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(54) **Title:** CRYSTAL STRUCTURE OF HUMAN SOLUBLE ADENYLATE CYCLASE

(57) **Abstract:** The invention provides the crystal structure of the solAC catalytic domain. The structure is set out in Tables 1 to 5. The structure may be used in to model the interaction of ligands such as pharmaceutical compounds with this protein, and to determine the structure of related adenylate cyclase molecules.

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CRYSTAL STRUCTURE OF HUMAN SOLUBLE ADENYLATE CYCLASE

Field of the Invention.

The present invention relates to the catalytic domain of human soluble adenylate cyclase (solAC), methods for its crystallization, crystals of solAC and their 3-dimensional structures, crystals of solAC in the presence of ligand, and uses thereof.

Background to the Invention.

Adenylate Cyclases

Cyclic adenosine 3',5'-monophosphate (cAMP) is a ubiquitous second messenger which regulates a number of essential physiological processes including gene expression, cell growth, cardiac function, chromosome segregation and cellular metabolism (Robison, G.A. Butcher, R.W. and Sutherland, E.W. (1968) Annu. Rev. Biochem.,37, 149-174; Rodbell, M. (1980) Nature, 284, 17-22). It is synthesised from ATP by six different families of enzymes, one of which is the adenylate or adenylyl cyclases (AC). Though these families share the ability to generate cAMP from ATP, they display no sequence similarity with each other. Class I are present in enteric bacteria and regulate catabolic repression, while class II are present in pathogens such as *Bacillus anthracis, Pseudomonas aeruginosa* and *Bordetella pertusis.* Classes IV, V and VI are present in *Aeromonas hydrohila, Prevotella ruminicola* and *Rhizobium etli* respectively. Class III cyclases, also known as the Universal Class, are the only class found in eukaryotes and are also present in bacteria and archaea bacteria. Mammalian cells express two different types of these enzymes; the well characterised transmembrane adenylate cyclases (tmAC) and the recently discovered soluble adenylate cyclase (solAC) (Shenoy, A.V. and Visweswariah, S.S (2004) FEBS Lett. 561,11-21).

The tmACs are plasma membrane bound proteins. All nine of the identified tmAC isoforms (I-IX) are stimulated by hormones and neurotransmitters and activated by the α–subunit of the G_s protein and, with the exception of type IX, are stimulated by the diterpene forskolin. They can be differentiated by their variable responses to G_i, G_o and G_z α-subunits as well as the $G_{\beta,\gamma}$ subunits, PKC and Ca^{2+}/calmodulin. It is this regulatory diversity that allows the different tmAC's to respond to intercellular signals from neurotransmitters and hormones in the correct cellular context. TmACs share a common architecture consisting of a short cytosolic N-terminus followed by a tandem repeat of a hydrophobic region, often modelled as 6 transmembrane helices, and a cytoplasmic region. The two cytoplasmic domains, termed C_1 and C_2 respectively, display a large degree of homology between themselves (~50% identity) as well as across the nine different members of the tmAC family (~50-90% identity). Enzymatic activity requires C_1 and C_2 to associate to form a complimentary heterodimer. Biochemical characterisation of the mechanism and regulation of these enzymes was long held up by the difficulties in purifying active proteins. A significant breakthrough came from the development of a soluble tmAC system, in which sections of the cytoplasmic domains were independently expressed as soluble recombinant proteins. Both C_1 and C_2 tend to self- associate in a head to tail interface *in vitro* to produce inactive (C_1) and poorly active (C_2) homodimers, but produced

fully active heterodimers which retain their regulatory properties when mixed. Thus C_2 homodimers and C_1C_2 heterodimers respond to forskolin stimulation, whereas C_1 homodimers remain inactive.

The soluble tmAC systems enabled X-ray crystal studies of the enzymes, leading to the structure solution of the rat type II C_2 homodimer and the canine type V C_1/rat type II C_2 heterodimer complexed with bovine $G_{s\alpha}$ (Zhang, G., Liu, Y., Ruoho, A.E. and Hurley, J.H. (1997) Nature, 386, 247-253; Tesmer, J.J.G, Sunahara, R.K., Gilman, A.G. and Sprang, S.R. (1997) Science 278, 1907-1916; Tesmer, J.J.G, Sunahara, R.K., Johnson, R.A., Gosselin, G., Gilman, A.G. and Sprang, S.R (1999) Science, 285, 756-760).

The construction of such systems continues to be difficult and one of the major challenges is to determine the starting points for the C_1 and C_2 constructs. Although there is significant sequence homology across the family and construct design solely on sequence homology is a useful starting point, obtaining proteolytically stable, soluble and functional proteins is by no means routine (Beeler, J.A. and Tang, W-J.(2004) Methods in Mol. Biol, 237, 39-53).

Soluble adenylate cyclase: function, characterisation and purification

The existence of a new, soluble form of adenylate cyclase ("solAC") was first reported in 1975 in the cytosolic fractions derived from rat testis. Unlike tmACs, it showed a specific requirement for Mn^{2+} ions and its activity was not stimulated by either luteinizing hormone (LH) or follicle stimulating hormone (FSH) (Braun, T. and Dods, R.F. (1975) Proc. Natl. Acad. Sci. USA, 72, 1097-1101). The ability of Mn^{2+} ions to activate the enzyme and the insensitivity the enzyme displayed to G protein regulation, enabled Buck and co-workers to biochemically and chromatographically characterise the enzyme in 1999. They identified a soluble protein with a molecular mass of 48kDa, although the PCR isolated full length gene of solAC revealed an open reading frame encoding a much larger enzyme of 187KDa. The 48kD enzymatically active species was shown to reside within the N-terminal portion of the full length protein suggesting that it might represent a proteolytic fragment of the protein. Evidence for the short and full length enzyme to be generated by two alternate splice transcripts in rodent germ lines was shown by PCR and RNase protection assays (Jaiswal, B.S. and Conti, M. (2001) J. Biol. Chem., 276, 31698-31708). Comparison of the solAC open reading frame against other sequences revealed that the 48KDa species contained two regions which displayed significant amino acid homology to various adenylate cyclase catalytic domains, the most closely related sequences being those from cyanobacteria (*Anabaena spirulensis* cyaB1, cyaB2 and cyaA, and *Spirulina platensis* cyaC) and myxobacteria (*Stigmatella aurantiaca,* cyaA and cyaA) (Buck, J., Sinclair, M.L. Schapal, L., Cann, M.J. and Levin, L.R. (1999) Proc. Natl. Acad. Sci. USA, 96, 79-84). Further analysis showed that the catalytic domains of solAC shared only 15 to 25% sequence identity with the tmACs' catalytic domains C_1 and C_2.

Expression of solAC has been demonstrated by reverse PCR in most tissues examined including ocular ciliary processes, corneal endothelium, choroid plexus, kidney and epididymis (Mittag, T.W., Guo, W-B and Kobayashi (1993) Am. J. Physiol 264, F1060-F1064; Zippin, J.H

Levin, L.R. and Buck (2001) Trends Endocrinol Metab, 12 366-370). However Northern blot analysis and in situ hybridisation indicate, that a high degree of expression is only present in male germ cells (Sinclair, M.L., Wang, X-Y, Matia, M., Conti, M. Buck, J., Wolgemuth, D.J. and Levin, L.R. (2000) Mol. Reprod. Dev. 56, 6-11). It has been demonstrated that solAC is not solely a soluble enzyme but is specifically targeted to intracellular organelles, including mitochondria, centrioles, mitotic spindles, midbodies and nuclei, thus placing it in close proximity to effectors of cAMP signalling (Zippin, J.H., Chen, Y. Nahirney, P., Kamenetsky, M., Wuttke, M.S., Fishman, D.A., Levin, L.R and Buck,J. (2003) Faseb Journal, 17, 82-84; Litvin, T.N., Kamenetsky,M, Zarifyan,A., Buck,J. and Levin L.R. (2003) J. Biol. Chem. 278, 15922-15926).

Soluble AC is regulated by Ca^{2+} and HCO_3^- suggesting that modulation by these intracellular signalling molecules causes solAC to mediate the cAMP dependent responses to intrinsic cellular events. As it is the only enzyme so far identified as a bicarbonate/carbon dioxide chemosensor in mammals, solAC is thought to play a key role not only in sperm capacitation hyperactivated motility and the acrosome reaction, but also in fluid reabsorption in the kidney, fluid secretion in the ciliary bodies and choroid plexus, and metabolic regulation in response to nutritional signals (Litvin, T.N., Kamenetsky,M, Zarifyan,A., Buck,J. and Levin L.R. (2003) J. Biol. Chem. 278, 15922-15926).

The elucidation of the structure of a protein requires a source of sufficient quantities of purified protein to allow the generation of crystals. Many proteins, even when expressed in recombinant production systems, prove difficult to purify in a form in which the protein is soluble, active and non-aggregated.

A number of different bacterial adenylate cyclases have been expressed in *E. coli* in soluble form. In particular, the bacterial adenylate cyclases *Anabaena* cyaB, M*ycobacterium* Rv1264 and *Stigmatella* cyaB have been expressed in soluble form in *E. coli* (Cann et al. (2003), J. Biol. Chem; 278, 35033-35038; Kanacher et. Al. (2002) EMBO J. 21,-3672-3680; Linder et al. (2002) J. Biol. Chem, 277, 15271-15276).

E. coli has also been used to express *Trypanosoma brucei* adenylate cyclase, in the form of inclusion bodies (Bieger, B. and Essen, L-O. (2000) Acta Cryst. D56, 359-362).

E. coli has also been used to express the C2 domain of N-terminally His-tagged rat transmembrane adenylate cyclase. The protein was expressed in soluble form (Yan, S-Z et al. (1996) J. Biol. Chem, 271, 10941-10945).

The canine type V C1 domain of adenylate cyclase was also expressed, as an N-terminally His tagged fusion, by Sunahara, R.K et al. ((1997) J. Biol. Chem., 272, 22265-22271).

The elucidation of the mechanism and biochemistry of solAC has been hampered by the difficulty in obtaining sufficient material of high enough purity. The conditions for expression

and recovery of the other forms of adenylate cyclase mentioned above all vary and indicate tha different forms of adenylate cyclase require precise and different conditions to achieve production of substantial quantities of protein.

Prior to recombinant expression, one approach for the purification of solAC required processing of hundreds of rat testes (950) in order obtain enough protein (~3ug) to study the properties of the enzyme (Buck, J., Sinclair, M.L. and Levin, L.R. (2003) Methods in Enzymol. 345, 95-105). The purification procedure involved multiple steps, starting from a cell lysate comprising 20 mM Tris-HCl, pH 7.5, 1 mM DTT and protease inhibitors. Following six different column purifications, concentrated fractions of the enzyme were applied to an HPLC column and eluted with 20mM Tris-HCl, pH 6.8, 1 mM DTT and eluted with a gradient of 0 - 0.1 M NaCl. It was believed that the reduction in pH - made for the first time at this stage - accounted for a significant enrichment (about 60-fold) increase in activity. The final yield of recovered solAC protein was about 3 µg, though this included a 62 KDa unrelated contaminant protein, so it is unlikely that the preparation, even if scaled up, would be suitable for the production of crystals.

Recombinant full length and catalytic domain rat solAC has also been expressed in HEK293 cells. These constructs were used to determine the properties of the enzymes encoded by the two alternate transcripts as well as the relative activities to each other and to the tissue derived equivalents. The recombinant cell lysates were clarified by centrifugation and subsequently applied to a Sephacryl S-200 column. Although yields were not reported, they were sufficient to confirm that the recombinant species corresponded in activity, size and immunoreactivity to the two solAC species expressed in the testis (Jaiswal, B.S. and Conti, M. (2001) J. Biol. Chem., 276, 31698-31708).

Recombinant approaches to expression allow the protein being expressed to be tagged to facilitate recovery. Litvin et al ((2003) J. Biol. Chem. 278, 15922-15926) describe the production of recombinant human solAC catalytic domain with a GST tagged in Baculovirus Hi 5 cells. Cells producing the protein were lysed in PBS, pH 7.4, 1mM EDTA, 1mM DTT and a protease inhibitor cocktail. The lysate was applied to glutathione sepharose 4B column and eluted with 50mM Tris HCl pH 8.0, 10mM reduced glutathione, 10ug/ml aprotinin and 10ug/ml leupeptin. The eluate was applied to a Superdex 200 HR 10/30 column and samples stored in 10% glycerol. The final sample contained an additional GST band and the protein of interest was not cleaved from tag. The yields were not indicated by the authors, but appear to be very low even though they were sufficient for enzymology studies.

alternative tag is the hexahistidine tag, used by Chen et al ((2000) Science 289, 625-628) to ress solAC catalytic domain (amino acids 1 to 469). The tag was fused to the C-terminus. protein was heterologously expressed in insect HiFive cells using the Bac-to-Bac™ ulovirus Expression system (Life Technologies) and protein was purified by matography over Ni2+-NTA sepharose resin (Qiagen). Conditions and yields of protein not disclosed, yet sufficient quantities were sufficient to determine that the effect of bonate on recombinant enzyme activity was not due to a pH effect. Further they showed

that bisulphite ions were able to mimic the stimulation of solAC bicarbonate, whereas chloride or sulphate or phosphate did not.

Despite these previous studies with solAC, the final yields of pure recombinant mammalian protein remained low, thus preventing structural studies from being undertaken.

SolAC Homologue Structure

A series of structures of the solAC homolog CyaC from *Spirulina platensis* complexed with ATP analogs, Mg^{2+} or Ca^{2+} in the presence or absence of HCO_3^- have been reported. They show that the calcium ion occupies the first metal binding site and appears to mediate the binding of the nucleotide in an open conformation of the active site. The presence of bicarbonate causes the active site to close while also recruiting a second metal ion. The phosphate groups of the substrate analogs rearrange their conformation within the active site possibly to facilitate product formation and release. As the apo form of the enzyme has not been solved, it is possible that further conformations of the enzyme exist and that those observed represent trapped species along the reaction pathway (Steegborn, C., Litvin, T., Levin, L.R. Buck, J. and Wu,H. (2005) Nat. Struc. And Mol. Biol.,12, 32-37, Tesmer, J.J.G. (2005) Nat. Struc. And Mol. Biol.,12, 7-8).

SolAC and male contraception

Changes in cellular cAMP concentration have been linked to the regulation of the fertilization process by spermatozoa, specifically maturation, capacitation, motility and fusion with the gamete. Despite the relevance of these events, the underlying mechanisms are poorly understood. Studies in spermatozoa to determine the specific role of the different adenylate cyclases in the modulation of these processes suggested that solAC plays a major if not the key role (de Lamirande, E., LeClerc,P. and Gagnon, C. (1997) Mol. Hum. Reprod., 3, 175-194; Jaiswal, B.J. and Conti,M. (2003) Proc. Natl. Acad. Sci. USA, 100,10676-10681; Xie, F. and Conti, M. (2004) Developmental Biol. 265, 196-206; Chen, Y., Cann, M.J., Litvin, T.N., Iourgenko, V., Sinclair, M.L., Levin, L.R. and Buck, J. (2000) Science 289, 625-628). Definitive evidence for the role of solACs in fertilisation comes from the disruption of the solAC gene in mice causing severe impairment in sperm motility making them sterile. SolAC deficient males develop normal testes and epididymides and show no obvious abnormalities in other organs known to express solAC. Female solAC deficient mice show no phenotype and produce normal size litters with either wildtype or heterozygous mice. SolAC deficient males mated normally, yet due to the sperm's lack of forward movement failed to reproduce. In vitro studies with mutant sperm showed that normal motility could be restored by loading them with cAMP, although the mutant sperm remained unable to fertilise oocytes. (Esposito, G., Jaiswal, B.S., Xie, F., Krajnc-Franken, M.A.M., Robben, T.J.A.A, Strik, A.M., Kuil, C, Philipsen, R.L.A., van Duin, M., Conti, M. and Gossen, J.A. (2004) Proc. Natl. Acad. Sci. USA, 101, 2993-2998).

Despite the key role of solAC in fertilisation, there is evidence that several of the tmACs may also be involved in the process. Immunolocalisation of intact mouse spermatozoa showed that

tmACs II, III and VIII are abundantly present in the acrosomal and flagellar regions, while tmAC I and IV are present to a lesser extent in the midpiece and acrosomal cap. As some of the components of IVF media are known to act through G-protein linked receptors, it is likely their effect is modulated via tmACs (Baxendale, R.W. and Fraser,L (2003) Mol. Reprod. and Dev. 66, 181-189).

SolAC, oncology, inflammation and other processes

cAMP is involved in signal transduction pathways which affect cell proliferation, cell differentiation and apoptosis. Aberrations in these pathways are known to lead to pathological conditions such as cancer. Various cancers which may be mentioned include those set out in section G(vii) herein below. Thus the modulation of cAMP concentrations by increased or decreased activity of solAC can be viewed as a therapeutic or prophylactic lever.

Recent studies implicate solAC TNF-induced neutrophil activation and NGF-mediated neuritogenesis via the cAMP dependent modulation of the guanosine triphosphatase Rap-1 (Han, H., Stessin, A.M., Roberts, J., Hess, K.C., Gautam, N., Kamenetsky, M., Lou, O., Hyde, E., Nathan, N., Muller, W.A., Buck, J., Levin, L.R., and Nathan, C. (2005) J. Exp. Med., 202, 353-361; Stessin, A.M., Zippin, J.H., Kamenetsky, M., Hess, K.C., Buck, J., and Levin, L.R. (2006). J. Biol. Chem., 10, 1074). It is therefore possible that the downstream regulation of these processes, either by the activation or inhibition of solAC could be of therapeutic use.

Excessive or unregulated TNF production has been implicated in mediating or exacerbating a number of inflammatory diseases and conditions including rheumatoid arthritis (Maini et al., APMIS, 105(4): 257-263), rheumatoid spondylitis, osteoarthritis, gouty arthritis and other arthritic conditions; sepsis, septic shock, endotoxic shock, gram negative sepsis, toxic shock syndrome, adult respiratory distress syndrome, cerebral malaria, chronic pulmonary inflammatory disease, chronic obstructive pulmonary disease (COPD), acute respiratory distress syndrome (ARDS), asthma, pulmonary fibrosis and bacterial pneumonia silicosis, pulmonary sarcoisosis, bone resorption diseases, reperfusion injury, graft vs. host reaction, allograft rejections, fever and myalgias due to infection, such as influenza, herpes simplex virus type-1 (HSV-1), HSV-2, cytomegalovirus (CMV), varicella-zoster virus (VZV), Epstein-Barr virus (EBV), human herpes virus-6 (HHV-6), HHV-7, HHV-8, pseudorabies, rhinotracheitis and cachexia secondary to infection or malignancy, cachexia secondary to acquired immune deficiency syndrome (AIDS), AIDS, ARC (AIDS related complex), keloid formation, scar tissue formation, Crohn's disease, ulcerative colitis, or pyresis. Due to the inhibition of the effects caused by TNF production, it is envisaged that solAC inhibitors will be useful in the treatment of the above listed diseases.

cAMP is further known to stimulate aqueous humour formation (glaucoma) and insulin secretion from pancreatic islet cells (diabetes). Both processes are regulated by bicarbonate concentration thus linking them directly to solAC.

Protein Crystallization

It is well known in the art of protein chemistry that crystallizing a protein is an uncertain and difficult process, without any clear expectation of success. It is now evident that protein crystallization is the main hurdle in protein structure determination. For this reason, protein crystallization has become a research subject in and of itself, and is not simply an extension of the protein crystallographer's laboratory. There are many references that describe the difficulties associated with growing protein crystals (Kierzek AM. and Zielenkiewicz P. (2001) Biophysical Chemistry, 91, 1-20 Models of protein crystal growth; Wiencek JM (1999) Annu Rev Biomed Eng., 1, 505-534 New Strategies for crystal growth; Service, R., Science (2002) Nov 1;298, 948-50 Structural genomics. Tapping DNA for structures produces a trickle; Chayen N., J Struct Funct Genomics (2003) 4 (2-3) 115-20 Protein crystallization for genomics: throughput versus output).

Wiencek highlights the need for rational methodologies and protocols to produce single, high quality protein crystals suitable for protein structure determination, and mentions the lack of a fundamental approach to protein crystallization which is generally the rate-limiting step in structure determination. In connection with the need for a rational approach, the variables affecting protein solubility, nucleation and crystal growth are discussed, including the effects of temperature, pressure, pH, electrolytes, antisolvents and soluble synthetic polymers on protein solubility. Various physiochemical techniques (including laser light scattering, X-ray scattering, X-ray diffraction and atomic force microscopy) and their uses in studying crystal growth and nucleation rates are described, as are various crystal growing techniques, such as vapour diffusion, free interface diffusion, dialysis, batch growth and seeding techniques. The measurement of protein crystal quality and the variables affecting this are also discussed. Wiencek concludes that much in protein crystallization remains unclear, and that fundamental advances in our understanding of protein crystallization will have significant impact in applications beyond protein crystallography itself, because much of structural biology hinges on the ability to crystallize a protein molecule.

Similarly, Kierzek et al. acknowledge that the growth of large, well-ordered protein crystals remains the major obstacle in protein structure determination by X-ray crystallography because the physico-chemical aspect of protein crystallization is not understood. Efforts towards the formulation of models for interpreting experimental data collected thus far on protein crystal growth are reviewed, but it is stated that there are no satisfactory models of protein crystallization, because of the enormous complexity of the problem: the crystallization process spans many orders of magnitude on both time and size scales which is prohibitive for most of the computer simulation approaches. Kierzek et al. conclude that the further development of both experimental and theoretical methods will be required for some unification of the wide range of approaches currently being tested in the field of crystal growth.

Service (*ibid*) discusses the problems associated with crystallization and structural determination of proteins. An example given is a US pilot project initiated in order to speed up the structure determination process by automating the numerous steps involved in crystallizing

proteins. This project is described as having encountered difficulties at each stage of the process: of the 1870 protein targets identified for structure determination, only 23 completed protein structures were generated. Service states that other projects have produced similar results, so that out of about 18,000 proteins targeted by various structural genomics projects worldwide, the structures of only about 200 proteins were available. The article then sets out several different points in the process of structure determination, all of which cause problems. The starting point, namely coaxing E. coli and other host cells to express the right proteins and getting them into soluble form is said to be one of the biggest problems. The continuing problem associated with getting proteins to form crystals suitable for X-ray studies is then discussed: crystallization and then optimization of the crystals is said to be a major difficulty in the process. Indeed, the article states that the attrition is severe at each step. Even if a crystal can be obtained, the structure of the crystal has to be solved, which is not a routine process, nor one where success can be expected or predicted. This is illustrated in the article by the NISGC consortium. Compared to the number of target proteins identified for crystallization and structure determination, the numbers actually cloned and then expressed as soluble protein are low. Further purification was then not always possible, and even after purification, only a small fraction of the purified proteins were crystallized. Even then, only a proportion of these proteins crystallized to produce single, high quality protein crystals suitable for protein structure determination by X-ray crystallography. Of the 5187 target proteins, Consortium members cloned 1675 of them, and expressed 1295 as protein, of which only 773 were soluble. Of these they purified 719 of their proteins, but they crystallized only 94. So far they have determined 50 structures, only 22 of which were determined by X-ray analysis.

Similar figures are presented in Figure 1 of Chayen (*ibid*). Chayen focuses on the crystallization step of the many steps involved in structural genomics, and discusses the difficulty of producing high quality protein crystals suitable for structure determination by X-ray crystallography. This difficulty largely accounts for the fact that only a small percentage of the proteins produced have so far led to structure determination.

The reasons why it is commonly held that crystallization of protein molecules from solution is an obstacle in the process of determining protein structures are many; proteins are complex molecules, and the delicate balance involving specific and non-specific interactions with other protein molecules and small molecules in solution is difficult to predict.

Each protein crystallizes under a unique set of conditions, which cannot be predicted in advance. Simply supersaturating the protein to bring it out of solution will not work, the result would, in most cases, be an amorphous precipitate. Many precipitating agents are used, common ones are different salts, and polyethylene glycols, but others are known. In addition, additives such as metals and detergents can be added to modulate the behaviour of the protein in solution. Many kits are available (e.g., from Hampton Research), which attempt to cover as many parameters in crystallization space as possible, but in many cases these are just a starting point to optimize crystalline precipitates and crystals which are unsuitable for diffraction analysis. Successful crystallization is aided by knowledge of the proteins behaviour in terms of

solubility, dependence on metal ions for correct folding or activity, interactions with other molecules and any other information that is available. Even so, crystallization of proteins is often regarded as a time-consuming process, whereby subsequent experiments build on observations of past trials.

In cases where protein crystals are obtained, these are not necessarily always suitable for diffraction analysis; they may be limited in resolution, and it may subsequently be difficult to improve them to the point at which they will diffract to the resolution required for analysis. Limited resolution in a crystal can be due to several factors. It may be due to intrinsic mobility of the protein within the crystal; this can be difficult to overcome, even with other crystal forms. It may be due to high solvent content within the crystal, which consequently results in weak scattering. Alternatively, it could be due to defects within the crystal lattice, which means that the diffracted x-rays will not be completely in phase from unit to unit within the lattice. Any one of these or a combination of these could mean that the crystals are not suitable for structure determination.

Some proteins never crystallize, and after a reasonable attempt it is necessary to examine the protein itself and consider whether it is possible to make individual domains, different N or C-terminal truncations, or point mutations. It is often hard to predict how a protein could be re-engineered in such a manner as to improve crystallisability. Sometimes the inclusion of a ligand in the crystallization mixture is essential for the production suitable crystals. Our understanding of crystallization mechanisms is still incomplete and the factors of protein structure, which are involved in crystallization, are not well known.

Disclosure of the Invention.

The present invention relates to the crystal structure of the catalytic domain of human soluble adenylate cyclase, which allows the binding location of the substrate and co-factor in the enzyme to be investigated and determined.

Thus in one aspect, the invention provides a three dimensional apo (i.e. ligand-free) structure of soluble adenylate cyclase set out in Table 1, and uses thereof.

In a second aspect, the invention provides a three-dimensional structure of soluble adenylate cyclase in the presence of a ligand, set out in Table 2 and also in Tables 3, 4 and 5.

In general aspects, the present invention is concerned with the provision of a solAC structure and its use in modelling the interaction of ligands, e.g. potential and existing pharmaceutical compounds or other molecular structures, prodrugs, solAC modulators or substrates, or fragments of such compounds, modulators or substrates with this solAC structure.

These and other aspects and embodiments of the present invention are discussed below.

The above aspects of the invention, both singly and in combination, all contribute to features of the invention, which are advantageous.

Brief Description of the Drawings

Figure 1 shows three compounds which were bound to solAC. The figure shows the atom numbering system used in Tables 3-5.

Figure 2 shows the binding interactions of bicarbonate to three of the residues of solAC.

Brief Description of the Tables

Table 1 sets out the coordinate data of the structure of solAC.
Table 2 sets out the coordinate data of the structure of solAC in complex with AMPCPP.
Table 3 sets out the coordinate data of the structure of solAC in complex with bicarbonate
Table 4 sets out the coordinate data of the structure of solAC in complex with 5-Phenyl-2H-[1,2,4]triazole-3-thiol (Compound 1).
Table 5 sets out the coordinate data of the structure of solAC in complex with N-(3-phenoxy-phenyl)-oxalamic acid
Table 6: Active site residues of solAC.
Table 7 Active site residues of solAC interacting with adenosine moiety.
Table 8: Bicarbonate binding site of solAC.
Table 9: Channel binding site of solAC.
Table 10: Sub-pocket binding site of solAC.
Table 11: Alternative binding site residues of solAC.
Table 12: Percentage identity between entire sequences of mammalian soluble adenylate cyclases.
Table 13: Percentage identity between the catalytic domains of mammalian soluble adenylate cyclases
Table 14: solAC expression constructs.
Table 15: solAC lysis buffers.
Table 16: Heavy atom derivatives used to solve solAC structure.

Detailed Description of the Invention

Definitions.

Selected Coordinates.

Various aspects of the invention described herein (e.g. fitting of ligands, homology modelling and structure solution, data storage means, computer assisted manipulation of the coordinates and the like), utilise the coordinates of the solAC structures set out in Table 1, Table 2, Table 3, Table 4 or Table 5, or derived from Table 1, Table 2, Table 3, Table 4 or Table 5, or obtained by reference to the coordinates of Table 1, Table 2, Table 3, Table 4 or Table 5. In all such aspects of the invention, those of skill in the art will appreciate that in many applications of the

invention, it is not necessary to utilise all the coordinates of Table 1, Table 2, Table 3, Table 4 or Table 5, but merely a portion of them, e.g. a set of coordinates representing atoms of particular interest in relation to a particular use. Such a portion of coordinates is referred to herein as "selected coordinates".

Where selected coordinates according to the invention are mentioned, it is meant for example at least 5, preferably at least 10, more preferably at least 50 and even more preferably at least 100, for example at least 500 or at least 1000 protein atoms of the solAC structure. Preferably the selected coordinates pertain to at least 30 different amino acid residues (i.e. at least one atom from 30 different residues may be present), more preferably to at least 60 residues, and even more preferably to at least 100 or 150 residues. Optionally, the selected coordinates include one or more ligand or water molecule atoms set out in Table 1, Table 2, Table 3, Table 4 or Table 5.

Adenylate cyclases in general, possess a 2-domain structure, the two domains having considerable structural homology to each other, and resembling a pseudo-dimer. Soluble adenylate cyclase is most closely related to cyanobacterial class III adenylate cyclases which function as a symmetrical homodimer. The two monomers in the homodimer, or the two domains in the pseudo-dimer may have different orientations relative to each other, depending on the contents of their active site. Therefore, the selected coordinates may be those of the N-terminal domain (residues 1-246) only or of only the C-terminal domain (residues 247-468).

In another aspect, the selected coordinates may include or may consist of atoms of one or more amino acid residues we have identified as contributing main chain or side chain atoms to the active site of solAC as described herein below, and particularly those of Table 6 (more particularly any of those of Table 7).

In a preferred embodiment, when the selected co-ordinates include at least one atom from the group of residues identified in Table 6, and more preferably from the group of residues identified in Table 7, the selected co-ordinates include at least one atom from at least 2, such as at least 3, more preferably at least 4, even more preferably at least 5 and most preferably all amino acids of these preferred groups. More preferably, the selected co-ordinates comprise at least 10, more preferably 25, more preferably 50 atoms from these groups of residues wherein at least one atom is from each member of the group.

In another aspect, the selected coordinates may include or consist of atoms of one or more amino acid residues of any one of Tables 8, 9, 10 or 11. In another embodiment, when the selected co-ordinates include at least one atom from the group of residues identified in any one of Tables 8, 9, 10 or 11, the selected co-ordinates include at least one atom from at least 2, such as at least 3, more preferably at least 4, even more preferably at least 5 and most preferably all amino acids of each table. More preferably, the selected co-ordinates comprise at least 10, more preferably 25, more preferably 50 atoms from these groups of residues

wherein at least one atom is from each member of the group set out in any one of these Tables.

Alternatively, the selected coordinates may comprise at least 10, more preferably 25, more preferably 50 atoms such as at least 100 atoms from any or all of Tables 6 to 11

In one aspect, the selected coordinates may comprise one or more coordinates of an amino acid residue selected from Table 6 (e.g. a residue of Table 7) together with one or more coordinates of an amino acid residue selected from any one of Tables 8, 9, 10 or 11. In one aspect, the selected coordinates are from at least Table 6 (preferably Table 7) together with Table 8. Such groups of selected coordinates may be particularly advantageous in the design, development and analysis of ligands which occupy the ATP and bicarbonate binding sites.

In another aspect, a preferred subset of residues of Table 8 are Lys95, Val167 and Arg176. In aspects of the invention set out herein relating to the use of the coordinates of amino acids of Table 8 residues, the use of coordinates from this subset of residues is also contemplated. Additionally, the use of the coordinates of the atoms identified as having specific ligand interactions (atoms 1525, 2585, 2600, 2729 of Table 1; 1525, 2588, 2603 and 2732 of Table 2; 937, 1505, 1508 and 1578 of Table 3; 1516, 2678, 2692 and 2821 of Table 4; 1516, 2670, 2684 and 2813 of Table 5) is contemplated.

In another aspect, a preferred subset of the residues of Table 9 are His164, Phe165 and Val 335. In aspects of the invention set out herein relating to the use of the coordinates of amino acids of Table 9 residues, the use of coordinates from this subset of residues is also contemplated. Additionally, the use of the coordinates of the atoms identified as having specific ligand interactions (atoms 2536, 2546, 2565 and 5295 of Table 1; atoms 2539, 2549, 2568 and 5298 of Table 2; atoms 1482, 1486, 1489, and 2866 of Table 3; atoms 2628, 2639, 2657, and 5413 of Table 4; atoms 2620, 2631, 2649, and 5392 of Table 5) is contemplated.

In a further aspect, the selected coordinates may include or consist of atoms of one or more of the amino acid residues of an additional, partially helical domain of solAC which appears to be unique to this protein compared to tmAC. Thus the selected coordinates may include at least one atom of the residues Met1 to Tyr26 or Lys219 to Gly284. Preferably the selected coordinates include at least one atom of the residues Ile13 to His19, Phe226 to Phe236, Asp258 to Tyr268 or Glu271 to Ile277. In such a case, more preferably the selected co-ordinates include at least one atom from at least 2, such as at least 3, more preferably at least 4, even more preferably at least 5, such as at least 10 and most preferably all amino acids of these preferred coordinates. More preferably, the selected co-ordinates comprise at least 10, more preferably 25, more preferably 50 atoms from this group of residues wherein said atoms are from the preceding preferred values of different amino acids.

The selected coordinates preferably include at least about 5%, more preferably at least about 10% C-alpha atoms. Alternatively, or in addition, the selected coordinates include at least

about 10%, more preferably at least about 20%, even more preferably at least about 30% backbone atoms selected from any combination of the nitrogen, C-alpha, C-terminal and carbonyl oxygen atoms.

Thus all reference to "selected coordinates" herein below should be construed as defined above unless explicitly otherwise qualified.

Root Mean Square Deviation (rmsd).

Protein structure similarity is routinely expressed and measured by the root mean square deviation (rmsd), which measures the difference in positioning in space between two sets of atoms. The rmsd measures distance between equivalent atoms after their optimal superposition. The rmsd can be calculated over all atoms, over residue backbone atoms (i.e. the nitrogen-carbon-carbon backbone atoms of the protein amino acid residues), main chain atoms only (i.e. the nitrogen-carbon-oxygen-carbon backbone atoms of the protein amino acid residues), side chain atoms only or more usually over C-alpha atoms only.

Methods of comparing protein structures are discussed in Methods of Enzymology, vol 115, pg 397-420. The necessary least-squares algebra to calculate rmsd has been given by Rossman and Argos (J. Biol. Chem., vol 250, pp7525 (1975)) although faster methods have been described by Kabsch (Acta Crystallogr., Section A, A92, 922 (1976)); Acta Cryst. A34, 827-828 (1978)), Hendrickson (Acta Crystallogr., Section A, A35, 158 (1979)); McLachan (J. Mol. Biol., vol 128, pp49 (1979)) and Kearsley (Acta Crystallogr., Section A, A45, 208 (1989)). Some algorithms use an iterative procedure in which the one molecule is moved relative to the other, such as that described by Ferro and Hermans (Ferro and Hermans, Acta Crystallographic, A33, 345-347 (1977)). Other methods e.g. Kabsch's algorithm locate the best fit directly.

Programs for determining rmsd include MNYFIT (part of a collection of programs called COMPOSER, Sutcliffe, M.J., Haneef, I., Carney, D. and Blundell, T.L. (1987) Protein Engineering, 1, 377-384), MAPS (Lu, G. An Approach for Multiple Alignment of Protein Structures (1998, in manuscript and on http://bioinfo1.mbfys.lu.se/TOP/maps.html)).

It is more normal when comparing significantly different sets of coordinates to calculate the rmsd value over C-alpha atoms only. However, when analysing side chain movement the rmsd over all atoms can also be calculated.

Programs such as LSQKAB (Collaborative Computational Project 4. The CCP4 Suite: Programs for Protein Crystallography, *Acta Crystallographica*, D50, (1994), 760-763), QUANTA (Jones et al., Acta Crystallography A47 (1991), 110-119 and commercially available from Accelrys, San Diego, CA), Insight (commercially available from Accelrys, San Diego, CA), Sybyl® (commercially available from Tripos, Inc., St Louis), O (Jones et al., *Acta Crystallographica*, A47, (1991), 110-119), and other coordinate fitting programs can be used to calculated rmsd values.

In, for example the programs LSQKAB and O, the user can define the residues in the two proteins that are to be paired for the purpose of the calculation. Alternatively, the pairing of residues can be determined by generating a sequence alignment of the two proteins, programs for sequence alignment are discussed in more detail in Section D. The atomic coordinates can then be superimposed according to this alignment and an rmsd value calculated. The program Sequoia (C.M. Bruns, I. Hubatsch, M. Ridderström, B. Mannervik, and J.A. Tainer (1999) Human Glutathione Transferase A4-4 Crystal Structures and Mutagenesis Reveal the Basis of High Catalytic Efficiency with Toxic Lipid Peroxidation Products, *Journal of Molecular Biology* 288(3): 427-439) performs the alignment of homologous protein sequences, and the superposition of homologous protein atomic coordinates. Once aligned, the rmsd can be calculated using programs detailed above. For sequence identical, or highly identical, the structural alignment of proteins can be done manually or automatically as outlined above. Another approach would be to generate a superposition of protein atomic coordinates without considering the sequence.

In various aspects of the invention described herein, the use of all or selected coordinates of Table 1, Table 2, Table 3, Table 4 or Table 5 is described. Similarly, structures and their uses obtainable by use of all or selected coordinates of Table 1, Table 2, Table 3, Table 4 or Table 5, or derived from all or selected coordinates of Table 1, Table 2, Table 3, Table 4 or Table 5, are described. In such aspects, the coordinates of the Tables may be varied within an rmsd of not more than 1.5 Å, preferably not more than 1.4 Å, more preferably not more than 1.2 Å, more preferably not more than 1.0 Å, for example preferably not more than 0.7 Å, more preferably not more than 0.5 Å, more preferably not more than 0.2 Å, and even more preferably not more than 0.1 Å.

Thus all references herein to the coordinates of Table 1, Table 2, Table 3, Table 4 or Table 5 are to be construed, unless specified to the contrary, as including an rmsd variation of not more than 1.5 Å, with preferred values of variation being that as set out in the preceding paragraph. Similarly, reference to an rmsd variation of a value smaller than not more than 1.5 Å is likewise to be construed as including the preferred, narrower, limits set out in the preceding sentence. For the avoidance of doubt, reference herein to an rmsd value of less than a specified number of Å smaller than said not more than 1.5 Å is to be understood as including the preferred, narrower, limits set out above which are not more than that specified number.

Preferably, rmsd is calculated by reference to the C-alpha atoms, provided that where selected coordinates are used, these comprise at least about 5%, preferably at least about 10%, of such atoms. Where selected coordinates do not include said at least about 5%, rmsd may be calculated by reference to all four backbone atoms, provided these comprise at least about 10%, preferably at least about 20% and more preferably at least about 30% of the selected coordinates. Where selected coordinates comprise 90% or more side chain atoms, rmsd may be calculated by reference to all the selected coordinates.

Ligand.

As used herein, a ligand is a structure, either virtual or physical, comprising one or more atoms with a potential to bind to, or interact with, a solAC structure of the present invention. Such atoms include those found in organic molecules such as carbon, oxygen, hydrogen, nitrogen, phosphorus, and sulphur, as well as metal ions commonly found in biological systems such as iron, calcium, magnesium, manganese, selenium and the like.

A ligand for use in the present invention may be a small chemical molecule whose three-dimensional structure is available in the art, e.g. from the Cambridge Structural Database (www.ccdc.cam.ac.uk) which contains the structures of over 250,000 molecules, or may be a ligand whose structure has been designed or selected on the basis of specific structural or other criteria. These and other structures may be used for example in aspects of the invention directed to the screening of ligands in the development of new compounds which interact with solAC so as to modulate, e.g. activate or inhibit, its function. It will be apparent to those of skill in the art that whereas a ligand in the form of a virtual molecule may be made to interact with one or more protein atoms of a solAC structure of the present invention, such an interaction may not occur between the physical compound itself and solAC.

Ligands which bind to, or interact with, one or more atoms of the catalytic domain of solAC are of particular interest. A ligand may be a modulator (e.g. activator or inhibitor) of the enzyme, or a substrate for the enzyme. One such substrate may be a prodrug which is converted to an active drug by the action of the adenylate cyclase. Ligand binding is generally, though not exclusively, via non-covalent interactions, such as via hydrogen bonds or the like.

It will be apparent to those of skill in the art that reference to a ligand in the context of methods of computer-based methods of analysis and the like will refer to a virtual molecular structure, whereas in other contexts (e.g. soaking of crystals of solAC and the like) the ligand will be a chemical compound. In some aspects of the invention, a ligand will be identified by computer modelling techniques, and subsequently provided in the form of a chemical compound for further analysis. Often the analysis of the compound, e.g. in soaking or co-crystallization experiments, will lead to the production of further ligands which may then be analysed by computer-based methods of the present invention.

Candidate ligands which can be used for soaking or co-crystallization may be obtained from a variety of sources. For example, compounds under development as potential adenylate cyclase inhibitors may be used, in order to ascertain their interaction with solAC and thus to modify the ligand in a manner to enhance or otherwise modulate its activity. Such ligands may include adenine nucleotide analogues as described further below.

Alternatively, a number of synthetic compound libraries are commercially available from a various companies including Maybridge Chemical Co. (Trevillet, Cornwall, UK), Comgenex (Princeton, N.J.), Brandon Associates (Merrimack, N.H.), and Microsource (New Milford, Conn.) and a rare chemical library is available from Aldrich (Milwaukee, Wis.). Combinatorial libraries

are available and can be prepared. Alternatively, libraries of natural compounds in the form of bacterial, fungal, plant and animal extracts are also available, for example, Pan Laboratories (Bothell, Wash.) or MycoSearch (N.C.), or can be readily prepared by methods well known in the art. It is proposed that compounds isolated from natural sources, such as animals, bacteria, fungi, plant sources, including leaves and bark, and marine samples may be assayed as candidates for the presence of potentially useful pharmaceutical agents. It will be understood that the pharmaceutical agents to be screened could also be derived or synthesized from chemical compositions or man-made compounds.

Ligands of particular interest will be compounds under development for pharmaceutical use. Generally such ligands will be organic molecules, which are typically from about 100 to 2000 Da, more preferably from about 100 to 1000 Da in molecular weight. Such ligands include peptides and derivatives thereof, steroids, anti-inflammatory drugs, anti-cancer agents, anti-bacterial or antiviral agents, neurological agents and the like. In principle, any compound under development in the field of pharmacy can be used in the present invention in order to facilitate its development or to allow further rational drug design to improve its properties.

Other ligands of interest will be adenine nucleotides and analogues thereof. An adenine nucleotide is any one of the phosphate esters of adenosine, i.e. any one of adenosine 5' monophosphate (AMP), ADP and ATP.

An analogue of adenine nucleotide is any compound which retains the characteristic structure of an adenine nucleotide, such as a fragment of the nucleotide or a molecular variant of the nucleotide, which is capable of binding to the ATP-binding pocket of a solAC. By characteristic structure, it is meant that the analogue will comprise one or more of a purine base structure, a sugar residue, and a mono, di- or tri-phosphate ester structure or analogue thereof.

A fragment of adenine nucleotide includes any molecular fragment of any one of the phosphate esters of adenosine, which fragment is capable of binding to the ATP-binding pocket of a solAC. Thus, examples of fragments of an adenine nucleotide are adenine (base), adenosine (nucleoside), ribose (sugar), and any one of the phosphate esters of ribose (e.g. any one of ribose 5' monophosphate, ribose 5' diphosphate and ribose 5' triphosphate).

In a molecular variant of the adenine nucleotide, the purine base structure may be an adenine derivative, such as adenine substituted at position 8 (e.g. by a halogen atom to give 8-bromo ATP or 8-bromo AMP, or by an alkyl group), or in which the ring contains a heteroatom, or wherein the base is an open-ring analogue such as in ZMP (AICA riboside monophosphate). Additionally or alternatively, the sugar residue structure may comprise, for example, modifications of the 2' or 3' hydroxyl groups, e.g. substitution by other groups or cyclization of the groups. Furthermore, the phosphate ester portion of the analogues may be modified for example to provide for non-hydrolysable groups between the γ and β phosphates (e.g. adenosine-5'-[(β,γ)-imido]triphosphate, AMPPNP) or between the β and a phosphates (e.g. adenosine-5'-[(α,β)-methyleno]triphosphate, AMPCPP). A very large range of analogues are available from a range of commercial suppliers, e.g. Jena Bioscience GmbH (Jena, Germany).

In addition, a range of adenine nucleoside analogues are also used clinically, in particular in the antiviral area. For example vidarabine (also known as adenine arabinoside, or ara-A) is an adenine nucleoside analogue used to treat Herpes viruses by targeting viral polymerase, and 9-(3-Hydroxy-2-phosphonyl-methoxypropyl)-adenine (also known as HPMPA) is a adenine derivative with anti-HIV activity (Pauwels, R.; Balzarini, J.; Schols, D.; Baba, M.; Desmyter, J.; Rosenberg, I.; Holy, A.; De Clercq, E., *Phosphonylmethoxyethyl Purine Derivatives, A New Class Of Anti-Human Immunodeficiency Virus Agents*. Antimicrob Agents Chemother **32(7)**:1025-1030 (1988)). Some of these are phosphorylated *in vivo* to the triphosphate.

Adenine nucleotides and analogues thereof may be used as ligands which can be modified further to increase or decrease their interactions with solAC, e.g. in the development of novel pharmaceutical compounds.

Ligands may also be compounds with a moiety which is a bicarbonate or bisulphide analogue moiety, such that the moiety has the ability to coordinate one or more of the solAC atoms involved in bicarbonate binding.

A. Protein Crystals.

The present invention provides a crystal of the human soluble adenylate cyclase catalytic domain.

In a further aspect, the invention provides a crystal of the soluble adenylate cyclase catalytic domain comprising residues 1 to 468 of SEQ ID NO:3 or a variant thereof having from 1 to 10 amino acid substitutions, deletions or insertions. Such a crystal may have the sequence of SEQ ID NO:3, optionally excluding the His6 tag (i.e. 1 to 469 of SEQ ID NO:3) or wherein the His6 tag is replaced by a tag having from 4 to 20 amino acids. Such a tag may comprise a smaller or larger number of histidine residues, e.g. may be a His4, His5, His 7 or His8 tag. The crystal may comprise an allele or a variant of residues 1-468 of SEQ ID NO:3 which retains the ability to form crystals under the conditions illustrated herein. Such variants include those with a number of amino acid substitutions, for example 1, 2, 3, 4, 5, 6, 7, 8, 9 or 10 amino acids by an equivalent or fewer number of amino acids. Further examples of variants, including mutants, are discussed further herein below.

In one embodiment, the crystals of the invention described above have a space group $P6_3$ with unit cell dimensions $a = b = 99.5$ Å, $c = 97.4$ Å, and $\alpha = \beta = 90.0°$, $\gamma = 120.0°$. Unit cell dimensions may be subject to a variability of 5%. Thus, particular examples are $a = b = 99.51$ Å, $c = 97.13$ Å; $a = b = 99.424$ Å, $c = 97.390$ Å (as shown in Table 1); $a = b = 99.651$ Å, $c = 96.522$ (as shown in Table 2); a = b = 99.673 Å, c = 96.824 (as shown in Table 3); a = b = 99.569 Å, c = 98.470 (as shown in Table 4); a = b = 99.291 Å, c = 97.753 (as shown in Table 5).

More generally, the unit cell crystal dimensions may be in the ranges 104.475 Å > a = b > 94.525 Å, 102.27 Å > c > 92.53 Å.

Such crystals may be obtained using the methods described in the accompanying examples.

The invention provides a crystal of the solAC catalytic domain grown in the absence of any active site binding ligand. The invention therefore further includes the apo crystal of the solAC catalytic domain.

The methodology used to provide a solAC crystal or co-crystal illustrated herein may be used generally to provide a solAC catalytic domain crystal or co-crystal resolvable at a resolution of about 3.5 Å or better.

The invention thus further provides a solAC catalytic domain crystal or co-crystal having a resolution of 3.5 Å or better.

In a further aspect, the invention provides a method for making a solAC catalytic domain protein crystal, particularly of a solAC protein comprising the sequence of the catalytic domain of solAC or a variant thereof, which method comprises growing a crystal by hanging drop vapour diffusion.

A further aspect of the invention provides a solAC catalytic domain into which a ligand has been soaked

Further, the invention provides a method for making a crystal of a complex of solAC catalytic domain with a ligand, which method comprises taking a crystal of solAC catalytic domain and soaking a ligand into it.

(i) Mutants

A mutant is a solAC catalytic domain protein characterized by the replacement, insertion or deletion of at least one amino acid from the wild type solAC. Such a mutant may be prepared for example by site-specific mutagenesis, or incorporation of natural or unnatural amino acids.

The present invention contemplates "mutants" wherein a "mutant" refers to a polypeptide which is obtained by replacing at least one amino acid residue in a native or synthetic solAC with a different amino acid residue and/or by adding and/or deleting amino acid residues within the native polypeptide or at the N- and/or C-terminus of a polypeptide corresponding to solAC, and which has substantially the same three-dimensional structure as solAC from which it is derived. By having substantially the same three-dimensional structure is meant having a set of atomic structure co-ordinates that have a root mean square deviation (rmsd) of less than about 1.5 Å from the coordinates of Table 1, Table 2, Table 3, Table 4 or Table 5.

A mutant may have, but need not have, enzymatic or catalytic activity.

To produce homologues or mutants, amino acids present in the said protein can be replaced by other amino acids having similar properties, for example hydrophobicity, hydrophobic moment, antigenicity, propensity to form or break α-helical or β-sheet structures, and so on. Substitutional variants of a protein are those in which at least one amino acid in the protein sequence has been removed and a different residue inserted in its place. Amino acid substitutions are typically of single residues but may be clustered depending on functional constraints e.g. at a crystal contact. Preferably amino acid substitutions will comprise conservative amino acid substitutions. Insertional amino acid variants are those in which one or more amino acids are introduced. This can be amino-terminal and/or carboxy-terminal fusion as well as intrasequence. Examples of amino-terminal and/or carboxy-terminal fusions are affinity tags (e.g. MBP or GST tags), or epitope tags.

Amino acid substitutions, deletions and additions which do not significantly interfere with the three-dimensional structure of the solAC will depend, in part, on the region of the solAC where the substitution, addition or deletion occurs. In highly variable regions of the molecule, non-conservative substitutions as well as conservative substitutions may be tolerated without significantly disrupting the three-dimensional structure of the molecule. In highly conserved regions, or regions containing significant secondary structure, conservative amino acid substitutions are preferred.

Conservative amino acid substitutions are well-known in the art, and include substitutions made on the basis of similarity in polarity, charge, solubility, hydrophobicity, hydrophilicity and/or the amphipathic nature of the amino acid residues involved. For example, negatively charged amino acids include aspartic acid and glutamic acid; positively charged amino acids include lysine and arginine; amino acids with uncharged polar head groups having similar hydrophilicity values include the following: leucine, isoleucine, valine; glycine, alanine; asparagine, glutamine; serine, threonine; phenylalanine, tyrosine. Other conservative amino acid substitutions are well known in the art.

In some instances, it may be particularly advantageous or convenient to substitute, delete and/or add amino acid residues in order to provide convenient cloning sites in the cDNA encoding the polypeptide, to aid in purification of the polypeptide, etc. Such substitutions, deletions and/or additions which do not substantially alter the three dimensional structure of solAC will be apparent to those having skills in the art.

As mentioned above, the mutants contemplated herein need not exhibit enzymatic activity. Indeed, amino acid substitutions, additions or deletions that interfere with the catalytic activity of the solAC but which do not significantly alter the three-dimensional structure of the catalytic region are specifically contemplated by the invention. Such crystalline polypeptides, or the atomic structure co-ordinates obtained there from, can be used to identify ligands that bind to the protein.

The residues for mutation could easily be identified by those skilled in the art and these mutations can be introduced by site-directed mutagenesis e.g. using a Stratagene QuikChange™ Site-Directed Mutagenesis Kit or cassette mutagenesis methods (see e.g. Ausubel et al., eds., *Current Protocols in Molecular Biology*, John Wiley & Sons, Inc., New York, and Sambrook et al., *Molecular Cloning: a Laboratory Manual*, 2nd ed., Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, (1989)).

(ii) Alleles

The present invention contemplates "alleles" wherein allele is a term coined by Bateson and Saunders in 1902 for characters which are alternative to one another in Mendelian inheritance. Now the term allele is used for two or more alternative forms of a gene resulting in different gene products and thus different phenotypes. An allele contains nucleotide changes that have been shown to affect transcription, splicing, translation, post-transcriptional or post-translational modifications or result in at least one amino acid change. Typically, an allelic variant of a solAC will have at least 75% sequence identity (more preferably, at least 80%, 85%, 90% or 95% sequence identity) with the corresponding specifically exemplified solAC protein, where sequence identity is determined by comparing the nucleotide sequences of the polynucleotides when aligned so as to maximize overlap and identity while minimizing sequence gaps. More usually allelic forms comprise 1-10 amino acid changes, in particular 1 or 2 amino acid changes, from the wild-type protein, or 1-30 nucleotide changes in the DNA sequence.

To the extent that the present invention relates to solAC-ligand complexes and mutant, homologue, analogue, allelic form, species variant proteins of solAC, crystals of such proteins may be formed. The skilled person would recognize that the conditions provided herein for crystallising solAC may be used to form such crystals. Alternatively, the skilled person would use the conditions as a basis for identifying modified conditions for forming the crystals.

Thus the aspects of the invention relating to crystals of solAC, may be extended to crystals of mutant and mutants of solAC which result in homologue, allelic form, and species variant.

(iii) Purification of solAC

To obtain sufficient quantity of protein for crystallization, it was necessary to develop a protocol for high level expression and recovery of solAC. In one embodiment, the invention provides a process for the production of solAC (for example the solAC comprising residues 1-469 of SEQ ID NO:3 or a mutant or variant thereof), the solAC optionally being fused to a C-terminal or N-terminal tag, which method comprises

expressing the solAC in a eukaryotic cell culture;

lysing the cells of the culture in a buffer comprising 10 - 100mM Tris pH7.4 - 8.0 (at 4°C), 0.3 - 0.5 M NaCl, 0 - 20% (v/v) glycerol and 2-5 mM beta-mercaptoethanol; and

recovering the solAC from the culture.

More preferably, the process comprises:

lysing the cells of the culture in a buffer comprising 40-60 mM Tris pH7.4 - 7.6. (at 4°C), 0.3 - 0.4 M NaCl, 5 - 15% (v/v) glycerol and 2-5 mM beta-mercaptoethanol; and
recovering the solAC from the culture.

Even more preferably, following expression in said cell culture, the process comprises:
lysing the cells of the culture in a buffer comprising 50mM Tris pH7.5 (at 4°C), 0.3 M NaCl, 10% (v/v) glycerol and 2-5 mM beta-mercaptoethanol; and
recovering the solAC from the culture.

In these above-mentioned processes, the eukaryotic cell culture may be a mammalian or insect cell culture, particularly an insect cell culture.

In one embodiment, the solAC comprises a histidine tag (e.g. a tag comprising from about 4 to 10, such as about 6 histidine) residues and the recovery of the solAC includes the step of binding the solAC to a chelate column under conditions for binding of the tag to the column, followed by elution of the protein from the column. In another embodiment, the solAC may comprise a GST tag.

The invention also provides a composition comprising solAC - particularly the solAC of SEQ ID NO:3 or a mutant or variant thereof - in a buffer comprising 50mM Tris pH7.5 (at 4°C), 330 mM NaCl, 10% (v/v) glycerol and 1 mM beta-mercaptoethanol. In a preferred embodiment, the solAC is at a concentration of from 10 to 40 mg/ml, such as from 20 to 40 mg/ml. Preferably, the solAC remains in monomeric form in these preferred concentrations.

(iv) Crystallization of solAC

To produce crystals of solAC catalytic domain protein the final protein is concentrated to ~8-15 mg/ml in a buffer, for example comprising 50mM Tris, pH7.5, 330mM sodium chloride, 1mM beta-mercaptoethanol and 10% glycerol, by using concentration devices which are commercially available.

Crystallization of the protein is set up by the hanging or sitting drop methods and the protein is crystallized by vapour diffusion at 4°C against a range of vapour diffusion buffer compositions. Microseeding may be used. It is customary to use a 1:1 ratio of protein solution and vapour diffusion buffer in the hanging or sitting drop, and this has been used herein unless stated to the contrary. The hanging or sitting drop typically has a volume of from about 0.5 to 2 µl, such as about 1 to 2 µl, preferably 1 µl. Crystallization may also be performed by the microbatch method.

Typically, the vapour diffusion buffer comprises 100mM sodium acetate pH4.8, 200mM trisodium citrate, 14-17% PEG4000, 10% glycerol and 3mM beta-mercaptoethanol.

Trial conditions for crystallization may be prepared using a Hampton Research Screening kits, Poly-ethylene glycol (PEG)/ion screens, PEG grid, Ammonium sulphate grid, PEG/ammonium sulphate grid or the like.

Additives can be added to a crystallization condition identified to influence crystallization. Additive Screens are to be used during the optimisation of preliminary crystallization conditions where the presence of additives may assist in the crystallization of the sample and the additives may improve the quality of the crystal e.g. Hampton Research additive screens which use glycerol, polyols and other protein stabilizing agents in protein crystallization (R. Sousa. Acta. Cryst. (1995) D51, 271-277) or divalent cations (Trakhanov, S. and Quiocho, F.A. Protein Science (1995) 4,9, 1914-1919).

In addition, detergents may be added to a crystallization condition to improve the crystallization behaviour e.g. the ionic, non-ionic and zwitterionic detergents found in the Hampton Research detergent screens (McPherson, A., et al., The effects of neutral detergents on the crystallization of soluble proteins, J. Crystal Growth (1986) 76, 547-553).

In addition crystal quality may be improved by the use of seeding methods. These include microseeding, streak seeding and macroseeding. A commercial seed preparation kit may be used, such as those sold by Hampton Research.

B. Crystal Coordinates.

In a further aspect, the invention also provides a crystal of soluble adenylate cyclase catalytic domain having the three dimensional atomic coordinates of Table 1.

Table 1 gives atomic coordinate data for the catalytic domain of soluble adenylate cyclase present in the asymmetric unit, identified as molecule A encompassing atoms 1 to 7273. In these rows of the Table the second column denotes the atom number, third column denotes the atom, the fourth the residue type, the fifth the chain identification (A or B), the sixth the residue number the seventh, eighth and ninth columns are the X, Y, Z coordinates respectively of the atom in question, the tenth column the occupancy of the atom, the eleventh the temperature factor of the atom, the twelfth the atom type.

The remaining atoms of the Table (7274-8726) are water, with the atoms identified in the same format as above.

An advantageous feature of the structures defined by the atomic coordinates of Table 1 are that they have a resolution of about 1.7 Å. An advantageous feature of the structures defined by the atomic coordinates of Table 2 are that they have a resolution of about 1.9 Å. An advantageous feature of the structures defined by the atomic coordinates of Table 3 and Table 4 are that they have a resolution of about 2.0 Å. An advantageous feature of the structures defined by the atomic coordinates of Table 5 are that they have a resolution of about 2.05 Å.

A particular advantage of the structure as defined by the atomic coordinates of Table 1 are that they delineate a structure having an active site which is unoccupied by ligand.

In a further aspect , the invention also provides a crystal of soluble adenylate cyclase catalytic domain in complex with the molecule AMPCPP, having the three-dimensional structure set out in Table 2.

Table 2 gives atomic coordinates for the complex of solAC with AMPCPP, where the protein identified as molecule A comprises atoms numbered from 1-7289, the AMPCPP molecule comprises atoms numbered 7291-7339, a calcium ion is numbered 7340 and the remaining atoms are numbered 7341-8307 and are water molecules. In these rows of the Table the second column denotes the atom number, the third column denotes the atom, the fourth the residue type, the fifth the chain identification (A or B), the sixth the residue number the seventh, eighth and ninth columns are the X, Y, Z coordinates respectively of the atom in question, the tenth column the occupancy of the atom, the eleventh the temperature factor of the atom, the twelfth the atom type.

Table 3 gives the atomic coordinate data for the complex of solAC with bicarbonate. The protein identified as molecule A comprises atoms numbered from 171 to 3909. These atoms are preceded in the table by the water molecules (1-87 and 92-170) and atoms of bicarbonate (88-91).

Table 4 gives atomic coordinate data for the complex of solAC with 5-Phenyl-2H-[1,2,4]-triazole-3-thiol (compound 1), wherein the protein identified as molecule A comprises atoms numbered from 1-7499, the compound 1 molecule is atoms 7516-7534 and the molecules after this are water. There is also a glycerol molecule present in the structure as atoms 7502 to 7514.

Table 5 gives atomic coordinate data for the complex of solAC with N-(3-phenoxy-phenyl)-oxalamic acid (compound 2), wherein the protein identified as molecule A comprises atoms numbered from 1-7478, the compound 2 molecule is atoms 7495-7523 and the molecules after this are water. There is also a glycerol molecule present in the structure as atoms 7481 to 7493.

The order of the columns in Tables 3-5 are as for Table 2 in relation to the solAC protein structure.

Table 1, Table 2, Table 3, Table 4 and Table 5 are all set out in internally consistent formats. For example in Tables 1, 2, 4 and 5 the coordinates of the atoms of each amino acid residue are listed such that the backbone nitrogen atom is first, followed by the C-alpha backbone carbon atom, designated CA, followed by side chain residues atoms (designated according to one standard convention) and finally by the carbon and oxygen of the protein backbone. In Table 3 the carbon and oxygen of the protein backbone precede the side chain residues. Table

3 also contains consecutive atom numbering for the solAC structure, whereas the numbering of the other tables uses the convention of counting the hydrogen atoms of the protein molecule. Alternative file formats which may include a different ordering of these atoms, or a different designation of the side-chain residues, ligand molecule atoms, may be used or preferred by others of skill in the art. However it will be apparent that the use of a different file format to present or manipulate the coordinates of the Table is within the scope of the present invention.

The coordinates of Table 1, Table 2, Table 3, Table 4 or Table 5 provide a measure of atomic location in Angstroms, given to 3 decimal places. The coordinates are a relative set of positions that define a shape in three dimensions, but the skilled person would understand that an entirely different set of coordinates having a different origin and/or axes could define a similar or identical shape. Furthermore, as set out in the "Definitions" section above, the skilled person would understand that varying the relative atomic positions of the atoms of the structure so that the root mean square deviation is less than 1.5 Å will generally result in a structure which is substantially the same as the structure of Table 1, Table 2, Table 3, Table 4 or Table 5 in terms of both its structural characteristics and usefulness for structure-based analysis of solAC-interactivity with ligands.

Likewise the skilled person would understand that changing the number and/or positions of the water molecules and/or ligand molecules of the Tables will not generally affect the usefulness of the structures for structure-based analysis of solAC-interacting ligands. Thus for the purposes described herein as being aspects of the present invention, it is within the scope of the invention if: the coordinates of Table 1, Table 2, Table 3, Table 4 or Table 5 are transposed to a different origin and/or axes; the relative atomic positions of the atoms of the structure or selected coordinates thereof are varied so that the root mean square deviation of the resulting varied structure is less than 1.5 Å when superimposed on the coordinates provided in Table 1, Table 2, Table 3, Table 4 or Table 5; and/or the number and/or positions of water molecules and/or ligand molecules is varied.

As mentioned above, preferred selected coordinates of the solAC structures of Table 1, Table 2, Table 3, Table 4 or Table 5 may be atoms of one or more amino acid residues we have identified as contributing main chain or side chain atoms to the active site of solAC as described herein below. Such atoms include one or more of those present in the amino acids set out in any one of Tables 6, 7, 8, 9, 10 or 11 such as Tables 6, 7 or 11. Preferred selected coordinates of each Table, or combinations of coordinates from two or more Tables are as described elsewhere herein.

The structure of the catalytic domain of soluble adenylate cyclase is described by the coordinates in Table 1 or Table 2. Residue Met1 is the first observable residue in the electron density and Lys468 is the last. An electron density peak close to the main chain nitrogen of Met1 may be due to acetylation, and has not been modelled. Residues which have no interpretable main chain density in Table 1 are Trp135, Glu136, Glu137, Gly138, Leu139, Asp140, Phe350, Pro351, Gly352, Glu353, Lys354, Val355 and Pro356. Residue Val469 and

the C-terminal His tag are not visible in the electron density. The main chain close to the first break at 134 is poorly defined and residues 132-134 have patchy main chain electron density. Residues 304-306 and 451-455 are poorly defined by the electron density. In addition, several residues on the periphery of the model have had their side-chains placed arbitrarily as there is no interpretable density for them. Phe350 is visible in Table 2.

Further structures of the catalytic domain of soluble adenylate cyclase were resolved and several of these structures had interpretable density for the unresolved residues of Table 1, allowing the more complete coordinate data of Table 3, Table 4 or Table 5 to be obtained.

In order to compare the solved mammalian soluble adenylate cyclase structure with the previously published structure of bacterial soluble adenylate cyclase, the rmsd between the soluble adenylate cyclase and the *Spirulina platensis* adenylate cyclase (PDB code 1wc1) (Steegborn, C., Litvin, T., Levin, L.R. Buck, J. and Wu,H. (2005) Nat. Struc. And Mol. Biol.,12, 32-37) structures was calculated. Calculations were carried out using Comparer (Sali and Blundell (1990) J Mol Biol. 212, 403-428) to superpose the structures and MNYFIT (Sutcliffe et al. 1987) to refine the superposition and calculate rmsd. Rmsd was calculated using positions of the Cα atoms only. Each structure was split into its constituent domains in order to perform the superposition. This negates the issue of domain movement being the cause of large differences in rmsd between the structures. The first domain of the soluble adenylate cyclase (residues 36-216) was therefore superimposed on the B chain of the *Spirulina platensis* structure and the second domain (residues 287-465) on the C chain. A cut-off of 2.5Å was used to define equivalence (Cα atoms of one structure that are within 2.5Å of Cα atoms of the superposed structure are equivalent). For the first domain of the soluble adenylate cyclase 116 of the181 residues were defined as equivalent to residues in the *S. platensis* structure with an rmsd of 1.2Å. For the second domain, 127 of the 179 residues are defined as equivalent to residues in the *S. platensis* structure with an rmsd of 1.4Å. These rmsd values and the low number of equivalent residues identified at the 2.5Å cut-off are a consequence of the difference in length and orientation of a number of the regions of sequence joining secondary structure elements. Inspection of the superposition also reveals a difference in the length of helix α3, which is several residues shorter in the mammalian cyclase and while the core β-sheet portion of the molecules superpose well, helices α2 and α3 superpose less well. Thus, overall the two domains of the solAC structure of the present invention have rmsd values of total Cα atoms of considerably more than 1.5 Å from the *S. platensis* structure 1wc1.

There are some differences in secondary structure between the enzymes, e.g. human soluble adenylate cyclase has a shorter beta1 strand and a longer alpha1 helix than the tmAC or the *S. platensis* enzyme.

A major difference between solAC and both the tmACs and the *S. platensis* solAC is the presence of an additional partially helical domain lying against the base of the N-terminal domain of the pseudodimer. It consists of N-terminal residues 1-26, residues 1-12 have an extended conformation, 13-19 adopt a helical conformation, the remaining residues 20-26

extended with 25-27 forming one turn of a helix. The remainder of the domain is formed by residues 219-284. This includes residues which would form beta8 in the N-terminal domain, beta1 in the C-terminal domain, and alpha1 in the C-terminal domain. Within residues 219-284, the residues 226-236, 258-268 and 271-277 form three helices.

We have identified several regions within solAC which bind ligands. We have also found that these regions have the potential to form an expanded binding site for ligands which bind in two or more of these regions.

The regions we have identified are (a) the ATP binding site, (b) the bicarbonate binding site, (c) a channel binding site and (d) a sub-pocket binding site. Further, we have also identified (e) an alternative, potentially allosteric, site. A more detailed description of these sites is provided in the accompanying examples.

(A) The ATP binding site.

This site, referred to more generally as the active site of solAC, is lined by active site residues. The active site residues of solAC identified by the present invention are set out in single letter code in Tables 6 and 7 which follow.

Table 6: Active site residues of solAC

D47	I48	S49	G50
F51	T52	A97	G98
F296	F336	F338	L345
V406	V411	N412	A415
R416			

Table 7: Active site residues of solAC interacting with adenosine moiety. Residues forming hydrogen bonds with the adenine group are differentiated from those which line the sides of the hydrophobic pocket.

H-bonds	G98	V406					
Hydrophobic pocket	A97	F296	F336	F338	L345	V411	A415

(B) Bicarbonate binding site

Our analysis of the structure of solAC has revealed a bicarbonate binding region. Three residues of solAC interact with a bicarbonate ion, namely Lys95, Val167 and Arg176. Using a compound (5-Phenyl-2H-[1,2,4]-triazole-3-thiol; "compound 1") with a negatively charged sulphur atom that sits in an almost identical position to the HCO_3^- ion we have identified an expanded bicarbonate binding site which forms a large pocket, contiguous with the ATP binding site.

This expanded HCO_3^- binding site highlights a region of the solAC structure that can be exploited in the design of solAC inhibitors or activators.

The residues of the expanded site are as set out in Table 8.

Table 8: Bicarbonate binding site residues.

Phe45	Leu94	Lys95	Ala97
Ala100	Leu102	Phe165	Leu166
Val167	Ile168	Val172	Arg176
Val335	Phe336	Met337	Phe338

In these residues, we have found that:

1) The NZ of Lys95 forms a salt bridge with the O1 of HCO_3^-;
2) the backbone NH of Val167 forms a charged hydrogen bond with the O1 of HCO_3;
3) the backbone carbonyl of Val167 forms a hydrogen bond with the OH of HCO_3^-;
4) the side-chain NH2 of Arg176 forms a salt bridge with the O3 of HCO_3^- and
5) the side-chain NH2 of Arg176 forms a charged hydrogen bond with the OH of HCO_3^-.

Within the extended bicarbonate site, the sulphur atom of 5-Phenyl-2H-[1,2,4]-triazole-3-thiol is located at the bottom of the pocket and forms a salt bridge with the NZ of Lys95 and charged hydrogen bonds with the backbone NH of Val167 and the backbone NH of Phe336. The N6 of the triazole also forms a hydrogen bond with the backbone carbonyl of Met337 at the bottom of the pocket. In addition, the N5 of the triazole forms a charged hydrogen bond with the NH2 of Arg176. The phenyl group of compound 1 extends into a predominantly lipophilic region of the compound pocket formed by the sidechains of Phe45, Lys95, Ala97, Ala100, Leu102 and Phe336. Beyond the phenyl group of the compound the pocket narrows slightly before opening into the ATP binding site. The shape of the expanded HCO_3^- binding site and the nature of the interactions observed in the compound:solAC complex suggest that this site will be amenable to a variety of ligands.

(C) Channel binding site

The crystal structure of N-(3-phenoxy-phenyl)-oxalamic acid ("compound 2") bound to solAC reveals further regions of the solAC structure that might be exploited in drug design. The binding site for compound 2 overlaps with the expanded HCO_3^- pocket described for compound 1 such that the phenoxy group of compound 2 occupies a very similar position to the phenyl group of compound 1. However, compound 2 induces a large sidechain movement of Lys95, which lies at the bottom of the HCO_3^- binding site. This Lys95 movement opens up the HCO_3^- binding pocket to form a channel that merges with a large water filled cavity before opening onto the protein surface at a point opposite to the ATP binding site. The following residues (Table 9) line this newly exposed channel:

Table 9: Channel Binding Site

His164	Phe165	Tyr268
Asn333	Lys334	Val335

The oxalamic acid group of compound 2 protrudes furthest into this channel to form several interactions with the protein:

1) the compound 2 O3 forms a charged hydrogen bond with the ND of His164;
2) the compound 2 O1 forms a charged hydrogen bond with the backbone NH of Phe165,
3) the compound 2 O5 hydrogen bonds to the backbone NH of Val335 and
4) the amide N6 of compound 2 hydrogen bonds to the backbone carbonyl of Phe165.

The side-chains of Lys95, Phe165, Leu166, Val167 and Phe336 form a lipophilic environment around the central anilino aromatic ring of compound 2. Although the terminal phenoxy group of compound 2 binds within the same lipophilic pocket described for compound 1, the environment of this pocket is slightly altered via a compound 2 induced movement of a loop comprising Met337, Phe338, Asp339, Lys340 and Gly341. This loop movement drags Phe338 away from the ATP site to within van der Waals distance of the terminal phenoxy group of compound 2. This movement of Phe338 is not observed in the structures of apo, AMP-PNP and compound 1 bound solAC.

(D)Sub-Pocket Binding Site

Further analysis of the structure of the AMP-PNP complex reveals that Phe338 forms one end of the ATP site sitting close to the hydroxyl groups of the AMP-PNP ribose. The repositioning of Phe338 creates a new sub-pocket adjacent to the ATP binding site. This new sub-pocket is lined by the following residues (Table 10)

Table 10: Sub-pocket residues:

Phe296	Met418	Asn298	Ser343
Phe336	Met337	Gly341	Asp339
Met419	Cys342	Ala415	Arg416
Met300	Lys340		

(E) Alternative binding site on the solAC

A hydrophobic cleft on the surface of the solAC molecule forms a binding site for the N-terminus of a symmetry related molecule The side chain of the N-terminal methionine slots into a hydrophobic pocket formed by the side-chains of Phe89, Phe230 and Phe226. The main chain of residues 1-4 then slot into a groove formed on one side by residues at the end of helix 2 and on the other side by residues from the loop including residue numbers Lys246, Asn247, Leu248 and Leu249, which lie in an extra domain of solAC relative to *Spirulina platensis* adenylate cyclase. While not wishing to be bound by any one particular theory, these residues, set out in Table 11, may form an allosteric site and thus this may be a further target for ligands to solAC.

Table 11: Alternative binding site residues

Phe89	Phe226	Phe230	Lys246
Asn247	Leu248	Leu249	

Complex structures

The structure of the soluble adenylate cyclase soaked with AMPCPP provides structural information on the nucleotide binding pocket of the protein, in particular that of the adenosine moiety of the nucleotide. This structure may then be used to model interactions of analogous structures with solAC, for the purpose of designing more potent modulators, e.g. inhibitors or activators. More generally, the structure of soluble adenylate cyclase soaked with other ligands provides structural information on the other binding pockets of this protein.

Identification and use of solAC residues.

The crystal structure for solAC has allowed the precise identification of all the residues that line the binding site of the enzyme (Table 6) in the ATP binding pocket region.

Accordingly, in a preferred aspect of the invention, where the invention contemplates the use of selected coordinates in a method of the invention, such selected coordinates will comprise at least one coordinate, preferably at least one side-chain coordinate, of an amino acid residue selected from Table 6. More preferably, the selected coordinates comprise at least one coordinate, preferably at least one side-chain coordinate, of an amino acid residue selected from Table 7. The residues identified in Table 6 are particularly useful for small molecule ligand design.

Also preferred, whether all or just some atoms of a particular amino acid are selected, is that at least 5, more preferably at least 10, and most preferably at least 50 of the selected coordinates are of side chain residues from the corresponding number of different amino acid residues. These may be selected exclusively from Table 6, 7 or 11.

In other embodiments, where the invention contemplates the use of selected coordinates in a method of the invention, such selected coordinates will comprise at least one coordinate,

preferably at least one side-chain coordinate, of an amino acid residue selected from any one of Table 6, 7 or 11.

C. Chimeras.

The use of chimeric proteins to achieve desired properties is now common in the scientific literature. Thus, a variant of solAC may be a chimera.

Of particular relevance are cases where the active site is modified so as to provide a surrogate system to obtain structural information. For example, Ikuta et al (J Biol Chem (2001) 276, 27548-27554) modified the active site of cdk2, for which they could obtain structural data, to resemble that of cdk4, for which no X-ray structure is currently available. In this way they were able to obtain protein/ligand structures from the chimaeric protein which were useful in cdk4 inhibitor design. In a similar way, based on comparison of primary sequences of related solAC isoforms, the binding site of the solAC of the present invention could be modified to resemble those isoforms. Protein structures or protein/ligand structures of the chimaeric proteins could be used in structure-based selection of compounds which are ligands of that related solAC isoform.

Even if the percentage of the amino acid sequence identity between solAC described herein and other isoforms rank from 20 to 80%, the overall folding of solAC proteins is expected to be very similar, with the same spatial distribution of the structural elements.

D. Homology Modelling.

The invention also provides a means for homology modelling of other proteins (referred to below as target adenylate cyclase proteins). By "homology modelling", it is meant the prediction of related adenylate cyclase structures using computer-assisted *de novo* prediction of structure, based upon manipulation of the coordinate data derivable from Table 1, Table 2, Table 3, Table 4 or Table 5, or selected coordinates thereof.

"Homology modelling" extends to target adenylate cyclase proteins which are analogues or homologues of the solAC protein whose structure has been determined in the accompanying examples. It also extends to protein mutants of solAC protein itself.

The term "homologous regions" describes amino acid residues in two sequences that are identical or have similar (e.g. aliphatic, aromatic, polar, negatively charged, or positively charged) side-chain chemical groups. Identical and similar residues in homologous regions are sometimes described as being respectively "invariant" and "conserved" by those skilled in the art.

In general, the method involves comparing the amino acid sequences of the solAC protein with a target protein by aligning the amino acid sequences. Amino acids in the sequences are then compared and groups of amino acids that are homologous (conveniently referred to as

"corresponding regions") are grouped together. This method detects conserved regions of the polypeptides and accounts for amino acid insertions or deletions.

Homology between amino acid sequences can be determined using commercially available algorithms. The programs *BLAST*, *gapped BLAST*, *BLASTN*, *PSI-BLAST*, *BLAST 2* and *WU-BLAST* (provided by the National Center for Biotechnology Information) are widely used in the art for this purpose, and can align homologous regions of two, or more, amino acid sequences. These may be used with default parameters to determine the degree of homology between the amino acid sequence of the solAC and other target proteins which are to be modelled.

Preferred for use according to the present invention is the WU-BLAST (Washington University BLAST) version 2.0 software. WU-BLAST version 2.0 executable programs for several UNIX platforms can be downloaded from ftp ://blast. wustl. edu/blast/executables. This program is based on WU-BLAST version 1.4, which in turn is based on the public domain NCBI-BLAST version 1.4 (Altschul and Gish, 1996, Local alignment statistics, Doolittle ed., Methods in Enzymology 266: 460-480; Altschul et al., 1990, Basic local alignment search tool, Journal of Molecular Biology 215: 403-410; Gish and States, 1993, Identification of protein coding regions by database similarity search, Nature Genetics 3: 266-272; Karlin and Altschul, 1993, Applications and statistics for multiple high-scoring segments in molecular sequences, Proc. Natl. Acad. Sci. USA 90: 5873-5877; all of which are incorporated by reference herein).

In all search programs in the suite the gapped alignment routines are integral to the database search itself. Gapping can be turned off if desired. The default penalty (Q) for a gap of length one is Q=9 for proteins and BLASTP, and Q=10 for BLASTN, but may be changed to any integer. The default per-residue penalty for extending a gap (R) is R=2 for proteins and BLASTP, and R=10 for BLASTN, but may be changed to any integer. Any combination of values for Q and R can be used in order to align sequences so as to maximize overlap and identity while minimizing sequence gaps. The default amino acid comparison matrix is BLOSUM62, but other amino acid comparison matrices such as PAM can be utilized.

Analogues are defined as proteins with similar three-dimensional structures and/or functions with little evidence of a common ancestor at a sequence level.

Homologues are proteins with evidence of a common ancestor, i.e. likely to be the result of evolutionary divergence and are divided into remote, medium and close sub-divisions based on the degree (usually expressed as a percentage) of sequence identity.

A homologue is defined herein as a protein with at least about 20%, e.g. at least 25%, at least 30%, at least 35%, at least 40%, at least 50%, preferably at least 60% sequence, more preferably at least 70%, more preferably at least 80%, more preferably at least 90% and more preferably at least 95% identity to human solAC. This includes polymorphic forms of solAC and species forms including those species referred to in Tables 12 and 13 below.

Tables 12 and 13 shows percentage identity between mammalian soluble adenylate cyclases.

Table 12: Percentage identity between mammalian soluble adenylate cyclases. Comparison has been done along entire sequence:

	Homo sapiens	*Oryctolagus cuniculus*	*Rattus norvegicus*	*Mus musculus*	*Pan troglodytes*	*Canis familiaris*
Homo sapiens	100.0	85.4	83.2	72.6	57.7	17.0
Oryctolagus cuniculus	85.4	100.0	91.1	74.5	50.9	17.9
Rattus norvegicus	83.2	91.1	100.0	79.9	49.4	18.1
Mus musculus	72.6	74.5	79.7	100.0	47.0	17.9
Pan troglodytes	57.7	50.9	49.4	47.0	100.0	16.0
Canis familiaris	17.0	17.9	18.1	17.9	16.0	100.0

Table 13: Percentage identity between mammalian soluble adenylate cyclases. Comparison has been done between sequence of catalytic domains alone.

