HID	617	9,848	-12,205	19,130	1.00	0.00
ATOM	6418	HE1	HID	617	6,330	-14,709	19,633	1.00	0.00
ATOM	6419	N	PHE	618	14,195	-15,228	20,223	1.00	0.00
ATOM	6420	CA	PHE	618	15,371	-16,021	20,221	1.00	0.00
ATOM	6421	C	PHE	618	16,142	-16,142	21,584	1.00	0.00
ATOM	6422	O	PHE	618	16,503	-17,258	21,956	1.00	0.00
ATOM	6423	CB	PHE	618	16,307	-15,481	19,157	1.00	0.00
ATOM	6424	CG	PHE	618	15,903	-15,504	17,666	1.00	0.00
ATOM	6425	CD1	PHE	618	14,673	-16,071	17,313	1.00	0.00
ATOM	6426	CD2	PHE	618	16,705	-14,798	16,715	1.00	0.00
ATOM	6427	CE1	PHE	618	14,361	-16,084	15,912	1.00	0.00
ATOM	6428	CE2	PHE	618	16,222	-14,652	15,394	1.00	0.00
ATOM	6429	CZ	PHE	618	15,115	-15,383	14,980	1.00	0.00
ATOM	6430	H	PHE	618	14,197	-14,522	19,500	1.00	0.00
ATOM	6431	HA	PHE	618	15,114	-17,049	19,965	1.00	0.00
ATOM	6432	HB2	PHE	618	16,620	-14,491	19,489	1.00	0.00
ATOM	6433	HB3	PHE	618	17,235	-16,053	19,121	1.00	0.00
ATOM	6434	HD1	PHE	618	14,122	-16,685	18,011	1.00	0.00
ATOM	6435	HD2	PHE	618	17,640	-14,333	16,990	1.00	0.00
ATOM	6436	HE1	PHE	618	13,471	-16,607	15,592	1.00	0.00
ATOM	6437	HE2	PHE	618	16,708	-13,978	14,703	1.00	0.00
ATOM	6438	HZ	PHE	618	14,751	-15,445	13,965	1.00	0.00
ATOM	6439	N	ALA	619	16,342	-15,037	22,365	1.00	0.00
ATOM	6440	CA	ALA	619	16,896	-15,198	23,716	1.00	0.00
ATOM	6441	C	ALA	619	15,900	-15,984	24,632	1.00	0.00
ATOM	6442	O	ALA	619	16,293	-16,893	25,344	1.00	0.00
ATOM	6443	CB	ALA	619	17,179	-13,790	24,261	1.00	0.00
ATOM	6444	H	ALA	619	15,969	-14,134	22,111	1.00	0.00
ATOM	6445	HA	ALA	619	17,794	-15,813	23,654	1.00	0.00
ATOM	6446	HB1	ALA	619	17,670	-13,975	25,216	1.00	0.00
ATOM	6447	HB2	ALA	619	16,250	-13,265	24,483	1.00	0.00
ATOM	6448	HB3	ALA	619	17,848	-13,284	23,563	1.00	0.00
ATOM	6449	N	CYS	620	14,630	-15,782	24,498	1.00	0.00

ATOM	6450	CA	CYS	620	13,569	-16,509	25,305	1.00	0.00
ATOM	6451	C	CYS	620	13,582	-18,027	24,990	1.00	0.00
ATOM	6452	O	CYS	620	13,756	-18,891	25,826	1.00	0.00
ATOM	6453	CB	CYS	620	12,176	-15,948	25,022	1.00	0.00
ATOM	6454	SG	CYS	620	12,146	-14,195	25,560	1.00	0.00
ATOM	6455	H	CYS	620	14,341	-15,062	23,851	1.00	0.00
ATOM	6456	HA	CYS	620	13,800	-16,373	26,362	1.00	0.00
ATOM	6457	HB2	CYS	620	11,832	-16,081	23,997	1.00	0.00
ATOM	6458	HB3	CYS	620	11,465	-16,544	25,595	1.00	0.00
ATOM	6459	HG	CYS	620	12,558	-13,678	24,400	1.00	0.00
ATOM	6460	N	THR	621	13,629	-18,337	23,690	1.00	0.00
ATOM	6461	CA	THR	621	13,980	-19,655	23,120	1.00	0.00
ATOM	6462	C	THR	621	15,316	-20,180	23,668	1.00	0.00
ATOM	6463	O	THR	621	15,431	-21,334	24,136	1.00	0.00
ATOM	6464	CB	THR	621	14,117	-19,686	21,578	1.00	0.00
ATOM	6465	CG2	THR	621	14,549	-21,064	21,073	1.00	0.00
ATOM	6466	OG1	THR	621	12,834	-19,409	21,076	1.00	0.00
ATOM	6467	H	THR	621	13,634	-17,661	22,940	1.00	0.00
ATOM	6468	HA	THR	621	13,209	-20,357	23,437	1.00	0.00
ATOM	6469	HB	THR	621	14,777	-18,872	21,278	1.00	0.00
ATOM	6470	HG1	THR	621	12,847	-18,459	20,940	1.00	0.00
ATOM	6471	HG21	THR	621	14,082	-21,853	21,662	1.00	0.00
ATOM	6472	HG22	THR	621	15,633	-21,126	21,170	1.00	0.00
ATOM	6473	HG23	THR	621	14,272	-21,162	20,023	1.00	0.00
ATOM	6474	N	ALA	622	16,409	-19,421	23,675	1.00	0.00
ATOM	6475	CA	ALA	622	17,672	-19,968	24,218	1.00	0.00
ATOM	6476	C	ALA	622	17,672	-20,157	25,754	1.00	0.00
ATOM	6477	O	ALA	622	18,325	-21,091	26,274	1.00	0.00
ATOM	6478	CB	ALA	622	18,891	-19,108	23,876	1.00	0.00
ATOM	6479	H	ALA	622	16,386	-18,486	23,293	1.00	0.00
ATOM	6480	HA	ALA	622	17,659	-20,954	23,757	1.00	0.00
ATOM	6481	HB1	ALA	622	19,917	-19,468	23,950	1.00	0.00
ATOM	6482	HB2	ALA	622	18,845	-18,275	24,577	1.00	0.00
ATOM	6483	HB3	ALA	622	18,743	-18,687	22,880	1.00	0.00
ATOM	6484	N	ALA	623	16,763	-19,506	26,472	1.00	0.00
ATOM	6485	CA	ALA	623	16,522	-19,694	27,919	1.00	0.00
ATOM	6486	C	ALA	623	15,659	-20,948	28,244	1.00	0.00
ATOM	6487	O	ALA	623	16,028	-21,731	29,096	1.00	0.00
ATOM	6488	CB	ALA	623	15,920	-18,383	28,438	1.00	0.00
ATOM	6489	H	ALA	623	16,258	-18,715	26,102	1.00	0.00
ATOM	6490	HA	ALA	623	17,507	-19,912	28,329	1.00	0.00
ATOM	6491	HB1	ALA	623	15,111	-18,068	27,779	1.00	0.00
ATOM	6492	HB2	ALA	623	16,718	-17,640	28,421	1.00	0.00

ATOM	6493	HB3	ALA	623	15,635	-18,560	29,475	1.00	0.00
ATOM	6494	N	GLU	624	14,741	-21,261	27,308	1.00	0.00
ATOM	6495	CA	GLU	624	13,983	-22,552	27,317	1.00	0.00
ATOM	6496	C	GLU	624	14,817	-23,770	26,869	1.00	0.00
ATOM	6497	O	GLU	624	14,447	-24,875	27,231	1.00	0.00
ATOM	6498	CB	GLU	624	12,663	-22,306	26,471	1.00	0.00
ATOM	6499	CG	GLU	624	11,738	-21,300	27,226	1.00	0.00
ATOM	6500	CD	GLU	624	11,064	-20,445	26,225	1.00	0.00
ATOM	6501	OE1	GLU	624	10,825	-20,725	25,022	1.00	0.00
ATOM	6502	OE2	GLU	624	10,628	-19,421	26,685	1.00	0.00
ATOM	6503	H	GLU	624	14,657	-20,633	26,522	1.00	0.00
ATOM	6504	HA	GLU	624	13,656	-22,707	28,345	1.00	0.00
ATOM	6505	HB2	GLU	624	12,946	-22,030	25,455	1.00	0.00
ATOM	6506	HB3	GLU	624	12,063	-23,214	26,428	1.00	0.00
ATOM	6507	HG2	GLU	624	10,982	-21,899	27,733	1.00	0.00
ATOM	6508	HG3	GLU	624	12,332	-20,672	27,890	1.00	0.00
ATOM	6509	N	GLN	625	15,876	-23,580	26,071	1.00	0.00
ATOM	6510	CA	GLN	625	16,889	-24,579	25,763	1.00	0.00
ATOM	6511	C	GLN	625	17,873	-24,702	26,949	1.00	0.00
ATOM	6512	O	GLN	625	18,499	-25,724	27,034	1.00	0.00
ATOM	6513	CB	GLN	625	17,507	-24,253	24,427	1.00	0.00
ATOM	6514	CG	GLN	625	16,474	-24,351	23,257	1.00	0.00
ATOM	6515	CD	GLN	625	17,030	-23,838	21,881	1.00	0.00
ATOM	6516	NE2	GLN	625	16,268	-23,884	20,833	1.00	0.00
ATOM	6517	OE1	GLN	625	18,122	-23,273	21,710	1.00	0.00
ATOM	6518	H	GLN	625	15,953	-22,649	25,688	1.00	0.00
ATOM	6519	HA	GLN	625	16,328	-25,511	25,694	1.00	0.00
ATOM	6520	HB2	GLN	625	17,912	-23,243	24,496	1.00	0.00
ATOM	6521	HB3	GLN	625	18,300	-24,961	24,182	1.00	0.00
ATOM	6522	HG2	GLN	625	16,210	-25,402	23,131	1.00	0.00
ATOM	6523	HG3	GLN	625	15,587	-23,772	23,512	1.00	0.00
ATOM	6524	HE21	GLN	625	16,728	-23,614	19,976	1.00	0.00
ATOM	6525	HE22	GLN	625	15,397	-24,393	20,870	1.00	0.00
ATOM	6526	N	GLY	626	17,963	-23,685	27,813	1.00	0.00
ATOM	6527	CA	GLY	626	18,835	-23,746	28,982	1.00	0.00
ATOM	6528	C	GLY	626	20,285	-23,434	28,552	1.00	0.00
ATOM	6529	O	GLY	626	21,233	-24,023	29,151	1.00	0.00
ATOM	6530	H	GLY	626	17,163	-23,074	27,743	1.00	0.00
ATOM	6531	HA2	GLY	626	18,522	-23,070	29,778	1.00	0.00
ATOM	6532	HA3	GLY	626	18,745	-24,684	29,530	1.00	0.00
ATOM	6533	N	ASN	627	20,545	-22,735	27,413	1.00	0.00
ATOM	6534	CA	ASN	627	21,750	-22,716	26,659	1.00	0.00
ATOM	6535	C	ASN	627	22,453	-21,345	26,647	1.00	0.00

ATOM	6536	O	ASN	627	22,202	-20,566	25,789	1.00	0.00
ATOM	6537	CB	ASN	627	21,591	-23,284	25,217	1.00	0.00
ATOM	6538	CG	ASN	627	22,823	-23,357	24,315	1.00	0.00
ATOM	6539	ND2	ASN	627	22,747	-23,846	23,093	1.00	0.00
ATOM	6540	OD1	ASN	627	23,910	-22,889	24,699	1.00	0.00
ATOM	6541	H	ASN	627	19,743	-22,250	27,035	1.00	0.00
ATOM	6542	HA	ASN	627	22,363	-23,434	27,202	1.00	0.00
ATOM	6543	HB2	ASN	627	21,174	-24,280	25,367	1.00	0.00
ATOM	6544	HB3	ASN	627	20,865	-22,669	24,685	1.00	0.00
ATOM	6545	HD21	ASN	627	21,844	-24,018	22,675	1.00	0.00
ATOM	6546	HD22	ASN	627	23,560	-23,785	22,497	1.00	0.00
ATOM	6547	N	LEU	628	23,254	-21,138	27,675	1.00	0.00
ATOM	6548	CA	LEU	628	24,010	-20,004	27,908	1.00	0.00
ATOM	6549	C	LEU	628	25,022	-19,653	26,795	1.00	0.00
ATOM	6550	O	LEU	628	25,252	-18,493	26,431	1.00	0.00
ATOM	6551	CB	LEU	628	24,740	-20,140	29,349	1.00	0.00
ATOM	6552	CG	LEU	628	25,150	-18,731	29,906	1.00	0.00
ATOM	6553	CD1	LEU	628	23,954	-17,790	30,173	1.00	0.00
ATOM	6554	CD2	LEU	628	25,916	-18,899	31,234	1.00	0.00
ATOM	6555	H	LEU	628	23,170	-21,824	28,412	1.00	0.00
ATOM	6556	HA	LEU	628	23,318	-19,164	27,978	1.00	0.00
ATOM	6557	HB2	LEU	628	24,012	-20,465	30,091	1.00	0.00
ATOM	6558	HB3	LEU	628	25,609	-20,789	29,251	1.00	0.00
ATOM	6559	HG	LEU	628	25,804	-18,235	29,190	1.00	0.00
ATOM	6560	HD11	LEU	628	24,315	-16,957	30,775	1.00	0.00
ATOM	6561	HD12	LEU	628	23,145	-18,328	30,667	1.00	0.00
ATOM	6562	HD13	LEU	628	23,650	-17,379	29,211	1.00	0.00
ATOM	6563	HD21	LEU	628	26,297	-17,908	31,480	1.00	0.00
ATOM	6564	HD22	LEU	628	25,320	-19,220	32,090	1.00	0.00
ATOM	6565	HD23	LEU	628	26,709	-19,635	31,096	1.00	0.00
ATOM	6566	N	LYS	629	25,627	-20,668	26,240	1.00	0.00
ATOM	6567	CA	LYS	629	26,590	-20,497	25,155	1.00	0.00
ATOM	6568	C	LYS	629	25,859	-19,767	23,959	1.00	0.00
ATOM	6569	O	LYS	629	26,360	-18,719	23,495	1.00	0.00
ATOM	6570	CB	LYS	629	27,264	-21,795	24,887	1.00	0.00
ATOM	6571	CG	LYS	629	28,015	-21,994	23,575	1.00	0.00
ATOM	6572	CD	LYS	629	29,055	-20,894	23,233	1.00	0.00
ATOM	6573	CE	LYS	629	29,601	-21,264	21,874	1.00	0.00
ATOM	6574	NZ	LYS	629	30,493	-20,139	21,436	1.00	0.00
ATOM	6575	H	LYS	629	25,416	-21,584	26,611	1.00	0.00
ATOM	6576	HA	LYS	629	27,361	-19,800	25,484	1.00	0.00
ATOM	6577	HB2	LYS	629	27,912	-21,978	25,744	1.00	0.00
ATOM	6578	HB3	LYS	629	26,536	-22,605	24,876	1.00	0.00

ATOM	6579	HG2	LYS	629	28,494	-22,969	23,655	1.00	0.00
ATOM	6580	HG3	LYS	629	27,256	-22,032	22,793	1.00	0.00
ATOM	6581	HD2	LYS	629	28,589	-19,908	23,228	1.00	0.00
ATOM	6582	HD3	LYS	629	29,833	-20,899	23,996	1.00	0.00
ATOM	6583	HE2	LYS	629	30,145	-22,208	21,847	1.00	0.00
ATOM	6584	HE3	LYS	629	28,784	-21,405	21,165	1.00	0.00
ATOM	6585	HZ1	LYS	629	31,405	-20,097	21,868	1.00	0.00
ATOM	6586	HZ2	LYS	629	30,031	-19,242	21,439	1.00	0.00
ATOM	6587	HZ3	LYS	629	30,768	-20,222	20,467	1.00	0.00
ATOM	6588	N	LEU	630	24,709	-20,230	23,609	1.00	0.00
ATOM	6589	CA	LEU	630	23,890	-19,632	22,560	1.00	0.00
ATOM	6590	C	LEU	630	23,338	-18,205	22,922	1.00	0.00
ATOM	6591	O	LEU	630	23,361	-17,375	22,014	1.00	0.00
ATOM	6592	CB	LEU	630	22,768	-20,676	22,238	1.00	0.00
ATOM	6593	CG	LEU	630	21,733	-20,286	21,247	1.00	0.00
ATOM	6594	CD1	LEU	630	22,435	-19,941	19,952	1.00	0.00
ATOM	6595	CD2	LEU	630	20,809	-21,516	21,088	1.00	0.00
ATOM	6596	H	LEU	630	24,384	-21,053	24,096	1.00	0.00
ATOM	6597	HA	LEU	630	24,476	-19,552	21,646	1.00	0.00
ATOM	6598	HB2	LEU	630	23,259	-21,589	21,903	1.00	0.00
ATOM	6599	HB3	LEU	630	22,255	-20,962	23,155	1.00	0.00
ATOM	6600	HG	LEU	630	21,076	-19,501	21,625	1.00	0.00
ATOM	6601	HD11	LEU	630	23,021	-20,819	19,685	1.00	0.00
ATOM	6602	HD12	LEU	630	22,974	-19,000	20,071	1.00	0.00
ATOM	6603	HD13	LEU	630	21,715	-19,688	19,174	1.00	0.00
ATOM	6604	HD21	LEU	630	19,964	-21,303	20,433	1.00	0.00
ATOM	6605	HD22	LEU	630	21,171	-22,436	20,628	1.00	0.00
ATOM	6606	HD23	LEU	630	20,297	-21,661	22,038	1.00	0.00
ATOM	6607	N	LEU	631	22,995	-17,972	24,191	1.00	0.00
ATOM	6608	CA	LEU	631	22,812	-16,563	24,671	1.00	0.00
ATOM	6609	C	LEU	631	23,993	-15,587	24,358	1.00	0.00
ATOM	6610	O	LEU	631	23,765	-14,453	24,094	1.00	0.00
ATOM	6611	CB	LEU	631	22,412	-16,509	26,179	1.00	0.00
ATOM	6612	CG	LEU	631	21,001	-16,988	26,329	1.00	0.00
ATOM	6613	CD1	LEU	631	20,750	-17,281	27,778	1.00	0.00
ATOM	6614	CD2	LEU	631	19,985	-15,850	26,053	1.00	0.00
ATOM	6615	H	LEU	631	23,246	-18,670	24,876	1.00	0.00
ATOM	6616	HA	LEU	631	22,047	-16,199	23,987	1.00	0.00
ATOM	6617	HB2	LEU	631	23,041	-17,219	26,717	1.00	0.00
ATOM	6618	HB3	LEU	631	22,565	-15,555	26,683	1.00	0.00
ATOM	6619	HG	LEU	631	20,686	-17,728	25,593	1.00	0.00
ATOM	6620	HD11	LEU	631	19,714	-17,192	28,105	1.00	0.00
ATOM	6621	HD12	LEU	631	21,260	-16,660	28,514	1.00	0.00

ATOM	6622	HD13	LEU	631	21,093	-18,311	27,873	1.00	0.00
ATOM	6623	HD21	LEU	631	20,127	-15,718	24,979	1.00	0.00
ATOM	6624	HD22	LEU	631	18,998	-16,297	26,164	1.00	0.00
ATOM	6625	HD23	LEU	631	20,226	-14,976	26,656	1.00	0.00
ATOM	6626	N	LYS	632	25,259	-16,084	24,394	1.00	0.00
ATOM	6627	CA	LYS	632	26,493	-15,311	24,088	1.00	0.00
ATOM	6628	C	LYS	632	26,730	-15,221	22,556	1.00	0.00
ATOM	6629	O	LYS	632	27,227	-14,235	22,074	1.00	0.00
ATOM	6630	CB	LYS	632	27,615	-15,815	24,957	1.00	0.00
ATOM	6631	CG	LYS	632	27,292	-15,661	26,484	1.00	0.00
ATOM	6632	CD	LYS	632	28,481	-16,141	27,334	1.00	0.00
ATOM	6633	CE	LYS	632	28,231	-15,897	28,785	1.00	0.00
ATOM	6634	NZ	LYS	632	29,373	-16,318	29,680	1.00	0.00
ATOM	6635	H	LYS	632	25,372	-17,040	24,700	1.00	0.00
ATOM	6636	HA	LYS	632	26,302	-14,311	24,474	1.00	0.00
ATOM	6637	HB2	LYS	632	27,867	-16,845	24,709	1.00	0.00
ATOM	6638	HB3	LYS	632	28,496	-15,218	24,717	1.00	0.00
ATOM	6639	HG2	LYS	632	27,148	-14,596	26,663	1.00	0.00
ATOM	6640	HG3	LYS	632	26,406	-16,280	26,622	1.00	0.00
ATOM	6641	HD2	LYS	632	28,728	-17,184	27,134	1.00	0.00
ATOM	6642	HD3	LYS	632	29,299	-15,493	27,020	1.00	0.00
ATOM	6643	HE2	LYS	632	28,196	-14,813	28,890	1.00	0.00
ATOM	6644	HE3	LYS	632	27,310	-16,338	29,168	1.00	0.00
ATOM	6645	HZ1	LYS	632	30,224	-15,894	29,338	1.00	0.00
ATOM	6646	HZ2	LYS	632	29,598	-17,302	29,631	1.00	0.00
ATOM	6647	HZ3	LYS	632	29,330	-16,076	30,660	1.00	0.00
ATOM	6648	N	GLU	633	26,311	-16,187	21,757	1.00	0.00
ATOM	6649	CA	GLU	633	26,321	-16,174	20,232	1.00	0.00
ATOM	6650	C	GLU	633	25,394	-15,113	19,568	1.00	0.00
ATOM	6651	O	GLU	633	25,714	-14,463	18,605	1.00	0.00
ATOM	6652	CB	GLU	633	26,071	-17,567	19,696	1.00	0.00
ATOM	6653	CG	GLU	633	27,097	-18,650	20,067	1.00	0.00
ATOM	6654	CD	GLU	633	28,514	-18,395	19,560	1.00	0.00
ATOM	6655	OE1	GLU	633	28,747	-18,809	18,349	1.00	0.00
ATOM	6656	OE2	GLU	633	29,451	-17,928	20,287	1.00	0.00
ATOM	6657	H	GLU	633	25,926	-17,046	22,123	1.00	0.00
ATOM	6658	HA	GLU	633	27,338	-15,931	19,924	1.00	0.00
ATOM	6659	HB2	GLU	633	25,095	-17,958	19,986	1.00	0.00
ATOM	6660	HB3	GLU	633	26,056	-17,613	18,607	1.00	0.00
ATOM	6661	HG2	GLU	633	27,200	-18,796	21,141	1.00	0.00
ATOM	6662	HG3	GLU	633	26,818	-19,659	19,763	1.00	0.00
ATOM	6663	N	ILE	634	24,336	-14,821	20,247	1.00	0.00
ATOM	6664	CA	ILE	634	23,369	-13,770	20,002	1.00	0.00

ATOM	6665	C	ILE	634	24,051	-12,445	20,162	1.00	0.00
ATOM	6666	O	ILE	634	23,884	-11,631	19,211	1.00	0.00
ATOM	6667	CB	ILE	634	22,155	-13,896	20,880	1.00	0.00
ATOM	6668	CG1	ILE	634	21,388	-15,133	20,422	1.00	0.00
ATOM	6669	CG2	ILE	634	21,166	-12,723	20,702	1.00	0.00
ATOM	6670	CD1	ILE	634	20,123	-15,630	21,294	1.00	0.00
ATOM	6671	H	ILE	634	24,253	-15,344	21,106	1.00	0.00
ATOM	6672	HA	ILE	634	23,014	-13,941	18,986	1.00	0.00
ATOM	6673	HB	ILE	634	22,579	-13,975	21,882	1.00	0.00
ATOM	6674	HG12	ILE	634	20,918	-14,913	19,464	1.00	0.00
ATOM	6675	HG13	ILE	634	22,024	-16,009	20,291	1.00	0.00
ATOM	6676	HG21	ILE	634	21,682	-11,817	21,020	1.00	0.00
ATOM	6677	HG22	ILE	634	20,321	-12,903	21,368	1.00	0.00
ATOM	6678	HG23	ILE	634	20,879	-12,634	19,655	1.00	0.00
ATOM	6679	HD11	ILE	634	19,192	-15,082	21,156	1.00	0.00
ATOM	6680	HD12	ILE	634	20,414	-15,777	22,334	1.00	0.00
ATOM	6681	HD13	ILE	634	19,798	-16,608	20,940	1.00	0.00
ATOM	6682	N	VAL	635	24,808	-12,191	21,223	1.00	0.00
ATOM	6683	CA	VAL	635	25,462	-10,880	21,355	1.00	0.00
ATOM	6684	C	VAL	635	26,683	-10,731	20,402	1.00	0.00
ATOM	6685	O	VAL	635	26,978	-9,611	19,943	1.00	0.00
ATOM	6686	CB	VAL	635	25,780	-10,494	22,809	1.00	0.00
ATOM	6687	CG1	VAL	635	24,488	-10,485	23,663	1.00	0.00
ATOM	6688	CG2	VAL	635	26,746	-11,432	23,467	1.00	0.00
ATOM	6689	H	VAL	635	24,842	-12,841	21,995	1.00	0.00
ATOM	6690	HA	VAL	635	24,724	-10,136	21,055	1.00	0.00
ATOM	6691	HB	VAL	635	26,239	-9,511	22,903	1.00	0.00
ATOM	6692	HG11	VAL	635	23,989	-11,446	23,540	1.00	0.00
ATOM	6693	HG12	VAL	635	24,775	-10,327	24,703	1.00	0.00
ATOM	6694	HG13	VAL	635	23,849	-9,640	23,406	1.00	0.00
ATOM	6695	HG21	VAL	635	26,690	-11,283	24,545	1.00	0.00
ATOM	6696	HG22	VAL	635	27,725	-11,122	23,100	1.00	0.00
ATOM	6697	HG23	VAL	635	26,520	-12,493	23,362	1.00	0.00
ATOM	6698	N	LEU	636	27,315	-11,886	20,072	1.00	0.00
ATOM	6699	CA	LEU	636	28,464	-12,006	19,194	1.00	0.00
ATOM	6700	C	LEU	636	28,096	-11,502	17,756	1.00	0.00
ATOM	6701	O	LEU	636	28,780	-10,626	17,160	1.00	0.00
ATOM	6702	CB	LEU	636	28,947	-13,455	19,045	1.00	0.00
ATOM	6703	CG	LEU	636	30,370	-13,568	18,350	1.00	0.00
ATOM	6704	CD1	LEU	636	31,413	-12,693	19,013	1.00	0.00
ATOM	6705	CD2	LEU	636	30,834	-15,006	18,162	1.00	0.00
ATOM	6706	H	LEU	636	27,039	-12,689	20,619	1.00	0.00
ATOM	6707	HA	LEU	636	29,196	-11,306	19,597	1.00	0.00



ATOM	6708	HB2	LEU	636	29,000	-13,958	20,010	1.00	0.00
ATOM	6709	HB3	LEU	636	28,184	-13,960	18,455	1.00	0.00
ATOM	6710	HG	LEU	636	30,153	-13,067	17,407	1.00	0.00
ATOM	6711	HD11	LEU	636	31,522	-13,043	20,039	1.00	0.00
ATOM	6712	HD12	LEU	636	31,108	-11,647	18,987	1.00	0.00
ATOM	6713	HD13	LEU	636	32,357	-12,869	18,496	1.00	0.00
ATOM	6714	HD21	LEU	636	30,051	-15,436	17,538	1.00	0.00
ATOM	6715	HD22	LEU	636	31,759	-14,988	17,588	1.00	0.00
ATOM	6716	HD23	LEU	636	30,984	-15,426	19,156	1.00	0.00
ATOM	6717	N	HIE	637	26,935	-11,923	17,242	1.00	0.00
ATOM	6718	CA	HIE	637	26,292	-11,551	16,000	1.00	0.00
ATOM	6719	C	HIE	637	25,354	-10,334	16,186	1.00	0.00
ATOM	6720	O	HIE	637	24,445	-10,135	15,348	1.00	0.00
ATOM	6721	CB	HIE	637	25,630	-12,823	15,345	1.00	0.00
ATOM	6722	CG	HIE	637	26,664	-13,861	14,821	1.00	0.00
ATOM	6723	CD2	HIE	637	26,790	-15,097	15,376	1.00	0.00
ATOM	6724	ND1	HIE	637	27,635	-13,735	13,819	1.00	0.00
ATOM	6725	CE1	HIE	637	28,296	-14,958	13,768	1.00	0.00
ATOM	6726	NE2	HIE	637	27,814	-15,777	14,689	1.00	0.00
ATOM	6727	H	HIE	637	26,586	-12,687	17,801	1.00	0.00
ATOM	6728	HA	HIE	637	27,093	-11,202	15,350	1.00	0.00
ATOM	6729	HB2	HIE	637	24,938	-13,221	16,086	1.00	0.00
ATOM	6730	HB3	HIE	637	25,084	-12,478	14,466	1.00	0.00
ATOM	6731	HD2	HIE	637	26,243	-15,483	16,223	1.00	0.00
ATOM	6732	HE1	HIE	637	29,156	-15,096	13,130	1.00	0.00
ATOM	6733	HE2	HIE	637	28,206	-16,659	14,985	1.00	0.00
ATOM	6734	N	GLY	638	25,610	-9,475	17,169	1.00	0.00
ATOM	6735	CA	GLY	638	24,927	-8,160	17,268	1.00	0.00
ATOM	6736	C	GLY	638	23,465	-8,156	17,773	1.00	0.00
ATOM	6737	O	GLY	638	22,731	-7,315	17,312	1.00	0.00
ATOM	6738	H	GLY	638	26,414	-9,556	17,775	1.00	0.00
ATOM	6739	HA2	GLY	638	25,518	-7,533	17,934	1.00	0.00
ATOM	6740	HA3	GLY	638	25,024	-7,631	16,320	1.00	0.00
ATOM	6741	N	GLY	639	22,954	-9,020	18,642	1.00	0.00
ATOM	6742	CA	GLY	639	21,563	-9,138	19,026	1.00	0.00
ATOM	6743	C	GLY	639	21,398	-8,805	20,540	1.00	0.00
ATOM	6744	O	GLY	639	22,337	-9,172	21,257	1.00	0.00
ATOM	6745	H	GLY	639	23,572	-9,755	18,955	1.00	0.00
ATOM	6746	HA2	GLY	639	20,898	-8,543	18,399	1.00	0.00
ATOM	6747	HA3	GLY	639	21,148	-10,145	18,972	1.00	0.00
ATOM	6748	N	ASP	640	20,328	-8,170	20,971	1.00	0.00
ATOM	6749	CA	ASP	640	20,167	-7,853	22,450	1.00	0.00
ATOM	6750	C	ASP	640	19,319	-8,923	23,202	1.00	0.00