	Homo sapiens	*Oryctolagus cuniculus*	*Rattus norvegicus*	*Mus musculus*	*Pan troglodytes*	*Canis familiaris*
Homo sapiens	100.0	88.8	86.7	86.2	69.5	34.3
Oryctolagus cuniculus	88.8	100.0	92.7	92.0	63.1	34.3
Rattus norvegicus	86.7	92.7	100.0	98.7	62.9	34.8
Mus musculus	86.2	92.0	98.7	100.0	62.5	35.0
Pan troglodytes	69.5	63.1	62.9	62.5	100.0	28.9
Canis familiaris	34.3	34.3	34.8	35.0	28.9	100.0

There are two types of homologue: orthologues and paralogues. Orthologues are defined as homologous genes in different organisms, i.e. the genes share a common ancestor coincident with the speciation event that generated them. Paralogues are defined as homologous genes in the same organism derived from a gene/chromosome/genome duplication, i.e. the common ancestor of the genes occurred since the last speciation event.

The homologues could also be polymorphic forms of solAC such as alleles or mutants as described in section (A) or chimeras as described in section (D).

Once the amino acid sequences of the polypeptides with known and unknown structures are aligned, the structures of the conserved amino acids in a computer representation of the polypeptide with known structure are transferred to the corresponding amino acids of the

polypeptide whose structure is unknown. For example, a tyrosine in the amino acid sequence of known structure may be replaced by a phenylalanine, the corresponding homologous amino acid in the amino acid sequence of unknown structure.

The structures of amino acids located in non-conserved regions may be assigned manually by using standard peptide geometries or by molecular simulation techniques, such as molecular dynamics. The final step in the process is accomplished by refining the entire structure using molecular dynamics and/or energy minimization.

Homology modelling as such is a technique that is well known to those skilled in the art (see e.g. Greer, (*Science*, Vol. 228, (1985), 1055), and Blundell *et al.*,(*Eur. J. Biochem*, Vol. 172, (1988), 513). The techniques described in these references, as well as other homology modelling techniques, generally available in the art, may be used in performing the present invention.

Thus the invention provides a method of homology modelling comprising the steps of:

(a) aligning a representation of an amino acid sequence of a target solAC protein of unknown three-dimensional structure with the amino acid sequence of the solAC of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof, to match homologous regions of the amino acid sequences;

(b) modelling the structure of the matched homologous regions of said target solAC of unknown structure on the corresponding regions of the solAC structure as defined by Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof; and

(c) determining a conformation for said target solAC of unknown structure which substantially preserves the structure of said matched homologous regions.

A conformation for said target solAC of unknown structure will for example be one in which favourable interactions are formed within the target adenylate cyclase of unknown structure and/or so that a low energy conformation is formed.

Preferably one or all of steps (a) to (c) are performed by computer modelling.

The coordinate data of Table 1, Table 2, Table 3, Table 4 or Table 5, or selected coordinates thereof, will be particularly advantageous for homology modelling of other adenylate cyclases.

The aspects of the invention described herein which utilise the solAC structure *in silico* may be equally applied to homologue models of adenylate cyclase obtained by the above aspect of the invention, and this application forms a further aspect of the present invention. Thus having determined a conformation of an adenylate cyclase by the method described above, such a conformation may be used in a computer-based method of rational drug design as described herein.

E. Structure Solution

The atomic coordinate data of solAC can also be used to solve the crystal structure of other target adenylate cyclase proteins including other crystal forms of solAC, mutants, co-complexes of solAC, where X-ray diffraction data or NMR spectroscopic data of these target adenylate cyclase proteins has been generated and requires interpretation in order to provide a structure.

In the case of solAC, this protein may crystallize in more than one crystal form. The data of Table 1, Table 2, Table 3, Table 4 or Table 5, or selected coordinates thereof, as provided by this invention, are particularly useful to solve the structure of those other crystal forms of solAC. It may also be used to solve the structure of solAC mutants, solAC co-complexes, or of the crystalline form of any other protein with significant amino acid sequence homology to any functional domain of solAC.

In the case of other target adenylate cyclase proteins, particularly the homologous mammalian soluble adenylate cyclases such as those from the species referred to in Tables 12 and 13, the present invention allows the structures of such targets to be obtained more readily where raw X-ray diffraction data is generated.

Thus, where X-ray crystallographic or NMR spectroscopic data is provided for a target protein adenylate cyclase or solAC of unknown three-dimensional structure, the atomic coordinate data derived from Table 1, Table 2, Table 3, Table 4 or Table 5, may be used to interpret that data to provide a likely structure for the other adenylate cyclase by techniques which are well known in the art, e.g. phasing in the case of X-ray crystallography and assisting peak assignments in NMR spectra.

One method that may be employed for these purposes is molecular replacement. In this method, the unknown crystal structure, whether it is another crystal form of solAC, a solAC mutant, a solAC chimera or a solAC co-complex, or the crystal of a target adenylate cyclase protein with amino acid sequence homology to any functional domain of solAC, may be determined using the solAC structure coordinates of all or part of Table 1, Table 2, Table 3, Table 4 or Table 5 of this invention. This method will provide an accurate structural form for the unknown crystal more quickly and efficiently than attempting to determine such information *ab initio*.

Examples of computer programs known in the art for performing molecular replacement are CNX (Brunger A.T.; Adams P.D.; Rice L.M., Current Opinion in Structural Biology, Volume 8, Issue 5, October 1998, Pages 606-611 (also commercially available from Accelrys San Diego, CA), MOLREP (A.Vagin, A.Teplyakov, MOLREP: an automated program for molecular replacement, J. Appl. Cryst. (1997) 30, 1022-1025, part of the CCP4 suite) or AMoRe (Navaza, J. (1994). AMoRe: an automated package for molecular replacement. Acta Cryst. A50, 157-163).

Thus, in a further aspect of the invention provides a method for determining the structure of a protein, which method comprises;

providing the co-ordinates of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by an rmsd of less than 1.5 Å, or selected coordinates thereof; and

either (a) positioning said co-ordinates in the crystal unit cell of said protein so as to provide a structure for said protein, or (b) assigning NMR spectra peaks of said protein by manipulating said co-ordinates.

Preferably the coordinates of Table 1, Table 2, Table 3, Table 4 or Table 5 or selected coordinates thereof, include coordinates of atoms of the amino acid residues set out in any one of Tables 6 to 11, such as Tables 6, 7 or 11. Preferred selected coordinates of each Table, or combinations of coordinates from two or more Tables are as described elsewhere herein.

The invention may also be used to assign peaks of NMR spectra of such proteins, by manipulation of the data of Table 1, Table 2, Table 3, Table 4 or Table 5.

In a preferred aspect of this invention the co-ordinates are used to solve the structure of target adenylate cyclase, particularly homologues of solAC for example other adenylate cyclases, and in particular isoforms of solAC from different species.

F. Computer Systems.

In another aspect, the present invention provides systems, particularly a computer system, intended to generate structures and/or perform optimisation of ligands which interact with solAC, solAC homologues or analogues, complexes of solAC with ligands, or complexes of solAC homologues or analogues with ligands, the system containing computer-readable data comprising one or more of:

(a) solAC co-ordinate data of Table 1, Table 2, Table 3, Table 4 or Table 5 said data defining the three-dimensional structure of solAC catalytic domain, or selected coordinates thereof;

(b) atomic coordinate data of a target adenylate cyclase protein generated by homology modelling of the target based on the coordinate data of Table 1, Table 2, Table 3, Table 4 or Table 5;

(c) atomic coordinate data of a target adenylate cyclase protein generated by interpreting X-ray crystallographic data or NMR data by reference to the co-ordinate data of Table 1, Table 2, Table 3, Table 4 or Table 5;

(d) structure factor data derivable from the atomic coordinate data of (b) or (c).

and

(e) atomic coordinate data of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by an rmsd of less than 1.5 Å, or selected coordinates thereof.

For example the computer system may comprise: (i) a computer-readable data storage medium comprising data storage material encoded with the computer-readable data; (ii) a working memory for storing instructions for processing said computer-readable data; and (iii) a central-

processing unit coupled to said working memory and to said computer-readable data storage medium for processing said computer-readable data and thereby generating structures and/or performing rational drug design. The computer system may further comprise a display coupled to said central-processing unit for displaying said structures.

The invention also provides such systems containing atomic coordinate data of target adenylate cyclase proteins wherein such data has been generated according to the methods of the invention described herein based on the starting data provided the data of Table 1, Table 2, Table 3, Table 4 or Table 5 or selected coordinates thereof.

Such data is useful for a number of purposes, including the generation of structures to analyse the mechanisms of action of adenylate cyclase proteins and/or to perform rational drug design of ligands which interact with solAC, such as compounds which are metabolised by adenylate cyclases.

In another aspect, the invention provides computer-readable storage medium, comprising a data storage material encoded with computer readable data, wherein the data are defined by the structure coordinates of the solAC protein of Table 1, Table 2, Table 3, Table 4 or Table 5 or selected coordinates thereof, or a homologue of solAC, wherein said homologue comprises backbone atoms that have a root mean square deviation from the backbone atoms of said Table 1, Table 2, Table 3, Table 4 or Table 5 or selected coordinates thereof of less than 1.5 Å.

In a further aspect, there is provided a computer-readable storage medium comprising a data storage material encoded with a first set of computer-readable data comprising a Fourier transform of at least a portion of the structural coordinates for the solAC protein defined by the structure of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by an rmsd of less than 1.5 Å, or selected coordinates thereof;

which data, when combined with a second set of machine readable data comprising an X-ray diffraction pattern of a molecule or molecular complex of unknown structure, using a machine programmed with the instructions for using said first set of data and said second set of data, can determine at least a portion of the structure coordinates corresponding to the second set of machine readable data.

As used herein, "computer readable media" refers to any medium or media, which can be read and accessed directly by a computer. Such media include, but are not limited to: magnetic storage media such as floppy discs, hard disc storage medium and magnetic tape; optical storage media such as optical discs or CD-ROM; electrical storage media such as RAM and ROM; and hybrids of these categories such as magnetic/optical storage media.

By providing such computer readable media, the atomic coordinate data of the invention can be routinely accessed to model adenylate cyclases or selected coordinates thereof. For example, RASMOL (Sayle et al., *TIBS*, Vol. 20, (1995), 374) is a publicly available computer software

package, which allows access and analysis of atomic coordinate data for structure determination and/or rational drug design.

As used herein, "a computer system" refers to the hardware means, software means and data storage means used to analyse the atomic coordinate data of the invention. The minimum hardware means of the computer-based systems of the present invention comprises a central processing unit (CPU), input means, output means and data storage means. Desirably a monitor is provided to visualize structure data. The data storage means may be RAM or means for accessing computer readable media of the invention. Examples of such systems are microcomputer workstations available from Silicon Graphics Incorporated and Sun Microsystems running Unix based, Windows XP or IBM OS/2 operating systems.

The invention also provides a computer-readable data storage medium comprising a data storage material encoded with a first set of computer-readable data comprising the solAC coordinates of Table 1, Table 2, Table 3, Table 4 or Table 5 or selected coordinates thereof; which, when combined with a second set of machine readable data comprising an X-ray diffraction pattern of a molecule or molecular complex of unknown structure, using a machine programmed with the instructions for using said first set of data and said second set of data, can determine at least a portion of the electron density corresponding to the second set of machine readable data.

A further aspect of the invention provides a method of providing data for generating structures and/or performing optimisation of ligands which interact with solAC, solAC homologues or analogues, complexes of solAC with ligands, or complexes of solAC homologues or analogues with ligands, the method comprising:

(i) establishing communication with a remote device containing

(a) computer-readable data comprising atomic coordinate data of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by an rmsd of less than 1.5 Å, or selected coordinates thereof, said data defining the three-dimensional structure of solAC catalytic domain, or selected coordinates thereof;

(b) atomic coordinate data of a target adenylate cyclase homologue or analogue generated by homology modelling of the target based on the data (a);

(c) atomic coordinate data of a protein generated by interpreting X-ray crystallographic data or NMR data by reference to the data of Table 1, Table 2, Table 3, Table 4 or Table 5 and

(d) structure factor data derivable from the atomic coordinate data of (a) or (c); and

(ii) receiving said computer-readable data from said remote device.

In a further aspect, the invention provides the use of a computer for producing a three-dimensional representation of a solAC structure or a solAC-ligand complex wherein the solAC structure is of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean

square deviation of not more than 1.5 Å, or selected coordinates thereof, wherein said computer comprises:

(i) a machine-readable data storage medium comprising a data storage material encoded with machine-readable data, wherein said data comprise the structure of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof;

(ii) instructions for processing said machine-readable data into said three-dimensional representation.

The computer may further comprise a display for displaying said three-dimensional representation.

The computer-readable data received from said remote device, particularly when in the form of the atomic coordinate data of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by an rmsd of less than 1.5 Å, or selected coordinates thereof, may be used in the methods of the invention described herein, e.g. for the analysis of a ligand structure with a solAC structure.

Thus the remote device may comprise e.g. a computer system or computer readable media of one of the previous aspects of the invention. The device may be in a different country or jurisdiction from where the computer-readable data is received.

The communication may be via the internet, intranet, e-mail etc, transmitted through wires or by wireless means such as by terrestrial radio or by satellite. Typically the communication will be electronic in nature, but some or all of the communication pathway may be optical, for example, over optical fibers.

G. Uses of the Structures of the Invention.

The crystal structures obtained according to the present invention as well as the structures of target adenylate cyclase proteins obtained in accordance with the methods described herein, may be used in several ways for drug design. For example, the design of ligands selective for solAC, such as the nucleotide binding region of solAC, may be undertaken by reference to the coordinate data of Table 1, Table 2, Table 3, Table 4 or Table 5 or selected coordinates thereof. In one aspect, the non-cyclizable nucleotide analogue AMPCPP is able to bind in the nucleotide binding pocket of many different adenylate cyclases. The use of the present structure of the solAC catalytic domain permits the design of structures which will have greater specificity for solAC compared to other adenylate cyclases.

More generally, the structures of the invention may be used in the provision, design, modification or analysis of modulators of solAC. As used herein, reference to a "modulator" of solAC is intended to refer to a ligand which causes a change (i.e a modulation) in the level of biological activity of the solAC protein. Thus modulation encompasses physiological changes which effect an increase or decrease in solAC activity. In the former case, the modulation may be described as an activation; in the latter, an inhibition. The modulation may arise directly as

a result of ligand binding to the ATP binding site of solAC or indirectly, e.g. by ligand binding to any site of the solAC such that the activity of solAC or its interactions with other proteins are affected. Such interactions may include interaction with other gene products or proteins which localise the solAC enzyme to specific organelles (for example mitochondria, centrioles, mitotic spindles, nuclei) or brings about the interaction between solAC and effector molecules (for example PKA) or at the level of enzyme activity (for example by allosteric mechanisms, competitive inhibition, active-site inactivation, perturbation of feedback inhibitory pathways etc). Thus, modulation may imply over- or under-expression of the solAC brought about by such mechanisms, as well as hyper- (or hypo-)activity due to ligand binding at the ATP binding site, or at the bicarbonate binding site, or at any of the other sites identified herein. The terms "modulator", "modulation" and "modulate" as used in relation to solAC are to be interpreted accordingly.

For example, information on the binding orientation of a ligand in the binding pocket can be determined by either co-crystallization, soaking or computationally docking the ligand. This will guide specific modifications to the chemical structure designed to mediate or control the interaction of the ligand with the protein. Such modifications can be designed with an aim to modify the interaction of the ligand with solAC and so improve its therapeutic action.

Thus, the determination of the three-dimensional structure of solAC provides a basis for the design of new ligands, e.g. chemical compounds, which interact with solAC. For example, knowing the three-dimensional structure of solAC, computer modelling programs may be used to design different molecules expected to interact with possible or confirmed active sites, such as binding sites or other structural or functional features of solAC.

(i) Obtaining and analysing crystal complexes.

In one approach, the structure of a ligand bound to a solAC may be determined by experiment. This will provide a starting point in the analysis of the ligand bound to solAC, thus providing those of skill in the art with a detailed insight as to how that particular ligand interacts with solAC and the mechanism by which, for example, it competes with ATP for the binding pocket.

Many of the techniques and approaches applied to structure-based drug design described above rely at some stage on X-ray analysis to identify the binding position of a ligand in a ligand-protein complex. A common way of doing this is to perform X-ray crystallography on the complex, produce a difference Fourier electron density map, and associate a particular pattern of electron density with the ligand. However, in order to produce the map (as explained e.g. by Blundell et al., in *Protein Crystallography*, Academic Press, New York, London and San Francisco, (1976)), it is necessary to know beforehand the protein 3D structure (or at least a set of structure factors for the protein crystal). Therefore, determination of the solAC structure also allows difference Fourier electron density maps of solAC-ligand complexes to be produced, determination of the binding position of the drug and hence may greatly assist the process of rational drug design.

Accordingly, the invention provides a method for determining the structure of a ligand bound to solAC, said method comprising:

providing a crystal of the solAC protein;

soaking the crystal with the ligand to form a complex; and

determining the structure of the complex by employing the data of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof.

Alternatively, the solAC and catalytic domain and ligand may be co-crystallized. Purified protein samples are incubated over a period of time (usually >1hr) with a potential ligand. The protein ligand complex can then be screened for crystallization conditions. Alternatively, protein crystals containing one ligand can be back-soaked to remove this ligand by placing the crystals into a stabilising solution in which the ligand is not present. The resultant crystals can then be transferred into a second solution containing a different ligand.

Thus the invention provides a method for determining the structure of a ligand bound to solAC, said method comprising;

mixing solAC protein with the ligand;

crystallizing a solAC protein-ligand complex; and

determining the structure of the complex by employing the data of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by an rmsd of less than 1.5 Å, or selected coordinates thereof.

A mixture of compounds may be soaked or co-crystallized with the crystal, wherein only one or some of the compounds may be expected to bind to the solAC. The mixture of compounds may comprise a ligand known to bind to solAC. As well as the structure of the complex, the identity of the complexing compound(s) is/are then determined.

The method may comprise the further steps of: (a) obtaining or synthesising said candidate ligand; (b) forming a complex of solAC and said candidate ligand; and (c) analysing said complex by X-ray crystallography or NMR spectroscopy to determine the ability of said candidate ligand to interact with solAC.

The analysis of such structures may employ (i) X-ray crystallographic diffraction data from the complex and (ii) a three-dimensional structure of solAC, or at least selected coordinates thereof, to generate a difference Fourier electron density map of the complex, the three-dimensional structure being defined by atomic coordinate data of Table 1, Table 2, Table 3, Table 4 or Table 5 or selected coordinates thereof. The difference Fourier electron density map may then be analysed.

Therefore, such complexes can be crystallized and analysed using X-ray diffraction methods, e.g. according to the approach described by Greer et al.,(*J. of Medicinal Chemistry*, Vol. 37, (1994), 1035-1054), and difference Fourier electron density maps can be calculated based on

X-ray diffraction patterns of soaked or co-crystallized solAC and the solved structure of uncomplexed solAC. These maps can then be analysed e.g. to determine whether and where a particular ligand binds to solAC and/or changes the conformation of solAC.

Electron density maps can be calculated using programs such as those from the CCP4 computing package (Collaborative Computational Project 4. The CCP4 Suite: Programs for Protein Crystallography, *Acta Crystallographica*, D50, (1994), 760-763.). For map visualization and model building programs such as "O" (Jones et al., *Acta Crystallographica*, A47, (1991), 110-119) can be used.

In addition, in accordance with this invention, solAC mutants may be crystallized in co-complex with known solAC ligands or novel ligands. The crystal structures of a series of such complexes may then be solved by molecular replacement and compared with that of the solAC structure of Table 1, Table 2, Table 3, Table 4 or Table 5 or selected coordinates thereof. Potential sites for modification within the various binding sites of the enzyme may thus be identified. This information provides an additional tool for determining the most efficient binding interactions, for example, increased hydrophobic interactions, between solAC and a ligand.

All of the complexes referred to above may be studied using well-known X-ray diffraction techniques and may be refined against 1.5 to 3.5 Å resolution X-ray data to an R value of about 0.30 or less using computer software, such as CNX (Brunger et al., *Current Opinion in Structural Biology*, Vol. 8, Issue 5, October 1998, 606-611, and commercially available from Accelrys, San Diego, CA), and as described by Blundell et al, (1976) and Methods in Enzymology, vol. 114 & 115, H. W. Wyckoff et al., eds., Academic Press (1985).

This information may thus be used to optimise known classes of solAC ligands, and more importantly, to design and synthesize novel classes of solAC ligands, particularly inhibitors or activators, and to design drugs with modified solAC interactions.

(ii) In silico analysis and design

Although the invention will facilitate the determination of actual crystal structures comprising a solAC catalytic domain and a ligand, which interacts with the solAC catalytic domain, current computational techniques provide a powerful alternative to the need to generate such crystals and generate and analyse diffraction date. Accordingly, a particularly preferred aspect of the invention relates to computer based ("in silico") methods directed to the analysis and development of ligands which interact with solAC structures of the present invention.

Determination of the three-dimensional structure of the solAC catalytic domain provides important information about the binding sites of solAC, particularly when comparisons are made with similar enzymes. This information may then be used for rational design and modification of solAC ligands, e.g. by computational techniques which identify possible binding ligands for the binding sites, by enabling linked-fragment approaches to drug design, and by enabling the

identification and location of bound ligands using X-ray crystallographic analysis. These techniques are discussed in more detail below.

Thus as a result of the determination of the solAC three-dimensional structure, more purely computational techniques for rational drug design may also be used to design structures whose interaction with solAC is better understood (for an overview of these techniques see e.g. Walters et al (*Drug Discovery Today*, Vol.3, No.4, (1998), 160-178; Abagyan, R.; Totrov, M. *Curr. Opin. Chem. Biol.* 2001, *5*, 375-382). For example, automated ligand-receptor docking programs (discussed e.g. by Jones et al. in *Current Opinion in Biotechnology*, Vol.6, (1995), 652-656 and Halperin, I.; Ma, B.; Wolfson, H.; Nussinov, R. *Proteins* 2002, *47*, 409-443), which require accurate information on the atomic coordinates of target receptors may be used.

The aspects of the invention described herein which utilize the solAC structure *in silico* may be equally applied to both the solAC structure of Table 1, Table 2, Table 3, Table 4 or Table 5 or selected coordinates thereof and the models of target adenylate cyclase proteins obtained by other aspects of the invention. Thus having determined a conformation of a solAC by the method described above, such a conformation may be used in a computer-based method of rational drug design as described herein. In addition the availability of the structure of the solAC will allow the generation of highly predictive pharmacophore models for virtual library screening or ligand design.

Accordingly, the invention provides a method for the analysis of the interaction of a ligand with a solAC structure, which comprises:

providing a solAC structure which is of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof;

providing a ligand to be fitted to said solAC structure or selected coordinates thereof; and

fitting the ligand to said solAC structure.

This method of the invention is generally applicable for the analysis of known ligands of solAC, the development or discovery of ligands of solAC, the modification of ligands of solAC e.g. to improve or modify one or more of their properties, and the like.

In performing the methods of the invention, the solAC structure of Table 1, Table 2, Table 3, Table 4 or Table 5, or selected coordinates thereof, may be represented in a computer model in accordance with standard techniques known as such in the art. Those of skill in the art will be familiar with means of providing three-dimensional representations of proteins in such methods. Suitable models include (a) a wire-frame model; (b) a chicken-wire model; (c) a ball-and-stick model; (d) a space-filling model; (e) a stick-model; (f) a ribbon model; (g) a snake model; (h) an arrow and cylinder model; (i) an electron density map; or (j) a molecular surface model.

The selected coordinates may be from one or more side chain or main chain atoms from some or all of the amino acids listed in any one of Tables 6 to 11, such as Tables 6, 7 or 11, with preferred numbers and combinations of such coordinates being as described elsewhere herein.

In an alternative aspect, the method of the invention may utilize the coordinates of atoms of interest of the solAC ligand binding region, which are in the vicinity of a putative ligand structure, for example within 10-25 Å of the catalytic regions or within 5-10 Å of a ligand bound, in order to model the pocket in which the structure binds. These coordinates may be used to define a space, which is then analysed in silico as described above.

In practice, it will be desirable to model a sufficient number of atoms of the solAC as defined by the coordinates of Table 1, Table 2, Table 3, Table 4 or Table 5 or selected coordinates thereof, which represent a binding pocket, e.g. the atoms of the residues identified in any one of Tables 6 to 11, such as Tables 6, 7 or 11. Preferred selected coordinates of each Table, or combinations of coordinates from two or more Tables are as described elsewhere herein. Binding pockets and other features of the interaction of solAC with ligand are described in the accompanying example.

Although every different ligand bound by solAC may interact with different parts of the binding pocket of the protein, the structure of this solAC allows the identification of a number of particular sites which are likely to be involved in many of the interactions of solAC with a drug candidate. The residues are set out in Tables 6 to 11, such as Tables 6, 7, or 11. Thus in this aspect of the invention, the selected coordinates may comprise coordinates of some or all of these residues. Preferred selected coordinates of each Table, or combinations of coordinates from two or more Tables are as described elsewhere herein.

In order to provide a three-dimensional structure of ligands to be fitted to a solAC structure of the invention, the ligand structure may be modelled in three dimensions using commercially available software for this purpose or, if its crystal structure is available, the coordinates of the structure may be used to provide a representation of the ligand for fitting to a solAC structure of the invention.

Newly designed ligand structures may be synthesised and their interaction with solAC may be determined or predicted as to how the newly designed structure is bound by said solAC structure. This process may be iterated so as to further alter the interaction between it and the solAC.

By "fitting", is meant determining by automatic, or semi-automatic means, interactions between one or more atoms of a candidate molecule and at least one atom of a solAC structure of the invention, and calculating the extent to which such interactions are stable. Interactions include attraction and repulsion, brought about by charge, steric, lipophilic, considerations and the like. Charge and steric interactions of this type can be modeled computationally. An example of such computation would be via a force field such as Amber (Cornell *et al.* A Second

Generation Force Field for the Simulation of Proteins, Nucleic Acids, and Organic Molecules, *Journal of the American Chemical Society*, (1995), 117(19), 5179-97) which would assign partial charges to atoms on the protein and ligand and evaluate the electrostatic interaction energy between a protein and ligand atom using the Coulomb potential. The Amber force field would also assign van der Waals energy terms to assess the attractive and repulsive steric interactions between two atoms. Lipophilic interactions can be modeled using a variety of means. For example the ChemScore function (Eldridge M D; Murray C W; Auton T R; Paolini G V; Mee R P Empirical scoring functions: I. The development of a fast empirical scoring function to estimate the binding affinity of ligands in receptor complexes, *Journal of computer-aided molecular design* (1997 Sep), 11(5), 425-45) assigns protein and ligand atoms as hydrophobic or polar, and a favorable energy term is specified for the interaction between two hydrophobic atoms. Other methods of assessing the hydrophobic contributions to ligand binding are available and these would be known to one skilled in the art. Other methods of assessing interactions are available and would be known to one skilled in the art of designing molecules. Various computer-based methods for fitting are described further herein.

More specifically, the interaction of a ligand with a solAC structure of the invention can be examined through the use of computer modelling using a docking program such as GOLD (Jones et al., *J. Mol. Biol.*, 245, 43-53 (1995), Jones et al., *J. Mol. Biol.,* 267, 727-748 (1997)), GRAMM (Vakser, I.A., *Proteins* , Suppl., 1:226-230 (1997)), DOCK (Kuntz et al, (1982) *J.Mol.Biol.*, *161*, 269-288; Makino et al, (1997) *J.Comput.Chem.*, *18*, 1812-1825), AUTODOCK (Goodsell et al, (1990) *Proteins*, *8*, 195-202, Morris et al, (1998) *J.Comput.Chem.*, *19*, 1639-1662.), FlexX, (Rarey et al, (1996) *J.Mol.Biol.*, *261*, 470-489) or ICM (Abagyan et al, (1994) *J.Comput.Chem.*, *15*, 488-506). This procedure can include computer fitting of ligands to solAC to ascertain how well the shape and the chemical structure of the ligand will bind to the solAC.

Also computer-assisted, manual examination of the active site structure of solAC may be performed. The use of programs such as GRID (Goodford, (1985) *J. Med. Chem.*, 28, 849-857) - a program that determines probable interaction sites between molecules with various functional groups and an enzyme surface - may also be used to analyse the active site to predict, for example, the types of modifications which will alter the rate of metabolism of a ligand.

Computer programs can be employed to estimate the attraction, repulsion, and steric hindrance of the two binding partners (i.e. a solAC structure and a ligand).

If more than one solAC active site pocket is characterized and a plurality of respective smaller ligands are designed or selected, a ligand may be formed by linking the respective small ligands into a larger ligand, which maintains the relative positions and orientations of the respective ligands at the active sites. The larger ligand may be formed as a real molecule or by computer modelling.

Detailed structural information can then be obtained about the binding of the ligand to solAC, and in the light of this information adjustments can be made to the structure or functionality of the ligand, e.g. to alter its interaction with solAC. The above steps may be repeated and re-repeated as necessary.

In another aspect, the present invention provides a method for identifying a ligand for modulating the activity of solAC, comprising the steps of: (a) employing three-dimensional atomic coordinate data according to Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof, to characterise at least one solAC binding site and preferably a plurality of solAC binding sites; (b) providing the structure of a candidate ligand; (c) fitting the candidate ligand to the binding site or sites; and (d) selecting a candidate ligand which fits the site or sites.

In one embodiment a plurality of candidate ligands are screened or interrogated for interaction with the binding sites. In one example, step (b) involves providing the structures of the candidate ligands, each of which is then fitted in step (c) to computationally screen a database of compounds (such as the Cambridge Structural Database) for interaction with the binding sites, i.e. the candidate ligand may be selected by computationally screening a database of ligands for interaction with the binding sites (see Martin, J. Med. Chem., vol 35, 2145-2154 (1992)). In another example, a 3-D descriptor for the ligand is derived, the descriptor including e.g. geometric and functional constraints derived from the architecture and chemical nature of the binding cavity or cavities. The descriptor may then be used to interrogate the compound database, the identified ligand being a compound which matches with the features of the descriptor. In effect, the descriptor is a type of virtual pharmacophore.

As indicated above, ligands which may be fitted to the solAC structure of the invention, include compounds under development as potential pharmaceutical agents. The agents may be fitted in order to determine how the action of solAC modifies the agent and to provide a basis for modelling candidate ligands, which for example bind to solAC in competition with ATP.

Having obtained and characterized a ligand compound according to the invention, the invention further provides a method for modulating the activity of solAC which method comprises: (a) providing solAC under conditions where, in the absence of ligand, the solAC is able to bind ATP; (b) providing a ligand compound; and (c) determining the extent to which the ability of solAC to bind ATP is altered by the presence of said compound, e.g. by competition.

(iii) Analysis and modification of ligands

Where a ligand is known to modulate or suspected of modulating the action of solAC, the structure of the ligand may be modelled in order to better determine residues of solAC which interact with the ligand. The present invention also provides a process for predicting further ligands which act as solAC ligands, which method comprises:

fitting said ligand to the three-dimensional structure of the solAC catalytic domain, or selected co-ordinates thereof, the three-dimensional structure being defined by the co-

ordinates of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by an rmsd of less than 1.5 Å, or selected coordinates thereof;

determining or predicting how said ligand binds to said catalytic domain; and

modifying the ligand structure so as to increase or decrease its interaction with the catalytic domain.

Typically the ligand will be modified with the aim of producing a more effective ligand than the starting ligand, or of producing a more pharmaceutically acceptable ligand.

It would be understood by those of skill in the art that modification of the structure will usually occur *in silico*, allowing predictions to be made as to how the modified structure interacts with the solAC.

Greer *et al.* (Greer *et al.* (1994), *J. of Medicinal Chemistry*, 37, 1035-1054) describes an iterative approach to ligand design based on repeated sequences of computer modelling, protein-ligand complex formation and X-ray crystallographic or NMR spectroscopic analysis. Thus novel thymidylate synthase inhibitor series were designed *de novo* by Greer *et al.*, and solAC ligands may also be designed or modified in the this way. More specifically, using e.g. GRID on the solved structure of solAC, a ligand for solAC may be designed that complements the functionalities of the solAC binding sites. Alternatively a ligand for solAC may be modified such that it complements the functionalities of the solAC binding sites better or less well. The ligand can then be synthesised, formed into a complex with solAC, and the complex then analysed by X-ray crystallography to identify the actual position of the bound ligand. The structure and/or functional groups of the ligand can then be adjusted, if necessary, in view of the results of the X-ray analysis, and the synthesis and analysis sequence repeated until an optimised ligand is obtained. Related approaches to structure-based drug design are also discussed in Bohacek *et al.* (1996) Medicinal Research Reviews, 16, 3-50. Design of a ligand with alternative solAC properties using structure based drug design may also take into account the requirements for high affinity to a second, target protein. Gschwend *et al.*, (Gschwend *et al.* (1999),.Bioorganic & Medicinal Chemistry Letters, 9, 307-312) and Bayley *et al.*, (Bayley *et al.* (1997) Proteins: Structure, Function and Genetics, 29, 29-67) describe approaches where structure based drug design is used to reduce affinity to one protein whilst maintaining affinity for a target protein.

The modifications will be those conventional in the art known to the skilled medicinal chemist, and will include, for example, substitutions or removal of groups containing residues which interact with the amino acid side chain groups of a solAC structure of the invention. For example, the replacements may include the addition or removal of groups in order to decrease or increase the charge of a group in a test compound, the replacement of a group to increase or decrease the size of the group in a test compound, the replacement of a charge group with a group of the opposite charge, or the replacement of a hydrophobic group with a hydrophilic group or vice versa. It will be understood that these are only examples of the type of substitutions considered by medicinal chemists in the development of new pharmaceutical

compounds and other modifications may be made, depending upon the nature of the starting compound and its activity.

Where a potential modified ligand has been developed by fitting a starting ligand to the solAC structure of the invention and predicting from this a modified ligand, the invention further includes the step of synthesizing the modified ligand and testing it in a *in vivo* or *in vitro* biological system in order to determine its activity and/or its effectiveness as a ligand for solAC.

The above-described processes of the invention may be iterated in that the modified ligand may itself be the basis for further ligand design. The above-described processes may also be used to modify a ligand which interacts with a second ligand within the solAC binding pocket.

(iv) Analysis of ligands in binding pocket regions

In one embodiment, the present invention provides a method for modifying the structure of a ligand, which method comprises:

fitting said ligand to the three-dimensional structure of the solAC catalytic domain, or selected co-ordinates thereof, the three-dimensional structure being defined by the co-ordinates of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by an rmsd of less than 1.5 Å, or selected coordinates thereof; and

modifying the ligand structure so as to increase or decrease its interaction with the catalytic domain.

wherein said fitting is to the ligand-binding region defined as including at least one coordinate of an amino acid residue set out in any one of Tables 6 to 11, such as Tables 6, 7, or 11. Preferred selected coordinates of each Table, or combinations of coordinates from two or more Tables are as described elsewhere herein. Typically the ligand will be modified with the aim of improving its inhibitory effectiveness, or its pharmaceutical acceptability.

For the avoidance of doubt, the term "modifying" is used as defined in the preceding subsection, and once such a ligand has been developed it may be synthesised and tested also as described above.

(vi) Fragment linking and growing.

The provision of the crystal structures of the invention will also allow the development of ligands which interact with the binding pocket regions the solAC catalytic domain (for example to act as ligands, particularly inhibitors or activators of a solAC) based on a fragment linking or fragment growing approach.

For example, the binding of one or more ligand fragments can be determined in the protein binding pocket by X-ray crystallography. Ligand fragments are typically compounds with a molecular weight between 100 and 200 Da (Carr et al, (2002) Drug Discov Today. May 1;7(9):522-7). These can then provide a starting point for medicinal chemistry to optimise the interactions using a structure-based approach. The fragments can be combined onto a template or used as the starting point for 'growing out' a ligand into other pockets of the protein

(Blundell et al; Nat Rev Drug Discov. (2002) Jan;1(1):45-54). The fragments can be positioned in the binding pocket of the solAC and then 'grown' to fill the space available, exploring the electrostatic, van der Waals or hydrogen-bonding interactions that are involved in molecular recognition. The potency of the original weakly binding fragment thus can be rapidly improved using iterative structure-based chemical syntheses.

At one or more stages in the fragment growing approach, the ligand may be synthesized and tested in a biological system for its activity. This can be used to guide the further growing out of the fragment.

Where two fragment-binding regions are identified, a linked fragment approach may be based upon attempting to link the two fragments directly, or growing one or both fragments in the manner described above in order to obtain a larger, linked structure, which may have the desired properties.

The linked-fragment approach may be used for example to design ligands which occupy the ATP binding site and the bicarbonate binding site. Such a ligand which occupies at least part of both sites may have better selectivity for solAC than a ligand which only occupies the ATP biding site.

Where the binding site of two or more ligands are determined they may be connected to form a potential lead compound that can be further refined using e.g. the iterative technique of *Greer* et al. For a virtual linked-fragment approach see Verlinde et al. (Verlinde et al. (1992) *J. of Computer-Aided Molecular Design*, 6, 131-147), and for NMR and X-ray approaches see Shuker et al. (Shuker et al. (1996) *Science*, 274, 1531-1534) and Stout et al. (Stout et al. (1998) *Structure*, 6, 839-848). The use of these approaches to design solAC ligands is made possible by the determination of the solAC structure.

(vii) Compounds of the invention.

Where a potential ligand for the solAC catalytic domain structure of the invention has been identified in accordance with the methods of the invention, the invention further includes the step of synthesizing the identified ligand and testing it in an *in vivo* or *in vitro* biological system in order to determine its activity and/or its effectiveness.

This aspect of the invention preferably further comprises the steps of:

obtaining or synthesizing the ligand; and

contacting the candidate ligand with solAC to determine the ability of the candidate ligand to interact with solAC.

For example, in the contacting step above the candidate ligand is contacted with solAC in the presence of a substrate, usually ATP, and typically a buffer, to determine the ability of said candidate ligand to bind to, e.g. inhibit, solAC. One such method is an HTRF based immunoassay, in which cAMP produced by solAC and XL-665-labelled cAMP compete for

binding to an anti-cAMP antibody labelled with Eu-cryptate (http://www.htrf-assays.com; Gabriel D, Vernier M, Pfeifer MJ, Dasen B, Tenaillon L, Bouhelal R. (2003) Assay & Drug Dev. Technol.; 2: 291-303). So, for example, an assay mixture for solAC may be produced which comprises the candidate ligand, substrate and buffer.

More preferably, in the latter step the candidate ligand is contacted with solAC under conditions to determine its function.

Alternatively, or in addition, the method may further comprise the steps of:

obtaining or synthesizing the ligand;

forming a complex of a solAC protein or catalytic domain thereof and said ligand; and

analysing said complex by X-ray crystallography to determine the ability of said ligand to interact with the solAC or catalytic domain thereof.

These steps may be used to identify ligands which can be fitted to the structure of the invention in an iterative process leading to the design of further ligands.

For example, in the contacting step above the candidate ligand is contacted with solAC in the presence of a substrate and typically a buffer, to determine the ability of said candidate ligand to bind to, e.g. inhibit, solAC. So, for example, an assay mixture for solAC may be produced which comprises the candidate ligand, substrate and buffer.

In another aspect, the invention includes a compound, which is a solAC ligand identified by the methods of the invention described herein.

Following identification of such a compound, it may be manufactured and/or used in the preparation, i.e. manufacture or formulation, of a composition such as a medicament, pharmaceutical composition or drug. These may be administered to individuals.

Thus, the present invention extends in various aspects not only to a compound as provided by the invention, but also a pharmaceutical composition, medicament, drug or other composition comprising such a compound. The compositions may be used for treatment (which may include preventative treatment) of disease such as cancer, inflammation, osteoporosis, diabetes, glaucoma or infertility. The compositions may also be used in contraceptive methods, e.g. to inhibit sperm motility or fertilization.

The term "treatment" as used herein in the context of treating a disease or condition, pertains generally to treatment and therapy, whether of a human or an animal (e.g. in veterinary applications), in which some desired therapeutic effect is achieved, for example, the inhibition of the progress of the condition, and includes a reduction in the rate of progress, a halt in the rate of progress, amelioration of the condition, and cure of the disease or condition. Treatment as a prophylactic measure (i.e. prophylaxis) is also included.

The term "therapeutically-effective amount" as used herein, pertains to that amount of an active compound, or a material, composition or dosage from comprising an active compound, which is effective for producing some desired therapeutic effect, commensurate with a reasonable benefit/risk ratio, when administered in accordance with a desired treatment regimen.

The term "treatment" includes combination treatments and therapies, in which two or more treatments or therapies are combined, for example, sequentially or simultaneously.

The compounds of, or obtained in accordance with, the invention include compounds which are inhibitors of solAC activity. As such, they are expected to be useful in providing a means of preventing and/or enabling sperm motility and hypermotility, capacitation and acrosome reaction. It is therefore anticipated that the compounds will prove useful in treating some forms of male infertility or sterility and/or preventing fertilisation of oocytes and consequently pregnancy.

Examples of cancers which may be treated include, but are not limited to, carcinomas, for example a carcinoma of the bladder, breast, colon (e.g. colorectal carcinomas such as colon adenocarcinoma and colon adenoma), kidney, epidermus, liver, lung, for example adenocarcinoma, small cell lung cancer and non-small cell lung carcinomas, oesophagus, gall bladder, ovary, pancreas e.g. exocrine pancreatic carcinoma, stomach, cervix, thyroid, prostate, or skin, for example squamous cell carcinoma; a hematopoietic tumour of lymphoid lineage, for example leukemia, acute lymphocytic leukemia, B-cell lymphoma, T-cell lymphoma, Hodgkin's lymphoma, non-Hodgkin's lymphoma, hairy cell lymphoma, or Burkett's lymphoma; a hematopoietic tumor of myeloid lineage, for example acute and chronic myelogenous leukemias, myelodysplastic syndrome, or promyelocytic leukemia; multiple myeloma; thyroid follicular cancer; a tumour of mesenchymal origin, for example fibrosarcoma or habdomyosarcoma; a tumor of the central or peripheral nervous system, for example astrocytoma, neuroblastoma, glioma or schwannoma; melanoma; seminoma; teratocarcinoma; osteosarcoma; xenoderoma pigmentoum; keratoctanthoma; or Kaposi's sarcoma.

Examples of inflammatory diseases or conditions ameliorated by the inhibition of solAC include, but are not limited to, rheumatoid arthritis, osteoarthritis, rheumatoid spondylitis, gouty arthritis, traumatic arthritis, rubella arthritis, psoriatic arthritis, and other arthritic conditions; Alzheimer's disease; toxic shock syndrome, the inflammatory reaction induced by endotoxin or inflammatory bowel disease; tuberculosis, atherosclerosis, muscle degeneration, Reiter's syndrome, gout, acute synovitis, sepsis, septic shock, endotoxic shock, gram negative sepsis, adult respiratory distress syndrome, cerebral malaria, chronic pulmonary inflammatory disease, silicosis, pulmonary sarcoisosis, bone resorption diseases, reperfusion injury, graft vs. host reaction, allograft rejections, fever and myalgias due to infection, such as influenza, cachexia, in particular cachexia secondary to infection or malignancy, cachexia secondary to acquired immune deficiency syndrome (AIDS), AIDS, ARC (AIDS related complex), keloid formation, scar tissue formation, Crohn's disease, ulcerative colitis, pyresis, chronic obstructive pulmonary

disease (COPD), acute respiratory distress syndrome (ARDS), asthma, pulmonary fibrosis and bacterial pneumonia.

Of particular interest are compounds for use in the treatment or prophylaxis of inflammatory diseases and conditions, rheumatoid arthritis and osteoarthritis.

Thus the invention provides for the treatment of a condition mentioned above, wherein said treatment may comprise administration of a composition comprising a compound obtained according to the invention to a patient, e.g. for treatment of disease; the use of a compound, e.g. an inhibitor of solAC, in the manufacture of a composition for administration, e.g. for treatment of disease; and a method of making a pharmaceutical composition comprising admixing such a compound with a pharmaceutically acceptable excipient, vehicle or carrier, and optionally other ingredients.

Thus a further aspect of the present invention provides a method for preparing a medicament, pharmaceutical composition or drug, the method comprising: (a) identifying or modifying a compound by a method of any one of the other aspects of the invention disclosed herein; (b) optimising the structure of the compound; and (c) preparing a medicament, pharmaceutical composition or drug containing the optimised compound.

The above-described processes of the invention may be iterated in that the modified compound may itself be the basis for further compound design.

By "optimising the structure" we mean e.g. adding molecular scaffolding, adding or varying functional groups, or connecting the molecule with other molecules (e.g. using a fragment linking approach) such that the chemical structure of the ligand molecule is changed while its original modulating functionality is maintained or enhanced. Such optimisation is regularly undertaken during drug development programmes to e.g. enhance potency, promote pharmacological acceptability, increase chemical stability etc. of lead compounds.

Modification will be those conventional in the art known to the skilled medicinal chemist, and will include, for example, substitutions or removal of groups containing residues which interact with the amino acid side chain groups of a solAC structure of the invention. For example, the replacements may include the addition or removal of groups in order to decrease or increase the charge of a group in a test compound, the replacement of a charge group with a group of the opposite charge, or the replacement of a hydrophobic group with a hydrophilic group or vice versa. It will be understood that these are only examples of the type of substitutions considered by medicinal chemists in the development of new pharmaceutical compounds and other modifications may be made, depending upon the nature of the starting compound and its activity.

Compositions may be formulated for any suitable route and means of administration. Pharmaceutically acceptable carriers or diluents include those used in formulations suitable for

oral, rectal, nasal, topical (including buccal and sublingual), vaginal or parenteral (including subcutaneous, intramuscular, intravenous, intradermal, intrathecal and epidural) administration. The formulations may conveniently be presented in unit dosage form and may be prepared by any of the methods well known in the art of pharmacy.

For solid compositions, conventional non-toxic solid carriers include, for example, pharmaceutical grades of mannitol, lactose, cellulose, cellulose derivatives, starch, magnesium stearate, sodium saccharin, talcum, glucose, sucrose, magnesium carbonate, and the like may be used. Liquid pharmaceutically administrable compositions can, for example, be prepared by dissolving, dispersing, etc, an active compound as defined above and optional pharmaceutical adjuvants in a carrier, such as, for example, water, saline aqueous dextrose, glycerol, ethanol, and the like, to thereby form a solution or suspension. If desired, the pharmaceutical composition to be administered may also contain minor amounts.of non-toxic auxiliary substances such as wetting or emulsifying agents, pH buffering agents and the like, for example, sodium acetate, sorbitan monolaurate, triethanolamine sodium acetate, sorbitan monolaurate, triethanolamine oleate, etc. Actual methods of preparing such dosage forms are known, or will be apparent, to those skilled in this art; for example, see Remington: The Science and Practice of Pharmacy", 20th Edition, 2000, pub. Lippincott, Williams & Wilkins.

The invention is illustrated by the following examples:

Example

In order to obtain a polypeptide (or protein) that can be utilised for determination of the three dimensional (tertiary) structure of solAC, DNA encoding solAC may be obtained by total gene synthesis or by cloning. This DNA may then be expressed in a suitable expression system to obtain a polypeptide that can be subjected to techniques to determine its three dimensional structure.

Summary of cloning, expression and purification of solAC.

In order to obtain expression and purification of solAC for structural studies, a number of different constructs were made, for expression in both *E. coli* and insect cells. In the detailed examples which follow, the expression of a preferred construct, 2056, is described. The conditions for the expression and recovery of this construct were arrived at after extensive investigation of numerous constructs and expression and purification conditions.

The constructs included all or part of the solAC protein between residues 1 and 469, as well as N-terminal or C-terminal tags. C-terminal tags were either Tobacco Etch Virus (TEV) Protease-cleavable-GST or TEV-cleavable-His6 tags. His6 tags were also used at the C-terminal in some constructs. The constructs analysed are set out in Table 14 below.

Table 14:

	Construct	Description of construct
1	2022	TEV-Cleavable-GST---1—469
2	2021	TEV-Cleavable-GST---1—469---His6
3	2023	TEV-Cleavable-His6---1—469
4	2056	1—469---His6
5	2024	TEV-Cleavable- His6---13---469
6	2026	TEV-Cleavable- His6---36---469
7	2025	TEV-Cleavable- His6---27---469
8	2027	1—469
9	2044	TEV-Cleavable- His6----1---245
10	2032	255-469---- His6
11	2033	TEV-Cleavable- His6----1—469
12		1—469 ---- His6
13	2100	TEV-Cleavable- His6---13---469
14	2101	TEV-Cleavable- His6---36---469
15	2102	TEV-Cleavable- His6---27---469

Constructs 1-8 were for expression in a baculovirus expression system, and 9-15 for expression in *E. coli*.

E. coli constructs

All of the constructs expressed as inclusion bodies when the temperature was maintained between 30 to 37°C upon induction. Attempts to achieve soluble expression by lowering the temperature as far down as 15°C upon induction resulted in some soluble expression, but severe proteolytic degradation of all constructs as observed by western blot analysis using anti SAC antibodies. Inclusion body preparations of construct 2033 were pursued using the *T. brucei* AC protocol of Bieger (Bieger, B. and Essen, L-O. (2000) Acta Cryst. D56, 359-362) as a starting point.

Briefly, cells (construct 2033 mainly) were suspended, lysed by sonication and clarified by centrifugation. The inclusion body pellets were re-suspended and extensively washed before re-solubilisation in either 6M GuHCl or 8M Urea. Buffers used were predominantly Tris HCl pH 8.0, Hepes, pH 8.0 or PBS, pH 7.6. The detergent used for some of the washes was Triton 100. Both Ni-NTA and the non-nickel, immobilized metal affinity chromatography (IMAC) resin TALON™ (Clontech, Mountain View, CA) columns were used under denaturing conditions to capture the protein of interest. Dialysis of the denatured solubilized proteins against a 10mM NaH_2PO_4/Na_2HPO_4 pH 7.6, 0.3M NaCl, 0.4M Arginine, 10% glycerol for 2 hours, caused a large proportion of the contaminants to remain in solution, where as the protein of interest crashed out of solution. Re-solubilized solAC protein was used in a refolding screen of 8x96 conditions. A set of conditions were identified that resulted in refolded active protein, for example: 50mM HEPES pH7.2, 0.5M Arginine, 0.3M NaCl, 5mM BME and 10% Glycerol. This

yielded folded active protein which could then be applied to a Ni-NTA column for further purification. Yields of protein were low and further study was focussed on insect cell expression.

Baculovirus constructs

Work focused predominantly around the constructs described in the literature as these had been shown to be active and competent in the assays. There were however significant concerns regarding the published low expression yields and lack of purification precedent. Expression of the solAC constructs was tested in Sf9 and High Five™ cells and shown to be better in the latter.

The N-terminally GST tagged solAC construct (2022) comprises an engineered TEV cleavage site in the linker between the GST and solAC domains. Cells were initially suspended in PBS, 10% glycerol, 2mM BME lysed by sonication on ice, and clarified by centrifugation. Supernatant was re-clarified by centrifugation, as it turned translucent/opaque within minutes of pooling the tubes. SDS PAGE and western blot analysis of the pellet showed that intact and proteolytically cleaved sAC constituted a significant proportion of the precipitate. A strategy to stabilize the lysate was sought by examining a range of buffers at two temperatures 4°C and room temperature (about 20°C). These buffers are set out in Table 15 below.

Table 15:

50mM NaAcetate pH4.5
50mM NaAcetate pH4.5 ; 0.1% Triton
50mM NaAcetate pH4.5; 0.3M NaCl
50mM NaAcetate pH4.5; 0.5M NaCl
50mM Mes pH 6.5
50mM Mes pH 6.5; 0.1% n-octyl gucopyranoside
50mM HEPES pH 7.5
50mM HEPES pH 7.5 ; 0.5M NaCl
50mM HEPES pH 7.5 ; 1mM lauryl maltoside
50mM Tris pH 8.5
50mM Tris pH 8.5; 0.5M NaCl
50mM Tris pH 8.5; 0.1% n-octyl glucopyranoside

For all the buffers, ~2g of cells were suspended in 5ml of each of the buffers and put through a freeze thaw cycle to burst them open. The propensity of the suspensions to 'cloud' or precipitate was noted. Best results were obtained when pH was between 7.5 and 8.5, the temperature kept at 4°C and in the presence of 0.3M or 0.5M NaCl. The detergents were seen to have a deleterious effect. Separate experiments with PBS suggested stability problems with this buffer.

Optimal conditions were found to be 50mM Tris pH 7.5 (measured at 4°C); 0.3M NaCl

10% glycerol; and 2-5mM BME.

Construct 2056 has a C-terminal hexahistidine tag which allowed the use of Ni-NTA resin to capture the protein. Use of TALON™ columns did not improve capture. Though the choice of buffer helped significantly in stabilising the lysate, the need for a slow flow rate to allow enough contact time with the resin still caused difficulties which lead to the implementation of a pre-cleanup step by means of a DEAE column. For this, the cells were suspended in very low salt buffer, lysed, and clarified and applied to a DEAE column. The conductivity of the lysate had to be maintained very low, since the target protein bound weakly to the matrix. Failure to do this caused poor capture. Elution was done via a two step gradient, with both constructs 2022 and 2056 eluting in the first step. Most of the contaminants which readily precipitate failed to bind to this column. The fractions were pooled and NaCl concentration was adjusted to 300mM before application on to either the Ni-NTA column or Glutathione sepharose 4b column. The addition of this step enabled slow flow rates in subsequent steps which led to higher recovery of enzyme. Later on we were also able to batch bind to Ni-NTA Fast flow resin directly after clarification, having lysed the cells in the high salt buffer.

Removal of the imidazole from the solAC-2056 containing fractions was a key component to the success of protein recovery. Once the reproducibility of the Ni-NTA elution was established, the protein pool was buffer exchanged into 50mM Tris pH 7.5 (4°C), 30mM NaCl, 10% Glycerol and 1mM BME in order to apply to a resource Q column. The residence time of the protein in low salt was kept to a minimum as the highest losses in protein yield were experienced at this step, with up to 50% of the protein being lost. It was observed that the resource Q step worked well though the pH and the conductivity of the buffers at this step were found to be of extreme importance. If either of these parameters was altered, the protein failed to bind or the purification profile on a gel showed no improvement. The final step of the purification served to place the protein in the most stable buffer we had discovered: 50mM Tris pH 7.5 (4°C), 330mM NaCl, 10% Glycerol, 1mM BME.

The protein could be concentrated without any evidence of aggregation to beyond 40mg/ml, though crystallizations were set up at 10mg/ml.

Surprisingly, despite the similarity of the 2022 and 2056 constructs (2022 post TEV cleavage only differed in a few amino acid residues at the N-terminus and the absence of the His6 tag at the C-terminus), 2022 oligomerised at concentrations of 5mg/ml and higher, whereas 2056 remained monomeric up to 40mg/ml.

Cloning, expression and purification of solAC-2056

An expression vector pCDNA3.1 encoding full length solAC (Nucleotide NM 018417 SwissProt) was used as a template for PCR amplification.

Cloning of solAC-2056

The construct M1-V469 was amplified using PCR.
The 5' primer:
5'GGGGACAAGTTTGTACAAAAAAGCAGGCTCCATGAACACTCCAAAAGAAGAATTCCAGGACTGG3' (SEQ ID NO:1)
carried an attB1 recognition sequence, and sequence corresponding to bases 1-11.
The 3' primer:
5'GGGGACCACTTTGTACAAGAAAGCTGGGTTCAGTGGTGGTGGTGGTGGTGGACTTTCTCAGTAC GGCCC3' (SEQ ID NO:2)
introduces a sequence corresponding to bases 463-469, a 6 his c-terminal tag, a stop codon and an attB2 recognition site.

PCR Reaction reagents: 10µl Thermopol buffer 10X, 2µl dNTP mix, 1µl DNA template, 1µl 5' primer, 1µl 3' primer, 1µl Vent. Reaction made up to 100µl with H2O.

PCR Cycling: 25 cycles of 94°C for 30 sec, 55°C 1 min, 72°C for 3 mins, followed by an extension of 10 min at 72°C.

The 1407-bp fragment was recombined into the entry vector, pDONR using the BP reaction of the Gateway cloning technique.

An aliquot of the product was transformed into DH5α competent cells. Plasmid was extracted from the bacteria grown on the kanamycin selective plates. The sequence was confirmed by DNA sequencing before transferring the clone to the destination vector, pDEST8 via the LR reaction of the Gateway cloning technique. An aliquot of the product was transformed into DH5α competent cells. Plasmid was extracted from the bacteria grown on the carbenicillin selective plates. The sequence was confirmed by DNA sequencing before beginning expression of the protein.

The protein sequence of solAC-2056 is:
MNTPKEEFQDWPIVRIAAHLPDLIVYGHFSPERPFMDYFDGVLMFVDISGFTAMTEKFSSAMY
MDRGAEQLVEILNYHISAIVEKVLIFGGDILKFAGDALLALWRVERKQLKNIITVVIKCSLEIHGLF
ETQEWEEGLDIRVKIGLAAGHISMLVFGDETHSHFLVIGQAVDDVRLAQNMAQMNDVILSPNC
WQLCDRSMIEIESVPDQRAVKVNFLKPPPNFNFDEFFTKCTTFMHYYPSGEHKNLLRLACTLK
PDPELEMSLQKYVMESILKQIDNKQLQGYLSELRPVTIVFVNLMFEDQDKAEEIGPAIQDAYMHI
TSVLKIFQGQINKVFMFDKGCSFLCVFGFPGEKVPDELTHALECAMDIFDFCSQVHKIQTVSIG
VASGIVFCGIVGHTVRHEYTVIGQKVNLAARMMMYYPGIVTCDSVTYNGSNLPAYFFKELPKKV
MKGVADSGPLYQYWGRTEKVHHHHHH (SEQ ID NO:3)

The 6 His tag is non cleavable in this construct.

Protein Production of solAC-2056

Production of recombinant virus of solAC-2056 was performed in the following manner. Briefly, the pDEST8 vector encoding the relevant gene was transformed into *E. coli* DH10BAC cells containing the baculovirus genome (Bacmid DNA). Via a transposition event in the cells, a region of the pDEST8 vector containing the gene and a gentamycin resistance gene including the baculovirus polyhedron promoter was transposed directly into the Bacmid DNA. By selection on gentamycin, kanamycin, tetracycline and Bluo-gal, resultant white colonies should contain recombinant bacmid DNA encoding the relevant gene. Bacmid DNA was extracted from a culture of white DH10BAC cells and transfected into *Spodoptera frugiperda* Sf9 cells grown in SF900 II serum free media following manufacturers instructions. Virus particles were harvested 72 hours post infection. A 1ml aliquot of harvested virus particles was used to infect 100mls of sf9 cells containing $1x10^6$cells/ml. Cell culture medium was harvested 72 hours post infection.

Hi 5 insect cells were cultured in EX –Cell 405 (JRH) serum free media to a density of $1x10^6$ cells/ml. A 5ml aliquot of viral stock was added to each litre of Hi 5 cells. The cultures were incubated at 27°C for 48-72hrs. Cells were harvested by centrifugation at 4000rpm for 8 minutes. Pellets were frozen at –80°C.

Protein Purification of solAC-2056

All procedures were performed at 4°C unless stated otherwise. Cell pellets were thawed on ice and re-suspended in lysis buffer (50mM Tris pH 7.5, 300mM NaCl, 10% Glycerol, 2mM BME, protease inhibitor cocktail (Calbiochem). Cells were lysed by sonication and lysate was incubated with DNase 1 for 1 hour at 4°C. Lysate was clarified by centrifugation at 14,000 or 25,000rpm for 1 hour. The clarified lysate was further clarified by centrifugation as in the previous step, then passed through a 0.45μm filter before being applied to metal chelating matrix (GE Healthcare) pre-charged with Ni^{2+}in batch bind mode. The resin or matrix was poured into a column and the solAC protein was eluted by addition of lysis buffer containing 250mM Imidazole. Fractions were analysed by SDS PAGE and those containing solAC protein were pooled. The pooled protein was buffer exchanged into low salt by application to a G25-desalting column equilibrated in 50mM Tris pH 7.5, 30mM NaCl, 10% Glycerol, 5mM BME. The buffer exchanged solAC protein was then applied to a 6ml Resource Q cation exchange (GE Healthcare) column and eluted using a gradient of 0-30% 1M NaCl over 20 column volumes. Fractions were analysed by SDS PAGE and those containing solAC protein were pooled and applied to a 26/60 superdex-75 gel filtration column pre-equilibrated in 50mM Tris, pH7.5, 330mM NaCl, 10% glycerol, 5mM BME. Fractions were analysed by SDS PAGE. SolAC fractions were pooled and concentrated to a final concentration of ~10mg/ml using a vivaspin 2 centrifugal concentrator (HY).

Alternative purification of solAC-2056

All procedures were performed at 4°C unless stated otherwise. Cell pellets were thawed on ice and re-suspended in lysis buffer (50mM Tris pH 7.5, 10% Glycerol, 2mM BME, protease inhibitor cocktail (Calbiochem). Cells were lysed by sonication and lysate was incubated with DNase 1 for 1 hour at 4°C. Lysate was clarified by centrifugation at 14,000 or 25,000rpm for 1 hour. The clarified lysate was further clarified by centrifugation as in the previous step, then passed through a 0.45μm filter before being applied to a DEAE cation exchanger resin. The protein was eluted via a 15 and 30% step gradient of 1M NaCl. The 15% peak was pooled, the NaCl concentration of the pooled protein was raised to 300mM and then applied to a metal chelating, usually a 5ml Hi-trap, column (GE Healthcare) pre-charged with Ni^{2+} and equilibrated in 50mM Tris pH 7.5, 300mM NaCl, 10% Glycerol, 2mM BME. The solAC protein was eluted by addition of equlibration buffer containing 250mM Imidazole. Fractions were analysed by SDS PAGE and those containing solAC protein were pooled. The pooled protein was buffer exchanged into low salt by application to a G25-desalting column equilibrated in 50mM Tris pH 7.5, 30mM NaCl, 10% Glycerol, 5mM BME. The buffer exchanged solAC protein was then applied to a 6ml Resource Q cation exchange (GE Healthcare) column and eluted using a gradient of 0-30% 1M NaCl over 20 column volumes. Fractions were analysed by SDS PAGE and those containing solAC protein were pooled and applied to a 26/60 superdex-75 gel filtration column pre-equilibrated in 50mM Tris, pH7.5, 330mM NaCl, 10% glycerol, 5mM BME. Fractions were analysed by SDS PAGE. SolAC fractions were pooled and concentrated to a final concentration of ~10mg/ml using a vivaspin 2 centrifugal concentrator (HY).

Protein Crystallization of soluble adenylate cyclase

A commercially available microbatch crystallization screen was used to grow crystals of human solAC using the sitting or hanging drop vapour diffusion method. Against a range of conditions, it was found that crystals grew from 200mM citrate salt (eg sodium, potassium, ammonium) and 20% PEG3350. These crystals were chunky in shape but very small. Diffraction from these crystals was poor and reached a maximum resolution of 6.0 Angstroms. It was therefore necessary to find different conditions in which crystals of a size and acceptable resolution of diffraction could be made.

The crystals obtained in the initial screen grew from a solution which was not buffered. In further rounds of screening, using the hanging drop vapour diffusion method, it was found that using a buffer of pH 4.6-5.2 improved crystal growth.

The final pH of the solution against which the crystals were equilibrated varied from pH 6.0-6.4. In further round of screening, the citrate concentration was kept constant at 0.2M trisodium citrate, while the concentration and molecular weight of PEG was varied. It was found that using PEG 4000, at concentrations varied between 10-20%, improved crystallization.

The best crystals appeared at 16% PEG4K, however, their quality was not consistent, and their size varied from 0.05mM to 0.2mM in the longest dimension. The best of these crystals diffracted to a resolution of 2.3 Angstroms.

Thus further optimization was required. The protein was concentrated to ~10mg/ml in 50mM Tris/HCl, pH7.5, 330mM NaCl, 2mM beta mercaptoethanol and 10% glycerol. The protein solution was mixed 1:1 by volume mixture with reservoir solution of 0.1M sodium acetate, pH 4.8, 0.2M trisodium citrate, 16-18% PEG4K and 10% glycerol. Crystals were grown at 4°C by the method of hanging drop vapour diffusion.

Crystals appeared in the drops after 3-6 days and reached a maximum size of 0.5 x 0.1x 0.1 mm after 14 days. Consistency of crystal size and quality was further improved using a microseeding method. The seed stock was prepared by crushing a solAC crystal in a solution of 0.1M sodium acetate, pH 4.8, 0.2M trisodium citrate, 14% PEG4K, 2mM beta mercaptoethanol and 10% glycerol. The optimal dilution of the seed stock was reached by doing a trial crystallization run, in which a tray was set up using seed stocks of 1/100, 1/10000, 1/100,000 and 1/1000,000 dilutions.

The crystallization trays were set up by mixing equal volumes (1μl+1μl usually) of protein solution and seed stock on a cover slip. This was placed over a well containing 0.1M sodium acetate, pH 4.8, 0.2M trisodium citrate, 14% PEG4K and 10% glycerol The required dilution varied from batch to batch of protein.

The crystals grew in space group $P6_3$ with cell dimensions of a=b=99.15 Å, c=97.51 Å.

In order to preserve the crystals during data collection at low temperatures, crystals of solAC were briefly transferred to a cryobuffer solution containing 0.1M sodium acetate, pH 4.8, 0.2M trisodium citrate, 30% PEG4K and 10% glycerol. From this solution the crystals were plunged into liquid nitrogen and stored for subsequent data collection.

Data Collection and Processing

Diffraction data used to solve the structure of solAC was collected in house using either a Jupiter CCD detector or an RAXIS HTC image plate detector. Both were mounted on Rigaku rotating anode generators. The high resolution data used to refine the solAC structure at 1.7 Å was collected on Beamline ID29-1 at the European Synchrotron Radiation facility, using an ADSC Quantum4 CCD detector, with a wavelength of 0.934Å and processed using MOSFLM (Leslie, A. G. W. (1992). In *Joint CCP4 and EESF-EACMB Newsletter on Protein Crystallography*, vol. 26, Warrington, Daresbury Laboratory). The dataset was scaled using SCALA (CCP4 – Collaborative Computational Project 4. (1994) The CCP4 Suite: Programs for Protein Crystallography. *Acta Crystallographica* D50, 760-763) and the intensities converted to structure factor amplitudes with TRUNCATE (Evans, P. R. (1997). Scaling of MAD data. In *Recent Advances in Phasing* (ed. K. S. Wilson, G. Davies, A. W. Ashton and S. Bailey), pp. 97-102. Council for the Central Laboratory of the Research Councils Daresbury Laboratory, Daresbury, UK), from the CCP4 suite of programs (CCP4 – Collaborative Computational Project 4. (1994) The CCP4 Suite: Programs for Protein Crystallography. *Acta Crystallographica* D50, 760-763).

Structure Determination and Refinement

The structure of soluble adenylate cyclase was solved using multiple isomorphous replacement. A wide variety of heavy metal solutions were prepared by dissolving compounds containing heavy metals in a solution consisting of 0.1M sodium acetate, pH 4.8, 0.2M trisodium citrate, 16% PEG4K and 10% glycerol. Crystals of solAC were then placed in the solution and equilibrated for varying lengths of time (2 minutes to 5 days). Many of these solutions caused damage to the crystals leading to effects from complete loss of diffraction to a lack of isomorphism of the soaked crystal with the original crystal.

Out of a large number of soaks (>100), 31 crystals gave useable datasets, and out of these 5 gave derivatives which could be analysed and solved for heavy atom position and occupancy. Difference Patterson methods were used to obtain initial positions for the heavy atoms, these were used for preliminary phasing with MLPHARE (CCP4 suite of programmes), difference Fourier maps were used to locate additional sites. This was repeated for the 5 useable derivatives, which were then cross checked using Difference Fouriers, to ensure that all solutions for heavy atoms were on the same origin.

Therefore 5 derivatives were used to obtain phases (shown in Table 16), which were then improved using solvent flattening ((Solomon) and cycles of ARP/WARP. The sequence of soluble adenylate cyclase was then built into the resulting electron density map. After multiple rounds of rebuilding and refinement (using QUANTA, REFMAC and CNX), initially at 2.3 Å using the in-house data and finally at 1.7 Å using the synchrotron data, the final soluble adenylate cyclase model consisted of residues 1-468, with 2 gaps (residues 135-140 and 350-356). The resulting structure is shown in Table 1.

Table 16: Heavy atom derivatives used to solve solAC structure

Compound	Concn/mM	Soak time	No of sites (Major/minor)	Resolution /Angstrom	Riso	Phasing power
thimersal	0.05	2.5hours	4	2.5	0.18	0.98
Potassium iodide	150	2 minutes	2	2.5	0.24	0.62
Dichloroethylene diamine platinum	Saturated	5.5 hours	1(3)	2.2	0.12	0.57
Ammonium tertrabromoosmate	1	3 days	4	2.8	0.24	0.66
Trimethyl lead acetate	10	3 days	3	3.0	0.22	0.89

Description of the Structure of apo Soluble adenylate cyclase

The structure of the catalytic domain of soluble adenylate cyclase is described by the coordinates in Table 1. Residue Met1 is the first observable residue in the electron density and Lys468 is the last. An electron density peak close to the main chain nitrogen of Met1 may be due to acetylation of the N-terminus, and has not been modelled. Residues which have no interpretable main chain density are Trp135, Glu136, Glu137, Gly138, Leu139, Asp140, Phe350, Pro 351, Gly352, Glu 353, Lys354, Val355 and Pro 356. Residue Val469 and the C-terminal His_6- tag are not visible in the electron density. The main chain close to the first break at 134 is poorly defined and residues 132-134 have patchy main chain electron density. Residues 304-306 and 451-455 are poorly defined by the electron density. In addition, several residues on the periphery of the model have had their side-chains placed arbitrarily as there is no interpretable density for them.

Active site of solAC

Comparison of solAC with the enzyme from *Spirulina platensis* strongly suggests that solAC has only one active site, and this corresponds to the site formed by the A-chain residue 1140, the loop containing B-chain residue 1061and the residues forming helix α1 from the B monomer in *S. Platensis*. Helix α1 does not exist for the second site which would correspond to the A monomer in *S. platensis*. Beta-strands corresponding to 2 and 3 in the A monomer are longer for solAC and partially obscure the adenosine binding site, which is a lot less open than the symmetry related corresponding site. Table 6 describes the residues in the active site region which are proposed to interact with the substrate.

Preparation of crystals of solAC complexed with a ligand.

A solution of 200mM α–β-methylene adenosine 5'-triphosphate, 40mM $CaCl_2$ and 40mM $MnCl_2$ was prepared in a soaking solution. The soaking solution consisted of 0.1M sodium acetate, pH 4.8, 0.2M trisodium citrate, 16% PEG4K, and 10% glycerol. A previously grown crystal of solAC catalytic domain was placed in 20μL of the ligand soaking solution and allowed to equilibrate for 3 days. The crystal was then moved to a solution of cryoprotectant and frozen in liquid nitrogen in preparation for data collection.

Data collection, structure solution and refinement for ligand complex

Diffraction data was collected for the solAC catalytic domain/ ligand complex using an RAXIS HTC mounted on an in-house X-ray source. The previously solved structure of solAC catalytic domain was used as a starting model for refinement. Rigid body and restrained refinement was done and difference maps calculated. The ligand molecule, α-β-methylene adenosine 5'-triphosphate was built into the difference density and subsequent rounds of refinement done.

Description of the solAC ligand complex.

The structure of α,β methylene ATP complexed with solAC shows a mode of interaction which is very similar to that described for *S.platensis*. The majority of the interactions are between the phosphate groups, a metal ion and the protein. The adenine group forms a hydrogen bond between N6 amino group and the main chain carbonyl group of Val406, a water mediated interaction is formed between N7 and OD1 of Asn412. The ribose group makes no hydrogen bonds with the protein. The majority of the interactions are between the phosphate groups, a proposed metal binding site and the protein. Side chains of residues Asp99, Asp47, the carbonyl group of Ile48, oxygen atoms of the beta and gamma phosphates and a water molecule interact with the metal ion. Arg416 interacts with an oxygen from the alpha phosphate. Oxygen atoms from the gamma phosphate interact with OG of Thr52, and the main chain nitrogen atoms of Thr52 and Phe51.

On binding of the ligand, some rearrangement is seen in the region of residues 48-58 which corresponds to helix alpha 1 and loop joining beta 1 and alpha 1. The loop containing residues 96 to 101 undergoes a concerted motion so that the C-alpha of residue 99 moves 3.5 Å.

Further solAC-ligand complexes

The HCO_3^- binding site of solAC

SolAC is the only protein whose activity is known to be directly regulated by HCO_3^-. Soaking of solAC crystals with sodium bicarbonate has revealed the location of the HCO_3^- binding site. Binding of the HCO_3^- ion is mediated by a network of hydrogen bond and electrostatic interactions as shown in Figure 2: 1) The NZ of Lys95 forms a salt bridge with the O1 of HCO_3^-, 2) the backbone NH of Val167 forms a charged hydrogen bond with the O1 of HCO_3^-, 3) the backbone carbonyl of Val167 forms a hydrogen bond with the OH of HCO_3^-, 4) the sidechain NH2 of Arg176 forms a salt bridge with the O3 of HCO_3^- and 5) the sidechain NH2 of Arg176 forms a charged hydrogen bond with the OH of HCO_3^-. The involvement of Lys95 in coordinating HCO_3^- is consistent with the conclusions drawn from a published study of bicarbonate-responsive adenylate cyclases (Cann, M.J. et al. (2003) Journal of Biological Chemistry 278, 35033-35038).

Binding of 5-Phenyl-2H-[1,2,4]-triazole-3-thiol to the bicarbonate site of solAC

The structure of 5-Phenyl-2H-[1,2,4]-triazole-3-thiol (compound 1, purchased from Lancaster Synthesis, UK) bound to solAC reveals that the HCO_3^- binding site can be accessed by other small molecule ligands. The negatively charged sulphur atom of compound 1 sits in an almost identical position to the HCO_3^- ion, however the phenyl linked triazole group of compound 1 opens up the HCO_3^- binding site into a large pocket, contiguous with the ATP binding site. This expanded HCO_3^- binding site highlights a region of the solAC structure that can be exploited in the design of solAC inhibitors or activators.

The compound 1 mediated expansion of the HCO_3^- binding site is made possible by the movement of Arg176 out of the HCO_3^- pocket and the movement of a loop comprising Ala97, Gly98, Asp99 and Ala100. Compound 1 binding also induces a concerted movement in the sequence from Val335-Cys343. This region of solAC forms part of a beta strand and loop structure running along the bottom of the bicarbonate binding site. Phe336, Met337, and Phe338 in this sequence form part of the compound 1 binding site.

The expanded HCO_3^- binding site for compound 1 is lined by the following residues: Phe45, Leu94, Lys95, Ala97, Ala100, Leu102, Phe165, Leu166, Val167, Ile168, Val172, Arg176, Val335, Phe336, Met337, and Phe338. The sulphur atom of compound 1 is located at the bottom of the pocket and forms a salt bridge with the NZ of Lys95 and charged hydrogen bonds with the backbone NH of Val167 and the backbone NH of Phe336. The N6 of the triazole also forms a hydrogen bond with the backbone carbonyl of Met337 at the bottom of the pocket. In addition, the N5 of the triazole forms a charged hydrogen bond with the NH2 of Arg176. The phenyl group of compound 1 extends into a predominantly lipophilic region of the compound 1 pocket formed by the sidechains of Phe45, Lys95, Ala97, Ala100, Leu102 and Phe336. Beyond the phenyl group of compound 1 the pocket narrows slightly before opening into the ATP binding site. The shape of the expanded HCO_3^- binding site and the nature of the interactions observed in the compound 1:solAC complex suggest that this site will be amenable to a variety of ligands.

Although there is a high level of sequence and structural similarity between mammalian transmembrane adenylate cyclase isoforms, solAC is the only member of this enzyme class that is regulated by HCO_3^-. Thus, the structural information about the solAC HCO_3^- binding site described herein provides guidance for the design of solAC targeted drugs that are highly selective over tmAC's. Another critical feature of the compound 1 bound structure in regard to drug design is that the compound 1 exhibits clear growth vector opportunities out of the HCO_3^- site and into the ATP binding site of solAC. Compounds that target ATP binding sites of proteins are well precedented in drug discovery. The structures presented herein establish that compounds can be designed to occupy both the HCO3- and ATP binding of sites of solAC simultaneously.

Additional solAC compound binding sites – N-(3-phenoxy-phenyl)-oxalamic acid

The crystal structure of N-(3-phenoxy-phenyl)-oxalamic acid (compound 2) bound to solAC reveals further regions of the solAC structure that might be exploited in drug design. The binding site for compound 2 overlaps with the expanded HCO_3^- pocket described for compound 1 such that the phenoxy group of compound 2 occupies a very similar position to the phenyl group of compound 1. However, compound 2 induces a large sidechain movement of Lys95, which lies at the bottom of the HCO_3^- binding site. This Lys95 movement opens up the HCO_3^- binding pocket to form a channel that merges with a large water filled cavity before opening onto the protein surface at a point opposite to the ATP binding site. The following residues line this newly exposed channel: His164, Phe165, Tyr268, Asn333, Lys334 and Val335. The oxalamic acid group of compound 2 protrudes furthest into this channel to form several

interactions with the protein: 1) the compound 2 O3 forms a charged hydrogen bond with the ND of His164, 2) the compound 2 O1 forms a charged hydrogen bond with the backbone NH of Phe165, 3) the compound 2 O5 hydrogen bonds to the backbone NH of Val335 and 4) the amide N6 of compound 2 hydrogen bonds to the backbone carbonyl of Phe165. The sidechains of Lys95, Phe165, Leu166, Val167 and Phe336 form a lipophilic environment around the central anilino aromatic ring of compound 2. Although the terminal phenoxy group of compound 2 binds within the same lipophilic pocket described for compound 1, the environment of this pocket is slightly altered via a compound 2 induced movement of a loop comprising Met337, Phe338, Asp339, Lys340 and Gly341. This loop movement drags Phe338 away from the ATP site to within van der Waals distance of the terminal phenoxy group of compound 2. This movement of Phe338 is not observed in the structures of apo, AMP-PNP and compound 1 bound solAC. In fact, the structure of the AMP-PNP complex reveals that Phe338 forms one end of the ATP site sitting close to the hydroxyl groups of the AMP-PNP ribose. The repositioning of Phe338 creates a new sub-pocket adjacent to the ATP binding site. This new sub-pocket is lined by the following residues: Phe296, Met418, N298, Ser343, Phe336, Met337, Gly341, Asp339, Met419, Cys342, Ala415, Arg416, Met300, and Lys340.

Compounds that induce the formation of this ATP sub-pocket create additional drug design opportunities within the solAC active site. The fact that this ATP sub-pocket is induced by a compound binding within an expanded HCO_3^- site reinforces the view that the HCO_3^- site holds great potential for the development of drugs with a high level of selectivity over the non-bicarbonate responsive tmAC's.

Importantly, the four binding sites described herein are not mutually exclusive but can form a continuous solAC binding site that includes the expanded ATP and HCO_3^- pockets described. This entire binding site presents an attractive target for the development of small molecule solAC drugs.

Preparation of N-(3-phenoxy-phenyl)-oxalamic acid

To a solution of 3-phenoxyaniline (276mg, 1.4mmoles) and triethylamine (0.2ml, 1.4mmoles) in tetrahydrofuran (3ml) was added drop wise chloro-oxo-acetic acid ethyl ester (0.175ml, 1.5mmoles). The resultant solution was stirred at ambient temperature for 40 minutes. To the reaction mixture was added water (1.5ml) and sodium hydroxide (72mg, 1.8mmoles). The reaction mixture was stirred at ambient temperature for a further 24 hours. The reaction mixture was partitioned between dichloromethane and hydrochloric acid (2N). The aqueous layer was washed with dichloromethane. The dichloromethane layers were combined and then washed with hydrochloric acid (2N) and water. The organics were dried ($MgSO_4$) filtered and the solvent removed by evaporation *in vacuo* to give N-(3-phenoxy-phenyl)-oxalamic acid as a white solid (286mg, 74%).

Preparation of solAC crystals complexed with HCO3-

A solution of 50 mM sodium bicarbonate was prepared in a soaking solution consisting of 0.1 M sodium acetate, pH 4.8, 0.2 M tri-sodium citrate, 16% PEG 4000, and 10% glycerol. A previously grown crystal of the solAC catalytic domain was placed in 20 µl of the bicarbonate soaking solution and allowed to equilibrate for 3 hours. The crystal was then moved to a solution of cryoprotectant and frozen in liquid nitrogen in preparation for data collection.

Preparation of solAC crystals complexed with compounds

A stock soaking solution was prepared at 90% of the final volume and comprised 200 mM NaCl, 200 mM tri-sodium citrate (pH 6.4), 15% w/v PEG 4000 and 15% v/v glycerol. The remaining 10% of the volume was topped up with either 1) water to give the harvesting solution or 2) a compound stock solution (in DMSO) to make the final soaking solution. The harvesting solution was used for temporary storage of solAC crystals after collecting them from hanging drops as well as a reservoir solution during soaking to prevent evaporation of the soaking solution. Compound 1 and compound 2 stock solutions were prepared at 0.25 M in DMSO. The pH of the stock 90% soaking solution was adjusted to pH 7.3 for compound 1 in order to facilitate binding of this compound.