ATOM	6751	O	ASP	640	18,161	-9,040	22,863	1.00	0.00
ATOM	6752	CB	ASP	640	19,380	-6,489	22,401	1.00	0.00
ATOM	6753	CG	ASP	640	18,920	-6,012	23,816	1.00	0.00
ATOM	6754	OD1	ASP	640	19,207	-6,624	24,882	1.00	0.00
ATOM	6755	OD2	ASP	640	18,189	-4,956	23,787	1.00	0.00
ATOM	6756	H	ASP	640	19,575	-7,814	20,399	1.00	0.00
ATOM	6757	HA	ASP	640	21,184	-7,759	22,831	1.00	0.00
ATOM	6758	HB2	ASP	640	19,931	-5,684	21,913	1.00	0.00
ATOM	6759	HB3	ASP	640	18,468	-6,524	21,806	1.00	0.00
ATOM	6760	N	VAL	641	19,815	-9,684	24,136	1.00	0.00
ATOM	6761	CA	VAL	641	19,175	-10,894	24,714	1.00	0.00
ATOM	6762	C	VAL	641	18,046	-10,581	25,686	1.00	0.00
ATOM	6763	O	VAL	641	17,500	-11,519	26,273	1.00	0.00
ATOM	6764	CB	VAL	641	20,198	-11,858	25,318	1.00	0.00
ATOM	6765	CG1	VAL	641	20,818	-12,581	24,201	1.00	0.00
ATOM	6766	CG2	VAL	641	21,324	-11,108	26,088	1.00	0.00
ATOM	6767	H	VAL	641	20,747	-9,488	24,472	1.00	0.00
ATOM	6768	HA	VAL	641	18,712	-11,362	23,845	1.00	0.00
ATOM	6769	HB	VAL	641	19,748	-12,636	25,934	1.00	0.00
ATOM	6770	HG11	VAL	641	20,124	-13,231	23,668	1.00	0.00
ATOM	6771	HG12	VAL	641	21,185	-11,848	23,483	1.00	0.00
ATOM	6772	HG13	VAL	641	21,623	-13,208	24,582	1.00	0.00
ATOM	6773	HG21	VAL	641	22,008	-11,914	26,354	1.00	0.00
ATOM	6774	HG22	VAL	641	21,061	-10,422	26,893	1.00	0.00
ATOM	6775	HG23	VAL	641	21,928	-10,427	25,488	1.00	0.00
ATOM	6776	N	THR	642	17,688	-9,298	25,843	1.00	0.00
ATOM	6777	CA	THR	642	16,935	-8,774	26,950	1.00	0.00
ATOM	6778	C	THR	642	15,502	-8,427	26,527	1.00	0.00
ATOM	6779	O	THR	642	14,688	-8,079	27,419	1.00	0.00
ATOM	6780	CB	THR	642	17,620	-7,597	27,740	1.00	0.00
ATOM	6781	CG2	THR	642	19,099	-7,906	28,163	1.00	0.00
ATOM	6782	OG1	THR	642	17,609	-6,436	26,919	1.00	0.00
ATOM	6783	H	THR	642	18,167	-8,556	25,352	1.00	0.00
ATOM	6784	HA	THR	642	16,761	-9,612	27,626	1.00	0.00
ATOM	6785	HB	THR	642	17,022	-7,395	28,628	1.00	0.00
ATOM	6786	HG1	THR	642	18,361	-6,403	26,323	1.00	0.00
ATOM	6787	HG21	THR	642	19,093	-8,699	28,913	1.00	0.00
ATOM	6788	HG22	THR	642	19,439	-7,060	28,761	1.00	0.00
ATOM	6789	HG23	THR	642	19,842	-8,112	27,394	1.00	0.00
ATOM	6790	N	ARG	643	15,179	-8,460	25,212	1.00	0.00
ATOM	6791	CA	ARG	643	13,913	-8,235	24,567	1.00	0.00
ATOM	6792	C	ARG	643	12,890	-9,364	24,879	1.00	0.00
ATOM	6793	O	ARG	643	13,324	-10,456	25,198	1.00	0.00

ATOM	6794	CB	ARG	643	14,197	-8,085	23,090	1.00	0.00
ATOM	6795	CG	ARG	643	15,069	-6,844	22,627	1.00	0.00
ATOM	6796	CD	ARG	643	14,800	-6,561	21,187	1.00	0.00
ATOM	6797	NE	ARG	643	15,931	-5,815	20,671	1.00	0.00
ATOM	6798	CZ	ARG	643	16,424	-5,932	19,464	1.00	0.00
ATOM	6799	NH1	ARG	643	15,983	-6,785	18,582	1.00	0.00
ATOM	6800	NH2	ARG	643	17,419	-5,176	19,074	1.00	0.00
ATOM	6801	H	ARG	643	15,845	-8,878	24,579	1.00	0.00
ATOM	6802	HA	ARG	643	13,449	-7,310	24,905	1.00	0.00
ATOM	6803	HB2	ARG	643	14,797	-8,948	22,803	1.00	0.00
ATOM	6804	HB3	ARG	643	13,261	-8,105	22,534	1.00	0.00
ATOM	6805	HG2	ARG	643	14,841	-5,957	23,217	1.00	0.00
ATOM	6806	HG3	ARG	643	16,130	-7,085	22,700	1.00	0.00
ATOM	6807	HD2	ARG	643	14,720	-7,534	20,703	1.00	0.00
ATOM	6808	HD3	ARG	643	13,922	-5,923	21,076	1.00	0.00
ATOM	6809	HE	ARG	643	16,314	-5,044	21,199	1.00	0.00
ATOM	6810	HH11	ARG	643	15,123	-7,295	18,717	1.00	0.00
ATOM	6811	HH12	ARG	643	16,594	-6,826	17,777	1.00	0.00
ATOM	6812	HH21	ARG	643	17,683	-4,470	19,746	1.00	0.00
ATOM	6813	HH22	ARG	643	17,818	-5,136	18,147	1.00	0.00
ATOM	6814	N	PRO	644	11,613	-9,137	24,798	1.00	0.00
ATOM	6815	CA	PRO	644	10,616	-10,161	25,072	1.00	0.00
ATOM	6816	C	PRO	644	10,044	-10,843	23,773	1.00	0.00
ATOM	6817	O	PRO	644	10,130	-10,319	22,670	1.00	0.00
ATOM	6818	CB	PRO	644	9,499	-9,431	25,787	1.00	0.00
ATOM	6819	CG	PRO	644	9,582	-8,008	25,191	1.00	0.00
ATOM	6820	CD	PRO	644	11,042	-7,875	24,718	1.00	0.00
ATOM	6821	HA	PRO	644	11,027	-10,894	25,764	1.00	0.00
ATOM	6822	HB2	PRO	644	8,507	-9,885	25,774	1.00	0.00
ATOM	6823	HB3	PRO	644	9,922	-9,340	26,788	1.00	0.00
ATOM	6824	HG2	PRO	644	8,988	-7,998	24,277	1.00	0.00
ATOM	6825	HG3	PRO	644	9,356	-7,193	25,879	1.00	0.00
ATOM	6826	HD2	PRO	644	10,926	-7,531	23,690	1.00	0.00
ATOM	6827	HD3	PRO	644	11,403	-7,159	25,455	1.00	0.00
ATOM	6828	N	ARG	645	9,257	-11,948	23,943	1.00	0.00
ATOM	6829	CA	ARG	645	8,148	-12,352	23,049	1.00	0.00
ATOM	6830	C	ARG	645	7,046	-11,261	23,046	1.00	0.00
ATOM	6831	O	ARG	645	7,032	-10,332	23,844	1.00	0.00
ATOM	6832	CB	ARG	645	7,569	-13,693	23,422	1.00	0.00
ATOM	6833	CG	ARG	645	8,587	-14,833	23,186	1.00	0.00
ATOM	6834	CD	ARG	645	7,808	-16,166	22,921	1.00	0.00
ATOM	6835	NE	ARG	645	8,687	-17,316	22,653	1.00	0.00
ATOM	6836	CZ	ARG	645	9,225	-18,115	23,516	1.00	0.00

ATOM	6837	NH1	ARG	645	9,223	-17,911	24,840	1.00	0.00
ATOM	6838	NH2	ARG	645	9,853	-19,145	23,019	1.00	0.00
ATOM	6839	H	ARG	645	9,300	-12,321	24,881	1.00	0.00
ATOM	6840	HA	ARG	645	8,590	-12,463	22,059	1.00	0.00
ATOM	6841	HB2	ARG	645	7,426	-13,603	24,500	1.00	0.00
ATOM	6842	HB3	ARG	645	6,614	-13,937	22,957	1.00	0.00
ATOM	6843	HG2	ARG	645	9,161	-14,591	22,292	1.00	0.00
ATOM	6844	HG3	ARG	645	9,307	-14,878	24,003	1.00	0.00
ATOM	6845	HD2	ARG	645	7,052	-16,366	23,680	1.00	0.00
ATOM	6846	HD3	ARG	645	7,224	-15,881	22,046	1.00	0.00
ATOM	6847	HE	ARG	645	8,839	-17,552	21,683	1.00	0.00
ATOM	6848	HH11	ARG	645	9,001	-16,998	25,210	1.00	0.00
ATOM	6849	HH12	ARG	645	9,752	-18,513	25,455	1.00	0.00
ATOM	6850	HH21	ARG	645	9,898	-19,392	22,041	1.00	0.00
ATOM	6851	HH22	ARG	645	10,132	-19,841	23,696	1.00	0.00
ATOM	6852	N	ALA	646	6,086	-11,353	22,098	1.00	0.00
ATOM	6853	CA	ALA	646	4,990	-10,424	21,995	1.00	0.00
ATOM	6854	C	ALA	646	3,948	-10,437	23,127	1.00	0.00
ATOM	6855	O	ALA	646	3,052	-9,550	23,217	1.00	0.00
ATOM	6856	CB	ALA	646	4,273	-10,674	20,679	1.00	0.00
ATOM	6857	H	ALA	646	6,148	-12,084	21,405	1.00	0.00
ATOM	6858	HA	ALA	646	5,382	-9,408	22,048	1.00	0.00
ATOM	6859	HB1	ALA	646	3,850	-11,679	20,714	1.00	0.00
ATOM	6860	HB2	ALA	646	4,919	-10,672	19,801	1.00	0.00
ATOM	6861	HB3	ALA	646	3,474	-9,938	20,603	1.00	0.00
ATOM	6862	N	THR	647	4,002	-11,412	24,019	1.00	0.00
ATOM	6863	CA	THR	647	3,302	-11,423	25,343	1.00	0.00
ATOM	6864	C	THR	647	4,017	-10,598	26,417	1.00	0.00
ATOM	6865	O	THR	647	3,362	-10,219	27,362	1.00	0.00
ATOM	6866	CB	THR	647	3,151	-12,873	25,851	1.00	0.00
ATOM	6867	CG2	THR	647	2,191	-13,709	25,024	1.00	0.00
ATOM	6868	OG1	THR	647	4,402	-13,464	25,892	1.00	0.00
ATOM	6869	H	THR	647	4,540	-12,227	23,766	1.00	0.00
ATOM	6870	HA	THR	647	2,286	-11,072	25,163	1.00	0.00
ATOM	6871	HB	THR	647	2,676	-12,823	26,831	1.00	0.00
ATOM	6872	HG1	THR	647	4,339	-14,307	26,345	1.00	0.00
ATOM	6873	HG21	THR	647	1,425	-14,177	25,641	1.00	0.00
ATOM	6874	HG22	THR	647	2,740	-14,522	24,551	1.00	0.00
ATOM	6875	HG23	THR	647	1,755	-13,075	24,252	1.00	0.00
ATOM	6876	N	GLY	648	5,326	-10,340	26,334	1.00	0.00
ATOM	6877	CA	GLY	648	6,072	-9,573	27,285	1.00	0.00
ATOM	6878	C	GLY	648	6,969	-10,270	28,249	1.00	0.00
ATOM	6879	O	GLY	648	7,853	-9,645	28,839	1.00	0.00

ATOM	6880	H	GLY	648	5,822	-10,712	25,537	1.00	0.00
ATOM	6881	HA2	GLY	648	6,671	-8,914	26,656	1.00	0.00
ATOM	6882	HA3	GLY	648	5,335	-9,038	27,883	1.00	0.00
ATOM	6883	N	THR	649	7,005	-11,585	28,356	1.00	0.00
ATOM	6884	CA	THR	649	8,111	-12,356	29,005	1.00	0.00
ATOM	6885	C	THR	649	9,415	-12,208	28,287	1.00	0.00
ATOM	6886	O	THR	649	9,450	-12,385	27,109	1.00	0.00
ATOM	6887	CB	THR	649	7,812	-13,826	29,070	1.00	0.00
ATOM	6888	CG2	THR	649	8,830	-14,684	29,798	1.00	0.00
ATOM	6889	OG1	THR	649	6,643	-13,950	29,819	1.00	0.00
ATOM	6890	H	THR	649	6,211	-12,059	27,950	1.00	0.00
ATOM	6891	HA	THR	649	8,268	-12,018	30,028	1.00	0.00
ATOM	6892	HB	THR	649	7,686	-14,210	28,057	1.00	0.00
ATOM	6893	HG1	THR	649	5,975	-13,410	29,391	1.00	0.00
ATOM	6894	HG21	THR	649	9,784	-14,671	29,270	1.00	0.00
ATOM	6895	HG22	THR	649	8,412	-15,690	29,828	1.00	0.00
ATOM	6896	HG23	THR	649	8,867	-14,255	30,799	1.00	0.00
ATOM	6897	N	SER	650	10,430	-11,869	29,048	1.00	0.00
ATOM	6898	CA	SER	650	11,875	-11,948	28,659	1.00	0.00
ATOM	6899	C	SER	650	12,508	-13,168	29,159	1.00	0.00
ATOM	6900	O	SER	650	12,179	-13,628	30,242	1.00	0.00
ATOM	6901	CB	SER	650	12,666	-10,652	29,130	1.00	0.00
ATOM	6902	OG	SER	650	13,141	-10,744	30,467	1.00	0.00
ATOM	6903	H	SER	650	10,259	-11,690	30,028	1.00	0.00
ATOM	6904	HA	SER	650	11,907	-11,951	27,570	1.00	0.00
ATOM	6905	HB2	SER	650	13,510	-10,490	28,458	1.00	0.00
ATOM	6906	HB3	SER	650	11,987	-9,811	28,990	1.00	0.00
ATOM	6907	HG	SER	650	13,235	-9,894	30,903	1.00	0.00
ATOM	6908	N	ALA	651	13,613	-13,543	28,512	1.00	0.00
ATOM	6909	CA	ALA	651	14,585	-14,514	29,021	1.00	0.00
ATOM	6910	C	ALA	651	15,053	-14,367	30,478	1.00	0.00
ATOM	6911	O	ALA	651	15,433	-15,336	31,102	1.00	0.00
ATOM	6912	CB	ALA	651	15,771	-14,338	28,174	1.00	0.00
ATOM	6913	H	ALA	651	13,849	-13,091	27,641	1.00	0.00
ATOM	6914	HA	ALA	651	14,298	-15,548	28,832	1.00	0.00
ATOM	6915	HB1	ALA	651	16,508	-15,120	28,358	1.00	0.00
ATOM	6916	HB2	ALA	651	16,188	-13,345	28,343	1.00	0.00
ATOM	6917	HB3	ALA	651	15,608	-14,366	27,097	1.00	0.00
ATOM	6918	N	LEU	652	14,956	-13,157	30,992	1.00	0.00
ATOM	6919	CA	LEU	652	15,215	-13,035	32,392	1.00	0.00
ATOM	6920	C	LEU	652	14,099	-13,632	33,348	1.00	0.00
ATOM	6921	O	LEU	652	14,500	-14,114	34,414	1.00	0.00
ATOM	6922	CB	LEU	652	15,605	-11,538	32,795	1.00	0.00

ATOM	6923	CG	LEU	652	15,958	-11,250	34,298	1.00	0.00
ATOM	6924	CD1	LEU	652	17,451	-11,699	34,602	1.00	0.00
ATOM	6925	CD2	LEU	652	15,863	-9,724	34,519	1.00	0.00
ATOM	6926	H	LEU	652	14,527	-12,377	30,515	1.00	0.00
ATOM	6927	HA	LEU	652	16,132	-13,586	32,603	1.00	0.00
ATOM	6928	HB2	LEU	652	16,410	-11,182	32,153	1.00	0.00
ATOM	6929	HB3	LEU	652	14,713	-10,936	32,619	1.00	0.00
ATOM	6930	HG	LEU	652	15,266	-11,825	34,912	1.00	0.00
ATOM	6931	HD11	LEU	652	17,543	-12,785	34,616	1.00	0.00
ATOM	6932	HD12	LEU	652	17,677	-11,360	35,612	1.00	0.00
ATOM	6933	HD13	LEU	652	18,136	-11,171	33,938	1.00	0.00
ATOM	6934	HD21	LEU	652	16,683	-9,139	34,104	1.00	0.00
ATOM	6935	HD22	LEU	652	14,881	-9,354	34,224	1.00	0.00
ATOM	6936	HD23	LEU	652	16,021	-9,588	35,589	1.00	0.00
ATOM	6937	N	HIE	653	12,832	-13,612	33,007	1.00	0.00
ATOM	6938	CA	HIE	653	11,849	-14,435	33,732	1.00	0.00
ATOM	6939	C	HIE	653	12,144	-15,933	33,900	1.00	0.00
ATOM	6940	O	HIE	653	12,179	-16,461	34,984	1.00	0.00
ATOM	6941	CB	HIE	653	10,492	-14,335	33,055	1.00	0.00
ATOM	6942	CG	HIE	653	9,763	-13,060	33,207	1.00	0.00
ATOM	6943	CD2	HIE	653	9,943	-11,904	32,487	1.00	0.00
ATOM	6944	ND1	HIE	653	8,619	-13,005	33,895	1.00	0.00
ATOM	6945	CE1	HIE	653	8,031	-11,853	33,582	1.00	0.00
ATOM	6946	NE2	HIE	653	8,852	-11,107	32,765	1.00	0.00
ATOM	6947	H	HIE	653	12,675	-13,300	32,059	1.00	0.00
ATOM	6948	HA	HIE	653	11,747	-14,055	34,749	1.00	0.00
ATOM	6949	HB2	HIE	653	10,690	-14,541	32,002	1.00	0.00
ATOM	6950	HB3	HIE	653	9,826	-15,131	33,388	1.00	0.00
ATOM	6951	HD2	HIE	653	10,749	-11,768	31,781	1.00	0.00
ATOM	6952	HE1	HIE	653	7,092	-11,559	34,029	1.00	0.00
ATOM	6953	HE2	HIE	653	8,678	-10,173	32,421	1.00	0.00
ATOM	6954	N	THR	654	12,503	-16,517	32,754	1.00	0.00
ATOM	6955	CA	THR	654	12,825	-17,976	32,685	1.00	0.00
ATOM	6956	C	THR	654	14,172	-18,224	33,392	1.00	0.00
ATOM	6957	O	THR	654	14,360	-19,286	33,987	1.00	0.00
ATOM	6958	CB	THR	654	12,887	-18,412	31,228	1.00	0.00
ATOM	6959	CG2	THR	654	12,895	-19,952	31,046	1.00	0.00
ATOM	6960	OG1	THR	654	11,834	-17,975	30,462	1.00	0.00
ATOM	6961	H	THR	654	12,461	-15,919	31,941	1.00	0.00
ATOM	6962	HA	THR	654	12,149	-18,564	33,305	1.00	0.00
ATOM	6963	HB	THR	654	13,819	-18,027	30,814	1.00	0.00
ATOM	6964	HG1	THR	654	11,029	-18,173	30,947	1.00	0.00
ATOM	6965	HG21	THR	654	12,158	-20,384	31,723	1.00	0.00

ATOM	6966	HG22	THR	654	13,842	-20,376	31,379	1.00	0.00
ATOM	6967	HG23	THR	654	12,739	-20,231	30,003	1.00	0.00
ATOM	6968	N	ALA	655	15,008	-17,296	33,440	1.00	0.00
ATOM	6969	CA	ALA	655	16,265	-17,487	34,112	1.00	0.00
ATOM	6970	C	ALA	655	16,085	-17,658	35,632	1.00	0.00
ATOM	6971	O	ALA	655	16,879	-18,315	36,307	1.00	0.00
ATOM	6972	CB	ALA	655	17,230	-16,289	33,907	1.00	0.00
ATOM	6973	H	ALA	655	15,053	-16,489	32,835	1.00	0.00
ATOM	6974	HA	ALA	655	16,738	-18,407	33,768	1.00	0.00
ATOM	6975	HB1	ALA	655	18,119	-16,481	34,508	1.00	0.00
ATOM	6976	HB2	ALA	655	16,766	-15,366	34,258	1.00	0.00
ATOM	6977	HB3	ALA	655	17,546	-16,250	32,865	1.00	0.00
ATOM	6978	N	VAL	656	15,084	-16,982	36,200	1.00	0.00
ATOM	6979	CA	VAL	656	14,559	-17,109	37,624	1.00	0.00
ATOM	6980	C	VAL	656	13,727	-18,365	37,872	1.00	0.00
ATOM	6981	O	VAL	656	13,895	-19,060	38,860	1.00	0.00
ATOM	6982	CB	VAL	656	13,718	-15,851	37,972	1.00	0.00
ATOM	6983	CG1	VAL	656	13,243	-15,936	39,444	1.00	0.00
ATOM	6984	CG2	VAL	656	14,548	-14,569	37,842	1.00	0.00
ATOM	6985	H	VAL	656	14,543	-16,367	35,609	1.00	0.00
ATOM	6986	HA	VAL	656	15,353	-17,055	38,368	1.00	0.00
ATOM	6987	HB	VAL	656	12,844	-15,870	37,322	1.00	0.00
ATOM	6988	HG11	VAL	656	12,660	-15,016	39,498	1.00	0.00
ATOM	6989	HG12	VAL	656	12,549	-16,768	39,572	1.00	0.00
ATOM	6990	HG13	VAL	656	14,027	-15,976	40,201	1.00	0.00
ATOM	6991	HG21	VAL	656	15,279	-14,595	38,651	1.00	0.00
ATOM	6992	HG22	VAL	656	13,949	-13,711	38,143	1.00	0.00
ATOM	6993	HG23	VAL	656	14,957	-14,439	36,839	1.00	0.00
ATOM	6994	N	CYS	657	12,690	-18,685	36,926	1.00	0.00
ATOM	6995	CA	CYS	657	11,838	-19,866	36,984	1.00	0.00
ATOM	6996	C	CYS	657	12,739	-21,137	36,882	1.00	0.00
ATOM	6997	O	CYS	657	12,293	-22,135	37,428	1.00	0.00
ATOM	6998	CB	CYS	657	10,764	-19,826	35,867	1.00	0.00
ATOM	6999	SG	CYS	657	9,601	-18,430	36,135	1.00	0.00
ATOM	7000	H	CYS	657	12,535	-18,055	36,153	1.00	0.00
ATOM	7001	HA	CYS	657	11,321	-19,847	37,944	1.00	0.00
ATOM	7002	HB2	CYS	657	11,222	-19,717	34,884	1.00	0.00
ATOM	7003	HB3	CYS	657	10,190	-20,750	35,915	1.00	0.00
ATOM	7004	HG	CYS	657	9,276	-18,244	34,852	1.00	0.00
ATOM	7005	N	GLU	658	13,898	-21,016	36,296	1.00	0.00
ATOM	7006	CA	GLU	658	14,942	-22,083	36,214	1.00	0.00
ATOM	7007	C	GLU	658	15,988	-22,060	37,240	1.00	0.00
ATOM	7008	O	GLU	658	16,965	-22,877	37,216	1.00	0.00

ATOM	7009	CB	GLU	658	15,587	-22,203	34,848	1.00	0.00
ATOM	7010	CG	GLU	658	14,680	-22,638	33,652	1.00	0.00
ATOM	7011	CD	GLU	658	13,933	-23,958	33,750	1.00	0.00
ATOM	7012	OE1	GLU	658	12,840	-24,050	33,080	1.00	0.00
ATOM	7013	OE2	GLU	658	14,347	-24,890	34,520	1.00	0.00
ATOM	7014	H	GLU	658	14,217	-20,098	36,016	1.00	0.00
ATOM	7015	HA	GLU	658	14,394	-22,982	36,496	1.00	0.00
ATOM	7016	HB2	GLU	658	16,162	-21,331	34,535	1.00	0.00
ATOM	7017	HB3	GLU	658	16,382	-22,949	34,836	1.00	0.00
ATOM	7018	HG2	GLU	658	14,050	-21,755	33,542	1.00	0.00
ATOM	7019	HG3	GLU	658	15,266	-22,730	32,737	1.00	0.00
ATOM	7020	N	GLU	659	15,902	-21,081	38,142	1.00	0.00
ATOM	7021	CA	GLU	659	16,771	-20,876	39,310	1.00	0.00
ATOM	7022	C	GLU	659	18,272	-20,717	38,948	1.00	0.00
ATOM	7023	O	GLU	659	19,177	-21,137	39,683	1.00	0.00
ATOM	7024	CB	GLU	659	16,483	-21,879	40,397	1.00	0.00
ATOM	7025	CG	GLU	659	15,135	-21,774	41,015	1.00	0.00
ATOM	7026	CD	GLU	659	15,030	-22,714	42,236	1.00	0.00
ATOM	7027	OE1	GLU	659	14,539	-23,845	42,102	1.00	0.00
ATOM	7028	OE2	GLU	659	15,448	-22,423	43,332	1.00	0.00
ATOM	7029	H	GLU	659	15,033	-20,570	38,078	1.00	0.00
ATOM	7030	HA	GLU	659	16,470	-19,974	39,842	1.00	0.00
ATOM	7031	HB2	GLU	659	16,689	-22,871	39,996	1.00	0.00
ATOM	7032	HB3	GLU	659	17,170	-21,845	41,243	1.00	0.00
ATOM	7033	HG2	GLU	659	15,045	-20,741	41,353	1.00	0.00
ATOM	7034	HG3	GLU	659	14,386	-21,920	40,237	1.00	0.00
ATOM	7035	N	ASN	660	18,523	-20,371	37,677	1.00	0.00
ATOM	7036	CA	ASN	660	19,810	-20,452	36,941	1.00	0.00
ATOM	7037	C	ASN	660	20,749	-19,233	37,066	1.00	0.00
ATOM	7038	O	ASN	660	20,713	-18,324	36,200	1.00	0.00
ATOM	7039	CB	ASN	660	19,475	-20,797	35,485	1.00	0.00
ATOM	7040	CG	ASN	660	20,618	-21,197	34,527	1.00	0.00
ATOM	7041	ND2	ASN	660	20,225	-21,559	33,361	1.00	0.00
ATOM	7042	OD1	ASN	660	21,778	-21,295	34,861	1.00	0.00
ATOM	7043	H	ASN	660	17,730	-19,986	37,185	1.00	0.00
ATOM	7044	HA	ASN	660	20,314	-21,342	37,320	1.00	0.00
ATOM	7045	HB2	ASN	660	18,777	-21,633	35,523	1.00	0.00
ATOM	7046	HB3	ASN	660	18,960	-19,981	34,976	1.00	0.00
ATOM	7047	HD21	ASN	660	19,254	-21,449	33,104	1.00	0.00
ATOM	7048	HD22	ASN	660	20,930	-21,827	32,690	1.00	0.00
ATOM	7049	N	ILE	661	21,557	-19,146	38,103	1.00	0.00
ATOM	7050	CA	ILE	661	22,272	-17,939	38,534	1.00	0.00
ATOM	7051	C	ILE	661	23,355	-17,496	37,574	1.00	0.00