The final soaking solutions for compounds 1 and 2 were prepared by mixing 36 µl of a "90% stock solution" with 4 µl of compound stock solution. This gave a final compound concentration of 25 mM.

Soaking/freezing procedure for compounds

Crystals were collected from hanging drops into 10 µl of fresh harvesting solution. The reservoir was also filled with 50-100 µl of harvesting solution. Soaking solutions (6 µl) were placed into wells and the corresponding reservoirs filled with 50 µl of harvesting solution. Crystals were distributed into the soaking solutions (1 crystal/compound). Wells were sealed and soaking was allowed to proceed at 20°C for 6 min in the case of compound 1 and for 4.5 hr in the case of compound 2. Seals were cut and crystals were mounted on micromounts and frozen in liquid nitrogen.

Compound numbering

In the description of the solAC:HCO3-, solAC:compound 1 and solAC:compound 2 complexes the atom numbering scheme employed (as found in the associated pdb files) is shown in Figure 1. Hydrogen atoms are not shown for compound 1 and compound 2. The hydrogen atom is shown for HCO3- since this hydrogen is particularly important in defining the solAC:HCO3- interaction.

Table 1

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CRYST1   99.424   99.424   97.390  90.00  90.00 120.00 P 63
SCALE1      0.010058  0.005807  0.000000        0.00000
SCALE2      0.000000  0.011614  0.000000        0.00000
SCALE3      0.000000  0.000000  0.010268        0.00000
ATOM      1  N   MET A   1      62.520  12.184  24.205  1.00 23.48           N
ATOM      3  CA  MET A   1      62.268  12.459  22.755  1.00 20.83           C
ATOM      5  CB  MET A   1      61.645  11.252  22.038  1.00 21.69           C
ATOM      8  CG  MET A   1      62.613  10.131  21.812  1.00 24.28           C
ATOM     11  SD  MET A   1      61.825   8.705  21.066  1.00 24.95           S
ATOM     12  CE  MET A   1      60.856   8.106  22.484  1.00 25.06           C
ATOM     16  C   MET A   1      61.376  13.662  22.624  1.00 19.72           C
ATOM     17  O   MET A   1      60.490  13.941  23.474  1.00 19.05           O
ATOM     20  N   ASN A   2      61.616  14.418  21.561  1.00 17.47           N
ATOM     22  CA  ASN A   2      60.729  15.535  21.242  1.00 17.94           C
ATOM     24  CB  ASN A   2      61.246  16.333  20.085  1.00 15.08           C
ATOM     27  CG  ASN A   2      62.597  16.976  20.349  1.00 14.07           C
ATOM     28  OD1 ASN A   2      62.985  17.243  21.539  1.00 17.72           O
ATOM     29  ND2 ASN A   2      63.364  17.151  19.273  1.00 11.18           N
ATOM     32  C   ASN A   2      59.318  15.103  20.914  1.00 18.19           C
ATOM     33  O   ASN A   2      59.097  13.972  20.471  1.00 18.11           O
ATOM     34  N   THR A   3      58.380  16.023  21.075  1.00 21.09           N
ATOM     36  CA  THR A   3      56.988  15.813  20.696  1.00 23.54           C
ATOM     38  CB  THR A   3      56.050  15.749  21.929  1.00 24.59           C
ATOM     40  OG1 THR A   3      56.261  16.895  22.762  1.00 26.50           O
ATOM     42  CG2 THR A   3      56.332  14.548  22.804  1.00 26.28           C
ATOM     46  C   THR A   3      56.509  16.971  19.816  1.00 26.25           C
ATOM     47  O   THR A   3      55.679  17.756  20.270  1.00 27.11           O
ATOM     48  N   PRO A   4      57.004  17.090  18.589  1.00 28.84           N
ATOM     49  CA  PRO A   4      56.539  18.171  17.688  1.00 30.30           C
ATOM     51  CB  PRO A   4      57.388  17.963  16.424  1.00 30.75           C
ATOM     54  CG  PRO A   4      58.575  17.229  16.884  1.00 30.23           C
ATOM     57  CD  PRO A   4      58.019  16.243  17.930  1.00 29.03           C
ATOM     60  C   PRO A   4      55.043  18.053  17.370  1.00 32.21           C
ATOM     61  O   PRO A   4      54.506  16.957  17.303  1.00 31.07           O
ATOM     62  N   LYS A   5      54.378  19.193  17.220  1.00 34.82           N
ATOM     64  CA  LYS A   5      52.939  19.227  17.011  1.00 37.40           C
ATOM     66  CB  LYS A   5      52.422  20.659  17.143  1.00 37.97           C
ATOM     69  CG  LYS A   5      50.904  20.797  17.088  1.00 40.56           C
ATOM     72  CD  LYS A   5      50.523  22.252  16.834  1.00 44.72           C
ATOM     75  CE  LYS A   5      49.022  22.434  16.708  1.00 45.36           C
ATOM     78  NZ  LYS A   5      48.622  23.713  17.347  1.00 47.57           N
ATOM     82  C   LYS A   5      52.581  18.691  15.637  1.00 38.12           C
ATOM     83  O   LYS A   5      53.383  18.783  14.697  1.00 38.98           O
ATOM     84  N   GLU A   6      51.382  18.119  15.536  1.00 39.26           N
ATOM     86  CA  GLU A   6      50.835  17.730  14.240  1.00 39.83           C
ATOM     88  CB  GLU A   6      49.422  17.154  14.371  1.00 40.41           C
ATOM     91  CG  GLU A   6      48.838  16.683  13.048  1.00 42.22           C
ATOM     94  CD  GLU A   6      47.532  15.937  13.209  1.00 45.68           C
ATOM     95  OE1 GLU A   6      47.520  14.694  13.029  1.00 46.10           O
ATOM     96  OE2 GLU A   6      46.508  16.603  13.503  1.00 48.41           O
ATOM     97  C   GLU A   6      50.812  18.958  13.330  1.00 39.58           C
ATOM     98  O   GLU A   6      50.470  20.070  13.758  1.00 39.38           O
ATOM     99  N   GLU A   7      51.189  18.755  12.077  1.00 39.28           N
ATOM    101  CA  GLU A   7      51.060  19.815  11.074  1.00 38.50           C
ATOM    103  CB  GLU A   7      51.922  19.520   9.840  1.00 39.05           C
ATOM    106  CG  GLU A   7      51.676  18.175   9.186  1.00 40.29           C
ATOM    109  CD  GLU A   7      52.462  18.023   7.889  1.00 41.61           C
ATOM    110  OE1 GLU A   7      53.413  18.817   7.671  1.00 40.35           O
ATOM    111  OE2 GLU A   7      52.104  17.127   7.083  1.00 42.39           O
ATOM    112  C   GLU A   7      49.581  20.020  10.690  1.00 37.01           C
ATOM    113  O   GLU A   7      48.730  19.173  10.941  1.00 35.61           O
ATOM    114  N   PHE A   8      49.294  21.186  10.130  1.00 36.15           N
ATOM    116  CA  PHE A   8      47.969  21.496   9.606  1.00 36.03           C
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ATOM	118	CB	PHE	A	8	47.964	22.894	8.961	1.00	36.54	C
ATOM	121	CG	PHE	A	8	46.626	23.306	8.378	1.00	39.41	C
ATOM	122	CD1	PHE	A	8	45.504	23.461	9.192	1.00	43.23	C
ATOM	124	CE1	PHE	A	8	44.276	23.840	8.645	1.00	43.20	C
ATOM	126	CZ	PHE	A	8	44.173	24.086	7.289	1.00	42.66	C
ATOM	128	CE2	PHE	A	8	45.284	23.949	6.476	1.00	42.11	C
ATOM	130	CD2	PHE	A	8	46.500	23.563	7.014	1.00	42.66	C
ATOM	132	C	PHE	A	8	47.614	20.422	8.589	1.00	34.46	C
ATOM	133	O	PHE	A	8	48.388	20.157	7.663	1.00	34.98	O
ATOM	134	N	GLN	A	9	46.468	19.776	8.795	1.00	32.04	N
ATOM	136	CA	GLN	A	9	46.000	18.728	7.904	1.00	29.85	C
ATOM	138	CB	GLN	A	9	45.132	17.689	8.648	1.00	29.70	C
ATOM	141	CG	AGLN	A	9	43.884	17.358	7.847	0.50	28.59	C
ATOM	142	CG	BGLN	A	9	45.957	17.145	9.847	0.50	29.34	C
ATOM	147	CD	AGLN	A	9	43.309	16.013	8.263	0.50	26.47	C
ATOM	148	CD	BGLN	A	9	47.097	16.225	9.412	0.50	27.80	C
ATOM	149	OE1	AGLN	A	9	42.689	15.934	9.257	0.50	25.14	O
ATOM	150	OE1	BGLN	A	9	46.875	15.056	9.073	0.50	28.61	O
ATOM	151	NE2	AGLN	A	9	43.586	14.962	7.513	0.50	28.54	N
ATOM	152	NE2	BGLN	A	9	48.308	16.744	9.425	0.50	25.65	N
ATOM	157	C	GLN	A	9	45.254	19.360	6.724	1.00	27.26	C
ATOM	158	O	GLN	A	9	44.159	19.946	6.897	1.00	27.58	O
ATOM	159	N	ASP	A	10	45.873	19.291	5.543	1.00	23.15	N
ATOM	161	CA	ASP	A	10	45.351	19.998	4.372	1.00	20.39	C
ATOM	163	CB	ASP	A	10	46.282	21.152	4.065	1.00	21.79	C
ATOM	166	CG	ASP	A	10	45.700	22.134	3.107	1.00	25.32	C
ATOM	167	OD1	ASP	A	10	44.437	22.286	3.020	1.00	25.59	O
ATOM	168	OD2	ASP	A	10	46.481	22.813	2.414	1.00	30.63	O
ATOM	169	C	ASP	A	10	45.253	19.093	3.158	1.00	16.93	C
ATOM	170	O	ASP	A	10	45.330	19.530	1.999	1.00	17.06	O
ATOM	171	N	TRP	A	11	45.034	17.831	3.452	1.00	13.82	N
ATOM	173	CA	TRP	A	11	44.983	16.794	2.428	1.00	11.83	C
ATOM	175	CB	TRP	A	11	44.713	15.471	3.094	1.00	10.17	C
ATOM	178	CG	TRP	A	11	45.720	15.013	4.113	1.00	11.43	C
ATOM	179	CD1	TRP	A	11	45.547	14.987	5.454	1.00	15.30	C
ATOM	181	NE1	TRP	A	11	46.691	14.549	6.073	1.00	16.99	N
ATOM	183	CE2	TRP	A	11	47.617	14.244	5.121	1.00	13.94	C
ATOM	184	CD2	TRP	A	11	47.045	14.530	3.878	1.00	11.80	C
ATOM	185	CE3	TRP	A	11	47.808	14.322	2.735	1.00	15.54	C
ATOM	187	CZ3	TRP	A	11	49.103	13.842	2.857	1.00	16.46	C
ATOM	189	CH2	TRP	A	11	49.614	13.526	4.098	1.00	15.99	C
ATOM	191	CZ2	TRP	A	11	48.917	13.761	5.241	1.00	14.95	C
ATOM	193	C	TRP	A	11	43.835	17.043	1.449	1.00	10.27	C
ATOM	194	O	TRP	A	11	42.809	17.605	1.818	1.00	8.96	O
ATOM	195	N	PRO	A	12	43.947	16.551	0.230	1.00	10.03	N
ATOM	196	CA	PRO	A	12	42.856	16.606	-0.712	1.00	9.84	C
ATOM	198	CB	PRO	A	12	43.352	15.683	-1.835	1.00	10.21	C
ATOM	201	CG	PRO	A	12	44.791	15.880	-1.814	1.00	11.41	C
ATOM	204	CD	PRO	A	12	45.149	15.944	-0.403	1.00	12.00	C
ATOM	207	C	PRO	A	12	41.514	16.157	-0.136	1.00	8.20	C
ATOM	208	O	PRO	A	12	40.501	16.797	-0.395	1.00	7.57	O
ATOM	209	N	ILE	A	13	41.492	15.062	0.615	1.00	8.52	N
ATOM	211	CA	ILE	A	13	40.219	14.582	1.151	1.00	8.25	C
ATOM	213	CB	ILE	A	13	40.331	13.205	1.828	1.00	8.53	C
ATOM	215	CG1	ILE	A	13	38.966	12.536	1.902	1.00	10.61	C
ATOM	218	CD1	ILE	A	13	39.016	11.069	2.351	1.00	10.75	C
ATOM	222	CG2	ILE	A	13	41.004	13.287	3.196	1.00	8.60	C
ATOM	226	C	ILE	A	13	39.559	15.630	2.057	1.00	7.27	C
ATOM	227	O	ILE	A	13	38.341	15.776	2.032	1.00	6.95	O
ATOM	228	N	VAL	A	14	40.337	16.367	2.804	1.00	6.36	N
ATOM	230	CA	VAL	A	14	39.788	17.412	3.688	1.00	6.97	C
ATOM	232	CB	VAL	A	14	40.873	17.947	4.608	1.00	8.52	C
ATOM	234	CG1	VAL	A	14	40.426	19.156	5.360	1.00	11.34	C
ATOM	238	CG2	VAL	A	14	41.389	16.838	5.565	1.00	9.99	C
ATOM	242	C	VAL	A	14	39.263	18.533	2.826	1.00	6.99	C
ATOM	243	O	VAL	A	14	38.205	19.087	3.089	1.00	8.34	O
ATOM	244	N	ARG	A	15	40.036	18.893	1.803	1.00	6.08	N

ATOM	246	CA	ARG	A	15	39.621	19.970	0.906	1.00	7.16	C
ATOM	248	CB	ARG	A	15	40.715	20.262	-0.103	1.00	7.09	C
ATOM	251	CG	ARG	A	15	41.994	20.873	0.484	1.00	8.95	C
ATOM	254	CD	ARG	A	15	43.010	21.141	-0.572	1.00	12.19	C
ATOM	257	NE	ARG	A	15	44.061	22.035	-0.112	1.00	16.16	N
ATOM	259	CZ	ARG	A	15	44.896	22.676	-0.916	1.00	17.97	C
ATOM	260	NH1	ARG	A	15	45.821	23.477	-0.395	1.00	23.15	N
ATOM	263	NH2	ARG	A	15	44.820	22.518	-2.223	1.00	15.42	N
ATOM	266	C	ARG	A	15	38.327	19.642	0.203	1.00	6.33	C
ATOM	267	O	ARG	A	15	37.492	20.513	0.007	1.00	5.75	O
ATOM	268	N	ILE	A	16	38.153	18.396	-0.215	1.00	6.10	N
ATOM	270	CA	ILE	A	16	36.936	17.913	-0.820	1.00	5.53	C
ATOM	272	CB	ILE	A	16	37.139	16.512	-1.387	1.00	7.38	C
ATOM	274	CG1	ILE	A	16	38.102	16.530	-2.545	1.00	7.27	C
ATOM	277	CD1	ILE	A	16	38.658	15.159	-3.015	1.00	10.06	C
ATOM	281	CG2	ILE	A	16	35.799	15.914	-1.827	1.00	8.49	C
ATOM	285	C	ILE	A	16	35.783	17.963	0.130	1.00	7.61	C
ATOM	286	O	ILE	A	16	34.691	18.426	-0.205	1.00	6.46	O
ATOM	287	N	ALA	A	17	35.997	17.532	1.350	1.00	7.61	N
ATOM	289	CA	ALA	A	17	34.926	17.498	2.321	1.00	7.77	C
ATOM	291	CB	ALA	A	17	35.329	16.774	3.559	1.00	9.44	C
ATOM	295	C	ALA	A	17	34.424	18.877	2.705	1.00	7.81	C
ATOM	296	O	ALA	A	17	33.301	18.988	3.136	1.00	8.04	O
ATOM	297	N	ALA	A	18	35.226	19.914	2.534	1.00	6.64	N
ATOM	299	CA	ALA	A	18	34.757	21.285	2.747	1.00	6.65	C
ATOM	301	CB	ALA	A	18	35.874	22.321	2.532	1.00	7.50	C
ATOM	305	C	ALA	A	18	33.557	21.596	1.868	1.00	7.75	C
ATOM	306	O	ALA	A	18	32.743	22.466	2.211	1.00	8.16	O
ATOM	307	N	HIS	A	19	33.505	20.981	0.705	1.00	8.08	N
ATOM	309	CA	HIS	A	19	32.438	21.219	-0.263	1.00	7.89	C
ATOM	311	CB	HIS	A	19	32.938	20.872	-1.657	1.00	6.76	C
ATOM	314	CG	HIS	A	19	33.827	21.896	-2.237	1.00	8.19	C
ATOM	315	ND1	HIS	A	19	35.183	21.994	-1.968	1.00	12.07	N
ATOM	317	CE1	HIS	A	19	35.672	23.039	-2.633	1.00	5.42	C
ATOM	319	NE2	HIS	A	19	34.684	23.616	-3.305	1.00	9.92	N
ATOM	321	CD2	HIS	A	19	33.520	22.938	-3.046	1.00	5.21	C
ATOM	323	C	HIS	A	19	31.150	20.431	0.018	1.00	8.10	C
ATOM	324	O	HIS	A	19	30.152	20.523	-0.743	1.00	9.83	O
ATOM	325	N	LEU	A	20	31.098	19.693	1.125	1.00	7.84	N
ATOM	327	CA	LEU	A	20	30.021	18.743	1.369	1.00	6.72	C
ATOM	329	CB	LEU	A	20	30.455	17.328	1.023	1.00	8.43	C
ATOM	332	CG	LEU	A	20	30.753	16.997	-0.422	1.00	10.45	C
ATOM	334	CD1	LEU	A	20	31.498	15.669	-0.542	1.00	12.86	C
ATOM	338	CD2	LEU	A	20	29.418	16.969	-1.133	1.00	15.33	C
ATOM	342	C	LEU	A	20	29.542	18.795	2.836	1.00	7.50	C
ATOM	343	O	LEU	A	20	30.323	19.062	3.731	1.00	6.96	O
ATOM	344	N	PRO	A	21	28.270	18.493	3.069	1.00	8.51	N
ATOM	345	CA	PRO	A	21	27.792	18.437	4.428	1.00	8.86	C
ATOM	347	CB	PRO	A	21	26.252	18.502	4.262	1.00	8.72	C
ATOM	350	CG	PRO	A	21	26.036	17.798	2.981	1.00	9.21	C
ATOM	353	CD	PRO	A	21	27.228	18.165	2.090	1.00	8.69	C
ATOM	356	C	PRO	A	21	28.205	17.105	5.077	1.00	8.13	C
ATOM	357	O	PRO	A	21	28.489	16.121	4.389	1.00	8.41	O
ATOM	358	N	ASP	A	22	28.178	17.083	6.395	1.00	8.47	N
ATOM	360	CA	ASP	A	22	28.357	15.871	7.194	1.00	8.93	C
ATOM	362	CB	ASP	A	22	28.206	16.178	8.645	1.00	9.99	C
ATOM	365	CG	ASP	A	22	29.230	17.146	9.152	1.00	11.57	C
ATOM	366	OD1	ASP	A	22	30.303	17.307	8.488	1.00	13.35	O
ATOM	367	OD2	ASP	A	22	29.025	17.783	10.191	1.00	13.79	O
ATOM	368	C	ASP	A	22	27.406	14.755	6.795	1.00	9.80	C
ATOM	369	O	ASP	A	22	27.769	13.578	6.866	1.00	8.98	O
ATOM	370	N	LEU	A	23	26.195	15.142	6.378	1.00	10.91	N
ATOM	372	CA	LEU	A	23	25.197	14.231	5.884	1.00	10.64	C
ATOM	374	CB	LEU	A	23	23.981	15.022	5.335	1.00	11.92	C
ATOM	377	CG	LEU	A	23	22.806	14.207	4.831	1.00	13.59	C
ATOM	379	CD1	LEU	A	23	22.084	13.572	6.011	1.00	18.92	C
ATOM	383	CD2	LEU	A	23	21.867	15.110	3.994	1.00	19.10	C

ATOM	387	C	LEU	A	23	25.779	13.319	4.819	1.00	10.40	C
ATOM	388	O	LEU	A	23	25.454	12.141	4.787	1.00	13.75	O
ATOM	389	N	ILE	A	24	26.668	13.847	3.971	1.00	9.31	N
ATOM	391	CA	ILE	A	24	27.319	13.069	2.983	1.00	9.32	C
ATOM	393	CB	ILE	A	24	27.506	13.917	1.682	1.00	10.40	C
ATOM	395	CG1	ILE	A	24	26.148	14.384	1.145	1.00	10.16	C
ATOM	398	CD1	ILE	A	24	25.207	13.248	0.654	1.00	11.21	C
ATOM	402	CG2	ILE	A	24	28.300	13.207	0.711	1.00	11.11	C
ATOM	406	C	ILE	A	24	28.666	12.532	3.462	1.00	9.47	C
ATOM	407	O	ILE	A	24	28.998	11.370	3.192	1.00	11.95	O
ATOM	408	N	VAL	A	25	29.458	13.388	4.082	1.00	8.64	N
ATOM	410	CA	VAL	A	25	30.837	13.030	4.460	1.00	8.55	C
ATOM	412	CB	VAL	A	25	31.533	14.195	5.189	1.00	8.12	C
ATOM	414	CG1	VAL	A	25	32.893	13.763	5.752	1.00	8.45	C
ATOM	418	CG2	VAL	A	25	31.801	15.391	4.210	1.00	9.69	C
ATOM	422	C	VAL	A	25	30.872	11.789	5.322	1.00	9.81	C
ATOM	423	O	VAL	A	25	31.664	10.905	5.118	1.00	10.69	O
ATOM	424	N	TYR	A	26	29.959	11.769	6.274	1.00	10.08	N
ATOM	426	CA	TYR	A	26	29.831	10.637	7.193	1.00	12.06	C
ATOM	428	CB	TYR	A	26	29.798	11.165	8.613	1.00	12.19	C
ATOM	431	CG	TYR	A	26	31.043	11.928	8.963	1.00	11.71	C
ATOM	432	CD1	TYR	A	26	31.011	13.309	9.178	1.00	11.54	C
ATOM	434	CE1	TYR	A	26	32.186	14.025	9.481	1.00	12.55	C
ATOM	436	CZ	TYR	A	26	33.388	13.349	9.598	1.00	14.66	C
ATOM	437	OH	TYR	A	26	34.589	13.985	9.863	1.00	16.80	O
ATOM	439	CE2	TYR	A	26	33.429	11.977	9.401	1.00	13.23	C
ATOM	441	CD2	TYR	A	26	32.266	11.282	9.120	1.00	12.61	C
ATOM	443	C	TYR	A	26	28.668	9.710	6.914	1.00	14.78	C
ATOM	444	O	TYR	A	26	28.320	8.852	7.765	1.00	14.49	O
ATOM	445	N	GLY	A	27	28.080	9.803	5.732	1.00	15.39	N
ATOM	447	CA	GLY	A	27	26.885	9.039	5.429	1.00	17.87	C
ATOM	450	C	GLY	A	27	27.114	7.577	5.119	1.00	20.52	C
ATOM	451	O	GLY	A	27	26.230	6.771	5.322	1.00	20.95	O
ATOM	452	N	HIS	A	28	28.259	7.226	4.572	1.00	23.72	N
ATOM	454	CA	HIS	A	28	28.444	5.854	4.074	1.00	27.77	C
ATOM	456	CB	HIS	A	28	29.232	5.074	5.121	1.00	27.55	C
ATOM	459	CG	HIS	A	28	30.620	5.615	5.277	1.00	32.46	C
ATOM	460	ND1	HIS	A	28	31.668	5.241	4.458	1.00	36.50	N
ATOM	462	CE1	HIS	A	28	32.747	5.939	4.779	1.00	35.38	C
ATOM	464	NE2	HIS	A	28	32.428	6.783	5.744	1.00	36.43	N
ATOM	466	CD2	HIS	A	28	31.093	6.629	6.048	1.00	35.61	C
ATOM	468	C	HIS	A	28	27.202	5.115	3.522	1.00	29.74	C
ATOM	469	O	HIS	A	28	26.786	4.078	4.026	1.00	32.15	O
ATOM	470	N	PHE	A	29	26.662	5.627	2.418	1.00	32.34	N
ATOM	472	CA	PHE	A	29	25.447	5.068	1.784	1.00	33.50	C
ATOM	474	CB	PHE	A	29	24.774	6.133	0.904	1.00	34.34	C
ATOM	477	CG	PHE	A	29	24.607	7.423	1.552	1.00	32.66	C
ATOM	478	CD1	PHE	A	29	23.952	7.522	2.752	1.00	33.81	C
ATOM	480	CE1	PHE	A	29	23.778	8.744	3.364	1.00	36.56	C
ATOM	482	CZ	PHE	A	29	24.306	9.885	2.762	1.00	35.44	C
ATOM	484	CE2	PHE	A	29	24.974	9.782	1.569	1.00	33.83	C
ATOM	486	CD2	PHE	A	29	25.119	8.572	0.955	1.00	35.22	C
ATOM	488	C	PHE	A	29	25.671	3.903	0.840	1.00	35.26	C
ATOM	489	O	PHE	A	29	26.756	3.715	0.310	1.00	36.68	O
ATOM	490	N	SER	A	30	24.593	3.190	0.550	1.00	37.09	N
ATOM	492	CA	SER	A	30	24.603	2.099	-0.415	1.00	38.80	C
ATOM	494	CB	SER	A	30	23.182	1.522	-0.567	1.00	39.80	C
ATOM	497	OG	SER	A	30	22.615	1.151	0.685	1.00	43.39	O
ATOM	499	C	SER	A	30	25.118	2.553	-1.797	1.00	39.44	C
ATOM	500	O	SER	A	30	25.239	3.779	-2.098	1.00	38.47	O
ATOM	501	N	PRO	A	31	25.431	1.569	-2.639	1.00	39.47	N
ATOM	502	CA	PRO	A	31	25.913	1.873	-3.984	1.00	39.16	C
ATOM	504	CB	PRO	A	31	26.496	0.529	-4.445	1.00	39.25	C
ATOM	507	CG	PRO	A	31	25.693	-0.498	-3.732	1.00	40.08	C
ATOM	510	CD	PRO	A	31	25.406	0.112	-2.391	1.00	40.15	C
ATOM	513	C	PRO	A	31	24.811	2.385	-4.942	1.00	37.56	C
ATOM	514	O	PRO	A	31	25.065	3.284	-5.737	1.00	38.56	O

ATOM	515	N	GLU	A	32	23.606	1.842	-4.812	1.00 36.01	N
ATOM	517	CA	GLU	A	32	22.591	2.002	-5.814	1.00 34.73	C
ATOM	519	CB	GLU	A	32	21.425	1.026	-5.577	1.00 35.36	C
ATOM	522	CG	GLU	A	32	20.422	1.373	-4.475	1.00 38.12	C
ATOM	525	CD	GLU	A	32	20.704	0.709	-3.137	1.00 41.97	C
ATOM	526	OE1	GLU	A	32	19.962	1.021	-2.185	1.00 45.25	O
ATOM	527	OE2	GLU	A	32	21.652	-0.112	-3.027	1.00 43.87	O
ATOM	528	C	GLU	A	32	22.111	3.457	-5.936	1.00 32.07	C
ATOM	529	O	GLU	A	32	22.154	4.241	-4.997	1.00 30.71	O
ATOM	530	N	ARG	A	33	21.675	3.787	-7.142	1.00 29.32	N
ATOM	532	CA	ARG	A	33	21.096	5.074	-7.431	1.00 26.97	C
ATOM	534	CB	ARG	A	33	21.990	5.848	-8.397	1.00 27.00	C
ATOM	537	CG	ARG	A	33	23.355	6.201	-7.821	1.00 26.70	C
ATOM	540	CD	ARG	A	33	23.262	7.087	-6.624	1.00 28.77	C
ATOM	543	NE	ARG	A	33	24.571	7.475	-6.124	1.00 26.98	N
ATOM	545	CZ	ARG	A	33	25.112	7.000	-5.022	1.00 29.59	C
ATOM	546	NH1	ARG	A	33	24.476	6.113	-4.272	1.00 27.69	N
ATOM	549	NH2	ARG	A	33	26.298	7.452	-4.653	1.00 29.84	N
ATOM	552	C	ARG	A	33	19.765	4.814	-8.099	1.00 25.41	C
ATOM	553	O	ARG	A	33	19.716	4.059	-9.047	1.00 25.50	O
ATOM	554	N	PRO	A	34	18.683	5.394	-7.612	1.00 23.56	N
ATOM	555	CA	PRO	A	34	18.675	6.313	-6.484	1.00 23.27	C
ATOM	557	CB	PRO	A	34	17.260	6.893	-6.530	1.00 23.81	C
ATOM	560	CG	PRO	A	34	16.439	5.783	-7.125	1.00 22.46	C
ATOM	563	CD	PRO	A	34	17.319	5.106	-8.096	1.00 23.50	C
ATOM	566	C	PRO	A	34	18.859	5.591	-5.159	1.00 23.38	C
ATOM	567	O	PRO	A	34	18.617	4.376	-5.084	1.00 23.01	O
ATOM	568	N	PHE	A	35	19.272	6.353	-4.152	1.00 22.90	N
ATOM	570	CA	PHE	A	35	19.323	5.920	-2.780	1.00 22.01	C
ATOM	572	CB	PHE	A	35	20.757	5.965	-2.244	1.00 22.15	C
ATOM	575	CG	PHE	A	35	20.841	5.717	-0.755	1.00 22.37	C
ATOM	576	CD1	PHE	A	35	20.712	4.422	-0.264	1.00 24.64	C
ATOM	578	CE1	PHE	A	35	20.759	4.171	1.093	1.00 24.06	C
ATOM	580	CZ	PHE	A	35	20.933	5.214	1.970	1.00 24.24	C
ATOM	582	CE2	PHE	A	35	21.076	6.513	1.494	1.00 25.01	C
ATOM	584	CD2	PHE	A	35	21.008	6.753	0.130	1.00 21.82	C
ATOM	586	C	PHE	A	35	18.478	6.870	-1.970	1.00 21.94	C
ATOM	587	O	PHE	A	35	18.600	8.096	-2.095	1.00 20.08	O
ATOM	588	N	MET	A	36	17.642	6.320	-1.102	1.00 22.40	N
ATOM	590	CA	MET	A	36	16.795	7.124	-0.243	1.00 24.20	C
ATOM	592	CB	MET	A	36	15.306	6.875	-0.528	1.00 25.64	C
ATOM	595	CG	MET	A	36	14.798	7.404	-1.820	1.00 31.65	C
ATOM	598	SD	MET	A	36	15.263	6.359	-3.194	1.00 41.90	S
ATOM	599	CE	MET	A	36	13.774	5.485	-3.523	1.00 41.53	C
ATOM	603	C	MET	A	36	17.056	6.753	1.212	1.00 23.74	C
ATOM	604	O	MET	A	36	17.211	5.556	1.555	1.00 22.82	O
ATOM	605	N	ASP	A	37	17.076	7.773	2.048	1.00 23.46	N
ATOM	607	CA	ASP	A	37	17.149	7.610	3.490	1.00 24.65	C
ATOM	609	CB	ASP	A	37	18.540	7.977	3.999	1.00 25.68	C
ATOM	612	CG	ASP	A	37	18.950	7.186	5.217	1.00 30.59	C
ATOM	613	OD1	ASP	A	37	18.057	6.599	5.896	1.00 33.11	O
ATOM	614	OD2	ASP	A	37	20.149	7.097	5.551	1.00 37.92	O
ATOM	615	C	ASP	A	37	16.131	8.509	4.126	1.00 23.95	C
ATOM	616	O	ASP	A	37	15.658	9.503	3.520	1.00 24.07	O
ATOM	617	N	TYR	A	38	15.772	8.175	5.352	1.00 22.75	N
ATOM	619	CA	TYR	A	38	14.750	8.904	6.083	1.00 23.25	C
ATOM	621	CB	TYR	A	38	13.420	8.123	6.071	1.00 24.12	C
ATOM	624	CG	TYR	A	38	13.019	7.707	4.677	1.00 27.11	C
ATOM	625	CD1	TYR	A	38	13.520	6.539	4.095	1.00 29.32	C
ATOM	627	CE1	TYR	A	38	13.195	6.184	2.816	1.00 29.76	C
ATOM	629	CZ	TYR	A	38	12.319	6.990	2.090	1.00 31.82	C
ATOM	630	OH	TYR	A	38	11.959	6.664	0.810	1.00 33.18	O
ATOM	632	CE2	TYR	A	38	11.798	8.142	2.650	1.00 33.28	C
ATOM	634	CD2	TYR	A	38	12.166	8.502	3.930	1.00 30.20	C
ATOM	636	C	TYR	A	38	15.216	9.150	7.502	1.00 22.43	C
ATOM	637	O	TYR	A	38	15.872	8.303	8.107	1.00 23.25	O
ATOM	638	N	PHE	A	39	14.902	10.331	8.002	1.00 20.94	N

ATOM	640	CA	PHE	A	39	15.242	10.750	9.341	1.00	19.73	C
ATOM	642	CB	PHE	A	39	16.747	11.070	9.466	1.00	20.07	C
ATOM	645	CG	PHE	A	39	17.268	12.038	8.435	1.00	19.09	C
ATOM	646	CD1	PHE	A	39	17.230	13.377	8.666	1.00	18.96	C
ATOM	648	CE1	PHE	A	39	17.748	14.297	7.720	1.00	15.32	C
ATOM	650	CZ	PHE	A	39	18.285	13.837	6.550	1.00	17.59	C
ATOM	652	CE2	PHE	A	39	18.326	12.495	6.295	1.00	18.82	C
ATOM	654	CD2	PHE	A	39	17.855	11.581	7.265	1.00	19.88	C
ATOM	656	C	PHE	A	39	14.365	11.926	9.786	1.00	20.30	C
ATOM	657	O	PHE	A	39	13.421	12.327	9.085	1.00	21.55	O
ATOM	658	N	ASP	A	40	14.654	12.451	10.954	1.00	20.07	N
ATOM	660	CA	ASP	A	40	14.026	13.649	11.472	1.00	20.95	C
ATOM	662	CB	ASP	A	40	13.252	13.335	12.742	1.00	21.14	C
ATOM	665	CG	ASP	A	40	12.124	12.396	12.487	1.00	26.19	C
ATOM	666	OD1	ASP	A	40	11.102	12.847	11.932	1.00	28.99	O
ATOM	667	OD2	ASP	A	40	12.196	11.187	12.772	1.00	31.45	O
ATOM	668	C	ASP	A	40	15.047	14.709	11.763	1.00	19.50	C
ATOM	669	O	ASP	A	40	16.214	14.420	11.980	1.00	21.08	O
ATOM	670	N	GLY	A	41	14.612	15.950	11.775	1.00	19.09	N
ATOM	672	CA	GLY	A	41	15.506	17.038	12.069	1.00	18.50	C
ATOM	675	C	GLY	A	41	14.858	18.375	12.014	1.00	18.30	C
ATOM	676	O	GLY	A	41	13.669	18.503	11.687	1.00	19.33	O
ATOM	677	N	VAL	A	42	15.656	19.378	12.361	1.00	16.67	N
ATOM	679	CA	VAL	A	42	15.292	20.771	12.256	1.00	17.16	C
ATOM	681	CB	VAL	A	42	15.611	21.437	13.562	1.00	16.80	C
ATOM	683	CG1	VAL	A	42	15.245	22.922	13.555	1.00	16.52	C
ATOM	687	CG2	VAL	A	42	14.891	20.716	14.674	1.00	19.43	C
ATOM	691	C	VAL	A	42	16.068	21.428	11.110	1.00	17.92	C
ATOM	692	O	VAL	A	42	17.294	21.249	10.982	1.00	16.01	O
ATOM	693	N	LEU	A	43	15.343	22.161	10.276	1.00	16.70	N
ATOM	695	CA	LEU	A	43	15.892	22.837	9.102	1.00	17.28	C
ATOM	697	CB	LEU	A	43	15.107	22.469	7.848	1.00	16.34	C
ATOM	700	CG	LEU	A	43	15.188	21.054	7.285	1.00	17.33	C
ATOM	702	CD1	LEU	A	43	14.221	20.776	6.164	1.00	20.20	C
ATOM	706	CD2	LEU	A	43	16.597	20.678	6.786	1.00	18.78	C
ATOM	710	C	LEU	A	43	15.874	24.335	9.308	1.00	17.57	C
ATOM	711	O	LEU	A	43	14.938	24.904	9.910	1.00	17.03	O
ATOM	712	N	MET	A	44	16.943	24.982	8.837	1.00	17.36	N
ATOM	714	CA	MET	A	44	17.055	26.414	8.861	1.00	17.04	C
ATOM	716	CB	MET	A	44	18.150	26.848	9.817	1.00	16.69	C
ATOM	719	CG	MET	A	44	18.467	28.348	9.784	1.00	18.56	C
ATOM	722	SD	MET	A	44	20.061	28.892	10.433	1.00	19.69	S
ATOM	723	CE	MET	A	44	19.735	28.762	12.214	1.00	20.90	C
ATOM	727	C	MET	A	44	17.364	26.870	7.456	1.00	18.22	C
ATOM	728	O	MET	A	44	18.306	26.387	6.845	1.00	16.54	O
ATOM	729	N	PHE	A	45	16.558	27.794	6.953	1.00	18.74	N
ATOM	731	CA	PHE	A	45	16.717	28.356	5.612	1.00	19.85	C
ATOM	733	CB	PHE	A	45	15.428	28.121	4.842	1.00	21.20	C
ATOM	736	CG	PHE	A	45	15.441	28.540	3.397	1.00	24.16	C
ATOM	737	CD1	PHE	A	45	15.089	27.635	2.411	1.00	29.67	C
ATOM	739	CE1	PHE	A	45	15.041	28.024	1.057	1.00	33.08	C
ATOM	741	CZ	PHE	A	45	15.286	29.354	0.704	1.00	33.59	C
ATOM	743	CE2	PHE	A	45	15.569	30.273	1.686	1.00	31.72	C
ATOM	745	CD2	PHE	A	45	15.628	29.862	3.042	1.00	29.82	C
ATOM	747	C	PHE	A	45	17.028	29.804	5.816	1.00	20.05	C
ATOM	748	O	PHE	A	45	16.197	30.570	6.357	1.00	19.53	O
ATOM	749	N	VAL	A	46	18.245	30.194	5.430	1.00	18.78	N
ATOM	751	CA	VAL	A	46	18.719	31.554	5.586	1.00	19.30	C
ATOM	753	CB	VAL	A	46	20.119	31.642	6.214	1.00	20.14	C
ATOM	755	CG1	VAL	A	46	20.510	33.064	6.541	1.00	19.66	C
ATOM	759	CG2	VAL	A	46	20.182	30.813	7.464	1.00	21.02	C
ATOM	763	C	VAL	A	46	18.706	32.180	4.205	1.00	20.32	C
ATOM	764	O	VAL	A	46	19.467	31.809	3.352	1.00	20.12	O
ATOM	765	N	ASP	A	47	17.762	33.100	3.991	1.00	21.03	N
ATOM	767	CA	ASP	A	47	17.689	33.822	2.721	1.00	22.18	C
ATOM	769	CB	ASP	A	47	16.344	34.537	2.610	1.00	23.26	C
ATOM	772	CG	ASP	A	47	16.231	35.402	1.362	1.00	28.35	C

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ATOM    773  OD1 ASP A  47      16.959  35.177   0.368  1.00 30.16           O
ATOM    774  OD2 ASP A  47      15.388  36.317   1.294  1.00 33.68           O
ATOM    775  C   ASP A  47      18.817  34.843   2.711  1.00 21.50           C
ATOM    776  O   ASP A  47      18.821  35.785   3.496  1.00 22.60           O
ATOM    777  N   ILE A  48      19.773  34.643   1.816  1.00 22.47           N
ATOM    779  CA  ILE A  48      20.854  35.612   1.618  1.00 22.39           C
ATOM    781  CB  ILE A  48      22.221  34.942   1.708  1.00 22.38           C
ATOM    783  CG1 ILE A  48      22.397  33.884   0.624  1.00 23.52           C
ATOM    786  CD1 ILE A  48      23.828  33.402   0.497  1.00 26.11           C
ATOM    790  CG2 ILE A  48      22.422  34.340   3.112  1.00 21.50           C
ATOM    794  C   ILE A  48      20.742  36.335   0.282  1.00 24.60           C
ATOM    795  O   ILE A  48      21.747  36.791  -0.246  1.00 25.21           O
ATOM    796  N   SER A  49      19.524  36.459  -0.250  1.00 26.43           N
ATOM    798  CA  SER A  49      19.309  37.217  -1.502  1.00 28.33           C
ATOM    800  CB  SER A  49      17.851  37.120  -1.961  1.00 27.87           C
ATOM    803  OG  SER A  49      17.045  37.703  -0.977  1.00 30.32           O
ATOM    805  C   SER A  49      19.730  38.679  -1.400  1.00 29.27           C
ATOM    806  O   SER A  49      20.059  39.293  -2.415  1.00 30.87           O
ATOM    807  N   GLY A  50      19.724  39.244  -0.198  1.00 30.63           N
ATOM    809  CA  GLY A  50      20.217  40.591   0.041  1.00 31.51           C
ATOM    812  C   GLY A  50      21.719  40.727  -0.169  1.00 32.84           C
ATOM    813  O   GLY A  50      22.191  41.795  -0.539  1.00 33.67           O
ATOM    814  N   PHE A  51      22.469  39.641   0.065  1.00 33.08           N
ATOM    816  CA  PHE A  51      23.902  39.593  -0.262  1.00 33.90           C
ATOM    818  CB  PHE A  51      24.613  38.490   0.551  1.00 34.19           C
ATOM    821  CG  PHE A  51      24.687  38.783   2.017  1.00 38.50           C
ATOM    822  CD1 PHE A  51      25.509  39.807   2.493  1.00 41.91           C
ATOM    824  CE1 PHE A  51      25.554  40.107   3.835  1.00 43.41           C
ATOM    826  CZ  PHE A  51      24.779  39.385   4.728  1.00 43.79           C
ATOM    828  CE2 PHE A  51      23.965  38.371   4.266  1.00 43.86           C
ATOM    830  CD2 PHE A  51      23.915  38.075   2.919  1.00 41.40           C
ATOM    832  C   PHE A  51      24.138  39.333  -1.749  1.00 32.80           C
ATOM    833  O   PHE A  51      24.930  40.024  -2.384  1.00 32.77           O
ATOM    834  N   THR A  52      23.465  38.328  -2.297  1.00 32.10           N
ATOM    836  CA  THR A  52      23.703  37.920  -3.671  1.00 31.64           C
ATOM    838  CB  THR A  52      22.980  36.596  -4.021  1.00 32.13           C
ATOM    840  OG1 THR A  52      21.572  36.730  -3.815  1.00 30.44           O
ATOM    842  CG2 THR A  52      23.400  35.441  -3.106  1.00 32.52           C
ATOM    846  C   THR A  52      23.270  39.027  -4.630  1.00 31.29           C
ATOM    847  O   THR A  52      23.711  39.061  -5.774  1.00 30.67           O
ATOM    848  N   ALA A  53      22.403  39.922  -4.162  1.00 31.06           N
ATOM    850  CA  ALA A  53      21.932  41.065  -4.959  1.00 31.29           C
ATOM    852  CB  ALA A  53      20.875  41.834  -4.210  1.00 31.10           C
ATOM    856  C   ALA A  53      23.049  42.009  -5.368  1.00 32.23           C
ATOM    857  O   ALA A  53      22.865  42.829  -6.291  1.00 31.23           O
ATOM    858  N   MET A  54      24.179  41.911  -4.663  1.00 32.49           N
ATOM    860  CA  MET A  54      25.353  42.737  -4.911  1.00 33.24           C
ATOM    862  CB  MET A  54      26.364  42.563  -3.776  1.00 33.57           C
ATOM    865  CG  MET A  54      25.950  43.268  -2.481  1.00 36.59           C
ATOM    868  SD  MET A  54      27.145  43.075  -1.109  1.00 42.93           S
ATOM    869  CE  MET A  54      27.515  41.330  -1.039  1.00 42.81           C
ATOM    873  C   MET A  54      26.036  42.462  -6.256  1.00 32.89           C
ATOM    874  O   MET A  54      26.845  43.257  -6.713  1.00 32.55           O
ATOM    875  N   THR A  55      25.694  41.353  -6.908  1.00 32.55           N
ATOM    877  CA  THR A  55      26.272  41.033  -8.206  1.00 32.41           C
ATOM    879  CB  THR A  55      25.582  39.801  -8.770  1.00 33.07           C
ATOM    881  OG1 THR A  55      25.790  38.700  -7.880  1.00 35.38           O
ATOM    883  CG2 THR A  55      26.226  39.332 -10.026  1.00 33.93           C
ATOM    887  C   THR A  55      26.163  42.195  -9.186  1.00 32.71           C
ATOM    888  O   THR A  55      27.050  42.410 -10.017  1.00 30.08           O
ATOM    889  N   GLU A  56      25.063  42.931  -9.078  1.00 33.96           N
ATOM    891  CA  GLU A  56      24.769  44.016 -10.001  1.00 35.71           C
ATOM    893  CB  GLU A  56      23.333  44.512  -9.781  1.00 36.65           C
ATOM    896  CG  GLU A  56      22.295  43.446 -10.081  1.00 40.17           C
ATOM    899  CD  GLU A  56      22.012  43.330 -11.568  1.00 44.33           C
ATOM    900  OE1 GLU A  56      22.814  42.686 -12.270  1.00 44.61           O
ATOM    901  OE2 GLU A  56      20.988  43.907 -12.026  1.00 48.81           O
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ATOM    902  C   GLU A  56      25.760  45.160  -9.829  1.00 34.84           C
ATOM    903  O   GLU A  56      26.414  45.556 -10.784  1.00 35.81           O
ATOM    904  N   LYS A  57      25.890  45.655  -8.608  1.00 34.79           N
ATOM    906  CA  LYS A  57      26.810  46.765  -8.317  1.00 34.48           C
ATOM    908  CB  LYS A  57      26.630  47.278  -6.876  1.00 35.41           C
ATOM    911  CG  LYS A  57      27.530  46.693  -5.764  1.00 38.13           C
ATOM    914  CD  LYS A  57      27.507  47.611  -4.514  1.00 41.24           C
ATOM    917  CE  LYS A  57      28.389  47.091  -3.388  1.00 42.76           C
ATOM    920  NZ  LYS A  57      28.698  48.108  -2.329  1.00 44.74           N
ATOM    924  C   LYS A  57      28.282  46.425  -8.626  1.00 32.27           C
ATOM    925  O   LYS A  57      29.040  47.296  -9.031  1.00 32.12           O
ATOM    926  N   PHE A  58      28.673  45.156  -8.481  1.00 29.59           N
ATOM    928  CA  PHE A  58      30.070  44.780  -8.732  1.00 27.37           C
ATOM    930  CB  PHE A  58      30.474  43.536  -7.906  1.00 26.19           C
ATOM    933  CG  PHE A  58      30.700  43.845  -6.478  1.00 24.11           C
ATOM    934  CD1 PHE A  58      29.766  43.534  -5.527  1.00 25.04           C
ATOM    936  CE1 PHE A  58      29.970  43.843  -4.195  1.00 25.58           C
ATOM    938  CZ  PHE A  58      31.093  44.505  -3.800  1.00 23.70           C
ATOM    940  CE2 PHE A  58      32.039  44.834  -4.734  1.00 20.67           C
ATOM    942  CD2 PHE A  58      31.830  44.514  -6.077  1.00 23.46           C
ATOM    944  C   PHE A  58      30.391  44.613 -10.212  1.00 26.73           C
ATOM    945  O   PHE A  58      31.527  44.417 -10.587  1.00 25.82           O
ATOM    946  N   SER A  59      29.374  44.652 -11.064  1.00 28.50           N
ATOM    948  CA  SER A  59      29.588  44.782 -12.512  1.00 29.96           C
ATOM    950  CB  SER A  59      28.345  44.264 -13.237  1.00 31.28           C
ATOM    953  OG  SER A  59      27.164  44.655 -12.542  1.00 33.06           O
ATOM    955  C   SER A  59      29.911  46.246 -12.967  1.00 30.71           C
ATOM    956  O   SER A  59      30.467  46.488 -14.043  1.00 32.25           O
ATOM    957  N   SER A  60      29.603  47.213 -12.114  1.00 30.26           N
ATOM    959  CA  SER A  60      29.966  48.612 -12.364  1.00 29.50           C
ATOM    961  CB  SER A  60      29.613  49.430 -11.139  1.00 29.35           C
ATOM    964  OG  SER A  60      30.257  50.674 -11.149  1.00 31.10           O
ATOM    966  C   SER A  60      31.461  48.798 -12.744  1.00 29.22           C
ATOM    967  O   SER A  60      32.379  48.139 -12.195  1.00 28.39           O
ATOM    968  N   ALA A  61      31.714  49.705 -13.687  1.00 27.44           N
ATOM    970  CA  ALA A  61      33.066  50.119 -14.034  1.00 26.56           C
ATOM    972  CB  ALA A  61      33.013  51.158 -15.200  1.00 27.35           C
ATOM    976  C   ALA A  61      33.872  50.701 -12.868  1.00 24.99           C
ATOM    977  O   ALA A  61      35.091  50.794 -12.926  1.00 24.47           O
ATOM    978  N   MET A  62      33.187  51.124 -11.819  1.00 24.12           N
ATOM    980  CA  MET A  62      33.856  51.593 -10.612  1.00 24.26           C
ATOM    982  CB  MET A  62      32.823  51.953  -9.547  1.00 25.80           C
ATOM    985  CG  MET A  62      31.928  53.172  -9.894  1.00 31.55           C
ATOM    988  SD  MET A  62      30.560  53.375  -8.706  1.00 46.06           S
ATOM    989  CE  MET A  62      31.158  52.329  -7.236  1.00 42.05           C
ATOM    993  C   MET A  62      34.813  50.531 -10.024  1.00 21.47           C
ATOM    994  O   MET A  62      35.817  50.871  -9.403  1.00 20.83           O
ATOM    995  N   TYR A  63      34.483  49.255 -10.188  1.00 20.10           N
ATOM    997  CA  TYR A  63      35.333  48.151  -9.637  1.00 18.63           C
ATOM    999  CB  TYR A  63      34.507  46.910  -9.287  1.00 17.80           C
ATOM   1002  CG  TYR A  63      33.617  47.257  -8.159  1.00 18.18           C
ATOM   1003  CD1 TYR A  63      32.321  47.693  -8.391  1.00 18.15           C
ATOM   1005  CE1 TYR A  63      31.516  48.087  -7.342  1.00 21.34           C
ATOM   1007  CZ  TYR A  63      32.021  48.093  -6.081  1.00 23.59           C
ATOM   1008  OH  TYR A  63      31.255  48.482  -5.014  1.00 30.88           O
ATOM   1010  CE2 TYR A  63      33.328  47.711  -5.837  1.00 23.86           C
ATOM   1012  CD2 TYR A  63      34.110  47.294  -6.869  1.00 22.42           C
ATOM   1014  C   TYR A  63      36.466  47.771 -10.564  1.00 19.11           C
ATOM   1015  O   TYR A  63      37.258  46.855 -10.282  1.00 17.31           O
ATOM   1016  N   MET A  64      36.584  48.513 -11.652  1.00 20.05           N
ATOM   1018  CA  MET A  64      37.741  48.412 -12.497  1.00 20.68           C
ATOM   1020  CB  MET A  64      38.976  48.936 -11.781  1.00 21.46           C
ATOM   1023  CG  MET A  64      38.908  50.484 -11.549  1.00 20.18           C
ATOM   1026  SD  MET A  64      39.995  51.236 -10.413  1.00 20.50           S
ATOM   1027  CE  MET A  64      39.298  50.655  -8.769  1.00 19.34           C
ATOM   1031  C   MET A  64      37.754  46.965 -12.955  1.00 21.18           C
ATOM   1032  O   MET A  64      36.741  46.443 -13.442  1.00 24.23           O
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ATOM   1033  N   ASP A  65      38.827  46.270 -12.887  1.00 21.06           N
ATOM   1035  CA  ASP A  65      38.665  44.958 -13.507  1.00 21.21           C
ATOM   1037  CB  ASP A  65      39.841  44.693 -14.405  1.00 23.35           C
ATOM   1040  CG  ASP A  65      39.890  45.669 -15.577  1.00 29.21           C
ATOM   1041  OD1 ASP A  65      38.846  45.782 -16.293  1.00 31.50           O
ATOM   1042  OD2 ASP A  65      40.904  46.392 -15.798  1.00 36.53           O
ATOM   1043  C   ASP A  65      38.454  43.867 -12.483  1.00 16.96           C
ATOM   1044  O   ASP A  65      38.628  42.702 -12.799  1.00 17.73           O
ATOM   1045  N   ARG A  66      38.032  44.252 -11.282  1.00 13.03           N
ATOM   1047  CA  ARG A  66      38.133  43.346 -10.127  1.00 11.13           C
ATOM   1049  CB  ARG A  66      39.186  43.833  -9.090  1.00  9.49           C
ATOM   1052  CG  ARG A  66      40.582  43.725  -9.641  1.00  9.83           C
ATOM   1055  CD  ARG A  66      41.694  44.030  -8.679  1.00  9.44           C
ATOM   1058  NE  ARG A  66      41.640  43.172  -7.509  1.00  9.19           N
ATOM   1060  CZ  ARG A  66      41.182  43.443  -6.339  1.00  8.37           C
ATOM   1061  NH1 ARG A  66      40.699  44.626  -5.991  1.00  8.98           N
ATOM   1064  NH2 ARG A  66      41.179  42.471  -5.446  1.00  9.28           N
ATOM   1067  C   ARG A  66      36.784  43.147  -9.462  1.00 10.57           C
ATOM   1068  O   ARG A  66      36.699  42.850  -8.293  1.00 10.41           O
ATOM   1069  N   GLY A  67      35.704  43.339 -10.213  1.00 10.68           N
ATOM   1071  CA  GLY A  67      34.404  43.101  -9.628  1.00 11.68           C
ATOM   1074  C   GLY A  67      34.217  41.709  -9.061  1.00 11.23           C
ATOM   1075  O   GLY A  67      33.642  41.607  -7.979  1.00 11.40           O
ATOM   1076  N   ALA A  68      34.681  40.659  -9.744  1.00 12.22           N
ATOM   1078  CA  ALA A  68      34.429  39.296  -9.263  1.00 11.81           C
ATOM   1080  CB  ALA A  68      34.802  38.277 -10.277  1.00 12.13           C
ATOM   1084  C   ALA A  68      35.210  39.058  -7.960  1.00 11.52           C
ATOM   1085  O   ALA A  68      34.688  38.531  -6.996  1.00 12.16           O
ATOM   1086  N   GLU A  69      36.434  39.549  -7.952  1.00 11.07           N
ATOM   1088  CA  GLU A  69      37.311  39.376  -6.816  1.00 11.06           C
ATOM   1090  CB  GLU A  69      38.708  39.798  -7.211  1.00 10.77           C
ATOM   1093  CG  GLU A  69      39.348  38.921  -8.268  1.00 13.06           C
ATOM   1096  CD  GLU A  69      38.992  39.244  -9.708  1.00 15.42           C
ATOM   1097  OE1 GLU A  69      38.158  40.145 -10.000  1.00 14.68           O
ATOM   1098  OE2 GLU A  69      39.588  38.612 -10.623  1.00 20.76           O
ATOM   1099  C   GLU A  69      36.774  40.104  -5.608  1.00 11.71           C
ATOM   1100  O   GLU A  69      36.698  39.551  -4.486  1.00 13.22           O
ATOM   1101  N   GLN A  70      36.323  41.333  -5.806  1.00  9.78           N
ATOM   1103  CA  GLN A  70      35.729  42.087  -4.747  1.00 10.30           C
ATOM   1105  CB  GLN A  70      35.475  43.533  -5.150  1.00 10.68           C
ATOM   1108  CG  GLN A  70      36.726  44.378  -5.299  1.00 12.19           C
ATOM   1111  CD  GLN A  70      36.744  45.595  -4.359  1.00 15.21           C
ATOM   1112  OE1 GLN A  70      37.160  46.698  -4.784  1.00 16.43           O
ATOM   1113  NE2 GLN A  70      36.367  45.395  -3.105  1.00 12.03           N
ATOM   1116  C   GLN A  70      34.446  41.440  -4.209  1.00 11.43           C
ATOM   1117  O   GLN A  70      34.211  41.422  -2.979  1.00 12.51           O
ATOM   1118  N   LEU A  71      33.596  40.961  -5.138  1.00 10.83           N
ATOM   1120  CA  LEU A  71      32.329  40.399  -4.769  1.00 12.45           C
ATOM   1122  CB  LEU A  71      31.501  40.057  -6.011  1.00 13.77           C
ATOM   1125  CG  LEU A  71      30.136  39.436  -5.749  1.00 17.68           C
ATOM   1127  CD1 LEU A  71      29.294  40.230  -4.736  1.00 21.70           C
ATOM   1131  CD2 LEU A  71      29.422  39.304  -7.042  1.00 21.27           C
ATOM   1135  C   LEU A  71      32.508  39.177  -3.884  1.00 12.74           C
ATOM   1136  O   LEU A  71      31.855  39.065  -2.826  1.00 13.93           O
ATOM   1137  N   VAL A  72      33.367  38.289  -4.285  1.00 12.86           N
ATOM   1139  CA  VAL A  72      33.602  37.010  -3.564  1.00 13.54           C
ATOM   1141  CB  VAL A  72      34.474  35.991  -4.358  1.00 14.28           C
ATOM   1143  CG1 VAL A  72      35.863  36.379  -4.483  1.00 16.69           C
ATOM   1147  CG2 VAL A  72      34.453  34.587  -3.689  1.00 19.26           C
ATOM   1151  C   VAL A  72      34.178  37.329  -2.192  1.00 12.35           C
ATOM   1152  O   VAL A  72      33.808  36.710  -1.200  1.00 10.66           O
ATOM   1153  N   GLU A  73      35.067  38.329  -2.128  1.00 10.37           N
ATOM   1155  CA  GLU A  73      35.679  38.693  -0.863  1.00 10.12           C
ATOM   1157  CB  GLU A  73      36.756  39.757  -1.098  1.00  9.76           C
ATOM   1160  CG  GLU A  73      37.337  40.306   0.178  1.00  9.42           C
ATOM   1163  CD  GLU A  73      38.384  41.347  -0.101  1.00  9.90           C
ATOM   1164  OE1 GLU A  73      39.217  41.583   0.810  1.00 11.14           O
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ATOM	1165	OE2	GLU	A	73	38.370	41.921	-1.264	1.00	10.92	O
ATOM	1166	C	GLU	A	73	34.610	39.171	0.136	1.00	10.64	C
ATOM	1167	O	GLU	A	73	34.540	38.686	1.260	1.00	9.54	O
ATOM	1168	N	ILE	A	74	33.764	40.102	-0.262	1.00	9.79	N
ATOM	1170	CA	ILE	A	74	32.783	40.670	0.678	1.00	12.06	C
ATOM	1172	CB	ILE	A	74	32.275	42.058	0.209	1.00	13.33	C
ATOM	1174	CG1	ILE	A	74	31.495	42.772	1.323	1.00	13.85	C
ATOM	1177	CD1	ILE	A	74	32.288	43.029	2.576	1.00	14.31	C
ATOM	1181	CG2	ILE	A	74	31.425	41.927	-1.005	1.00	15.48	C
ATOM	1185	C	ILE	A	74	31.644	39.662	0.968	1.00	10.75	C
ATOM	1186	O	ILE	A	74	31.171	39.558	2.088	1.00	12.18	O
ATOM	1187	N	LEU	A	75	31.251	38.903	-0.033	1.00	11.96	N
ATOM	1189	CA	LEU	A	75	30.221	37.866	0.162	1.00	13.84	C
ATOM	1191	CB	LEU	A	75	29.920	37.239	-1.182	1.00	14.08	C
ATOM	1194	CG	LEU	A	75	28.741	36.275	-1.274	1.00	20.82	C
ATOM	1196	CD1	LEU	A	75	27.459	36.994	-0.927	1.00	22.50	C
ATOM	1200	CD2	LEU	A	75	28.733	35.719	-2.707	1.00	23.22	C
ATOM	1204	C	LEU	A	75	30.733	36.831	1.145	1.00	13.11	C
ATOM	1205	O	LEU	A	75	30.075	36.525	2.164	1.00	13.75	O
ATOM	1206	N	ASN	A	76	31.953	36.377	0.935	1.00	12.18	N
ATOM	1208	CA	ASN	A	76	32.529	35.358	1.867	1.00	12.03	C
ATOM	1210	CB	ASN	A	76	33.753	34.679	1.253	1.00	12.06	C
ATOM	1213	CG	ASN	A	76	33.396	33.648	0.168	1.00	12.81	C
ATOM	1214	OD1	ASN	A	76	34.288	33.137	-0.535	1.00	16.81	O
ATOM	1215	ND2	ASN	A	76	32.136	33.352	0.034	1.00	9.30	N
ATOM	1218	C	ASN	A	76	32.838	35.872	3.264	1.00	11.76	C
ATOM	1219	O	ASN	A	76	32.692	35.135	4.264	1.00	11.60	O
ATOM	1220	N	TYR	A	77	33.163	37.157	3.385	1.00	11.77	N
ATOM	1222	CA	TYR	A	77	33.352	37.758	4.691	1.00	12.85	C
ATOM	1224	CB	TYR	A	77	33.825	39.205	4.526	1.00	12.72	C
ATOM	1227	CG	TYR	A	77	33.977	39.916	5.813	1.00	14.85	C
ATOM	1228	CD1	TYR	A	77	34.881	39.469	6.766	1.00	17.09	C
ATOM	1230	CE1	TYR	A	77	35.019	40.138	7.970	1.00	18.19	C
ATOM	1232	CZ	TYR	A	77	34.246	41.226	8.232	1.00	21.27	C
ATOM	1233	OH	TYR	A	77	34.372	41.927	9.434	1.00	23.43	O
ATOM	1235	CE2	TYR	A	77	33.342	41.688	7.291	1.00	20.12	C
ATOM	1237	CD2	TYR	A	77	33.206	41.022	6.098	1.00	18.71	C
ATOM	1239	C	TYR	A	77	32.061	37.634	5.512	1.00	12.27	C
ATOM	1240	O	TYR	A	77	32.078	37.166	6.677	1.00	12.41	O
ATOM	1241	N	HIS	A	78	30.933	38.003	4.906	1.00	12.37	N
ATOM	1243	CA	HIS	A	78	29.658	37.964	5.602	1.00	13.24	C
ATOM	1245	CB	HIS	A	78	28.644	38.889	4.945	1.00	14.81	C
ATOM	1248	CG	HIS	A	78	29.000	40.343	5.097	1.00	16.70	C
ATOM	1249	ND1	HIS	A	78	29.232	40.926	6.329	1.00	20.89	N
ATOM	1251	CE1	HIS	A	78	29.528	42.204	6.156	1.00	24.16	C
ATOM	1253	NE2	HIS	A	78	29.518	42.462	4.862	1.00	20.80	N
ATOM	1255	CD2	HIS	A	78	29.221	41.310	4.177	1.00	21.70	C
ATOM	1257	C	HIS	A	78	29.131	36.560	5.734	1.00	12.87	C
ATOM	1258	O	HIS	A	78	28.702	36.203	6.800	1.00	12.13	O
ATOM	1259	N	ILE	A	79	29.164	35.770	4.669	1.00	11.98	N
ATOM	1261	CA	ILE	A	79	28.617	34.418	4.716	1.00	12.84	C
ATOM	1263	CB	ILE	A	79	28.536	33.785	3.327	1.00	13.70	C
ATOM	1265	CG1	ILE	A	79	27.483	34.509	2.470	1.00	15.57	C
ATOM	1268	CD1	ILE	A	79	27.399	34.011	1.096	1.00	21.41	C
ATOM	1272	CG2	ILE	A	79	28.170	32.367	3.426	1.00	13.24	C
ATOM	1276	C	ILE	A	79	29.434	33.555	5.673	1.00	12.96	C
ATOM	1277	O	ILE	A	79	28.839	32.761	6.395	1.00	12.93	O
ATOM	1278	N	SER	A	80	30.758	33.755	5.753	1.00	11.98	N
ATOM	1280	CA	SER	A	80	31.599	33.025	6.743	1.00	12.97	C
ATOM	1282	CB	SER	A	80	33.059	33.470	6.717	1.00	13.22	C
ATOM	1285	OG	SER	A	80	33.607	32.961	5.538	1.00	16.17	O
ATOM	1287	C	SER	A	80	31.091	33.157	8.155	1.00	12.76	C
ATOM	1288	O	SER	A	80	31.115	32.203	8.938	1.00	12.93	O
ATOM	1289	N	ALA	A	81	30.645	34.356	8.478	1.00	11.72	N
ATOM	1291	CA	ALA	A	81	30.157	34.674	9.803	1.00	12.25	C
ATOM	1293	CB	ALA	A	81	29.947	36.210	9.994	1.00	13.00	C
ATOM	1297	C	ALA	A	81	28.883	33.893	10.107	1.00	12.11	C

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ATOM   1298  O   ALA A  81      28.693  33.437  11.251  1.00 13.72           O
ATOM   1299  N   ILE A  82      28.021  33.714   9.107  1.00 11.62           N
ATOM   1301  CA  ILE A  82      26.800  32.938   9.252  1.00 11.22           C
ATOM   1303  CB  ILE A  82      25.873  33.110   8.061  1.00 11.70           C
ATOM   1305  CG1 ILE A  82      25.481  34.604   7.904  1.00 12.05           C
ATOM   1308  CD1 ILE A  82      24.627  34.924   6.687  1.00 13.54           C
ATOM   1312  CG2 ILE A  82      24.607  32.297   8.221  1.00 11.14           C
ATOM   1316  C   ILE A  82      27.164  31.479   9.406  1.00 11.86           C
ATOM   1317  O   ILE A  82      26.593  30.775  10.221  1.00 12.54           O
ATOM   1318  N   VAL A  83      28.073  31.019   8.563  1.00 11.21           N
ATOM   1320  CA  VAL A  83      28.503  29.629   8.629  1.00 11.33           C
ATOM   1322  CB  VAL A  83      29.465  29.292   7.462  1.00 12.20           C
ATOM   1324  CG1 VAL A  83      30.053  27.920   7.605  1.00 13.77           C
ATOM   1328  CG2 VAL A  83      28.760  29.426   6.124  1.00 12.35           C
ATOM   1332  C   VAL A  83      29.092  29.303   9.997  1.00 11.77           C
ATOM   1333  O   VAL A  83      28.747  28.233  10.566  1.00 11.97           O
ATOM   1334  N   GLU A  84      29.975  30.133  10.536  1.00 12.45           N
ATOM   1336  CA  GLU A  84      30.564  29.869  11.839  1.00 13.47           C
ATOM   1338  CB  GLU A  84      31.628  30.892  12.286  1.00 15.38           C
ATOM   1341  CG  GLU A  84      32.959  30.759  11.552  1.00 18.37           C
ATOM   1344  CD  GLU A  84      34.164  31.336  12.291  1.00 22.57           C
ATOM   1345  OE1 GLU A  84      34.002  31.845  13.463  1.00 26.43           O
ATOM   1346  OE2 GLU A  84      35.294  31.298  11.683  1.00 21.90           O
ATOM   1347  C   GLU A  84      29.459  29.744  12.881  1.00 15.27           C
ATOM   1348  O   GLU A  84      29.495  28.852  13.705  1.00 13.08           O
ATOM   1349  N   LYS A  85      28.448  30.599  12.811  1.00 13.57           N
ATOM   1351  CA  LYS A  85      27.325  30.538  13.788  1.00 15.64           C
ATOM   1353  CB  LYS A  85      26.358  31.704  13.565  1.00 17.44           C
ATOM   1356  CG  LYS A  85      26.858  32.982  14.061  1.00 22.72           C
ATOM   1359  CD  LYS A  85      26.497  33.111  15.522  1.00 28.09           C
ATOM   1362  CE  LYS A  85      26.976  34.424  16.098  1.00 25.89           C
ATOM   1365  NZ  LYS A  85      27.312  34.233  17.550  1.00 28.91           N
ATOM   1369  C   LYS A  85      26.582  29.228  13.710  1.00 13.63           C
ATOM   1370  O   LYS A  85      26.393  28.534  14.733  1.00 14.34           O
ATOM   1371  N   VAL A  86      26.255  28.791  12.510  1.00 10.60           N
ATOM   1373  CA  VAL A  86      25.529  27.564  12.315  1.00 10.88           C
ATOM   1375  CB  VAL A  86      25.116  27.332  10.862  1.00 11.71           C
ATOM   1377  CG1 VAL A  86      24.646  25.922  10.619  1.00 11.48           C
ATOM   1381  CG2 VAL A  86      24.038  28.362  10.422  1.00 12.11           C
ATOM   1385  C   VAL A  86      26.385  26.424  12.838  1.00 12.11           C
ATOM   1386  O   VAL A  86      25.883  25.565  13.598  1.00 11.63           O
ATOM   1387  N   LEU A  87      27.660  26.382  12.431  1.00 10.46           N
ATOM   1389  CA  LEU A  87      28.495  25.260  12.871  1.00 10.22           C
ATOM   1391  CB  LEU A  87      29.865  25.295  12.152  1.00 10.35           C
ATOM   1394  CG  LEU A  87      29.729  25.093  10.633  1.00  8.62           C
ATOM   1396  CD1 LEU A  87      31.107  25.288   9.951  1.00  8.64           C
ATOM   1400  CD2 LEU A  87      29.117  23.822  10.250  1.00 11.29           C
ATOM   1404  C   LEU A  87      28.712  25.217  14.383  1.00 10.14           C
ATOM   1405  O   LEU A  87      28.695  24.131  14.957  1.00 10.92           O
ATOM   1406  N   ILE A  88      28.921  26.373  15.027  1.00  9.47           N
ATOM   1408  CA  ILE A  88      29.133  26.420  16.487  1.00 11.40           C
ATOM   1410  CB  ILE A  88      29.640  27.792  16.883  1.00 12.60           C
ATOM   1412  CG1 ILE A  88      31.057  27.978  16.325  1.00 14.54           C
ATOM   1415  CD1 ILE A  88      31.582  29.348  16.443  1.00 20.48           C
ATOM   1419  CG2 ILE A  88      29.661  27.988  18.375  1.00 16.38           C
ATOM   1423  C   ILE A  88      27.897  26.006  17.284  1.00 12.31           C
ATOM   1424  O   ILE A  88      28.041  25.387  18.333  1.00 11.46           O
ATOM   1425  N   PHE A  89      26.716  26.291  16.757  1.00 13.06           N
ATOM   1427  CA  PHE A  89      25.458  25.821  17.348  1.00 13.32           C
ATOM   1429  CB  PHE A  89      24.268  26.786  16.989  1.00 12.63           C
ATOM   1432  CG  PHE A  89      24.221  28.027  17.841  1.00 12.58           C
ATOM   1433  CD1 PHE A  89      25.140  29.043  17.680  1.00 12.29           C
ATOM   1435  CE1 PHE A  89      25.107  30.204  18.469  1.00 16.75           C
ATOM   1437  CZ  PHE A  89      24.116  30.321  19.453  1.00 14.57           C
ATOM   1439  CE2 PHE A  89      23.198  29.297  19.639  1.00 15.45           C
ATOM   1441  CD2 PHE A  89      23.220  28.170  18.861  1.00 14.72           C
ATOM   1443  C   PHE A  89      25.119  24.386  16.929  1.00 12.36           C
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ATOM	1444	O	PHE A	89	24.048	23.896	17.214	1.00	12.15	O
ATOM	1445	N	GLY A	90	26.015	23.687	16.206	1.00	10.89	N
ATOM	1447	CA	GLY A	90	25.835	22.288	15.920	1.00	11.75	C
ATOM	1450	C	GLY A	90	25.155	21.853	14.680	1.00	11.19	C
ATOM	1451	O	GLY A	90	24.831	20.674	14.531	1.00	12.28	O
ATOM	1452	N	GLY A	91	24.872	22.797	13.772	1.00	11.60	N
ATOM	1454	CA	GLY A	91	24.201	22.468	12.537	1.00	11.12	C
ATOM	1457	C	GLY A	91	25.122	21.997	11.408	1.00	12.41	C
ATOM	1458	O	GLY A	91	26.315	22.078	11.541	1.00	14.24	O
ATOM	1459	N	ASP A	92	24.522	21.495	10.349	1.00	11.65	N
ATOM	1461	CA	ASP A	92	25.180	20.913	9.181	1.00	10.96	C
ATOM	1463	CB	ASP A	92	24.797	19.477	9.026	1.00	12.26	C
ATOM	1466	CG	ASP A	92	25.626	18.733	7.956	1.00	11.66	C
ATOM	1467	OD1	ASP A	92	25.257	17.597	7.586	1.00	14.69	O
ATOM	1468	OD2	ASP A	92	26.662	19.234	7.454	1.00	13.02	O
ATOM	1469	C	ASP A	92	24.723	21.771	8.029	1.00	11.60	C
ATOM	1470	O	ASP A	92	23.497	21.845	7.747	1.00	13.36	O
ATOM	1471	N	ILE A	93	25.632	22.500	7.387	1.00	10.26	N
ATOM	1473	CA	ILE A	93	25.216	23.324	6.255	1.00	10.27	C
ATOM	1475	CB	ILE A	93	26.204	24.480	5.889	1.00	10.10	C
ATOM	1477	CG1	ILE A	93	26.403	25.420	7.102	0.50	9.21	C
ATOM	1480	CD1	ILE A	93	25.432	26.478	7.220	0.50	12.18	C
ATOM	1484	CG2	ILE A	93	25.744	25.206	4.627	0.50	6.10	C
ATOM	1488	C	ILE A	93	25.056	22.360	5.096	1.00	10.51	C
ATOM	1489	O	ILE A	93	26.025	21.788	4.653	1.00	9.74	O
ATOM	1490	N	LEU A	94	23.842	22.164	4.596	1.00	9.96	N
ATOM	1492	CA	LEU A	94	23.582	21.238	3.518	1.00	10.70	C
ATOM	1494	CB	LEU A	94	22.117	20.850	3.439	1.00	12.50	C
ATOM	1497	CG	LEU A	94	21.586	20.108	4.654	1.00	12.23	C
ATOM	1499	CD1	LEU A	94	20.154	19.678	4.358	1.00	14.68	C
ATOM	1503	CD2	LEU A	94	22.474	18.966	5.055	1.00	16.42	C
ATOM	1507	C	LEU A	94	23.952	21.806	2.143	1.00	12.86	C
ATOM	1508	O	LEU A	94	24.489	21.096	1.321	1.00	13.70	O
ATOM	1509	N	LYS A	95	23.583	23.052	1.896	1.00	13.88	N
ATOM	1511	CA	LYS A	95	23.665	23.600	0.558	1.00	16.66	C
ATOM	1513	CB	LYS A	95	22.432	23.136	-0.243	1.00	17.83	C
ATOM	1516	CG	LYS A	95	22.571	21.845	-0.826	1.00	23.90	C
ATOM	1519	CD	LYS A	95	21.631	21.640	-1.974	1.00	28.00	C
ATOM	1522	CE	LYS A	95	21.849	20.230	-2.448	1.00	25.46	C
ATOM	1525	NZ	LYS A	95	20.714	19.777	-3.160	1.00	23.55	N
ATOM	1529	C	LYS A	95	23.638	25.108	0.546	1.00	16.41	C
ATOM	1530	O	LYS A	95	23.001	25.754	1.387	1.00	16.43	O
ATOM	1531	N	PHE A	96	24.390	25.663	-0.388	1.00	17.61	N
ATOM	1533	CA	PHE A	96	24.281	27.053	-0.736	1.00	19.52	C
ATOM	1535	CB	PHE A	96	25.671	27.700	-0.865	1.00	19.34	C
ATOM	1538	CG	PHE A	96	26.527	27.622	0.386	1.00	18.28	C
ATOM	1539	CD1	PHE A	96	27.244	26.454	0.679	1.00	19.81	C
ATOM	1541	CE1	PHE A	96	28.051	26.361	1.806	1.00	17.85	C
ATOM	1543	CZ	PHE A	96	28.161	27.449	2.652	1.00	17.03	C
ATOM	1545	CE2	PHE A	96	27.459	28.614	2.384	1.00	18.02	C
ATOM	1547	CD2	PHE A	96	26.657	28.697	1.251	1.00	20.39	C
ATOM	1549	C	PHE A	96	23.507	26.975	-2.091	1.00	22.28	C
ATOM	1550	O	PHE A	96	24.025	26.549	-3.109	1.00	21.50	O
ATOM	1551	N	ALA A	97	22.214	27.248	-2.071	1.00	26.31	N
ATOM	1553	CA	ALA A	97	21.420	27.186	-3.323	1.00	28.62	C
ATOM	1555	CB	ALA A	97	21.078	25.745	-3.653	1.00	29.15	C
ATOM	1559	C	ALA A	97	20.142	28.006	-3.205	1.00	29.97	C
ATOM	1560	O	ALA A	97	19.573	28.105	-2.132	1.00	30.59	O
ATOM	1561	N	GLY A	98	19.686	28.586	-4.317	1.00	31.23	N
ATOM	1563	CA	GLY A	98	18.477	29.401	-4.310	1.00	31.14	C
ATOM	1566	C	GLY A	98	18.643	30.698	-3.523	1.00	30.72	C
ATOM	1567	O	GLY A	98	17.718	31.123	-2.815	1.00	31.83	O
ATOM	1568	N	ASP A	99	19.824	31.320	-3.638	1.00	30.18	N
ATOM	1570	CA	ASP A	99	20.174	32.523	-2.874	1.00	30.08	C
ATOM	1572	CB	ASP A	99	19.374	33.724	-3.357	1.00	31.13	C
ATOM	1575	CG	ASP A	99	19.847	34.254	-4.711	1.00	35.43	C
ATOM	1576	OD1	ASP A	99	21.065	34.207	-5.010	1.00	40.35	O

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ATOM   1577  OD2 ASP A  99      19.055  34.764  -5.532  1.00 39.94           O
ATOM   1578  C   ASP A  99      19.920  32.312  -1.365  1.00 28.49           C
ATOM   1579  O   ASP A  99      19.415  33.189  -0.665  1.00 27.98           O
ATOM   1580  N   ALA A 100      20.260  31.131  -0.890  1.00 25.95           N
ATOM   1582  CA  ALA A 100      19.980  30.752   0.466  1.00 24.87           C
ATOM   1584  CB  ALA A 100      18.626  30.137   0.518  1.00 25.62           C
ATOM   1588  C   ALA A 100      21.013  29.757   0.992  1.00 23.26           C
ATOM   1589  O   ALA A 100      21.708  29.090   0.240  1.00 24.48           O
ATOM   1590  N   LEU A 101      21.085  29.647   2.298  1.00 21.06           N
ATOM   1592  CA  LEU A 101      21.892  28.627   2.922  1.00 20.33           C
ATOM   1594  CB  LEU A 101      22.858  29.316   3.862  1.00 21.56           C
ATOM   1597  CG  LEU A 101      23.779  28.674   4.867  1.00 25.41           C
ATOM   1599  CD1 LEU A 101      24.866  29.747   5.170  1.00 23.88           C
ATOM   1603  CD2 LEU A 101      23.039  28.253   6.104  1.00 28.55           C
ATOM   1607  C   LEU A 101      20.871  27.756   3.649  1.00 18.11           C
ATOM   1608  O   LEU A 101      20.043  28.285   4.376  1.00 18.99           O
ATOM   1609  N   LEU A 102      20.966  26.452   3.457  1.00 15.60           N
ATOM   1611  CA  LEU A 102      20.062  25.505   4.043  1.00 15.20           C
ATOM   1613  CB  LEU A 102      19.476  24.559   3.007  1.00 15.91           C
ATOM   1616  CG  LEU A 102      18.565  23.439   3.534  1.00 14.63           C
ATOM   1618  CD1 LEU A 102      17.317  24.041   4.229  1.00 19.41           C
ATOM   1622  CD2 LEU A 102      18.147  22.449   2.523  1.00 17.23           C
ATOM   1626  C   LEU A 102      20.898  24.717   5.037  1.00 14.71           C
ATOM   1627  O   LEU A 102      21.876  24.113   4.630  1.00 13.31           O
ATOM   1628  N   ALA A 103      20.475  24.712   6.298  1.00 13.83           N
ATOM   1630  CA  ALA A 103      21.167  23.961   7.368  1.00 13.64           C
ATOM   1632  CB  ALA A 103      21.736  24.896   8.348  1.00 13.00           C
ATOM   1636  C   ALA A 103      20.249  22.951   8.070  1.00 14.35           C
ATOM   1637  O   ALA A 103      19.021  23.140   8.148  1.00 13.86           O
ATOM   1638  N   LEU A 104      20.865  21.893   8.609  1.00 13.48           N
ATOM   1640  CA  LEU A 104      20.149  20.771   9.173  1.00 13.83           C
ATOM   1642  CB  LEU A 104      20.273  19.532   8.268  1.00 14.01           C
ATOM   1645  CG  LEU A 104      19.862  18.164   8.848  1.00 14.56           C
ATOM   1647  CD1 LEU A 104      18.333  18.252   9.193  1.00 15.97           C
ATOM   1651  CD2 LEU A 104      20.173  16.999   7.917  1.00 13.47           C
ATOM   1655  C   LEU A 104      20.720  20.408  10.518  1.00 15.99           C
ATOM   1656  O   LEU A 104      21.932  20.391  10.700  1.00 14.12           O
ATOM   1657  N   TRP A 105      19.828  20.211  11.484  1.00 14.62           N
ATOM   1659  CA  TRP A 105      20.170  19.572  12.767  1.00 15.30           C
ATOM   1661  CB  TRP A 105      19.751  20.428  13.930  1.00 15.68           C
ATOM   1664  CG  TRP A 105      20.620  21.551  14.304  1.00 12.71           C
ATOM   1665  CD1 TRP A 105      21.433  21.599  15.377  1.00 14.79           C
ATOM   1667  NE1 TRP A 105      22.026  22.816  15.466  1.00 14.32           N
ATOM   1669  CE2 TRP A 105      21.642  23.585  14.415  1.00 12.79           C
ATOM   1670  CD2 TRP A 105      20.745  22.830  13.664  1.00 13.93           C
ATOM   1671  CE3 TRP A 105      20.197  23.415  12.513  1.00 12.26           C
ATOM   1673  CZ3 TRP A 105      20.607  24.697  12.166  1.00 13.11           C
ATOM   1675  CH2 TRP A 105      21.481  25.390  12.927  1.00 14.01           C
ATOM   1677  CZ2 TRP A 105      22.033  24.854  14.051  1.00 14.44           C
ATOM   1679  C   TRP A 105      19.407  18.254  12.775  1.00 16.67           C
ATOM   1680  O   TRP A 105      18.163  18.201  12.954  1.00 16.47           O
ATOM   1681  N   ARG A 106      20.120  17.183  12.471  1.00 16.84           N
ATOM   1683  CA  ARG A 106      19.525  15.852  12.415  1.00 18.41           C
ATOM   1685  CB  ARG A 106      20.263  14.980  11.435  1.00 18.62           C
ATOM   1688  CG  ARG A 106      19.760  13.587  11.333  1.00 19.79           C
ATOM   1691  CD  ARG A 106      20.619  12.759  10.439  1.00 22.21           C
ATOM   1694  NE  ARG A 106      20.194  11.368  10.378  1.00 19.76           N
ATOM   1696  CZ  ARG A 106      20.533  10.555   9.400  1.00 22.46           C
ATOM   1697  NH1 ARG A 106      21.356  10.955   8.438  1.00 23.78           N
ATOM   1700  NH2 ARG A 106      20.104   9.302   9.417  1.00 23.49           N
ATOM   1703  C   ARG A 106      19.571  15.231  13.796  1.00 20.10           C
ATOM   1704  O   ARG A 106      20.632  15.157  14.435  1.00 19.33           O
ATOM   1705  N   VAL A 107      18.400  14.811  14.259  1.00 20.39           N
ATOM   1707  CA  VAL A 107      18.287  14.339  15.623  1.00 22.99           C
ATOM   1709  CB  VAL A 107      18.201  15.550  16.570  1.00 23.39           C
ATOM   1711  CG1 VAL A 107      16.833  16.196  16.500  1.00 24.34           C
ATOM   1715  CG2 VAL A 107      18.560  15.201  17.935  1.00 26.86           C
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ATOM	1719	C	VAL	A	107	17.146	13.348	15.734	1.00 23.20	C
ATOM	1720	O	VAL	A	107	16.262	13.274	14.872	1.00 21.41	O
ATOM	1721	N	GLU	A	108	17.237	12.485	16.756	1.00 24.37	N
ATOM	1723	CA	GLU	A	108	16.160	11.560	17.021	1.00 25.46	C
ATOM	1725	CB	GLU	A	108	16.539	10.645	18.182	1.00 26.42	C
ATOM	1728	CG	GLU	A	108	16.917	11.386	19.454	1.00 28.85	C
ATOM	1731	CD	GLU	A	108	17.101	10.451	20.649	1.00 34.16	C
ATOM	1732	OE1	GLU	A	108	16.100	10.259	21.389	1.00 35.32	O
ATOM	1733	OE2	GLU	A	108	18.229	9.913	20.828	1.00 32.71	O
ATOM	1734	C	GLU	A	108	14.899	12.354	17.341	1.00 25.44	C
ATOM	1735	O	GLU	A	108	14.930	13.457	17.893	1.00 24.26	O
ATOM	1736	N	ARG	A	109	13.781	11.766	17.003	1.00 27.06	N
ATOM	1738	CA	ARG	A	109	12.504	12.432	17.107	1.00 28.18	C
ATOM	1740	CB	ARG	A	109	11.394	11.460	16.727	1.00 28.92	C
ATOM	1743	CG	ARG	A	109	10.167	12.157	16.264	1.00 33.76	C
ATOM	1746	CD	ARG	A	109	9.139	11.217	15.705	1.00 39.20	C
ATOM	1749	NE	ARG	A	109	9.527	10.704	14.388	1.00 42.13	N
ATOM	1751	CZ	ARG	A	109	9.981	9.475	14.129	1.00 45.54	C
ATOM	1752	NH1	ARG	A	109	10.148	8.563	15.092	1.00 47.05	N
ATOM	1755	NH2	ARG	A	109	10.277	9.153	12.873	1.00 46.41	N
ATOM	1758	C	ARG	A	109	12.227	13.048	18.472	1.00 28.33	C
ATOM	1759	O	ARG	A	109	11.690	14.139	18.550	1.00 28.11	O
ATOM	1760	N	LYS	A	110	12.601	12.355	19.544	1.00 28.48	N
ATOM	1762	CA	LYS	A	110	12.328	12.820	20.901	1.00 28.51	C
ATOM	1764	CB	LYS	A	110	12.583	11.718	21.942	1.00 29.77	C
ATOM	1767	CG	LYS	A	110	11.607	10.556	21.763	1.00 34.47	C
ATOM	1770	CD	LYS	A	110	11.714	9.506	22.857	1.00 39.56	C
ATOM	1773	CE	LYS	A	110	10.585	8.466	22.711	1.00 42.48	C
ATOM	1776	NZ	LYS	A	110	10.577	7.522	23.869	1.00 44.89	N
ATOM	1780	C	LYS	A	110	13.079	14.058	21.290	1.00 27.33	C
ATOM	1781	O	LYS	A	110	12.676	14.744	22.228	1.00 27.70	O
ATOM	1782	N	GLN	A	111	14.161	14.374	20.587	1.00 25.22	N
ATOM	1784	CA	GLN	A	111	14.919	15.554	20.902	1.00 23.84	C
ATOM	1786	CB	GLN	A	111	16.427	15.258	20.849	1.00 24.58	C
ATOM	1789	CG	GLN	A	111	16.956	14.556	22.094	1.00 25.34	C
ATOM	1792	CD	GLN	A	111	16.604	15.222	23.428	1.00 26.71	C
ATOM	1793	OE1	GLN	A	111	16.869	16.407	23.651	1.00 30.95	O
ATOM	1794	NE2	GLN	A	111	16.057	14.449	24.337	1.00 28.81	N
ATOM	1797	C	GLN	A	111	14.578	16.767	20.010	1.00 22.39	C
ATOM	1798	O	GLN	A	111	15.200	17.801	20.177	1.00 22.33	O
ATOM	1799	N	LEU	A	112	13.599	16.654	19.112	1.00 21.61	N
ATOM	1801	CA	LEU	A	112	13.271	17.777	18.234	1.00 21.39	C
ATOM	1803	CB	LEU	A	112	12.138	17.412	17.273	1.00 21.93	C
ATOM	1806	CG	LEU	A	112	12.469	16.520	16.115	1.00 23.11	C
ATOM	1808	CD1	LEU	A	112	11.201	16.289	15.337	1.00 27.00	C
ATOM	1812	CD2	LEU	A	112	13.581	17.125	15.199	1.00 23.69	C
ATOM	1816	C	LEU	A	112	12.912	19.008	19.016	1.00 20.83	C
ATOM	1817	O	LEU	A	112	13.310	20.082	18.680	1.00 19.52	O
ATOM	1818	N	LYS	A	113	12.137	18.851	20.093	1.00 20.86	N
ATOM	1820	CA	LYS	A	113	11.760	19.979	20.909	1.00 20.88	C
ATOM	1822	CB	LYS	A	113	10.858	19.503	22.065	1.00 21.86	C
ATOM	1825	CG	LYS	A	113	10.422	20.597	22.996	1.00 24.17	C
ATOM	1828	CD	LYS	A	113	9.596	20.011	24.149	1.00 29.09	C
ATOM	1831	CE	LYS	A	113	9.201	21.105	25.113	1.00 32.53	C
ATOM	1834	NZ	LYS	A	113	8.281	20.660	26.216	1.00 36.60	N
ATOM	1838	C	LYS	A	113	12.939	20.773	21.436	1.00 19.98	C
ATOM	1839	O	LYS	A	113	12.960	21.970	21.323	1.00 21.61	O
ATOM	1840	N	ASN	A	114	13.947	20.127	22.017	1.00 19.10	N
ATOM	1842	CA	ASN	A	114	15.071	20.847	22.542	1.00 19.01	C
ATOM	1844	CB	ASN	A	114	15.878	19.961	23.474	1.00 20.15	C
ATOM	1847	CG	ASN	A	114	15.125	19.705	24.742	1.00 22.96	C
ATOM	1848	OD1	ASN	A	114	14.274	20.513	25.102	1.00 24.09	O
ATOM	1849	ND2	ASN	A	114	15.381	18.575	25.379	1.00 23.51	N
ATOM	1852	C	ASN	A	114	15.970	21.438	21.474	1.00 17.43	C
ATOM	1853	O	ASN	A	114	16.511	22.515	21.669	1.00 17.51	O
ATOM	1854	N	ILE	A	115	16.066	20.748	20.360	1.00 17.66	N
ATOM	1856	CA	ILE	A	115	16.937	21.208	19.280	1.00 18.83	C

ATOM	1858	CB	ILE	A	115	17.250	20.093	18.294	1.00	18.81	C
ATOM	1860	CG1	ILE	A	115	18.125	19.043	18.982	1.00	21.12	C
ATOM	1863	CD1	ILE	A	115	19.481	19.592	19.509	1.00	21.90	C
ATOM	1867	CG2	ILE	A	115	17.951	20.643	17.031	1.00	19.37	C
ATOM	1871	C	ILE	A	115	16.323	22.429	18.608	1.00	18.36	C
ATOM	1872	O	ILE	A	115	17.058	23.352	18.233	1.00	16.93	O
ATOM	1873	N	ILE	A	116	14.986	22.499	18.517	1.00	18.17	N
ATOM	1875	CA	ILE	A	116	14.374	23.717	17.992	1.00	17.81	C
ATOM	1877	CB	ILE	A	116	12.816	23.576	17.848	1.00	16.83	C
ATOM	1879	CG1	ILE	A	116	12.429	22.535	16.798	1.00	19.40	C
ATOM	1882	CD1	ILE	A	116	11.030	21.954	16.941	1.00	19.81	C
ATOM	1886	CG2	ILE	A	116	12.193	24.898	17.461	1.00	16.14	C
ATOM	1890	C	ILE	A	116	14.786	24.922	18.810	1.00	16.52	C
ATOM	1891	O	ILE	A	116	15.012	26.004	18.291	1.00	18.22	O
ATOM	1892	N	THR	A	117	14.897	24.777	20.113	1.00	18.60	N
ATOM	1894	CA	THR	A	117	15.357	25.852	20.947	1.00	18.13	C
ATOM	1896	CB	THR	A	117	15.295	25.427	22.396	1.00	20.12	C
ATOM	1898	OG1	THR	A	117	13.929	25.182	22.768	1.00	23.46	O
ATOM	1900	CG2	THR	A	117	15.768	26.486	23.289	1.00	18.60	C
ATOM	1904	C	THR	A	117	16.772	26.332	20.575	1.00	18.37	C
ATOM	1905	O	THR	A	117	17.080	27.540	20.575	1.00	18.73	O
ATOM	1906	N	VAL	A	118	17.645	25.363	20.325	1.00	17.32	N
ATOM	1908	CA	VAL	A	118	19.026	25.676	19.988	1.00	16.67	C
ATOM	1910	CB	VAL	A	118	19.855	24.395	19.761	1.00	16.48	C
ATOM	1912	CG1	VAL	A	118	21.234	24.732	19.300	1.00	16.57	C
ATOM	1916	CG2	VAL	A	118	19.939	23.575	21.049	1.00	15.65	C
ATOM	1920	C	VAL	A	118	19.004	26.478	18.669	1.00	15.11	C
ATOM	1921	O	VAL	A	118	19.696	27.477	18.538	1.00	17.60	O
ATOM	1922	N	VAL	A	119	18.213	25.996	17.736	1.00	15.37	N
ATOM	1924	CA	VAL	A	119	18.142	26.542	16.360	1.00	14.76	C
ATOM	1926	CB	VAL	A	119	17.433	25.600	15.418	1.00	15.25	C
ATOM	1928	CG1	VAL	A	119	17.326	26.208	13.960	1.00	14.13	C
ATOM	1932	CG2	VAL	A	119	18.142	24.300	15.308	1.00	14.16	C
ATOM	1936	C	VAL	A	119	17.517	27.947	16.368	1.00	16.19	C
ATOM	1937	O	VAL	A	119	17.937	28.826	15.637	1.00	15.08	O
ATOM	1938	N	ILE	A	120	16.519	28.169	17.212	1.00	16.62	N
ATOM	1940	CA	ILE	A	120	16.008	29.521	17.375	1.00	17.12	C
ATOM	1942	CB	ILE	A	120	14.675	29.482	18.241	1.00	16.61	C
ATOM	1944	CG1	ILE	A	120	13.563	28.758	17.472	1.00	18.66	C
ATOM	1947	CD1	ILE	A	120	12.281	28.433	18.339	1.00	22.15	C
ATOM	1951	CG2	ILE	A	120	14.289	30.876	18.567	1.00	17.45	C
ATOM	1955	C	ILE	A	120	17.041	30.494	17.949	1.00	17.52	C
ATOM	1956	O	ILE	A	120	17.210	31.617	17.467	1.00	18.02	O
ATOM	1957	N	LYS	A	121	17.783	30.081	18.965	1.00	18.09	N
ATOM	1959	CA	LYS	A	121	18.836	30.900	19.479	1.00	18.94	C
ATOM	1961	CB	LYS	A	121	19.539	30.210	20.634	1.00	19.55	C
ATOM	1964	CG	LYS	A	121	20.522	31.078	21.374	1.00	21.07	C
ATOM	1967	CD	LYS	A	121	19.870	32.178	22.175	1.00	27.77	C
ATOM	1970	CE	LYS	A	121	20.919	33.089	22.844	1.00	32.76	C
ATOM	1973	NZ	LYS	A	121	21.736	32.378	23.853	1.00	35.18	N
ATOM	1977	C	LYS	A	121	19.873	31.231	18.405	1.00	17.78	C
ATOM	1978	O	LYS	A	121	20.314	32.340	18.328	1.00	18.48	O
ATOM	1979	N	CYS	A	122	20.310	30.204	17.674	1.00	16.89	N
ATOM	1981	CA	CYS	A	122	21.245	30.375	16.580	1.00	15.73	C
ATOM	1983	CB	CYS	A	122	21.367	29.061	15.832	1.00	14.80	C
ATOM	1986	SG	CYS	A	122	22.672	29.108	14.503	1.00	15.14	S
ATOM	1987	C	CYS	A	122	20.721	31.458	15.625	1.00	15.74	C
ATOM	1988	O	CYS	A	122	21.448	32.360	15.277	1.00	15.88	O
ATOM	1989	N	SER	A	123	19.460	31.323	15.249	1.00	16.01	N
ATOM	1991	CA	SER	A	123	18.802	32.198	14.269	1.00	17.33	C
ATOM	1993	CB	SER	A	123	17.355	31.768	14.045	1.00	15.56	C
ATOM	1996	OG	SER	A	123	17.229	30.480	13.503	1.00	16.54	O
ATOM	1998	C	SER	A	123	18.814	33.621	14.765	1.00	18.05	C
ATOM	1999	O	SER	A	123	19.099	34.550	14.001	1.00	18.74	O
ATOM	2000	N	LEU	A	124	18.517	33.833	16.059	1.00	20.04	N
ATOM	2002	CA	LEU	A	124	18.601	35.170	16.625	1.00	20.80	C
ATOM	2004	CB	LEU	A	124	17.952	35.207	18.018	1.00	20.42	C

ATOM	2007	CG	LEU	A	124	16.486	34.837	18.043	1.00 22.08	C
ATOM	2009	CD1	LEU	A	124	16.027	34.833	19.519	1.00 23.25	C
ATOM	2013	CD2	LEU	A	124	15.627	35.754	17.213	1.00 24.40	C
ATOM	2017	C	LEU	A	124	19.997	35.749	16.684	1.00 21.81	C
ATOM	2018	O	LEU	A	124	20.188	36.949	16.503	1.00 22.87	O
ATOM	2019	N	GLU	A	125	21.002	34.916	16.950	1.00 21.86	N
ATOM	2021	CA	GLU	A	125	22.386	35.383	16.929	1.00 21.00	C
ATOM	2023	CB	GLU	A	125	23.303	34.387	17.611	1.00 22.54	C
ATOM	2026	CG	GLU	A	125	22.926	34.188	19.070	1.00 23.90	C
ATOM	2029	CD	GLU	A	125	24.101	33.855	19.948	1.00 28.33	C
ATOM	2030	OE1	GLU	A	125	25.182	33.559	19.423	1.00 24.75	O
ATOM	2031	OE2	GLU	A	125	23.930	33.915	21.182	1.00 28.97	O
ATOM	2032	C	GLU	A	125	22.875	35.698	15.497	1.00 20.15	C
ATOM	2033	O	GLU	A	125	23.679	36.604	15.319	1.00 20.45	O
ATOM	2034	N	ILE	A	126	22.360	34.983	14.513	1.00 19.53	N
ATOM	2036	CA	ILE	A	126	22.629	35.296	13.090	1.00 18.60	C
ATOM	2038	CB	ILE	A	126	22.017	34.272	12.157	1.00 17.89	C
ATOM	2040	CG1	ILE	A	126	22.799	32.943	12.281	1.00 14.49	C
ATOM	2043	CD1	ILE	A	126	22.245	31.787	11.527	1.00 16.35	C
ATOM	2047	CG2	ILE	A	126	22.066	34.739	10.711	1.00 17.69	C
ATOM	2051	C	ILE	A	126	22.128	36.699	12.775	1.00 20.39	C
ATOM	2052	O	ILE	A	126	22.856	37.502	12.197	1.00 19.52	O
ATOM	2053	N	HIS	A	127	20.869	36.975	13.124	1.00 21.61	N
ATOM	2055	CA	HIS	A	127	20.344	38.327	12.898	1.00 22.59	C
ATOM	2057	CB	HIS	A	127	18.856	38.435	13.285	1.00 22.15	C
ATOM	2060	CG	HIS	A	127	17.936	37.769	12.322	1.00 21.15	C
ATOM	2061	ND1	HIS	A	127	17.928	38.055	10.971	1.00 21.49	N
ATOM	2063	CE1	HIS	A	127	16.987	37.335	10.384	1.00 22.95	C
ATOM	2065	NE2	HIS	A	127	16.412	36.570	11.300	1.00 19.91	N
ATOM	2067	CD2	HIS	A	127	17.002	36.810	12.511	1.00 20.36	C
ATOM	2069	C	HIS	A	127	21.169	39.382	13.622	1.00 24.72	C
ATOM	2070	O	HIS	A	127	21.389	40.466	13.086	1.00 25.06	O
ATOM	2071	N	GLY	A	128	21.687	39.043	14.803	1.00 25.64	N
ATOM	2073	CA	GLY	A	128	22.529	39.940	15.582	1.00 26.61	C
ATOM	2076	C	GLY	A	128	23.853	40.334	14.938	1.00 28.59	C
ATOM	2077	O	GLY	A	128	24.416	41.374	15.261	1.00 28.85	O
ATOM	2078	N	LEU	A	129	24.372	39.491	14.045	1.00 29.39	N
ATOM	2080	CA	LEU	A	129	25.599	39.787	13.318	1.00 31.08	C
ATOM	2082	CB	LEU	A	129	25.928	38.633	12.358	1.00 30.52	C
ATOM	2085	CG	LEU	A	129	26.304	37.294	13.010	1.00 28.78	C
ATOM	2087	CD1	LEU	A	129	26.488	36.260	11.948	1.00 29.48	C
ATOM	2091	CD2	LEU	A	129	27.570	37.454	13.848	1.00 29.78	C
ATOM	2095	C	LEU	A	129	25.465	41.061	12.491	1.00 34.31	C
ATOM	2096	O	LEU	A	129	26.437	41.796	12.294	1.00 33.41	O
ATOM	2097	N	PHE	A	130	24.251	41.304	12.012	1.00 37.32	N
ATOM	2099	CA	PHE	A	130	24.000	42.322	11.001	1.00 40.69	C
ATOM	2101	CB	PHE	A	130	23.280	41.664	9.831	1.00 40.23	C
ATOM	2104	CG	PHE	A	130	24.043	40.502	9.244	1.00 39.82	C
ATOM	2105	CD1	PHE	A	130	23.513	39.222	9.263	1.00 39.13	C
ATOM	2107	CE1	PHE	A	130	24.223	38.150	8.738	1.00 38.39	C
ATOM	2109	CZ	PHE	A	130	25.481	38.357	8.188	1.00 38.43	C
ATOM	2111	CE2	PHE	A	130	26.031	39.635	8.179	1.00 39.45	C
ATOM	2113	CD2	PHE	A	130	25.314	40.694	8.701	1.00 39.04	C
ATOM	2115	C	PHE	A	130	23.211	43.524	11.507	1.00 44.27	C
ATOM	2116	O	PHE	A	130	22.730	44.319	10.704	1.00 44.61	O
ATOM	2117	N	GLU	A	131	23.090	43.662	12.828	1.00 49.15	N
ATOM	2119	CA	GLU	A	131	22.339	44.771	13.430	1.00 52.78	C
ATOM	2121	CB	GLU	A	131	21.787	44.374	14.814	1.00 53.29	C
ATOM	2124	CG	GLU	A	131	20.510	43.533	14.719	1.00 54.45	C
ATOM	2127	CD	GLU	A	131	19.936	43.108	16.069	1.00 56.25	C
ATOM	2128	OE1	GLU	A	131	19.816	43.968	16.969	1.00 58.63	O
ATOM	2129	OE2	GLU	A	131	19.575	41.912	16.222	1.00 56.71	O
ATOM	2130	C	GLU	A	131	23.169	46.064	13.487	1.00 55.71	C
ATOM	2131	O	GLU	A	131	22.607	47.154	13.473	1.00 56.46	O
ATOM	2132	N	THR	A	132	24.497	45.928	13.508	1.00 59.24	N
ATOM	2134	CA	THR	A	132	25.437	47.067	13.438	1.00 61.78	C
ATOM	2136	CB	THR	A	132	26.690	46.798	14.344	1.00 62.18	C

ATOM	2138	OG1	THR	A	132	27.055	45.404	14.302	1.00	63.00	O
ATOM	2140	CG2	THR	A	132	26.398	47.070	15.820	1.00	62.65	C
ATOM	2144	C	THR	A	132	25.905	47.365	11.994	1.00	63.67	C
ATOM	2145	O	THR	A	132	26.996	47.918	11.783	1.00	63.86	O
ATOM	2146	N	GLN	A	133	25.080	47.003	11.009	1.00	65.71	N
ATOM	2148	CA	GLN	A	133	25.480	47.043	9.600	1.00	67.30	C
ATOM	2150	CB	GLN	A	133	25.229	45.669	8.951	1.00	67.55	C
ATOM	2153	CG	GLN	A	133	26.488	44.995	8.420	1.00	68.29	C
ATOM	2156	CD	GLN	A	133	27.360	44.433	9.534	1.00	69.10	C
ATOM	2157	OE1	GLN	A	133	27.731	45.152	10.466	1.00	69.69	O
ATOM	2158	NE2	GLN	A	133	27.690	43.149	9.438	1.00	69.29	N
ATOM	2161	C	GLN	A	133	24.752	48.174	8.862	1.00	68.43	C
ATOM	2162	O	GLN	A	133	24.300	49.131	9.501	1.00	68.68	O
ATOM	2163	N	GLU	A	134	24.667	48.068	7.529	1.00	69.66	N
ATOM	2165	CA	GLU	A	134	24.003	49.062	6.665	1.00	70.60	C
ATOM	2167	CB	GLU	A	134	23.617	48.408	5.318	1.00	70.96	C
ATOM	2170	CG	GLU	A	134	23.185	49.369	4.210	1.00	72.26	C
ATOM	2173	CD	GLU	A	134	24.336	50.188	3.631	1.00	73.62	C
ATOM	2174	OE1	GLU	A	134	24.807	51.132	4.306	1.00	74.29	O
ATOM	2175	OE2	GLU	A	134	24.762	49.902	2.489	1.00	74.27	O
ATOM	2176	C	GLU	A	134	22.768	49.739	7.295	1.00	70.71	C
ATOM	2177	O	GLU	A	134	21.848	49.078	7.792	1.00	71.01	O
ATOM	2178	N	ILE	A	141	22.530	45.491	4.677	1.00	43.40	N
ATOM	2180	CA	ILE	A	141	22.174	44.141	4.259	1.00	43.32	C
ATOM	2182	CB	ILE	A	141	23.277	43.496	3.397	1.00	43.99	C
ATOM	2184	CG1	ILE	A	141	23.767	44.458	2.310	1.00	45.32	C
ATOM	2187	CD1	ILE	A	141	24.807	43.865	1.395	1.00	46.21	C
ATOM	2191	CG2	ILE	A	141	22.730	42.242	2.717	1.00	45.56	C
ATOM	2195	C	ILE	A	141	21.858	43.247	5.467	1.00	41.85	C
ATOM	2196	O	ILE	A	141	22.570	43.252	6.470	1.00	41.72	O
ATOM	2197	N	ARG	A	142	20.770	42.496	5.330	1.00	39.32	N
ATOM	2199	CA	ARG	A	142	20.240	41.637	6.374	1.00	37.96	C
ATOM	2201	CB	ARG	A	142	19.111	42.381	7.095	1.00	39.03	C
ATOM	2204	CG	ARG	A	142	19.547	43.634	7.847	1.00	42.67	C
ATOM	2207	CD	ARG	A	142	18.474	44.176	8.785	1.00	49.20	C
ATOM	2210	NE	ARG	A	142	18.488	45.635	8.920	1.00	54.61	N
ATOM	2212	CZ	ARG	A	142	18.087	46.497	7.972	1.00	58.20	C
ATOM	2213	NH1	ARG	A	142	17.638	46.066	6.791	1.00	59.53	N
ATOM	2216	NH2	ARG	A	142	18.141	47.809	8.209	1.00	59.59	N
ATOM	2219	C	ARG	A	142	19.734	40.313	5.766	1.00	34.65	C
ATOM	2220	O	ARG	A	142	19.769	40.126	4.547	1.00	33.50	O
ATOM	2221	N	VAL	A	143	19.258	39.407	6.624	1.00	31.18	N
ATOM	2223	CA	VAL	A	143	18.727	38.119	6.190	1.00	28.45	C
ATOM	2225	CB	VAL	A	143	19.693	36.970	6.570	1.00	28.44	C
ATOM	2227	CG1	VAL	A	143	21.074	37.250	5.944	1.00	27.58	C
ATOM	2231	CG2	VAL	A	143	19.837	36.826	8.074	1.00	25.84	C
ATOM	2235	C	VAL	A	143	17.341	37.846	6.742	1.00	26.69	C
ATOM	2236	O	VAL	A	143	16.873	38.547	7.630	1.00	26.53	O
ATOM	2237	N	LYS	A	144	16.670	36.889	6.134	1.00	25.18	N
ATOM	2239	CA	LYS	A	144	15.394	36.364	6.624	1.00	25.18	C
ATOM	2241	CB	LYS	A	144	14.304	36.489	5.551	1.00	25.71	C
ATOM	2244	CG	LYS	A	144	14.276	37.800	4.782	1.00	30.70	C
ATOM	2247	CD	LYS	A	144	13.152	37.787	3.744	1.00	34.61	C
ATOM	2250	CE	LYS	A	144	12.848	39.180	3.171	1.00	37.27	C
ATOM	2253	NZ	LYS	A	144	12.130	39.149	1.859	1.00	38.42	N
ATOM	2257	C	LYS	A	144	15.604	34.879	6.936	1.00	22.84	C
ATOM	2258	O	LYS	A	144	16.309	34.190	6.181	1.00	21.78	O
ATOM	2259	N	ILE	A	145	14.958	34.369	7.989	1.00	21.42	N
ATOM	2261	CA	ILE	A	145	15.116	32.956	8.395	1.00	20.11	C
ATOM	2263	CB	ILE	A	145	15.945	32.847	9.699	1.00	19.88	C
ATOM	2265	CG1	ILE	A	145	17.367	33.361	9.448	1.00	17.52	C
ATOM	2268	CD1	ILE	A	145	18.274	33.460	10.622	1.00	15.08	C
ATOM	2272	CG2	ILE	A	145	15.998	31.404	10.203	1.00	20.50	C
ATOM	2276	C	ILE	A	145	13.789	32.248	8.540	1.00	19.52	C
ATOM	2277	O	ILE	A	145	12.868	32.772	9.222	1.00	20.66	O
ATOM	2278	N	GLY	A	146	13.661	31.129	7.856	1.00	18.98	N
ATOM	2280	CA	GLY	A	146	12.581	30.192	8.045	1.00	19.66	C

ATOM	2283	C	GLY	A	146	13.109	28.948	8.770	1.00	20.06	C
ATOM	2284	O	GLY	A	146	14.246	28.504	8.480	1.00	18.65	O
ATOM	2285	N	LEU	A	147	12.309	28.399	9.681	1.00	19.94	N
ATOM	2287	CA	LEU	A	147	12.642	27.153	10.382	1.00	20.05	C
ATOM	2289	CB	LEU	A	147	12.931	27.413	11.878	1.00	19.53	C
ATOM	2292	CG	LEU	A	147	13.969	28.444	12.298	1.00	20.50	C
ATOM	2294	CD1	LEU	A	147	14.131	28.573	13.780	1.00	21.29	C
ATOM	2298	CD2	LEU	A	147	15.329	28.104	11.654	1.00	20.04	C
ATOM	2302	C	LEU	A	147	11.526	26.119	10.240	1.00	20.51	C
ATOM	2303	O	LEU	A	147	10.321	26.444	10.258	1.00	20.77	O
ATOM	2304	N	ALA	A	148	11.913	24.859	10.103	1.00	20.06	N
ATOM	2306	CA	ALA	A	148	10.973	23.771	9.977	1.00	19.90	C
ATOM	2308	CB	ALA	A	148	10.773	23.400	8.547	1.00	20.24	C
ATOM	2312	C	ALA	A	148	11.489	22.584	10.781	1.00	20.81	C
ATOM	2313	O	ALA	A	148	12.687	22.474	11.095	1.00	19.57	O
ATOM	2314	N	ALA	A	149	10.584	21.678	11.133	1.00	20.87	N
ATOM	2316	CA	ALA	A	149	10.973	20.480	11.894	1.00	21.14	C
ATOM	2318	CB	ALA	A	149	10.890	20.739	13.374	1.00	22.30	C
ATOM	2322	C	ALA	A	149	10.099	19.337	11.485	1.00	21.51	C
ATOM	2323	O	ALA	A	149	8.949	19.546	11.077	1.00	21.28	O
ATOM	2324	N	GLY	A	150	10.627	18.132	11.564	1.00	20.45	N
ATOM	2326	CA	GLY	A	150	9.891	16.948	11.172	1.00	20.98	C
ATOM	2329	C	GLY	A	150	10.627	15.911	10.373	1.00	21.81	C
ATOM	2330	O	GLY	A	150	11.853	15.772	10.443	1.00	22.50	O
ATOM	2331	N	HIS	A	151	9.863	15.159	9.609	1.00	21.75	N
ATOM	2333	CA	HIS	A	151	10.380	14.075	8.849	1.00	22.11	C
ATOM	2335	CB	HIS	A	151	9.263	13.158	8.345	1.00	23.52	C
ATOM	2338	CG	HIS	A	151	8.345	12.661	9.421	1.00	28.01	C
ATOM	2339	ND1	HIS	A	151	8.797	12.001	10.548	1.00	33.31	N
ATOM	2341	CE1	HIS	A	151	7.760	11.673	11.303	1.00	33.87	C
ATOM	2343	NE2	HIS	A	151	6.659	12.110	10.716	1.00	32.02	N
ATOM	2345	CD2	HIS	A	151	6.995	12.722	9.534	1.00	32.06	C
ATOM	2347	C	HIS	A	151	11.086	14.686	7.658	1.00	21.68	C
ATOM	2348	O	HIS	A	151	10.574	15.611	7.026	1.00	21.81	O
ATOM	2349	N	ILE	A	152	12.254	14.146	7.360	1.00	20.76	N
ATOM	2351	CA	ILE	A	152	13.033	14.555	6.185	1.00	19.88	C
ATOM	2353	CB	ILE	A	152	14.262	15.381	6.656	1.00	19.73	C
ATOM	2355	CG1	ILE	A	152	13.834	16.624	7.430	1.00	20.05	C
ATOM	2358	CD1	ILE	A	152	14.886	17.166	8.338	1.00	22.57	C
ATOM	2362	CG2	ILE	A	152	15.188	15.814	5.468	1.00	21.26	C
ATOM	2366	C	ILE	A	152	13.473	13.307	5.461	1.00	20.52	C
ATOM	2367	O	ILE	A	152	13.904	12.314	6.083	1.00	19.70	O
ATOM	2368	N	SER	A	153	13.392	13.347	4.134	1.00	20.78	N
ATOM	2370	CA	SER	A	153	13.923	12.304	3.284	1.00	20.85	C
ATOM	2372	CB	SER	A	153	12.883	11.848	2.249	1.00	22.10	C
ATOM	2375	OG	SER	A	153	11.713	11.335	2.850	1.00	23.94	O
ATOM	2377	C	SER	A	153	15.138	12.879	2.530	1.00	20.72	C
ATOM	2378	O	SER	A	153	15.173	14.045	2.167	1.00	20.69	O
ATOM	2379	N	MET	A	154	16.139	12.060	2.341	1.00	20.71	N
ATOM	2381	CA	MET	A	154	17.303	12.439	1.541	1.00	21.60	C
ATOM	2383	CB	MET	A	154	18.609	12.292	2.328	1.00	22.36	C
ATOM	2386	CG	MET	A	154	19.828	12.128	1.415	1.00	26.55	C
ATOM	2389	SD	MET	A	154	21.355	11.646	2.183	1.00	33.89	S
ATOM	2390	CE	MET	A	154	22.258	12.968	1.688	1.00	35.91	C
ATOM	2394	C	MET	A	154	17.325	11.512	0.340	1.00	20.74	C
ATOM	2395	O	MET	A	154	17.118	10.300	0.484	1.00	21.22	O
ATOM	2396	N	LEU	A	155	17.578	12.084	-0.840	1.00	18.63	N
ATOM	2398	CA	LEU	A	155	17.769	11.354	-2.057	1.00	18.26	C
ATOM	2400	CB	LEU	A	155	16.789	11.880	-3.116	1.00	18.14	C
ATOM	2403	CG	LEU	A	155	17.040	11.391	-4.518	1.00	19.51	C
ATOM	2405	CD1	LEU	A	155	16.899	9.860	-4.611	1.00	20.62	C
ATOM	2409	CD2	LEU	A	155	16.047	12.052	-5.506	1.00	22.23	C
ATOM	2413	C	LEU	A	155	19.213	11.563	-2.575	1.00	17.06	C
ATOM	2414	O	LEU	A	155	19.652	12.677	-2.556	1.00	18.82	O
ATOM	2415	N	VAL	A	156	19.912	10.488	-2.936	1.00	16.79	N
ATOM	2417	CA	VAL	A	156	21.183	10.546	-3.657	1.00	16.83	C
ATOM	2419	CB	VAL	A	156	22.317	9.815	-2.908	1.00	17.25	C

ATOM	2421	CG1	VAL	A	156	23.609	9.900	-3.717	1.00	18.35	C
ATOM	2425	CG2	VAL	A	156	22.494	10.446	-1.558	1.00	16.94	C
ATOM	2429	C	VAL	A	156	20.983	9.912	-5.018	1.00	17.58	C
ATOM	2430	O	VAL	A	156	20.450	8.818	-5.151	1.00	17.02	O
ATOM	2431	N	PHE	A	157	21.383	10.623	-6.056	1.00	17.86	N
ATOM	2433	CA	PHE	A	157	21.242	10.142	-7.395	1.00	18.16	C
ATOM	2435	CB	PHE	A	157	19.981	10.711	-8.046	1.00	18.13	C
ATOM	2438	CG	PHE	A	157	19.973	12.190	-8.165	1.00	18.67	C
ATOM	2439	CD1	PHE	A	157	20.339	12.785	-9.340	1.00	15.88	C
ATOM	2441	CE1	PHE	A	157	20.366	14.174	-9.452	1.00	17.91	C
ATOM	2443	CZ	PHE	A	157	19.974	14.945	-8.408	1.00	19.44	C
ATOM	2445	CE2	PHE	A	157	19.622	14.359	-7.238	1.00	19.61	C
ATOM	2447	CD2	PHE	A	157	19.593	12.978	-7.118	1.00	19.62	C
ATOM	2449	C	PHE	A	157	22.513	10.457	-8.148	1.00	16.65	C
ATOM	2450	O	PHE	A	157	23.355	11.227	-7.676	1.00	16.20	O
ATOM	2451	N	GLY	A	158	22.687	9.800	-9.264	1.00	15.39	N
ATOM	2453	CA	GLY	A	158	23.876	9.956	-10.065	1.00	16.11	C
ATOM	2456	C	GLY	A	158	24.247	8.732	-10.828	1.00	17.72	C
ATOM	2457	O	GLY	A	158	23.471	7.783	-10.966	1.00	15.36	O
ATOM	2458	N	ASP	A	159	25.454	8.773	-11.357	1.00	17.79	N
ATOM	2460	CA	ASP	A	159	25.992	7.701	-12.151	1.00	18.68	C
ATOM	2462	CB	ASP	A	159	26.032	8.078	-13.656	1.00	18.82	C
ATOM	2465	CG	ASP	A	159	26.874	9.315	-13.968	1.00	19.85	C
ATOM	2466	OD1	ASP	A	159	27.697	9.707	-13.111	1.00	18.67	O
ATOM	2467	OD2	ASP	A	159	26.872	9.934	-15.082	1.00	19.07	O
ATOM	2468	C	ASP	A	159	27.339	7.294	-11.596	1.00	19.17	C
ATOM	2469	O	ASP	A	159	27.635	7.522	-10.411	1.00	18.11	O
ATOM	2470	N	GLU	A	160	28.164	6.645	-12.411	1.00	19.74	N
ATOM	2472	CA	GLU	A	160	29.340	6.046	-11.862	1.00	21.45	C
ATOM	2474	CB	GLU	A	160	29.905	4.981	-12.811	1.00	23.73	C
ATOM	2477	CG	GLU	A	160	29.044	3.730	-12.850	1.00	28.81	C
ATOM	2480	CD	GLU	A	160	29.120	2.932	-11.568	1.00	35.85	C
ATOM	2481	OE1	GLU	A	160	30.214	2.833	-10.964	1.00	42.48	O
ATOM	2482	OE2	GLU	A	160	28.066	2.393	-11.151	1.00	45.44	O
ATOM	2483	C	GLU	A	160	30.392	7.098	-11.570	1.00	19.38	C
ATOM	2484	O	GLU	A	160	31.332	6.804	-10.880	1.00	20.87	O
ATOM	2485	N	THR	A	161	30.275	8.289	-12.152	1.00	18.57	N
ATOM	2487	CA	THR	A	161	31.269	9.336	-11.923	1.00	18.11	C
ATOM	2489	CB	THR	A	161	31.931	9.776	-13.228	1.00	19.50	C
ATOM	2491	OG1	THR	A	161	30.939	10.251	-14.136	1.00	24.87	O
ATOM	2493	CG2	THR	A	161	32.469	8.641	-13.933	1.00	21.24	C
ATOM	2497	C	THR	A	161	30.768	10.558	-11.154	1.00	17.67	C
ATOM	2498	O	THR	A	161	31.588	11.309	-10.625	1.00	18.44	O
ATOM	2499	N	HIS	A	162	29.449	10.760	-11.087	1.00	15.51	N
ATOM	2501	CA	HIS	A	162	28.867	11.935	-10.456	1.00	14.81	C
ATOM	2503	CB	HIS	A	162	28.319	12.924	-11.507	1.00	16.38	C
ATOM	2506	CG	HIS	A	162	29.317	13.323	-12.544	1.00	22.24	C
ATOM	2507	ND1	HIS	A	162	30.552	13.861	-12.227	1.00	30.04	N
ATOM	2509	CE1	HIS	A	162	31.233	14.069	-13.341	1.00	28.22	C
ATOM	2511	NE2	HIS	A	162	30.465	13.732	-14.363	1.00	29.07	N
ATOM	2513	CD2	HIS	A	162	29.273	13.244	-13.890	1.00	25.79	C
ATOM	2515	C	HIS	A	162	27.744	11.568	-9.523	1.00	13.28	C
ATOM	2516	O	HIS	A	162	26.970	10.658	-9.827	1.00	14.19	O
ATOM	2517	N	SER	A	163	27.656	12.283	-8.415	1.00	11.46	N
ATOM	2519	CA	SER	A	163	26.619	12.153	-7.416	1.00	11.12	C
ATOM	2521	CB	SER	A	163	27.154	11.489	-6.160	1.00	12.11	C
ATOM	2524	OG	SER	A	163	27.690	10.214	-6.444	1.00	13.70	O
ATOM	2526	C	SER	A	163	26.080	13.503	-7.019	1.00	11.52	C
ATOM	2527	O	SER	A	163	26.794	14.534	-7.013	1.00	12.24	O
ATOM	2528	N	HIS	A	164	24.804	13.508	-6.696	1.00	12.48	N
ATOM	2530	CA	HIS	A	164	24.077	14.682	-6.219	1.00	12.66	C
ATOM	2532	CB	HIS	A	164	23.202	15.328	-7.329	1.00	13.78	C
ATOM	2535	CG	HIS	A	164	23.983	15.747	-8.512	1.00	15.81	C
ATOM	2536	ND1	HIS	A	164	24.567	16.987	-8.598	1.00	16.19	N
ATOM	2538	CE1	HIS	A	164	25.268	17.063	-9.714	1.00	17.36	C
ATOM	2540	NE2	HIS	A	164	25.166	15.912	-10.349	1.00	16.30	N
ATOM	2542	CD2	HIS	A	164	24.363	15.069	-9.617	1.00	16.65	C

ATOM	2544	C	HIS	A	164	23.193	14.219	-5.109	1.00 13.56	C
ATOM	2545	O	HIS	A	164	22.731	13.052	-5.124	1.00 15.87	O
ATOM	2546	N	PHE	A	165	22.896	15.111	-4.178	1.00 13.08	N
ATOM	2548	CA	PHE	A	165	21.858	14.835	-3.179	1.00 13.76	C
ATOM	2550	CB	PHE	A	165	22.486	14.520	-1.831	1.00 14.05	C
ATOM	2553	CG	PHE	A	165	22.862	15.736	-1.063	1.00 14.54	C
ATOM	2554	CD1	PHE	A	165	21.992	16.259	-0.134	1.00 16.09	C
ATOM	2556	CE1	PHE	A	165	22.306	17.393	0.576	1.00 17.18	C
ATOM	2558	CZ	PHE	A	165	23.483	18.035	0.320	1.00 16.24	C
ATOM	2560	CE2	PHE	A	165	24.369	17.543	-0.613	1.00 15.21	C
ATOM	2562	CD2	PHE	A	165	24.046	16.380	-1.316	1.00 15.21	C
ATOM	2564	C	PHE	A	165	20.864	15.988	-3.031	1.00 15.04	C
ATOM	2565	O	PHE	A	165	21.167	17.146	-3.359	1.00 15.22	O
ATOM	2566	N	LEU	A	166	19.699	15.642	-2.479	1.00 16.91	N
ATOM	2568	CA	LEU	A	166	18.550	16.514	-2.290	1.00 19.36	C
ATOM	2570	CB	LEU	A	166	17.444	16.237	-3.339	1.00 21.85	C
ATOM	2573	CG	LEU	A	166	17.646	16.429	-4.807	1.00 24.84	C
ATOM	2575	CD1	LEU	A	166	16.358	16.183	-5.579	1.00 27.19	C
ATOM	2579	CD2	LEU	A	166	18.133	17.840	-5.038	1.00 29.32	C
ATOM	2583	C	LEU	A	166	17.923	16.093	-0.996	1.00 18.34	C
ATOM	2584	O	LEU	A	166	17.840	14.888	-0.726	1.00 18.62	O
ATOM	2585	N	VAL	A	167	17.455	17.046	-0.205	1.00 17.61	N
ATOM	2587	CA	VAL	A	167	16.475	16.669	0.816	1.00 18.59	C
ATOM	2589	CB	VAL	A	167	16.735	17.277	2.202	1.00 18.15	C
ATOM	2591	CG1	VAL	A	167	17.994	16.648	2.831	1.00 17.22	C
ATOM	2595	CG2	VAL	A	167	16.847	18.745	2.174	1.00 18.38	C
ATOM	2599	C	VAL	A	167	15.050	17.011	0.307	1.00 20.76	C
ATOM	2600	O	VAL	A	167	14.835	18.038	-0.411	1.00 20.65	O
ATOM	2601	N	ILE	A	168	14.119	16.132	0.709	1.00 21.49	N
ATOM	2603	CA	ILE	A	168	12.745	16.061	0.199	1.00 23.20	C
ATOM	2605	CB	ILE	A	168	12.533	14.719	-0.531	1.00 24.25	C
ATOM	2607	CG1	ILE	A	168	13.527	14.539	-1.674	1.00 28.83	C
ATOM	2610	CD1	ILE	A	168	13.551	15.648	-2.628	1.00 29.83	C
ATOM	2614	CG2	ILE	A	168	11.080	14.576	-1.044	1.00 27.33	C
ATOM	2618	C	ILE	A	168	11.790	16.074	1.380	1.00 23.45	C
ATOM	2619	O	ILE	A	168	12.169	15.640	2.444	1.00 21.82	O
ATOM	2620	N	GLY	A	169	10.537	16.496	1.173	1.00 23.98	N
ATOM	2622	CA	GLY	A	169	9.492	16.265	2.180	1.00 24.48	C
ATOM	2625	C	GLY	A	169	8.769	17.484	2.681	1.00 24.94	C
ATOM	2626	O	GLY	A	169	9.082	18.611	2.314	1.00 23.44	O
ATOM	2627	N	GLN	A	170	7.777	17.278	3.564	1.00 26.64	N
ATOM	2629	CA	GLN	A	170	6.960	18.414	4.013	1.00 27.06	C
ATOM	2631	CB	GLN	A	170	5.697	17.977	4.798	1.00 27.80	C
ATOM	2634	CG	GLN	A	170	4.616	19.085	4.965	1.00 30.55	C
ATOM	2637	CD	GLN	A	170	4.147	19.779	3.642	1.00 32.85	C
ATOM	2638	OE1	GLN	A	170	3.801	19.121	2.644	1.00 36.02	O
ATOM	2639	NE2	GLN	A	170	4.137	21.105	3.654	1.00 33.67	N
ATOM	2642	C	GLN	A	170	7.754	19.450	4.785	1.00 26.43	C
ATOM	2643	O	GLN	A	170	7.570	20.635	4.561	1.00 27.07	O
ATOM	2644	N	ALA	A	171	8.682	19.026	5.646	1.00 26.07	N
ATOM	2646	CA	ALA	A	171	9.504	19.965	6.396	1.00 24.96	C
ATOM	2648	CB	ALA	A	171	10.318	19.224	7.443	1.00 25.10	C
ATOM	2652	C	ALA	A	171	10.430	20.800	5.458	1.00 23.28	C
ATOM	2653	O	ALA	A	171	10.656	21.967	5.702	1.00 22.89	O
ATOM	2654	N	VAL	A	172	10.889	20.196	4.379	1.00 23.06	N
ATOM	2656	CA	VAL	A	172	11.656	20.878	3.330	1.00 23.30	C
ATOM	2658	CB	VAL	A	172	12.263	19.867	2.352	1.00 23.77	C
ATOM	2660	CG1	VAL	A	172	12.865	20.541	1.114	1.00 25.81	C
ATOM	2664	CG2	VAL	A	172	13.366	19.030	3.059	1.00 23.91	C
ATOM	2668	C	VAL	A	172	10.757	21.915	2.616	1.00 24.91	C
ATOM	2669	O	VAL	A	172	11.105	23.093	2.517	1.00 24.00	O
ATOM	2670	N	ASP	A	173	9.585	21.471	2.166	1.00 25.46	N
ATOM	2672	CA	ASP	A	173	8.575	22.402	1.630	1.00 26.89	C
ATOM	2674	CB	ASP	A	173	7.229	21.694	1.314	1.00 27.25	C
ATOM	2677	CG	ASP	A	173	7.375	20.500	0.408	1.00 30.14	C
ATOM	2678	OD1	ASP	A	173	8.382	20.433	-0.307	1.00 30.09	O
ATOM	2679	OD2	ASP	A	173	6.520	19.571	0.331	1.00 34.35	O

ATOM	2680	C	ASP	A	173	8.304	23.519	2.633	1.00 26.49	C
ATOM	2681	O	ASP	A	173	8.365	24.664	2.278	1.00 26.96	O
ATOM	2682	N	ASP	A	174	8.033	23.170	3.889	1.00 27.49	N
ATOM	2684	CA	ASP	A	174	7.701	24.129	4.952	1.00 27.13	C
ATOM	2686	CB	ASP	A	174	7.439	23.404	6.287	1.00 27.56	C
ATOM	2689	CG	ASP	A	174	6.182	22.554	6.268	1.00 29.87	C
ATOM	2690	OD1	ASP	A	174	5.340	22.736	5.344	1.00 30.41	O
ATOM	2691	OD2	ASP	A	174	5.987	21.631	7.109	1.00 32.36	O
ATOM	2692	C	ASP	A	174	8.786	25.160	5.200	1.00 27.37	C
ATOM	2693	O	ASP	A	174	8.500	26.335	5.505	1.00 27.29	O
ATOM	2694	N	VAL	A	175	10.058	24.749	5.127	1.00 27.48	N
ATOM	2696	CA	VAL	A	175	11.100	25.688	5.506	1.00 26.92	C
ATOM	2698	CB	VAL	A	175	12.487	25.006	5.754	1.00 26.10	C
ATOM	2700	CG1	VAL	A	175	13.215	24.706	4.468	1.00 25.53	C
ATOM	2704	CG2	VAL	A	175	13.305	25.862	6.692	1.00 26.02	C
ATOM	2708	C	VAL	A	175	11.159	26.807	4.468	1.00 28.15	C
ATOM	2709	O	VAL	A	175	11.403	27.970	4.814	1.00 28.37	O
ATOM	2710	N	ARG	A	176	10.897	26.439	3.223	1.00 29.34	N
ATOM	2712	CA	ARG	A	176	10.835	27.395	2.122	1.00 31.75	C
ATOM	2714	CB	ARG	A	176	10.750	26.638	0.801	1.00 32.49	C
ATOM	2717	CG	ARG	A	176	10.527	27.522	-0.433	1.00 36.59	C
ATOM	2720	CD	ARG	A	176	11.775	28.132	-0.982	1.00 40.51	C
ATOM	2723	NE	ARG	A	176	12.649	27.106	-1.552	1.00 44.57	N
ATOM	2725	CZ	ARG	A	176	13.817	27.345	-2.137	1.00 44.94	C
ATOM	2726	NH1	ARG	A	176	14.262	28.584	-2.269	1.00 46.34	N
ATOM	2729	NH2	ARG	A	176	14.539	26.335	-2.599	1.00 45.51	N
ATOM	2732	C	ARG	A	176	9.615	28.308	2.277	1.00 31.96	C
ATOM	2733	O	ARG	A	176	9.724	29.525	2.117	1.00 31.82	O
ATOM	2734	N	LEU	A	177	8.466	27.711	2.581	1.00 32.51	N
ATOM	2736	CA	LEU	A	177	7.236	28.484	2.836	1.00 33.42	C
ATOM	2738	CB	LEU	A	177	6.060	27.552	3.132	1.00 33.40	C
ATOM	2741	CG	LEU	A	177	5.664	26.630	1.976	1.00 33.86	C
ATOM	2743	CD1	LEU	A	177	4.540	25.744	2.415	1.00 34.67	C
ATOM	2747	CD2	LEU	A	177	5.259	27.427	0.743	1.00 34.31	C
ATOM	2751	C	LEU	A	177	7.440	29.484	3.977	1.00 33.29	C
ATOM	2752	O	LEU	A	177	7.078	30.647	3.858	1.00 33.59	O
ATOM	2753	N	ALA	A	178	8.074	29.026	5.055	1.00 33.71	N
ATOM	2755	CA	ALA	A	178	8.360	29.837	6.227	1.00 33.80	C
ATOM	2757	CB	ALA	A	178	8.975	28.963	7.308	1.00 33.60	C
ATOM	2761	C	ALA	A	178	9.273	31.021	5.937	1.00 35.12	C
ATOM	2762	O	ALA	A	178	9.043	32.127	6.416	1.00 34.86	O
ATOM	2763	N	GLN	A	179	10.324	30.795	5.153	1.00 36.88	N
ATOM	2765	CA	GLN	A	179	11.272	31.861	4.831	1.00 38.15	C
ATOM	2767	CB	GLN	A	179	12.532	31.282	4.169	1.00 38.60	C
ATOM	2770	CG	GLN	A	179	13.426	32.332	3.477	1.00 41.80	C
ATOM	2773	CD	GLN	A	179	13.087	32.543	1.999	1.00 45.05	C
ATOM	2774	OE1	GLN	A	179	13.256	33.648	1.489	1.00 49.19	O
ATOM	2775	NE2	GLN	A	179	12.595	31.497	1.322	1.00 45.95	N
ATOM	2778	C	GLN	A	179	10.651	32.974	3.949	1.00 38.86	C
ATOM	2779	O	GLN	A	179	10.932	34.146	4.156	1.00 38.22	O
ATOM	2780	N	ASN	A	180	9.834	32.620	2.968	1.00 40.39	N
ATOM	2782	CA	ASN	A	180	9.280	33.674	2.104	1.00 41.83	C
ATOM	2784	CB	ASN	A	180	9.065	33.230	0.636	1.00 42.19	C
ATOM	2787	CG	ASN	A	180	8.269	31.971	0.501	1.00 43.48	C
ATOM	2788	OD1	ASN	A	180	7.218	31.811	1.132	1.00 49.01	O
ATOM	2789	ND2	ASN	A	180	8.743	31.067	-0.355	1.00 42.51	N
ATOM	2792	C	ASN	A	180	8.076	34.435	2.705	1.00 42.26	C
ATOM	2793	O	ASN	A	180	7.637	35.424	2.124	1.00 42.22	O
ATOM	2794	N	MET	A	181	7.584	34.002	3.875	1.00 42.69	N
ATOM	2796	CA	MET	A	181	6.718	34.835	4.733	1.00 42.55	C
ATOM	2798	CB	MET	A	181	5.951	33.994	5.749	1.00 42.47	C
ATOM	2801	CG	MET	A	181	4.989	33.003	5.160	1.00 43.38	C
ATOM	2804	SD	MET	A	181	4.259	32.016	6.478	1.00 44.21	S
ATOM	2805	CE	MET	A	181	4.368	30.384	5.740	1.00 44.28	C
ATOM	2809	C	MET	A	181	7.534	35.835	5.538	1.00 42.89	C
ATOM	2810	O	MET	A	181	7.112	36.968	5.742	1.00 42.84	O
ATOM	2811	N	ALA	A	182	8.699	35.408	6.014	1.00 42.59	N

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ATOM   2813  CA  ALA A 182       9.576  36.283   6.776  1.00 42.57           C
ATOM   2815  CB  ALA A 182      10.935  35.590   7.034  1.00 42.68           C
ATOM   2819  C   ALA A 182       9.799  37.615   6.066  1.00 42.56           C
ATOM   2820  O   ALA A 182       9.865  37.668   4.838  1.00 42.79           O
ATOM   2821  N   GLN A 183       9.887  38.679   6.856  1.00 42.04           N
ATOM   2823  CA  GLN A 183      10.435  39.947   6.413  1.00 41.92           C
ATOM   2825  CB  GLN A 183       9.678  41.117   7.058  1.00 42.37           C
ATOM   2828  CG  GLN A 183       8.193  41.174   6.741  1.00 43.98           C
ATOM   2831  CD  GLN A 183       7.931  41.143   5.254  1.00 47.04           C
ATOM   2832  OE1 GLN A 183       8.575  41.877   4.499  1.00 50.86           O
ATOM   2833  NE2 GLN A 183       7.012  40.285   4.819  1.00 49.47           N
ATOM   2836  C   GLN A 183      11.888  39.966   6.864  1.00 41.31           C
ATOM   2837  O   GLN A 183      12.319  39.073   7.599  1.00 41.47           O
ATOM   2838  N   MET A 184      12.646  40.970   6.439  1.00 39.84           N
ATOM   2840  CA  MET A 184      14.002  41.153   6.927  1.00 39.35           C
ATOM   2842  CB  MET A 184      14.621  42.461   6.415  1.00 39.90           C
ATOM   2845  CG  MET A 184      15.174  42.374   4.987  1.00 41.41           C
ATOM   2848  SD  MET A 184      16.675  41.359   4.806  1.00 45.32           S
ATOM   2849  CE  MET A 184      16.221  40.277   3.527  1.00 45.71           C
ATOM   2853  C   MET A 184      14.014  41.169   8.443  1.00 37.96           C
ATOM   2854  O   MET A 184      13.196  41.832   9.065  1.00 37.26           O
ATOM   2855  N   ASN A 185      14.955  40.416   9.007  1.00 36.05           N
ATOM   2857  CA  ASN A 185      15.195  40.324  10.431  1.00 34.80           C
ATOM   2859  CB  ASN A 185      15.192  41.717  11.086  1.00 36.00           C
ATOM   2862  CG  ASN A 185      15.652  41.694  12.542  1.00 39.78           C
ATOM   2863  OD1 ASN A 185      16.719  41.172  12.874  1.00 44.98           O
ATOM   2864  ND2 ASN A 185      14.828  42.265  13.425  1.00 44.67           N
ATOM   2867  C   ASN A 185      14.271  39.355  11.176  1.00 32.19           C
ATOM   2868  O   ASN A 185      14.436  39.184  12.364  1.00 32.06           O
ATOM   2869  N   ASP A 186      13.353  38.695  10.480  1.00 29.61           N
ATOM   2871  CA  ASP A 186      12.405  37.775  11.110  1.00 27.77           C
ATOM   2873  CB  ASP A 186      11.108  37.696  10.333  1.00 28.06           C
ATOM   2876  CG  ASP A 186      10.265  38.950  10.427  1.00 27.98           C
ATOM   2877  OD1 ASP A 186      10.578  39.915  11.171  1.00 29.80           O
ATOM   2878  OD2 ASP A 186       9.251  39.012   9.734  1.00 28.86           O
ATOM   2879  C   ASP A 186      12.925  36.340  11.179  1.00 26.77           C
ATOM   2880  O   ASP A 186      13.700  35.893  10.333  1.00 24.68           O
ATOM   2881  N   VAL A 187      12.439  35.619  12.179  1.00 25.22           N
ATOM   2883  CA  VAL A 187      12.541  34.170  12.259  1.00 24.94           C
ATOM   2885  CB  VAL A 187      13.219  33.745  13.548  1.00 24.85           C
ATOM   2887  CG1 VAL A 187      13.340  32.204  13.638  1.00 24.99           C
ATOM   2891  CG2 VAL A 187      14.572  34.425  13.701  1.00 25.13           C
ATOM   2895  C   VAL A 187      11.102  33.663  12.267  1.00 24.86           C
ATOM   2896  O   VAL A 187      10.329  34.035  13.159  1.00 24.87           O
ATOM   2897  N   ILE A 188      10.748  32.855  11.273  1.00 24.05           N
ATOM   2899  CA  ILE A 188       9.440  32.243  11.158  1.00 25.37           C
ATOM   2901  CB  ILE A 188       8.857  32.463   9.752  1.00 25.59           C
ATOM   2903  CG1 ILE A 188       8.776  33.953   9.416  1.00 27.54           C
ATOM   2906  CD1 ILE A 188       7.917  34.762  10.323  1.00 29.18           C
ATOM   2910  CG2 ILE A 188       7.480  31.774   9.631  1.00 24.91           C
ATOM   2914  C   ILE A 188       9.556  30.738  11.382  1.00 25.87           C
ATOM   2915  O   ILE A 188      10.459  30.099  10.843  1.00 24.22           O
ATOM   2916  N   LEU A 189       8.620  30.183  12.154  1.00 25.08           N
ATOM   2918  CA  LEU A 189       8.519  28.751  12.380  1.00 25.25           C
ATOM   2920  CB  LEU A 189       8.227  28.475  13.851  1.00 24.44           C
ATOM   2923  CG  LEU A 189       9.016  29.241  14.896  1.00 24.05           C
ATOM   2925  CD1 LEU A 189       8.666  28.809  16.294  1.00 23.52           C
ATOM   2929  CD2 LEU A 189      10.537  29.042  14.654  1.00 25.85           C
ATOM   2933  C   LEU A 189       7.394  28.194  11.545  1.00 26.00           C
ATOM   2934  O   LEU A 189       6.310  28.768  11.519  1.00 27.40           O
ATOM   2935  N   SER A 190       7.631  27.071  10.878  1.00 25.99           N
ATOM   2937  CA  SER A 190       6.591  26.342  10.183  1.00 25.34           C
ATOM   2939  CB  SER A 190       7.162  25.092   9.556  1.00 25.97           C
ATOM   2942  OG  SER A 190       7.548  24.199  10.576  1.00 24.80           O
ATOM   2944  C   SER A 190       5.508  25.913  11.178  1.00 26.19           C
ATOM   2945  O   SER A 190       5.785  25.873  12.363  1.00 25.14           O
ATOM   2946  N   PRO A 191       4.302  25.581  10.706  1.00 26.68           N
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ATOM	2947	CA	PRO	A	191	3.274	25.049	11.617	1.00	27.40	C
ATOM	2949	CB	PRO	A	191	2.137	24.647	10.681	1.00	27.30	C
ATOM	2952	CG	PRO	A	191	2.302	25.556	9.502	1.00	28.30	C
ATOM	2955	CD	PRO	A	191	3.805	25.637	9.317	1.00	26.85	C
ATOM	2958	C	PRO	A	191	3.776	23.883	12.452	1.00	27.52	C
ATOM	2959	O	PRO	A	191	3.689	24.007	13.668	1.00	28.57	O
ATOM	2960	N	ASN	A	192	4.331	22.835	11.845	1.00	27.93	N
ATOM	2962	CA	ASN	A	192	4.822	21.659	12.589	1.00	28.02	C
ATOM	2964	CB	ASN	A	192	5.284	20.570	11.629	1.00	27.92	C
ATOM	2967	CG	ASN	A	192	5.417	19.218	12.293	1.00	30.09	C
ATOM	2968	OD1	ASN	A	192	6.358	18.446	12.005	1.00	29.75	O
ATOM	2969	ND2	ASN	A	192	4.472	18.901	13.175	1.00	28.47	N
ATOM	2972	C	ASN	A	192	5.942	22.031	13.557	1.00	28.24	C
ATOM	2973	O	ASN	A	192	5.982	21.561	14.700	1.00	28.69	O
ATOM	2974	N	CYS	A	193	6.844	22.908	13.125	1.00	28.52	N
ATOM	2976	CA	CYS	A	193	7.877	23.422	14.023	1.00	27.65	C
ATOM	2978	CB	CYS	A	193	8.845	24.346	13.277	1.00	27.52	C
ATOM	2981	SG	CYS	A	193	10.231	24.923	14.281	1.00	26.89	S
ATOM	2982	C	CYS	A	193	7.257	24.105	15.237	1.00	27.82	C
ATOM	2983	O	CYS	A	193	7.649	23.858	16.365	1.00	27.34	O
ATOM	2984	N	TRP	A	194	6.254	24.947	15.024	1.00	27.62	N
ATOM	2986	CA	TRP	A	194	5.518	25.544	16.151	1.00	27.86	C
ATOM	2988	CB	TRP	A	194	4.525	26.591	15.622	1.00	27.95	C
ATOM	2991	CG	TRP	A	194	3.560	27.155	16.610	1.00	27.87	C
ATOM	2992	CD1	TRP	A	194	2.179	27.202	16.472	1.00	29.96	C
ATOM	2994	NE1	TRP	A	194	1.623	27.832	17.556	1.00	29.74	N
ATOM	2996	CE2	TRP	A	194	2.615	28.241	18.403	1.00	27.03	C
ATOM	2997	CD2	TRP	A	194	3.852	27.830	17.840	1.00	26.98	C
ATOM	2998	CE3	TRP	A	194	5.025	28.141	18.531	1.00	25.15	C
ATOM	3000	CZ3	TRP	A	194	4.939	28.825	19.726	1.00	26.77	C
ATOM	3002	CH2	TRP	A	194	3.703	29.182	20.260	1.00	29.35	C
ATOM	3004	CZ2	TRP	A	194	2.537	28.896	19.608	1.00	25.93	C
ATOM	3006	C	TRP	A	194	4.806	24.472	17.003	1.00	27.50	C
ATOM	3007	O	TRP	A	194	4.835	24.550	18.215	1.00	27.63	O
ATOM	3008	N	GLN	A	195	4.247	23.448	16.361	1.00	29.58	N
ATOM	3010	CA	GLN	A	195	3.582	22.330	17.057	1.00	30.81	C
ATOM	3012	CB	GLN	A	195	2.928	21.405	16.016	1.00	32.46	C
ATOM	3015	CG	GLN	A	195	2.155	20.195	16.568	1.00	37.35	C
ATOM	3018	CD	GLN	A	195	0.781	20.580	17.105	1.00	43.13	C
ATOM	3019	OE1	GLN	A	195	0.665	21.190	18.185	1.00	45.42	O
ATOM	3020	NE2	GLN	A	195	-0.264	20.234	16.349	1.00	46.03	N
ATOM	3023	C	GLN	A	195	4.549	21.529	17.932	1.00	31.15	C
ATOM	3024	O	GLN	A	195	4.156	20.983	18.980	1.00	31.11	O
ATOM	3025	N	LEU	A	196	5.813	21.446	17.507	1.00	29.71	N
ATOM	3027	CA	LEU	A	196	6.795	20.567	18.148	1.00	29.55	C
ATOM	3029	CB	LEU	A	196	7.700	19.919	17.106	1.00	29.57	C
ATOM	3032	CG	LEU	A	196	7.103	18.836	16.218	1.00	30.47	C
ATOM	3034	CD1	LEU	A	196	8.091	18.420	15.159	1.00	32.48	C
ATOM	3038	CD2	LEU	A	196	6.649	17.648	17.057	1.00	33.40	C
ATOM	3042	C	LEU	A	196	7.666	21.295	19.143	1.00	28.68	C
ATOM	3043	O	LEU	A	196	8.361	20.657	19.941	1.00	29.91	O
ATOM	3044	N	CYS	A	197	7.641	22.621	19.130	1.00	28.08	N
ATOM	3046	CA	CYS	A	197	8.624	23.385	19.869	1.00	27.69	C
ATOM	3048	CB	CYS	A	197	8.830	24.762	19.230	1.00	27.69	C
ATOM	3051	SG	CYS	A	197	7.549	25.972	19.653	1.00	28.40	S
ATOM	3052	C	CYS	A	197	8.299	23.544	21.340	1.00	29.04	C
ATOM	3053	O	CYS	A	197	7.216	23.165	21.796	1.00	28.98	O
ATOM	3054	N	ASP	A	198	9.260	24.088	22.075	1.00	29.23	N
ATOM	3056	CA	ASP	A	198	9.133	24.351	23.496	1.00	29.99	C
ATOM	3058	CB	ASP	A	198	10.465	24.269	24.252	1.00	30.86	C
ATOM	3061	CG	ASP	A	198	10.287	24.470	25.745	1.00	31.51	C
ATOM	3062	OD1	ASP	A	198	11.265	24.391	26.531	1.00	29.92	O
ATOM	3063	OD2	ASP	A	198	9.167	24.752	26.228	1.00	31.73	O
ATOM	3064	C	ASP	A	198	8.540	25.737	23.655	1.00	30.70	C
ATOM	3065	O	ASP	A	198	9.256	26.725	23.748	1.00	30.53	O
ATOM	3066	N	ARG	A	199	7.212	25.780	23.704	1.00	30.89	N
ATOM	3068	CA	ARG	A	199	6.499	27.059	23.677	1.00	32.20	C

ATOM	3070	CB	ARG A 199	4.994	26.849	23.554	1.00	31.77		C
ATOM	3073	CG	ARG A 199	4.620	26.186	22.269	1.00	32.23		C
ATOM	3076	CD	ARG A 199	3.173	26.079	22.017	1.00	31.53		C
ATOM	3079	NE	ARG A 199	2.929	25.482	20.699	1.00	33.13		N
ATOM	3081	CZ	ARG A 199	1.739	25.399	20.125	1.00	32.84		C
ATOM	3082	NH1	ARG A 199	0.653	25.832	20.757	1.00	35.57		N
ATOM	3085	NH2	ARG A 199	1.619	24.861	18.922	1.00	33.02		N
ATOM	3088	C	ARG A 199	6.782	27.922	24.873	1.00	32.01		C
ATOM	3089	O	ARG A 199	6.475	29.095	24.843	1.00	32.76		O
ATOM	3090	N	SER A 200	7.349	27.350	25.928	1.00	32.54		N
ATOM	3092	CA	SER A 200	7.706	28.126	27.119	1.00	33.04		C
ATOM	3094	CB	SER A 200	7.946	27.191	28.309	1.00	33.13		C
ATOM	3097	OG	SER A 200	9.194	26.514	28.150	1.00	34.94		O
ATOM	3099	C	SER A 200	8.953	28.965	26.910	1.00	33.72		C
ATOM	3100	O	SER A 200	9.242	29.870	27.683	1.00	33.36		O
ATOM	3101	N	MET A 201	9.737	28.634	25.896	1.00	34.09		N
ATOM	3103	CA	MET A 201	10.935	29.402	25.595	1.00	34.68		C
ATOM	3105	CB	MET A 201	11.889	28.544	24.754	1.00	34.47		C
ATOM	3108	CG	MET A 201	12.378	27.295	25.469	1.00	35.56		C
ATOM	3111	SD	MET A 201	13.412	27.763	26.855	1.00	37.30		S
ATOM	3112	CE	MET A 201	14.994	28.078	26.131	1.00	40.95		C
ATOM	3116	C	MET A 201	10.657	30.711	24.850	1.00	34.41		C
ATOM	3117	O	MET A 201	11.430	31.635	24.975	1.00	33.78		O
ATOM	3118	N	ILE A 202	9.577	30.771	24.077	1.00	34.88		N
ATOM	3120	CA	ILE A 202	9.432	31.829	23.086	1.00	35.91		C
ATOM	3122	CB	ILE A 202	9.698	31.276	21.674	1.00	36.04		C
ATOM	3124	CG1	ILE A 202	8.859	30.029	21.409	1.00	34.62		C
ATOM	3127	CD1	ILE A 202	8.765	29.653	19.972	1.00	35.40		C
ATOM	3131	CG2	ILE A 202	11.187	30.948	21.517	1.00	36.19		C
ATOM	3135	C	ILE A 202	8.079	32.539	23.110	1.00	37.26		C
ATOM	3136	O	ILE A 202	7.040	31.946	23.430	1.00	36.57		O
ATOM	3137	N	GLU A 203	8.132	33.816	22.756	1.00	38.91		N
ATOM	3139	CA	GLU A 203	6.964	34.658	22.539	1.00	40.85		C
ATOM	3141	CB	GLU A 203	7.212	36.011	23.188	1.00	41.64		C
ATOM	3144	CG	GLU A 203	7.725	35.881	24.615	1.00	45.70		C
ATOM	3147	CD	GLU A 203	7.429	37.090	25.466	1.00	49.64		C
ATOM	3148	OE1	GLU A 203	7.866	38.209	25.086	1.00	52.46		O
ATOM	3149	OE2	GLU A 203	6.766	36.898	26.506	1.00	50.23		O
ATOM	3150	C	GLU A 203	6.807	34.828	21.046	1.00	41.04		C
ATOM	3151	O	GLU A 203	7.716	35.334	20.409	1.00	41.17		O
ATOM	3152	N	ILE A 204	5.687	34.364	20.503	1.00	41.58		N
ATOM	3154	CA	ILE A 204	5.428	34.407	19.077	1.00	42.53		C
ATOM	3156	CB	ILE A 204	5.056	32.975	18.509	1.00	42.47		C
ATOM	3158	CG1	ILE A 204	3.710	32.454	19.062	1.00	42.58		C
ATOM	3161	CD1	ILE A 204	2.459	32.766	18.192	1.00	43.33		C
ATOM	3165	CG2	ILE A 204	6.168	32.004	18.801	1.00	41.97		C
ATOM	3169	C	ILE A 204	4.368	35.450	18.706	1.00	43.78		C
ATOM	3170	O	ILE A 204	4.028	36.329	19.501	1.00	44.08		O
ATOM	3171	N	GLU A 205	3.878	35.319	17.479	1.00	44.59		N
ATOM	3173	CA	GLU A 205	2.912	36.202	16.887	1.00	45.68		C
ATOM	3175	CB	GLU A 205	3.618	37.476	16.458	1.00	46.17		C
ATOM	3178	CG	GLU A 205	2.758	38.512	15.791	1.00	48.29		C
ATOM	3181	CD	GLU A 205	3.540	39.787	15.591	1.00	51.10		C
ATOM	3182	OE1	GLU A 205	3.988	40.046	14.451	1.00	52.21		O
ATOM	3183	OE2	GLU A 205	3.728	40.508	16.594	1.00	52.95		O
ATOM	3184	C	GLU A 205	2.381	35.455	15.677	1.00	46.32		C
ATOM	3185	O	GLU A 205	3.153	34.859	14.896	1.00	44.93		O
ATOM	3186	N	SER A 206	1.066	35.452	15.527	1.00	46.85		N
ATOM	3188	CA	SER A 206	0.453	34.832	14.365	1.00	47.86		C
ATOM	3190	CB	SER A 206	-1.077	34.812	14.500	1.00	47.93		C
ATOM	3193	OG	SER A 206	-1.619	36.103	14.276	1.00	48.79		O
ATOM	3195	C	SER A 206	0.874	35.570	13.093	1.00	48.28		C
ATOM	3196	O	SER A 206	1.379	36.692	13.128	1.00	47.43		O
ATOM	3197	N	VAL A 207	0.677	34.899	11.972	1.00	49.83		N
ATOM	3199	CA	VAL A 207	0.957	35.463	10.663	1.00	50.89		C
ATOM	3201	CB	VAL A 207	2.094	34.693	9.947	1.00	51.01		C
ATOM	3203	CG1	VAL A 207	2.396	35.315	8.588	1.00	51.11		C

ATOM	3207	CG2	VAL	A	207	3.348	34.637	10.827	1.00 50.85	C
ATOM	3211	C	VAL	A	207	-0.342	35.331	9.878	1.00 51.87	C
ATOM	3212	O	VAL	A	207	-0.831	34.221	9.663	1.00 51.66	O
ATOM	3213	N	PRO	A	208	-0.928	36.462	9.492	1.00 53.25	N
ATOM	3214	CA	PRO	A	208	-2.217	36.467	8.793	1.00 53.80	C
ATOM	3216	CB	PRO	A	208	-2.209	37.827	8.102	1.00 53.86	C
ATOM	3219	CG	PRO	A	208	-1.464	38.708	9.082	1.00 53.83	C
ATOM	3222	CD	PRO	A	208	-0.426	37.832	9.723	1.00 53.46	C
ATOM	3225	C	PRO	A	208	-2.387	35.330	7.773	1.00 54.38	C
ATOM	3226	O	PRO	A	208	-1.532	35.133	6.910	1.00 54.76	O
ATOM	3227	N	ASP	A	209	-3.474	34.574	7.906	1.00 54.80	N
ATOM	3229	CA	ASP	A	209	-3.821	33.510	6.955	1.00 55.23	C
ATOM	3231	CB	ASP	A	209	-4.128	34.109	5.578	1.00 55.48	C
ATOM	3234	CG	ASP	A	209	-5.060	35.310	5.669	1.00 56.48	C
ATOM	3235	OD1	ASP	A	209	-4.932	36.231	4.832	1.00 56.14	O
ATOM	3236	OD2	ASP	A	209	-5.929	35.417	6.574	1.00 58.11	O
ATOM	3237	C	ASP	A	209	-2.750	32.436	6.853	1.00 54.91	C
ATOM	3238	O	ASP	A	209	-2.517	31.869	5.783	1.00 55.49	O
ATOM	3239	N	GLN	A	210	-2.118	32.163	7.990	1.00 54.49	N
ATOM	3241	CA	GLN	A	210	-1.044	31.179	8.103	1.00 53.68	C
ATOM	3243	CB	GLN	A	210	0.318	31.840	7.864	1.00 53.96	C
ATOM	3246	CG	GLN	A	210	0.538	32.426	6.481	1.00 54.50	C
ATOM	3249	CD	GLN	A	210	0.646	31.370	5.405	1.00 55.80	C
ATOM	3250	OE1	GLN	A	210	0.626	31.688	4.221	1.00 57.99	O
ATOM	3251	NE2	GLN	A	210	0.763	30.113	5.807	1.00 57.01	N
ATOM	3254	C	GLN	A	210	-1.035	30.591	9.512	1.00 52.65	C
ATOM	3255	O	GLN	A	210	-1.161	31.331	10.494	1.00 52.51	O
ATOM	3256	N	ARG	A	211	-0.860	29.272	9.611	1.00 50.98	N
ATOM	3258	CA	ARG	A	211	-0.613	28.622	10.904	1.00 49.98	C
ATOM	3260	CB	ARG	A	211	-1.103	27.168	10.896	1.00 50.38	C
ATOM	3263	CG	ARG	A	211	-2.622	27.022	10.710	1.00 52.10	C
ATOM	3266	CD	ARG	A	211	-3.117	25.600	10.499	1.00 53.82	C
ATOM	3269	NE	ARG	A	211	-2.386	24.916	9.432	1.00 55.67	N
ATOM	3271	CZ	ARG	A	211	-1.407	24.019	9.607	1.00 56.04	C
ATOM	3272	NH1	ARG	A	211	-1.012	23.657	10.829	1.00 56.85	N
ATOM	3275	NH2	ARG	A	211	-0.821	23.471	8.543	1.00 55.64	N
ATOM	3278	C	ARG	A	211	0.874	28.669	11.277	1.00 48.13	C
ATOM	3279	O	ARG	A	211	1.242	28.242	12.369	1.00 48.51	O
ATOM	3280	N	ALA	A	212	1.721	29.176	10.374	1.00 45.57	N
ATOM	3282	CA	ALA	A	212	3.120	29.457	10.705	1.00 43.60	C
ATOM	3284	CB	ALA	A	212	3.933	29.759	9.445	1.00 43.28	C
ATOM	3288	C	ALA	A	212	3.135	30.643	11.631	1.00 41.80	C
ATOM	3289	O	ALA	A	212	2.197	31.438	11.629	1.00 42.05	O
ATOM	3290	N	VAL	A	213	4.186	30.757	12.434	1.00 39.11	N
ATOM	3292	CA	VAL	A	213	4.316	31.839	13.403	1.00 37.52	C
ATOM	3294	CB	VAL	A	213	4.139	31.347	14.866	1.00 37.93	C
ATOM	3296	CG1	VAL	A	213	2.761	30.739	15.073	1.00 36.78	C
ATOM	3300	CG2	VAL	A	213	5.219	30.347	15.249	1.00 37.17	C
ATOM	3304	C	VAL	A	213	5.659	32.535	13.303	1.00 36.85	C
ATOM	3305	O	VAL	A	213	6.630	31.967	12.776	1.00 36.29	O
ATOM	3306	N	LYS	A	214	5.701	33.767	13.810	1.00 34.81	N
ATOM	3308	CA	LYS	A	214	6.893	34.574	13.861	1.00 34.12	C
ATOM	3310	CB	LYS	A	214	6.602	35.995	13.370	1.00 33.94	C
ATOM	3313	CG	LYS	A	214	7.752	36.969	13.579	1.00 34.49	C
ATOM	3316	CD	LYS	A	214	7.383	38.393	13.090	1.00 35.85	C
ATOM	3319	CE	LYS	A	214	8.186	39.455	13.825	1.00 36.47	C
ATOM	3322	NZ	LYS	A	214	7.695	40.804	13.507	1.00 38.97	N
ATOM	3326	C	LYS	A	214	7.358	34.589	15.295	1.00 33.78	C
ATOM	3327	O	LYS	A	214	6.541	34.672	16.216	1.00 33.30	O
ATOM	3328	N	VAL	A	215	8.666	34.440	15.492	1.00 33.29	N
ATOM	3330	CA	VAL	A	215	9.277	34.523	16.816	1.00 33.33	C
ATOM	3332	CB	VAL	A	215	10.602	33.720	16.904	1.00 33.01	C
ATOM	3334	CG1	VAL	A	215	11.295	33.945	18.251	1.00 31.77	C
ATOM	3338	CG2	VAL	A	215	10.332	32.269	16.649	1.00 32.35	C
ATOM	3342	C	VAL	A	215	9.598	35.954	17.129	1.00 34.92	C
ATOM	3343	O	VAL	A	215	10.417	36.573	16.458	1.00 34.47	O
ATOM	3344	N	ASN	A	216	8.938	36.514	18.142	1.00 36.66	N