ATOM	7052	O	ILE	661	23,599	-16,298	37,535	1.00	0.00
ATOM	7053	CB	ILE	661	22,904	-18,090	39,884	1.00	0.00
ATOM	7054	CG1	ILE	661	23,948	-19,284	40,071	1.00	0.00
ATOM	7055	CG2	ILE	661	21,790	-18,159	40,973	1.00	0.00
ATOM	7056	CD1	ILE	661	24,898	-19,266	41,259	1.00	0.00
ATOM	7057	H	ILE	661	21,731	-19,996	38,620	1.00	0.00
ATOM	7058	HA	ILE	661	21,619	-17,069	38,609	1.00	0.00
ATOM	7059	HB	ILE	661	23,493	-17,185	40,035	1.00	0.00
ATOM	7060	HG12	ILE	661	23,500	-20,270	39,947	1.00	0.00
ATOM	7061	HG13	ILE	661	24,532	-19,204	39,153	1.00	0.00
ATOM	7062	HG21	ILE	661	21,181	-19,060	40,929	1.00	0.00
ATOM	7063	HG22	ILE	661	21,136	-17,288	41,001	1.00	0.00
ATOM	7064	HG23	ILE	661	22,114	-18,096	42,012	1.00	0.00
ATOM	7065	HD11	ILE	661	25,454	-20,193	41,127	1.00	0.00
ATOM	7066	HD12	ILE	661	24,361	-19,226	42,207	1.00	0.00
ATOM	7067	HD13	ILE	661	25,598	-18,455	41,459	1.00	0.00
ATOM	7068	N	GLU	662	23,829	-18,319	36,664	1.00	0.00
ATOM	7069	CA	GLU	662	24,634	-17,751	35,590	1.00	0.00
ATOM	7070	C	GLU	662	23,863	-16,908	34,568	1.00	0.00
ATOM	7071	O	GLU	662	24,363	-15,856	34,099	1.00	0.00
ATOM	7072	CB	GLU	662	25,370	-18,939	34,892	1.00	0.00
ATOM	7073	CG	GLU	662	26,496	-19,559	35,682	1.00	0.00
ATOM	7074	CD	GLU	662	27,253	-20,632	34,878	1.00	0.00
ATOM	7075	OE1	GLU	662	28,333	-20,396	34,306	1.00	0.00
ATOM	7076	OE2	GLU	662	26,715	-21,751	34,770	1.00	0.00
ATOM	7077	H	GLU	662	23,613	-19,304	36,633	1.00	0.00
ATOM	7078	HA	GLU	662	25,420	-17,088	35,951	1.00	0.00
ATOM	7079	HB2	GLU	662	24,655	-19,684	34,541	1.00	0.00
ATOM	7080	HB3	GLU	662	25,840	-18,439	34,045	1.00	0.00
ATOM	7081	HG2	GLU	662	27,270	-18,821	35,892	1.00	0.00
ATOM	7082	HG3	GLU	662	26,144	-19,971	36,627	1.00	0.00
ATOM	7083	N	MET	663	22,665	-17,309	34,215	1.00	0.00
ATOM	7084	CA	MET	663	21,731	-16,649	33,352	1.00	0.00
ATOM	7085	C	MET	663	20,924	-15,456	34,003	1.00	0.00
ATOM	7086	O	MET	663	20,664	-14,509	33,277	1.00	0.00
ATOM	7087	CB	MET	663	20,849	-17,690	32,811	1.00	0.00
ATOM	7088	CG	MET	663	20,209	-17,235	31,506	1.00	0.00
ATOM	7089	SD	MET	663	18,848	-18,324	31,008	1.00	0.00
ATOM	7090	CE	MET	663	19,678	-19,808	30,384	1.00	0.00
ATOM	7091	H	MET	663	22,300	-18,088	34,744	1.00	0.00
ATOM	7092	HA	MET	663	22,395	-16,220	32,601	1.00	0.00
ATOM	7093	HB2	MET	663	21,500	-18,548	32,644	1.00	0.00
ATOM	7094	HB3	MET	663	20,021	-17,858	33,499	1.00	0.00

ATOM	7095	HG2	MET	663	19,774	-16,236	31,567	1.00	0.00
ATOM	7096	HG3	MET	663	20,996	-17,188	30,754	1.00	0.00
ATOM	7097	HE1	MET	663	20,235	-20,327	31,163	1.00	0.00
ATOM	7098	HE2	MET	663	18,934	-20,498	29,983	1.00	0.00
ATOM	7099	HE3	MET	663	20,378	-19,467	29,621	1.00	0.00
ATOM	7100	N	VAL	664	20,743	-15,510	35,305	1.00	0.00
ATOM	7101	CA	VAL	664	20,388	-14,312	36,085	1.00	0.00
ATOM	7102	C	VAL	664	21,522	-13,303	35,891	1.00	0.00
ATOM	7103	O	VAL	664	21,271	-12,255	35,340	1.00	0.00
ATOM	7104	CB	VAL	664	20,206	-14,710	37,627	1.00	0.00
ATOM	7105	CG1	VAL	664	19,867	-13,494	38,533	1.00	0.00
ATOM	7106	CG2	VAL	664	19,122	-15,785	37,932	1.00	0.00
ATOM	7107	H	VAL	664	20,774	-16,434	35,711	1.00	0.00
ATOM	7108	HA	VAL	664	19,483	-13,876	35,662	1.00	0.00
ATOM	7109	HB	VAL	664	21,184	-15,028	37,989	1.00	0.00
ATOM	7110	HG11	VAL	664	20,414	-12,615	38,190	1.00	0.00
ATOM	7111	HG12	VAL	664	18,843	-13,120	38,515	1.00	0.00
ATOM	7112	HG13	VAL	664	20,147	-13,731	39,559	1.00	0.00
ATOM	7113	HG21	VAL	664	19,267	-16,139	38,953	1.00	0.00
ATOM	7114	HG22	VAL	664	19,289	-16,692	37,350	1.00	0.00
ATOM	7115	HG23	VAL	664	18,139	-15,432	37,620	1.00	0.00
ATOM	7116	N	LYS	665	22,692	-13,693	36,263	1.00	0.00
ATOM	7117	CA	LYS	665	23,846	-12,728	36,202	1.00	0.00
ATOM	7118	C	LYS	665	24,224	-12,245	34,793	1.00	0.00
ATOM	7119	O	LYS	665	24,332	-11,044	34,616	1.00	0.00
ATOM	7120	CB	LYS	665	25,083	-13,381	36,898	1.00	0.00
ATOM	7121	CG	LYS	665	24,819	-13,631	38,419	1.00	0.00
ATOM	7122	CD	LYS	665	25,866	-14,480	39,059	1.00	0.00
ATOM	7123	CE	LYS	665	25,535	-14,705	40,545	1.00	0.00
ATOM	7124	NZ	LYS	665	26,585	-15,388	41,303	1.00	0.00
ATOM	7125	H	LYS	665	22,772	-14,546	36,799	1.00	0.00
ATOM	7126	HA	LYS	665	23,630	-11,826	36,774	1.00	0.00
ATOM	7127	HB2	LYS	665	25,317	-14,241	36,271	1.00	0.00
ATOM	7128	HB3	LYS	665	25,858	-12,623	37,002	1.00	0.00
ATOM	7129	HG2	LYS	665	24,813	-12,638	38,869	1.00	0.00
ATOM	7130	HG3	LYS	665	23,835	-14,038	38,652	1.00	0.00
ATOM	7131	HD2	LYS	665	25,904	-15,488	38,647	1.00	0.00
ATOM	7132	HD3	LYS	665	26,779	-13,886	39,021	1.00	0.00
ATOM	7133	HE2	LYS	665	25,435	-13,707	40,970	1.00	0.00
ATOM	7134	HE3	LYS	665	24,543	-15,140	40,677	1.00	0.00
ATOM	7135	HZ1	LYS	665	26,261	-15,689	42,211	1.00	0.00
ATOM	7136	HZ2	LYS	665	27,431	-14,858	41,461	1.00	0.00
ATOM	7137	HZ3	LYS	665	26,857	-16,204	40,772	1.00	0.00

ATOM	7138	N	TYR	666	24,381	-13,124	33,840	1.00	0.00
ATOM	7139	CA	TYR	666	24,550	-12,608	32,463	1.00	0.00
ATOM	7140	C	TYR	666	23,425	-11,719	31,900	1.00	0.00
ATOM	7141	O	TYR	666	23,726	-10,745	31,166	1.00	0.00
ATOM	7142	CB	TYR	666	24,724	-13,825	31,534	1.00	0.00
ATOM	7143	CG	TYR	666	24,753	-13,465	30,118	1.00	0.00
ATOM	7144	CD1	TYR	666	25,937	-12,894	29,631	1.00	0.00
ATOM	7145	CD2	TYR	666	23,635	-13,716	29,357	1.00	0.00
ATOM	7146	CE1	TYR	666	26,051	-12,683	28,229	1.00	0.00
ATOM	7147	CE2	TYR	666	23,687	-13,413	27,979	1.00	0.00
ATOM	7148	CZ	TYR	666	24,912	-12,967	27,376	1.00	0.00
ATOM	7149	OH	TYR	666	25,024	-12,801	26,035	1.00	0.00
ATOM	7150	H	TYR	666	24,338	-14,102	34,086	1.00	0.00
ATOM	7151	HA	TYR	666	25,424	-11,957	32,444	1.00	0.00
ATOM	7152	HB2	TYR	666	25,527	-14,481	31,868	1.00	0.00
ATOM	7153	HB3	TYR	666	23,806	-14,406	31,623	1.00	0.00
ATOM	7154	HD1	TYR	666	26,843	-12,898	30,221	1.00	0.00
ATOM	7155	HD2	TYR	666	22,754	-14,142	29,817	1.00	0.00
ATOM	7156	HE1	TYR	666	26,930	-12,266	27,761	1.00	0.00
ATOM	7157	HE2	TYR	666	22,746	-13,547	27,467	1.00	0.00
ATOM	7158	HH	TYR	666	24,356	-13,156	25,443	1.00	0.00
ATOM	7159	N	LEU	667	22,204	-12,038	32,197	1.00	0.00
ATOM	7160	CA	LEU	667	21,025	-11,292	31,565	1.00	0.00
ATOM	7161	C	LEU	667	20,802	-9,877	32,241	1.00	0.00
ATOM	7162	O	LEU	667	20,528	-8,912	31,505	1.00	0.00
ATOM	7163	CB	LEU	667	19,768	-12,102	31,569	1.00	0.00
ATOM	7164	CG	LEU	667	19,622	-13,358	30,663	1.00	0.00
ATOM	7165	CD1	LEU	667	18,286	-14,044	30,958	1.00	0.00
ATOM	7166	CD2	LEU	667	19,680	-12,864	29,230	1.00	0.00
ATOM	7167	H	LEU	667	22,059	-12,768	32,880	1.00	0.00
ATOM	7168	HA	LEU	667	21,292	-10,994	30,551	1.00	0.00
ATOM	7169	HB2	LEU	667	19,622	-12,462	32,587	1.00	0.00
ATOM	7170	HB3	LEU	667	18,978	-11,427	31,238	1.00	0.00
ATOM	7171	HG	LEU	667	20,471	-14,019	30,837	1.00	0.00
ATOM	7172	HD11	LEU	667	18,197	-15,015	30,470	1.00	0.00
ATOM	7173	HD12	LEU	667	17,446	-13,514	30,508	1.00	0.00
ATOM	7174	HD13	LEU	667	18,259	-14,229	32,032	1.00	0.00
ATOM	7175	HD21	LEU	667	19,363	-13,639	28,532	1.00	0.00
ATOM	7176	HD22	LEU	667	19,040	-12,018	28,977	1.00	0.00
ATOM	7177	HD23	LEU	667	20,685	-12,596	28,899	1.00	0.00
ATOM	7178	N	LEU	668	21,226	-9,775	33,537	1.00	0.00
ATOM	7179	CA	LEU	668	21,291	-8,492	34,245	1.00	0.00
ATOM	7180	C	LEU	668	22,487	-7,689	33,647	1.00	0.00

ATOM	7181	O	LEU	668	22,365	-6,527	33,153	1.00	0.00
ATOM	7182	CB	LEU	668	21,655	-8,785	35,710	1.00	0.00
ATOM	7183	CG	LEU	668	20,477	-9,272	36,603	1.00	0.00
ATOM	7184	CD1	LEU	668	20,956	-9,584	37,998	1.00	0.00
ATOM	7185	CD2	LEU	668	19,431	-8,151	36,608	1.00	0.00
ATOM	7186	H	LEU	668	21,444	-10,613	34,058	1.00	0.00
ATOM	7187	HA	LEU	668	20,386	-7,885	34,233	1.00	0.00
ATOM	7188	HB2	LEU	668	22,433	-9,548	35,667	1.00	0.00
ATOM	7189	HB3	LEU	668	22,126	-7,918	36,173	1.00	0.00
ATOM	7190	HG	LEU	668	20,030	-10,192	36,227	1.00	0.00
ATOM	7191	HD11	LEU	668	20,173	-10,110	38,544	1.00	0.00
ATOM	7192	HD12	LEU	668	21,261	-8,652	38,474	1.00	0.00
ATOM	7193	HD13	LEU	668	21,830	-10,237	37,979	1.00	0.00
ATOM	7194	HD21	LEU	668	18,916	-8,197	35,649	1.00	0.00
ATOM	7195	HD22	LEU	668	18,679	-8,309	37,381	1.00	0.00
ATOM	7196	HD23	LEU	668	19,971	-7,210	36,717	1.00	0.00
ATOM	7197	N	GLU	669	23,656	-8,354	33,512	1.00	0.00
ATOM	7198	CA	GLU	669	24,862	-7,789	32,919	1.00	0.00
ATOM	7199	C	GLU	669	24,674	-7,295	31,453	1.00	0.00
ATOM	7200	O	GLU	669	25,188	-6,245	31,015	1.00	0.00
ATOM	7201	CB	GLU	669	25,964	-8,829	32,919	1.00	0.00
ATOM	7202	CG	GLU	669	27,367	-8,332	32,532	1.00	0.00
ATOM	7203	CD	GLU	669	28,417	-9,297	33,187	1.00	0.00
ATOM	7204	OE1	GLU	669	28,578	-9,338	34,417	1.00	0.00
ATOM	7205	OE2	GLU	669	29,100	-10,015	32,438	1.00	0.00
ATOM	7206	H	GLU	669	23,668	-9,275	33,927	1.00	0.00
ATOM	7207	HA	GLU	669	25,250	-6,923	33,457	1.00	0.00
ATOM	7208	HB2	GLU	669	25,918	-9,301	33,900	1.00	0.00
ATOM	7209	HB3	GLU	669	25,799	-9,580	32,147	1.00	0.00
ATOM	7210	HG2	GLU	669	27,414	-8,156	31,457	1.00	0.00
ATOM	7211	HG3	GLU	669	27,365	-7,355	33,013	1.00	0.00
ATOM	7212	N	GLN	670	23,737	-7,953	30,718	1.00	0.00
ATOM	7213	CA	GLN	670	23,261	-7,511	29,378	1.00	0.00
ATOM	7214	C	GLN	670	22,189	-6,385	29,339	1.00	0.00
ATOM	7215	O	GLN	670	21,723	-6,055	28,234	1.00	0.00
ATOM	7216	CB	GLN	670	22,939	-8,705	28,468	1.00	0.00
ATOM	7217	CG	GLN	670	24,117	-9,658	28,212	1.00	0.00
ATOM	7218	CD	GLN	670	25,290	-8,980	27,598	1.00	0.00
ATOM	7219	NE2	GLN	670	26,484	-9,061	28,192	1.00	0.00
ATOM	7220	OE1	GLN	670	25,185	-8,306	26,547	1.00	0.00
ATOM	7221	H	GLN	670	23,463	-8,872	31,030	1.00	0.00
ATOM	7222	HA	GLN	670	24,131	-7,115	28,853	1.00	0.00
ATOM	7223	HB2	GLN	670	22,102	-9,279	28,866	1.00	0.00