ATOM	3346	CA	ASN A 216	9.231	37.882	18.536	1.00	37.64		C
ATOM	3348	CB	ASN A 216	8.037	38.547	19.230	1.00	38.36		C
ATOM	3351	CG	ASN A 216	6.846	38.683	18.324	1.00	40.32		C
ATOM	3352	OD1	ASN A 216	6.985	38.967	17.130	1.00	43.33		O
ATOM	3353	ND2	ASN A 216	5.657	38.494	18.880	1.00	43.58		N
ATOM	3356	C	ASN A 216	10.406	37.894	19.451	1.00	38.03		C
ATOM	3357	O	ASN A 216	11.268	38.735	19.324	1.00	37.80		O
ATOM	3358	N	PHE A 217	10.432	36.949	20.386	1.00	39.81		N
ATOM	3360	CA	PHE A 217	11.406	36.948	21.477	1.00	40.83		C
ATOM	3362	CB	PHE A 217	10.880	37.768	22.671	1.00	41.27		C
ATOM	3365	CG	PHE A 217	10.575	39.205	22.344	1.00	42.63		C
ATOM	3366	CD1	PHE A 217	11.607	40.134	22.208	1.00	44.18		C
ATOM	3368	CE1	PHE A 217	11.330	41.461	21.889	1.00	44.88		C
ATOM	3370	CZ	PHE A 217	10.014	41.874	21.700	1.00	45.87		C
ATOM	3372	CE2	PHE A 217	8.968	40.949	21.823	1.00	45.43		C
ATOM	3374	CD2	PHE A 217	9.258	39.623	22.144	1.00	45.18		C
ATOM	3376	C	PHE A 217	11.681	35.524	21.967	1.00	41.50		C
ATOM	3377	O	PHE A 217	10.800	34.649	21.953	1.00	40.78		O
ATOM	3378	N	LEU A 218	12.915	35.301	22.385	1.00	42.38		N
ATOM	3380	CA	LEU A 218	13.286	34.074	23.064	1.00	43.52		C
ATOM	3382	CB	LEU A 218	14.579	33.477	22.492	1.00	43.58		C
ATOM	3385	CG	LEU A 218	15.153	32.295	23.274	1.00	44.30		C
ATOM	3387	CD1	LEU A 218	14.343	31.046	22.995	1.00	44.20		C
ATOM	3391	CD2	LEU A 218	16.606	32.074	22.925	1.00	45.08		C
ATOM	3395	C	LEU A 218	13.467	34.509	24.501	1.00	43.91		C
ATOM	3396	O	LEU A 218	14.425	35.215	24.825	1.00	43.99		O
ATOM	3397	N	LYS A 219	12.507	34.115	25.331	1.00	44.18		N
ATOM	3399	CA	LYS A 219	12.429	34.521	26.726	1.00	44.72		C
ATOM	3401	CB	LYS A 219	11.226	35.461	26.915	1.00	45.19		C
ATOM	3404	CG	LYS A 219	10.910	35.875	28.358	1.00	47.70		C
ATOM	3407	CD	LYS A 219	11.770	37.034	28.837	1.00	50.03		C
ATOM	3410	CE	LYS A 219	11.311	37.535	30.221	1.00	50.56		C
ATOM	3413	NZ	LYS A 219	12.453	37.956	31.108	1.00	51.89		N
ATOM	3417	C	LYS A 219	12.293	33.242	27.572	1.00	44.11		C
ATOM	3418	O	LYS A 219	11.178	32.735	27.795	1.00	43.99		O
ATOM	3419	N	PRO A 220	13.429	32.728	28.029	1.00	43.24		N
ATOM	3420	CA	PRO A 220	13.485	31.410	28.672	1.00	42.74		C
ATOM	3422	CB	PRO A 220	14.959	31.037	28.533	1.00	42.78		C
ATOM	3425	CG	PRO A 220	15.663	32.382	28.685	1.00	43.48		C
ATOM	3428	CD	PRO A 220	14.758	33.379	28.004	1.00	43.50		C
ATOM	3431	C	PRO A 220	13.141	31.515	30.152	1.00	42.07		C
ATOM	3432	O	PRO A 220	13.322	32.603	30.702	1.00	41.82		O
ATOM	3433	N	PRO A 221	12.731	30.410	30.783	1.00	41.09		N
ATOM	3434	CA	PRO A 221	12.461	30.379	32.231	1.00	40.04		C
ATOM	3436	CB	PRO A 221	12.366	28.884	32.533	1.00	40.23		C
ATOM	3439	CG	PRO A 221	11.854	28.289	31.288	1.00	41.74		C
ATOM	3442	CD	PRO A 221	12.493	29.093	30.169	1.00	41.33		C
ATOM	3445	C	PRO A 221	13.574	30.991	33.081	1.00	39.22		C
ATOM	3446	O	PRO A 221	14.733	31.050	32.675	1.00	37.46		O
ATOM	3447	N	PRO A 222	13.206	31.461	34.267	1.00	38.47		N
ATOM	3448	CA	PRO A 222	14.144	32.005	35.239	1.00	37.89		C
ATOM	3450	CB	PRO A 222	13.313	32.041	36.525	1.00	38.05		C
ATOM	3453	CG	PRO A 222	12.008	32.328	36.065	1.00	37.92		C
ATOM	3456	CD	PRO A 222	11.822	31.611	34.744	1.00	39.16		C
ATOM	3459	C	PRO A 222	15.429	31.271	35.494	1.00	37.53		C
ATOM	3460	O	PRO A 222	16.426	31.985	35.546	1.00	38.36		O
ATOM	3461	N	ASN A 223	15.444	29.948	35.677	1.00	36.82		N
ATOM	3463	CA	ASN A 223	16.715	29.256	35.970	1.00	36.86		C
ATOM	3465	CB	ASN A 223	16.540	28.212	37.076	1.00	38.02		C
ATOM	3468	CG	ASN A 223	16.221	28.845	38.424	1.00	41.65		C
ATOM	3469	OD1	ASN A 223	15.425	29.803	38.510	1.00	48.15		O
ATOM	3470	ND2	ASN A 223	16.842	28.325	39.485	1.00	43.60		N
ATOM	3473	C	ASN A 223	17.351	28.590	34.740	1.00	34.67		C
ATOM	3474	O	ASN A 223	18.175	27.685	34.877	1.00	33.89		O
ATOM	3475	N	PHE A 224	16.959	29.047	33.552	1.00	32.85		N
ATOM	3477	CA	PHE A 224	17.552	28.578	32.306	1.00	31.03		C
ATOM	3479	CB	PHE A 224	16.720	29.037	31.138	1.00	31.37		C

ATOM	3482	CG	PHE	A	224	17.114	28.413	29.833	1.00 30.55	C
ATOM	3483	CD1	PHE	A	224	16.808	27.082	29.569	1.00 30.18	C
ATOM	3485	CE1	PHE	A	224	17.167	26.518	28.366	1.00 30.98	C
ATOM	3487	CZ	PHE	A	224	17.802	27.290	27.408	1.00 29.41	C
ATOM	3489	CE2	PHE	A	224	18.112	28.601	27.657	1.00 30.75	C
ATOM	3491	CD2	PHE	A	224	17.760	29.164	28.874	1.00 31.70	C
ATOM	3493	C	PHE	A	224	18.984	29.080	32.115	1.00 29.91	C
ATOM	3494	O	PHE	A	224	19.312	30.235	32.380	1.00 29.78	O
ATOM	3495	N	ASN	A	225	19.854	28.198	31.646	1.00 28.53	N
ATOM	3497	CA	ASN	A	225	21.218	28.593	31.320	1.00 27.62	C
ATOM	3499	CB	ASN	A	225	22.215	28.094	32.370	1.00 28.69	C
ATOM	3502	CG	ASN	A	225	23.642	28.571	32.084	1.00 30.31	C
ATOM	3503	OD1	ASN	A	225	24.102	29.579	32.639	1.00 36.83	O
ATOM	3504	ND2	ASN	A	225	24.341	27.861	31.206	1.00 30.93	N
ATOM	3507	C	ASN	A	225	21.528	27.989	29.949	1.00 26.13	C
ATOM	3508	O	ASN	A	225	21.614	26.782	29.852	1.00 25.62	O
ATOM	3509	N	PHE	A	226	21.629	28.823	28.912	1.00 25.43	N
ATOM	3511	CA	PHE	A	226	21.701	28.289	27.547	1.00 24.30	C
ATOM	3513	CB	PHE	A	226	21.685	29.356	26.456	1.00 24.18	C
ATOM	3516	CG	PHE	A	226	21.656	28.754	25.095	1.00 23.52	C
ATOM	3517	CD1	PHE	A	226	20.479	28.221	24.586	1.00 20.40	C
ATOM	3519	CE1	PHE	A	226	20.444	27.598	23.361	1.00 23.72	C
ATOM	3521	CZ	PHE	A	226	21.633	27.467	22.638	1.00 20.09	C
ATOM	3523	CE2	PHE	A	226	22.801	27.969	23.139	1.00 21.82	C
ATOM	3525	CD2	PHE	A	226	22.836	28.584	24.380	1.00 23.91	C
ATOM	3527	C	PHE	A	226	22.913	27.392	27.366	1.00 24.36	C
ATOM	3528	O	PHE	A	226	22.827	26.341	26.700	1.00 23.51	O
ATOM	3529	N	ASP	A	227	24.018	27.777	27.981	1.00 24.52	N
ATOM	3531	CA	ASP	A	227	25.266	27.023	27.851	1.00 25.32	C
ATOM	3533	CB	ASP	A	227	26.440	27.753	28.504	1.00 26.51	C
ATOM	3536	CG	ASP	A	227	26.795	29.040	27.795	1.00 30.16	C
ATOM	3537	OD1	ASP	A	227	27.536	29.842	28.409	1.00 37.69	O
ATOM	3538	OD2	ASP	A	227	26.387	29.365	26.648	1.00 34.11	O
ATOM	3539	C	ASP	A	227	25.111	25.619	28.418	1.00 24.63	C
ATOM	3540	O	ASP	A	227	25.504	24.659	27.783	1.00 23.85	O
ATOM	3541	N	GLU	A	228	24.497	25.466	29.594	1.00 24.24	N
ATOM	3543	CA	GLU	A	228	24.267	24.127	30.138	1.00 23.32	C
ATOM	3545	CB	GLU	A	228	23.791	24.208	31.587	1.00 24.02	C
ATOM	3548	CG	GLU	A	228	24.820	24.709	32.562	1.00 28.33	C
ATOM	3551	CD	GLU	A	228	24.177	25.151	33.854	1.00 33.81	C
ATOM	3552	OE1	GLU	A	228	24.817	25.966	34.541	1.00 39.00	O
ATOM	3553	OE2	GLU	A	228	23.028	24.705	34.153	1.00 35.51	O
ATOM	3554	C	GLU	A	228	23.247	23.339	29.324	1.00 21.74	C
ATOM	3555	O	GLU	A	228	23.354	22.125	29.185	1.00 21.83	O
ATOM	3556	N	PHE	A	229	22.253	24.037	28.790	1.00 19.65	N
ATOM	3558	CA	PHE	A	229	21.234	23.450	27.941	1.00 18.81	C
ATOM	3560	CB	PHE	A	229	20.161	24.469	27.609	1.00 18.52	C
ATOM	3563	CG	PHE	A	229	19.127	23.965	26.671	1.00 19.69	C
ATOM	3564	CD1	PHE	A	229	18.205	23.014	27.073	1.00 23.42	C
ATOM	3566	CE1	PHE	A	229	17.235	22.564	26.213	1.00 22.93	C
ATOM	3568	CZ	PHE	A	229	17.176	23.065	24.911	1.00 23.59	C
ATOM	3570	CE2	PHE	A	229	18.091	24.014	24.521	1.00 19.66	C
ATOM	3572	CD2	PHE	A	229	19.058	24.438	25.374	1.00 19.47	C
ATOM	3574	C	PHE	A	229	21.870	22.947	26.640	1.00 16.54	C
ATOM	3575	O	PHE	A	229	21.602	21.842	26.197	1.00 16.38	O
ATOM	3576	N	PHE	A	230	22.731	23.772	26.090	1.00 16.39	N
ATOM	3578	CA	PHE	A	230	23.427	23.401	24.859	1.00 15.84	C
ATOM	3580	CB	PHE	A	230	24.287	24.552	24.336	1.00 16.67	C
ATOM	3583	CG	PHE	A	230	24.936	24.244	22.993	1.00 15.99	C
ATOM	3584	CD1	PHE	A	230	26.212	23.719	22.947	1.00 16.40	C
ATOM	3586	CE1	PHE	A	230	26.794	23.376	21.759	1.00 15.83	C
ATOM	3588	CZ	PHE	A	230	26.114	23.567	20.588	1.00 14.35	C
ATOM	3590	CE2	PHE	A	230	24.841	24.123	20.588	1.00 16.59	C
ATOM	3592	CD2	PHE	A	230	24.245	24.445	21.795	1.00 16.56	C
ATOM	3594	C	PHE	A	230	24.240	22.136	25.091	1.00 16.01	C
ATOM	3595	O	PHE	A	230	24.189	21.198	24.294	1.00 16.44	O
ATOM	3596	N	THR	A	231	24.948	22.110	26.193	1.00 17.71	N

ATOM	3598	CA	THR	A	231	25.794	20.979	26.485	1.00	19.04	C
ATOM	3600	CB	THR	A	231	26.531	21.202	27.761	1.00	19.78	C
ATOM	3602	OG1	THR	A	231	27.468	22.266	27.597	1.00	21.37	O
ATOM	3604	CG2	THR	A	231	27.385	19.960	28.093	1.00	20.72	C
ATOM	3608	C	THR	A	231	24.949	19.725	26.545	1.00	19.33	C
ATOM	3609	O	THR	A	231	25.317	18.686	26.001	1.00	18.72	O
ATOM	3610	N	LYS	A	232	23.776	19.796	27.196	1.00	18.84	N
ATOM	3612	CA	LYS	A	232	22.901	18.651	27.239	1.00	20.22	C
ATOM	3614	CB	LYS	A	232	21.659	18.942	28.090	1.00	21.75	C
ATOM	3617	CG	LYS	A	232	21.934	18.799	29.573	1.00	25.33	C
ATOM	3620	CD	LYS	A	232	20.643	19.070	30.434	1.00	31.49	C
ATOM	3623	CE	LYS	A	232	20.977	19.223	31.930	1.00	35.32	C
ATOM	3626	NZ	LYS	A	232	19.824	18.857	32.838	1.00	39.34	N
ATOM	3630	C	LYS	A	232	22.521	18.220	25.836	1.00	19.25	C
ATOM	3631	O	LYS	A	232	22.619	17.061	25.490	1.00	19.63	O
ATOM	3632	N	CYS	A	233	22.163	19.185	25.005	1.00	17.23	N
ATOM	3634	CA	CYS	A	233	21.806	18.912	23.656	1.00	16.73	C
ATOM	3636	CB	CYS	A	233	21.358	20.180	22.972	1.00	16.19	C
ATOM	3639	SG	CYS	A	233	19.770	20.793	23.570	1.00	18.46	S
ATOM	3640	C	CYS	A	233	22.946	18.279	22.815	1.00	14.93	C
ATOM	3641	O	CYS	A	233	22.629	17.557	21.901	1.00	15.32	O
ATOM	3642	N	THR	A	234	24.205	18.511	23.168	1.00	16.20	N
ATOM	3644	CA	THR	A	234	25.329	17.946	22.368	1.00	16.79	C
ATOM	3646	CB	THR	A	234	26.672	18.467	22.737	1.00	17.38	C
ATOM	3648	OG1	THR	A	234	26.961	18.128	24.112	1.00	16.90	O
ATOM	3650	CG2	THR	A	234	26.751	19.930	22.627	1.00	18.43	C
ATOM	3654	C	THR	A	234	25.386	16.437	22.436	1.00	18.13	C
ATOM	3655	O	THR	A	234	25.939	15.803	21.537	1.00	16.50	O
ATOM	3656	N	THR	A	235	24.780	15.842	23.479	1.00	18.08	N
ATOM	3658	CA	THR	A	235	24.661	14.397	23.546	1.00	18.37	C
ATOM	3660	CB	THR	A	235	23.831	14.026	24.789	1.00	20.27	C
ATOM	3662	OG1	THR	A	235	24.603	14.332	25.946	1.00	20.20	O
ATOM	3664	CG2	THR	A	235	23.533	12.536	24.803	1.00	20.85	C
ATOM	3668	C	THR	A	235	24.045	13.760	22.319	1.00	19.04	C
ATOM	3669	O	THR	A	235	24.396	12.644	21.944	1.00	20.62	O
ATOM	3670	N	PHE	A	236	23.149	14.493	21.661	1.00	18.10	N
ATOM	3672	CA	PHE	A	236	22.418	14.040	20.499	1.00	18.43	C
ATOM	3674	CB	PHE	A	236	20.989	14.515	20.675	1.00	19.36	C
ATOM	3677	CG	PHE	A	236	20.423	14.052	21.963	1.00	20.97	C
ATOM	3678	CD1	PHE	A	236	20.318	14.913	23.039	1.00	24.15	C
ATOM	3680	CE1	PHE	A	236	19.826	14.451	24.239	1.00	27.53	C
ATOM	3682	CZ	PHE	A	236	19.484	13.107	24.386	1.00	25.54	C
ATOM	3684	CE2	PHE	A	236	19.629	12.237	23.326	1.00	28.16	C
ATOM	3686	CD2	PHE	A	236	20.125	12.704	22.134	1.00	24.19	C
ATOM	3688	C	PHE	A	236	22.992	14.512	19.180	1.00	17.63	C
ATOM	3689	O	PHE	A	236	22.417	14.218	18.150	1.00	19.16	O
ATOM	3690	N	MET	A	237	24.147	15.180	19.235	1.00	16.34	N
ATOM	3692	CA	MET	A	237	24.845	15.741	18.042	1.00	15.56	C
ATOM	3694	CB	MET	A	237	25.250	17.194	18.259	1.00	16.20	C
ATOM	3697	CG	MET	A	237	24.127	18.175	18.525	1.00	17.82	C
ATOM	3700	SD	MET	A	237	24.798	19.763	18.970	1.00	18.97	S
ATOM	3701	CE	MET	A	237	23.261	20.604	19.298	1.00	22.87	C
ATOM	3705	C	MET	A	237	26.077	14.892	17.768	1.00	14.94	C
ATOM	3706	O	MET	A	237	27.106	15.036	18.387	1.00	14.56	O
ATOM	3707	N	HIS	A	238	25.954	14.012	16.792	1.00	13.99	N
ATOM	3709	CA	HIS	A	238	26.924	12.932	16.557	1.00	14.23	C
ATOM	3711	CB	HIS	A	238	26.382	12.124	15.411	1.00	15.19	C
ATOM	3714	CG	HIS	A	238	27.057	10.821	15.150	1.00	14.99	C
ATOM	3715	ND1	HIS	A	238	28.290	10.483	15.667	1.00	16.60	N
ATOM	3717	CE1	HIS	A	238	28.608	9.269	15.236	1.00	13.83	C
ATOM	3719	NE2	HIS	A	238	27.631	8.811	14.489	1.00	17.54	N
ATOM	3721	CD2	HIS	A	238	26.643	9.756	14.421	1.00	15.91	C
ATOM	3723	C	HIS	A	238	28.309	13.475	16.224	1.00	14.53	C
ATOM	3724	O	HIS	A	238	29.332	12.863	16.544	1.00	13.20	O
ATOM	3725	N	TYR	A	239	28.361	14.613	15.525	1.00	12.62	N
ATOM	3727	CA	TYR	A	239	29.648	15.090	14.988	1.00	11.51	C
ATOM	3729	CB	TYR	A	239	29.570	15.184	13.466	1.00	12.42	C

ATOM	3732	CG	TYR A 239	29.102	13.908	12.878	1.00	12.95		C
ATOM	3733	CD1	TYR A 239	27.849	13.793	12.282	1.00	17.20		C
ATOM	3735	CE1	TYR A 239	27.456	12.561	11.738	1.00	19.27		C
ATOM	3737	CZ	TYR A 239	28.291	11.491	11.876	1.00	18.71		C
ATOM	3738	OH	TYR A 239	28.022	10.194	11.406	1.00	28.23		O
ATOM	3740	CE2	TYR A 239	29.493	11.624	12.453	1.00	18.86		C
ATOM	3742	CD2	TYR A 239	29.890	12.800	12.965	1.00	13.93		C
ATOM	3744	C	TYR A 239	30.123	16.402	15.564	1.00	11.71		C
ATOM	3745	O	TYR A 239	31.068	17.002	15.056	1.00	11.14		O
ATOM	3746	N	TYR A 240	29.530	16.857	16.679	1.00	11.32		N
ATOM	3748	CA	TYR A 240	29.967	18.114	17.269	1.00	11.54		C
ATOM	3750	CB	TYR A 240	29.035	18.503	18.439	1.00	10.75		C
ATOM	3753	CG	TYR A 240	29.196	19.940	18.821	1.00	11.03		C
ATOM	3754	CD1	TYR A 240	28.832	20.939	17.938	1.00	12.74		C
ATOM	3756	CE1	TYR A 240	29.003	22.261	18.246	1.00	11.81		C
ATOM	3758	CZ	TYR A 240	29.544	22.628	19.437	1.00	11.20		C
ATOM	3759	OH	TYR A 240	29.712	23.953	19.747	1.00	11.58		O
ATOM	3761	CE2	TYR A 240	29.910	21.639	20.361	1.00	9.43		C
ATOM	3763	CD2	TYR A 240	29.775	20.320	20.017	1.00	12.02		C
ATOM	3765	C	TYR A 240	31.418	18.066	17.709	1.00	11.11		C
ATOM	3766	O	TYR A 240	31.805	17.107	18.477	1.00	10.35		O
ATOM	3767	N	PRO A 241	32.284	18.937	17.194	1.00	9.63		N
ATOM	3768	CA	PRO A 241	33.695	18.874	17.558	1.00	10.02		C
ATOM	3770	CB	PRO A 241	34.302	20.082	16.855	1.00	10.42		C
ATOM	3773	CG	PRO A 241	33.416	20.226	15.638	1.00	9.18		C
ATOM	3776	CD	PRO A 241	32.034	19.935	16.102	1.00	9.43		C
ATOM	3779	C	PRO A 241	33.883	18.963	19.060	1.00	10.44		C
ATOM	3780	O	PRO A 241	33.329	19.867	19.709	1.00	11.13		O
ATOM	3781	N	SER A 242	34.623	18.000	19.606	1.00	12.89		N
ATOM	3783	CA	SER A 242	34.749	17.905	21.058	1.00	13.41		C
ATOM	3785	CB	SER A 242	33.695	16.935	21.590	1.00	13.92		C
ATOM	3788	OG	SER A 242	32.389	17.262	21.199	1.00	15.01		O
ATOM	3790	C	SER A 242	36.115	17.415	21.464	1.00	15.10		C
ATOM	3791	O	SER A 242	36.901	16.924	20.653	1.00	14.17		O
ATOM	3792	N	GLY A 243	36.381	17.466	22.770	1.00	16.09		N
ATOM	3794	CA	GLY A 243	37.648	16.959	23.269	1.00	17.49		C
ATOM	3797	C	GLY A 243	38.831	17.671	22.677	1.00	17.16		C
ATOM	3798	O	GLY A 243	38.857	18.890	22.567	1.00	19.08		O
ATOM	3799	N	GLU A 244	39.799	16.894	22.215	1.00	18.31		N
ATOM	3801	CA	GLU A 244	40.979	17.480	21.643	1.00	19.76		C
ATOM	3803	CB	GLU A 244	42.042	16.443	21.395	1.00	21.98		C
ATOM	3806	CG	GLU A 244	41.764	15.330	20.421	1.00	26.80		C
ATOM	3809	CD	GLU A 244	43.082	14.730	19.902	1.00	36.70		C
ATOM	3810	OE1	GLU A 244	43.956	15.526	19.419	1.00	39.33		O
ATOM	3811	OE2	GLU A 244	43.260	13.480	20.002	1.00	39.78		O
ATOM	3812	C	GLU A 244	40.676	18.261	20.371	1.00	18.87		C
ATOM	3813	O	GLU A 244	41.506	19.042	19.970	1.00	19.94		O
ATOM	3814	N	HIS A 245	39.482	18.075	19.804	1.00	17.27		N
ATOM	3816	CA	HIS A 245	39.095	18.773	18.578	1.00	16.08		C
ATOM	3818	CB	HIS A 245	38.655	17.789	17.541	1.00	16.20		C
ATOM	3821	CG	HIS A 245	39.741	16.846	17.121	1.00	18.52		C
ATOM	3822	ND1	HIS A 245	39.599	15.465	17.167	1.00	21.00		N
ATOM	3824	CE1	HIS A 245	40.720	14.907	16.736	1.00	21.36		C
ATOM	3826	NE2	HIS A 245	41.596	15.864	16.458	1.00	19.35		N
ATOM	3828	CD2	HIS A 245	40.998	17.087	16.677	1.00	17.08		C
ATOM	3830	C	HIS A 245	38.045	19.849	18.753	1.00	16.90		C
ATOM	3831	O	HIS A 245	37.476	20.317	17.766	1.00	14.62		O
ATOM	3832	N	LYS A 246	37.831	20.292	19.993	1.00	15.96		N
ATOM	3834	CA	LYS A 246	36.858	21.309	20.290	1.00	16.18		C
ATOM	3836	CB	LYS A 246	36.601	21.383	21.802	1.00	16.48		C
ATOM	3839	CG	LYS A 246	37.656	22.121	22.580	1.00	21.08		C
ATOM	3842	CD	LYS A 246	37.503	21.932	24.120	1.00	26.31		C
ATOM	3845	CE	LYS A 246	36.243	22.608	24.667	1.00	30.49		C
ATOM	3848	NZ	LYS A 246	36.030	24.019	24.190	1.00	37.39		N
ATOM	3852	C	LYS A 246	37.245	22.700	19.753	1.00	15.60		C
ATOM	3853	O	LYS A 246	36.442	23.611	19.816	1.00	16.22		O
ATOM	3854	N	ASN A 247	38.455	22.822	19.239	1.00	16.11		N

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ATOM   3856  CA  ASN A 247      38.933  24.083  18.652  1.00 16.89           C
ATOM   3858  CB  ASN A 247      40.439  24.235  18.890  1.00 18.01           C
ATOM   3861  CG  ASN A 247      41.269  23.057  18.307  1.00 23.46           C
ATOM   3862  OD1 ASN A 247      40.935  21.856  18.463  1.00 25.71           O
ATOM   3863  ND2 ASN A 247      42.343  23.402  17.615  1.00 31.37           N
ATOM   3866  C   ASN A 247      38.652  24.158  17.136  1.00 16.40           C
ATOM   3867  O   ASN A 247      39.016  25.163  16.498  1.00 16.82           O
ATOM   3868  N   LEU A 248      38.078  23.114  16.555  1.00 14.60           N
ATOM   3870  CA  LEU A 248      37.825  23.059  15.085  1.00 13.41           C
ATOM   3872  CB  LEU A 248      38.181  21.661  14.541  1.00 14.59           C
ATOM   3875  CG  LEU A 248      39.652  21.277  14.685  1.00 16.30           C
ATOM   3877  CD1 LEU A 248      39.843  19.847  14.283  1.00 17.88           C
ATOM   3881  CD2 LEU A 248      40.523  22.283  13.904  1.00 20.62           C
ATOM   3885  C   LEU A 248      36.350  23.297  14.842  1.00 12.16           C
ATOM   3886  O   LEU A 248      35.486  22.953  15.645  1.00 11.10           O
ATOM   3887  N   LEU A 249      36.014  23.890  13.701  1.00 10.28           N
ATOM   3889  CA  LEU A 249      34.626  24.107  13.368  1.00  9.99           C
ATOM   3891  CB  LEU A 249      34.524  25.225  12.319  1.00  9.18           C
ATOM   3894  CG  LEU A 249      34.761  26.637  12.710  1.00 10.78           C
ATOM   3896  CD1 LEU A 249      35.043  27.435  11.491  1.00 12.44           C
ATOM   3900  CD2 LEU A 249      33.541  27.161  13.465  1.00 12.97           C
ATOM   3904  C   LEU A 249      33.891  22.868  12.835  1.00  9.22           C
ATOM   3905  O   LEU A 249      32.692  22.779  12.909  1.00 10.99           O
ATOM   3906  N   ARG A 250      34.621  21.906  12.304  1.00  9.47           N
ATOM   3908  CA  ARG A 250      34.037  20.686  11.780  1.00  8.61           C
ATOM   3910  CB  ARG A 250      33.887  20.682  10.240  1.00  8.92           C
ATOM   3913  CG  ARG A 250      33.039  21.765   9.705  1.00  9.45           C
ATOM   3916  CD  ARG A 250      32.892  21.730   8.226  1.00 10.16           C
ATOM   3919  NE  ARG A 250      32.097  20.583   7.861  1.00  7.83           N
ATOM   3921  CZ  ARG A 250      31.983  20.107   6.669  1.00  7.05           C
ATOM   3922  NH1 ARG A 250      32.644  20.653   5.651  1.00  4.86           N
ATOM   3925  NH2 ARG A 250      31.247  19.074   6.460  1.00  8.83           N
ATOM   3928  C   ARG A 250      34.952  19.520  12.106  1.00  8.55           C
ATOM   3929  O   ARG A 250      36.208  19.622  11.961  1.00  9.21           O
ATOM   3930  N   LEU A 251      34.344  18.420  12.507  1.00 10.23           N
ATOM   3932  CA  LEU A 251      35.038  17.119  12.509  1.00 10.42           C
ATOM   3934  CB  LEU A 251      34.100  15.997  12.871  1.00 12.96           C
ATOM   3937  CG  LEU A 251      34.742  14.676  13.229  1.00 14.27           C
ATOM   3939  CD1 LEU A 251      35.628  14.824  14.457  1.00 15.53           C
ATOM   3943  CD2 LEU A 251      33.597  13.661  13.472  1.00 17.19           C
ATOM   3947  C   LEU A 251      35.716  16.836  11.183  1.00 10.27           C
ATOM   3948  O   LEU A 251      36.809  16.238  11.160  1.00 11.34           O
ATOM   3949  N   ALA A 252      35.101  17.253  10.087  1.00  9.04           N
ATOM   3951  CA  ALA A 252      35.619  16.958   8.772  1.00  8.58           C
ATOM   3953  CB  ALA A 252      34.635  17.430   7.710  1.00  9.24           C
ATOM   3957  C   ALA A 252      36.963  17.603   8.522  1.00  9.36           C
ATOM   3958  O   ALA A 252      37.672  17.174   7.650  1.00  9.78           O
ATOM   3959  N   CYS A 253      37.338  18.577   9.328  1.00  9.37           N
ATOM   3961  CA  CYS A 253      38.679  19.151   9.264  1.00 11.78           C
ATOM   3963  CB  CYS A 253      38.770  20.286  10.279  1.00 12.33           C
ATOM   3966  SG  CYS A 253      37.690  21.700   9.912  1.00 16.02           S
ATOM   3967  C   CYS A 253      39.780  18.106   9.633  1.00 12.75           C
ATOM   3968  O   CYS A 253      40.946  18.325   9.287  1.00 15.66           O
ATOM   3969  N   THR A 254      39.389  17.011  10.274  1.00 12.84           N
ATOM   3971  CA  THR A 254      40.294  15.960  10.759  1.00 14.51           C
ATOM   3973  CB  THR A 254      39.940  15.498  12.257  1.00 14.54           C
ATOM   3975  OG1 THR A 254      38.740  14.721  12.285  1.00 13.95           O
ATOM   3977  CG2 THR A 254      39.687  16.595  13.186  1.00 17.06           C
ATOM   3981  C   THR A 254      40.276  14.715   9.909  1.00 13.65           C
ATOM   3982  O   THR A 254      40.842  13.666  10.284  1.00 12.44           O
ATOM   3983  N   LEU A 255      39.566  14.764   8.800  1.00 12.73           N
ATOM   3985  CA  LEU A 255      39.466  13.579   7.953  1.00 13.92           C
ATOM   3987  CB  LEU A 255      38.581  13.926   6.762  1.00 14.56           C
ATOM   3990  CG  LEU A 255      37.135  13.588   6.683  1.00 20.28           C
ATOM   3992  CD1 LEU A 255      36.722  13.798   5.218  1.00 20.46           C
ATOM   3996  CD2 LEU A 255      36.789  12.177   7.130  1.00 19.00           C
ATOM   4000  C   LEU A 255      40.851  13.170   7.453  1.00 13.82           C
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ATOM	4001	O	LEU A 255	41.623	14.005	7.070	1.00	13.12	O
ATOM	4002	N	LYS A 256	41.157	11.877	7.450	1.00	14.50	N
ATOM	4004	CA	LYS A 256	42.439	11.435	6.984	1.00	15.83	C
ATOM	4006	CB	LYS A 256	43.163	10.545	8.002	1.00	18.10	C
ATOM	4009	CG	LYS A 256	42.955	11.004	9.461	1.00	21.88	C
ATOM	4012	CD	LYS A 256	44.215	11.438	10.129	1.00	30.26	C
ATOM	4015	CE	LYS A 256	44.658	12.831	9.720	1.00	31.52	C
ATOM	4018	NZ	LYS A 256	44.336	13.855	10.771	1.00	33.48	N
ATOM	4022	C	LYS A 256	42.271	10.745	5.653	1.00	13.81	C
ATOM	4023	O	LYS A 256	41.194	10.224	5.332	1.00	12.35	O
ATOM	4024	N	PRO A 257	43.323	10.749	4.876	1.00	14.31	N
ATOM	4025	CA	PRO A 257	43.266	10.061	3.591	1.00	13.42	C
ATOM	4027	CB	PRO A 257	44.706	10.069	3.153	1.00	14.84	C
ATOM	4030	CG	PRO A 257	45.189	11.326	3.697	1.00	14.67	C
ATOM	4033	CD	PRO A 257	44.640	11.372	5.059	1.00	14.99	C
ATOM	4036	C	PRO A 257	42.719	8.636	3.714	1.00	13.03	C
ATOM	4037	O	PRO A 257	42.991	7.886	4.685	1.00	12.40	O
ATOM	4038	N	ASP A 258	41.902	8.295	2.740	1.00	13.02	N
ATOM	4040	CA	ASP A 258	41.163	7.056	2.662	1.00	12.02	C
ATOM	4042	CB	ASP A 258	40.026	7.044	3.679	1.00	14.79	C
ATOM	4045	CG	ASP A 258	39.045	5.888	3.494	1.00	17.58	C
ATOM	4046	OD1	ASP A 258	39.085	5.128	2.517	1.00	20.60	O
ATOM	4047	OD2	ASP A 258	38.160	5.703	4.346	1.00	25.89	O
ATOM	4048	C	ASP A 258	40.654	7.003	1.215	1.00	11.78	C
ATOM	4049	O	ASP A 258	39.667	7.681	0.906	1.00	9.11	O
ATOM	4050	N	PRO A 259	41.359	6.311	0.316	1.00	12.14	N
ATOM	4051	CA	PRO A 259	41.029	6.350	-1.114	1.00	13.14	C
ATOM	4053	CB	PRO A 259	42.037	5.369	-1.739	1.00	14.37	C
ATOM	4056	CG	PRO A 259	43.170	5.341	-0.753	1.00	15.92	C
ATOM	4059	CD	PRO A 259	42.590	5.511	0.562	1.00	13.91	C
ATOM	4062	C	PRO A 259	39.593	5.951	-1.436	1.00	13.29	C
ATOM	4063	O	PRO A 259	39.035	6.544	-2.336	1.00	11.60	O
ATOM	4064	N	GLU A 260	39.019	4.977	-0.732	1.00	13.39	N
ATOM	4066	CA	GLU A 260	37.634	4.584	-1.042	1.00	15.06	C
ATOM	4068	CB	GLU A 260	37.187	3.282	-0.348	1.00	17.31	C
ATOM	4071	CG	GLU A 260	37.937	2.021	-0.807	1.00	25.22	C
ATOM	4074	CD	GLU A 260	38.243	1.964	-2.297	1.00	33.42	C
ATOM	4075	OE1	GLU A 260	37.292	1.684	-3.081	1.00	38.09	O
ATOM	4076	OE2	GLU A 260	39.438	2.194	-2.672	1.00	38.94	O
ATOM	4077	C	GLU A 260	36.664	5.729	-0.682	1.00	13.10	C
ATOM	4078	O	GLU A 260	35.712	5.968	-1.415	1.00	12.68	O
ATOM	4079	N	LEU A 261	36.910	6.408	0.443	1.00	12.08	N
ATOM	4081	CA	LEU A 261	36.031	7.481	0.864	1.00	11.79	C
ATOM	4083	CB	LEU A 261	36.344	7.948	2.263	1.00	12.43	C
ATOM	4086	CG	LEU A 261	35.503	9.145	2.749	1.00	13.63	C
ATOM	4088	CD1	LEU A 261	34.028	8.928	2.670	1.00	14.17	C
ATOM	4092	CD2	LEU A 261	35.939	9.528	4.161	1.00	14.47	C
ATOM	4096	C	LEU A 261	36.198	8.648	-0.112	1.00	9.84	C
ATOM	4097	O	LEU A 261	35.222	9.220	-0.576	1.00	10.39	O
ATOM	4098	N	GLU A 262	37.446	8.971	-0.448	1.00	9.30	N
ATOM	4100	CA	GLU A 262	37.659	10.068	-1.369	1.00	9.45	C
ATOM	4102	CB	GLU A 262	39.153	10.349	-1.476	1.00	8.99	C
ATOM	4105	CG	GLU A 262	39.451	11.512	-2.375	1.00	8.77	C
ATOM	4108	CD	GLU A 262	40.892	12.025	-2.322	1.00	8.85	C
ATOM	4109	OE1	GLU A 262	41.429	12.439	-3.364	1.00	10.29	O
ATOM	4110	OE2	GLU A 262	41.456	12.042	-1.224	1.00	9.13	O
ATOM	4111	C	GLU A 262	37.088	9.808	-2.762	1.00	10.21	C
ATOM	4112	O	GLU A 262	36.539	10.745	-3.383	1.00	10.02	O
ATOM	4113	N	MET A 263	37.210	8.574	-3.260	1.00	10.89	N
ATOM	4115	CA	MET A 263	36.498	8.205	-4.493	1.00	13.03	C
ATOM	4117	CB	MET A 263	36.687	6.714	-4.846	1.00	14.50	C
ATOM	4120	CG	MET A 263	37.843	6.514	-5.773	1.00	20.56	C
ATOM	4123	SD	MET A 263	38.030	4.773	-6.318	1.00	29.27	S
ATOM	4124	CE	MET A 263	36.412	4.219	-6.024	1.00	24.57	C
ATOM	4128	C	MET A 263	34.999	8.541	-4.450	1.00	12.18	C
ATOM	4129	O	MET A 263	34.443	9.041	-5.428	1.00	13.78	O
ATOM	4130	N	SER A 264	34.322	8.198	-3.366	1.00	12.43	N

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ATOM   4132  CA  SER A 264      32.914   8.504  -3.250  1.00 13.10           C
ATOM   4134  CB  SER A 264      32.236   7.718  -2.111  1.00 15.04           C
ATOM   4137  OG  SER A 264      32.726   8.086  -0.866  1.00 22.91           O
ATOM   4139  C   SER A 264      32.657   9.987  -3.097  1.00 12.29           C
ATOM   4140  O   SER A 264      31.746  10.514  -3.704  1.00 13.65           O
ATOM   4141  N   LEU A 265      33.472  10.696  -2.308  1.00  8.55           N
ATOM   4143  CA  LEU A 265      33.206  12.122  -2.109  1.00  8.56           C
ATOM   4145  CB  LEU A 265      33.990  12.660  -0.932  1.00  8.06           C
ATOM   4148  CG  LEU A 265      33.699  12.037   0.422  1.00  9.47           C
ATOM   4150  CD1 LEU A 265      34.515  12.712   1.500  1.00 11.96           C
ATOM   4154  CD2 LEU A 265      32.188  11.892   0.751  1.00 10.91           C
ATOM   4158  C   LEU A 265      33.481  13.001  -3.316  1.00  8.05           C
ATOM   4159  O   LEU A 265      32.793  14.003  -3.529  1.00 11.07           O
ATOM   4160  N   GLN A 266      34.455  12.652  -4.119  1.00  9.25           N
ATOM   4162  CA  GLN A 266      34.847  13.522  -5.225  1.00  9.26           C
ATOM   4164  CB  GLN A 266      36.118  13.112  -5.869  1.00  9.80           C
ATOM   4167  CG  GLN A 266      36.087  11.863  -6.722  1.00  9.13           C
ATOM   4170  CD  GLN A 266      37.106  11.880  -7.752  1.00 14.17           C
ATOM   4171  OE1 GLN A 266      36.808  12.156  -8.951  1.00 17.66           O
ATOM   4172  NE2 GLN A 266      38.307  11.606  -7.362  1.00  9.75           N
ATOM   4175  C   GLN A 266      33.750  13.573  -6.256  1.00  9.56           C
ATOM   4176  O   GLN A 266      33.730  14.474  -7.031  1.00 10.73           O
ATOM   4177  N   LYS A 267      32.863  12.564  -6.282  1.00  9.86           N
ATOM   4179  CA  LYS A 267      31.809  12.529  -7.300  1.00 11.37           C
ATOM   4181  CB  LYS A 267      31.095  11.159  -7.212  1.00 11.80           C
ATOM   4184  CG  LYS A 267      31.995  10.003  -7.638  1.00 14.42           C
ATOM   4187  CD  LYS A 267      31.245   8.678  -7.632  1.00 21.53           C
ATOM   4190  CE  LYS A 267      32.165   7.566  -8.098  1.00 24.20           C
ATOM   4193  NZ  LYS A 267      33.212   7.239  -7.123  1.00 29.26           N
ATOM   4197  C   LYS A 267      30.781  13.643  -7.150  1.00 11.24           C
ATOM   4198  O   LYS A 267      30.016  13.928  -8.086  1.00 12.31           O
ATOM   4199  N   TYR A 268      30.753  14.304  -5.997  1.00 10.97           N
ATOM   4201  CA  TYR A 268      29.850  15.426  -5.759  1.00 10.77           C
ATOM   4203  CB  TYR A 268      29.491  15.460  -4.258  1.00  9.46           C
ATOM   4206  CG  TYR A 268      28.714  14.285  -3.753  1.00 11.34           C
ATOM   4207  CD1 TYR A 268      29.359  13.147  -3.289  1.00 13.96           C
ATOM   4209  CE1 TYR A 268      28.655  12.064  -2.809  1.00 11.65           C
ATOM   4211  CZ  TYR A 268      27.290  12.140  -2.731  1.00 14.00           C
ATOM   4212  OH  TYR A 268      26.633  11.044  -2.207  1.00 13.65           O
ATOM   4214  CE2 TYR A 268      26.623  13.276  -3.136  1.00 10.28           C
ATOM   4216  CD2 TYR A 268      27.339  14.338  -3.631  1.00 12.37           C
ATOM   4218  C   TYR A 268      30.397  16.798  -6.170  1.00 12.56           C
ATOM   4219  O   TYR A 268      29.667  17.781  -6.075  1.00 14.06           O
ATOM   4220  N   VAL A 269      31.659  16.848  -6.595  1.00 12.55           N
ATOM   4222  CA  VAL A 269      32.412  18.064  -6.802  1.00 14.18           C
ATOM   4224  CB  VAL A 269      33.662  18.039  -5.874  1.00 14.61           C
ATOM   4226  CG1 VAL A 269      34.541  19.238  -6.074  1.00 17.17           C
ATOM   4230  CG2 VAL A 269      33.226  17.940  -4.388  1.00 17.39           C
ATOM   4234  C   VAL A 269      32.846  18.140  -8.281  1.00 15.25           C
ATOM   4235  O   VAL A 269      33.372  17.145  -8.857  1.00 15.84           O
ATOM   4236  N   MET A 270      32.686  19.311  -8.899  1.00 15.87           N
ATOM   4238  CA  MET A 270      33.059  19.481 -10.286  1.00 16.54           C
ATOM   4240  CB  MET A 270      32.703  20.909 -10.761  1.00 18.72           C
ATOM   4243  CG  MET A 270      31.207  21.181 -10.681  1.00 23.44           C
ATOM   4246  SD  MET A 270      30.691  22.286 -12.015  0.50 29.58           S
ATOM   4247  CE  MET A 270      32.067  23.355 -12.130  0.50 22.11           C
ATOM   4251  C   MET A 270      34.556  19.276 -10.506  1.00 15.08           C
ATOM   4252  O   MET A 270      35.374  19.528  -9.634  1.00 12.64           O
ATOM   4253  N   GLU A 271      34.895  18.812 -11.694  1.00 14.78           N
ATOM   4255  CA  GLU A 271      36.261  18.516 -12.093  1.00 15.99           C
ATOM   4257  CB  GLU A 271      36.252  18.006 -13.550  1.00 18.54           C
ATOM   4260  CG  GLU A 271      37.576  17.865 -14.268  1.00 25.85           C
ATOM   4263  CD  GLU A 271      37.477  17.330 -15.725  1.00 33.48           C
ATOM   4264  OE1 GLU A 271      38.545  17.233 -16.370  1.00 37.23           O
ATOM   4265  OE2 GLU A 271      36.379  16.994 -16.227  1.00 36.05           O
ATOM   4266  C   GLU A 271      37.171  19.760 -11.921  1.00 13.94           C
ATOM   4267  O   GLU A 271      38.312  19.647 -11.454  1.00 12.32           O
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ATOM	4268	N	SER	A	272	36.672	20.944	-12.292	1.00	13.02	N
ATOM	4270	CA	SER	A	272	37.511	22.159	-12.169	1.00	13.22	C
ATOM	4272	CB	SER	A	272	36.842	23.369	-12.827	1.00	14.88	C
ATOM	4275	OG	SER	A	272	35.535	23.527	-12.374	1.00	19.12	O
ATOM	4277	C	SER	A	272	37.838	22.488	-10.703	1.00	11.40	C
ATOM	4278	O	SER	A	272	38.908	23.024	-10.404	1.00	10.61	O
ATOM	4279	N	ILE	A	273	36.926	22.134	-9.783	1.00	9.88	N
ATOM	4281	CA	ILE	A	273	37.166	22.351	-8.351	1.00	10.08	C
ATOM	4283	CB	ILE	A	273	35.872	22.177	-7.515	1.00	9.24	C
ATOM	4285	CG1	ILE	A	273	34.857	23.304	-7.878	1.00	14.76	C
ATOM	4288	CD1	ILE	A	273	35.146	24.593	-7.306	1.00	23.08	C
ATOM	4292	CG2	ILE	A	273	36.193	22.167	-6.049	1.00	13.33	C
ATOM	4296	C	ILE	A	273	38.225	21.365	-7.898	1.00	7.80	C
ATOM	4297	O	ILE	A	273	39.124	21.716	-7.143	1.00	9.45	O
ATOM	4298	N	LEU	A	274	38.122	20.115	-8.361	1.00	8.95	N
ATOM	4300	CA	LEU	A	274	39.078	19.119	-7.948	1.00	8.27	C
ATOM	4302	CB	LEU	A	274	38.702	17.718	-8.448	1.00	8.28	C
ATOM	4305	CG	LEU	A	274	37.402	17.179	-7.870	1.00	9.56	C
ATOM	4307	CD1	LEU	A	274	36.905	15.953	-8.574	1.00	11.53	C
ATOM	4311	CD2	LEU	A	274	37.654	16.860	-6.376	1.00	11.74	C
ATOM	4315	C	LEU	A	274	40.454	19.524	-8.489	1.00	8.22	C
ATOM	4316	O	LEU	A	274	41.457	19.289	-7.824	1.00	7.50	O
ATOM	4317	N	LYS	A	275	40.509	20.150	-9.654	1.00	8.70	N
ATOM	4319	CA	LYS	A	275	41.807	20.622	-10.185	1.00	9.48	C
ATOM	4321	CB	LYS	A	275	41.633	21.231	-11.571	1.00	10.76	C
ATOM	4324	CG	LYS	A	275	42.936	21.279	-12.357	1.00	12.45	C
ATOM	4327	CD	LYS	A	275	42.745	21.747	-13.812	1.00	19.70	C
ATOM	4330	CE	LYS	A	275	44.046	21.808	-14.587	1.00	21.09	C
ATOM	4333	NZ	LYS	A	275	43.754	22.254	-15.998	1.00	23.43	N
ATOM	4337	C	LYS	A	275	42.504	21.604	-9.260	1.00	9.57	C
ATOM	4338	O	LYS	A	275	43.693	21.471	-8.962	1.00	7.90	O
ATOM	4339	N	GLN	A	276	41.704	22.511	-8.721	1.00	9.66	N
ATOM	4341	CA	GLN	A	276	42.189	23.467	-7.748	1.00	9.52	C
ATOM	4343	CB	GLN	A	276	41.090	24.497	-7.488	1.00	11.64	C
ATOM	4346	CG	GLN	A	276	41.525	25.552	-6.567	1.00	13.76	C
ATOM	4349	CD	GLN	A	276	40.426	26.492	-6.161	1.00	15.45	C
ATOM	4350	OE1	GLN	A	276	40.288	26.770	-4.962	1.00	22.14	O
ATOM	4351	NE2	GLN	A	276	39.698	26.992	-7.105	1.00	14.43	N
ATOM	4354	C	GLN	A	276	42.617	22.797	-6.476	1.00	8.86	C
ATOM	4355	O	GLN	A	276	43.679	23.103	-5.920	1.00	7.84	O
ATOM	4356	N	ILE	A	277	41.819	21.836	-6.016	1.00	7.28	N
ATOM	4358	CA	ILE	A	277	42.090	21.141	-4.775	1.00	7.14	C
ATOM	4360	CB	ILE	A	277	40.932	20.191	-4.482	1.00	6.88	C
ATOM	4362	CG1	ILE	A	277	39.787	21.010	-3.872	1.00	7.78	C
ATOM	4365	CD1	ILE	A	277	38.508	20.239	-3.708	1.00	10.06	C
ATOM	4369	CG2	ILE	A	277	41.389	19.007	-3.536	1.00	8.03	C
ATOM	4373	C	ILE	A	277	43.423	20.401	-4.907	1.00	7.24	C
ATOM	4374	O	ILE	A	277	44.194	20.293	-3.943	1.00	8.71	O
ATOM	4375	N	ASP	A	278	43.696	19.931	-6.095	1.00	8.11	N
ATOM	4377	CA	ASP	A	278	44.927	19.175	-6.353	1.00	9.23	C
ATOM	4379	CB	ASP	A	278	44.684	18.253	-7.517	1.00	8.20	C
ATOM	4382	CG	ASP	A	278	43.820	17.045	-7.127	1.00	11.06	C
ATOM	4383	OD1	ASP	A	278	43.887	16.587	-5.955	1.00	11.78	O
ATOM	4384	OD2	ASP	A	278	43.087	16.514	-8.000	1.00	12.35	O
ATOM	4385	C	ASP	A	278	46.124	20.094	-6.650	1.00	10.18	C
ATOM	4386	O	ASP	A	278	47.215	19.618	-6.974	1.00	11.34	O
ATOM	4387	N	ASN	A	279	45.949	21.393	-6.446	1.00	11.06	N
ATOM	4389	CA	ASN	A	279	47.011	22.363	-6.737	1.00	11.56	C
ATOM	4391	CB	ASN	A	279	48.169	22.217	-5.756	1.00	11.69	C
ATOM	4394	CG	ASN	A	279	47.775	22.469	-4.307	1.00	12.69	C
ATOM	4395	OD1	ASN	A	279	48.339	21.872	-3.397	1.00	21.25	O
ATOM	4396	ND2	ASN	A	279	46.896	23.391	-4.095	1.00	10.91	N
ATOM	4399	C	ASN	A	279	47.507	22.319	-8.172	1.00	10.43	C
ATOM	4400	O	ASN	A	279	48.729	22.499	-8.432	1.00	11.19	O
ATOM	4401	N	LYS	A	280	46.596	22.029	-9.102	1.00	9.95	N
ATOM	4403	CA	LYS	A	280	46.835	22.003	-10.537	1.00	10.99	C
ATOM	4405	CB	LYS	A	280	46.420	20.640	-11.105	1.00	13.05	C

ATOM	4408	CG	LYS	A	280	47.458	19.552	-10.726	1.00	16.99	C
ATOM	4411	CD	LYS	A	280	47.230	18.174	-11.427	1.00	20.56	C
ATOM	4414	CE	LYS	A	280	48.472	17.241	-11.190	1.00	21.80	C
ATOM	4417	NZ	LYS	A	280	48.583	16.695	-9.805	1.00	23.03	N
ATOM	4421	C	LYS	A	280	46.211	23.182	-11.297	1.00	11.15	C
ATOM	4422	O	LYS	A	280	46.323	23.294	-12.521	1.00	12.00	O
ATOM	4423	N	GLN	A	281	45.612	24.099	-10.537	1.00	11.21	N
ATOM	4425	CA	GLN	A	281	45.036	25.316	-11.040	1.00	12.09	C
ATOM	4427	CB	GLN	A	281	43.574	25.046	-11.393	1.00	14.05	C
ATOM	4430	CG	GLN	A	281	42.748	26.056	-12.064	1.00	16.54	C
ATOM	4433	CD	GLN	A	281	41.369	25.398	-12.405	1.00	24.55	C
ATOM	4434	OE1	GLN	A	281	40.415	25.319	-11.549	1.00	21.91	O
ATOM	4435	NE2	GLN	A	281	41.298	24.836	-13.596	1.00	29.00	N
ATOM	4438	C	GLN	A	281	45.141	26.347	-9.926	1.00	11.48	C
ATOM	4439	O	GLN	A	281	45.094	26.000	-8.718	1.00	12.42	O
ATOM	4440	N	LEU	A	282	45.304	27.599	-10.330	1.00	10.78	N
ATOM	4442	CA	LEU	A	282	45.425	28.695	-9.375	1.00	12.61	C
ATOM	4444	CB	LEU	A	282	45.667	29.987	-10.103	1.00	12.67	C
ATOM	4447	CG	LEU	A	282	47.040	30.017	-10.786	1.00	13.45	C
ATOM	4449	CD1	LEU	A	282	47.064	31.005	-11.992	1.00	16.56	C
ATOM	4453	CD2	LEU	A	282	48.108	30.342	-9.807	1.00	17.00	C
ATOM	4457	C	LEU	A	282	44.148	28.820	-8.563	1.00	13.55	C
ATOM	4458	O	LEU	A	282	43.067	28.621	-9.128	1.00	14.20	O
ATOM	4459	N	GLN	A	283	44.312	29.184	-7.297	1.00	14.81	N
ATOM	4461	CA	GLN	A	283	43.269	29.087	-6.258	1.00	17.32	C
ATOM	4463	CB	GLN	A	283	43.822	29.212	-4.819	1.00	18.89	C
ATOM	4466	CG	GLN	A	283	44.719	28.011	-4.348	1.00	20.19	C
ATOM	4469	CD	GLN	A	283	44.032	26.644	-4.389	1.00	24.00	C
ATOM	4470	OE1	GLN	A	283	42.879	26.493	-3.931	1.00	25.42	O
ATOM	4471	NE2	GLN	A	283	44.734	25.645	-4.936	1.00	20.60	N
ATOM	4474	C	GLN	A	283	42.231	30.124	-6.493	1.00	17.91	C
ATOM	4475	O	GLN	A	283	41.117	30.015	-5.962	1.00	19.66	O
ATOM	4476	N	GLY	A	284	42.573	31.141	-7.276	1.00	18.46	N
ATOM	4478	CA	GLY	A	284	41.648	32.193	-7.633	1.00	19.91	C
ATOM	4481	C	GLY	A	284	41.019	32.132	-9.007	1.00	19.64	C
ATOM	4482	O	GLY	A	284	40.216	32.994	-9.349	1.00	20.27	O
ATOM	4483	N	TYR	A	285	41.300	31.082	-9.773	1.00	17.96	N
ATOM	4485	CA	TYR	A	285	40.893	30.953	-11.138	1.00	16.10	C
ATOM	4487	CB	TYR	A	285	41.457	29.619	-11.666	1.00	17.66	C
ATOM	4490	CG	TYR	A	285	41.442	29.484	-13.127	1.00	20.95	C
ATOM	4491	CD1	TYR	A	285	42.337	30.214	-13.915	1.00	28.21	C
ATOM	4493	CE1	TYR	A	285	42.359	30.049	-15.283	1.00	30.50	C
ATOM	4495	CZ	TYR	A	285	41.508	29.151	-15.872	1.00	29.83	C
ATOM	4496	OH	TYR	A	285	41.558	29.007	-17.239	1.00	38.49	O
ATOM	4498	CE2	TYR	A	285	40.644	28.400	-15.134	1.00	30.02	C
ATOM	4500	CD2	TYR	A	285	40.614	28.567	-13.752	1.00	25.05	C
ATOM	4502	C	TYR	A	285	39.349	30.866	-11.389	1.00	14.96	C
ATOM	4503	O	TYR	A	285	38.846	31.242	-12.421	1.00	15.54	O
ATOM	4504	N	LEU	A	286	38.661	30.312	-10.437	1.00	12.17	N
ATOM	4506	CA	LEU	A	286	37.221	30.079	-10.551	1.00	13.37	C
ATOM	4508	CB	LEU	A	286	36.826	28.837	-9.717	1.00	14.35	C
ATOM	4511	CG	LEU	A	286	37.352	27.554	-10.347	1.00	14.96	C
ATOM	4513	CD1	LEU	A	286	37.128	26.381	-9.435	1.00	17.55	C
ATOM	4517	CD2	LEU	A	286	36.718	27.280	-11.683	1.00	20.64	C
ATOM	4521	C	LEU	A	286	36.384	31.254	-10.116	1.00	13.61	C
ATOM	4522	O	LEU	A	286	35.147	31.176	-10.271	1.00	16.41	O
ATOM	4523	N	SER	A	287	36.979	32.330	-9.608	1.00	14.20	N
ATOM	4525	CA	SER	A	287	36.221	33.508	-9.214	1.00	13.36	C
ATOM	4527	CB	SER	A	287	36.816	34.290	-8.046	1.00	14.29	C
ATOM	4530	OG	SER	A	287	36.789	33.567	-6.832	1.00	13.98	O
ATOM	4532	C	SER	A	287	36.145	34.416	-10.448	1.00	14.88	C
ATOM	4533	O	SER	A	287	37.133	34.986	-10.805	1.00	13.76	O
ATOM	4534	N	GLU	A	288	34.968	34.559	-11.065	1.00	14.97	N
ATOM	4536	CA	GLU	A	288	34.925	35.305	-12.335	1.00	16.03	C
ATOM	4538	CB	GLU	A	288	35.425	34.351	-13.426	1.00	18.77	C
ATOM	4541	CG	GLU	A	288	35.661	34.992	-14.789	1.00	25.97	C
ATOM	4544	CD	GLU	A	288	35.777	33.947	-15.894	1.00	32.86	C

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ATOM   4545  OE1 GLU A 288      36.145  32.794 -15.575  1.00 33.50           O
ATOM   4546  OE2 GLU A 288      35.525  34.313 -17.087  1.00 40.91           O
ATOM   4547  C   GLU A 288      33.542  35.811 -12.634  1.00 15.77           C
ATOM   4548  O   GLU A 288      32.578  35.235 -12.173  1.00 14.08           O
ATOM   4549  N   LEU A 289      33.463  36.960 -13.322  1.00 16.72           N
ATOM   4551  CA  LEU A 289      32.202  37.452 -13.930  1.00 20.32           C
ATOM   4553  CB  LEU A 289      32.117  38.967 -13.866  1.00 20.01           C
ATOM   4556  CG  LEU A 289      32.084  39.564 -12.500  1.00 23.23           C
ATOM   4558  CD1 LEU A 289      31.973  41.080 -12.563  1.00 25.46           C
ATOM   4562  CD2 LEU A 289      31.017  39.005 -11.702  1.00 25.84           C
ATOM   4566  C   LEU A 289      32.297  37.005 -15.365  1.00 21.03           C
ATOM   4567  O   LEU A 289      33.232  37.361 -16.066  1.00 23.55           O
ATOM   4568  N   ARG A 290      31.434  36.079 -15.745  1.00 22.45           N
ATOM   4570  CA  ARG A 290      31.632  35.216 -16.900  1.00 23.29           C
ATOM   4572  CB  ARG A 290      31.883  33.810 -16.403  1.00 24.20           C
ATOM   4575  CG  ARG A 290      32.416  32.890 -17.396  1.00 28.56           C
ATOM   4578  CD  ARG A 290      32.594  31.486 -16.861  1.00 33.25           C
ATOM   4581  NE  ARG A 290      33.020  30.584 -17.926  1.00 37.43           N
ATOM   4583  CZ  ARG A 290      34.217  30.609 -18.537  1.00 38.37           C
ATOM   4584  NH1 ARG A 290      35.202  31.420 -18.144  1.00 37.66           N
ATOM   4587  NH2 ARG A 290      34.454  29.744 -19.510  1.00 38.45           N
ATOM   4590  C   ARG A 290      30.316  35.170 -17.667  1.00 21.50           C
ATOM   4591  O   ARG A 290      29.266  35.032 -17.021  1.00 20.14           O
ATOM   4592  N   PRO A 291      30.356  35.265 -18.997  1.00 21.76           N
ATOM   4593  CA  PRO A 291      29.139  35.068 -19.808  1.00 20.32           C
ATOM   4595  CB  PRO A 291      29.542  35.625 -21.184  1.00 20.94           C
ATOM   4598  CG  PRO A 291      31.032  35.350 -21.247  1.00 21.27           C
ATOM   4601  CD  PRO A 291      31.539  35.536 -19.849  1.00 21.81           C
ATOM   4604  C   PRO A 291      28.807  33.592 -19.904  1.00 19.41           C
ATOM   4605  O   PRO A 291      29.620  32.753 -20.323  1.00 20.89           O
ATOM   4606  N   VAL A 292      27.593  33.261 -19.485  1.00 19.29           N
ATOM   4608  CA  VAL A 292      27.114  31.900 -19.507  1.00 18.62           C
ATOM   4610  CB  VAL A 292      27.179  31.259 -18.096  1.00 18.27           C
ATOM   4612  CG1 VAL A 292      28.610  31.369 -17.499  1.00 20.08           C
ATOM   4616  CG2 VAL A 292      26.182  31.862 -17.116  1.00 19.93           C
ATOM   4620  C   VAL A 292      25.664  31.869 -20.000  1.00 18.68           C
ATOM   4621  O   VAL A 292      24.954  32.894 -20.023  1.00 20.56           O
ATOM   4622  N   THR A 293      25.229  30.671 -20.341  1.00 18.30           N
ATOM   4624  CA  THR A 293      23.795  30.412 -20.495  1.00 17.40           C
ATOM   4626  CB  THR A 293      23.544  29.841 -21.823  1.00 18.30           C
ATOM   4628  OG1 THR A 293      24.006  30.769 -22.825  1.00 21.87           O
ATOM   4630  CG2 THR A 293      22.030  29.714 -22.061  1.00 17.50           C
ATOM   4634  C   THR A 293      23.316  29.478 -19.394  1.00 15.52           C
ATOM   4635  O   THR A 293      23.884  28.384 -19.212  1.00 17.92           O
ATOM   4636  N   ILE A 294      22.307  29.925 -18.649  1.00 13.98           N
ATOM   4638  CA  ILE A 294      21.689  29.152 -17.602  1.00 13.97           C
ATOM   4640  CB  ILE A 294      21.144  30.077 -16.549  1.00 14.07           C
ATOM   4642  CG1 ILE A 294      22.277  30.997 -15.970  1.00 14.25           C
ATOM   4645  CD1 ILE A 294      23.466  30.170 -15.366  1.00 15.24           C
ATOM   4649  CG2 ILE A 294      20.450  29.264 -15.438  1.00 14.15           C
ATOM   4653  C   ILE A 294      20.506  28.397 -18.242  1.00 15.26           C
ATOM   4654  O   ILE A 294      19.722  28.994 -18.971  1.00 15.79           O
ATOM   4655  N   VAL A 295      20.446  27.103 -18.033  1.00 14.94           N
ATOM   4657  CA  VAL A 295      19.271  26.266 -18.368  1.00 14.29           C
ATOM   4659  CB  VAL A 295      19.686  25.161 -19.332  1.00 14.16           C
ATOM   4661  CG1 VAL A 295      18.488  24.174 -19.677  1.00 16.21           C
ATOM   4665  CG2 VAL A 295      20.234  25.770 -20.588  1.00 15.01           C
ATOM   4669  C   VAL A 295      18.749  25.728 -17.064  1.00 14.90           C
ATOM   4670  O   VAL A 295      19.391  24.853 -16.442  1.00 15.38           O
ATOM   4671  N   PHE A 296      17.632  26.291 -16.594  1.00 14.27           N
ATOM   4673  CA  PHE A 296      17.052  25.938 -15.328  1.00 14.36           C
ATOM   4675  CB  PHE A 296      16.616  27.184 -14.587  1.00 15.09           C
ATOM   4678  CG  PHE A 296      17.049  27.213 -13.136  1.00 15.26           C
ATOM   4679  CD1 PHE A 296      16.887  26.123 -12.312  1.00 15.88           C
ATOM   4681  CE1 PHE A 296      17.303  26.193 -10.972  1.00 17.77           C
ATOM   4683  CZ  PHE A 296      17.874  27.329 -10.509  1.00 18.05           C
ATOM   4685  CE2 PHE A 296      18.054  28.427 -11.352  1.00 18.96           C
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ATOM	4687	CD2	PHE	A	296	17.669	28.350	-12.631	1.00	18.84	C
ATOM	4689	C	PHE	A	296	15.883	25.000	-15.568	1.00	15.16	C
ATOM	4690	O	PHE	A	296	14.882	25.409	-16.161	1.00	14.93	O
ATOM	4691	N	VAL	A	297	16.028	23.754	-15.135	1.00	14.40	N
ATOM	4693	CA	VAL	A	297	15.038	22.698	-15.409	1.00	14.75	C
ATOM	4695	CB	VAL	A	297	15.710	21.388	-15.869	1.00	14.62	C
ATOM	4697	CG1	VAL	A	297	14.678	20.277	-16.159	1.00	16.04	C
ATOM	4701	CG2	VAL	A	297	16.561	21.618	-17.056	1.00	15.23	C
ATOM	4705	C	VAL	A	297	14.221	22.423	-14.171	1.00	17.04	C
ATOM	4706	O	VAL	A	297	14.767	22.109	-13.113	1.00	17.96	O
ATOM	4707	N	ASN	A	298	12.898	22.508	-14.287	1.00	16.29	N
ATOM	4709	CA	ASN	A	298	12.000	22.192	-13.192	1.00	17.88	C
ATOM	4711	CB	ASN	A	298	11.120	23.371	-12.834	1.00	17.84	C
ATOM	4714	CG	ASN	A	298	10.334	23.130	-11.555	1.00	23.71	C
ATOM	4715	OD1	ASN	A	298	10.920	22.836	-10.502	1.00	22.88	O
ATOM	4716	ND2	ASN	A	298	9.013	23.255	-11.636	1.00	27.22	N
ATOM	4719	C	ASN	A	298	11.143	20.998	-13.546	1.00	18.64	C
ATOM	4720	O	ASN	A	298	10.566	20.964	-14.614	1.00	18.69	O
ATOM	4721	N	LEU	A	299	11.124	20.008	-12.649	1.00	18.59	N
ATOM	4723	CA	LEU	A	299	10.354	18.771	-12.794	1.00	19.84	C
ATOM	4725	CB	LEU	A	299	11.274	17.565	-12.616	1.00	19.13	C
ATOM	4728	CG	LEU	A	299	12.510	17.493	-13.523	1.00	20.77	C
ATOM	4730	CD1	LEU	A	299	13.366	16.220	-13.224	1.00	21.35	C
ATOM	4734	CD2	LEU	A	299	12.110	17.459	-14.961	1.00	19.27	C
ATOM	4738	C	LEU	A	299	9.311	18.801	-11.701	1.00	21.28	C
ATOM	4739	O	LEU	A	299	9.640	18.965	-10.530	1.00	20.13	O
ATOM	4740	N	MET	A	300	8.036	18.712	-12.075	1.00	23.03	N
ATOM	4742	CA	MET	A	300	6.967	18.693	-11.076	1.00	25.57	C
ATOM	4744	CB	MET	A	300	5.921	19.744	-11.399	1.00	25.71	C
ATOM	4747	CG	MET	A	300	6.377	21.115	-11.041	1.00	30.51	C
ATOM	4750	SD	MET	A	300	5.176	22.366	-11.502	1.00	43.38	S
ATOM	4751	CE	MET	A	300	3.760	21.863	-10.493	1.00	42.62	C
ATOM	4755	C	MET	A	300	6.336	17.323	-11.024	1.00	26.10	C
ATOM	4756	O	MET	A	300	6.244	16.654	-12.037	1.00	25.69	O
ATOM	4757	N	PHE	A	301	5.964	16.898	-9.820	1.00	28.52	N
ATOM	4759	CA	PHE	A	301	5.331	15.607	-9.579	1.00	31.68	C
ATOM	4761	CB	PHE	A	301	6.232	14.721	-8.677	1.00	31.38	C
ATOM	4764	CG	PHE	A	301	7.711	14.850	-8.968	1.00	27.82	C
ATOM	4765	CD1	PHE	A	301	8.454	15.831	-8.348	1.00	25.99	C
ATOM	4767	CE1	PHE	A	301	9.786	15.979	-8.603	1.00	27.67	C
ATOM	4769	CZ	PHE	A	301	10.410	15.144	-9.522	1.00	26.06	C
ATOM	4771	CE2	PHE	A	301	9.703	14.159	-10.145	1.00	24.79	C
ATOM	4773	CD2	PHE	A	301	8.335	14.008	-9.865	1.00	27.26	C
ATOM	4775	C	PHE	A	301	3.999	15.911	-8.877	1.00	35.24	C
ATOM	4776	O	PHE	A	301	3.896	16.911	-8.186	1.00	35.59	O
ATOM	4777	N	GLU	A	302	2.973	15.088	-9.049	1.00	39.82	N
ATOM	4779	CA	GLU	A	302	1.751	15.239	-8.219	1.00	43.37	C
ATOM	4781	CB	GLU	A	302	0.639	14.285	-8.667	1.00	43.89	C
ATOM	4784	CG	GLU	A	302	-0.744	14.677	-8.135	1.00	46.84	C
ATOM	4787	CD	GLU	A	302	-1.783	13.573	-8.313	1.00	51.28	C
ATOM	4788	OE1	GLU	A	302	-2.635	13.403	-7.394	1.00	52.61	O
ATOM	4789	OE2	GLU	A	302	-1.743	12.874	-9.368	1.00	53.08	O
ATOM	4790	C	GLU	A	302	2.055	14.998	-6.739	1.00	45.35	C
ATOM	4791	O	GLU	A	302	1.423	15.580	-5.847	1.00	45.80	O
ATOM	4792	N	ASP	A	303	3.049	14.141	-6.527	1.00	47.89	N
ATOM	4794	CA	ASP	A	303	3.510	13.680	-5.231	1.00	50.07	C
ATOM	4796	CB	ASP	A	303	3.633	12.151	-5.285	1.00	50.74	C
ATOM	4799	CG	ASP	A	303	4.659	11.666	-6.324	1.00	52.17	C
ATOM	4800	OD1	ASP	A	303	4.476	11.883	-7.550	1.00	52.76	O
ATOM	4801	OD2	ASP	A	303	5.693	11.053	-5.987	1.00	56.26	O
ATOM	4802	C	ASP	A	303	4.866	14.305	-4.869	1.00	50.97	C
ATOM	4803	O	ASP	A	303	5.902	13.855	-5.326	1.00	52.02	O
ATOM	4804	N	GLN	A	304	4.876	15.345	-4.053	1.00	51.81	N
ATOM	4806	CA	GLN	A	304	6.139	15.999	-3.728	1.00	52.52	C
ATOM	4808	CB	GLN	A	304	5.878	17.406	-3.212	1.00	53.44	C
ATOM	4811	CG	GLN	A	304	6.987	17.973	-2.279	1.00	55.79	C
ATOM	4814	CD	GLN	A	304	8.401	17.622	-2.719	1.00	58.40	C

ATOM	4815	OE1	GLN	A	304	9.311	17.483	-1.874	1.00 58.19	O
ATOM	4816	NE2	GLN	A	304	8.589	17.457	-4.039	1.00 59.38	N
ATOM	4819	C	GLN	A	304	6.975	15.259	-2.689	1.00 52.17	C
ATOM	4820	O	GLN	A	304	8.162	14.997	-2.894	1.00 52.44	O
ATOM	4821	N	ASP	A	305	6.351	14.967	-1.557	1.00 51.55	N
ATOM	4823	CA	ASP	A	305	7.054	14.520	-0.361	1.00 50.80	C
ATOM	4825	CB	ASP	A	305	6.184	14.801	0.871	1.00 50.93	C
ATOM	4828	CG	ASP	A	305	5.611	16.205	0.866	1.00 51.78	C
ATOM	4829	OD1	ASP	A	305	6.386	17.164	0.702	1.00 53.04	O
ATOM	4830	OD2	ASP	A	305	4.398	16.448	0.987	1.00 54.53	O
ATOM	4831	C	ASP	A	305	7.441	13.045	-0.377	1.00 49.80	C
ATOM	4832	O	ASP	A	305	8.111	12.595	0.546	1.00 49.59	O
ATOM	4833	N	LYS	A	306	7.018	12.309	-1.413	1.00 48.71	N
ATOM	4835	CA	LYS	A	306	7.133	10.842	-1.473	1.00 47.48	C
ATOM	4837	CB	LYS	A	306	5.931	10.230	-2.224	1.00 47.95	C
ATOM	4840	CG	LYS	A	306	4.642	10.157	-1.420	1.00 50.16	C
ATOM	4843	CD	LYS	A	306	3.643	9.150	-2.004	1.00 51.86	C
ATOM	4846	CE	LYS	A	306	2.364	9.078	-1.134	1.00 53.87	C
ATOM	4849	NZ	LYS	A	306	1.141	8.627	-1.880	1.00 53.98	N
ATOM	4853	C	LYS	A	306	8.391	10.462	-2.209	1.00 45.55	C
ATOM	4854	O	LYS	A	306	8.358	10.309	-3.430	1.00 45.59	O
ATOM	4855	N	ALA	A	307	9.495	10.289	-1.489	1.00 43.04	N
ATOM	4857	CA	ALA	A	307	10.762	9.972	-2.146	1.00 41.37	C
ATOM	4859	CB	ALA	A	307	11.920	9.888	-1.126	1.00 41.33	C
ATOM	4863	C	ALA	A	307	10.689	8.693	-2.979	1.00 39.61	C
ATOM	4864	O	ALA	A	307	11.372	8.579	-3.971	1.00 38.43	O
ATOM	4865	N	GLU	A	308	9.842	7.739	-2.597	1.00 37.98	N
ATOM	4867	CA	GLU	A	308	9.857	6.424	-3.242	1.00 37.44	C
ATOM	4869	CB	GLU	A	308	9.051	5.373	-2.450	1.00 37.87	C
ATOM	4872	CG	GLU	A	308	9.014	5.623	-0.948	1.00 40.57	C
ATOM	4875	CD	GLU	A	308	8.054	6.751	-0.564	1.00 43.97	C
ATOM	4876	OE1	GLU	A	308	6.912	6.774	-1.084	1.00 48.31	O
ATOM	4877	OE2	GLU	A	308	8.454	7.634	0.231	1.00 47.01	O
ATOM	4878	C	GLU	A	308	9.350	6.518	-4.678	1.00 35.81	C
ATOM	4879	O	GLU	A	308	9.780	5.774	-5.544	1.00 33.77	O
ATOM	4880	N	GLU	A	309	8.450	7.454	-4.932	1.00 34.73	N
ATOM	4882	CA	GLU	A	309	8.025	7.704	-6.301	1.00 35.05	C
ATOM	4884	CB	GLU	A	309	6.580	8.176	-6.298	1.00 36.43	C
ATOM	4887	CG	GLU	A	309	5.606	7.036	-6.033	1.00 40.80	C
ATOM	4890	CD	GLU	A	309	4.168	7.508	-6.023	1.00 45.43	C
ATOM	4891	OE1	GLU	A	309	3.659	7.870	-7.117	1.00 49.33	O
ATOM	4892	OE2	GLU	A	309	3.568	7.531	-4.915	1.00 48.68	O
ATOM	4893	C	GLU	A	309	8.919	8.702	-7.053	1.00 33.03	C
ATOM	4894	O	GLU	A	309	9.335	8.461	-8.198	1.00 34.48	O
ATOM	4895	N	ILE	A	310	9.232	9.823	-6.429	1.00 30.06	N
ATOM	4897	CA	ILE	A	310	9.966	10.843	-7.174	1.00 28.57	C
ATOM	4899	CB	ILE	A	310	9.803	12.239	-6.573	1.00 28.45	C
ATOM	4901	CG1	ILE	A	310	10.589	12.436	-5.294	1.00 29.89	C
ATOM	4904	CD1	ILE	A	310	10.766	13.898	-4.955	1.00 30.34	C
ATOM	4908	CG2	ILE	A	310	8.323	12.567	-6.351	1.00 29.22	C
ATOM	4912	C	ILE	A	310	11.434	10.462	-7.358	1.00 26.67	C
ATOM	4913	O	ILE	A	310	12.045	10.863	-8.307	1.00 25.43	O
ATOM	4914	N	GLY	A	311	12.003	9.682	-6.457	1.00 24.47	N
ATOM	4916	CA	GLY	A	311	13.407	9.323	-6.574	1.00 22.93	C
ATOM	4919	C	GLY	A	311	13.785	8.656	-7.876	1.00 22.53	C
ATOM	4920	O	GLY	A	311	14.706	9.094	-8.538	1.00 20.09	O
ATOM	4921	N	PRO	A	312	13.134	7.556	-8.271	1.00 21.63	N
ATOM	4922	CA	PRO	A	312	13.418	6.954	-9.585	1.00 22.14	C
ATOM	4924	CB	PRO	A	312	12.408	5.799	-9.656	1.00 22.55	C
ATOM	4927	CG	PRO	A	312	12.114	5.516	-8.232	1.00 23.10	C
ATOM	4930	CD	PRO	A	312	12.165	6.775	-7.488	1.00 23.47	C
ATOM	4933	C	PRO	A	312	13.228	7.931	-10.760	1.00 20.80	C
ATOM	4934	O	PRO	A	312	13.936	7.866	-11.754	1.00 20.41	O
ATOM	4935	N	ALA	A	313	12.269	8.835	-10.642	1.00 22.03	N
ATOM	4937	CA	ALA	A	313	11.964	9.790	-11.731	1.00 21.22	C
ATOM	4939	CB	ALA	A	313	10.638	10.535	-11.429	1.00 22.21	C
ATOM	4943	C	ALA	A	313	13.099	10.796	-11.911	1.00 20.80	C

ATOM	4944	O	ALA A 313	13.549	11.081	-13.008	1.00	19.86	O
ATOM	4945	N	ILE A 314	13.584	11.296	-10.794	1.00	19.52	N
ATOM	4947	CA	ILE A 314	14.714	12.208	-10.796	1.00	18.46	C
ATOM	4949	CB	ILE A 314	14.893	12.814	-9.388	1.00	17.89	C
ATOM	4951	CG1	ILE A 314	13.737	13.747	-9.082	1.00	19.43	C
ATOM	4954	CD1	ILE A 314	13.639	14.218	-7.681	1.00	18.91	C
ATOM	4958	CG2	ILE A 314	16.264	13.529	-9.252	1.00	19.18	C
ATOM	4962	C	ILE A 314	15.969	11.517	-11.290	1.00	16.73	C
ATOM	4963	O	ILE A 314	16.740	12.116	-12.062	1.00	14.98	O
ATOM	4964	N	GLN A 315	16.221	10.274	-10.857	1.00	14.59	N
ATOM	4966	CA	GLN A 315	17.355	9.561	-11.361	1.00	14.71	C
ATOM	4968	CB	GLN A 315	17.492	8.195	-10.631	1.00	14.85	C
ATOM	4971	CG	GLN A 315	18.472	7.224	-11.239	1.00	15.14	C
ATOM	4974	CD	GLN A 315	19.938	7.613	-11.060	1.00	15.08	C
ATOM	4975	OE1	GLN A 315	20.814	7.197	-11.814	1.00	17.48	O
ATOM	4976	NE2	GLN A 315	20.185	8.379	-10.063	1.00	12.35	N
ATOM	4979	C	GLN A 315	17.249	9.391	-12.869	1.00	16.08	C
ATOM	4980	O	GLN A 315	18.207	9.573	-13.574	1.00	15.23	O
ATOM	4981	N	ASP A 316	16.069	9.018	-13.376	1.00	16.53	N
ATOM	4983	CA	ASP A 316	15.901	8.865	-14.823	1.00	18.44	C
ATOM	4985	CB	ASP A 316	14.489	8.328	-15.161	1.00	18.99	C
ATOM	4988	CG	ASP A 316	14.265	6.910	-14.655	1.00	26.69	C
ATOM	4989	OD1	ASP A 316	13.081	6.499	-14.553	1.00	35.48	O
ATOM	4990	OD2	ASP A 316	15.202	6.164	-14.277	1.00	31.02	O
ATOM	4991	C	ASP A 316	16.149	10.178	-15.569	1.00	16.74	C
ATOM	4992	O	ASP A 316	16.859	10.196	-16.591	1.00	17.75	O
ATOM	4993	N	ALA A 317	15.583	11.271	-15.054	1.00	16.79	N
ATOM	4995	CA	ALA A 317	15.784	12.593	-15.637	1.00	15.87	C
ATOM	4997	CB	ALA A 317	14.974	13.631	-14.896	1.00	16.11	C
ATOM	5001	C	ALA A 317	17.279	12.940	-15.619	1.00	15.88	C
ATOM	5002	O	ALA A 317	17.834	13.407	-16.608	1.00	14.76	O
ATOM	5003	N	TYR A 318	17.939	12.653	-14.491	1.00	15.84	N
ATOM	5005	CA	TYR A 318	19.354	12.953	-14.323	1.00	15.60	C
ATOM	5007	CB	TYR A 318	19.854	12.652	-12.874	1.00	16.34	C
ATOM	5010	CG	TYR A 318	21.357	12.601	-12.884	1.00	16.05	C
ATOM	5011	CD1	TYR A 318	22.119	13.773	-12.859	1.00	19.06	C
ATOM	5013	CE1	TYR A 318	23.529	13.720	-12.973	1.00	19.39	C
ATOM	5015	CZ	TYR A 318	24.138	12.507	-13.169	1.00	21.46	C
ATOM	5016	OH	TYR A 318	25.498	12.347	-13.320	1.00	26.42	O
ATOM	5018	CE2	TYR A 318	23.393	11.355	-13.218	1.00	21.49	C
ATOM	5020	CD2	TYR A 318	22.017	11.411	-13.088	1.00	20.57	C
ATOM	5022	C	TYR A 318	20.210	12.253	-15.372	1.00	15.92	C
ATOM	5023	O	TYR A 318	21.094	12.838	-15.959	1.00	15.22	O
ATOM	5024	N	MET A 319	19.939	10.980	-15.623	1.00	14.03	N
ATOM	5026	CA	MET A 319	20.727	10.222	-16.563	1.00	14.67	C
ATOM	5028	CB	MET A 319	20.296	8.763	-16.520	1.00	15.26	C
ATOM	5031	CG	MET A 319	20.582	8.094	-15.156	1.00	15.55	C
ATOM	5034	SD	MET A 319	22.388	7.944	-14.837	1.00	19.60	S
ATOM	5035	CE	MET A 319	22.914	6.869	-16.039	1.00	20.34	C
ATOM	5039	C	MET A 319	20.627	10.791	-17.957	1.00	15.14	C
ATOM	5040	O	MET A 319	21.614	10.849	-18.683	1.00	17.12	O
ATOM	5041	N	HIS A 320	19.444	11.274	-18.300	1.00	14.89	N
ATOM	5043	CA	HIS A 320	19.265	11.904	-19.584	1.00	15.31	C
ATOM	5045	CB	HIS A 320	17.798	12.024	-19.975	1.00	16.25	C
ATOM	5048	CG	HIS A 320	17.646	12.368	-21.408	1.00	18.65	C
ATOM	5049	ND1	HIS A 320	17.943	11.461	-22.408	1.00	22.07	N
ATOM	5051	CE1	HIS A 320	17.787	12.051	-23.585	1.00	24.17	C
ATOM	5053	NE2	HIS A 320	17.426	13.309	-23.380	1.00	19.90	N
ATOM	5055	CD2	HIS A 320	17.345	13.536	-22.027	1.00	22.84	C
ATOM	5057	C	HIS A 320	19.900	13.281	-19.642	1.00	14.10	C
ATOM	5058	O	HIS A 320	20.611	13.548	-20.580	1.00	16.14	O
ATOM	5059	N	ILE A 321	19.678	14.094	-18.622	1.00	14.92	N
ATOM	5061	CA	ILE A 321	20.255	15.452	-18.552	1.00	15.95	C
ATOM	5063	CB	ILE A 321	19.798	16.170	-17.312	1.00	16.22	C
ATOM	5065	CG1	ILE A 321	18.335	16.579	-17.413	1.00	16.97	C
ATOM	5068	CD1	ILE A 321	17.726	16.966	-16.114	1.00	19.20	C
ATOM	5072	CG2	ILE A 321	20.625	17.424	-17.062	1.00	17.07	C

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ATOM   5076  C   ILE A 321      21.763  15.371 -18.630  1.00 17.51           C
ATOM   5077  O   ILE A 321      22.399  16.024 -19.433  1.00 17.66           O
ATOM   5078  N   THR A 322      22.347  14.505 -17.820  1.00 17.07           N
ATOM   5080  CA  THR A 322      23.769  14.445 -17.853  1.00 19.24           C
ATOM   5082  CB  THR A 322      24.328  13.645 -16.653  1.00 17.35           C
ATOM   5084  OG1 THR A 322      25.739  13.919 -16.566  1.00 23.78           O
ATOM   5086  CG2 THR A 322      24.252  12.240 -16.891  1.00 21.05           C
ATOM   5090  C   THR A 322      24.313  14.023 -19.208  1.00 18.98           C
ATOM   5091  O   THR A 322      25.335  14.546 -19.632  1.00 21.80           O
ATOM   5092  N   SER A 323      23.627  13.145 -19.941  1.00 20.71           N
ATOM   5094  CA  SER A 323      24.053  12.776 -21.289  1.00 21.66           C
ATOM   5096  CB  SER A 323      23.338  11.518 -21.798  1.00 21.90           C
ATOM   5099  OG  SER A 323      22.017  11.764 -22.198  1.00 26.88           O
ATOM   5101  C   SER A 323      23.920  13.906 -22.304  1.00 21.91           C
ATOM   5102  O   SER A 323      24.771  14.089 -23.176  1.00 22.72           O
ATOM   5103  N   VAL A 324      22.875  14.685 -22.158  1.00 21.50           N
ATOM   5105  CA  VAL A 324      22.698  15.850 -23.008  1.00 22.57           C
ATOM   5107  CB  VAL A 324      21.269  16.400 -22.915  1.00 21.97           C
ATOM   5109  CG1 VAL A 324      21.149  17.742 -23.653  1.00 21.07           C
ATOM   5113  CG2 VAL A 324      20.298  15.399 -23.516  1.00 22.76           C
ATOM   5117  C   VAL A 324      23.759  16.914 -22.690  1.00 22.95           C
ATOM   5118  O   VAL A 324      24.328  17.457 -23.628  1.00 25.28           O
ATOM   5119  N   LEU A 325      24.023  17.228 -21.410  1.00 23.62           N
ATOM   5121  CA  LEU A 325      24.984  18.277 -21.058  1.00 23.52           C
ATOM   5123  CB  LEU A 325      24.944  18.599 -19.563  1.00 23.57           C
ATOM   5126  CG  LEU A 325      23.632  19.095 -18.992  1.00 23.60           C
ATOM   5128  CD1 LEU A 325      23.715  19.305 -17.482  1.00 25.82           C
ATOM   5132  CD2 LEU A 325      23.193  20.367 -19.670  1.00 29.03           C
ATOM   5136  C   LEU A 325      26.404  17.891 -21.447  1.00 25.74           C
ATOM   5137  O   LEU A 325      27.192  18.765 -21.791  1.00 25.83           O
ATOM   5138  N   LYS A 326      26.715  16.590 -21.433  1.00 26.73           N
ATOM   5140  CA  LYS A 326      28.084  16.077 -21.698  1.00 28.30           C
ATOM   5142  CB  LYS A 326      28.115  14.539 -21.574  1.00 28.41           C
ATOM   5145  CG  LYS A 326      29.361  13.813 -22.165  1.00 29.83           C
ATOM   5148  CD  LYS A 326      29.360  12.317 -21.713  1.00 31.83           C
ATOM   5151  CE  LYS A 326      30.523  11.493 -22.270  1.00 32.71           C
ATOM   5154  NZ  LYS A 326      30.160  10.039 -22.239  1.00 35.68           N
ATOM   5158  C   LYS A 326      28.560  16.474 -23.085  1.00 29.56           C
ATOM   5159  O   LYS A 326      29.726  16.761 -23.328  1.00 30.17           O
ATOM   5160  N   ILE A 327      27.628  16.483 -24.003  1.00 31.56           N
ATOM   5162  CA  ILE A 327      27.949  16.729 -25.403  1.00 32.48           C
ATOM   5164  CB  ILE A 327      26.658  16.438 -26.241  1.00 32.97           C
ATOM   5166  CG1 ILE A 327      26.289  14.935 -26.101  1.00 33.19           C
ATOM   5169  CD1 ILE A 327      24.920  14.574 -26.592  1.00 36.15           C
ATOM   5173  CG2 ILE A 327      26.836  16.816 -27.735  1.00 34.71           C
ATOM   5177  C   ILE A 327      28.546  18.154 -25.578  1.00 33.47           C
ATOM   5178  O   ILE A 327      29.470  18.357 -26.357  1.00 33.30           O
ATOM   5179  N   PHE A 328      28.087  19.102 -24.763  1.00 34.43           N
ATOM   5181  CA  PHE A 328      28.532  20.499 -24.814  1.00 34.65           C
ATOM   5183  CB  PHE A 328      27.332  21.359 -25.231  1.00 35.09           C
ATOM   5186  CG  PHE A 328      26.713  20.892 -26.528  1.00 34.90           C
ATOM   5187  CD1 PHE A 328      25.529  20.181 -26.531  1.00 35.38           C
ATOM   5189  CE1 PHE A 328      24.974  19.710 -27.725  1.00 35.29           C
ATOM   5191  CZ  PHE A 328      25.629  19.939 -28.934  1.00 35.52           C
ATOM   5193  CE2 PHE A 328      26.827  20.640 -28.936  1.00 35.17           C
ATOM   5195  CD2 PHE A 328      27.372  21.099 -27.741  1.00 35.15           C
ATOM   5197  C   PHE A 328      29.142  21.003 -23.514  1.00 35.17           C
ATOM   5198  O   PHE A 328      29.105  22.178 -23.242  1.00 35.21           O
ATOM   5199  N   GLN A 329      29.729  20.096 -22.736  1.00 35.20           N
ATOM   5201  CA  GLN A 329      30.375  20.419 -21.473  1.00 35.20           C
ATOM   5203  CB  GLN A 329      31.744  21.071 -21.727  1.00 35.74           C
ATOM   5206  CG  GLN A 329      32.790  20.084 -22.254  1.00 38.47           C
ATOM   5209  CD  GLN A 329      33.112  20.285 -23.722  1.00 43.32           C
ATOM   5210  OE1 GLN A 329      32.344  19.868 -24.613  1.00 48.26           O
ATOM   5211  NE2 GLN A 329      34.251  20.926 -23.990  1.00 45.79           N
ATOM   5214  C   GLN A 329      29.505  21.278 -20.542  1.00 34.15           C
ATOM   5215  O   GLN A 329      30.026  22.097 -19.765  1.00 34.80           O
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ATOM	5216	N	GLY	A	330	28.185	21.069	-20.601	1.00 31.94	N
ATOM	5218	CA	GLY	A	330	27.285	21.684	-19.655	1.00 30.22	C
ATOM	5221	C	GLY	A	330	27.413	21.013	-18.322	1.00 28.25	C
ATOM	5222	O	GLY	A	330	27.750	19.834	-18.225	1.00 29.32	O
ATOM	5223	N	GLN	A	331	27.150	21.752	-17.275	1.00 25.77	N
ATOM	5225	CA	GLN	A	331	27.273	21.249	-15.936	1.00 26.08	C
ATOM	5227	CB	GLN	A	331	28.387	21.981	-15.192	1.00 27.03	C
ATOM	5230	CG	GLN	A	331	29.775	21.847	-15.815	1.00 31.34	C
ATOM	5233	CD	GLN	A	331	30.439	20.476	-15.610	1.00 35.22	C
ATOM	5234	OE1	GLN	A	331	31.298	20.090	-16.410	1.00 39.15	O
ATOM	5235	NE2	GLN	A	331	30.071	19.765	-14.547	1.00 35.46	N
ATOM	5238	C	GLN	A	331	26.008	21.470	-15.167	1.00 24.18	C
ATOM	5239	O	GLN	A	331	25.308	22.457	-15.389	1.00 22.16	O
ATOM	5240	N	ILE	A	332	25.714	20.545	-14.261	1.00 21.97	N
ATOM	5242	CA	ILE	A	332	24.703	20.763	-13.242	1.00 22.10	C
ATOM	5244	CB	ILE	A	332	24.032	19.449	-12.806	1.00 21.98	C
ATOM	5246	CG1	ILE	A	332	23.405	18.733	-13.984	1.00 21.79	C
ATOM	5249	CD1	ILE	A	332	23.020	17.356	-13.696	1.00 20.95	C
ATOM	5253	CG2	ILE	A	332	22.993	19.709	-11.727	1.00 22.59	C
ATOM	5257	C	ILE	A	332	25.398	21.410	-12.051	1.00 22.38	C
ATOM	5258	O	ILE	A	332	26.201	20.756	-11.351	1.00 23.04	O
ATOM	5259	N	ASN	A	333	25.065	22.654	-11.766	1.00 21.29	N
ATOM	5261	CA	ASN	A	333	25.646	23.366	-10.636	1.00 22.45	C
ATOM	5263	CB	ASN	A	333	25.603	24.872	-10.896	1.00 22.02	C
ATOM	5266	CG	ASN	A	333	26.236	25.699	-9.769	1.00 24.90	C
ATOM	5267	OD1	ASN	A	333	27.452	25.662	-9.553	1.00 28.64	O
ATOM	5268	ND2	ASN	A	333	25.438	26.484	-9.099	1.00 24.17	N
ATOM	5271	C	ASN	A	333	24.943	23.057	-9.310	1.00 23.10	C
ATOM	5272	O	ASN	A	333	25.561	23.016	-8.268	1.00 24.20	O
ATOM	5273	N	LYS	A	334	23.624	22.917	-9.354	1.00 23.07	N
ATOM	5275	CA	LYS	A	334	22.796	22.721	-8.170	1.00 23.33	C
ATOM	5277	CB	LYS	A	334	22.317	24.037	-7.574	1.00 23.99	C
ATOM	5280	CG	LYS	A	334	23.362	25.055	-7.191	1.00 26.72	C
ATOM	5283	CD	LYS	A	334	24.232	24.641	-5.987	1.00 28.56	C
ATOM	5286	CE	LYS	A	334	25.422	25.592	-5.917	1.00 28.90	C
ATOM	5289	NZ	LYS	A	334	26.302	25.308	-4.757	1.00 30.62	N
ATOM	5293	C	LYS	A	334	21.557	21.942	-8.556	1.00 23.22	C
ATOM	5294	O	LYS	A	334	21.039	22.087	-9.682	1.00 20.61	O
ATOM	5295	N	VAL	A	335	21.066	21.135	-7.612	1.00 22.66	N
ATOM	5297	CA	VAL	A	335	19.761	20.496	-7.717	1.00 23.29	C
ATOM	5299	CB	VAL	A	335	19.858	19.007	-8.042	1.00 22.74	C
ATOM	5301	CG1	VAL	A	335	18.486	18.421	-8.391	1.00 23.23	C
ATOM	5305	CG2	VAL	A	335	20.813	18.735	-9.166	1.00 22.83	C
ATOM	5309	C	VAL	A	335	19.114	20.677	-6.370	1.00 24.56	C
ATOM	5310	O	VAL	A	335	19.770	20.524	-5.333	1.00 25.40	O
ATOM	5311	N	PHE	A	336	17.842	21.049	-6.339	1.00 25.00	N
ATOM	5313	CA	PHE	A	336	17.172	21.291	-5.085	1.00 26.14	C
ATOM	5315	CB	PHE	A	336	17.716	22.560	-4.407	1.00 26.74	C
ATOM	5318	CG	PHE	A	336	17.594	23.790	-5.247	1.00 27.78	C
ATOM	5319	CD1	PHE	A	336	16.405	24.529	-5.238	1.00 31.19	C
ATOM	5321	CE1	PHE	A	336	16.259	25.646	-6.026	1.00 31.70	C
ATOM	5323	CZ	PHE	A	336	17.320	26.069	-6.834	1.00 30.59	C
ATOM	5325	CE2	PHE	A	336	18.497	25.346	-6.858	1.00 28.92	C
ATOM	5327	CD2	PHE	A	336	18.629	24.199	-6.063	1.00 28.35	C
ATOM	5329	C	PHE	A	336	15.679	21.379	-5.317	1.00 27.56	C
ATOM	5330	O	PHE	A	336	15.230	21.573	-6.453	1.00 25.49	O
ATOM	5331	N	MET	A	337	14.906	21.195	-4.256	1.00 29.67	N
ATOM	5333	CA	MET	A	337	13.459	21.383	-4.335	1.00 32.66	C
ATOM	5335	CB	MET	A	337	12.734	20.549	-3.269	1.00 32.31	C
ATOM	5338	CG	MET	A	337	13.084	19.047	-3.286	1.00 33.72	C
ATOM	5341	SD	MET	A	337	12.836	18.128	-4.846	1.00 36.58	S
ATOM	5342	CE	MET	A	337	11.166	18.051	-4.853	1.00 35.02	C
ATOM	5346	C	MET	A	337	13.052	22.852	-4.159	1.00 35.71	C
ATOM	5347	O	MET	A	337	13.631	23.566	-3.346	1.00 35.42	O
ATOM	5348	N	PHE	A	338	12.042	23.304	-4.911	1.00 39.35	N
ATOM	5350	CA	PHE	A	338	11.198	24.405	-4.416	1.00 42.31	C
ATOM	5352	CB	PHE	A	338	11.842	25.793	-4.586	1.00 43.54	C

ATOM	5355	CG	PHE	A	338	11.867	26.328	-5.978	1.00 46.68	C
ATOM	5356	CD1	PHE	A	338	12.103	27.685	-6.160	1.00 50.91	C
ATOM	5358	CE1	PHE	A	338	12.169	28.233	-7.429	1.00 51.72	C
ATOM	5360	CZ	PHE	A	338	12.002	27.419	-8.536	1.00 51.42	C
ATOM	5362	CE2	PHE	A	338	11.779	26.061	-8.371	1.00 50.46	C
ATOM	5364	CD2	PHE	A	338	11.727	25.516	-7.101	1.00 49.72	C
ATOM	5366	C	PHE	A	338	9.735	24.389	-4.861	1.00 43.53	C
ATOM	5367	O	PHE	A	338	9.396	24.025	-5.995	1.00 44.41	O
ATOM	5368	N	ASP	A	339	8.875	24.799	-3.929	1.00 44.71	N
ATOM	5370	CA	ASP	A	339	7.446	24.525	-4.006	1.00 45.20	C
ATOM	5372	CB	ASP	A	339	6.717	25.656	-4.743	1.00 46.17	C
ATOM	5375	CG	ASP	A	339	6.987	27.031	-4.113	1.00 48.65	C
ATOM	5376	OD1	ASP	A	339	6.774	27.191	-2.891	1.00 52.71	O
ATOM	5377	OD2	ASP	A	339	7.436	28.007	-4.757	1.00 53.04	O
ATOM	5378	C	ASP	A	339	7.219	23.151	-4.643	1.00 44.63	C
ATOM	5379	O	ASP	A	339	6.481	23.012	-5.619	1.00 45.55	O
ATOM	5380	N	LYS	A	340	7.921	22.146	-4.108	1.00 43.44	N
ATOM	5382	CA	LYS	A	340	7.640	20.737	-4.386	1.00 42.28	C
ATOM	5384	CB	LYS	A	340	6.140	20.483	-4.136	1.00 43.60	C
ATOM	5387	CG	LYS	A	340	5.650	21.010	-2.751	1.00 46.07	C
ATOM	5390	CD	LYS	A	340	4.315	20.395	-2.274	1.00 48.74	C
ATOM	5393	CE	LYS	A	340	3.758	21.149	-1.034	1.00 50.71	C
ATOM	5396	NZ	LYS	A	340	2.252	21.070	-0.896	1.00 50.93	N
ATOM	5400	C	LYS	A	340	8.070	20.226	-5.784	1.00 39.49	C
ATOM	5401	O	LYS	A	340	7.814	19.064	-6.127	1.00 40.08	O
ATOM	5402	N	GLY	A	341	8.717	21.083	-6.581	1.00 35.47	N
ATOM	5404	CA	GLY	A	341	9.322	20.652	-7.826	1.00 32.13	C
ATOM	5407	C	GLY	A	341	10.820	20.484	-7.624	1.00 28.77	C
ATOM	5408	O	GLY	A	341	11.413	21.172	-6.801	1.00 28.65	O
ATOM	5409	N	CYS	A	342	11.412	19.568	-8.373	1.00 24.15	N
ATOM	5411	CA	CYS	A	342	12.869	19.410	-8.389	1.00 22.11	C
ATOM	5413	CB	CYS	A	342	13.218	17.970	-8.647	1.00 21.19	C
ATOM	5416	SG	CYS	A	342	14.987	17.615	-8.550	1.00 22.27	S
ATOM	5417	C	CYS	A	342	13.479	20.272	-9.494	1.00 20.85	C
ATOM	5418	O	CYS	A	342	13.120	20.139	-10.644	1.00 21.70	O
ATOM	5419	N	SER	A	343	14.446	21.108	-9.147	1.00 19.38	N
ATOM	5421	CA	SER	A	343	15.048	22.021	-10.131	1.00 18.96	C
ATOM	5423	CB	SER	A	343	14.943	23.445	-9.644	1.00 18.66	C
ATOM	5426	OG	SER	A	343	13.595	23.829	-9.516	1.00 23.46	O
ATOM	5428	C	SER	A	343	16.513	21.683	-10.332	1.00 18.59	C
ATOM	5429	O	SER	A	343	17.236	21.496	-9.365	1.00 19.82	O
ATOM	5430	N	PHE	A	344	16.937	21.604	-11.582	1.00 16.54	N
ATOM	5432	CA	PHE	A	344	18.348	21.445	-11.960	1.00 16.72	C
ATOM	5434	CB	PHE	A	344	18.532	20.406	-13.050	1.00 15.97	C
ATOM	5437	CG	PHE	A	344	18.222	18.995	-12.641	1.00 18.93	C
ATOM	5438	CD1	PHE	A	344	16.919	18.584	-12.396	1.00 20.22	C
ATOM	5440	CE1	PHE	A	344	16.635	17.255	-12.054	1.00 23.63	C
ATOM	5442	CZ	PHE	A	344	17.660	16.333	-11.969	1.00 22.57	C
ATOM	5444	CE2	PHE	A	344	18.963	16.726	-12.240	1.00 22.26	C
ATOM	5446	CD2	PHE	A	344	19.241	18.058	-12.565	1.00 19.39	C
ATOM	5448	C	PHE	A	344	18.844	22.787	-12.474	1.00 16.58	C
ATOM	5449	O	PHE	A	344	18.336	23.295	-13.498	1.00 16.12	O
ATOM	5450	N	LEU	A	345	19.842	23.363	-11.794	1.00 14.57	N
ATOM	5452	CA	LEU	A	345	20.505	24.555	-12.326	1.00 16.22	C
ATOM	5454	CB	LEU	A	345	20.968	25.441	-11.184	1.00 16.28	C
ATOM	5457	CG	LEU	A	345	21.311	26.890	-11.430	1.00 18.84	C
ATOM	5459	CD1	LEU	A	345	21.737	27.523	-10.085	1.00 20.94	C
ATOM	5463	CD2	LEU	A	345	22.299	27.119	-12.502	1.00 21.88	C
ATOM	5467	C	LEU	A	345	21.654	24.149	-13.226	1.00 16.38	C
ATOM	5468	O	LEU	A	345	22.720	23.763	-12.735	1.00 16.33	O
ATOM	5469	N	CYS	A	346	21.444	24.183	-14.538	1.00 13.83	N
ATOM	5471	CA	CYS	A	346	22.440	23.816	-15.504	1.00 15.07	C
ATOM	5473	CB	CYS	A	346	21.859	22.968	-16.629	1.00 14.46	C
ATOM	5476	SG	CYS	A	346	20.951	21.505	-16.021	1.00 17.12	S
ATOM	5477	C	CYS	A	346	23.085	25.058	-16.113	1.00 15.20	C
ATOM	5478	O	CYS	A	346	22.441	26.085	-16.316	1.00 15.49	O
ATOM	5479	N	VAL	A	347	24.382	24.948	-16.341	1.00 14.82	N

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ATOM   5481  CA  VAL A 347      25.182  26.051 -16.827  1.00 15.25           C
ATOM   5483  CB  VAL A 347      26.113  26.604 -15.694  1.00 14.35           C
ATOM   5485  CG1 VAL A 347      26.951  27.757 -16.253  1.00 16.17           C
ATOM   5489  CG2 VAL A 347      25.282  27.018 -14.508  1.00 16.63           C
ATOM   5493  C   VAL A 347      26.016  25.661 -18.012  1.00 16.02           C
ATOM   5494  O   VAL A 347      26.774  24.645 -18.027  1.00 18.13           O
ATOM   5495  N   PHE A 348      25.949  26.501 -19.038  1.00 17.36           N
ATOM   5497  CA  PHE A 348      26.767  26.330 -20.255  1.00 19.19           C
ATOM   5499  CB  PHE A 348      25.903  26.393 -21.510  1.00 18.96           C
ATOM   5502  CG  PHE A 348      25.041  25.193 -21.718  1.00 19.70           C
ATOM   5503  CD1 PHE A 348      23.881  25.059 -21.010  1.00 20.42           C
ATOM   5505  CE1 PHE A 348      23.095  23.948 -21.194  1.00 21.20           C
ATOM   5507  CZ  PHE A 348      23.475  22.976 -22.078  1.00 21.59           C
ATOM   5509  CE2 PHE A 348      24.633  23.086 -22.757  1.00 23.13           C
ATOM   5511  CD2 PHE A 348      25.431  24.184 -22.549  1.00 23.07           C
ATOM   5513  C   PHE A 348      27.753  27.506 -20.315  1.00 21.05           C
ATOM   5514  O   PHE A 348      27.370  28.642 -20.062  1.00 20.01           O
ATOM   5515  N   GLY A 349      29.016  27.211 -20.636  1.00 25.29           N
ATOM   5517  CA  GLY A 349      30.108  28.186 -20.617  1.00 27.40           C
ATOM   5520  C   GLY A 349      31.058  28.033 -19.431  1.00 29.63           C
ATOM   5521  O   GLY A 349      31.187  28.981 -18.615  1.00 31.81           O
ATOM   5522  N   ASP A 357      28.435  28.753 -30.609  1.00 43.59           N
ATOM   5524  CA  ASP A 357      26.984  28.580 -30.721  1.00 42.85           C
ATOM   5526  CB  ASP A 357      26.636  27.597 -31.823  1.00 43.93           C
ATOM   5529  CG  ASP A 357      27.095  28.059 -33.165  1.00 46.19           C
ATOM   5530  OD1 ASP A 357      26.535  29.056 -33.671  1.00 51.00           O
ATOM   5531  OD2 ASP A 357      27.989  27.474 -33.794  1.00 50.91           O
ATOM   5532  C   ASP A 357      26.443  28.029 -29.436  1.00 41.28           C
ATOM   5533  O   ASP A 357      25.595  27.152 -29.447  1.00 41.76           O
ATOM   5534  N   GLU A 358      26.951  28.539 -28.329  1.00 39.10           N
ATOM   5536  CA  GLU A 358      26.493  28.105 -27.031  1.00 38.10           C
ATOM   5538  CB  GLU A 358      27.242  28.869 -25.936  1.00 38.65           C
ATOM   5541  CG  GLU A 358      26.684  28.704 -24.533  1.00 39.66           C
ATOM   5544  CD  GLU A 358      27.408  29.587 -23.552  1.00 42.96           C
ATOM   5545  OE1 GLU A 358      26.840  30.654 -23.193  1.00 46.09           O
ATOM   5546  OE2 GLU A 358      28.546  29.226 -23.164  1.00 43.42           O
ATOM   5547  C   GLU A 358      24.976  28.296 -26.889  1.00 36.14           C
ATOM   5548  O   GLU A 358      24.328  27.536 -26.160  1.00 35.26           O
ATOM   5549  N   LEU A 359      24.428  29.316 -27.559  1.00 34.29           N
ATOM   5551  CA  LEU A 359      23.018  29.667 -27.400  1.00 32.33           C
ATOM   5553  CB  LEU A 359      22.753  31.082 -27.904  1.00 32.69           C
ATOM   5556  CG  LEU A 359      23.460  32.197 -27.131  1.00 31.27           C
ATOM   5558  CD1 LEU A 359      23.105  33.538 -27.793  1.00 31.22           C
ATOM   5562  CD2 LEU A 359      23.052  32.220 -25.711  1.00 29.80           C
ATOM   5566  C   LEU A 359      22.121  28.696 -28.139  1.00 31.06           C
ATOM   5567  O   LEU A 359      21.109  28.253 -27.599  1.00 29.32           O
ATOM   5568  N   THR A 360      22.501  28.369 -29.367  1.00 29.47           N
ATOM   5570  CA  THR A 360      21.773  27.387 -30.157  1.00 29.62           C
ATOM   5572  CB  THR A 360      22.426  27.216 -31.525  1.00 29.86           C
ATOM   5574  OG1 THR A 360      22.431  28.479 -32.204  1.00 32.80           O
ATOM   5576  CG2 THR A 360      21.614  26.319 -32.405  1.00 30.38           C
ATOM   5580  C   THR A 360      21.759  26.045 -29.452  1.00 28.45           C
ATOM   5581  O   THR A 360      20.708  25.403 -29.295  1.00 28.13           O
ATOM   5582  N   HIS A 361      22.934  25.616 -29.049  1.00 26.31           N
ATOM   5584  CA  HIS A 361      23.083  24.370 -28.323  1.00 25.45           C
ATOM   5586  CB  HIS A 361      24.571  24.095 -28.102  1.00 26.59           C
ATOM   5589  CG  HIS A 361      25.287  23.795 -29.373  1.00 29.24           C
ATOM   5590  ND1 HIS A 361      24.724  23.020 -30.361  1.00 31.34           N
ATOM   5592  CE1 HIS A 361      25.569  22.926 -31.372  1.00 34.67           C
ATOM   5594  NE2 HIS A 361      26.660  23.607 -31.067  1.00 32.89           N
ATOM   5596  CD2 HIS A 361      26.505  24.171 -29.828  1.00 30.93           C
ATOM   5598  C   HIS A 361      22.320  24.339 -27.009  1.00 23.70           C
ATOM   5599  O   HIS A 361      21.770  23.302 -26.689  1.00 22.96           O
ATOM   5600  N   ALA A 362      22.295  25.454 -26.266  1.00 20.92           N
ATOM   5602  CA  ALA A 362      21.566  25.555 -25.022  1.00 21.07           C
ATOM   5604  CB  ALA A 362      21.751  26.908 -24.356  1.00 21.26           C
ATOM   5608  C   ALA A 362      20.075  25.296 -25.274  1.00 19.86           C
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ATOM   5609  O   ALA A 362      19.442  24.571 -24.522  1.00 19.47           O
ATOM   5610  N   LEU A 363      19.551  25.890 -26.336  1.00 18.75           N
ATOM   5612  CA  LEU A 363      18.145  25.725 -26.687  1.00 18.21           C
ATOM   5614  CB  LEU A 363      17.705  26.757 -27.758  1.00 18.22           C
ATOM   5617  CG  LEU A 363      17.661  28.228 -27.351  1.00 16.97           C
ATOM   5619  CD1 LEU A 363      17.480  29.125 -28.590  1.00 19.00           C
ATOM   5623  CD2 LEU A 363      16.564  28.560 -26.344  1.00 16.61           C
ATOM   5627  C   LEU A 363      17.832  24.330 -27.162  1.00 17.71           C
ATOM   5628  O   LEU A 363      16.855  23.744 -26.730  1.00 17.89           O
ATOM   5629  N   GLU A 364      18.696  23.757 -27.998  1.00 18.26           N
ATOM   5631  CA  GLU A 364      18.482  22.404 -28.476  1.00 18.36           C
ATOM   5633  CB  GLU A 364      19.456  22.035 -29.596  1.00 20.05           C
ATOM   5636  CG  GLU A 364      19.118  22.770 -30.877  1.00 22.63           C
ATOM   5639  CD  GLU A 364      20.123  22.565 -31.986  1.00 28.58           C
ATOM   5640  OE1 GLU A 364      21.307  22.215 -31.709  1.00 32.24           O
ATOM   5641  OE2 GLU A 364      19.724  22.771 -33.143  1.00 30.43           O
ATOM   5642  C   GLU A 364      18.622  21.426 -27.310  1.00 17.66           C
ATOM   5643  O   GLU A 364      17.850  20.470 -27.247  1.00 17.01           O
ATOM   5644  N   CYS A 365      19.576  21.664 -26.416  1.00 17.33           N
ATOM   5646  CA  CYS A 365      19.701  20.816 -25.225  1.00 17.61           C
ATOM   5648  CB  CYS A 365      20.951  21.139 -24.410  1.00 18.10           C
ATOM   5651  SG  CYS A 365      22.444  20.570 -25.251  1.00 25.03           S
ATOM   5652  C   CYS A 365      18.453  20.948 -24.350  1.00 16.65           C
ATOM   5653  O   CYS A 365      17.926  19.938 -23.875  1.00 17.46           O
ATOM   5654  N   ALA A 366      17.973  22.175 -24.138  1.00 15.67           N
ATOM   5656  CA  ALA A 366      16.754  22.386 -23.375  1.00 15.93           C
ATOM   5658  CB  ALA A 366      16.414  23.832 -23.285  1.00 15.76           C
ATOM   5662  C   ALA A 366      15.585  21.590 -23.986  1.00 16.71           C
ATOM   5663  O   ALA A 366      14.860  20.905 -23.247  1.00 15.63           O
ATOM   5664  N   MET A 367      15.385  21.672 -25.314  1.00 16.79           N
ATOM   5666  CA  MET A 367      14.279  20.935 -25.906  1.00 17.35           C
ATOM   5668  CB  MET A 367      14.077  21.338 -27.374  1.00 17.48           C
ATOM   5671  CG  MET A 367      12.813  20.716 -28.034  1.00 17.97           C
ATOM   5674  SD  MET A 367      11.315  21.135 -27.192  1.00 21.84           S
ATOM   5675  CE  MET A 367      11.082  22.771 -27.644  1.00 22.39           C
ATOM   5679  C   MET A 367      14.451  19.402 -25.778  1.00 17.31           C
ATOM   5680  O   MET A 367      13.472  18.669 -25.499  1.00 16.95           O
ATOM   5681  N   ASP A 368      15.688  18.910 -25.923  1.00 17.66           N
ATOM   5683  CA  ASP A 368      15.938  17.478 -25.804  1.00 18.16           C
ATOM   5685  CB  ASP A 368      17.412  17.200 -26.072  1.00 18.40           C
ATOM   5688  CG  ASP A 368      17.768  15.751 -26.050  1.00 21.50           C
ATOM   5689  OD1 ASP A 368      18.801  15.393 -26.670  1.00 28.69           O
ATOM   5690  OD2 ASP A 368      17.114  14.895 -25.450  1.00 28.09           O
ATOM   5691  C   ASP A 368      15.503  17.061 -24.379  1.00 17.09           C
ATOM   5692  O   ASP A 368      14.723  16.142 -24.212  1.00 16.77           O
ATOM   5693  N   ILE A 369      15.977  17.796 -23.374  1.00 16.08           N
ATOM   5695  CA  ILE A 369      15.629  17.557 -21.978  1.00 15.30           C
ATOM   5697  CB  ILE A 369      16.369  18.529 -21.027  1.00 15.09           C
ATOM   5699  CG1 ILE A 369      17.888  18.261 -21.087  1.00 18.42           C
ATOM   5702  CD1 ILE A 369      18.679  19.341 -20.390  1.00 19.79           C
ATOM   5706  CG2 ILE A 369      15.856  18.361 -19.644  1.00 14.29           C
ATOM   5710  C   ILE A 369      14.134  17.643 -21.766  1.00 15.32           C
ATOM   5711  O   ILE A 369      13.540  16.794 -21.118  1.00 16.77           O
ATOM   5712  N   PHE A 370      13.514  18.667 -22.328  1.00 15.65           N
ATOM   5714  CA  PHE A 370      12.075  18.837 -22.168  1.00 15.89           C
ATOM   5716  CB  PHE A 370      11.594  20.071 -22.909  1.00 16.11           C
ATOM   5719  CG  PHE A 370      10.121  20.252 -22.828  1.00 16.17           C
ATOM   5720  CD1 PHE A 370       9.546  20.889 -21.765  1.00 15.70           C
ATOM   5722  CE1 PHE A 370       8.168  21.005 -21.682  1.00 18.75           C
ATOM   5724  CZ  PHE A 370       7.387  20.464 -22.668  1.00 21.02           C
ATOM   5726  CE2 PHE A 370       7.959  19.812 -23.731  1.00 21.58           C
ATOM   5728  CD2 PHE A 370       9.301  19.706 -23.822  1.00 20.03           C
ATOM   5730  C   PHE A 370      11.330  17.605 -22.708  1.00 17.43           C
ATOM   5731  O   PHE A 370      10.450  17.063 -22.036  1.00 17.56           O
ATOM   5732  N   ASP A 371      11.672  17.175 -23.900  1.00 18.51           N
ATOM   5734  CA  ASP A 371      10.903  16.118 -24.545  1.00 20.58           C
ATOM   5736  CB  ASP A 371      11.281  15.991 -26.014  1.00 21.12           C
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ATOM   5739  CG  ASP A 371      10.736  17.146 -26.863  1.00 23.80           C
ATOM   5740  OD1 ASP A 371      11.379  17.473 -27.890  1.00 25.89           O
ATOM   5741  OD2 ASP A 371       9.699  17.789 -26.553  1.00 26.74           O
ATOM   5742  C   ASP A 371      11.084  14.801 -23.818  1.00 21.82           C
ATOM   5743  O   ASP A 371      10.123  14.031 -23.643  1.00 21.25           O
ATOM   5744  N   PHE A 372      12.302  14.557 -23.345  1.00 21.01           N
ATOM   5746  CA  PHE A 372      12.594  13.288 -22.703  1.00 21.58           C
ATOM   5748  CB  PHE A 372      14.078  13.115 -22.500  1.00 20.93           C
ATOM   5751  CG  PHE A 372      14.403  11.802 -21.902  1.00 22.82           C
ATOM   5752  CD1 PHE A 372      14.601  10.700 -22.707  1.00 25.65           C
ATOM   5754  CE1 PHE A 372      14.826   9.449 -22.122  1.00 25.39           C
ATOM   5756  CZ  PHE A 372      14.812   9.318 -20.757  1.00 25.60           C
ATOM   5758  CE2 PHE A 372      14.571  10.380 -19.957  1.00 25.24           C
ATOM   5760  CD2 PHE A 372      14.340  11.638 -20.529  1.00 22.33           C
ATOM   5762  C   PHE A 372      11.901  13.240 -21.351  1.00 21.69           C
ATOM   5763  O   PHE A 372      11.200  12.263 -21.007  1.00 20.49           O
ATOM   5764  N   CYS A 373      12.105  14.288 -20.565  1.00 21.59           N
ATOM   5766  CA  CYS A 373      11.645  14.271 -19.182  1.00 22.75           C
ATOM   5768  CB  CYS A 373      12.249  15.442 -18.369  1.00 22.96           C
ATOM   5771  SG  CYS A 373      14.005  15.240 -18.116  1.00 23.11           S
ATOM   5772  C   CYS A 373      10.126  14.259 -19.123  1.00 23.53           C
ATOM   5773  O   CYS A 373       9.540  13.714 -18.188  1.00 22.93           O
ATOM   5774  N   SER A 374       9.492  14.822 -20.150  1.00 24.72           N
ATOM   5776  CA  SER A 374       8.034  14.804 -20.268  1.00 26.58           C
ATOM   5778  CB  SER A 374       7.591  15.640 -21.468  1.00 26.59           C
ATOM   5781  OG  SER A 374       7.851  17.006 -21.211  1.00 27.33           O
ATOM   5783  C   SER A 374       7.469  13.374 -20.378  1.00 27.93           C
ATOM   5784  O   SER A 374       6.320  13.159 -20.047  1.00 29.16           O
ATOM   5785  N   GLN A 375       8.264  12.414 -20.831  1.00 29.05           N
ATOM   5787  CA  GLN A 375       7.807  11.029 -20.981  1.00 30.49           C
ATOM   5789  CB  GLN A 375       8.319  10.447 -22.298  1.00 31.34           C
ATOM   5792  CG  GLN A 375       8.172  11.348 -23.508  1.00 35.56           C
ATOM   5795  CD  GLN A 375       6.727  11.617 -23.865  1.00 40.74           C
ATOM   5796  OE1 GLN A 375       5.947  12.110 -23.036  1.00 44.35           O
ATOM   5797  NE2 GLN A 375       6.361  11.310 -25.109  1.00 45.42           N
ATOM   5800  C   GLN A 375       8.270  10.134 -19.828  1.00 30.60           C
ATOM   5801  O   GLN A 375       8.050   8.921 -19.855  1.00 30.51           O
ATOM   5802  N   VAL A 376       8.953  10.716 -18.840  1.00 29.82           N
ATOM   5804  CA  VAL A 376       9.430   9.972 -17.695  1.00 29.42           C
ATOM   5806  CB  VAL A 376      10.531  10.713 -16.924  1.00 29.00           C
ATOM   5808  CG1 VAL A 376      10.795  10.036 -15.557  1.00 29.41           C
ATOM   5812  CG2 VAL A 376      11.805  10.767 -17.749  1.00 29.80           C
ATOM   5816  C   VAL A 376       8.284   9.730 -16.739  1.00 29.61           C
ATOM   5817  O   VAL A 376       7.512  10.639 -16.404  1.00 28.12           O
ATOM   5818  N   HIS A 377       8.222   8.491 -16.266  1.00 30.79           N
ATOM   5820  CA  HIS A 377       7.157   8.065 -15.393  1.00 31.36           C
ATOM   5822  CB  HIS A 377       7.366   6.609 -14.969  1.00 32.71           C
ATOM   5825  CG  HIS A 377       6.158   6.017 -14.320  1.00 36.55           C
ATOM   5826  ND1 HIS A 377       4.894   6.150 -14.858  1.00 40.68           N
ATOM   5828  CE1 HIS A 377       4.016   5.578 -14.054  1.00 42.51           C
ATOM   5830  NE2 HIS A 377       4.664   5.095 -13.007  1.00 42.81           N
ATOM   5832  CD2 HIS A 377       6.004   5.364 -13.145  1.00 40.77           C
ATOM   5834  C   HIS A 377       7.097   8.943 -14.173  1.00 30.33           C
ATOM   5835  O   HIS A 377       8.131   9.194 -13.543  1.00 30.44           O
ATOM   5836  N   LYS A 378       5.900   9.434 -13.852  1.00 28.56           N
ATOM   5838  CA  LYS A 378       5.652  10.213 -12.638  1.00 27.94           C
ATOM   5840  CB  LYS A 378       6.298   9.533 -11.432  1.00 28.75           C
ATOM   5843  CG  LYS A 378       5.683   8.188 -11.145  1.00 33.48           C
ATOM   5846  CD  LYS A 378       4.362   8.358 -10.370  1.00 38.72           C
ATOM   5849  CE  LYS A 378       3.784   7.008 -10.014  1.00 42.75           C
ATOM   5852  NZ  LYS A 378       4.791   6.208  -9.249  1.00 44.65           N
ATOM   5856  C   LYS A 378       6.037  11.691 -12.696  1.00 25.72           C
ATOM   5857  O   LYS A 378       5.675  12.467 -11.819  1.00 25.86           O
ATOM   5858  N   ILE A 379       6.699  12.104 -13.760  1.00 24.42           N
ATOM   5860  CA  ILE A 379       6.905  13.527 -13.978  1.00 24.36           C
ATOM   5862  CB  ILE A 379       8.132  13.777 -14.849  1.00 23.87           C
ATOM   5864  CG1 ILE A 379       9.361  13.214 -14.136  1.00 24.58           C
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ATOM	5867	CD1	ILE	A	379	10.685	13.533	-14.798	1.00 25.99	C
ATOM	5871	CG2	ILE	A	379	8.290	15.258	-15.101	1.00 23.05	C
ATOM	5875	C	ILE	A	379	5.654	14.089	-14.621	1.00 24.91	C
ATOM	5876	O	ILE	A	379	5.339	13.756	-15.726	1.00 26.42	O
ATOM	5877	N	GLN	A	380	4.960	14.929	-13.901	1.00 24.54	N
ATOM	5879	CA	GLN	A	380	3.726	15.517	-14.376	1.00 25.92	C
ATOM	5881	CB	GLN	A	380	2.968	16.010	-13.175	1.00 26.92	C
ATOM	5884	CG	GLN	A	380	1.544	16.430	-13.428	1.00 31.65	C
ATOM	5887	CD	GLN	A	380	1.056	17.235	-12.264	1.00 37.13	C
ATOM	5888	OE1	GLN	A	380	1.569	18.335	-12.033	1.00 43.09	O
ATOM	5889	NE2	GLN	A	380	0.122	16.681	-11.481	1.00 40.45	N
ATOM	5892	C	GLN	A	380	3.942	16.661	-15.357	1.00 24.67	C
ATOM	5893	O	GLN	A	380	3.265	16.739	-16.352	1.00 24.66	O
ATOM	5894	N	THR	A	381	4.901	17.527	-15.060	1.00 23.76	N
ATOM	5896	CA	THR	A	381	5.189	18.714	-15.866	1.00 22.72	C
ATOM	5898	CB	THR	A	381	4.438	19.896	-15.301	1.00 23.64	C
ATOM	5900	OG1	THR	A	381	3.034	19.593	-15.342	1.00 25.15	O
ATOM	5902	CG2	THR	A	381	4.552	21.169	-16.206	1.00 24.44	C
ATOM	5906	C	THR	A	381	6.685	19.050	-15.858	1.00 21.11	C
ATOM	5907	O	THR	A	381	7.328	19.014	-14.836	1.00 19.00	O
ATOM	5908	N	VAL	A	382	7.193	19.419	-17.017	1.00 19.59	N
ATOM	5910	CA	VAL	A	382	8.556	19.894	-17.145	1.00 18.32	C
ATOM	5912	CB	VAL	A	382	9.339	19.056	-18.138	1.00 18.53	C
ATOM	5914	CG1	VAL	A	382	10.796	19.526	-18.246	1.00 17.59	C
ATOM	5918	CG2	VAL	A	382	9.294	17.627	-17.747	1.00 20.18	C
ATOM	5922	C	VAL	A	382	8.508	21.336	-17.614	1.00 17.81	C
ATOM	5923	O	VAL	A	382	7.683	21.723	-18.438	1.00 18.49	O
ATOM	5924	N	SER	A	383	9.406	22.145	-17.089	1.00 16.85	N
ATOM	5926	CA	SER	A	383	9.472	23.537	-17.447	1.00 15.89	C
ATOM	5928	CB	SER	A	383	8.767	24.410	-16.448	1.00 16.07	C
ATOM	5931	OG	SER	A	383	7.519	23.890	-16.061	1.00 17.12	O
ATOM	5933	C	SER	A	383	10.932	23.920	-17.443	1.00 15.79	C
ATOM	5934	O	SER	A	383	11.642	23.577	-16.508	1.00 13.33	O
ATOM	5935	N	ILE	A	384	11.329	24.703	-18.427	1.00 14.25	N
ATOM	5937	CA	ILE	A	384	12.744	25.047	-18.577	1.00 14.68	C
ATOM	5939	CB	ILE	A	384	13.479	24.167	-19.584	1.00 15.04	C
ATOM	5941	CG1	ILE	A	384	13.277	22.712	-19.256	1.00 13.89	C
ATOM	5944	CD1	ILE	A	384	13.895	21.724	-20.180	1.00 14.75	C
ATOM	5948	CG2	ILE	A	384	14.979	24.526	-19.612	1.00 13.86	C
ATOM	5952	C	ILE	A	384	12.897	26.488	-18.942	1.00 15.49	C
ATOM	5953	O	ILE	A	384	12.324	26.945	-19.939	1.00 15.37	O
ATOM	5954	N	GLY	A	385	13.719	27.195	-18.163	1.00 12.94	N
ATOM	5956	CA	GLY	A	385	14.050	28.586	-18.436	1.00 14.58	C
ATOM	5959	C	GLY	A	385	15.476	28.698	-18.899	1.00 15.45	C
ATOM	5960	O	GLY	A	385	16.371	28.088	-18.270	1.00 15.33	O
ATOM	5961	N	VAL	A	386	15.693	29.452	-19.991	1.00 14.21	N
ATOM	5963	CA	VAL	A	386	17.004	29.672	-20.609	1.00 13.71	C
ATOM	5965	CB	VAL	A	386	17.077	29.065	-22.026	1.00 13.11	C
ATOM	5967	CG1	VAL	A	386	18.441	29.136	-22.561	1.00 13.46	C
ATOM	5971	CG2	VAL	A	386	16.574	27.669	-22.028	1.00 11.89	C
ATOM	5975	C	VAL	A	386	17.310	31.173	-20.642	1.00 14.78	C
ATOM	5976	O	VAL	A	386	16.532	31.981	-21.174	1.00 13.87	O
ATOM	5977	N	ALA	A	387	18.386	31.567	-19.952	1.00 14.05	N
ATOM	5979	CA	ALA	A	387	18.743	32.987	-19.833	1.00 15.85	C
ATOM	5981	CB	ALA	A	387	18.293	33.584	-18.559	1.00 14.45	C
ATOM	5985	C	ALA	A	387	20.247	33.090	-19.980	1.00 17.56	C
ATOM	5986	O	ALA	A	387	20.978	32.200	-19.563	1.00 17.67	O
ATOM	5987	N	SER	A	388	20.699	34.136	-20.654	1.00 19.31	N
ATOM	5989	CA	SER	A	388	22.102	34.246	-21.028	1.00 19.20	C
ATOM	5991	CB	SER	A	388	22.348	33.963	-22.508	1.00 20.04	C
ATOM	5994	OG	SER	A	388	21.910	32.680	-22.905	0.50 16.00	O
ATOM	5996	C	SER	A	388	22.618	35.623	-20.647	1.00 20.83	C
ATOM	5997	O	SER	A	388	21.970	36.659	-20.923	1.00 20.69	O
ATOM	5998	N	GLY	A	389	23.799	35.667	-20.036	1.00 20.18	N
ATOM	6000	CA	GLY	A	389	24.367	36.951	-19.621	1.00 19.41	C
ATOM	6003	C	GLY	A	389	25.534	36.747	-18.657	1.00 19.69	C
ATOM	6004	O	GLY	A	389	26.001	35.613	-18.462	1.00 18.09	O

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ATOM   6005  N   ILE A 390      25.969  37.850 -18.076  1.00 20.18           N
ATOM   6007  CA  ILE A 390      27.117  37.840 -17.147  1.00 19.37           C
ATOM   6009  CB  ILE A 390      27.717  39.250 -17.038  1.00 20.56           C
ATOM   6011  CG1 ILE A 390      28.302  39.627 -18.372  1.00 22.60           C
ATOM   6014  CD1 ILE A 390      28.705  41.054 -18.429  1.00 26.25           C
ATOM   6018  CG2 ILE A 390      28.803  39.342 -15.888  1.00 20.69           C
ATOM   6022  C   ILE A 390      26.656  37.392 -15.795  1.00 17.29           C
ATOM   6023  O   ILE A 390      25.769  38.006 -15.151  1.00 19.10           O
ATOM   6024  N   VAL A 391      27.314  36.345 -15.270  1.00 15.36           N
ATOM   6026  CA  VAL A 391      26.986  35.904 -13.912  1.00 14.12           C
ATOM   6028  CB  VAL A 391      26.290  34.578 -13.922  1.00 14.78           C
ATOM   6030  CG1 VAL A 391      24.961  34.670 -14.757  1.00 14.75           C
ATOM   6034  CG2 VAL A 391      27.205  33.456 -14.435  1.00 18.20           C
ATOM   6038  C   VAL A 391      28.295  35.797 -13.125  1.00 11.96           C
ATOM   6039  O   VAL A 391      29.348  35.628 -13.747  1.00 12.86           O
ATOM   6040  N   PHE A 392      28.182  35.917 -11.821  1.00 11.26           N
ATOM   6042  CA  PHE A 392      29.311  35.646 -10.900  1.00 11.59           C
ATOM   6044  CB  PHE A 392      29.111  36.290  -9.530  1.00 13.40           C
ATOM   6047  CG  PHE A 392      30.148  35.825  -8.541  1.00 14.77           C
ATOM   6048  CD1 PHE A 392      31.477  36.244  -8.703  1.00 16.15           C
ATOM   6050  CE1 PHE A 392      32.471  35.784  -7.879  1.00 16.61           C
ATOM   6052  CZ  PHE A 392      32.159  34.835  -6.911  1.00 16.69           C
ATOM   6054  CE2 PHE A 392      30.834  34.364  -6.762  1.00 17.44           C
ATOM   6056  CD2 PHE A 392      29.845  34.837  -7.616  1.00 16.94           C
ATOM   6058  C   PHE A 392      29.389  34.156 -10.678  1.00 12.18           C
ATOM   6059  O   PHE A 392      28.383  33.506 -10.350  1.00 12.39           O
ATOM   6060  N   CYS A 393      30.607  33.627 -10.777  1.00 14.02           N
ATOM   6062  CA  CYS A 393      30.881  32.248 -10.481  1.00 14.18           C
ATOM   6064  CB  CYS A 393      31.392  31.543 -11.707  1.00 16.53           C
ATOM   6067  SG  CYS A 393      30.277  31.552 -13.108  1.00 23.34           S
ATOM   6068  C   CYS A 393      31.986  32.288  -9.446  1.00 14.20           C
ATOM   6069  O   CYS A 393      32.890  33.110  -9.527  1.00 14.92           O
ATOM   6070  N   GLY A 394      31.864  31.448  -8.441  1.00 12.50           N
ATOM   6072  CA  GLY A 394      32.969  31.274  -7.515  1.00 11.28           C
ATOM   6075  C   GLY A 394      32.618  30.417  -6.342  1.00 10.26           C
ATOM   6076  O   GLY A 394      31.490  30.048  -6.177  1.00 10.12           O
ATOM   6077  N   ILE A 395      33.632  30.089  -5.544  1.00  9.30           N
ATOM   6079  CA  ILE A 395      33.455  29.287  -4.343  1.00  8.20           C
ATOM   6081  CB  ILE A 395      34.761  28.527  -4.020  1.00  8.07           C
ATOM   6083  CG1 ILE A 395      35.022  27.494  -5.091  1.00  9.30           C
ATOM   6086  CD1 ILE A 395      36.420  26.802  -4.983  1.00 14.72           C
ATOM   6090  CG2 ILE A 395      34.634  27.853  -2.666  1.00  9.26           C
ATOM   6094  C   ILE A 395      33.028  30.210  -3.215  1.00  8.30           C
ATOM   6095  O   ILE A 395      33.796  31.086  -2.804  1.00 11.51           O
ATOM   6096  N   VAL A 396      31.815  30.034  -2.728  1.00  8.89           N
ATOM   6098  CA  VAL A 396      31.203  30.888  -1.732  1.00 10.07           C
ATOM   6100  CB  VAL A 396      29.812  31.306  -2.200  1.00 11.98           C
ATOM   6102  CG1 VAL A 396      29.065  32.056  -1.117  1.00 13.26           C
ATOM   6106  CG2 VAL A 396      29.989  32.193  -3.424  1.00 14.92           C
ATOM   6110  C   VAL A 396      31.028  30.119  -0.433  1.00  9.52           C
ATOM   6111  O   VAL A 396      30.600  28.955  -0.445  1.00  9.68           O
ATOM   6112  N   GLY A 397      31.342  30.770   0.657  1.00  9.94           N
ATOM   6114  CA  GLY A 397      31.222  30.164   1.981  1.00 10.22           C
ATOM   6117  C   GLY A 397      32.448  30.402   2.840  1.00 10.72           C
ATOM   6118  O   GLY A 397      33.208  31.356   2.708  1.00 12.80           O
ATOM   6119  N   HIS A 398      32.590  29.549   3.853  1.00  9.19           N
ATOM   6121  CA  HIS A 398      33.687  29.567   4.783  1.00  9.02           C
ATOM   6123  CB  HIS A 398      33.152  29.038   6.144  1.00  9.20           C
ATOM   6126  CG  HIS A 398      34.069  29.267   7.302  1.00  9.79           C
ATOM   6127  ND1 HIS A 398      35.257  28.566   7.469  1.00  9.55           N
ATOM   6129  CE1 HIS A 398      35.867  29.009   8.555  1.00 12.95           C
ATOM   6131  NE2 HIS A 398      35.140  29.983   9.089  1.00 13.42           N
ATOM   6133  CD2 HIS A 398      34.032  30.180   8.301  1.00 10.74           C
ATOM   6135  C   HIS A 398      34.804  28.645   4.220  1.00  8.59           C
ATOM   6136  O   HIS A 398      34.496  27.635   3.558  1.00  8.00           O
ATOM   6137  N   THR A 399      36.060  28.924   4.595  1.00 10.36           N
ATOM   6139  CA  THR A 399      37.152  27.976   4.366  1.00 11.34           C
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ATOM	6141	CB	THR	A	399	38.288	28.340	5.323	1.00	13.80	C
ATOM	6143	OG1	THR	A	399	38.702	29.671	5.018	1.00	18.33	O
ATOM	6145	CG2	THR	A	399	39.515	27.485	5.083	1.00	15.62	C
ATOM	6149	C	THR	A	399	36.756	26.524	4.651	1.00	10.63	C
ATOM	6150	O	THR	A	399	37.051	25.634	3.860	1.00	9.51	O
ATOM	6151	N	VAL	A	400	36.061	26.266	5.768	1.00	9.79	N
ATOM	6153	CA	VAL	A	400	35.755	24.888	6.125	1.00	9.19	C
ATOM	6155	CB	VAL	A	400	35.673	24.695	7.666	1.00	10.32	C
ATOM	6157	CG1	VAL	A	400	36.927	25.233	8.334	1.00	12.14	C
ATOM	6161	CG2	VAL	A	400	34.358	25.305	8.220	1.00	10.12	C
ATOM	6165	C	VAL	A	400	34.485	24.330	5.510	1.00	9.22	C
ATOM	6166	O	VAL	A	400	34.223	23.122	5.567	1.00	8.59	O
ATOM	6167	N	ARG	A	401	33.683	25.221	4.907	1.00	8.00	N
ATOM	6169	CA	ARG	A	401	32.405	24.813	4.333	1.00	6.11	C
ATOM	6171	CB	ARG	A	401	31.362	24.647	5.425	1.00	6.95	C
ATOM	6174	CG	ARG	A	401	30.040	24.108	4.925	1.00	7.54	C
ATOM	6177	CD	ARG	A	401	30.005	22.640	4.648	1.00	8.17	C
ATOM	6180	NE	ARG	A	401	28.794	22.230	3.917	1.00	8.80	N
ATOM	6182	CZ	ARG	A	401	28.640	22.292	2.611	1.00	10.38	C
ATOM	6183	NH1	ARG	A	401	29.622	22.728	1.806	1.00	10.91	N
ATOM	6186	NH2	ARG	A	401	27.477	21.969	2.075	1.00	10.52	N
ATOM	6189	C	ARG	A	401	31.967	25.849	3.305	1.00	7.62	C
ATOM	6190	O	ARG	A	401	31.557	26.927	3.662	1.00	7.91	O
ATOM	6191	N	HIS	A	402	32.123	25.457	2.050	1.00	6.72	N
ATOM	6193	CA	HIS	A	402	31.879	26.309	0.877	1.00	7.67	C
ATOM	6195	CB	HIS	A	402	33.111	27.171	0.625	1.00	7.29	C
ATOM	6198	CG	HIS	A	402	34.418	26.437	0.512	1.00	7.58	C
ATOM	6199	ND1	HIS	A	402	35.621	27.081	0.748	1.00	11.58	N
ATOM	6201	CE1	HIS	A	402	36.615	26.210	0.583	1.00	11.30	C
ATOM	6203	NE2	HIS	A	402	36.118	25.082	0.113	1.00	8.97	N
ATOM	6205	CD2	HIS	A	402	34.746	25.202	0.055	1.00	9.39	C
ATOM	6207	C	HIS	A	402	31.495	25.534	-0.321	1.00	8.13	C
ATOM	6208	O	HIS	A	402	31.669	24.305	-0.365	1.00	10.12	O
ATOM	6209	N	GLU	A	403	30.923	26.204	-1.332	1.00	8.29	N
ATOM	6211	CA	GLU	A	403	30.507	25.517	-2.522	1.00	9.35	C
ATOM	6213	CB	GLU	A	403	29.070	25.046	-2.415	1.00	11.22	C
ATOM	6216	CG	GLU	A	403	28.807	23.964	-1.357	1.00	15.14	C
ATOM	6219	CD	GLU	A	403	27.354	23.523	-1.284	1.00	20.23	C
ATOM	6220	OE1	GLU	A	403	26.411	24.178	-1.845	1.00	19.14	O
ATOM	6221	OE2	GLU	A	403	27.177	22.516	-0.614	1.00	19.01	O
ATOM	6222	C	GLU	A	403	30.625	26.433	-3.735	1.00	9.51	C
ATOM	6223	O	GLU	A	403	30.491	27.650	-3.575	1.00	9.49	O
ATOM	6224	N	TYR	A	404	30.908	25.850	-4.894	1.00	10.05	N
ATOM	6226	CA	TYR	A	404	30.924	26.619	-6.145	1.00	11.54	C
ATOM	6228	CB	TYR	A	404	31.478	25.793	-7.221	1.00	12.34	C
ATOM	6231	CG	TYR	A	404	31.718	26.526	-8.464	1.00	11.52	C
ATOM	6232	CD1	TYR	A	404	32.699	27.497	-8.544	1.00	11.58	C
ATOM	6234	CE1	TYR	A	404	32.943	28.162	-9.798	1.00	15.84	C
ATOM	6236	CZ	TYR	A	404	32.184	27.806	-10.873	1.00	18.48	C
ATOM	6237	OH	TYR	A	404	32.289	28.351	-12.154	1.00	23.46	O
ATOM	6239	CE2	TYR	A	404	31.243	26.844	-10.787	1.00	18.33	C
ATOM	6241	CD2	TYR	A	404	31.003	26.200	-9.593	1.00	19.33	C
ATOM	6243	C	TYR	A	404	29.498	27.046	-6.496	1.00	11.49	C
ATOM	6244	O	TYR	A	404	28.572	26.227	-6.519	1.00	13.68	O
ATOM	6245	N	THR	A	405	29.326	28.327	-6.704	1.00	12.00	N
ATOM	6247	CA	THR	A	405	28.005	28.938	-6.758	1.00	13.24	C
ATOM	6249	CB	THR	A	405	27.759	29.695	-5.452	1.00	14.92	C
ATOM	6251	OG1	THR	A	405	27.746	28.765	-4.364	1.00	18.88	O
ATOM	6253	CG2	THR	A	405	26.386	30.284	-5.421	1.00	18.89	C
ATOM	6257	C	THR	A	405	27.983	29.885	-7.952	1.00	13.23	C
ATOM	6258	O	THR	A	405	28.950	30.476	-8.281	1.00	13.06	O
ATOM	6259	N	VAL	A	406	26.844	29.962	-8.612	1.00	14.44	N
ATOM	6261	CA	VAL	A	406	26.661	30.908	-9.705	1.00	14.53	C
ATOM	6263	CB	VAL	A	406	26.463	30.185	-11.078	1.00	15.66	C
ATOM	6265	CG1A	VAL	A	406	27.462	29.044	-11.266	0.50	17.42	C
ATOM	6266	CG1B	VAL	A	406	25.533	30.796	-12.103	0.50	14.43	C
ATOM	6273	CG2A	VAL	A	406	25.016	29.754	-11.255	0.50	15.19	C

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ATOM   6274  CG2BVAL A 406      27.724  29.333 -11.578  0.50 15.43           C
ATOM   6281  C   VAL A 406      25.509  31.814  -9.262  1.00 14.94           C
ATOM   6282  O   VAL A 406      24.484  31.331  -8.757  1.00 16.73           O
ATOM   6283  N   ILE A 407      25.709  33.119  -9.366  1.00 14.42           N
ATOM   6285  CA  ILE A 407      24.811  34.117  -8.814  1.00 15.74           C
ATOM   6287  CB  ILE A 407      25.444  34.769  -7.586  1.00 16.74           C
ATOM   6289  CG1 ILE A 407      25.685  33.746  -6.480  1.00 21.88           C
ATOM   6292  CD1 ILE A 407      26.624  34.296  -5.431  1.00 23.61           C
ATOM   6296  CG2 ILE A 407      24.568  35.910  -7.033  1.00 20.88           C
ATOM   6300  C   ILE A 407      24.664  35.214  -9.873  1.00 16.19           C
ATOM   6301  O   ILE A 407      25.630  35.596 -10.551  1.00 15.37           O
ATOM   6302  N   GLY A 408      23.462  35.753  -9.999  1.00 16.37           N
ATOM   6304  CA  GLY A 408      23.285  36.830 -10.969  1.00 16.69           C
ATOM   6307  C   GLY A 408      21.826  36.986 -11.379  1.00 17.81           C
ATOM   6308  O   GLY A 408      20.995  36.134 -11.121  1.00 16.35           O
ATOM   6309  N   GLN A 409      21.519  38.144 -11.940  1.00 19.55           N
ATOM   6311  CA  GLN A 409      20.161  38.449 -12.404  1.00 21.25           C
ATOM   6313  CB  GLN A 409      20.120  39.858 -13.013  1.00 23.46           C
ATOM   6316  CG  GLN A 409      18.700  40.440 -13.214  1.00 30.56           C
ATOM   6319  CD  GLN A 409      18.001  40.806 -11.895  1.00 38.51           C
ATOM   6320  OE1 GLN A 409      16.784  41.101 -11.878  1.00 43.75           O
ATOM   6321  NE2 GLN A 409      18.754  40.770 -10.794  1.00 43.76           N
ATOM   6324  C   GLN A 409      19.681  37.424 -13.406  1.00 18.98           C
ATOM   6325  O   GLN A 409      18.517  37.035 -13.355  1.00 19.38           O
ATOM   6326  N   LYS A 410      20.573  36.925 -14.253  1.00 17.63           N
ATOM   6328  CA  LYS A 410      20.183  35.925 -15.244  1.00 18.49           C
ATOM   6330  CB  LYS A 410      21.206  35.820 -16.350  1.00 17.74           C
ATOM   6333  CG  LYS A 410      21.342  37.032 -17.231  1.00 22.07           C
ATOM   6336  CD  LYS A 410      20.145  37.221 -18.130  1.00 23.54           C
ATOM   6339  CE  LYS A 410      20.177  38.560 -18.887  1.00 27.47           C
ATOM   6342  NZ  LYS A 410      19.141  38.536 -19.958  1.00 23.81           N
ATOM   6346  C   LYS A 410      19.889  34.555 -14.640  1.00 17.61           C
ATOM   6347  O   LYS A 410      19.045  33.809 -15.149  1.00 17.93           O
ATOM   6348  N   VAL A 411      20.583  34.200 -13.551  1.00 17.04           N
ATOM   6350  CA  VAL A 411      20.188  33.015 -12.820  1.00 15.98           C
ATOM   6352  CB  VAL A 411      21.184  32.717 -11.639  1.00 15.27           C
ATOM   6354  CG1 VAL A 411      20.833  31.431 -10.971  1.00 15.41           C
ATOM   6358  CG2 VAL A 411      22.576  32.720 -12.164  1.00 16.07           C
ATOM   6362  C   VAL A 411      18.774  33.146 -12.271  1.00 16.34           C
ATOM   6363  O   VAL A 411      17.999  32.194 -12.376  1.00 16.31           O
ATOM   6364  N   ASN A 412      18.423  34.294 -11.662  1.00 17.22           N
ATOM   6366  CA  ASN A 412      17.122  34.457 -11.015  1.00 19.27           C
ATOM   6368  CB  ASN A 412      17.047  35.660 -10.045  1.00 20.01           C
ATOM   6371  CG AASN A 412      15.663  35.913  -9.505  0.50 21.27           C
ATOM   6372  CG BASN A 412      18.351  35.898  -9.310  0.50 19.34           C
ATOM   6373  OD1AASN A 412      15.154  35.100  -8.718  0.50 21.74           O
ATOM   6374  OD1BASN A 412      18.998  34.937  -8.924  0.50 17.22           O
ATOM   6375  ND2AASN A 412      15.075  37.062  -9.834  0.50 26.68           N
ATOM   6376  ND2BASN A 412      18.709  37.149  -9.080  0.50 20.66           N
ATOM   6381  C   ASN A 412      16.049  34.491 -12.148  1.00 19.69           C
ATOM   6382  O   ASN A 412      14.969  33.947 -12.010  1.00 20.42           O
ATOM   6383  N   LEU A 413      16.408  35.080 -13.263  1.00 19.60           N
ATOM   6385  CA  LEU A 413      15.479  35.180 -14.389  1.00 19.25           C
ATOM   6387  CB  LEU A 413      16.119  35.947 -15.546  1.00 20.17           C
ATOM   6390  CG  LEU A 413      15.262  36.781 -16.517  1.00 23.53           C
ATOM   6392  CD1 LEU A 413      15.818  36.776 -17.900  1.00 21.92           C
ATOM   6396  CD2 LEU A 413      13.822  36.442 -16.487  1.00 21.82           C
ATOM   6400  C   LEU A 413      15.109  33.789 -14.860  1.00 18.99           C
ATOM   6401  O   LEU A 413      13.928  33.501 -14.974  1.00 18.19           O
ATOM   6402  N   ALA A 414      16.104  32.946 -15.157  1.00 17.80           N
ATOM   6404  CA  ALA A 414      15.850  31.614 -15.656  1.00 17.26           C
ATOM   6406  CB  ALA A 414      17.149  30.861 -15.997  1.00 18.26           C
ATOM   6410  C   ALA A 414      14.994  30.836 -14.655  1.00 17.69           C
ATOM   6411  O   ALA A 414      14.092  30.095 -15.062  1.00 16.95           O
ATOM   6412  N   ALA A 415      15.242  31.039 -13.351  1.00 17.42           N
ATOM   6414  CA  ALA A 415      14.474  30.363 -12.307  1.00 18.75           C
ATOM   6416  CB  ALA A 415      15.088  30.593 -10.922  1.00 18.70           C
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ATOM	6420	C	ALA	A	415	13.028	30.791	-12.263	1.00	19.13	C
ATOM	6421	O	ALA	A	415	12.143	29.973	-12.036	1.00	21.42	O
ATOM	6422	N	ARG	A	416	12.808	32.084	-12.417	1.00	19.39	N
ATOM	6424	CA	ARG	A	416	11.479	32.652	-12.363	1.00	20.31	C
ATOM	6426	CB	ARG	A	416	11.543	34.171	-12.224	1.00	20.71	C
ATOM	6429	CG	ARG	A	416	12.032	34.679	-10.842	1.00	25.82	C
ATOM	6432	CD	ARG	A	416	11.209	34.173	-9.713	1.00	31.60	C
ATOM	6435	NE	ARG	A	416	11.681	34.594	-8.392	1.00	36.94	N
ATOM	6437	CZ	ARG	A	416	12.707	34.049	-7.733	1.00	42.80	C
ATOM	6438	NH1	ARG	A	416	13.433	33.053	-8.266	1.00	43.98	N
ATOM	6441	NH2	ARG	A	416	13.027	34.526	-6.524	1.00	42.76	N
ATOM	6444	C	ARG	A	416	10.734	32.277	-13.633	1.00	19.72	C
ATOM	6445	O	ARG	A	416	9.550	31.966	-13.556	1.00	20.27	O
ATOM	6446	N	MET	A	417	11.411	32.261	-14.778	1.00	19.62	N
ATOM	6448	CA	MET	A	417	10.734	31.880	-16.064	1.00	20.40	C
ATOM	6450	CB	MET	A	417	11.677	31.969	-17.255	1.00	19.93	C
ATOM	6453	CG	MET	A	417	12.062	33.359	-17.680	1.00	23.67	C
ATOM	6456	SD	MET	A	417	13.663	33.481	-18.582	1.00	27.58	S
ATOM	6457	CE	MET	A	417	13.553	32.238	-19.760	1.00	28.39	C
ATOM	6461	C	MET	A	417	10.202	30.439	-15.998	1.00	21.04	C
ATOM	6462	O	MET	A	417	9.097	30.148	-16.438	1.00	20.45	O
ATOM	6463	N	MET	A	418	10.985	29.508	-15.460	1.00	21.61	N
ATOM	6465	CA	MET	A	418	10.492	28.142	-15.402	1.00	22.47	C
ATOM	6467	CB	MET	A	418	11.604	27.166	-15.006	1.00	22.79	C
ATOM	6470	CG	MET	A	418	11.932	27.171	-13.554	1.00	22.94	C
ATOM	6473	SD	MET	A	418	13.420	26.184	-13.131	1.00	24.21	S
ATOM	6474	CE	MET	A	418	13.447	26.563	-11.509	1.00	26.21	C
ATOM	6478	C	MET	A	418	9.237	27.998	-14.508	1.00	23.34	C
ATOM	6479	O	MET	A	418	8.450	27.066	-14.678	1.00	24.04	O
ATOM	6480	N	MET	A	419	9.061	28.894	-13.541	1.00	24.33	N
ATOM	6482	CA	MET	A	419	7.916	28.828	-12.626	1.00	25.49	C
ATOM	6484	CB	MET	A	419	8.275	29.386	-11.253	1.00	26.26	C
ATOM	6487	CG	MET	A	419	9.448	28.640	-10.586	1.00	28.65	C
ATOM	6490	SD	MET	A	419	9.342	26.808	-10.599	1.00	33.87	S
ATOM	6491	CE	MET	A	419	7.730	26.534	-9.765	1.00	35.59	C
ATOM	6495	C	MET	A	419	6.713	29.596	-13.175	1.00	25.23	C
ATOM	6496	O	MET	A	419	5.591	29.152	-13.023	1.00	25.76	O
ATOM	6497	N	TYR	A	420	6.951	30.720	-13.827	1.00	24.53	N
ATOM	6499	CA	TYR	A	420	5.865	31.554	-14.329	1.00	23.94	C
ATOM	6501	CB	TYR	A	420	6.277	33.009	-14.354	1.00	24.94	C
ATOM	6504	CG	TYR	A	420	6.247	33.673	-13.009	1.00	29.00	C
ATOM	6505	CD1	TYR	A	420	7.252	33.436	-12.075	1.00	33.38	C
ATOM	6507	CE1	TYR	A	420	7.249	34.059	-10.842	1.00	35.90	C
ATOM	6509	CZ	TYR	A	420	6.231	34.928	-10.528	1.00	36.95	C
ATOM	6510	OH	TYR	A	420	6.230	35.547	-9.304	1.00	41.16	O
ATOM	6512	CE2	TYR	A	420	5.211	35.168	-11.426	1.00	36.11	C
ATOM	6514	CD2	TYR	A	420	5.229	34.551	-12.667	1.00	33.48	C
ATOM	6516	C	TYR	A	420	5.404	31.145	-15.718	1.00	22.31	C
ATOM	6517	O	TYR	A	420	4.337	31.552	-16.151	1.00	21.18	O
ATOM	6518	N	TYR	A	421	6.212	30.360	-16.425	1.00	20.17	N
ATOM	6520	CA	TYR	A	421	5.820	29.841	-17.721	1.00	19.96	C
ATOM	6522	CB	TYR	A	421	6.663	30.456	-18.803	1.00	20.71	C
ATOM	6525	CG	TYR	A	421	6.538	31.911	-18.956	1.00	19.88	C
ATOM	6526	CD1	TYR	A	421	7.307	32.762	-18.199	1.00	19.96	C
ATOM	6528	CE1	TYR	A	421	7.227	34.125	-18.327	1.00	23.10	C
ATOM	6530	CZ	TYR	A	421	6.347	34.687	-19.262	1.00	23.84	C
ATOM	6531	OH	TYR	A	421	6.311	36.057	-19.389	1.00	22.10	O
ATOM	6533	CE2	TYR	A	421	5.565	33.858	-20.024	1.00	20.90	C
ATOM	6535	CD2	TYR	A	421	5.644	32.482	-19.868	1.00	21.67	C
ATOM	6537	C	TYR	A	421	5.988	28.342	-17.697	1.00	18.58	C
ATOM	6538	O	TYR	A	421	6.850	27.777	-18.378	1.00	19.31	O
ATOM	6539	N	PRO	A	422	5.145	27.666	-16.906	1.00	18.05	N
ATOM	6540	CA	PRO	A	422	5.251	26.219	-16.748	1.00	18.23	C
ATOM	6542	CB	PRO	A	422	4.221	25.905	-15.655	1.00	18.58	C
ATOM	6545	CG	PRO	A	422	3.236	27.015	-15.767	1.00	18.27	C
ATOM	6548	CD	PRO	A	422	4.031	28.234	-16.119	1.00	17.60	C
ATOM	6551	C	PRO	A	422	4.922	25.459	-18.019	1.00	17.67	C

ATOM	6552	O	PRO	A	422	4.141	25.937	-18.851	1.00 18.01	O
ATOM	6553	N	GLY	A	423	5.491	24.269	-18.144	1.00 17.55	N
ATOM	6555	CA	GLY	A	423	5.191	23.349	-19.198	1.00 17.30	C
ATOM	6558	C	GLY	A	423	5.784	23.622	-20.565	1.00 17.11	C
ATOM	6559	O	GLY	A	423	5.439	22.931	-21.533	1.00 17.84	O
ATOM	6560	N	ILE	A	424	6.664	24.623	-20.666	1.00 16.84	N
ATOM	6562	CA	ILE	A	424	7.306	24.949	-21.928	1.00 16.29	C
ATOM	6564	CB	ILE	A	424	6.585	26.123	-22.659	1.00 16.45	C
ATOM	6566	CG1	ILE	A	424	6.604	27.395	-21.829	1.00 17.81	C
ATOM	6569	CD1	ILE	A	424	6.231	28.666	-22.590	1.00 18.13	C
ATOM	6573	CG2	ILE	A	424	5.150	25.732	-23.030	1.00 19.42	C
ATOM	6577	C	ILE	A	424	8.777	25.302	-21.712	1.00 14.38	C
ATOM	6578	O	ILE	A	424	9.214	25.432	-20.567	1.00 14.25	O
ATOM	6579	N	VAL	A	425	9.495	25.445	-22.809	1.00 14.20	N
ATOM	6581	CA	VAL	A	425	10.889	25.913	-22.788	1.00 14.50	C
ATOM	6583	CB	VAL	A	425	11.756	25.205	-23.831	1.00 13.95	C
ATOM	6585	CG1	VAL	A	425	13.185	25.818	-23.897	1.00 16.40	C
ATOM	6589	CG2	VAL	A	425	11.826	23.722	-23.583	1.00 14.45	C
ATOM	6593	C	VAL	A	425	10.823	27.416	-23.091	1.00 14.60	C
ATOM	6594	O	VAL	A	425	10.309	27.800	-24.161	1.00 15.50	O
ATOM	6595	N	THR	A	426	11.264	28.252	-22.156	1.00 15.05	N
ATOM	6597	CA	THR	A	426	11.318	29.712	-22.375	1.00 15.07	C
ATOM	6599	CB	THR	A	426	10.609	30.484	-21.296	1.00 16.38	C
ATOM	6601	OG1	THR	A	426	11.058	30.060	-20.000	1.00 18.21	O
ATOM	6603	CG2	THR	A	426	9.103	30.208	-21.302	1.00 19.31	C
ATOM	6607	C	THR	A	426	12.751	30.210	-22.447	1.00 16.14	C
ATOM	6608	O	THR	A	426	13.694	29.586	-21.876	1.00 15.08	O
ATOM	6609	N	CYS	A	427	12.939	31.300	-23.168	1.00 15.56	N
ATOM	6611	CA	CYS	A	427	14.256	31.934	-23.209	1.00 14.78	C
ATOM	6613	CB	CYS	A	427	15.078	31.418	-24.347	1.00 14.10	C
ATOM	6616	SG	CYS	A	427	14.621	32.120	-25.972	1.00 16.76	S
ATOM	6617	C	CYS	A	427	14.139	33.458	-23.191	1.00 15.70	C
ATOM	6618	O	CYS	A	427	13.093	34.029	-23.556	1.00 15.62	O
ATOM	6619	N	ASP	A	428	15.218	34.108	-22.764	1.00 15.31	N
ATOM	6621	CA	ASP	A	428	15.262	35.565	-22.746	1.00 16.20	C
ATOM	6623	CB	ASP	A	428	16.207	36.097	-21.613	1.00 16.64	C
ATOM	6626	CG	ASP	A	428	17.643	35.715	-21.816	1.00 19.31	C
ATOM	6627	OD1	ASP	A	428	17.947	35.072	-22.816	1.00 17.28	O
ATOM	6628	OD2	ASP	A	428	18.560	36.058	-20.998	1.00 21.36	O
ATOM	6629	C	ASP	A	428	15.676	36.142	-24.123	1.00 15.85	C
ATOM	6630	O	ASP	A	428	15.957	35.414	-25.050	1.00 15.06	O
ATOM	6631	N	SER	A	429	15.726	37.457	-24.227	1.00 18.50	N
ATOM	6633	CA	SER	A	429	16.086	38.143	-25.481	1.00 20.11	C
ATOM	6635	CB	SER	A	429	15.836	39.656	-25.359	1.00 20.82	C
ATOM	6638	OG	SER	A	429	14.448	39.952	-25.342	1.00 27.29	O
ATOM	6640	C	SER	A	429	17.494	37.930	-25.957	1.00 19.92	C
ATOM	6641	O	SER	A	429	17.732	37.831	-27.146	1.00 20.41	O
ATOM	6642	N	VAL	A	430	18.449	37.888	-25.022	1.00 19.46	N
ATOM	6644	CA	VAL	A	430	19.823	37.604	-25.380	1.00 19.34	C
ATOM	6646	CB	VAL	A	430	20.736	37.562	-24.142	1.00 19.97	C
ATOM	6648	CG1	VAL	A	430	22.114	37.101	-24.533	1.00 18.16	C
ATOM	6652	CG2	VAL	A	430	20.799	38.916	-23.515	1.00 20.50	C
ATOM	6656	C	VAL	A	430	19.912	36.304	-26.111	1.00 18.76	C
ATOM	6657	O	VAL	A	430	20.566	36.198	-27.131	1.00 18.66	O
ATOM	6658	N	THR	A	431	19.260	35.282	-25.570	1.00 18.34	N
ATOM	6660	CA	THR	A	431	19.340	33.971	-26.157	1.00 17.86	C
ATOM	6662	CB	THR	A	431	18.700	32.921	-25.204	1.00 18.03	C
ATOM	6664	OG1	THR	A	431	19.396	32.896	-23.926	1.00 17.67	O
ATOM	6666	CG2	THR	A	431	18.824	31.560	-25.808	1.00 18.61	C
ATOM	6670	C	THR	A	431	18.660	33.927	-27.511	1.00 19.00	C
ATOM	6671	O	THR	A	431	19.175	33.365	-28.457	1.00 18.55	O
ATOM	6672	N	TYR	A	432	17.482	34.531	-27.586	1.00 20.51	N
ATOM	6674	CA	TYR	A	432	16.685	34.537	-28.827	1.00 21.65	C
ATOM	6676	CB	TYR	A	432	15.425	35.333	-28.585	1.00 20.68	C
ATOM	6679	CG	TYR	A	432	14.631	35.652	-29.838	1.00 20.40	C
ATOM	6680	CD1	TYR	A	432	13.912	34.643	-30.501	1.00 23.83	C
ATOM	6682	CE1	TYR	A	432	13.159	34.922	-31.627	1.00 25.54	C