ATOM	7224	HB3	GLN	670	22,618	-8,404	27,471	1.00	0.00
ATOM	7225	HG2	GLN	670	24,484	-10,073	29,150	1.00	0.00
ATOM	7226	HG3	GLN	670	23,795	-10,460	27,547	1.00	0.00
ATOM	7227	HE21	GLN	670	27,133	-8,398	27,793	1.00	0.00
ATOM	7228	HE22	GLN	670	26,568	-9,561	29,065	1.00	0.00
ATOM	7229	N	GLY	671	21,762	-5,857	30,534	1.00	0.00
ATOM	7230	CA	GLY	671	20,916	-4,634	30,823	1.00	0.00
ATOM	7231	C	GLY	671	19,469	-4,876	31,202	1.00	0.00
ATOM	7232	O	GLY	671	18,671	-3,940	31,148	1.00	0.00
ATOM	7233	H	GLY	671	22,092	-6,322	31,367	1.00	0.00
ATOM	7234	HA2	GLY	671	21,402	-4,041	31,598	1.00	0.00
ATOM	7235	HA3	GLY	671	20,948	-3,989	29,944	1.00	0.00
ATOM	7236	N	ALA	672	19,122	-6,110	31,467	1.00	0.00
ATOM	7237	CA	ALA	672	17,712	-6,516	31,681	1.00	0.00
ATOM	7238	C	ALA	672	17,037	-5,953	32,956	1.00	0.00
ATOM	7239	O	ALA	672	17,594	-5,919	34,042	1.00	0.00
ATOM	7240	CB	ALA	672	17,613	-8,062	31,686	1.00	0.00
ATOM	7241	H	ALA	672	19,853	-6,807	31,463	1.00	0.00
ATOM	7242	HA	ALA	672	17,269	-6,087	30,783	1.00	0.00
ATOM	7243	HB1	ALA	672	17,981	-8,432	30,729	1.00	0.00
ATOM	7244	HB2	ALA	672	16,601	-8,395	31,916	1.00	0.00
ATOM	7245	HB3	ALA	672	18,332	-8,404	32,432	1.00	0.00
ATOM	7246	N	ASP	673	15,809	-5,486	32,772	1.00	0.00
ATOM	7247	CA	ASP	673	14,993	-4,796	33,781	1.00	0.00
ATOM	7248	C	ASP	673	14,333	-5,895	34,615	1.00	0.00
ATOM	7249	O	ASP	673	13,716	-6,859	34,171	1.00	0.00
ATOM	7250	CB	ASP	673	13,993	-3,750	33,147	1.00	0.00
ATOM	7251	CG	ASP	673	13,013	-3,229	34,190	1.00	0.00
ATOM	7252	OD1	ASP	673	13,403	-3,014	35,352	1.00	0.00
ATOM	7253	OD2	ASP	673	11,801	-3,153	33,813	1.00	0.00
ATOM	7254	H	ASP	673	15,403	-5,547	31,850	1.00	0.00
ATOM	7255	HA	ASP	673	15,699	-4,201	34,361	1.00	0.00
ATOM	7256	HB2	ASP	673	14,545	-2,941	32,669	1.00	0.00
ATOM	7257	HB3	ASP	673	13,505	-4,226	32,296	1.00	0.00
ATOM	7258	N	VAL	674	14,407	-5,705	35,960	1.00	0.00
ATOM	7259	CA	VAL	674	13,769	-6,597	36,959	1.00	0.00
ATOM	7260	C	VAL	674	12,304	-6,348	37,183	1.00	0.00
ATOM	7261	O	VAL	674	11,626	-7,221	37,733	1.00	0.00
ATOM	7262	CB	VAL	674	14,482	-6,414	38,304	1.00	0.00
ATOM	7263	CG1	VAL	674	16,020	-6,695	38,064	1.00	0.00
ATOM	7264	CG2	VAL	674	14,448	-5,027	38,943	1.00	0.00
ATOM	7265	H	VAL	674	14,995	-4,952	36,287	1.00	0.00
ATOM	7266	HA	VAL	674	13,889	-7,609	36,571	1.00	0.00

ATOM	7267	HB	VAL	674	14,174	-7,195	38,999	1.00	0.00
ATOM	7268	HG11	VAL	674	16,474	-6,074	37,293	1.00	0.00
ATOM	7269	HG12	VAL	674	16,569	-6,409	38,961	1.00	0.00
ATOM	7270	HG13	VAL	674	16,149	-7,712	37,694	1.00	0.00
ATOM	7271	HG21	VAL	674	13,444	-4,631	39,099	1.00	0.00
ATOM	7272	HG22	VAL	674	14,901	-4,265	38,308	1.00	0.00
ATOM	7273	HG23	VAL	674	14,977	-5,039	39,895	1.00	0.00
ATOM	7274	N	ASN	675	11,724	-5,209	36,732	1.00	0.00
ATOM	7275	CA	ASN	675	10,276	-4,933	36,713	1.00	0.00
ATOM	7276	C	ASN	675	9,603	-5,342	35,355	1.00	0.00
ATOM	7277	O	ASN	675	8,377	-5,258	35,276	1.00	0.00
ATOM	7278	CB	ASN	675	10,161	-3,441	37,060	1.00	0.00
ATOM	7279	CG	ASN	675	11,083	-2,768	38,091	1.00	0.00
ATOM	7280	ND2	ASN	675	12,333	-2,428	37,738	1.00	0.00
ATOM	7281	OD1	ASN	675	10,785	-2,874	39,284	1.00	0.00
ATOM	7282	H	ASN	675	12,360	-4,566	36,285	1.00	0.00
ATOM	7283	HA	ASN	675	9,852	-5,546	37,508	1.00	0.00
ATOM	7284	HB2	ASN	675	10,198	-2,945	36,091	1.00	0.00
ATOM	7285	HB3	ASN	675	9,137	-3,314	37,413	1.00	0.00
ATOM	7286	HD21	ASN	675	12,564	-2,495	36,757	1.00	0.00
ATOM	7287	HD22	ASN	675	12,897	-1,968	38,438	1.00	0.00
ATOM	7288	N	LYS	676	10,332	-5,795	34,294	1.00	0.00
ATOM	7289	CA	LYS	676	9,691	-6,102	33,024	1.00	0.00
ATOM	7290	C	LYS	676	8,476	-7,069	33,148	1.00	0.00
ATOM	7291	O	LYS	676	8,612	-8,261	33,264	1.00	0.00
ATOM	7292	CB	LYS	676	10,751	-6,737	32,030	1.00	0.00
ATOM	7293	CG	LYS	676	10,339	-7,025	30,575	1.00	0.00
ATOM	7294	CD	LYS	676	9,813	-5,786	29,964	1.00	0.00
ATOM	7295	CE	LYS	676	9,733	-5,910	28,457	1.00	0.00
ATOM	7296	NZ	LYS	676	9,030	-4,802	27,814	1.00	0.00
ATOM	7297	H	LYS	676	11,332	-5,672	34,348	1.00	0.00
ATOM	7298	HA	LYS	676	9,268	-5,194	32,595	1.00	0.00
ATOM	7299	HB2	LYS	676	11,536	-5,990	31,918	1.00	0.00
ATOM	7300	HB3	LYS	676	11,142	-7,653	32,474	1.00	0.00
ATOM	7301	HG2	LYS	676	11,239	-7,347	30,049	1.00	0.00
ATOM	7302	HG3	LYS	676	9,691	-7,898	30,642	1.00	0.00
ATOM	7303	HD2	LYS	676	8,795	-5,550	30,271	1.00	0.00
ATOM	7304	HD3	LYS	676	10,400	-4,918	30,264	1.00	0.00
ATOM	7305	HE2	LYS	676	10,735	-5,944	28,028	1.00	0.00
ATOM	7306	HE3	LYS	676	9,249	-6,875	28,299	1.00	0.00
ATOM	7307	HZ1	LYS	676	9,235	-3,936	28,292	1.00	0.00
ATOM	7308	HZ2	LYS	676	8,031	-4,894	27,936	1.00	0.00
ATOM	7309	HZ3	LYS	676	9,211	-4,693	26,826	1.00	0.00

ATOM	7310	N	GLN	677	7,274	-6,545	32,979	1.00	0.00
ATOM	7311	CA	GLN	677	5,964	-7,128	33,121	1.00	0.00
ATOM	7312	C	GLN	677	5,316	-7,799	31,911	1.00	0.00
ATOM	7313	O	GLN	677	4,985	-7,150	30,953	1.00	0.00
ATOM	7314	CB	GLN	677	4,994	-6,211	33,802	1.00	0.00
ATOM	7315	CG	GLN	677	4,827	-4,806	33,185	1.00	0.00
ATOM	7316	CD	GLN	677	3,619	-3,989	33,729	1.00	0.00
ATOM	7317	NE2	GLN	677	3,670	-2,738	34,034	1.00	0.00
ATOM	7318	OE1	GLN	677	2,522	-4,509	33,978	1.00	0.00
ATOM	7319	H	GLN	677	7,216	-5,554	32,792	1.00	0.00
ATOM	7320	HA	GLN	677	6,146	-8,028	33,708	1.00	0.00
ATOM	7321	HB2	GLN	677	4,002	-6,660	33,779	1.00	0.00
ATOM	7322	HB3	GLN	677	5,278	-6,116	34,850	1.00	0.00
ATOM	7323	HG2	GLN	677	5,737	-4,290	33,494	1.00	0.00
ATOM	7324	HG3	GLN	677	4,793	-4,912	32,101	1.00	0.00
ATOM	7325	HE21	GLN	677	2,841	-2,201	34,246	1.00	0.00
ATOM	7326	HE22	GLN	677	4,495	-2,229	33,750	1.00	0.00
ATOM	7327	N	ASP	678	5,114	-9,144	31,906	1.00	0.00
ATOM	7328	CA	ASP	678	4,293	-9,804	30,887	1.00	0.00
ATOM	7329	C	ASP	678	2,826	-9,458	30,979	1.00	0.00
ATOM	7330	O	ASP	678	2,409	-8,933	32,017	1.00	0.00
ATOM	7331	CB	ASP	678	4,464	-11,318	31,097	1.00	0.00
ATOM	7332	CG	ASP	678	3,803	-12,209	30,068	1.00	0.00
ATOM	7333	OD1	ASP	678	4,390	-12,641	29,058	1.00	0.00
ATOM	7334	OD2	ASP	678	2,552	-12,451	30,286	1.00	0.00
ATOM	7335	H	ASP	678	5,362	-9,602	32,771	1.00	0.00
ATOM	7336	HA	ASP	678	4,654	-9,611	29,877	1.00	0.00
ATOM	7337	HB2	ASP	678	5,543	-11,441	31,002	1.00	0.00
ATOM	7338	HB3	ASP	678	4,178	-11,658	32,092	1.00	0.00
ATOM	7339	N	MET	679	2,070	-9,740	30,005	1.00	0.00
ATOM	7340	CA	MET	679	0.626	-9,542	30,018	1.00	0.00
ATOM	7341	C	MET	679	-0.165	-10,241	31,147	1.00	0.00
ATOM	7342	O	MET	679	-1,238	-9,779	31,521	1.00	0.00
ATOM	7343	CB	MET	679	-0.044	-9,834	28,691	1.00	0.00
ATOM	7344	CG	MET	679	0.162	-11,248	28,171	1.00	0.00
ATOM	7345	SD	MET	679	-0.341	-11,583	26,437	1.00	0.00
ATOM	7346	CE	MET	679	-2,199	-11,776	26,746	1.00	0.00
ATOM	7347	H	MET	679	2,507	-10,217	29,228	1.00	0.00
ATOM	7348	HA	MET	679	0.475	-8,501	30,304	1.00	0.00
ATOM	7349	HB2	MET	679	-1,119	-9,657	28,665	1.00	0.00
ATOM	7350	HB3	MET	679	0.484	-9,282	27,914	1.00	0.00
ATOM	7351	HG2	MET	679	1,222	-11,454	28,320	1.00	0.00
ATOM	7352	HG3	MET	679	-0.369	-11,947	28,817	1.00	0.00

ATOM	7353	HE1	MET	679	-2,775	-12,137	25,893	1.00	0.00
ATOM	7354	HE2	MET	679	-2,471	-12,385	27,608	1.00	0.00
ATOM	7355	HE3	MET	679	-2,510	-10,745	26,919	1.00	0.00
ATOM	7356	N	HID	680	0.313	-11,336	31,721	1.00	0.00
ATOM	7357	CA	HID	680	-0.209	-12,045	32,943	1.00	0.00
ATOM	7358	C	HID	680	0.132	-11,277	34,221	1.00	0.00
ATOM	7359	O	HID	680	-0.114	-11,749	35,339	1.00	0.00
ATOM	7360	CB	HID	680	0.283	-13,488	33,006	1.00	0.00
ATOM	7361	CG	HID	680	-0.258	-14,523	33,918	1.00	0.00
ATOM	7362	CD2	HID	680	0.511	-15,516	34,407	1.00	0.00
ATOM	7363	ND1	HID	680	-1,473	-14,505	34,596	1.00	0.00
ATOM	7364	CE1	HID	680	-1,417	-15,568	35,448	1.00	0.00
ATOM	7365	NE2	HID	680	-0.180	-16,191	35,382	1.00	0.00
ATOM	7366	H	HID	680	1,121	-11,737	31,267	1.00	0.00
ATOM	7367	HA	HID	680	-1,298	-12,090	32,978	1.00	0.00
ATOM	7368	HB2	HID	680	0.204	-13,837	31,977	1.00	0.00
ATOM	7369	HB3	HID	680	1,343	-13,545	33,257	1.00	0.00
ATOM	7370	HD1	HID	680	-2,259	-13,912	34,371	1.00	0.00
ATOM	7371	HD2	HID	680	1,535	-15,776	34,183	1.00	0.00
ATOM	7372	HE1	HID	680	-2,252	-15,826	36,081	1.00	0.00
ATOM	7373	N	GLY	681	0.726	-10,081	34,147	1.00	0.00
ATOM	7374	CA	GLY	681	0.852	-9,148	35,296	1.00	0.00
ATOM	7375	C	GLY	681	2,057	-9,466	36,238	1.00	0.00
ATOM	7376	O	GLY	681	2,150	-9,047	37,386	1.00	0.00
ATOM	7377	H	GLY	681	1,044	-9,774	33,239	1.00	0.00
ATOM	7378	HA2	GLY	681	1,127	-8,128	35,029	1.00	0.00
ATOM	7379	HA3	GLY	681	-0.050	-9,124	35,907	1.00	0.00
ATOM	7380	N	TRP	682	2,987	-10,310	35,740	1.00	0.00
ATOM	7381	CA	TRP	682	4,191	-10,927	36,397	1.00	0.00
ATOM	7382	C	TRP	682	5,556	-10,363	35,952	1.00	0.00
ATOM	7383	O	TRP	682	5,770	-9,977	34,780	1.00	0.00
ATOM	7384	CB	TRP	682	4,162	-12,434	36,139	1.00	0.00
ATOM	7385	CG	TRP	682	3,281	-13,230	37,042	1.00	0.00
ATOM	7386	CD1	TRP	682	2,027	-13,591	36,804	1.00	0.00
ATOM	7387	CD2	TRP	682	3,565	-13,780	38,379	1.00	0.00
ATOM	7388	CE2	TRP	682	2,372	-14,323	38,951	1.00	0.00
ATOM	7389	CE3	TRP	682	4,663	-13,730	39,298	1.00	0.00
ATOM	7390	NE1	TRP	682	1,507	-14,209	37,894	1.00	0.00
ATOM	7391	CZ2	TRP	682	2,254	-14,857	40,240	1.00	0.00
ATOM	7392	CZ3	TRP	682	4,557	-14,217	40,627	1.00	0.00
ATOM	7393	CH2	TRP	682	3,331	-14,711	41,085	1.00	0.00
ATOM	7394	H	TRP	682	2,705	-10,729	34,865	1.00	0.00
ATOM	7395	HA	TRP	682	4,142	-10,909	37,486	1.00	0.00