ATOM	6684	CZ	TYR	A	432	13.108	36.215	-32.103	1.00 28.05	C
ATOM	6685	OH	TYR	A	432	12.347	36.464	-33.225	1.00 31.69	O
ATOM	6687	CE2	TYR	A	432	13.808	37.236	-31.472	1.00 23.72	C
ATOM	6689	CD2	TYR	A	432	14.577	36.941	-30.335	1.00 24.15	C
ATOM	6691	C	TYR	A	432	17.481	35.167	-29.961	1.00 23.00	C
ATOM	6692	O	TYR	A	432	17.714	34.564	-30.999	1.00 22.55	O
ATOM	6693	N	ASN	A	433	17.943	36.372	-29.699	1.00 26.91	N
ATOM	6695	CA	ASN	A	433	18.673	37.164	-30.690	1.00 28.58	C
ATOM	6697	CB	ASN	A	433	18.800	38.605	-30.191	1.00 28.82	C
ATOM	6700	CG	ASN	A	433	17.490	39.351	-30.301	1.00 28.97	C
ATOM	6701	OD1	ASN	A	433	16.968	39.890	-29.326	1.00 30.42	O
ATOM	6702	ND2	ASN	A	433	16.939	39.370	-31.508	1.00 32.48	N
ATOM	6705	C	ASN	A	433	20.017	36.579	-31.058	1.00 30.43	C
ATOM	6706	O	ASN	A	433	20.382	36.540	-32.225	1.00 31.68	O
ATOM	6707	N	GLY	A	434	20.741	36.106	-30.054	1.00 31.74	N
ATOM	6709	CA	GLY	A	434	22.074	35.583	-30.241	1.00 33.31	C
ATOM	6712	C	GLY	A	434	22.053	34.285	-31.002	1.00 34.76	C
ATOM	6713	O	GLY	A	434	22.946	34.047	-31.803	1.00 36.23	O
ATOM	6714	N	SER	A	435	21.017	33.465	-30.794	1.00 35.58	N
ATOM	6716	CA	SER	A	435	20.903	32.156	-31.451	1.00 36.42	C
ATOM	6718	CB	SER	A	435	19.591	31.441	-31.027	1.00 36.29	C
ATOM	6721	OG	SER	A	435	18.447	31.985	-31.687	1.00 34.76	O
ATOM	6723	C	SER	A	435	20.964	32.223	-32.985	1.00 37.36	C
ATOM	6724	O	SER	A	435	21.395	31.271	-33.628	1.00 38.06	O
ATOM	6725	N	ASN	A	436	20.491	33.329	-33.551	1.00 39.19	N
ATOM	6727	CA	ASN	A	436	20.291	33.472	-35.006	1.00 41.02	C
ATOM	6729	CB	ASN	A	436	21.638	33.737	-35.713	1.00 41.72	C
ATOM	6732	CG	ASN	A	436	21.901	35.224	-35.923	1.00 43.35	C
ATOM	6733	OD1	ASN	A	436	21.721	36.040	-35.015	1.00 47.51	O
ATOM	6734	ND2	ASN	A	436	22.319	35.579	-37.128	1.00 47.78	N
ATOM	6737	C	ASN	A	436	19.519	32.302	-35.655	1.00 41.24	C
ATOM	6738	O	ASN	A	436	19.545	32.142	-36.878	1.00 41.78	O
ATOM	6739	N	LEU	A	437	18.844	31.488	-34.826	1.00 40.93	N
ATOM	6741	CA	LEU	A	437	17.908	30.468	-35.309	1.00 40.42	C
ATOM	6743	CB	LEU	A	437	17.386	29.591	-34.170	1.00 40.23	C
ATOM	6746	CG	LEU	A	437	18.260	28.421	-33.737	1.00 42.27	C
ATOM	6748	CD1	LEU	A	437	17.799	27.857	-32.403	1.00 42.01	C
ATOM	6752	CD2	LEU	A	437	18.266	27.326	-34.803	1.00 44.39	C
ATOM	6756	C	LEU	A	437	16.750	31.209	-35.944	1.00 38.56	C
ATOM	6757	O	LEU	A	437	16.508	32.370	-35.608	1.00 38.56	O
ATOM	6758	N	PRO	A	438	16.022	30.554	-36.848	1.00 37.16	N
ATOM	6759	CA	PRO	A	438	14.931	31.225	-37.568	1.00 35.51	C
ATOM	6761	CB	PRO	A	438	14.375	30.122	-38.479	1.00 35.99	C
ATOM	6764	CG	PRO	A	438	15.410	29.051	-38.494	1.00 36.90	C
ATOM	6767	CD	PRO	A	438	16.101	29.114	-37.169	1.00 36.99	C
ATOM	6770	C	PRO	A	438	13.870	31.667	-36.565	1.00 34.15	C
ATOM	6771	O	PRO	A	438	13.640	30.918	-35.605	1.00 34.10	O
ATOM	6772	N	ALA	A	439	13.230	32.812	-36.773	1.00 31.80	N
ATOM	6774	CA	ALA	A	439	12.365	33.365	-35.751	1.00 30.27	C
ATOM	6776	CB	ALA	A	439	11.960	34.781	-36.095	1.00 30.44	C
ATOM	6780	C	ALA	A	439	11.131	32.510	-35.488	1.00 28.06	C
ATOM	6781	O	ALA	A	439	10.591	32.546	-34.389	1.00 26.51	O
ATOM	6782	N	TYR	A	440	10.699	31.721	-36.482	1.00 25.64	N
ATOM	6784	CA	TYR	A	440	9.488	30.888	-36.356	1.00 23.20	C
ATOM	6786	CB	TYR	A	440	8.945	30.500	-37.732	1.00 23.98	C
ATOM	6789	CG	TYR	A	440	9.927	29.775	-38.636	1.00 23.58	C
ATOM	6790	CD1	TYR	A	440	10.125	28.413	-38.539	1.00 23.70	C
ATOM	6792	CE1	TYR	A	440	11.021	27.771	-39.363	1.00 27.22	C
ATOM	6794	CZ	TYR	A	440	11.724	28.493	-40.296	1.00 26.57	C
ATOM	6795	OH	TYR	A	440	12.630	27.883	-41.120	1.00 29.78	O
ATOM	6797	CE2	TYR	A	440	11.551	29.831	-40.407	1.00 27.49	C
ATOM	6799	CD2	TYR	A	440	10.644	30.469	-39.594	1.00 26.63	C
ATOM	6801	C	TYR	A	440	9.705	29.614	-35.502	1.00 21.54	C
ATOM	6802	O	TYR	A	440	8.790	28.847	-35.259	1.00 21.75	O
ATOM	6803	N	PHE	A	441	10.935	29.419	-35.044	1.00 19.21	N
ATOM	6805	CA	PHE	A	441	11.225	28.404	-34.014	1.00 19.15	C
ATOM	6807	CB	PHE	A	441	12.749	28.182	-33.911	1.00 19.42	C

ATOM	6810	CG	PHE	A	441	13.355	27.295	-34.991	1.00 23.75	C
ATOM	6811	CD1	PHE	A	441	13.041	27.455	-36.332	1.00 27.98	C
ATOM	6813	CE1	PHE	A	441	13.607	26.626	-37.288	1.00 30.21	C
ATOM	6815	CZ	PHE	A	441	14.542	25.675	-36.927	1.00 29.92	C
ATOM	6817	CE2	PHE	A	441	14.888	25.534	-35.603	1.00 28.66	C
ATOM	6819	CD2	PHE	A	441	14.298	26.334	-34.648	1.00 28.08	C
ATOM	6821	C	PHE	A	441	10.772	28.901	-32.648	1.00 17.95	C
ATOM	6822	O	PHE	A	441	10.835	28.152	-31.661	1.00 18.49	O
ATOM	6823	N	PHE	A	442	10.376	30.163	-32.525	1.00 16.20	N
ATOM	6825	CA	PHE	A	442	10.036	30.742	-31.253	1.00 17.94	C
ATOM	6827	CB	PHE	A	442	10.981	31.891	-30.882	1.00 18.21	C
ATOM	6830	CG	PHE	A	442	12.423	31.520	-30.875	1.00 18.03	C
ATOM	6831	CD1	PHE	A	442	13.160	31.483	-32.034	1.00 16.80	C
ATOM	6833	CE1	PHE	A	442	14.477	31.106	-32.012	1.00 20.80	C
ATOM	6835	CZ	PHE	A	442	15.093	30.787	-30.826	1.00 20.22	C
ATOM	6837	CE2	PHE	A	442	14.371	30.829	-29.647	1.00 17.86	C
ATOM	6839	CD2	PHE	A	442	13.047	31.193	-29.673	1.00 17.04	C
ATOM	6841	C	PHE	A	442	8.630	31.321	-31.269	1.00 19.31	C
ATOM	6842	O	PHE	A	442	8.024	31.527	-32.343	1.00 19.74	O
ATOM	6843	N	LYS	A	443	8.132	31.591	-30.080	1.00 19.60	N
ATOM	6845	CA	LYS	A	443	6.940	32.403	-29.903	1.00 21.02	C
ATOM	6847	CB	LYS	A	443	5.762	31.580	-29.462	1.00 21.43	C
ATOM	6850	CG	LYS	A	443	4.531	32.459	-29.217	1.00 23.81	C
ATOM	6853	CD	LYS	A	443	3.440	31.745	-28.577	1.00 23.08	C
ATOM	6856	CE	LYS	A	443	2.361	32.746	-28.151	1.00 23.00	C
ATOM	6859	NZ	LYS	A	443	1.163	32.027	-27.772	1.00 17.49	N
ATOM	6863	C	LYS	A	443	7.192	33.482	-28.887	1.00 21.06	C
ATOM	6864	O	LYS	A	443	7.625	33.213	-27.773	1.00 18.89	O
ATOM	6865	N	GLU	A	444	6.931	34.713	-29.294	1.00 21.55	N
ATOM	6867	CA	GLU	A	444	6.993	35.862	-28.395	1.00 20.89	C
ATOM	6869	CB	GLU	A	444	6.950	37.154	-29.187	1.00 21.39	C
ATOM	6872	CG	GLU	A	444	7.172	38.371	-28.321	1.00 22.75	C
ATOM	6875	CD	GLU	A	444	7.074	39.672	-29.089	1.00 27.09	C
ATOM	6876	OE1	GLU	A	444	7.526	40.695	-28.517	1.00 23.38	O
ATOM	6877	OE2	GLU	A	444	6.547	39.630	-30.256	1.00 23.68	O
ATOM	6878	C	GLU	A	444	5.860	35.765	-27.346	1.00 20.21	C
ATOM	6879	O	GLU	A	444	4.683	35.538	-27.683	1.00 20.27	O
ATOM	6880	N	LEU	A	445	6.218	35.899	-26.058	1.00 17.18	N
ATOM	6882	CA	LEU	A	445	5.303	35.593	-24.983	1.00 16.52	C
ATOM	6884	CB	LEU	A	445	6.042	34.767	-23.891	1.00 16.01	C
ATOM	6887	CG	LEU	A	445	6.410	33.343	-24.284	1.00 18.50	C
ATOM	6889	CD1	LEU	A	445	7.411	32.715	-23.344	1.00 18.73	C
ATOM	6893	CD2	LEU	A	445	5.172	32.464	-24.318	1.00 21.16	C
ATOM	6897	C	LEU	A	445	4.713	36.849	-24.358	1.00 15.87	C
ATOM	6898	O	LEU	A	445	5.327	37.914	-24.406	1.00 15.46	O
ATOM	6899	N	PRO	A	446	3.530	36.754	-23.739	1.00 17.45	N
ATOM	6900	CA	PRO	A	446	3.051	37.862	-22.911	1.00 19.54	C
ATOM	6902	CB	PRO	A	446	1.696	37.366	-22.397	1.00 20.19	C
ATOM	6905	CG	PRO	A	446	1.301	36.278	-23.292	1.00 19.90	C
ATOM	6908	CD	PRO	A	446	2.592	35.625	-23.731	1.00 17.23	C
ATOM	6911	C	PRO	A	446	4.017	38.161	-21.741	1.00 21.95	C
ATOM	6912	O	PRO	A	446	4.662	37.226	-21.231	1.00 22.06	O
ATOM	6913	N	LYS	A	447	4.162	39.434	-21.403	1.00 24.45	N
ATOM	6915	CA	LYS	A	447	5.039	39.880	-20.319	1.00 28.22	C
ATOM	6917	CB	LYS	A	447	5.217	41.394	-20.394	1.00 28.87	C
ATOM	6920	CG	LYS	A	447	5.852	41.942	-21.654	1.00 33.39	C
ATOM	6923	CD	LYS	A	447	6.225	43.428	-21.462	1.00 37.77	C
ATOM	6926	CE	LYS	A	447	7.358	43.588	-20.435	1.00 41.09	C
ATOM	6929	NZ	LYS	A	447	8.274	44.724	-20.761	1.00 42.80	N
ATOM	6933	C	LYS	A	447	4.388	39.559	-18.972	1.00 29.34	C
ATOM	6934	O	LYS	A	447	3.234	39.889	-18.768	1.00 29.80	O
ATOM	6935	N	LYS	A	448	5.109	38.899	-18.073	1.00 31.58	N
ATOM	6937	CA	LYS	A	448	4.599	38.622	-16.726	1.00 32.91	C
ATOM	6939	CB	LYS	A	448	4.536	37.118	-16.442	1.00 33.57	C
ATOM	6942	CG	LYS	A	448	3.492	36.358	-17.276	1.00 33.11	C
ATOM	6945	CD	LYS	A	448	3.437	34.865	-16.984	1.00 33.35	C
ATOM	6948	CE	LYS	A	448	2.324	34.202	-17.780	1.00 34.76	C

ATOM	6951	NZ	LYS	A	448	2.255	32.696	-17.705	1.00 35.40	N
ATOM	6955	C	LYS	A	448	5.489	39.340	-15.708	1.00 34.50	C
ATOM	6956	O	LYS	A	448	6.707	39.412	-15.877	1.00 33.45	O
ATOM	6957	N	VAL	A	449	4.861	39.903	-14.678	1.00 36.13	N
ATOM	6959	CA	VAL	A	449	5.606	40.470	-13.559	1.00 38.05	C
ATOM	6961	CB	VAL	A	449	4.783	41.516	-12.794	1.00 37.94	C
ATOM	6963	CG1	VAL	A	449	5.525	41.985	-11.528	1.00 39.68	C
ATOM	6967	CG2	VAL	A	449	4.477	42.692	-13.711	1.00 38.90	C
ATOM	6971	C	VAL	A	449	5.994	39.276	-12.681	1.00 38.74	C
ATOM	6972	O	VAL	A	449	5.129	38.555	-12.171	1.00 39.16	O
ATOM	6973	N	MET	A	450	7.298	39.038	-12.585	1.00 39.87	N
ATOM	6975	CA	MET	A	450	7.839	37.944	-11.782	1.00 40.60	C
ATOM	6977	CB	MET	A	450	8.746	37.062	-12.632	1.00 39.90	C
ATOM	6980	CG	MET	A	450	8.099	36.630	-13.933	1.00 37.25	C
ATOM	6983	SD	MET	A	450	9.151	35.596	-14.930	1.00 30.42	S
ATOM	6984	CE	MET	A	450	10.233	36.808	-15.611	1.00 29.60	C
ATOM	6988	C	MET	A	450	8.623	38.559	-10.643	1.00 42.49	C
ATOM	6989	O	MET	A	450	9.555	39.325	-10.870	1.00 42.01	O
ATOM	6990	N	LYS	A	451	8.218	38.249	-9.419	1.00 45.36	N
ATOM	6992	CA	LYS	A	451	8.798	38.903	-8.249	1.00 47.13	C
ATOM	6994	CB	LYS	A	451	7.993	38.577	-6.981	1.00 47.97	C
ATOM	6997	CG	LYS	A	451	6.604	39.264	-6.928	1.00 49.92	C
ATOM	7000	CD	LYS	A	451	6.082	39.476	-5.482	1.00 52.27	C
ATOM	7003	CE	LYS	A	451	6.153	38.204	-4.621	1.00 53.79	C
ATOM	7006	NZ	LYS	A	451	5.662	36.978	-5.326	1.00 54.65	N
ATOM	7010	C	LYS	A	451	10.251	38.471	-8.127	1.00 47.69	C
ATOM	7011	O	LYS	A	451	10.551	37.288	-8.219	1.00 47.46	O
ATOM	7012	N	GLY	A	452	11.140	39.450	-7.987	1.00 48.73	N
ATOM	7014	CA	GLY	A	452	12.569	39.209	-7.902	1.00 49.93	C
ATOM	7017	C	GLY	A	452	13.329	39.682	-9.121	1.00 50.88	C
ATOM	7018	O	GLY	A	452	14.546	39.846	-9.062	1.00 50.87	O
ATOM	7019	N	VAL	A	453	12.621	39.876	-10.232	1.00 52.19	N
ATOM	7021	CA	VAL	A	453	13.244	40.344	-11.476	1.00 53.40	C
ATOM	7023	CB	VAL	A	453	13.229	39.243	-12.598	1.00 53.80	C
ATOM	7025	CG1	VAL	A	453	11.859	38.684	-12.807	1.00 54.54	C
ATOM	7029	CG2	VAL	A	453	13.786	39.778	-13.915	1.00 54.71	C
ATOM	7033	C	VAL	A	453	12.593	41.652	-11.953	1.00 53.53	C
ATOM	7034	O	VAL	A	453	11.368	41.784	-11.979	1.00 53.52	O
ATOM	7035	N	ALA	A	454	13.438	42.620	-12.291	1.00 53.97	N
ATOM	7037	CA	ALA	A	454	12.984	43.923	-12.757	1.00 54.38	C
ATOM	7039	CB	ALA	A	454	13.621	45.037	-11.949	1.00 54.51	C
ATOM	7043	C	ALA	A	454	13.372	44.048	-14.218	1.00 54.23	C
ATOM	7044	O	ALA	A	454	14.555	43.963	-14.555	1.00 54.65	O
ATOM	7045	N	ASP	A	455	12.366	44.235	-15.069	1.00 53.78	N
ATOM	7047	CA	ASP	A	455	12.538	44.379	-16.512	1.00 53.20	C
ATOM	7049	CB	ASP	A	455	13.275	45.678	-16.855	1.00 54.04	C
ATOM	7052	CG	ASP	A	455	13.286	45.951	-18.345	1.00 56.20	C
ATOM	7053	OD1	ASP	A	455	12.181	46.139	-18.919	1.00 59.58	O
ATOM	7054	OD2	ASP	A	455	14.341	45.962	-19.025	1.00 59.17	O
ATOM	7055	C	ASP	A	455	13.241	43.187	-17.151	1.00 51.27	C
ATOM	7056	O	ASP	A	455	14.371	43.300	-17.628	1.00 51.61	O
ATOM	7057	N	SER	A	456	12.540	42.054	-17.188	1.00 48.85	N
ATOM	7059	CA	SER	A	456	13.066	40.831	-17.788	1.00 46.45	C
ATOM	7061	CB	SER	A	456	12.066	39.691	-17.604	1.00 46.60	C
ATOM	7064	OG	SER	A	456	10.897	39.904	-18.375	1.00 47.27	O
ATOM	7066	C	SER	A	456	13.405	40.988	-19.281	1.00 43.97	C
ATOM	7067	O	SER	A	456	14.272	40.290	-19.790	1.00 43.89	O
ATOM	7068	N	GLY	A	457	12.731	41.918	-19.965	1.00 40.75	N
ATOM	7070	CA	GLY	A	457	12.887	42.119	-21.407	1.00 37.58	C
ATOM	7073	C	GLY	A	457	11.924	41.186	-22.118	1.00 34.43	C
ATOM	7074	O	GLY	A	457	11.249	40.384	-21.437	1.00 33.93	O
ATOM	7075	N	PRO	A	458	11.808	41.289	-23.444	1.00 30.81	N
ATOM	7076	CA	PRO	A	458	10.950	40.365	-24.206	1.00 28.02	C
ATOM	7078	CB	PRO	A	458	11.230	40.701	-25.664	1.00 29.14	C
ATOM	7081	CG	PRO	A	458	11.906	42.052	-25.652	1.00 30.39	C
ATOM	7084	CD	PRO	A	458	12.477	42.269	-24.311	1.00 31.46	C
ATOM	7087	C	PRO	A	458	11.358	38.926	-23.928	1.00 24.68	C

ATOM	7088	O	PRO	A	458	12.555	38.636	-23.963	1.00	22.81	O
ATOM	7089	N	LEU	A	459	10.384	38.075	-23.615	1.00	21.23	N
ATOM	7091	CA	LEU	A	459	10.632	36.657	-23.448	1.00	19.63	C
ATOM	7093	CB	LEU	A	459	10.164	36.178	-22.095	1.00	19.71	C
ATOM	7096	CG	LEU	A	459	10.712	36.906	-20.873	1.00	21.03	C
ATOM	7098	CD1	LEU	A	459	10.041	36.310	-19.654	1.00	23.63	C
ATOM	7102	CD2	LEU	A	459	12.223	36.789	-20.847	1.00	20.57	C
ATOM	7106	C	LEU	A	459	9.954	35.843	-24.553	1.00	17.94	C
ATOM	7107	O	LEU	A	459	8.981	36.270	-25.163	1.00	17.92	O
ATOM	7108	N	TYR	A	460	10.495	34.665	-24.774	1.00	16.56	N
ATOM	7110	CA	TYR	A	460	10.134	33.812	-25.886	1.00	15.94	C
ATOM	7112	CB	TYR	A	460	11.220	33.860	-26.929	1.00	16.07	C
ATOM	7115	CG	TYR	A	460	11.444	35.225	-27.494	1.00	17.93	C
ATOM	7116	CD1	TYR	A	460	12.315	36.141	-26.884	1.00	16.64	C
ATOM	7118	CE1	TYR	A	460	12.491	37.429	-27.388	1.00	22.40	C
ATOM	7120	CZ	TYR	A	460	11.795	37.795	-28.539	1.00	20.32	C
ATOM	7121	OH	TYR	A	460	11.952	39.050	-29.079	1.00	23.52	O
ATOM	7123	CE2	TYR	A	460	10.970	36.894	-29.169	1.00	18.21	C
ATOM	7125	CD2	TYR	A	460	10.767	35.629	-28.647	1.00	18.71	C
ATOM	7127	C	TYR	A	460	9.933	32.385	-25.425	1.00	16.65	C
ATOM	7128	O	TYR	A	460	10.606	31.895	-24.520	1.00	15.59	O
ATOM	7129	N	GLN	A	461	9.033	31.688	-26.080	1.00	14.66	N
ATOM	7131	CA	GLN	A	461	9.003	30.244	-26.054	1.00	15.34	C
ATOM	7133	CB	GLN	A	461	7.563	29.723	-26.196	1.00	14.48	C
ATOM	7136	CG	GLN	A	461	7.480	28.225	-26.265	1.00	15.25	C
ATOM	7139	CD	GLN	A	461	6.051	27.690	-26.318	1.00	17.87	C
ATOM	7140	OE1	GLN	A	461	5.822	26.465	-26.260	1.00	22.58	O
ATOM	7141	NE2	GLN	A	461	5.136	28.564	-26.471	1.00	18.56	N
ATOM	7144	C	GLN	A	461	9.848	29.705	-27.165	1.00	16.25	C
ATOM	7145	O	GLN	A	461	9.775	30.175	-28.326	1.00	16.24	O
ATOM	7146	N	TYR	A	462	10.694	28.717	-26.857	1.00	15.38	N
ATOM	7148	CA	TYR	A	462	11.333	27.949	-27.861	1.00	16.81	C
ATOM	7150	CB	TYR	A	462	12.681	27.365	-27.412	1.00	16.95	C
ATOM	7153	CG	TYR	A	462	13.416	26.618	-28.500	1.00	18.46	C
ATOM	7154	CD1	TYR	A	462	13.699	27.195	-29.733	1.00	20.31	C
ATOM	7156	CE1	TYR	A	462	14.366	26.478	-30.726	1.00	22.21	C
ATOM	7158	CZ	TYR	A	462	14.760	25.187	-30.495	1.00	19.77	C
ATOM	7159	OH	TYR	A	462	15.413	24.439	-31.446	1.00	23.23	O
ATOM	7161	CE2	TYR	A	462	14.473	24.601	-29.293	1.00	19.34	C
ATOM	7163	CD2	TYR	A	462	13.813	25.320	-28.311	1.00	19.47	C
ATOM	7165	C	TYR	A	462	10.372	26.838	-28.257	1.00	17.01	C
ATOM	7166	O	TYR	A	462	10.118	25.885	-27.528	1.00	16.52	O
ATOM	7167	N	TRP	A	463	9.766	27.017	-29.423	1.00	17.55	N
ATOM	7169	CA	TRP	A	463	8.754	26.110	-29.903	1.00	18.21	C
ATOM	7171	CB	TRP	A	463	7.918	26.880	-30.969	1.00	18.49	C
ATOM	7174	CG	TRP	A	463	6.681	26.204	-31.420	1.00	17.43	C
ATOM	7175	CD1	TRP	A	463	6.587	25.285	-32.395	1.00	18.13	C
ATOM	7177	NE1	TRP	A	463	5.270	24.927	-32.577	1.00	21.92	N
ATOM	7179	CE2	TRP	A	463	4.493	25.605	-31.680	1.00	15.72	C
ATOM	7180	CD2	TRP	A	463	5.352	26.432	-30.938	1.00	15.79	C
ATOM	7181	CE3	TRP	A	463	4.801	27.254	-29.964	1.00	16.83	C
ATOM	7183	CZ3	TRP	A	463	3.404	27.222	-29.753	1.00	18.76	C
ATOM	7185	CH2	TRP	A	463	2.595	26.384	-30.503	1.00	18.77	C
ATOM	7187	CZ2	TRP	A	463	3.112	25.569	-31.473	1.00	19.67	C
ATOM	7189	C	TRP	A	463	9.355	24.872	-30.493	1.00	20.63	C
ATOM	7190	O	TRP	A	463	8.771	23.791	-30.416	1.00	20.36	O
ATOM	7191	N	GLY	A	464	10.514	25.021	-31.113	1.00	23.32	N
ATOM	7193	CA	GLY	A	464	11.175	23.914	-31.749	1.00	26.51	C
ATOM	7196	C	GLY	A	464	11.166	24.076	-33.245	1.00	30.01	C
ATOM	7197	O	GLY	A	464	10.646	25.047	-33.792	1.00	29.63	O
ATOM	7198	N	ARG	A	465	11.730	23.078	-33.905	1.00	34.58	N
ATOM	7200	CA	ARG	A	465	12.072	23.162	-35.323	1.00	38.28	C
ATOM	7202	CB	ARG	A	465	13.087	22.070	-35.681	1.00	39.07	C
ATOM	7205	CG	ARG	A	465	14.272	21.996	-34.715	1.00	43.30	C
ATOM	7208	CD	ARG	A	465	15.304	20.994	-35.131	1.00	48.15	C
ATOM	7211	NE	ARG	A	465	16.036	21.443	-36.311	1.00	52.22	N
ATOM	7213	CZ	ARG	A	465	17.026	20.756	-36.875	1.00	56.80	C

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ATOM   7214  NH1 ARG A 465      17.402  19.577 -36.374  1.00 57.20           N
ATOM   7217  NH2 ARG A 465      17.650  21.245 -37.945  1.00 58.33           N
ATOM   7220  C   ARG A 465      10.847  23.016 -36.204  1.00 40.17           C
ATOM   7221  O   ARG A 465      10.880  23.396 -37.380  1.00 40.65           O
ATOM   7222  N   THR A 466       9.773  22.460 -35.645  1.00 41.95           N
ATOM   7224  CA  THR A 466       8.627  22.054 -36.459  1.00 43.68           C
ATOM   7226  CB  THR A 466       8.655  20.523 -36.698  1.00 43.78           C
ATOM   7228  OG1 THR A 466       8.513  19.839 -35.441  1.00 43.45           O
ATOM   7230  CG2 THR A 466       9.997  20.053 -37.269  1.00 44.26           C
ATOM   7234  C   THR A 466       7.298  22.385 -35.805  1.00 45.17           C
ATOM   7235  O   THR A 466       7.249  22.891 -34.688  1.00 43.93           O
ATOM   7236  N   GLU A 467       6.231  22.038 -36.527  1.00 47.72           N
ATOM   7238  CA  GLU A 467       4.854  22.093 -36.048  1.00 49.60           C
ATOM   7240  CB  GLU A 467       4.654  21.348 -34.716  1.00 49.92           C
ATOM   7243  CG  GLU A 467       5.031  19.869 -34.752  1.00 50.85           C
ATOM   7246  CD  GLU A 467       5.601  19.356 -33.442  1.00 53.12           C
ATOM   7247  OE1 GLU A 467       6.776  19.655 -33.134  1.00 54.40           O
ATOM   7248  OE2 GLU A 467       4.886  18.639 -32.711  1.00 54.79           O
ATOM   7249  C   GLU A 467       4.471  23.548 -35.945  1.00 51.00           C
ATOM   7250  O   GLU A 467       5.107  24.298 -35.222  1.00 51.70           O
ATOM   7251  N   LYS A 468       3.469  23.951 -36.735  1.00 52.52           N
ATOM   7253  CA  LYS A 468       2.892  25.312 -36.726  1.00 53.24           C
ATOM   7255  CB  LYS A 468       2.305  25.691 -35.341  1.00 53.41           C
ATOM   7258  CG  LYS A 468       0.842  25.232 -35.147  1.00 52.53           C
ATOM   7261  CD  LYS A 468       0.541  24.604 -33.776  1.00 53.31           C
ATOM   7264  CE  LYS A 468       0.947  23.135 -33.686  1.00 52.84           C
ATOM   7267  NZ  LYS A 468       2.375  22.962 -33.303  1.00 54.47           N
ATOM   7271  C   LYS A 468       3.853  26.377 -37.230  1.00 53.86           C
ATOM   7272  O   LYS A 468       3.416  27.319 -37.891  1.00 56.05           O
ATOM   7273  OXT LYS A 468       5.067  26.359 -37.048  1.00 53.41           O
ATOM   7274  O   HOH W   2      32.245  17.585  10.164  1.00 10.06           O
ATOM   7277  O   HOH W   3      35.172  43.616  -1.436  1.00 12.88           O
ATOM   7280  O   HOH W   4      29.967  20.288   9.692  1.00 10.36           O
ATOM   7283  O   HOH W   5      38.074  23.138  -0.134  1.00 10.06           O
ATOM   7286  O   HOH W   6      30.517  21.068  12.413  1.00  9.11           O
ATOM   7289  O   HOH W   7      29.463  21.503  -3.265  1.00 19.80           O
ATOM   7292  O   HOH W   8      26.727   8.218  -7.918  1.00 18.84           O
ATOM   7295  O   HOH W   9       9.524  27.891 -18.885  1.00 16.17           O
ATOM   7298  O   HOH W  10      28.434  21.518   7.583  1.00 11.34           O
ATOM   7301  O   HOH W  11      23.613  16.146   9.082  1.00 22.28           O
ATOM   7304  O   HOH W  12      38.162  25.061  12.184  1.00 15.39           O
ATOM   7307  O   HOH W  14       7.566  21.959 -14.367  1.00 22.86           O
ATOM   7310  O   HOH W  15      26.373  16.383  14.439  1.00 21.22           O
ATOM   7313  O   HOH W  16      36.430  30.805  -6.337  1.00 14.58           O
ATOM   7316  O   HOH W  17      35.508  15.880  17.925  1.00 19.18           O
ATOM   7319  O   HOH W  18      43.325  40.742 -10.536  1.00 15.92           O
ATOM   7322  O   HOH W  19      26.838  17.240  -6.304  1.00 18.77           O
ATOM   7325  O   HOH W  21      33.139  27.579 -23.204  1.00 38.73           O
ATOM   7328  O   HOH W  22      18.793  20.155  -0.860  1.00 11.87           O
ATOM   7331  O   HOH W  23      31.271  22.984  -4.720  1.00  9.11           O
ATOM   7334  O   HOH W  24       8.372  24.927 -25.560  1.00 13.88           O
ATOM   7337  O   HOH W  25      28.229  21.756  13.561  1.00 11.43           O
ATOM   7340  O   HOH W  26      24.457  28.317  -7.598  1.00 37.71           O
ATOM   7343  O   HOH W  28      37.135  44.534   0.392  1.00 11.88           O
ATOM   7346  O   HOH W  30      31.487  18.561  12.750  1.00 10.16           O
ATOM   7349  O   HOH W  31      34.335  30.077 -12.504  1.00 21.40           O
ATOM   7352  O   HOH W  32      38.211  24.343  -2.911  1.00 17.38           O
ATOM   7355  O   HOH W  33      33.414  24.053  16.890  1.00 18.81           O
ATOM   7358  O   HOH W  34      25.055  37.796  17.267  1.00 32.62           O
ATOM   7361  O   HOH W  35      34.626  19.322  24.127  1.00 16.72           O
ATOM   7364  O   HOH W  37      32.558  20.353  22.311  1.00 14.70           O
ATOM   7367  O   HOH W  38      22.428  29.501  -7.212  1.00 29.79           O
ATOM   7370  O   HOH W  39      17.630  39.390 -22.325  1.00 26.72           O
ATOM   7373  O   HOH W  40      46.987  29.763  -6.239  1.00 23.35           O
ATOM   7376  O   HOH W  41      36.271  25.306  21.810  1.00 21.56           O
ATOM   7379  O   HOH W  42      26.268  11.546  29.050  1.00 31.83           O
ATOM   7382  O   HOH W  43      10.716  43.984 -19.380  1.00 44.10           O
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ATOM	7385	O	HOH W	44	32.260	23.374	24.077	1.00	23.63	O
ATOM	7388	O	HOH W	45	36.154	40.609	-12.156	1.00	16.92	O
ATOM	7391	O	HOH W	46	42.485	33.858	-14.449	1.00	30.90	O
ATOM	7394	O	HOH W	47	32.365	12.686	16.601	1.00	26.51	O
ATOM	7397	O	HOH W	48	40.048	10.840	17.457	1.00	26.78	O
ATOM	7400	O	HOH W	49	34.281	4.421	-3.032	1.00	22.40	O
ATOM	7403	O	HOH W	50	38.555	36.604	-0.972	1.00	19.47	O
ATOM	7406	O	HOH W	51	31.597	27.156	-27.494	1.00	54.36	O
ATOM	7409	O	HOH W	52	54.009	14.999	2.660	1.00	24.64	O
ATOM	7412	O	HOH W	53	36.328	31.732	5.613	1.00	14.47	O
ATOM	7415	O	HOH W	54	16.410	11.275	13.057	1.00	20.70	O
ATOM	7418	O	HOH W	55	41.861	46.714	-11.447	1.00	17.81	O
ATOM	7421	O	HOH W	56	18.695	8.681	-21.586	1.00	35.87	O
ATOM	7424	O	HOH W	58	37.333	29.686	-20.896	1.00	48.33	O
ATOM	7427	O	HOH W	59	33.883	5.090	2.085	1.00	34.16	O
ATOM	7430	O	HOH W	61	36.961	12.729	10.629	1.00	21.78	O
ATOM	7433	O	HOH W	62	14.287	6.886	-18.814	1.00	36.33	O
ATOM	7436	O	HOH W	63	4.309	20.545	-20.943	1.00	29.17	O
ATOM	7439	O	HOH W	64	41.779	12.871	14.592	1.00	47.88	O
ATOM	7442	O	HOH W	65	23.920	4.762	-11.844	1.00	36.91	O
ATOM	7445	O	HOH W	66	17.075	3.590	-0.719	1.00	34.10	O
ATOM	7448	O	HOH W	67	39.124	27.996	9.300	1.00	37.97	O
ATOM	7451	O	HOH W	68	14.558	39.248	-22.132	1.00	20.97	O
ATOM	7454	O	HOH W	69	35.300	40.234	11.276	1.00	34.33	O
ATOM	7457	O	HOH W	70	26.374	18.674	15.634	1.00	26.93	O
ATOM	7460	O	HOH W	71	24.597	17.520	-4.523	1.00	19.67	O
ATOM	7463	O	HOH W	72	23.520	38.694	18.977	1.00	43.79	O
ATOM	7466	O	HOH W	73	38.923	9.061	6.492	1.00	36.24	O
ATOM	7469	O	HOH W	74	40.378	35.629	-6.978	1.00	14.39	O
ATOM	7472	O	HOH W	76	37.936	47.143	-7.524	1.00	14.67	O
ATOM	7475	O	HOH W	77	26.533	11.723	23.818	1.00	28.69	O
ATOM	7478	O	HOH W	78	35.984	29.845	0.854	1.00	21.49	O
ATOM	7481	O	HOH W	79	48.877	32.296	-6.521	1.00	24.56	O
ATOM	7484	O	HOH W	81	31.396	23.430	15.262	1.00	16.03	O
ATOM	7487	O	HOH W	82	33.692	14.951	-9.985	1.00	24.13	O
ATOM	7490	O	HOH W	83	42.145	24.927	-15.674	1.00	31.23	O
ATOM	7493	O	HOH W	85	45.196	27.943	-13.218	1.00	19.17	O
ATOM	7496	O	HOH W	86	28.064	9.005	-1.525	1.00	26.25	O
ATOM	7499	O	HOH W	87	10.671	35.139	33.335	1.00	41.69	O
ATOM	7502	O	HOH W	88	29.598	24.800	-18.111	1.00	24.67	O
ATOM	7505	O	HOH W	89	30.779	8.595	3.638	1.00	24.75	O
ATOM	7508	O	HOH W	90	36.817	19.088	5.509	1.00	15.19	O
ATOM	7511	O	HOH W	91	30.163	19.642	23.688	1.00	30.96	O
ATOM	7514	O	HOH W	92	14.411	2.956	-6.287	1.00	39.30	O
ATOM	7517	O	HOH W	93	38.478	37.547	-3.704	1.00	16.56	O
ATOM	7520	O	HOH W	94	29.895	17.031	22.280	1.00	16.55	O
ATOM	7523	O	HOH W	95	19.711	3.058	4.885	1.00	41.73	O
ATOM	7526	O	HOH W	96	6.011	26.807	6.820	1.00	24.94	O
ATOM	7529	O	HOH W	97	25.623	39.843	-13.327	1.00	38.55	O
ATOM	7532	O	HOH W	98	40.645	37.796	-4.877	1.00	14.34	O
ATOM	7535	O	HOH W	99	35.849	38.271	-13.828	1.00	18.68	O
ATOM	7538	O	HOH W	100	41.528	24.240	-3.172	1.00	28.56	O
ATOM	7541	O	HOH W	101	38.720	29.541	-7.201	1.00	18.77	O
ATOM	7544	O	HOH W	102	27.548	41.690	-14.278	1.00	56.96	O
ATOM	7547	O	HOH W	103	13.397	17.459	23.162	1.00	24.13	O
ATOM	7550	O	HOH W	104	28.369	19.120	14.380	1.00	18.55	O
ATOM	7553	O	HOH W	105	38.691	27.088	-2.156	1.00	19.01	O
ATOM	7556	O	HOH W	106	21.404	34.793	-8.219	1.00	24.55	O
ATOM	7559	O	HOH W	107	26.583	15.840	-12.883	1.00	25.54	O
ATOM	7562	O	HOH W	108	13.637	9.571	19.527	1.00	30.88	O
ATOM	7565	O	HOH W	109	36.982	34.413	-0.498	1.00	26.89	O
ATOM	7568	O	HOH W	110	46.897	19.532	-0.222	1.00	24.44	O
ATOM	7571	O	HOH W	111	37.583	12.288	16.550	1.00	25.64	O
ATOM	7574	O	HOH W	112	23.159	38.054	-14.656	1.00	22.43	O
ATOM	7577	O	HOH W	113	36.906	18.624	26.232	1.00	21.50	O
ATOM	7580	O	HOH W	114	15.782	4.941	-11.274	1.00	34.07	O
ATOM	7583	O	HOH W	115	8.192	19.814	-27.566	1.00	30.51	O

ATOM	7586	O	HOH W 116	38.701	29.249	-3.487	1.00	42.23	O
ATOM	7589	O	HOH W 117	28.521	39.982	-11.409	1.00	54.20	O
ATOM	7592	O	HOH W 118	8.855	14.242	13.256	1.00	35.48	O
ATOM	7595	O	HOH W 119	43.158	36.285	-15.215	1.00	41.91	O
ATOM	7598	O	HOH W 120	2.176	20.801	-19.357	1.00	37.23	O
ATOM	7601	O	HOH W 121	21.458	31.780	29.230	1.00	36.16	O
ATOM	7604	O	HOH W 122	22.792	17.513	11.419	1.00	18.15	O
ATOM	7607	O	HOH W 123	30.011	43.994	-18.413	1.00	56.47	O
ATOM	7610	O	HOH W 124	25.970	11.730	8.343	1.00	25.46	O
ATOM	7613	O	HOH W 125	34.350	21.160	-14.162	1.00	23.43	O
ATOM	7616	O	HOH W 126	22.493	40.407	-15.834	1.00	33.83	O
ATOM	7619	O	HOH W 127	40.672	4.044	14.472	1.00	46.99	O
ATOM	7622	O	HOH W 128	36.018	1.146	1.397	1.00	46.83	O
ATOM	7625	O	HOH W 129	21.616	9.261	23.897	1.00	23.92	O
ATOM	7628	O	HOH W 130	26.149	34.813	-22.715	1.00	50.68	O
ATOM	7631	O	HOH W 131	25.913	8.221	8.916	1.00	43.16	O
ATOM	7634	O	HOH W 132	33.671	36.716	8.720	1.00	25.59	O
ATOM	7637	O	HOH W 133	17.415	34.629	-33.814	1.00	43.53	O
ATOM	7640	O	HOH W 134	28.160	24.893	-27.145	1.00	52.56	O
ATOM	7643	O	HOH W 135	38.540	34.791	-5.316	1.00	32.04	O
ATOM	7646	O	HOH W 136	4.388	22.498	8.754	1.00	31.58	O
ATOM	7649	O	HOH W 137	57.885	10.810	23.595	1.00	36.49	O
ATOM	7652	O	HOH W 138	19.052	45.561	3.596	1.00	49.00	O
ATOM	7655	O	HOH W 139	48.426	32.652	-2.342	1.00	26.34	O
ATOM	7658	O	HOH W 140	7.912	21.604	9.493	1.00	29.93	O
ATOM	7661	O	HOH W 141	5.332	26.770	31.497	1.00	18.47	O
ATOM	7664	O	HOH W 142	18.287	7.084	8.373	1.00	66.42	O
ATOM	7667	O	HOH W 143	11.397	30.691	-9.259	1.00	44.40	O
ATOM	7670	O	HOH W 144	29.356	30.889	-27.909	1.00	38.12	O
ATOM	7673	O	HOH W 146	24.689	4.353	-14.229	1.00	46.99	O
ATOM	7676	O	HOH W 148	31.435	21.481	-7.316	1.00	24.63	O
ATOM	7679	O	HOH W 150	19.146	38.480	2.614	1.00	28.29	O
ATOM	7682	O	HOH W 151	33.351	9.157	6.798	1.00	24.68	O
ATOM	7685	O	HOH W 152	1.372	23.021	-18.360	1.00	40.42	O
ATOM	7688	O	HOH W 153	29.395	9.181	-4.532	1.00	15.08	O
ATOM	7691	O	HOH W 154	4.007	24.888	29.819	1.00	18.75	O
ATOM	7694	O	HOH W 156	36.526	21.434	6.296	1.00	20.33	O
ATOM	7697	O	HOH W 157	23.617	10.103	22.003	1.00	20.14	O
ATOM	7700	O	HOH W 158	44.732	42.705	-11.874	1.00	18.04	O
ATOM	7703	O	HOH W 159	43.225	44.701	-12.299	1.00	22.11	O
ATOM	7706	O	HOH W 160	32.393	10.766	15.045	1.00	28.72	O
ATOM	7709	O	HOH W 161	19.776	4.895	-13.437	1.00	23.84	O
ATOM	7712	O	HOH W 162	18.859	10.183	12.446	1.00	21.26	O
ATOM	7715	O	HOH W 163	11.097	17.167	4.708	1.00	24.04	O
ATOM	7718	O	HOH W 164	14.538	14.053	-26.244	1.00	27.59	O
ATOM	7721	O	HOH W 165	40.456	24.231	10.530	1.00	27.16	O
ATOM	7724	O	HOH W 166	16.649	19.526	-29.518	1.00	28.09	O
ATOM	7727	O	HOH W 167	23.850	13.379	9.359	1.00	26.92	O
ATOM	7730	O	HOH W 168	27.144	17.845	11.931	1.00	24.33	O
ATOM	7733	O	HOH W 169	28.414	30.623	20.184	1.00	27.67	O
ATOM	7736	O	HOH W 170	15.380	21.683	-31.102	1.00	26.17	O
ATOM	7739	O	HOH W 171	30.976	30.292	21.050	1.00	24.34	O
ATOM	7742	O	HOH W 172	30.030	34.218	13.532	1.00	20.27	O
ATOM	7745	O	HOH W 173	35.173	31.143	-14.574	1.00	26.62	O
ATOM	7748	O	HOH W 174	19.196	40.113	9.427	1.00	30.84	O
ATOM	7751	O	HOH W 175	26.854	5.555	13.363	1.00	26.23	O
ATOM	7754	O	HOH W 176	34.710	44.254	-12.722	1.00	26.99	O
ATOM	7757	O	HOH W 177	43.392	50.345	-10.197	1.00	19.91	O
ATOM	7760	O	HOH W 178	8.589	21.882	-32.650	1.00	30.66	O
ATOM	7763	O	HOH W 179	20.390	12.202	17.913	1.00	23.79	O
ATOM	7766	O	HOH W 180	29.684	6.512	-5.108	1.00	28.92	O
ATOM	7769	O	HOH W 181	23.009	20.757	-5.267	1.00	30.80	O
ATOM	7772	O	HOH W 182	42.087	8.066	20.081	1.00	28.68	O
ATOM	7775	O	HOH W 183	12.773	20.777	-32.000	1.00	25.57	O
ATOM	7778	O	HOH W 184	15.895	20.478	-1.485	1.00	28.26	O
ATOM	7781	O	HOH W 185	17.146	8.028	-18.261	1.00	30.88	O
ATOM	7784	O	HOH W 186	13.641	23.526	24.915	1.00	32.84	O

ATOM	7787	O	HOH W 187	5.862	18.698	-19.522	1.00	27.02	O
ATOM	7790	O	HOH W 188	42.848	49.038	-12.531	1.00	26.36	O
ATOM	7793	O	HOH W 189	32.756	10.402	12.338	1.00	23.49	O
ATOM	7796	O	HOH W 190	39.510	14.121	22.861	1.00	27.94	O
ATOM	7799	O	HOH W 191	4.309	30.926	23.263	1.00	36.21	O
ATOM	7802	O	HOH W 192	24.050	10.640	6.504	1.00	28.80	O
ATOM	7805	O	HOH W 194	33.725	34.312	9.910	1.00	31.27	O
ATOM	7808	O	HOH W 195	24.087	19.141	-6.870	1.00	29.00	O
ATOM	7811	O	HOH W 196	40.124	22.531	3.812	1.00	28.92	O
ATOM	7814	O	HOH W 197	32.890	32.293	15.483	1.00	29.75	O
ATOM	7817	O	HOH W 198	10.526	16.512	20.740	1.00	29.33	O
ATOM	7820	O	HOH W 199	40.690	35.473	0.288	1.00	30.94	O
ATOM	7823	O	HOH W 200	19.424	25.252	31.825	1.00	32.70	O
ATOM	7826	O	HOH W 201	40.712	25.858	8.519	1.00	29.57	O
ATOM	7829	O	HOH W 202	39.285	9.975	8.957	1.00	35.74	O
ATOM	7832	O	HOH W 203	19.635	41.318	-16.208	1.00	34.32	O
ATOM	7835	O	HOH W 205	33.101	14.653	18.359	1.00	29.77	O
ATOM	7838	O	HOH W 206	11.736	24.463	21.159	1.00	24.13	O
ATOM	7841	O	HOH W 207	21.871	6.482	24.249	1.00	24.32	O
ATOM	7844	O	HOH W 208	2.774	29.059	25.078	1.00	31.40	O
ATOM	7847	O	HOH W 209	28.403	9.219	1.549	1.00	30.41	O
ATOM	7850	O	HOH W 210	38.975	24.332	2.442	1.00	22.44	O
ATOM	7853	O	HOH W 211	24.923	18.857	12.548	1.00	24.60	O
ATOM	7856	O	HOH W 212	37.022	37.048	8.618	1.00	40.22	O
ATOM	7859	O	HOH W 213	32.307	22.076	-17.769	1.00	40.78	O
ATOM	7862	O	HOH W 214	42.930	36.446	-3.004	1.00	21.90	O
ATOM	7865	O	HOH W 215	2.651	26.034	-12.176	1.00	40.57	O
ATOM	7868	O	HOH W 217	27.700	6.437	-1.954	1.00	28.69	O
ATOM	7871	O	HOH W 218	38.708	22.587	5.886	1.00	34.19	O
ATOM	7874	O	HOH W 219	41.866	32.182	-3.964	1.00	44.97	O
ATOM	7877	O	HOH W 220	36.466	31.431	-3.365	1.00	26.36	O
ATOM	7880	O	HOH W 221	20.781	41.137	-21.191	1.00	36.25	O
ATOM	7883	O	HOH W 222	28.273	15.849	-9.398	1.00	35.87	O
ATOM	7886	O	HOH W 223	28.398	19.006	-8.722	1.00	43.49	O
ATOM	7889	O	HOH W 224	31.036	36.509	13.807	1.00	42.58	O
ATOM	7892	O	HOH W 225	38.936	12.906	14.421	1.00	32.04	O
ATOM	7895	O	HOH W 226	14.004	37.550	-0.204	1.00	47.13	O
ATOM	7898	O	HOH W 227	13.150	35.789	33.437	1.00	32.97	O
ATOM	7901	O	HOH W 228	12.961	32.630	40.196	1.00	30.91	O
ATOM	7904	O	HOH W 229	17.837	3.564	3.066	1.00	39.59	O
ATOM	7907	O	HOH W 231	42.515	20.288	17.035	1.00	31.00	O
ATOM	7910	O	HOH W 232	7.636	14.085	-25.027	1.00	40.45	O
ATOM	7913	O	HOH W 233	26.632	0.645	9.461	1.00	34.55	O
ATOM	7916	O	HOH W 234	21.687	38.238	-7.987	1.00	42.11	O
ATOM	7919	O	HOH W 235	34.450	25.091	-14.243	1.00	32.45	O
ATOM	7922	O	HOH W 236	24.918	22.209	-3.705	1.00	35.19	O
ATOM	7925	O	HOH W 237	37.712	12.993	24.834	1.00	29.38	O
ATOM	7928	O	HOH W 238	36.176	33.498	10.551	1.00	44.23	O
ATOM	7931	O	HOH W 239	6.121	18.702	-7.755	1.00	34.03	O
ATOM	7934	O	HOH W 240	27.158	32.920	21.025	1.00	28.11	O
ATOM	7937	O	HOH W 241	3.473	33.239	22.407	1.00	40.18	O
ATOM	7940	O	HOH W 242	16.506	12.024	-26.813	1.00	34.79	O
ATOM	7943	O	HOH W 243	26.154	16.213	27.291	1.00	29.69	O
ATOM	7946	O	HOH W 244	14.978	22.943	-1.078	1.00	37.57	O
ATOM	7949	O	HOH W 245	22.581	8.630	20.276	1.00	31.70	O
ATOM	7952	O	HOH W 246	14.342	9.895	13.663	1.00	31.12	O
ATOM	7955	O	HOH W 247	52.561	35.592	-1.868	1.00	41.95	O
ATOM	7958	O	HOH W 248	9.333	31.983	30.628	1.00	37.88	O
ATOM	7961	O	HOH W 250	14.776	3.056	4.304	1.00	52.59	O
ATOM	7964	O	HOH W 251	41.417	39.835	-12.130	1.00	35.18	O
ATOM	7967	O	HOH W 252	17.538	5.577	-14.963	1.00	37.53	O
ATOM	7970	O	HOH W 253	11.369	9.525	-21.454	1.00	29.61	O
ATOM	7973	O	HOH W 254	34.235	33.146	-21.406	1.00	35.44	O
ATOM	7976	O	HOH W 255	-0.291	27.309	-33.281	1.00	22.33	O
ATOM	7979	O	HOH W 256	7.409	25.116	-13.209	1.00	27.60	O
ATOM	7982	O	HOH W 257	35.731	11.018	15.636	1.00	29.66	O
ATOM	7985	O	HOH W 258	38.402	27.601	11.953	1.00	37.78	O

ATOM	7988	O	HOH W 259	6.878	15.925	9.494	1.00	33.90	O
ATOM	7991	O	HOH W 260	24.775	20.673	30.997	1.00	30.71	O
ATOM	7994	O	HOH W 261	8.482	29.804	32.750	1.00	43.18	O
ATOM	7997	O	HOH W 262	23.228	4.901	22.294	1.00	33.67	O
ATOM	8000	O	HOH W 263	18.616	17.891	24.989	1.00	37.03	O
ATOM	8003	O	HOH W 264	24.455	7.350	6.989	1.00	37.75	O
ATOM	8006	O	HOH W 265	15.243	39.322	35.118	1.00	29.62	O
ATOM	8009	O	HOH W 266	42.464	22.291	10.705	1.00	37.96	O
ATOM	8012	O	HOH W 267	41.236	42.266	-13.376	1.00	34.91	O
ATOM	8015	O	HOH W 268	7.912	25.980	31.624	1.00	29.13	O
ATOM	8018	O	HOH W 269	19.966	34.942	33.576	1.00	41.83	O
ATOM	8021	O	HOH W 270	29.909	5.243	0.952	1.00	29.94	O
ATOM	8024	O	HOH W 271	48.376	41.931	-15.106	1.00	38.88	O
ATOM	8027	O	HOH W 272	39.881	33.248	-14.001	1.00	32.40	O
ATOM	8030	O	HOH W 273	35.107	52.868	3.455	1.00	29.45	O
ATOM	8033	O	HOH W 274	26.159	6.355	10.934	1.00	31.04	O
ATOM	8036	O	HOH W 275	14.734	2.897	-9.593	1.00	44.77	O
ATOM	8039	O	HOH W 276	28.729	28.618	25.243	1.00	38.99	O
ATOM	8042	O	HOH W 277	44.476	32.842	-13.601	1.00	39.39	O
ATOM	8045	O	HOH W 278	9.149	26.719	33.720	1.00	36.90	O
ATOM	8048	O	HOH W 279	8.453	36.594	34.006	1.00	31.17	O
ATOM	8051	O	HOH W 280	35.843	49.267	9.976	1.00	55.67	O
ATOM	8054	O	HOH W 281	17.953	2.175	-6.136	1.00	43.85	O
ATOM	8057	O	HOH W 282	34.484	30.961	17.972	1.00	34.41	O
ATOM	8060	O	HOH W 283	20.546	10.024	19.121	1.00	29.33	O
ATOM	8063	O	HOH W 284	26.654	12.397	26.475	1.00	38.31	O
ATOM	8066	O	HOH W 285	47.789	48.702	-13.395	1.00	33.79	O
ATOM	8069	O	HOH W 286	26.546	47.528	-14.329	1.00	58.77	O
ATOM	8072	O	HOH W 287	27.078	17.786	-14.708	1.00	38.69	O
ATOM	8075	O	HOH W 288	-1.597	23.148	22.107	1.00	37.36	O
ATOM	8078	O	HOH W 289	18.362	3.579	-11.643	1.00	38.65	O
ATOM	8081	O	HOH W 290	22.920	39.790	-20.817	1.00	36.79	O
ATOM	8084	O	HOH W 291	11.524	3.617	-18.975	1.00	49.85	O
ATOM	8087	O	HOH W 292	50.777	30.942	-14.533	1.00	32.21	O
ATOM	8090	O	HOH W 293	45.011	41.606	-14.351	1.00	35.03	O
ATOM	8093	O	HOH W 294	26.290	10.417	-21.558	1.00	35.69	O
ATOM	8096	O	HOH W 295	37.938	37.367	-12.360	1.00	35.23	O
ATOM	8099	O	HOH W 296	5.071	26.580	-11.903	1.00	38.47	O
ATOM	8102	O	HOH W 297	25.943	3.943	-10.354	1.00	45.82	O
ATOM	8105	O	HOH W 298	37.414	29.531	13.164	1.00	35.02	O
ATOM	8108	O	HOH W 299	18.651	39.028	17.021	1.00	34.74	O
ATOM	8111	O	HOH W 300	40.875	20.549	23.969	1.00	32.74	O
ATOM	8114	O	HOH W 301	4.822	28.930	29.533	1.00	32.93	O
ATOM	8117	O	HOH W 302	32.472	46.071	4.805	1.00	36.68	O
ATOM	8120	O	HOH W 303	0.344	24.434	23.725	1.00	39.00	O
ATOM	8123	O	HOH W 304	18.391	34.404	25.543	1.00	44.03	O
ATOM	8126	O	HOH W 305	39.230	12.738	27.393	1.00	49.78	O
ATOM	8129	O	HOH W 306	22.714	30.907	34.694	1.00	52.28	O
ATOM	8132	O	HOH W 307	11.137	43.969	7.621	1.00	48.43	O
ATOM	8135	O	HOH W 308	26.414	16.898	-31.836	1.00	46.93	O
ATOM	8138	O	HOH W 309	14.436	38.643	32.837	1.00	53.36	O
ATOM	8141	O	HOH W 310	45.706	3.592	8.300	1.00	59.98	O
ATOM	8144	O	HOH W 311	47.747	31.128	-15.674	1.00	44.38	O
ATOM	8147	O	HOH W 313	28.205	19.451	-4.550	1.00	37.12	O
ATOM	8150	O	HOH W 314	27.516	15.676	-18.214	1.00	39.25	O
ATOM	8153	O	HOH W 315	33.350	23.190	-15.798	1.00	46.61	O
ATOM	8156	O	HOH W 316	17.574	6.762	12.472	1.00	39.38	O
ATOM	8159	O	HOH W 317	35.273	8.522	15.404	1.00	40.32	O
ATOM	8162	O	HOH W 318	40.695	27.211	-9.510	1.00	18.48	O
ATOM	8165	O	HOH W 319	22.830	30.722	-4.444	1.00	45.11	O
ATOM	8168	O	HOH W 320	12.172	23.947	-0.830	1.00	47.28	O
ATOM	8171	O	HOH W 322	4.621	17.849	19.994	1.00	48.15	O
ATOM	8174	O	HOH W 323	16.392	33.013	-1.199	1.00	38.57	O
ATOM	8177	O	HOH W 324	27.048	23.186	-4.571	1.00	43.43	O
ATOM	8180	O	HOH W 326	4.174	37.069	35.324	1.00	31.73	O
ATOM	8183	O	HOH W 327	26.433	33.535	-25.878	1.00	53.96	O
ATOM	8186	O	HOH W 328	15.531	29.373	-6.781	1.00	40.94	O

ATOM	8189	O	HOH W 329	25.761	20.649	-1.090	1.00	32.66	O
ATOM	8192	O	HOH W 330	29.264	26.481	-29.511	1.00	50.11	O
ATOM	8195	O	HOH W 331	8.516	23.538	-8.452	1.00	46.21	O
ATOM	8198	O	HOH W 332	32.562	24.945	-22.083	1.00	48.34	O
ATOM	8201	O	HOH W 333	31.386	28.186	-29.864	1.00	48.89	O
ATOM	8204	O	HOH W 334	7.114	15.162	-32.304	1.00	53.48	O
ATOM	8207	O	HOH W 335	20.393	5.653	9.914	1.00	44.23	O
ATOM	8210	O	HOH W 336	41.895	25.723	13.491	1.00	36.80	O
ATOM	8213	O	HOH W 337	9.125	7.005	-10.576	1.00	42.85	O
ATOM	8216	O	HOH W 338	32.786	34.674	12.759	1.00	50.12	O
ATOM	8219	O	HOH W 340	28.269	2.901	-4.874	1.00	39.04	O
ATOM	8222	O	HOH W 341	49.624	29.367	-13.173	0.33	14.54	O
ATOM	8225	O	HOH W 342	50.851	34.806	-14.746	1.00	32.84	O
ATOM	8228	O	HOH W 343	11.665	31.279	43.688	1.00	32.49	O
ATOM	8231	O	HOH W 344	22.132	38.372	-27.960	1.00	29.73	O
ATOM	8234	O	HOH W 345	31.179	7.453	1.366	1.00	36.58	O
ATOM	8237	O	HOH W 346	19.546	22.986	30.781	1.00	42.39	O
ATOM	8240	O	HOH W 347	34.362	24.991	-20.636	1.00	43.19	O
ATOM	8243	O	HOH W 349	37.288	30.152	-1.533	1.00	34.62	O
ATOM	8246	O	HOH W 350	21.737	19.001	-28.451	1.00	39.97	O
ATOM	8249	O	HOH W 351	6.585	40.948	33.623	1.00	35.93	O
ATOM	8252	O	HOH W 352	3.264	27.045	6.094	1.00	38.79	O
ATOM	8255	O	HOH W 353	18.131	41.695	-23.579	1.00	36.48	O
ATOM	8258	O	HOH W 356	49.230	28.240	9.953	0.33	35.18	O
ATOM	8261	O	HOH W 357	47.781	13.225	10.951	1.00	51.36	O
ATOM	8264	O	HOH W 358	42.215	20.837	8.648	1.00	29.74	O
ATOM	8267	O	HOH W 359	23.152	4.786	9.091	1.00	41.55	O
ATOM	8270	O	HOH W 361	21.828	8.543	7.091	1.00	39.60	O
ATOM	8273	O	HOH W 362	27.194	1.510	4.473	1.00	58.78	O
ATOM	8276	O	HOH W 363	11.356	5.816	8.113	1.00	49.38	O
ATOM	8279	O	HOH W 364	8.846	4.657	9.499	1.00	54.32	O
ATOM	8282	O	HOH W 365	10.075	12.013	5.474	1.00	45.96	O
ATOM	8285	O	HOH W 366	11.536	10.860	7.544	1.00	42.94	O
ATOM	8288	O	HOH W 367	6.972	4.938	2.945	1.00	56.14	O
ATOM	8291	O	HOH W 368	12.231	4.653	-0.362	1.00	52.85	O
ATOM	8294	O	HOH W 369	17.320	27.026	-2.236	1.00	44.65	O
ATOM	8297	O	HOH W 370	17.703	27.456	1.727	1.00	56.55	O
ATOM	8300	O	HOH W 371	18.094	23.887	-0.884	1.00	34.83	O
ATOM	8303	O	HOH W 372	11.299	29.789	-3.771	1.00	87.81	O
ATOM	8306	O	HOH W 373	16.823	40.353	-0.455	1.00	52.22	O
ATOM	8309	O	HOH W 374	19.542	39.120	-5.207	1.00	59.73	O
ATOM	8312	O	HOH W 375	22.360	47.013	-0.402	1.00	43.48	O
ATOM	8315	O	HOH W 376	23.473	40.402	-11.770	1.00	25.14	O
ATOM	8318	O	HOH W 377	28.193	50.308	-7.390	1.00	49.39	O
ATOM	8321	O	HOH W 378	26.385	18.971	-3.053	1.00	36.37	O
ATOM	8324	O	HOH W 379	9.669	9.547	25.511	1.00	55.03	O
ATOM	8327	O	HOH W 380	8.391	23.631	30.533	1.00	39.54	O
ATOM	8330	O	HOH W 381	5.349	22.752	29.063	1.00	38.89	O
ATOM	8333	O	HOH W 382	7.665	18.377	21.056	1.00	40.78	O
ATOM	8336	O	HOH W 383	11.537	43.184	4.929	1.00	43.26	O
ATOM	8339	O	HOH W 384	7.547	24.418	-0.598	1.00	45.36	O
ATOM	8342	O	HOH W 385	-0.025	18.640	14.270	1.00	46.90	O
ATOM	8345	O	HOH W 386	0.800	24.052	14.004	1.00	34.22	O
ATOM	8348	O	HOH W 387	0.315	23.612	16.554	1.00	54.91	O
ATOM	8351	O	HOH W 388	-0.912	36.794	17.039	1.00	53.16	O
ATOM	8354	O	HOH W 389	1.481	28.374	7.476	1.00	34.07	O
ATOM	8357	O	HOH W 390	2.309	28.937	3.517	1.00	43.60	O
ATOM	8360	O	HOH W 392	11.660	37.314	14.404	1.00	32.53	O
ATOM	8363	O	HOH W 393	13.756	38.315	23.955	1.00	55.91	O
ATOM	8366	O	HOH W 394	15.042	37.388	21.700	1.00	46.72	O
ATOM	8369	O	HOH W 395	18.882	32.021	25.928	1.00	34.61	O
ATOM	8372	O	HOH W 396	43.940	13.982	22.646	1.00	49.63	O
ATOM	8375	O	HOH W 397	44.052	15.231	15.896	1.00	53.08	O
ATOM	8378	O	HOH W 398	41.472	14.377	24.429	1.00	52.03	O
ATOM	8381	O	HOH W 399	39.342	19.555	26.398	1.00	44.74	O
ATOM	8384	O	HOH W 400	28.213	13.961	23.217	1.00	41.90	O
ATOM	8387	O	HOH W 401	28.572	16.027	24.621	1.00	41.46	O

ATOM	8390	O	HOH W 402	41.242	12.587	18.809	1.00	34.50	O
ATOM	8393	O	HOH W 403	2.503	18.430	-9.764	1.00	49.79	O
ATOM	8396	O	HOH W 405	29.557	16.318	-28.377	1.00	51.10	O
ATOM	8399	O	HOH W 406	33.732	13.955	-24.200	1.00	53.00	O
ATOM	8402	O	HOH W 407	25.626	27.902	-4.264	1.00	47.53	O
ATOM	8405	O	HOH W 408	14.766	26.774	-8.407	1.00	68.55	O
ATOM	8408	O	HOH W 409	9.017	31.390	-8.390	1.00	46.16	O
ATOM	8411	O	HOH W 410	9.036	26.935	-6.717	1.00	73.52	O
ATOM	8414	O	HOH W 411	6.018	23.012	-7.931	1.00	45.78	O
ATOM	8417	O	HOH W 412	29.686	31.288	-22.407	1.00	58.93	O
ATOM	8420	O	HOH W 413	27.693	32.813	-23.013	1.00	53.94	O
ATOM	8423	O	HOH W 414	7.443	16.677	-26.034	1.00	44.58	O
ATOM	8426	O	HOH W 415	12.141	12.569	-26.261	1.00	33.80	O
ATOM	8429	O	HOH W 416	5.130	14.560	-18.246	1.00	40.82	O
ATOM	8432	O	HOH W 417	4.066	16.636	-19.350	1.00	39.65	O
ATOM	8435	O	HOH W 418	5.484	11.235	-17.672	1.00	37.36	O
ATOM	8438	O	HOH W 419	16.106	38.218	-11.956	1.00	57.88	O
ATOM	8441	O	HOH W 420	9.462	40.791	-13.993	1.00	41.31	O
ATOM	8444	O	HOH W 421	57.360	8.246	27.100	1.00	50.22	O
ATOM	8447	O	HOH W 422	58.359	16.210	24.348	1.00	43.35	O
ATOM	8450	O	HOH W 423	52.649	14.230	14.233	1.00	47.83	O
ATOM	8453	O	HOH W 424	23.476	2.657	3.076	1.00	48.54	O
ATOM	8456	O	HOH W 425	27.273	-0.079	0.910	1.00	56.31	O
ATOM	8459	O	HOH W 426	16.453	7.846	16.810	1.00	47.14	O
ATOM	8462	O	HOH W 427	33.341	38.411	10.846	1.00	36.45	O
ATOM	8465	O	HOH W 428	29.038	40.276	9.017	1.00	35.56	O
ATOM	8468	O	HOH W 429	35.831	30.402	14.828	1.00	76.08	O
ATOM	8471	O	HOH W 430	29.210	34.352	20.584	1.00	43.20	O
ATOM	8474	O	HOH W 431	16.998	19.883	29.075	1.00	34.50	O
ATOM	8477	O	HOH W 432	8.156	16.504	6.848	1.00	40.33	O
ATOM	8480	O	HOH W 433	6.992	18.607	8.803	1.00	49.72	O
ATOM	8483	O	HOH W 434	3.674	16.272	13.086	1.00	47.90	O
ATOM	8486	O	HOH W 435	3.873	17.431	15.201	1.00	59.00	O
ATOM	8489	O	HOH W 436	5.498	20.502	24.025	1.00	45.62	O
ATOM	8492	O	HOH W 437	7.376	23.131	27.287	1.00	37.15	O
ATOM	8495	O	HOH W 438	3.286	38.543	12.516	1.00	52.75	O
ATOM	8498	O	HOH W 439	30.993	18.468	28.819	1.00	30.71	O
ATOM	8501	O	HOH W 440	27.217	21.495	31.527	1.00	35.91	O
ATOM	8504	O	HOH W 441	26.916	24.578	34.793	1.00	51.96	O
ATOM	8507	O	HOH W 442	39.686	26.679	14.335	1.00	37.99	O
ATOM	8510	O	HOH W 443	42.360	26.259	17.241	1.00	55.55	O
ATOM	8513	O	HOH W 444	40.230	3.095	1.454	1.00	39.72	O
ATOM	8516	O	HOH W 445	19.317	29.348	-7.809	1.00	39.81	O
ATOM	8519	O	HOH W 446	31.875	15.382	-24.532	1.00	39.35	O
ATOM	8522	O	HOH W 447	6.516	23.245	-28.772	1.00	34.04	O
ATOM	8525	O	HOH W 448	10.296	18.884	-29.904	1.00	37.62	O
ATOM	8528	O	HOH W 449	17.169	39.772	-15.806	1.00	41.37	O
ATOM	8531	O	HOH W 450	29.675	36.362	-24.912	1.00	37.47	O
ATOM	8534	O	HOH W 451	31.443	42.126	-16.603	1.00	56.10	O
ATOM	8537	O	HOH W 452	12.962	31.572	-1.775	1.00	39.81	O
ATOM	8540	O	HOH W 453	0.471	29.056	-15.811	1.00	38.69	O
ATOM	8543	O	HOH W 454	4.867	31.972	-10.355	1.00	72.31	O
ATOM	8546	O	HOH W 455	1.272	29.674	-18.115	1.00	47.13	O
ATOM	8549	O	HOH W 456	20.724	29.416	-35.661	1.00	45.59	O
ATOM	8552	O	HOH W 457	14.787	21.867	-38.922	1.00	58.26	O
ATOM	8555	O	HOH W 458	34.896	8.463	8.894	1.00	43.08	O
ATOM	8558	O	HOH W 459	42.711	21.735	4.224	1.00	29.08	O
ATOM	8561	O	HOH W 460	48.473	21.510	-0.308	1.00	37.52	O
ATOM	8564	O	HOH W 461	51.996	16.031	1.479	1.00	36.21	O
ATOM	8567	O	HOH W 462	47.945	17.011	-3.195	1.00	36.50	O
ATOM	8570	O	HOH W 464	19.297	1.022	-8.018	1.00	45.61	O
ATOM	8573	O	HOH W 465	11.891	3.605	-5.118	1.00	42.30	O
ATOM	8576	O	HOH W 466	28.501	31.790	17.313	1.00	39.01	O
ATOM	8579	O	HOH W 467	24.173	13.610	11.922	1.00	33.72	O
ATOM	8582	O	HOH W 468	9.910	15.341	23.137	1.00	42.54	O
ATOM	8585	O	HOH W 469	23.609	41.253	19.084	1.00	50.26	O
ATOM	8588	O	HOH W 470	28.795	41.393	13.488	1.00	55.90	O

ATOM	8591	O	HOH W 471	1.504	11.613	-3.383	1.00	74.30	O
ATOM	8594	O	HOH W 472	9.634	11.403	1.570	1.00	41.33	O
ATOM	8597	O	HOH W 473	14.853	17.707	-29.399	1.00	38.60	O
ATOM	8600	O	HOH W 474	17.536	24.127	-33.620	1.00	40.21	O
ATOM	8603	O	HOH W 475	18.496	24.418	-36.520	1.00	45.55	O
ATOM	8606	O	HOH W 476	5.160	20.295	-30.554	1.00	51.32	O
ATOM	8609	O	HOH W 477	3.523	10.599	-15.166	1.00	51.77	O
ATOM	8612	O	HOH W 478	3.666	12.534	-10.213	1.00	46.14	O
ATOM	8615	O	HOH W 479	3.660	13.816	-2.026	1.00	50.47	O
ATOM	8618	O	HOH W 480	51.282	23.024	9.616	1.00	44.28	O
ATOM	8621	O	HOH W 481	42.954	29.038	11.385	1.00	66.11	O
ATOM	8624	O	HOH W 482	48.888	17.614	5.273	1.00	36.85	O
ATOM	8627	O	HOH W 483	26.646	5.063	7.926	1.00	44.47	O
ATOM	8630	O	HOH W 484	29.772	25.403	-14.322	1.00	24.60	O
ATOM	8633	O	HOH W 485	29.927	27.727	-14.104	1.00	27.24	O
ATOM	8636	O	HOH W 486	33.778	28.223	-16.284	1.00	33.96	O
ATOM	8639	O	HOH W 487	50.088	40.134	-14.915	1.00	35.63	O
ATOM	8642	O	HOH W 488	32.028	31.306	-21.371	1.00	34.15	O
ATOM	8645	O	HOH W 489	21.171	9.819	26.209	1.00	35.24	O
ATOM	8648	O	HOH W 490	33.912	44.560	9.490	1.00	31.04	O
ATOM	8651	O	HOH W 491	31.531	34.188	19.009	1.00	44.42	O
ATOM	8654	O	HOH W 492	18.053	31.253	-8.680	1.00	43.16	O
ATOM	8657	O	HOH W 493	24.246	40.233	-18.374	1.00	33.13	O
ATOM	8660	O	HOH W 494	25.514	31.744	-30.658	1.00	46.84	O
ATOM	8663	O	HOH W 495	53.244	32.148	-17.612	1.00	43.27	O
ATOM	8666	O	HOH W 496	44.158	9.624	20.277	1.00	43.78	O
ATOM	8669	O	HOH W 497	29.875	-1.699	-3.467	1.00	41.87	O
ATOM	8672	O	HOH W 498	26.112	30.755	30.666	1.00	42.11	O
ATOM	8675	O	HOH W 499	42.346	25.529	4.770	1.00	45.29	O
ATOM	8678	O	HOH W 500	24.459	49.297	-4.604	1.00	44.92	O
ATOM	8681	O	HOH W 501	5.859	20.711	30.209	1.00	42.31	O
ATOM	8684	O	HOH W 502	15.273	18.302	-39.043	1.00	41.79	O
ATOM	8687	O	HOH W 503	29.869	46.566	1.792	1.00	42.72	O
ATOM	8690	O	HOH W 504	25.293	50.718	-2.865	1.00	43.74	O
ATOM	8693	O	HOH W 505	28.136	38.316	-23.584	1.00	45.34	O
ATOM	8696	O	HOH W 506	24.097	17.737	14.916	1.00	38.67	O
ATOM	8699	O	HOH W 507	32.272	33.231	-29.114	1.00	47.88	O
ATOM	8702	O	HOH W 508	29.947	45.226	4.146	1.00	41.08	O
ATOM	8705	O	HOH W 509	28.257	6.096	-7.340	1.00	33.35	O
ATOM	8708	O	HOH W 510	30.766	31.181	-31.380	1.00	47.36	O
ATOM	8711	O	HOH W 511	9.121	47.293	-16.626	1.00	46.87	O
ATOM	8714	O	HOH W 512	53.176	37.991	0.649	1.00	42.20	O
ATOM	8717	O	HOH W 513	13.581	16.052	-28.401	1.00	45.58	O
ATOM	8720	O	HOH W 514	37.496	34.383	8.547	1.00	48.85	O
ATOM	8723	O	HOH W 515	15.088	44.374	-24.885	1.00	50.63	O
ATOM	8726	O	HOH W 516	31.370	20.319	27.252	1.00	41.05	O

Table 2

CRYST1	99.651	99.651	96.522	90.00	90.00	120.00 P 63			
SCALE1		0.010035	0.005794	0.000000		0.00000			
SCALE2		0.000000	0.011587	0.000000		0.00000			
SCALE3		0.000000	0.000000	0.010360		0.00000			
ATOM	1	N	MET A 1	62.974	12.985	24.186	1.00	38.28	N
ATOM	3	CA	MET A 1	62.325	12.628	22.869	1.00	39.30	C
ATOM	5	CB	MET A 1	61.677	11.230	22.926	1.00	39.75	C
ATOM	8	CG	MET A 1	60.970	10.754	21.656	1.00	40.45	C
ATOM	11	SD	MET A 1	61.387	9.027	21.110	1.00	45.77	S
ATOM	12	CE	MET A 1	60.517	8.124	22.292	1.00	44.99	C
ATOM	16	C	MET A 1	61.283	13.678	22.532	1.00	38.83	C
ATOM	17	O	MET A 1	60.323	13.851	23.257	1.00	38.28	O
ATOM	20	N	ASN A 2	61.470	14.388	21.429	1.00	39.46	N
ATOM	22	CA	ASN A 2	60.558	15.489	21.073	1.00	39.85	C
ATOM	24	CB	ASN A 2	61.080	16.244	19.859	1.00	38.59	C
ATOM	27	CG	ASN A 2	62.368	16.948	20.127	1.00	35.87	C