ATOM	7396	HB2	TRP	682	3,798	-12,558	35,119	1.00	0.00
ATOM	7397	HB3	TRP	682	5,153	-12,879	36,228	1.00	0.00
ATOM	7398	HD1	TRP	682	1,429	-13,385	35,929	1.00	0.00
ATOM	7399	HE1	TRP	682	0,581	-14,610	37,946	1.00	0.00
ATOM	7400	HE3	TRP	682	5,606	-13,399	38,888	1.00	0.00
ATOM	7401	HZ2	TRP	682	1,328	-15,255	40,630	1.00	0.00
ATOM	7402	HZ3	TRP	682	5,401	-14,060	41,282	1.00	0.00
ATOM	7403	HH2	TRP	682	3,165	-14,993	42,114	1.00	0.00
ATOM	7404	N	THR	683	6,551	-10,362	36,847	1.00	0.00
ATOM	7405	CA	THR	683	7,884	-9,733	36,760	1.00	0.00
ATOM	7406	C	THR	683	8,935	-10,775	37,189	1.00	0.00
ATOM	7407	O	THR	683	8,570	-11,661	37,963	1.00	0.00
ATOM	7408	CB	THR	683	8,093	-8,457	37,598	1.00	0.00
ATOM	7409	CG2	THR	683	7,059	-7,410	37,306	1.00	0.00
ATOM	7410	OG1	THR	683	8,075	-8,850	38,978	1.00	0.00
ATOM	7411	H	THR	683	6,315	-10,722	37,761	1.00	0.00
ATOM	7412	HA	THR	683	8,034	-9,467	35,714	1.00	0.00
ATOM	7413	HB	THR	683	9,084	-8,048	37,396	1.00	0.00
ATOM	7414	HG1	THR	683	7,150	-8,879	39,235	1.00	0.00
ATOM	7415	HG21	THR	683	7,323	-6,393	37,600	1.00	0.00
ATOM	7416	HG22	THR	683	6,052	-7,624	37,662	1.00	0.00
ATOM	7417	HG23	THR	683	6,944	-7,392	36,222	1.00	0.00
ATOM	7418	N	PRO	684	10,231	-10,495	36,890	1.00	0.00
ATOM	7419	CA	PRO	684	11,323	-11,191	37,586	1.00	0.00
ATOM	7420	C	PRO	684	11,362	-10,889	39,079	1.00	0.00
ATOM	7421	O	PRO	684	11,600	-11,850	39,776	1.00	0.00
ATOM	7422	CB	PRO	684	12,583	-10,723	36,913	1.00	0.00
ATOM	7423	CG	PRO	684	12,172	-10,141	35,537	1.00	0.00
ATOM	7424	CD	PRO	684	10,730	-9,710	35,810	1.00	0.00
ATOM	7425	HA	PRO	684	11,131	-12,237	37,345	1.00	0.00
ATOM	7426	HB2	PRO	684	12,997	-9,845	37,409	1.00	0.00
ATOM	7427	HB3	PRO	684	13,337	-11,510	36,927	1.00	0.00
ATOM	7428	HG2	PRO	684	12,822	-9,297	35,307	1.00	0.00
ATOM	7429	HG3	PRO	684	12,245	-10,973	34,839	1.00	0.00
ATOM	7430	HD2	PRO	684	10,690	-8,639	36,008	1.00	0.00
ATOM	7431	HD3	PRO	684	10,100	-10,067	34,995	1.00	0.00
ATOM	7432	N	ARG	685	10,994	-9,665	39,480	1.00	0.00
ATOM	7433	CA	ARG	685	10,986	-9,369	40,903	1.00	0.00
ATOM	7434	C	ARG	685	10,000	-10,326	41,575	1.00	0.00
ATOM	7435	O	ARG	685	10,379	-11,055	42,512	1.00	0.00
ATOM	7436	CB	ARG	685	10,646	-7,850	41,083	1.00	0.00
ATOM	7437	CG	ARG	685	10,689	-7,404	42,549	1.00	0.00
ATOM	7438	CD	ARG	685	10,033	-6,039	42,902	1.00	0.00

ATOM	7439	NE	ARG	685	8,842	-5,827	42,129	1.00	0.00
ATOM	7440	CZ	ARG	685	7,721	-6,505	42,037	1.00	0.00
ATOM	7441	NH1	ARG	685	7,500	-7,498	42,835	1.00	0.00
ATOM	7442	NH2	ARG	685	6,827	-6,320	41,113	1.00	0.00
ATOM	7443	H	ARG	685	10,829	-8,934	38,803	1.00	0.00
ATOM	7444	HA	ARG	685	11,967	-9,495	41,361	1.00	0.00
ATOM	7445	HB2	ARG	685	11,432	-7,436	40,451	1.00	0.00
ATOM	7446	HB3	ARG	685	9,674	-7,796	40,592	1.00	0.00
ATOM	7447	HG2	ARG	685	10,150	-8,086	43,207	1.00	0.00
ATOM	7448	HG3	ARG	685	11,735	-7,297	42,841	1.00	0.00
ATOM	7449	HD2	ARG	685	9,966	-5,973	43,987	1.00	0.00
ATOM	7450	HD3	ARG	685	10,704	-5,238	42,593	1.00	0.00
ATOM	7451	HE	ARG	685	8,877	-5,004	41,544	1.00	0.00
ATOM	7452	HH11	ARG	685	8,186	-7,726	43,541	1.00	0.00
ATOM	7453	HH12	ARG	685	6,595	-7,947	42,840	1.00	0.00
ATOM	7454	HH21	ARG	685	6,835	-5,535	40,476	1.00	0.00
ATOM	7455	HH22	ARG	685	6,059	-6,957	41,269	1.00	0.00
ATOM	7456	N	ASP	686	8,709	-10,495	41,184	1.00	0.00
ATOM	7457	CA	ASP	686	7,694	-11,438	41,793	1.00	0.00
ATOM	7458	C	ASP	686	8,124	-12,909	41,740	1.00	0.00
ATOM	7459	O	ASP	686	7,976	-13,665	42,702	1.00	0.00
ATOM	7460	CB	ASP	686	6,263	-11,275	41,133	1.00	0.00
ATOM	7461	CG	ASP	686	5,749	-9,794	41,052	1.00	0.00
ATOM	7462	OD1	ASP	686	5,325	-9,250	42,088	1.00	0.00
ATOM	7463	OD2	ASP	686	5,780	-9,253	39,934	1.00	0.00
ATOM	7464	H	ASP	686	8,425	-9,897	40,422	1.00	0.00
ATOM	7465	HA	ASP	686	7,601	-11,070	42,815	1.00	0.00
ATOM	7466	HB2	ASP	686	6,366	-11,597	40,097	1.00	0.00
ATOM	7467	HB3	ASP	686	5,540	-11,937	41,611	1.00	0.00
ATOM	7468	N	LEU	687	8,745	-13,292	40,647	1.00	0.00
ATOM	7469	CA	LEU	687	9,217	-14,676	40,427	1.00	0.00
ATOM	7470	C	LEU	687	10,394	-15,029	41,263	1.00	0.00
ATOM	7471	O	LEU	687	10,693	-16,212	41,470	1.00	0.00
ATOM	7472	CB	LEU	687	9,479	-14,785	38,913	1.00	0.00
ATOM	7473	CG	LEU	687	8,136	-14,889	38,093	1.00	0.00
ATOM	7474	CD1	LEU	687	8,514	-14,838	36,604	1.00	0.00
ATOM	7475	CD2	LEU	687	7,404	-16,133	38,344	1.00	0.00
ATOM	7476	H	LEU	687	8,975	-12,582	39,968	1.00	0.00
ATOM	7477	HA	LEU	687	8,413	-15,359	40,701	1.00	0.00
ATOM	7478	HB2	LEU	687	10,062	-13,946	38,531	1.00	0.00
ATOM	7479	HB3	LEU	687	10,065	-15,678	38,694	1.00	0.00
ATOM	7480	HG	LEU	687	7,515	-14,040	38,380	1.00	0.00
ATOM	7481	HD11	LEU	687	7,593	-14,797	36,021	1.00	0.00

ATOM	7482	HD12	LEU	687	9,123	-15,706	36,352	1.00	0.00
ATOM	7483	HD13	LEU	687	9,036	-13,902	36,401	1.00	0.00
ATOM	7484	HD21	LEU	687	6,963	-16,017	39,334	1.00	0.00
ATOM	7485	HD22	LEU	687	6,516	-16,185	37,714	1.00	0.00
ATOM	7486	HD23	LEU	687	8,111	-16,960	38,407	1.00	0.00
ATOM	7487	N	ALA	688	11,103	-14,034	41,784	1.00	0.00
ATOM	7488	CA	ALA	688	12,122	-14,332	42,815	1.00	0.00
ATOM	7489	C	ALA	688	11,458	-14,302	44,201	1.00	0.00
ATOM	7490	O	ALA	688	11,710	-15,188	45,070	1.00	0.00
ATOM	7491	CB	ALA	688	13,259	-13,267	42,720	1.00	0.00
ATOM	7492	H	ALA	688	11,082	-13,102	41,395	1.00	0.00
ATOM	7493	HA	ALA	688	12,477	-15,329	42,552	1.00	0.00
ATOM	7494	HB1	ALA	688	13,961	-13,441	43,536	1.00	0.00
ATOM	7495	HB2	ALA	688	12,959	-12,220	42,736	1.00	0.00
ATOM	7496	HB3	ALA	688	13,765	-13,437	41,768	1.00	0.00
ATOM	7497	N	GLU	689	10,644	-13,267	44,478	1.00	0.00
ATOM	7498	CA	GLU	689	9,895	-13,118	45,701	1.00	0.00
ATOM	7499	C	GLU	689	9,168	-14,467	45,957	1.00	0.00
ATOM	7500	O	GLU	689	9,462	-15,097	46,956	1.00	0.00
ATOM	7501	CB	GLU	689	8,828	-11,995	45,602	1.00	0.00
ATOM	7502	CG	GLU	689	9,474	-10,609	45,706	1.00	0.00
ATOM	7503	CD	GLU	689	8,511	-9,455	45,460	1.00	0.00
ATOM	7504	OE1	GLU	689	9,024	-8,376	45,157	1.00	0.00
ATOM	7505	OE2	GLU	689	7,252	-9,586	45,546	1.00	0.00
ATOM	7506	H	GLU	689	10,395	-12,717	43,669	1.00	0.00
ATOM	7507	HA	GLU	689	10,555	-12,964	46,554	1.00	0.00
ATOM	7508	HB2	GLU	689	8,462	-12,121	44,583	1.00	0.00
ATOM	7509	HB3	GLU	689	7,993	-12,104	46,294	1.00	0.00
ATOM	7510	HG2	GLU	689	9,903	-10,415	46,688	1.00	0.00
ATOM	7511	HG3	GLU	689	10,288	-10,636	44,982	1.00	0.00
ATOM	7512	N	GLN	690	8,221	-14,877	45,112	1.00	0.00
ATOM	7513	CA	GLN	690	7,221	-15,926	45,572	1.00	0.00
ATOM	7514	C	GLN	690	7,594	-17,343	45,672	1.00	0.00
ATOM	7515	O	GLN	690	6,774	-18,250	45,927	1.00	0.00
ATOM	7516	CB	GLN	690	5,846	-15,797	44,785	1.00	0.00
ATOM	7517	CG	GLN	690	5,355	-14,356	44,760	1.00	0.00
ATOM	7518	CD	GLN	690	3,801	-14,185	44,629	1.00	0.00
ATOM	7519	NE2	GLN	690	3,320	-12,973	44,459	1.00	0.00
ATOM	7520	OE1	GLN	690	2,988	-15,134	44,867	1.00	0.00
ATOM	7521	H	GLN	690	8,029	-14,300	44,305	1.00	0.00
ATOM	7522	HA	GLN	690	7,001	-15,646	46,603	1.00	0.00
ATOM	7523	HB2	GLN	690	5,920	-16,232	43,789	1.00	0.00
ATOM	7524	HB3	GLN	690	5,129	-16,316	45,422	1.00	0.00

ATOM	7525	HG2	GLN	690	5,685	-13,700	45,564	1.00	0.00
ATOM	7526	HG3	GLN	690	5,854	-13,890	43,910	1.00	0.00
ATOM	7527	HE21	GLN	690	2,313	-12,902	44,498	1.00	0.00
ATOM	7528	HE22	GLN	690	3,925	-12,165	44,450	1.00	0.00
ATOM	7529	N	GLN	691	8,909	-17,665	45,396	1.00	0.00
ATOM	7530	CA	GLN	691	9,613	-18,905	45,761	1.00	0.00
ATOM	7531	C	GLN	691	10,536	-18,705	47,015	1.00	0.00
ATOM	7532	O	GLN	691	11,017	-19,659	47,611	1.00	0.00
ATOM	7533	CB	GLN	691	10,298	-19,471	44,537	1.00	0.00
ATOM	7534	CG	GLN	691	11,292	-18,499	43,798	1.00	0.00
ATOM	7535	CD	GLN	691	12,206	-19,100	42,740	1.00	0.00
ATOM	7536	NE2	GLN	691	12,364	-18,554	41,594	1.00	0.00
ATOM	7537	OE1	GLN	691	12,925	-20,045	42,971	1.00	0.00
ATOM	7538	H	GLN	691	9,474	-16,898	45,059	1.00	0.00
ATOM	7539	HA	GLN	691	8,888	-19,653	46,083	1.00	0.00
ATOM	7540	HB2	GLN	691	10,859	-20,386	44,734	1.00	0.00
ATOM	7541	HB3	GLN	691	9,509	-19,729	43,829	1.00	0.00
ATOM	7542	HG2	GLN	691	10,610	-17,863	43,234	1.00	0.00
ATOM	7543	HG3	GLN	691	11,886	-17,833	44,424	1.00	0.00
ATOM	7544	HE21	GLN	691	13,091	-19,003	41,055	1.00	0.00
ATOM	7545	HE22	GLN	691	11,963	-17,645	41,410	1.00	0.00
ATOM	7546	N	GLY	692	10,814	-17,477	47,385	1.00	0.00
ATOM	7547	CA	GLY	692	11,564	-17,164	48,521	1.00	0.00
ATOM	7548	C	GLY	692	13,053	-17,185	48,226	1.00	0.00
ATOM	7549	O	GLY	692	13,855	-17,410	49,144	1.00	0.00
ATOM	7550	H	GLY	692	10,272	-16,734	46,970	1.00	0.00
ATOM	7551	HA2	GLY	692	11,239	-16,135	48,674	1.00	0.00
ATOM	7552	HA3	GLY	692	11,370	-17,815	49,374	1.00	0.00
ATOM	7553	N	HID	693	13,424	-17,130	46,914	1.00	0.00
ATOM	7554	CA	HID	693	14,806	-17,316	46,460	1.00	0.00
ATOM	7555	C	HID	693	15,518	-16,010	46,652	1.00	0.00
ATOM	7556	O	HID	693	15,784	-15,146	45,770	1.00	0.00
ATOM	7557	CB	HID	693	14,800	-17,826	45,073	1.00	0.00
ATOM	7558	CG	HID	693	16,024	-18,415	44,594	1.00	0.00
ATOM	7559	CD2	HID	693	17,335	-18,196	44,924	1.00	0.00
ATOM	7560	ND1	HID	693	16,070	-19,378	43,595	1.00	0.00
ATOM	7561	CE1	HID	693	17,344	-19,649	43,408	1.00	0.00
ATOM	7562	NE2	HID	693	18,195	-19,021	44,176	1.00	0.00
ATOM	7563	H	HID	693	12,696	-17,060	46,218	1.00	0.00
ATOM	7564	HA	HID	693	15,265	-18,066	47,104	1.00	0.00
ATOM	7565	HB2	HID	693	14,001	-18,561	44,972	1.00	0.00
ATOM	7566	HB3	HID	693	14,523	-17,023	44,389	1.00	0.00
ATOM	7567	HD1	HID	693	15,309	-19,826	43,105	1.00	0.00

ATOM	7568	HD2	HID	693	17,715	-17,486	45,643	1.00	0.00
ATOM	7569	HE1	HID	693	17,749	-20,333	42,678	1.00	0.00
ATOM	7570	N	GLU	694	15,982	-15,792	47,906	1.00	0.00
ATOM	7571	CA	GLU	694	16,537	-14,569	48,438	1.00	0.00
ATOM	7572	C	GLU	694	17,889	-14,181	47,790	1.00	0.00
ATOM	7573	O	GLU	694	18,136	-12,961	47,760	1.00	0.00
ATOM	7574	CB	GLU	694	16,832	-14,775	49,919	1.00	0.00
ATOM	7575	CG	GLU	694	17,317	-13,547	50,695	1.00	0.00
ATOM	7576	CD	GLU	694	17,672	-13,857	52,146	1.00	0.00
ATOM	7577	OE1	GLU	694	18,180	-14,951	52,473	1.00	0.00
ATOM	7578	OE2	GLU	694	17,569	-12,961	53,023	1.00	0.00
ATOM	7579	H	GLU	694	15,753	-16,518	48,571	1.00	0.00
ATOM	7580	HA	GLU	694	15,894	-13,694	48,332	1.00	0.00
ATOM	7581	HB2	GLU	694	15,912	-15,183	50,342	1.00	0.00
ATOM	7582	HB3	GLU	694	17,603	-15,540	50,010	1.00	0.00
ATOM	7583	HG2	GLU	694	18,223	-13,131	50,255	1.00	0.00
ATOM	7584	HG3	GLU	694	16,461	-12,873	50,661	1.00	0.00
ATOM	7585	N	ASP	695	18,633	-15,085	47,176	1.00	0.00
ATOM	7586	CA	ASP	695	19,814	-14,755	46,383	1.00	0.00
ATOM	7587	C	ASP	695	19,494	-13,975	45,166	1.00	0.00
ATOM	7588	O	ASP	695	20,097	-12,926	44,811	1.00	0.00
ATOM	7589	CB	ASP	695	20,547	-16,121	46,073	1.00	0.00
ATOM	7590	CG	ASP	695	21,933	-15,890	45,430	1.00	0.00
ATOM	7591	OD1	ASP	695	22,348	-16,716	44,493	1.00	0.00
ATOM	7592	OD2	ASP	695	22,675	-14,948	45,836	1.00	0.00
ATOM	7593	H	ASP	695	18,209	-15,993	47,051	1.00	0.00
ATOM	7594	HA	ASP	695	20,540	-14,136	46,911	1.00	0.00
ATOM	7595	HB2	ASP	695	20,737	-16,637	47,013	1.00	0.00
ATOM	7596	HB3	ASP	695	19,987	-16,812	45,443	1.00	0.00
ATOM	7597	N	ILE	696	18,403	-14,371	44,489	1.00	0.00
ATOM	7598	CA	ILE	696	17,994	-13,718	43,189	1.00	0.00
ATOM	7599	C	ILE	696	17,341	-12,385	43,494	1.00	0.00
ATOM	7600	O	ILE	696	17,625	-11,392	42,830	1.00	0.00
ATOM	7601	CB	ILE	696	17,040	-14,692	42,414	1.00	0.00
ATOM	7602	CG1	ILE	696	17,763	-15,999	41,993	1.00	0.00
ATOM	7603	CG2	ILE	696	16,513	-13,938	41,179	1.00	0.00
ATOM	7604	CD1	ILE	696	17,013	-17,044	41,144	1.00	0.00
ATOM	7605	H	ILE	696	17,859	-15,002	45,060	1.00	0.00
ATOM	7606	HA	ILE	696	18,853	-13,403	42,597	1.00	0.00
ATOM	7607	HB	ILE	696	16,147	-14,938	42,988	1.00	0.00
ATOM	7608	HG12	ILE	696	18,645	-15,769	41,393	1.00	0.00
ATOM	7609	HG13	ILE	696	18,106	-16,627	42,814	1.00	0.00
ATOM	7610	HG21	ILE	696	15,872	-13,115	41,494	1.00	0.00

ATOM	7611	HG22	ILE	696	16,133	-14,644	40,439	1.00	0.00
ATOM	7612	HG23	ILE	696	17,286	-13,379	40,651	1.00	0.00
ATOM	7613	HD11	ILE	696	17,055	-16,611	40,144	1.00	0.00
ATOM	7614	HD12	ILE	696	15,978	-17,121	41,473	1.00	0.00
ATOM	7615	HD13	ILE	696	17,565	-17,980	41,061	1.00	0.00
ATOM	7616	N	LYS	697	16,451	-12,335	44,543	1.00	0.00
ATOM	7617	CA	LYS	697	15,931	-11,067	45,012	1.00	0.00
ATOM	7618	C	LYS	697	17,083	-10,115	45,190	1.00	0.00
ATOM	7619	O	LYS	697	17,015	-8,985	44,809	1.00	0.00
ATOM	7620	CB	LYS	697	15,129	-11,225	46,296	1.00	0.00
ATOM	7621	CG	LYS	697	14,164	-10,122	46,680	1.00	0.00
ATOM	7622	CD	LYS	697	13,491	-10,134	48,136	1.00	0.00
ATOM	7623	CE	LYS	697	12,576	-11,347	48,304	1.00	0.00
ATOM	7624	NZ	LYS	697	11,985	-11,286	49,681	1.00	0.00
ATOM	7625	H	LYS	697	16,370	-13,182	45,086	1.00	0.00
ATOM	7626	HA	LYS	697	15,268	-10,718	44,221	1.00	0.00
ATOM	7627	HB2	LYS	697	14,527	-12,131	46,223	1.00	0.00
ATOM	7628	HB3	LYS	697	15,830	-11,366	47,118	1.00	0.00
ATOM	7629	HG2	LYS	697	14,712	-9,187	46,566	1.00	0.00
ATOM	7630	HG3	LYS	697	13,300	-10,196	46,020	1.00	0.00
ATOM	7631	HD2	LYS	697	14,275	-10,134	48,895	1.00	0.00
ATOM	7632	HD3	LYS	697	12,837	-9,286	48,334	1.00	0.00
ATOM	7633	HE2	LYS	697	11,752	-11,210	47,603	1.00	0.00
ATOM	7634	HE3	LYS	697	13,083	-12,270	48,023	1.00	0.00
ATOM	7635	HZ1	LYS	697	11,225	-11,952	49,682	1.00	0.00
ATOM	7636	HZ2	LYS	697	11,698	-10,413	50,100	1.00	0.00
ATOM	7637	HZ3	LYS	697	12,598	-11,694	50,372	1.00	0.00
ATOM	7638	N	ALA	698	18,111	-10,549	45,805	1.00	0.00
ATOM	7639	CA	ALA	698	19,189	-9,681	46,180	1.00	0.00
ATOM	7640	C	ALA	698	19,987	-9,162	44,989	1.00	0.00
ATOM	7641	O	ALA	698	20,274	-7,982	44,957	1.00	0.00
ATOM	7642	CB	ALA	698	20,015	-10,278	47,318	1.00	0.00
ATOM	7643	H	ALA	698	17,992	-11,498	46,128	1.00	0.00
ATOM	7644	HA	ALA	698	18,777	-8,744	46,556	1.00	0.00
ATOM	7645	HB1	ALA	698	19,487	-10,262	48,271	1.00	0.00
ATOM	7646	HB2	ALA	698	20,887	-9,649	47,496	1.00	0.00
ATOM	7647	HB3	ALA	698	20,250	-11,302	47,028	1.00	0.00
ATOM	7648	N	LEU	699	20,182	-9,956	43,904	1.00	0.00
ATOM	7649	CA	LEU	699	20,705	-9,548	42,589	1.00	0.00
ATOM	7650	C	LEU	699	19,745	-8,531	42,021	1.00	0.00
ATOM	7651	O	LEU	699	20,281	-7,621	41,362	1.00	0.00
ATOM	7652	CB	LEU	699	20,858	-10,815	41,727	1.00	0.00
ATOM	7653	CG	LEU	699	22,041	-11,679	42,124	1.00	0.00

ATOM	7654	CD1	LEU	699	21,988	-13,073	41,421	1.00	0.00
ATOM	7655	CD2	LEU	699	23,352	-11,040	41,699	1.00	0.00
ATOM	7656	H	LEU	699	19,967	-10,942	43,951	1.00	0.00
ATOM	7657	HA	LEU	699	21,665	-9,033	42,630	1.00	0.00
ATOM	7658	HB2	LEU	699	19,902	-11,338	41,761	1.00	0.00
ATOM	7659	HB3	LEU	699	21,065	-10,512	40,700	1.00	0.00
ATOM	7660	HG	LEU	699	22,084	-11,812	43,205	1.00	0.00
ATOM	7661	HD11	LEU	699	21,095	-13,658	41,644	1.00	0.00
ATOM	7662	HD12	LEU	699	22,852	-13,634	41,775	1.00	0.00
ATOM	7663	HD13	LEU	699	22,132	-12,967	40,346	1.00	0.00
ATOM	7664	HD21	LEU	699	24,148	-11,780	41,767	1.00	0.00
ATOM	7665	HD22	LEU	699	23,244	-10,653	40,686	1.00	0.00
ATOM	7666	HD23	LEU	699	23,635	-10,243	42,388	1.00	0.00
ATOM	7667	N	PHE	700	18,459	-8,536	42,232	1.00	0.00
ATOM	7668	CA	PHE	700	17,619	-7,400	41,786	1.00	0.00
ATOM	7669	C	PHE	700	17,540	-6,227	42,729	1.00	0.00
ATOM	7670	O	PHE	700	17,051	-5,175	42,298	1.00	0.00
ATOM	7671	CB	PHE	700	16,269	-7,994	41,372	1.00	0.00
ATOM	7672	CG	PHE	700	16,254	-9,152	40,361	1.00	0.00
ATOM	7673	CD1	PHE	700	17,340	-9,411	39,420	1.00	0.00
ATOM	7674	CD2	PHE	700	15,078	-9,965	40,275	1.00	0.00
ATOM	7675	CE1	PHE	700	17,121	-10,365	38,405	1.00	0.00
ATOM	7676	CE2	PHE	700	14,951	-10,999	39,370	1.00	0.00
ATOM	7677	CZ	PHE	700	15,979	-11,202	38,419	1.00	0.00
ATOM	7678	H	PHE	700	18,055	-9,267	42,800	1.00	0.00
ATOM	7679	HA	PHE	700	18,110	-6,997	40,899	1.00	0.00
ATOM	7680	HB2	PHE	700	15,764	-8,376	42,259	1.00	0.00
ATOM	7681	HB3	PHE	700	15,621	-7,206	40,989	1.00	0.00
ATOM	7682	HD1	PHE	700	18,213	-8,782	39,504	1.00	0.00
ATOM	7683	HD2	PHE	700	14,341	-9,817	41,051	1.00	0.00
ATOM	7684	HE1	PHE	700	17,931	-10,543	37,712	1.00	0.00
ATOM	7685	HE2	PHE	700	14,152	-11,725	39,381	1.00	0.00
ATOM	7686	HZ	PHE	700	15,875	-11,972	37,669	1.00	0.00
ATOM	7687	N	ARG	701	17,966	-6,260	44,050	1.00	0.00
ATOM	7688	CA	ARG	701	18,011	-5,075	45,024	1.00	0.00
ATOM	7689	C	ARG	701	19,415	-4,428	45,025	1.00	0.00
ATOM	7690	O	ARG	701	19,534	-3,313	45,519	1.00	0.00
ATOM	7691	CB	ARG	701	17,682	-5,582	46,395	1.00	0.00
ATOM	7692	CG	ARG	701	16,204	-6,044	46,482	1.00	0.00
ATOM	7693	CD	ARG	701	15,705	-6,299	47,876	1.00	0.00
ATOM	7694	NE	ARG	701	14,283	-6,563	48,022	1.00	0.00
ATOM	7695	CZ	ARG	701	13,570	-6,734	49,147	1.00	0.00
ATOM	7696	NH1	ARG	701	14,119	-6,868	50,283	1.00	0.00

ATOM	7697	NH2	ARG	701	12,282	-6,724	49,073	1.00	0.00
ATOM	7698	H	ARG	701	18,276	-7,163	44,380	1.00	0.00
ATOM	7699	HA	ARG	701	17,254	-4,363	44,695	1.00	0.00
ATOM	7700	HB2	ARG	701	18,278	-6,439	46,706	1.00	0.00
ATOM	7701	HB3	ARG	701	17,895	-4,782	47,103	1.00	0.00
ATOM	7702	HG2	ARG	701	15,707	-5,171	46,059	1.00	0.00
ATOM	7703	HG3	ARG	701	16,060	-6,928	45,860	1.00	0.00
ATOM	7704	HD2	ARG	701	16,239	-7,208	48,155	1.00	0.00
ATOM	7705	HD3	ARG	701	16,017	-5,493	48,541	1.00	0.00
ATOM	7706	HE	ARG	701	13,762	-6,346	47,184	1.00	0.00
ATOM	7707	HH11	ARG	701	15,125	-6,794	50,331	1.00	0.00
ATOM	7708	HH12	ARG	701	13,500	-6,899	51,081	1.00	0.00
ATOM	7709	HH21	ARG	701	11,817	-6,967	48,210	1.00	0.00
ATOM	7710	HH22	ARG	701	11,900	-7,032	49,956	1.00	0.00
ATOM	7711	N	GLU	702	20,439	-5,024	44,372	1.00	0.00
ATOM	7712	CA	GLU	702	21,734	-4,388	43,898	1.00	0.00
ATOM	7713	C	GLU	702	21,454	-3,184	42,903	1.00	0.00
ATOM	7714	O	GLU	702	20,987	-3,296	41,739	1.00	0.00
ATOM	7715	CB	GLU	702	22,554	-5,423	43,095	1.00	0.00
ATOM	7716	CG	GLU	702	23,293	-6,457	43,997	1.00	0.00
ATOM	7717	CD	GLU	702	24,294	-7,362	43,334	1.00	0.00
ATOM	7718	OE1	GLU	702	24,882	-8,302	43,973	1.00	0.00
ATOM	7719	OE2	GLU	702	24,533	-7,152	42,118	1.00	0.00
ATOM	7720	OXT	GLU	702	21,746	-2,072	43,371	1.00	0.00
ATOM	7721	H	GLU	702	20,239	-5,986	44,132	1.00	0.00
ATOM	7722	HA	GLU	702	22,275	-4,040	44,777	1.00	0.00
ATOM	7723	HB2	GLU	702	21,951	-5,997	42,390	1.00	0.00
ATOM	7724	HB3	GLU	702	23,316	-4,853	42,561	1.00	0.00
ATOM	7725	HG2	GLU	702	23,814	-5,834	44,723	1.00	0.00
ATOM	7726	HG3	GLU	702	22,587	-7,104	44,518	1.00	0.00

END



AKT1 and CIPK23