ATOM	28	OD1	ASN	A	2	62.694	17.313	21.269	1.00	33.29	O
ATOM	29	ND2	ASN	A	2	63.125	17.146	19.078	1.00	29.87	N
ATOM	32	C	ASN	A	2	59.148	15.004	20.769	1.00	41.57	C
ATOM	33	O	ASN	A	2	58.966	13.895	20.292	1.00	40.74	O
ATOM	34	N	THR	A	3	58.154	15.836	21.075	1.00	44.73	N
ATOM	36	CA	THR	A	3	56.752	15.589	20.678	1.00	47.06	C
ATOM	38	CB	THR	A	3	55.871	15.303	21.901	1.00	46.96	C
ATOM	40	OG1	THR	A	3	56.223	16.180	22.975	1.00	46.95	O
ATOM	42	CG2	THR	A	3	56.143	13.900	22.454	1.00	47.32	C
ATOM	46	C	THR	A	3	56.209	16.805	19.928	1.00	49.81	C
ATOM	47	O	THR	A	3	55.432	17.604	20.491	1.00	50.60	O
ATOM	48	N	PRO	A	4	56.633	16.962	18.677	1.00	52.60	N
ATOM	49	CA	PRO	A	4	56.173	18.076	17.849	1.00	55.03	C
ATOM	51	CB	PRO	A	4	57.029	17.943	16.565	1.00	54.80	C
ATOM	54	CG	PRO	A	4	58.186	17.121	16.975	1.00	53.96	C
ATOM	57	CD	PRO	A	4	57.589	16.120	17.937	1.00	52.99	C
ATOM	60	C	PRO	A	4	54.693	17.982	17.513	1.00	57.23	C
ATOM	61	O	PRO	A	4	54.175	16.895	17.253	1.00	57.22	O
ATOM	62	N	LYS	A	5	54.042	19.142	17.535	1.00	60.35	N
ATOM	64	CA	LYS	A	5	52.636	19.295	17.160	1.00	62.57	C
ATOM	66	CB	LYS	A	5	52.217	20.758	17.338	1.00	63.32	C
ATOM	69	CG	LYS	A	5	50.735	21.057	17.072	1.00	66.14	C
ATOM	72	CD	LYS	A	5	50.492	22.583	16.898	1.00	69.14	C
ATOM	75	CE	LYS	A	5	49.383	22.872	15.875	1.00	70.57	C
ATOM	78	NZ	LYS	A	5	48.076	22.307	16.325	1.00	71.00	N
ATOM	82	C	LYS	A	5	52.400	18.859	15.714	1.00	63.28	C
ATOM	83	O	LYS	A	5	53.166	19.233	14.809	1.00	63.03	O
ATOM	84	N	GLU	A	6	51.349	18.048	15.531	1.00	64.60	N
ATOM	86	CA	GLU	A	6	50.862	17.617	14.209	1.00	65.35	C
ATOM	88	CB	GLU	A	6	49.508	16.891	14.333	1.00	65.93	C
ATOM	91	CG	GLU	A	6	48.545	17.123	13.168	1.00	66.84	C
ATOM	94	CD	GLU	A	6	47.435	16.104	13.135	1.00	68.78	C
ATOM	95	OE1	GLU	A	6	47.709	14.947	12.752	1.00	69.64	O
ATOM	96	OE2	GLU	A	6	46.288	16.455	13.498	1.00	71.52	O
ATOM	97	C	GLU	A	6	50.708	18.789	13.235	1.00	65.30	C
ATOM	98	O	GLU	A	6	50.063	19.805	13.538	1.00	65.49	O
ATOM	99	N	GLU	A	7	51.300	18.624	12.062	1.00	65.43	N
ATOM	101	CA	GLU	A	7	51.186	19.613	10.985	1.00	65.51	C
ATOM	103	CB	GLU	A	7	52.019	19.176	9.758	1.00	66.11	C
ATOM	106	CG	GLU	A	7	51.904	17.701	9.344	1.00	67.48	C
ATOM	109	CD	GLU	A	7	52.505	17.423	7.957	1.00	70.64	C
ATOM	110	OE1	GLU	A	7	53.126	18.366	7.381	1.00	70.78	O
ATOM	111	OE2	GLU	A	7	52.359	16.269	7.444	1.00	70.38	O
ATOM	112	C	GLU	A	7	49.713	19.865	10.584	1.00	64.45	C
ATOM	113	O	GLU	A	7	48.844	18.985	10.735	1.00	64.35	O
ATOM	114	N	PHE	A	8	49.440	21.082	10.099	1.00	62.82	N
ATOM	116	CA	PHE	A	8	48.101	21.432	9.586	1.00	61.19	C
ATOM	118	CB	PHE	A	8	48.101	22.848	8.967	1.00	61.96	C
ATOM	121	CG	PHE	A	8	46.709	23.407	8.683	1.00	65.20	C
ATOM	122	CD1	PHE	A	8	45.899	23.884	9.730	1.00	68.11	C
ATOM	124	CE1	PHE	A	8	44.627	24.398	9.469	1.00	69.24	C
ATOM	126	CZ	PHE	A	8	44.155	24.435	8.134	1.00	70.25	C
ATOM	128	CE2	PHE	A	8	44.960	23.963	7.087	1.00	68.24	C
ATOM	130	CD2	PHE	A	8	46.221	23.462	7.365	1.00	67.02	C
ATOM	132	C	PHE	A	8	47.654	20.369	8.558	1.00	57.62	C
ATOM	133	O	PHE	A	8	48.431	19.963	7.696	1.00	58.02	O
ATOM	134	N	GLN	A	9	46.418	19.904	8.682	1.00	53.19	N
ATOM	136	CA	GLN	A	9	45.939	18.784	7.879	1.00	49.48	C
ATOM	138	CB	GLN	A	9	45.179	17.772	8.788	1.00	49.76	C
ATOM	141	CG	AGLN	A	9	43.815	17.407	8.157	0.50	48.12	C
ATOM	142	CG	BGLN	A	9	46.193	17.377	9.862	0.50	48.24	C
ATOM	147	CD	AGLN	A	9	43.318	16.028	8.569	0.50	45.99	C
ATOM	148	CD	BGLN	A	9	47.367	16.640	9.246	0.50	46.94	C
ATOM	149	OE1	AGLN	A	9	43.211	15.725	9.738	0.50	45.38	O
ATOM	150	OE1	BGLN	A	9	47.368	15.422	9.202	0.50	46.01	O
ATOM	151	NE2	AGLN	A	9	43.050	15.184	7.594	0.50	45.77	N
ATOM	152	NE2	BGLN	A	9	48.334	17.381	8.717	0.50	46.80	N

ATOM	157	C	GLN	A	9	45.163	19.297	6.653	1.00	46.14	C
ATOM	158	O	GLN	A	9	44.010	19.753	6.759	1.00	45.73	O
ATOM	159	N	ASP	A	10	45.844	19.258	5.501	1.00	41.50	N
ATOM	161	CA	ASP	A	10	45.348	19.905	4.289	1.00	38.58	C
ATOM	163	CB	ASP	A	10	46.133	21.205	4.004	1.00	38.43	C
ATOM	166	CG	ASP	A	10	45.375	22.150	3.109	1.00	39.58	C
ATOM	167	OD1	ASP	A	10	44.132	22.267	3.220	1.00	36.97	O
ATOM	168	OD2	ASP	A	10	45.956	22.821	2.238	1.00	46.18	O
ATOM	169	C	ASP	A	10	45.412	18.973	3.105	1.00	34.81	C
ATOM	170	O	ASP	A	10	45.687	19.388	1.984	1.00	34.46	O
ATOM	171	N	TRP	A	11	45.163	17.705	3.375	1.00	31.19	N
ATOM	173	CA	TRP	A	11	45.096	16.711	2.323	1.00	29.27	C
ATOM	175	CB	TRP	A	11	44.849	15.327	2.900	1.00	28.29	C
ATOM	178	CG	TRP	A	11	45.790	14.923	3.981	1.00	27.53	C
ATOM	179	CD1	TRP	A	11	45.560	14.954	5.317	1.00	27.87	C
ATOM	181	NE1	TRP	A	11	46.652	14.486	5.998	1.00	29.10	N
ATOM	183	CE2	TRP	A	11	47.610	14.122	5.088	1.00	29.02	C
ATOM	184	CD2	TRP	A	11	47.094	14.391	3.810	1.00	26.52	C
ATOM	185	CE3	TRP	A	11	47.895	14.137	2.704	1.00	26.81	C
ATOM	187	CZ3	TRP	A	11	49.177	13.603	2.912	1.00	27.64	C
ATOM	189	CH2	TRP	A	11	49.638	13.345	4.188	1.00	27.36	C
ATOM	191	CZ2	TRP	A	11	48.888	13.624	5.289	1.00	27.78	C
ATOM	193	C	TRP	A	11	43.933	17.017	1.375	1.00	27.84	C
ATOM	194	O	TRP	A	11	42.962	17.625	1.768	1.00	26.95	O
ATOM	195	N	PRO	A	12	44.027	16.542	0.142	1.00	25.82	N
ATOM	196	CA	PRO	A	12	42.940	16.615	-0.806	1.00	24.60	C
ATOM	198	CB	PRO	A	12	43.410	15.657	-1.882	1.00	24.80	C
ATOM	201	CG	PRO	A	12	44.815	15.809	-1.878	1.00	23.67	C
ATOM	204	CD	PRO	A	12	45.200	15.896	-0.465	1.00	25.85	C
ATOM	207	C	PRO	A	12	41.586	16.196	-0.280	1.00	23.91	C
ATOM	208	O	PRO	A	12	40.621	16.866	-0.604	1.00	24.44	O
ATOM	209	N	ILE	A	13	41.498	15.114	0.477	1.00	23.17	N
ATOM	211	CA	ILE	A	13	40.201	14.679	0.997	1.00	22.95	C
ATOM	213	CB	ILE	A	13	40.311	13.277	1.631	1.00	23.07	C
ATOM	215	CG1	ILE	A	13	38.942	12.684	1.871	1.00	23.16	C
ATOM	218	CD1	ILE	A	13	38.968	11.197	2.356	1.00	23.89	C
ATOM	222	CG2	ILE	A	13	41.112	13.299	2.942	1.00	24.23	C
ATOM	226	C	ILE	A	13	39.583	15.698	1.947	1.00	22.24	C
ATOM	227	O	ILE	A	13	38.354	15.854	1.957	1.00	23.21	O
ATOM	228	N	VAL	A	14	40.404	16.367	2.756	1.00	21.26	N
ATOM	230	CA	VAL	A	14	39.949	17.492	3.570	1.00	20.70	C
ATOM	232	CB	VAL	A	14	41.063	18.053	4.494	1.00	21.05	C
ATOM	234	CG1	VAL	A	14	40.607	19.412	5.149	1.00	22.29	C
ATOM	238	CG2	VAL	A	14	41.422	17.038	5.624	1.00	21.54	C
ATOM	242	C	VAL	A	14	39.465	18.630	2.699	1.00	20.34	C
ATOM	243	O	VAL	A	14	38.437	19.227	2.933	1.00	21.49	O
ATOM	244	N	ARG	A	15	40.196	18.953	1.671	1.00	20.50	N
ATOM	246	CA	ARG	A	15	39.751	20.010	0.756	1.00	20.73	C
ATOM	248	CB	ARG	A	15	40.829	20.318	-0.279	1.00	20.67	C
ATOM	251	CG	ARG	A	15	42.101	20.837	0.321	1.00	20.09	C
ATOM	254	CD	ARG	A	15	43.113	21.211	-0.728	1.00	23.99	C
ATOM	257	NE	ARG	A	15	44.155	22.135	-0.244	1.00	28.35	N
ATOM	259	CZ	ARG	A	15	45.078	22.701	-1.041	1.00	29.27	C
ATOM	260	NH1	ARG	A	15	45.950	23.576	-0.567	1.00	28.08	N
ATOM	263	NH2	ARG	A	15	45.101	22.413	-2.327	1.00	30.80	N
ATOM	266	C	ARG	A	15	38.432	19.667	0.056	1.00	20.82	C
ATOM	267	O	ARG	A	15	37.598	20.570	-0.084	1.00	19.76	O
ATOM	268	N	ILE	A	16	38.264	18.386	-0.380	1.00	20.53	N
ATOM	270	CA	ILE	A	16	37.028	17.920	-0.981	1.00	21.44	C
ATOM	272	CB	ILE	A	16	37.143	16.484	-1.471	1.00	22.42	C
ATOM	274	CG1	ILE	A	16	37.950	16.458	-2.779	1.00	22.45	C
ATOM	277	CD1	ILE	A	16	38.624	15.162	-3.073	1.00	19.90	C
ATOM	281	CG2	ILE	A	16	35.767	15.858	-1.724	1.00	22.38	C
ATOM	285	C	ILE	A	16	35.910	18.105	0.026	1.00	22.05	C
ATOM	286	O	ILE	A	16	34.928	18.718	-0.273	1.00	22.76	O
ATOM	287	N	ALA	A	17	36.111	17.682	1.261	1.00	23.56	N
ATOM	289	CA	ALA	A	17	35.041	17.680	2.260	1.00	23.68	C

ATOM	291	CB	ALA	A	17	35.502	16.981	3.510	1.00	23.65	C
ATOM	295	C	ALA	A	17	34.492	19.065	2.621	1.00	24.18	C
ATOM	296	O	ALA	A	17	33.357	19.165	3.039	1.00	25.10	O
ATOM	297	N	ALA	A	18	35.272	20.129	2.469	1.00	23.72	N
ATOM	299	CA	ALA	A	18	34.733	21.504	2.612	1.00	23.39	C
ATOM	301	CB	ALA	A	18	35.770	22.504	2.284	1.00	23.28	C
ATOM	305	C	ALA	A	18	33.483	21.783	1.761	1.00	22.60	C
ATOM	306	O	ALA	A	18	32.596	22.504	2.154	1.00	21.34	O
ATOM	307	N	HIS	A	19	33.443	21.171	0.597	1.00	22.95	N
ATOM	309	CA	HIS	A	19	32.367	21.355	-0.341	1.00	23.28	C
ATOM	311	CB	HIS	A	19	32.888	21.030	-1.713	1.00	22.76	C
ATOM	314	CG	HIS	A	19	33.886	22.015	-2.213	1.00	25.34	C
ATOM	315	ND1	HIS	A	19	33.652	22.817	-3.307	1.00	25.13	N
ATOM	317	CE1	HIS	A	19	34.727	23.550	-3.533	1.00	28.61	C
ATOM	319	NE2	HIS	A	19	35.639	23.261	-2.622	1.00	25.79	N
ATOM	321	CD2	HIS	A	19	35.136	22.311	-1.782	1.00	24.86	C
ATOM	323	C	HIS	A	19	31.108	20.527	-0.073	1.00	23.58	C
ATOM	324	O	HIS	A	19	30.167	20.598	-0.852	1.00	22.11	O
ATOM	325	N	LEU	A	20	31.121	19.740	1.013	1.00	24.70	N
ATOM	327	CA	LEU	A	20	30.052	18.803	1.342	1.00	24.44	C
ATOM	329	CB	LEU	A	20	30.484	17.378	1.022	1.00	25.04	C
ATOM	332	CG	LEU	A	20	30.793	17.095	-0.444	1.00	27.00	C
ATOM	334	CD1	LEU	A	20	31.390	15.747	-0.618	1.00	27.78	C
ATOM	338	CD2	LEU	A	20	29.539	17.176	-1.303	1.00	29.85	C
ATOM	342	C	LEU	A	20	29.633	18.923	2.791	1.00	24.19	C
ATOM	343	O	LEU	A	20	30.416	19.313	3.652	1.00	24.44	O
ATOM	344	N	PRO	A	21	28.373	18.629	3.076	1.00	23.90	N
ATOM	345	CA	PRO	A	21	27.910	18.648	4.464	1.00	24.00	C
ATOM	347	CB	PRO	A	21	26.379	18.748	4.323	1.00	23.95	C
ATOM	350	CG	PRO	A	21	26.066	18.034	3.062	1.00	24.17	C
ATOM	353	CD	PRO	A	21	27.284	18.300	2.140	1.00	23.80	C
ATOM	356	C	PRO	A	21	28.296	17.347	5.144	1.00	23.99	C
ATOM	357	O	PRO	A	21	28.650	16.414	4.469	1.00	23.96	O
ATOM	358	N	ASP	A	22	28.227	17.325	6.466	1.00	24.24	N
ATOM	360	CA	ASP	A	22	28.442	16.133	7.257	1.00	24.76	C
ATOM	362	CB	ASP	A	22	28.319	16.466	8.750	1.00	23.58	C
ATOM	365	CG	ASP	A	22	29.385	17.470	9.201	1.00	24.01	C
ATOM	366	OD1	ASP	A	22	30.461	17.485	8.543	1.00	23.89	O
ATOM	367	OD2	ASP	A	22	29.256	18.305	10.135	1.00	18.43	O
ATOM	368	C	ASP	A	22	27.492	15.007	6.851	1.00	25.31	C
ATOM	369	O	ASP	A	22	27.896	13.853	6.869	1.00	24.74	O
ATOM	370	N	LEU	A	23	26.259	15.366	6.461	1.00	25.06	N
ATOM	372	CA	LEU	A	23	25.259	14.443	5.943	1.00	24.58	C
ATOM	374	CB	LEU	A	23	24.088	15.247	5.367	1.00	24.86	C
ATOM	377	CG	LEU	A	23	22.879	14.457	4.876	1.00	27.13	C
ATOM	379	CD1	LEU	A	23	22.043	14.015	6.035	1.00	28.57	C
ATOM	383	CD2	LEU	A	23	22.019	15.303	3.919	1.00	29.61	C
ATOM	387	C	LEU	A	23	25.852	13.559	4.870	1.00	24.28	C
ATOM	388	O	LEU	A	23	25.523	12.363	4.754	1.00	24.47	O
ATOM	389	N	ILE	A	24	26.737	14.118	4.052	1.00	23.51	N
ATOM	391	CA	ILE	A	24	27.341	13.309	3.007	1.00	22.95	C
ATOM	393	CB	ILE	A	24	27.479	14.114	1.705	1.00	23.01	C
ATOM	395	CG1	ILE	A	24	26.118	14.464	1.116	1.00	22.92	C
ATOM	398	CD1	ILE	A	24	25.265	13.283	0.651	1.00	24.97	C
ATOM	402	CG2	ILE	A	24	28.397	13.400	0.670	1.00	22.89	C
ATOM	406	C	ILE	A	24	28.678	12.767	3.489	1.00	23.27	C
ATOM	407	O	ILE	A	24	28.949	11.569	3.324	1.00	23.18	O
ATOM	408	N	VAL	A	25	29.500	13.637	4.085	1.00	23.11	N
ATOM	410	CA	VAL	A	25	30.867	13.279	4.443	1.00	23.56	C
ATOM	412	CB	VAL	A	25	31.585	14.398	5.164	1.00	23.28	C
ATOM	414	CG1	VAL	A	25	32.903	13.905	5.699	1.00	23.28	C
ATOM	418	CG2	VAL	A	25	31.838	15.564	4.209	1.00	24.15	C
ATOM	422	C	VAL	A	25	30.967	12.005	5.294	1.00	24.58	C
ATOM	423	O	VAL	A	25	31.802	11.165	5.026	1.00	22.95	O
ATOM	424	N	TYR	A	26	30.092	11.896	6.288	1.00	26.46	N
ATOM	426	CA	TYR	A	26	30.051	10.808	7.253	1.00	28.78	C
ATOM	428	CB	TYR	A	26	29.995	11.385	8.660	1.00	28.62	C

ATOM	431	CG	TYR	A	26	31.217	12.193	9.028	1.00 27.46	C
ATOM	432	CD1	TYR	A	26	31.122	13.540	9.324	1.00 26.88	C
ATOM	434	CE1	TYR	A	26	32.251	14.275	9.652	1.00 26.07	C
ATOM	436	CZ	TYR	A	26	33.461	13.652	9.677	1.00 23.95	C
ATOM	437	OH	TYR	A	26	34.586	14.344	9.993	1.00 26.39	O
ATOM	439	CE2	TYR	A	26	33.568	12.299	9.398	1.00 27.43	C
ATOM	441	CD2	TYR	A	26	32.469	11.594	9.064	1.00 27.35	C
ATOM	443	C	TYR	A	26	28.820	9.949	7.038	1.00 31.76	C
ATOM	444	O	TYR	A	26	28.278	9.386	7.981	1.00 33.00	O
ATOM	445	N	GLY	A	27	28.373	9.843	5.796	1.00 35.16	N
ATOM	447	CA	GLY	A	27	27.100	9.223	5.514	1.00 37.54	C
ATOM	450	C	GLY	A	27	27.183	7.771	5.118	1.00 39.94	C
ATOM	451	O	GLY	A	27	26.226	7.033	5.293	1.00 40.66	O
ATOM	452	N	HIS	A	28	28.304	7.348	4.579	1.00 42.57	N
ATOM	454	CA	HIS	A	28	28.416	5.979	4.051	1.00 45.87	C
ATOM	456	CB	HIS	A	28	29.294	5.134	4.998	1.00 46.37	C
ATOM	459	CG	HIS	A	28	30.743	5.545	4.979	1.00 50.07	C
ATOM	460	ND1	HIS	A	28	31.290	6.424	5.898	1.00 53.64	N
ATOM	462	CE1	HIS	A	28	32.573	6.608	5.628	1.00 51.63	C
ATOM	464	NE2	HIS	A	28	32.877	5.903	4.552	1.00 52.58	N
ATOM	466	CD2	HIS	A	28	31.747	5.236	4.121	1.00 53.11	C
ATOM	468	C	HIS	A	28	27.089	5.268	3.652	1.00 46.55	C
ATOM	469	O	HIS	A	28	26.618	4.392	4.354	1.00 47.39	O
ATOM	470	N	PHE	A	29	26.505	5.686	2.522	1.00 48.11	N
ATOM	472	CA	PHE	A	29	25.280	5.089	1.952	1.00 48.73	C
ATOM	474	CB	PHE	A	29	24.432	6.108	1.156	1.00 49.18	C
ATOM	477	CG	PHE	A	29	24.503	7.501	1.655	1.00 48.79	C
ATOM	478	CD1	PHE	A	29	23.945	7.838	2.878	1.00 49.21	C
ATOM	480	CE1	PHE	A	29	24.010	9.146	3.357	1.00 50.94	C
ATOM	482	CZ	PHE	A	29	24.642	10.115	2.601	1.00 49.54	C
ATOM	484	CE2	PHE	A	29	25.189	9.777	1.362	1.00 49.15	C
ATOM	486	CD2	PHE	A	29	25.116	8.480	0.897	1.00 49.42	C
ATOM	488	C	PHE	A	29	25.615	4.044	0.921	1.00 49.62	C
ATOM	489	O	PHE	A	29	26.695	4.065	0.334	1.00 49.49	O
ATOM	490	N	SER	A	30	24.630	3.203	0.629	1.00 50.67	N
ATOM	492	CA	SER	A	30	24.690	2.269	-0.494	1.00 51.99	C
ATOM	494	CB	SER	A	30	23.295	1.696	-0.760	1.00 52.38	C
ATOM	497	OG	SER	A	30	22.909	0.809	0.278	1.00 53.07	O
ATOM	499	C	SER	A	30	25.221	2.892	-1.793	1.00 53.13	C
ATOM	500	O	SER	A	30	25.221	4.131	-1.979	1.00 53.25	O
ATOM	501	N	PRO	A	31	25.664	2.031	-2.709	1.00 53.89	N
ATOM	502	CA	PRO	A	31	26.152	2.502	-4.009	1.00 53.86	C
ATOM	504	CB	PRO	A	31	27.004	1.322	-4.493	1.00 54.37	C
ATOM	507	CG	PRO	A	31	26.281	0.070	-3.938	1.00 53.88	C
ATOM	510	CD	PRO	A	31	25.685	0.551	-2.620	1.00 54.34	C
ATOM	513	C	PRO	A	31	24.952	2.754	-4.957	1.00 53.42	C
ATOM	514	O	PRO	A	31	25.005	3.695	-5.744	1.00 54.80	O
ATOM	515	N	GLU	A	32	23.891	1.955	-4.858	1.00 51.67	N
ATOM	517	CA	GLU	A	32	22.693	2.134	-5.678	1.00 51.02	C
ATOM	519	CB	GLU	A	32	21.574	1.219	-5.170	1.00 51.48	C
ATOM	522	CG	GLU	A	32	20.615	1.876	-4.176	1.00 54.49	C
ATOM	525	CD	GLU	A	32	20.128	0.943	-3.093	1.00 58.36	C
ATOM	526	OE1	GLU	A	32	19.042	1.226	-2.514	1.00 60.89	O
ATOM	527	OE2	GLU	A	32	20.851	-0.044	-2.796	1.00 60.82	O
ATOM	528	C	GLU	A	32	22.126	3.566	-5.783	1.00 49.06	C
ATOM	529	O	GLU	A	32	22.123	4.322	-4.823	1.00 49.08	O
ATOM	530	N	ARG	A	33	21.576	3.869	-6.951	1.00 46.74	N
ATOM	532	CA	ARG	A	33	20.926	5.138	-7.248	1.00 44.77	C
ATOM	534	CB	ARG	A	33	21.787	5.899	-8.246	1.00 44.58	C
ATOM	537	CG	ARG	A	33	23.192	6.175	-7.749	1.00 44.76	C
ATOM	540	CD	ARG	A	33	23.221	7.237	-6.725	1.00 44.47	C
ATOM	543	NE	ARG	A	33	24.504	7.341	-6.054	1.00 45.34	N
ATOM	545	CZ	ARG	A	33	24.810	6.733	-4.917	1.00 45.31	C
ATOM	546	NH1	ARG	A	33	23.945	5.947	-4.283	1.00 44.90	N
ATOM	549	NH2	ARG	A	33	26.005	6.922	-4.406	1.00 45.87	N
ATOM	552	C	ARG	A	33	19.521	4.912	-7.847	1.00 43.14	C
ATOM	553	O	ARG	A	33	19.387	4.170	-8.805	1.00 41.87	O

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ATOM    554  N   PRO A  34      18.476   5.542  -7.314  1.00 41.69           N
ATOM    555  CA  PRO A  34      18.557   6.495  -6.208  1.00 41.32           C
ATOM    557  CB  PRO A  34      17.235   7.244  -6.293  1.00 41.20           C
ATOM    560  CG  PRO A  34      16.276   6.240  -6.877  1.00 41.39           C
ATOM    563  CD  PRO A  34      17.096   5.351  -7.774  1.00 41.50           C
ATOM    566  C   PRO A  34      18.641   5.784  -4.873  1.00 41.24           C
ATOM    567  O   PRO A  34      18.289   4.615  -4.758  1.00 40.82           O
ATOM    568  N   PHE A  35      19.145   6.502  -3.881  1.00 41.18           N
ATOM    570  CA  PHE A  35      19.185   6.041  -2.516  1.00 40.81           C
ATOM    572  CB  PHE A  35      20.632   6.023  -2.017  1.00 40.57           C
ATOM    575  CG  PHE A  35      20.770   5.788  -0.535  1.00 39.89           C
ATOM    576  CD1 PHE A  35      20.871   4.496  -0.036  1.00 40.66           C
ATOM    578  CE1 PHE A  35      20.997   4.273   1.322  1.00 40.92           C
ATOM    580  CZ  PHE A  35      21.012   5.353   2.201  1.00 39.71           C
ATOM    582  CE2 PHE A  35      20.907   6.646   1.708  1.00 37.43           C
ATOM    584  CD2 PHE A  35      20.776   6.856   0.357  1.00 37.63           C
ATOM    586  C   PHE A  35      18.370   7.055  -1.750  1.00 41.71           C
ATOM    587  O   PHE A  35      18.510   8.257  -1.976  1.00 41.53           O
ATOM    588  N   MET A  36      17.536   6.565  -0.833  1.00 42.69           N
ATOM    590  CA  MET A  36      16.671   7.408  -0.011  1.00 43.72           C
ATOM    592  CB  MET A  36      15.191   7.152  -0.342  1.00 44.27           C
ATOM    595  CG  MET A  36      14.734   7.612  -1.724  1.00 47.64           C
ATOM    598  SD  MET A  36      15.037   6.355  -3.058  1.00 56.80           S
ATOM    599  CE  MET A  36      13.329   5.828  -3.533  1.00 55.86           C
ATOM    603  C   MET A  36      16.917   7.083   1.453  1.00 43.33           C
ATOM    604  O   MET A  36      17.058   5.923   1.801  1.00 44.49           O
ATOM    605  N   ASP A  37      16.976   8.106   2.300  1.00 42.72           N
ATOM    607  CA  ASP A  37      17.047   7.937   3.738  1.00 42.38           C
ATOM    609  CB  ASP A  37      18.431   8.307   4.284  1.00 43.26           C
ATOM    612  CG  ASP A  37      18.808   7.494   5.506  1.00 45.37           C
ATOM    613  OD1 ASP A  37      18.011   6.632   5.930  1.00 47.95           O
ATOM    614  OD2 ASP A  37      19.877   7.634   6.105  1.00 49.19           O
ATOM    615  C   ASP A  37      16.022   8.827   4.362  1.00 41.28           C
ATOM    616  O   ASP A  37      15.531   9.742   3.723  1.00 41.00           O
ATOM    617  N   TYR A  38      15.692   8.544   5.618  1.00 40.30           N
ATOM    619  CA  TYR A  38      14.651   9.279   6.343  1.00 39.22           C
ATOM    621  CB  TYR A  38      13.333   8.483   6.328  1.00 39.51           C
ATOM    624  CG  TYR A  38      13.026   7.886   4.960  1.00 40.91           C
ATOM    625  CD1 TYR A  38      13.560   6.667   4.584  1.00 41.82           C
ATOM    627  CE1 TYR A  38      13.317   6.117   3.319  1.00 42.02           C
ATOM    629  CZ  TYR A  38      12.527   6.789   2.412  1.00 43.47           C
ATOM    630  OH  TYR A  38      12.298   6.206   1.157  1.00 45.92           O
ATOM    632  CE2 TYR A  38      11.978   8.022   2.756  1.00 43.16           C
ATOM    634  CD2 TYR A  38      12.230   8.567   4.028  1.00 42.67           C
ATOM    636  C   TYR A  38      15.110   9.539   7.765  1.00 37.35           C
ATOM    637  O   TYR A  38      15.657   8.665   8.423  1.00 38.28           O
ATOM    638  N   PHE A  39      14.897  10.748   8.238  1.00 34.88           N
ATOM    640  CA  PHE A  39      15.249  11.109   9.594  1.00 32.62           C
ATOM    642  CB  PHE A  39      16.742  11.450   9.686  1.00 32.89           C
ATOM    645  CG  PHE A  39      17.238  12.325   8.579  1.00 31.83           C
ATOM    646  CD1 PHE A  39      17.183  13.693   8.686  1.00 30.17           C
ATOM    648  CE1 PHE A  39      17.657  14.497   7.687  1.00 28.96           C
ATOM    650  CZ  PHE A  39      18.168  13.950   6.561  1.00 29.75           C
ATOM    652  CE2 PHE A  39      18.251  12.592   6.429  1.00 29.49           C
ATOM    654  CD2 PHE A  39      17.791  11.772   7.434  1.00 32.15           C
ATOM    656  C   PHE A  39      14.423  12.292   9.973  1.00 31.18           C
ATOM    657  O   PHE A  39      13.551  12.669   9.246  1.00 30.35           O
ATOM    658  N   ASP A  40      14.700  12.871  11.116  1.00 30.38           N
ATOM    660  CA  ASP A  40      14.045  14.063  11.530  1.00 30.64           C
ATOM    662  CB  ASP A  40      13.219  13.786  12.811  1.00 32.10           C
ATOM    665  CG  ASP A  40      12.091  12.813  12.564  1.00 33.32           C
ATOM    666  OD1 ASP A  40      11.059  13.232  12.039  1.00 39.62           O
ATOM    667  OD2 ASP A  40      12.180  11.593  12.770  1.00 39.86           O
ATOM    668  C   ASP A  40      15.090  15.112  11.764  1.00 30.17           C
ATOM    669  O   ASP A  40      16.258  14.823  11.920  1.00 29.07           O
ATOM    670  N   GLY A  41      14.665  16.359  11.794  1.00 30.85           N
ATOM    672  CA  GLY A  41      15.602  17.470  11.877  1.00 31.01           C
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ATOM    675  C   GLY A  41      14.903  18.801  11.945  1.00 31.45           C
ATOM    676  O   GLY A  41      13.679  18.912  11.803  1.00 31.10           O
ATOM    677  N   VAL A  42      15.718  19.820  12.153  1.00 32.40           N
ATOM    679  CA  VAL A  42      15.306  21.212  12.190  1.00 32.60           C
ATOM    681  CB  VAL A  42      15.597  21.775  13.594  1.00 32.98           C
ATOM    683  CG1 VAL A  42      15.374  23.279  13.656  1.00 34.87           C
ATOM    687  CG2 VAL A  42      14.731  21.073  14.602  1.00 33.47           C
ATOM    691  C   VAL A  42      16.070  21.966  11.102  1.00 32.40           C
ATOM    692  O   VAL A  42      17.288  21.893  11.040  1.00 32.17           O
ATOM    693  N   LEU A  43      15.364  22.656  10.210  1.00 32.67           N
ATOM    695  CA  LEU A  43      16.011  23.364   9.105  1.00 32.02           C
ATOM    697  CB  LEU A  43      15.301  23.043   7.794  1.00 31.99           C
ATOM    700  CG  LEU A  43      15.335  21.586   7.310  1.00 30.79           C
ATOM    702  CD1 LEU A  43      14.363  21.409   6.168  1.00 31.37           C
ATOM    706  CD2 LEU A  43      16.721  21.104   6.870  1.00 27.81           C
ATOM    710  C   LEU A  43      16.060  24.879   9.312  1.00 32.85           C
ATOM    711  O   LEU A  43      15.192  25.472   9.963  1.00 32.24           O
ATOM    712  N   MET A  44      17.095  25.505   8.741  1.00 33.96           N
ATOM    714  CA  MET A  44      17.248  26.963   8.675  1.00 33.81           C
ATOM    716  CB  MET A  44      18.468  27.387   9.478  1.00 34.07           C
ATOM    719  CG  MET A  44      18.640  28.889   9.660  1.00 35.80           C
ATOM    722  SD  MET A  44      20.259  29.382  10.354  1.00 37.36           S
ATOM    723  CE  MET A  44      19.947  29.057  12.076  1.00 39.02           C
ATOM    727  C   MET A  44      17.499  27.317   7.249  1.00 34.76           C
ATOM    728  O   MET A  44      18.441  26.793   6.650  1.00 34.66           O
ATOM    729  N   PHE A  45      16.670  28.188   6.682  1.00 35.99           N
ATOM    731  CA  PHE A  45      16.915  28.730   5.356  1.00 37.72           C
ATOM    733  CB  PHE A  45      15.700  28.610   4.447  1.00 38.41           C
ATOM    736  CG  PHE A  45      16.028  28.709   2.981  1.00 41.95           C
ATOM    737  CD1 PHE A  45      16.742  27.695   2.343  1.00 45.94           C
ATOM    739  CE1 PHE A  45      17.073  27.777   1.005  1.00 47.68           C
ATOM    741  CZ  PHE A  45      16.687  28.891   0.274  1.00 49.27           C
ATOM    743  CE2 PHE A  45      15.973  29.907   0.900  1.00 47.81           C
ATOM    745  CD2 PHE A  45      15.653  29.807   2.250  1.00 46.24           C
ATOM    747  C   PHE A  45      17.261  30.169   5.567  1.00 38.43           C
ATOM    748  O   PHE A  45      16.462  30.900   6.106  1.00 38.63           O
ATOM    749  N   VAL A  46      18.473  30.567   5.197  1.00 39.81           N
ATOM    751  CA  VAL A  46      18.913  31.944   5.370  1.00 41.21           C
ATOM    753  CB  VAL A  46      20.248  32.050   6.117  1.00 40.71           C
ATOM    755  CG1 VAL A  46      20.649  33.474   6.305  1.00 41.21           C
ATOM    759  CG2 VAL A  46      20.142  31.394   7.466  1.00 41.72           C
ATOM    763  C   VAL A  46      19.065  32.512   3.992  1.00 43.02           C
ATOM    764  O   VAL A  46      19.781  31.979   3.152  1.00 42.57           O
ATOM    765  N   ASP A  47      18.378  33.615   3.757  1.00 46.17           N
ATOM    767  CA  ASP A  47      18.403  34.269   2.459  1.00 48.17           C
ATOM    769  CB  ASP A  47      16.995  34.538   2.010  1.00 48.64           C
ATOM    772  CG  ASP A  47      16.965  35.230   0.703  1.00 49.70           C
ATOM    773  OD1 ASP A  47      17.360  34.576  -0.296  1.00 49.91           O
ATOM    774  OD2 ASP A  47      16.622  36.428   0.601  1.00 49.73           O
ATOM    775  C   ASP A  47      19.126  35.578   2.530  1.00 50.05           C
ATOM    776  O   ASP A  47      18.798  36.410   3.379  1.00 50.16           O
ATOM    777  N   ILE A  48      20.120  35.778   1.671  1.00 52.57           N
ATOM    779  CA  ILE A  48      20.731  37.101   1.575  1.00 54.71           C
ATOM    781  CB  ILE A  48      22.255  37.053   1.423  1.00 55.54           C
ATOM    783  CG1 ILE A  48      22.903  36.448   2.693  1.00 55.57           C
ATOM    786  CD1 ILE A  48      23.513  37.474   3.658  1.00 55.98           C
ATOM    790  CG2 ILE A  48      22.789  38.496   1.118  1.00 55.76           C
ATOM    794  C   ILE A  48      20.105  37.884   0.425  1.00 56.22           C
ATOM    795  O   ILE A  48      20.164  37.470  -0.746  1.00 55.85           O
ATOM    796  N   SER A  49      19.490  39.014   0.767  1.00 57.75           N
ATOM    798  CA  SER A  49      18.843  39.817  -0.243  1.00 59.07           C
ATOM    800  CB  SER A  49      17.373  40.083   0.095  1.00 59.31           C
ATOM    803  OG  SER A  49      16.787  40.896  -0.922  1.00 60.47           O
ATOM    805  C   SER A  49      19.606  41.109  -0.352  1.00 59.63           C
ATOM    806  O   SER A  49      19.888  41.740   0.656  1.00 59.62           O
ATOM    807  N   GLY A  50      19.902  41.489  -1.595  1.00 60.71           N
ATOM    809  CA  GLY A  50      20.604  42.729  -1.934  1.00 61.08           C
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ATOM	812	C	GLY	A	50	21.725	42.529	-2.938	1.00 61.25	C
ATOM	813	O	GLY	A	50	22.319	43.494	-3.418	1.00 61.57	O
ATOM	814	N	PHE	A	51	21.992	41.269	-3.280	1.00 61.48	N
ATOM	816	CA	PHE	A	51	23.289	40.903	-3.799	1.00 61.22	C
ATOM	818	CB	PHE	A	51	23.787	39.622	-3.150	1.00 61.45	C
ATOM	821	CG	PHE	A	51	25.020	39.821	-2.378	1.00 62.70	C
ATOM	822	CD1	PHE	A	51	24.965	39.948	-0.996	1.00 65.05	C
ATOM	824	CE1	PHE	A	51	26.123	40.171	-0.249	1.00 66.36	C
ATOM	826	CZ	PHE	A	51	27.362	40.290	-0.914	1.00 66.62	C
ATOM	828	CE2	PHE	A	51	27.411	40.188	-2.316	1.00 65.59	C
ATOM	830	CD2	PHE	A	51	26.239	39.954	-3.033	1.00 63.87	C
ATOM	832	C	PHE	A	51	23.403	40.767	-5.268	1.00 60.60	C
ATOM	833	O	PHE	A	51	24.504	40.943	-5.780	1.00 60.38	O
ATOM	834	N	THR	A	52	22.316	40.407	-5.947	1.00 60.28	N
ATOM	836	CA	THR	A	52	22.309	40.417	-7.425	1.00 59.99	C
ATOM	838	CB	THR	A	52	21.091	39.669	-8.024	1.00 59.78	C
ATOM	840	OG1	THR	A	52	19.871	40.213	-7.506	1.00 58.76	O
ATOM	842	CG2	THR	A	52	21.086	38.199	-7.615	1.00 59.06	C
ATOM	846	C	THR	A	52	22.363	41.858	-7.950	1.00 60.08	C
ATOM	847	O	THR	A	52	22.758	42.088	-9.103	1.00 59.51	O
ATOM	848	N	ALA	A	53	21.972	42.804	-7.079	1.00 60.21	N
ATOM	850	CA	ALA	A	53	22.086	44.233	-7.327	1.00 60.26	C
ATOM	852	CB	ALA	A	53	21.366	45.027	-6.241	1.00 60.26	C
ATOM	856	C	ALA	A	53	23.561	44.601	-7.347	1.00 60.66	C
ATOM	857	O	ALA	A	53	24.043	45.259	-8.287	1.00 60.50	O
ATOM	858	N	MET	A	54	24.268	44.172	-6.300	1.00 60.90	N
ATOM	860	CA	MET	A	54	25.718	44.329	-6.223	1.00 61.20	C
ATOM	862	CB	MET	A	54	26.246	43.667	-4.980	1.00 61.88	C
ATOM	865	CG	MET	A	54	25.814	44.348	-3.721	1.00 64.23	C
ATOM	868	SD	MET	A	54	27.110	44.191	-2.525	1.00 69.58	S
ATOM	869	CE	MET	A	54	26.143	43.710	-1.097	1.00 69.47	C
ATOM	873	C	MET	A	54	26.373	43.695	-7.420	1.00 60.78	C
ATOM	874	O	MET	A	54	27.090	44.363	-8.143	1.00 61.11	O
ATOM	875	N	THR	A	55	26.101	42.415	-7.656	1.00 60.07	N
ATOM	877	CA	THR	A	55	26.634	41.741	-8.825	1.00 59.67	C
ATOM	879	CB	THR	A	55	25.936	40.393	-9.052	1.00 59.18	C
ATOM	881	OG1	THR	A	55	26.158	39.537	-7.933	1.00 57.91	O
ATOM	883	CG2	THR	A	55	26.577	39.635	-10.205	1.00 58.91	C
ATOM	887	C	THR	A	55	26.524	42.603	-10.083	1.00 60.41	C
ATOM	888	O	THR	A	55	27.397	42.532	-10.939	1.00 60.64	O
ATOM	889	N	GLU	A	56	25.456	43.392	-10.220	1.00 61.50	N
ATOM	891	CA	GLU	A	56	25.306	44.286	-11.387	1.00 62.74	C
ATOM	893	CB	GLU	A	56	23.835	44.701	-11.597	1.00 63.37	C
ATOM	896	CG	GLU	A	56	22.897	43.540	-11.919	1.00 65.78	C
ATOM	899	CD	GLU	A	56	22.267	43.613	-13.309	1.00 69.51	C
ATOM	900	OE1	GLU	A	56	22.892	44.180	-14.245	1.00 69.14	O
ATOM	901	OE2	GLU	A	56	21.129	43.081	-13.463	1.00 72.55	O
ATOM	902	C	GLU	A	56	26.198	45.524	-11.253	1.00 62.46	C
ATOM	903	O	GLU	A	56	26.956	45.869	-12.159	1.00 62.31	O
ATOM	904	N	LYS	A	57	26.116	46.175	-10.106	1.00 62.54	N
ATOM	906	CA	LYS	A	57	27.005	47.286	-9.824	1.00 63.29	C
ATOM	908	CB	LYS	A	57	26.689	47.931	-8.457	1.00 63.25	C
ATOM	911	CG	LYS	A	57	27.659	47.588	-7.323	1.00 63.94	C
ATOM	914	CD	LYS	A	57	27.115	47.983	-5.948	1.00 64.76	C
ATOM	917	CE	LYS	A	57	27.963	47.416	-4.779	1.00 64.58	C
ATOM	920	NZ	LYS	A	57	27.965	48.306	-3.555	1.00 63.69	N
ATOM	924	C	LYS	A	57	28.476	46.869	-9.885	1.00 63.60	C
ATOM	925	O	LYS	A	57	29.326	47.721	-10.098	1.00 64.09	O
ATOM	926	N	PHE	A	58	28.775	45.581	-9.683	1.00 63.67	N
ATOM	928	CA	PHE	A	58	30.156	45.120	-9.578	1.00 63.61	C
ATOM	930	CB	PHE	A	58	30.304	43.912	-8.647	1.00 63.46	C
ATOM	933	CG	PHE	A	58	30.594	44.273	-7.222	1.00 62.03	C
ATOM	934	CD1	PHE	A	58	29.721	43.909	-6.209	1.00 61.84	C
ATOM	936	CE1	PHE	A	58	29.978	44.243	-4.879	1.00 61.41	C
ATOM	938	CZ	PHE	A	58	31.121	44.938	-4.555	1.00 60.46	C
ATOM	940	CE2	PHE	A	58	31.998	45.299	-5.558	1.00 61.28	C
ATOM	942	CD2	PHE	A	58	31.734	44.969	-6.888	1.00 61.47	C

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ATOM    944  C   PHE A  58      30.688  44.783 -10.942  1.00 64.43           C
ATOM    945  O   PHE A  58      31.891  44.588 -11.095  1.00 64.63           O
ATOM    946  N   SER A  59      29.805  44.705 -11.936  1.00 65.57           N
ATOM    948  CA  SER A  59      30.248  44.733 -13.340  1.00 66.73           C
ATOM    950  CB  SER A  59      29.204  44.092 -14.248  1.00 66.66           C
ATOM    953  OG  SER A  59      29.561  44.212 -15.609  1.00 67.08           O
ATOM    955  C   SER A  59      30.616  46.163 -13.832  1.00 67.56           C
ATOM    956  O   SER A  59      31.228  46.313 -14.916  1.00 68.08           O
ATOM    957  N   SER A  60      30.260  47.185 -13.029  1.00 68.05           N
ATOM    959  CA  SER A  60      30.562  48.602 -13.318  1.00 68.38           C
ATOM    961  CB  SER A  60      29.804  49.556 -12.365  1.00 68.37           C
ATOM    964  OG  SER A  60      30.535  49.887 -11.183  1.00 67.71           O
ATOM    966  C   SER A  60      32.058  48.929 -13.280  1.00 68.77           C
ATOM    967  O   SER A  60      32.798  48.435 -12.415  1.00 68.95           O
ATOM    968  N   ALA A  61      32.467  49.775 -14.230  1.00 69.03           N
ATOM    970  CA  ALA A  61      33.833  50.271 -14.386  1.00 69.02           C
ATOM    972  CB  ALA A  61      33.856  51.380 -15.449  1.00 68.73           C
ATOM    976  C   ALA A  61      34.419  50.800 -13.077  1.00 69.42           C
ATOM    977  O   ALA A  61      35.654  50.938 -12.950  1.00 69.67           O
ATOM    978  N   MET A  62      33.529  51.137 -12.133  1.00 69.29           N
ATOM    980  CA  MET A  62      33.903  51.529 -10.767  1.00 69.16           C
ATOM    982  CB  MET A  62      32.641  51.637  -9.896  1.00 69.68           C
ATOM    985  CG  MET A  62      32.804  52.558  -8.709  1.00 71.19           C
ATOM    988  SD  MET A  62      31.287  53.383  -8.259  1.00 75.96           S
ATOM    989  CE  MET A  62      30.965  52.581  -6.559  1.00 74.16           C
ATOM    993  C   MET A  62      34.935  50.593 -10.096  1.00 68.19           C
ATOM    994  O   MET A  62      35.965  51.063  -9.560  1.00 67.88           O
ATOM    995  N   TYR A  63      34.639  49.286 -10.130  1.00 66.86           N
ATOM    997  CA  TYR A  63      35.495  48.247  -9.528  1.00 66.08           C
ATOM    999  CB  TYR A  63      34.627  47.092  -9.019  1.00 66.12           C
ATOM   1002  CG  TYR A  63      33.596  47.570  -8.036  1.00 66.32           C
ATOM   1003  CD1 TYR A  63      32.304  47.858  -8.449  1.00 67.15           C
ATOM   1005  CE1 TYR A  63      31.339  48.316  -7.551  1.00 68.53           C
ATOM   1007  CZ  TYR A  63      31.684  48.517  -6.214  1.00 68.73           C
ATOM   1008  OH  TYR A  63      30.736  48.975  -5.309  1.00 69.12           O
ATOM   1010  CE2 TYR A  63      32.983  48.263  -5.792  1.00 68.09           C
ATOM   1012  CD2 TYR A  63      33.932  47.797  -6.707  1.00 67.29           C
ATOM   1014  C   TYR A  63      36.528  47.754 -10.534  1.00 64.64           C
ATOM   1015  O   TYR A  63      36.494  46.590 -10.977  1.00 66.10           O
ATOM   1016  N   MET A  64      37.450  48.659 -10.865  1.00 62.18           N
ATOM   1018  CA  MET A  64      38.213  48.633 -12.129  1.00 59.85           C
ATOM   1020  CB  MET A  64      39.665  49.101 -11.856  1.00 60.01           C
ATOM   1023  CG  MET A  64      39.769  50.673 -11.738  1.00 59.97           C
ATOM   1026  SD  MET A  64      40.618  51.503 -10.288  1.00 59.87           S
ATOM   1027  CE  MET A  64      39.458  51.188  -8.863  1.00 57.67           C
ATOM   1031  C   MET A  64      38.084  47.312 -12.932  1.00 57.22           C
ATOM   1032  O   MET A  64      37.086  47.117 -13.613  1.00 57.21           O
ATOM   1033  N   ASP A  65      39.019  46.380 -12.865  1.00 53.95           N
ATOM   1035  CA  ASP A  65      38.710  45.076 -13.488  1.00 51.52           C
ATOM   1037  CB  ASP A  65      39.474  44.873 -14.766  1.00 51.75           C
ATOM   1040  CG  ASP A  65      38.852  45.640 -15.859  1.00 53.86           C
ATOM   1041  OD1 ASP A  65      38.017  45.057 -16.583  1.00 55.22           O
ATOM   1042  OD2 ASP A  65      39.060  46.871 -15.982  1.00 57.13           O
ATOM   1043  C   ASP A  65      38.841  43.936 -12.535  1.00 47.66           C
ATOM   1044  O   ASP A  65      39.376  42.881 -12.865  1.00 47.38           O
ATOM   1045  N   ARG A  66      38.288  44.202 -11.356  1.00 43.32           N
ATOM   1047  CA  ARG A  66      38.397  43.351 -10.201  1.00 39.87           C
ATOM   1049  CB  ARG A  66      39.427  43.953  -9.247  1.00 38.93           C
ATOM   1052  CG  ARG A  66      40.841  43.914  -9.786  1.00 34.93           C
ATOM   1055  CD  ARG A  66      41.940  44.215  -8.700  1.00 31.07           C
ATOM   1058  NE  ARG A  66      41.857  43.280  -7.598  1.00 26.38           N
ATOM   1060  CZ  ARG A  66      41.324  43.519  -6.412  1.00 24.42           C
ATOM   1061  NH1 ARG A  66      40.866  44.714  -6.065  1.00 21.65           N
ATOM   1064  NH2 ARG A  66      41.272  42.523  -5.543  1.00 25.35           N
ATOM   1067  C   ARG A  66      37.033  43.220  -9.534  1.00 37.81           C
ATOM   1068  O   ARG A  66      36.927  42.950  -8.356  1.00 37.80           O
ATOM   1069  N   GLY A  67      35.991  43.398 -10.327  1.00 36.30           N
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ATOM   1071  CA  GLY A  67      34.621  43.307  -9.873  1.00 34.49           C
ATOM   1074  C   GLY A  67      34.374  41.966  -9.260  1.00 32.65           C
ATOM   1075  O   GLY A  67      33.917  41.906  -8.118  1.00 32.48           O
ATOM   1076  N   ALA A  68      34.694  40.901  -9.983  1.00 30.34           N
ATOM   1078  CA  ALA A  68      34.445  39.544  -9.462  1.00 29.89           C
ATOM   1080  CB  ALA A  68      34.812  38.504 -10.512  1.00 29.44           C
ATOM   1084  C   ALA A  68      35.204  39.276  -8.146  1.00 29.27           C
ATOM   1085  O   ALA A  68      34.661  38.718  -7.209  1.00 29.54           O
ATOM   1086  N   GLU A  69      36.452  39.720  -8.090  1.00 28.51           N
ATOM   1088  CA  GLU A  69      37.331  39.568  -6.922  1.00 28.52           C
ATOM   1090  CB  GLU A  69      38.769  39.957  -7.321  1.00 28.99           C
ATOM   1093  CG  GLU A  69      39.407  39.044  -8.353  1.00 28.72           C
ATOM   1096  CD  GLU A  69      39.076  39.372  -9.817  1.00 32.05           C
ATOM   1097  OE1 GLU A  69      38.469  40.401 -10.128  1.00 29.84           O
ATOM   1098  OE2 GLU A  69      39.417  38.555 -10.697  1.00 34.89           O
ATOM   1099  C   GLU A  69      36.878  40.389  -5.703  1.00 28.10           C
ATOM   1100  O   GLU A  69      36.931  39.950  -4.574  1.00 26.98           O
ATOM   1101  N   GLN A  70      36.402  41.595  -5.951  1.00 28.63           N
ATOM   1103  CA  GLN A  70      35.872  42.435  -4.882  1.00 28.73           C
ATOM   1105  CB  GLN A  70      35.681  43.834  -5.438  1.00 29.09           C
ATOM   1108  CG  GLN A  70      36.944  44.643  -5.439  1.00 30.66           C
ATOM   1111  CD  GLN A  70      36.937  45.751  -4.376  1.00 32.83           C
ATOM   1112  OE1 GLN A  70      37.333  46.870  -4.673  1.00 39.34           O
ATOM   1113  NE2 GLN A  70      36.485  45.452  -3.173  1.00 30.59           N
ATOM   1116  C   GLN A  70      34.552  41.927  -4.314  1.00 28.87           C
ATOM   1117  O   GLN A  70      34.239  42.116  -3.107  1.00 28.04           O
ATOM   1118  N   LEU A  71      33.778  41.321  -5.224  1.00 28.90           N
ATOM   1120  CA  LEU A  71      32.475  40.736  -4.961  1.00 29.05           C
ATOM   1122  CB  LEU A  71      31.747  40.502  -6.294  1.00 30.36           C
ATOM   1125  CG  LEU A  71      30.378  39.837  -6.215  1.00 32.79           C
ATOM   1127  CD1 LEU A  71      29.536  40.492  -5.133  1.00 35.51           C
ATOM   1131  CD2 LEU A  71      29.712  39.934  -7.537  1.00 33.57           C
ATOM   1135  C   LEU A  71      32.591  39.417  -4.207  1.00 28.21           C
ATOM   1136  O   LEU A  71      31.952  39.226  -3.212  1.00 27.90           O
ATOM   1137  N   VAL A  72      33.445  38.510  -4.627  1.00 28.54           N
ATOM   1139  CA  VAL A  72      33.594  37.297  -3.833  1.00 28.44           C
ATOM   1141  CB  VAL A  72      34.423  36.220  -4.545  1.00 28.90           C
ATOM   1143  CG1 VAL A  72      35.867  36.622  -4.681  1.00 31.55           C
ATOM   1147  CG2 VAL A  72      34.317  34.940  -3.793  1.00 30.39           C
ATOM   1151  C   VAL A  72      34.162  37.631  -2.470  1.00 27.96           C
ATOM   1152  O   VAL A  72      33.761  37.047  -1.446  1.00 28.34           O
ATOM   1153  N   GLU A  73      35.083  38.585  -2.433  1.00 26.67           N
ATOM   1155  CA  GLU A  73      35.648  39.024  -1.168  1.00 26.12           C
ATOM   1157  CB  GLU A  73      36.703  40.112  -1.391  1.00 24.63           C
ATOM   1160  CG  GLU A  73      37.345  40.550  -0.106  1.00 23.29           C
ATOM   1163  CD  GLU A  73      38.431  41.586  -0.290  1.00 21.52           C
ATOM   1164  OE1 GLU A  73      39.199  41.810   0.661  1.00 18.70           O
ATOM   1165  OE2 GLU A  73      38.518  42.156  -1.383  1.00 25.54           O
ATOM   1166  C   GLU A  73      34.607  39.523  -0.141  1.00 26.46           C
ATOM   1167  O   GLU A  73      34.641  39.141   1.028  1.00 27.24           O
ATOM   1168  N   ILE A  74      33.739  40.427  -0.552  1.00 27.65           N
ATOM   1170  CA  ILE A  74      32.786  41.007   0.384  1.00 29.07           C
ATOM   1172  CB  ILE A  74      32.257  42.393  -0.092  1.00 28.98           C
ATOM   1174  CG1 ILE A  74      31.545  43.075   1.065  1.00 29.24           C
ATOM   1177  CD1 ILE A  74      32.418  43.320   2.323  1.00 29.10           C
ATOM   1181  CG2 ILE A  74      31.328  42.263  -1.306  1.00 29.25           C
ATOM   1185  C   ILE A  74      31.667  40.017   0.668  1.00 29.75           C
ATOM   1186  O   ILE A  74      31.240  39.882   1.800  1.00 30.94           O
ATOM   1187  N   LEU A  75      31.246  39.277  -0.346  1.00 30.43           N
ATOM   1189  CA  LEU A  75      30.269  38.211  -0.155  1.00 31.10           C
ATOM   1191  CB  LEU A  75      29.993  37.597  -1.521  1.00 31.30           C
ATOM   1194  CG  LEU A  75      28.920  36.511  -1.642  1.00 36.80           C
ATOM   1196  CD1 LEU A  75      27.522  37.041  -1.372  1.00 39.26           C
ATOM   1200  CD2 LEU A  75      28.950  35.891  -3.029  1.00 37.93           C
ATOM   1204  C   LEU A  75      30.778  37.171   0.886  1.00 30.33           C
ATOM   1205  O   LEU A  75      30.166  36.936   1.951  1.00 30.59           O
ATOM   1206  N   ASN A  76      31.921  36.571   0.614  1.00 29.26           N
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ATOM	1208	CA	ASN A	76	32.516	35.656	1.568	1.00	28.22	C
ATOM	1210	CB	ASN A	76	33.747	34.987	0.958	1.00	28.46	C
ATOM	1213	CG	ASN A	76	33.359	33.970	-0.109	1.00	27.79	C
ATOM	1214	OD1	ASN A	76	34.188	33.460	-0.877	1.00	27.13	O
ATOM	1215	ND2	ASN A	76	32.062	33.670	-0.150	1.00	21.55	N
ATOM	1218	C	ASN A	76	32.795	36.231	2.936	1.00	28.35	C
ATOM	1219	O	ASN A	76	32.693	35.502	3.952	1.00	27.41	O
ATOM	1220	N	TYR A	77	33.065	37.541	3.013	1.00	28.48	N
ATOM	1222	CA	TYR A	77	33.312	38.160	4.329	1.00	28.94	C
ATOM	1224	CB	TYR A	77	33.670	39.659	4.229	1.00	29.02	C
ATOM	1227	CG	TYR A	77	33.852	40.349	5.586	1.00	29.05	C
ATOM	1228	CD1	TYR A	77	34.727	39.822	6.543	1.00	28.77	C
ATOM	1230	CE1	TYR A	77	34.899	40.426	7.771	1.00	27.21	C
ATOM	1232	CZ	TYR A	77	34.185	41.584	8.110	1.00	28.75	C
ATOM	1233	OH	TYR A	77	34.409	42.135	9.362	1.00	32.01	O
ATOM	1235	CE2	TYR A	77	33.322	42.161	7.213	1.00	27.16	C
ATOM	1237	CD2	TYR A	77	33.145	41.524	5.925	1.00	29.84	C
ATOM	1239	C	TYR A	77	32.053	37.978	5.173	1.00	29.45	C
ATOM	1240	O	TYR A	77	32.106	37.584	6.319	1.00	27.70	O
ATOM	1241	N	HIS A	78	30.914	38.267	4.571	1.00	30.64	N
ATOM	1243	CA	HIS A	78	29.647	38.194	5.299	1.00	31.81	C
ATOM	1245	CB	HIS A	78	28.604	39.092	4.596	1.00	32.21	C
ATOM	1248	CG	HIS A	78	28.970	40.543	4.663	1.00	34.28	C
ATOM	1249	ND1	HIS A	78	29.014	41.236	5.849	1.00	36.24	N
ATOM	1251	CE1	HIS A	78	29.435	42.465	5.624	1.00	35.79	C
ATOM	1253	NE2	HIS A	78	29.703	42.582	4.340	1.00	33.87	N
ATOM	1255	CD2	HIS A	78	29.420	41.396	3.716	1.00	35.19	C
ATOM	1257	C	HIS A	78	29.142	36.773	5.491	1.00	31.24	C
ATOM	1258	O	HIS A	78	28.753	36.402	6.575	1.00	32.28	O
ATOM	1259	N	ILE A	79	29.157	35.985	4.436	1.00	31.24	N
ATOM	1261	CA	ILE A	79	28.647	34.633	4.503	1.00	31.07	C
ATOM	1263	CB	ILE A	79	28.546	34.067	3.107	1.00	31.45	C
ATOM	1265	CG1	ILE A	79	27.443	34.841	2.373	1.00	32.56	C
ATOM	1268	CD1	ILE A	79	27.267	34.467	0.928	1.00	35.55	C
ATOM	1272	CG2	ILE A	79	28.174	32.620	3.168	1.00	33.07	C
ATOM	1276	C	ILE A	79	29.465	33.754	5.441	1.00	30.31	C
ATOM	1277	O	ILE A	79	28.901	32.966	6.195	1.00	30.33	O
ATOM	1278	N	SER A	80	30.778	33.929	5.443	1.00	29.35	N
ATOM	1280	CA	SER A	80	31.624	33.285	6.437	1.00	29.07	C
ATOM	1282	CB	SER A	80	33.050	33.828	6.376	1.00	28.77	C
ATOM	1285	OG	SER A	80	33.666	33.344	5.244	1.00	30.60	O
ATOM	1287	C	SER A	80	31.154	33.486	7.858	1.00	28.77	C
ATOM	1288	O	SER A	80	31.234	32.575	8.644	1.00	28.89	O
ATOM	1289	N	ALA A	81	30.755	34.707	8.213	1.00	28.60	N
ATOM	1291	CA	ALA A	81	30.341	34.995	9.584	1.00	28.36	C
ATOM	1293	CB	ALA A	81	30.084	36.527	9.766	1.00	28.41	C
ATOM	1297	C	ALA A	81	29.096	34.199	9.939	1.00	28.24	C
ATOM	1298	O	ALA A	81	28.930	33.761	11.063	1.00	28.93	O
ATOM	1299	N	ILE A	82	28.222	34.039	8.963	1.00	28.28	N
ATOM	1301	CA	ILE A	82	26.978	33.298	9.121	1.00	28.27	C
ATOM	1303	CB	ILE A	82	26.073	33.492	7.877	1.00	28.14	C
ATOM	1305	CG1	ILE A	82	25.695	34.957	7.687	1.00	28.19	C
ATOM	1308	CD1	ILE A	82	24.812	35.165	6.474	1.00	27.19	C
ATOM	1312	CG2	ILE A	82	24.821	32.684	7.989	1.00	28.59	C
ATOM	1316	C	ILE A	82	27.270	31.830	9.270	1.00	27.64	C
ATOM	1317	O	ILE A	82	26.656	31.158	10.084	1.00	27.16	O
ATOM	1318	N	VAL A	83	28.197	31.336	8.451	1.00	28.04	N
ATOM	1320	CA	VAL A	83	28.572	29.920	8.435	1.00	27.73	C
ATOM	1322	CB	VAL A	83	29.551	29.611	7.292	1.00	27.67	C
ATOM	1324	CG1	VAL A	83	30.230	28.229	7.441	1.00	25.20	C
ATOM	1328	CG2	VAL A	83	28.816	29.708	5.982	1.00	28.63	C
ATOM	1332	C	VAL A	83	29.167	29.565	9.771	1.00	28.83	C
ATOM	1333	O	VAL A	83	28.843	28.540	10.347	1.00	29.10	O
ATOM	1334	N	GLU A	84	29.980	30.454	10.305	1.00	29.79	N
ATOM	1336	CA	GLU A	84	30.579	30.221	11.593	1.00	31.09	C
ATOM	1338	CB	GLU A	84	31.586	31.350	11.931	1.00	32.41	C
ATOM	1341	CG	GLU A	84	32.793	30.831	12.681	1.00	35.80	C

ATOM	1344	CD	GLU	A	84	33.944	31.803	12.706	1.00 42.01	C
ATOM	1345	OE1	GLU	A	84	34.024	32.554	13.708	1.00 46.46	O
ATOM	1346	OE2	GLU	A	84	34.772	31.808	11.745	1.00 45.90	O
ATOM	1347	C	GLU	A	84	29.517	30.063	12.674	1.00 30.66	C
ATOM	1348	O	GLU	A	84	29.593	29.134	13.482	1.00 30.50	O
ATOM	1349	N	LYS	A	85	28.512	30.938	12.674	1.00 29.95	N
ATOM	1351	CA	LYS	A	85	27.467	30.869	13.701	1.00 29.78	C
ATOM	1353	CB	LYS	A	85	26.515	32.066	13.646	1.00 30.63	C
ATOM	1356	CG	LYS	A	85	27.156	33.377	14.110	1.00 32.40	C
ATOM	1359	CD	LYS	A	85	26.779	33.702	15.544	1.00 37.17	C
ATOM	1362	CE	LYS	A	85	27.516	34.938	16.126	1.00 38.30	C
ATOM	1365	NZ	LYS	A	85	27.695	34.759	17.633	1.00 40.96	N
ATOM	1369	C	LYS	A	85	26.687	29.583	13.615	1.00 28.14	C
ATOM	1370	O	LYS	A	85	26.398	28.965	14.635	1.00 28.78	O
ATOM	1371	N	VAL	A	86	26.384	29.143	12.408	1.00 27.14	N
ATOM	1373	CA	VAL	A	86	25.697	27.860	12.216	1.00 25.95	C
ATOM	1375	CB	VAL	A	86	25.286	27.666	10.760	1.00 25.63	C
ATOM	1377	CG1	VAL	A	86	24.896	26.179	10.424	1.00 23.78	C
ATOM	1381	CG2	VAL	A	86	24.160	28.667	10.394	1.00 25.08	C
ATOM	1385	C	VAL	A	86	26.540	26.691	12.731	1.00 26.76	C
ATOM	1386	O	VAL	A	86	26.031	25.874	13.475	1.00 27.34	O
ATOM	1387	N	LEU	A	87	27.828	26.635	12.386	1.00 26.83	N
ATOM	1389	CA	LEU	A	87	28.688	25.528	12.818	1.00 26.72	C
ATOM	1391	CB	LEU	A	87	30.049	25.634	12.100	1.00 27.08	C
ATOM	1394	CG	LEU	A	87	30.033	25.437	10.575	1.00 25.48	C
ATOM	1396	CD1	LEU	A	87	31.417	25.430	9.972	1.00 26.03	C
ATOM	1400	CD2	LEU	A	87	29.250	24.225	10.215	1.00 24.30	C
ATOM	1404	C	LEU	A	87	28.910	25.481	14.349	1.00 27.21	C
ATOM	1405	O	LEU	A	87	28.846	24.434	14.993	1.00 27.17	O
ATOM	1406	N	ILE	A	88	29.200	26.636	14.917	1.00 27.27	N
ATOM	1408	CA	ILE	A	88	29.389	26.784	16.344	1.00 27.39	C
ATOM	1410	CB	ILE	A	88	29.852	28.232	16.627	1.00 27.98	C
ATOM	1412	CG1	ILE	A	88	31.303	28.354	16.167	1.00 30.91	C
ATOM	1415	CD1	ILE	A	88	31.929	29.745	16.302	1.00 34.67	C
ATOM	1419	CG2	ILE	A	88	29.772	28.576	18.116	1.00 29.25	C
ATOM	1423	C	ILE	A	88	28.151	26.388	17.159	1.00 26.74	C
ATOM	1424	O	ILE	A	88	28.296	25.839	18.250	1.00 26.54	O
ATOM	1425	N	PHE	A	89	26.962	26.642	16.616	1.00 26.43	N
ATOM	1427	CA	PHE	A	89	25.684	26.225	17.219	1.00 27.00	C
ATOM	1429	CB	PHE	A	89	24.540	27.212	16.826	1.00 28.18	C
ATOM	1432	CG	PHE	A	89	24.518	28.505	17.640	1.00 28.18	C
ATOM	1433	CD1	PHE	A	89	25.401	29.539	17.359	1.00 28.51	C
ATOM	1435	CE1	PHE	A	89	25.388	30.703	18.095	1.00 28.35	C
ATOM	1437	CZ	PHE	A	89	24.441	30.850	19.124	1.00 30.22	C
ATOM	1439	CE2	PHE	A	89	23.548	29.825	19.400	1.00 28.92	C
ATOM	1441	CD2	PHE	A	89	23.590	28.672	18.668	1.00 29.38	C
ATOM	1443	C	PHE	A	89	25.270	24.804	16.851	1.00 26.31	C
ATOM	1444	O	PHE	A	89	24.168	24.371	17.184	1.00 26.50	O
ATOM	1445	N	GLY	A	90	26.123	24.077	16.133	1.00 26.01	N
ATOM	1447	CA	GLY	A	90	25.890	22.676	15.870	1.00 25.56	C
ATOM	1450	C	GLY	A	90	25.199	22.244	14.595	1.00 26.00	C
ATOM	1451	O	GLY	A	90	24.897	21.048	14.444	1.00 26.45	O
ATOM	1452	N	GLY	A	91	24.952	23.162	13.653	1.00 26.31	N
ATOM	1454	CA	GLY	A	91	24.321	22.798	12.379	1.00 25.02	C
ATOM	1457	C	GLY	A	91	25.292	22.245	11.332	1.00 25.08	C
ATOM	1458	O	GLY	A	91	26.528	22.426	11.410	1.00 24.96	O
ATOM	1459	N	ASP	A	92	24.720	21.547	10.355	1.00 23.29	N
ATOM	1461	CA	ASP	A	92	25.392	21.157	9.152	1.00 22.36	C
ATOM	1463	CB	ASP	A	92	25.031	19.700	8.893	1.00 22.06	C
ATOM	1466	CG	ASP	A	92	25.882	19.043	7.845	1.00 22.07	C
ATOM	1467	OD1	ASP	A	92	25.513	17.899	7.470	1.00 21.63	O
ATOM	1468	OD2	ASP	A	92	26.900	19.581	7.321	1.00 20.29	O
ATOM	1469	C	ASP	A	92	24.882	22.044	8.017	1.00 22.47	C
ATOM	1470	O	ASP	A	92	23.687	22.059	7.765	1.00 21.64	O
ATOM	1471	N	ILE	A	93	25.752	22.812	7.356	1.00 22.45	N
ATOM	1473	CA	ILE	A	93	25.320	23.637	6.201	1.00 22.87	C
ATOM	1475	CB	ILE	A	93	26.370	24.778	5.816	1.00 22.57	C

ATOM	1477	CG1	ILE	A	93	26.729	25.648	7.023	0.50	19.26	C
ATOM	1480	CD1	ILE	A	93	26.039	26.862	7.108	0.50	18.29	C
ATOM	1484	CG2	ILE	A	93	25.925	25.547	4.579	0.50	20.48	C
ATOM	1488	C	ILE	A	93	25.186	22.676	5.052	1.00	23.77	C
ATOM	1489	O	ILE	A	93	26.173	22.195	4.563	1.00	24.48	O
ATOM	1490	N	LEU	A	94	23.954	22.389	4.635	1.00	25.72	N
ATOM	1492	CA	LEU	A	94	23.641	21.476	3.535	1.00	25.49	C
ATOM	1494	CB	LEU	A	94	22.156	21.156	3.550	1.00	25.67	C
ATOM	1497	CG	LEU	A	94	21.571	20.348	4.701	1.00	24.82	C
ATOM	1499	CD1	LEU	A	94	20.163	19.901	4.275	1.00	24.69	C
ATOM	1503	CD2	LEU	A	94	22.440	19.138	5.045	1.00	25.56	C
ATOM	1507	C	LEU	A	94	23.966	22.004	2.159	1.00	26.16	C
ATOM	1508	O	LEU	A	94	24.431	21.271	1.307	1.00	26.54	O
ATOM	1509	N	LYS	A	95	23.719	23.274	1.917	1.00	27.62	N
ATOM	1511	CA	LYS	A	95	23.802	23.772	0.545	1.00	28.90	C
ATOM	1513	CB	LYS	A	95	22.604	23.271	-0.269	1.00	30.22	C
ATOM	1516	CG	LYS	A	95	22.980	22.662	-1.616	1.00	32.27	C
ATOM	1519	CD	LYS	A	95	21.770	21.996	-2.240	1.00	34.47	C
ATOM	1522	CE	LYS	A	95	21.998	20.509	-2.510	1.00	34.44	C
ATOM	1525	NZ	LYS	A	95	20.697	19.909	-2.780	1.00	32.74	N
ATOM	1529	C	LYS	A	95	23.807	25.274	0.482	1.00	28.70	C
ATOM	1530	O	LYS	A	95	23.205	25.904	1.298	1.00	27.64	O
ATOM	1531	N	PHE	A	96	24.540	25.803	-0.497	1.00	30.22	N
ATOM	1533	CA	PHE	A	96	24.613	27.211	-0.845	1.00	30.83	C
ATOM	1535	CB	PHE	A	96	26.076	27.639	-1.030	1.00	30.20	C
ATOM	1538	CG	PHE	A	96	26.888	27.657	0.246	1.00	30.91	C
ATOM	1539	CD1	PHE	A	96	27.604	26.541	0.648	1.00	31.10	C
ATOM	1541	CE1	PHE	A	96	28.364	26.559	1.813	1.00	29.55	C
ATOM	1543	CZ	PHE	A	96	28.425	27.714	2.569	1.00	30.71	C
ATOM	1545	CE2	PHE	A	96	27.719	28.843	2.159	1.00	30.14	C
ATOM	1547	CD2	PHE	A	96	26.973	28.810	1.020	1.00	30.03	C
ATOM	1549	C	PHE	A	96	23.870	27.376	-2.185	1.00	32.46	C
ATOM	1550	O	PHE	A	96	24.265	26.810	-3.183	1.00	33.07	O
ATOM	1551	N	ALA	A	97	22.770	28.116	-2.184	1.00	34.76	N
ATOM	1553	CA	ALA	A	97	22.066	28.499	-3.415	1.00	36.29	C
ATOM	1555	CB	ALA	A	97	20.563	28.185	-3.329	1.00	35.68	C
ATOM	1559	C	ALA	A	97	22.312	30.002	-3.640	1.00	37.74	C
ATOM	1560	O	ALA	A	97	21.556	30.846	-3.186	1.00	38.36	O
ATOM	1561	N	GLY	A	98	23.397	30.293	-4.351	1.00	38.81	N
ATOM	1563	CA	GLY	A	98	23.886	31.631	-4.570	1.00	39.27	C
ATOM	1566	C	GLY	A	98	24.220	32.364	-3.287	1.00	40.29	C
ATOM	1567	O	GLY	A	98	25.239	32.144	-2.627	1.00	42.06	O
ATOM	1568	N	ASP	A	99	23.295	33.250	-2.982	1.00	40.27	N
ATOM	1570	CA	ASP	A	99	23.257	34.231	-1.895	1.00	40.03	C
ATOM	1572	CB	ASP	A	99	22.296	35.302	-2.467	1.00	40.09	C
ATOM	1575	CG	AASP	A	99	20.974	34.655	-2.875	0.50	39.35	C
ATOM	1576	CG	BASP	A	99	22.986	36.610	-2.693	0.50	38.67	C
ATOM	1577	OD1	AASP	A	99	20.714	34.529	-4.085	0.50	39.68	O
ATOM	1578	OD1	BASP	A	99	24.226	36.732	-2.497	0.50	37.92	O
ATOM	1579	OD2	AASP	A	99	20.161	34.184	-2.064	0.50	40.62	O
ATOM	1580	OD2	BASP	A	99	22.327	37.570	-3.130	0.50	32.69	O
ATOM	1581	C	ASP	A	99	22.597	33.606	-0.617	1.00	39.99	C
ATOM	1582	O	ASP	A	99	22.670	34.160	0.506	1.00	40.05	O
ATOM	1583	N	ALA	A	100	21.875	32.502	-0.862	1.00	39.15	N
ATOM	1585	CA	ALA	A	100	21.057	31.783	0.108	1.00	37.81	C
ATOM	1587	CB	ALA	A	100	19.726	31.472	-0.505	1.00	37.36	C
ATOM	1591	C	ALA	A	100	21.757	30.479	0.560	1.00	36.63	C
ATOM	1592	O	ALA	A	100	22.738	30.012	-0.048	1.00	36.58	O
ATOM	1593	N	LEU	A	101	21.194	29.853	1.580	1.00	35.46	N
ATOM	1595	CA	LEU	A	101	21.924	28.851	2.339	1.00	34.35	C
ATOM	1597	CB	LEU	A	101	22.962	29.611	3.163	1.00	34.63	C
ATOM	1600	CG	LEU	A	101	23.764	29.124	4.340	1.00	34.78	C
ATOM	1602	CD1	LEU	A	101	24.836	30.179	4.611	1.00	35.83	C
ATOM	1606	CD2	LEU	A	101	22.884	28.897	5.550	1.00	34.86	C
ATOM	1610	C	LEU	A	101	20.953	28.073	3.220	1.00	32.89	C
ATOM	1611	O	LEU	A	101	20.180	28.677	3.947	1.00	32.55	O
ATOM	1612	N	LEU	A	102	20.999	26.744	3.110	1.00	30.44	N

ATOM	1614	CA	LEU	A	102	20.195	25.823	3.891	1.00 29.40	C
ATOM	1616	CB	LEU	A	102	19.457	24.860	2.963	1.00 28.61	C
ATOM	1619	CG	LEU	A	102	18.538	23.853	3.640	1.00 29.23	C
ATOM	1621	CD1	LEU	A	102	17.335	24.526	4.223	1.00 30.37	C
ATOM	1625	CD2	LEU	A	102	18.094	22.787	2.688	1.00 29.36	C
ATOM	1629	C	LEU	A	102	21.041	24.997	4.850	1.00 28.25	C
ATOM	1630	O	LEU	A	102	21.956	24.311	4.421	1.00 28.02	O
ATOM	1631	N	ALA	A	103	20.682	25.055	6.124	1.00 27.78	N
ATOM	1633	CA	ALA	A	103	21.319	24.309	7.209	1.00 28.28	C
ATOM	1635	CB	ALA	A	103	21.919	25.280	8.249	1.00 27.63	C
ATOM	1639	C	ALA	A	103	20.372	23.335	7.920	1.00 27.78	C
ATOM	1640	O	ALA	A	103	19.175	23.532	7.962	1.00 28.37	O
ATOM	1641	N	LEU	A	104	20.968	22.342	8.556	1.00 27.89	N
ATOM	1643	CA	LEU	A	104	20.275	21.212	9.157	1.00 28.02	C
ATOM	1645	CB	LEU	A	104	20.394	19.995	8.238	1.00 28.07	C
ATOM	1648	CG	LEU	A	104	19.949	18.651	8.852	1.00 28.09	C
ATOM	1650	CD1	LEU	A	104	18.419	18.625	9.033	1.00 29.23	C
ATOM	1654	CD2	LEU	A	104	20.454	17.502	7.987	1.00 25.24	C
ATOM	1658	C	LEU	A	104	20.872	20.838	10.526	1.00 27.93	C
ATOM	1659	O	LEU	A	104	22.067	20.669	10.652	1.00 27.08	O
ATOM	1660	N	TRP	A	105	20.008	20.701	11.528	1.00 28.54	N
ATOM	1662	CA	TRP	A	105	20.336	20.044	12.788	1.00 29.12	C
ATOM	1664	CB	TRP	A	105	19.948	20.876	13.966	1.00 28.55	C
ATOM	1667	CG	TRP	A	105	20.818	22.007	14.275	1.00 26.92	C
ATOM	1668	CD1	TRP	A	105	21.645	22.109	15.319	1.00 26.27	C
ATOM	1670	NE1	TRP	A	105	22.236	23.354	15.336	1.00 27.49	N
ATOM	1672	CE2	TRP	A	105	21.805	24.065	14.249	1.00 24.51	C
ATOM	1673	CD2	TRP	A	105	20.900	23.255	13.563	1.00 25.92	C
ATOM	1674	CE3	TRP	A	105	20.298	23.766	12.404	1.00 23.92	C
ATOM	1676	CZ3	TRP	A	105	20.619	25.036	12.004	1.00 20.81	C
ATOM	1678	CH2	TRP	A	105	21.531	25.801	12.702	1.00 22.77	C
ATOM	1680	CZ2	TRP	A	105	22.123	25.344	13.831	1.00 24.15	C
ATOM	1682	C	TRP	A	105	19.533	18.768	12.831	1.00 30.89	C
ATOM	1683	O	TRP	A	105	18.354	18.759	13.253	1.00 29.86	O
ATOM	1684	N	ARG	A	106	20.155	17.725	12.294	1.00 32.55	N
ATOM	1686	CA	ARG	A	106	19.625	16.397	12.320	1.00 34.31	C
ATOM	1688	CB	ARG	A	106	20.444	15.507	11.406	1.00 34.60	C
ATOM	1691	CG	ARG	A	106	19.793	14.166	11.167	1.00 34.61	C
ATOM	1694	CD	ARG	A	106	20.641	13.211	10.413	1.00 32.98	C
ATOM	1697	NE	ARG	A	106	20.111	11.852	10.495	1.00 32.55	N
ATOM	1699	CZ	ARG	A	106	20.436	10.905	9.636	1.00 31.99	C
ATOM	1700	NH1	ARG	A	106	21.288	11.184	8.660	1.00 32.67	N
ATOM	1703	NH2	ARG	A	106	19.930	9.683	9.750	1.00 30.96	N
ATOM	1706	C	ARG	A	106	19.650	15.857	13.754	1.00 36.51	C
ATOM	1707	O	ARG	A	106	20.693	15.855	14.446	1.00 37.25	O
ATOM	1708	N	VAL	A	107	18.481	15.403	14.189	1.00 38.78	N
ATOM	1710	CA	VAL	A	107	18.283	14.966	15.545	1.00 39.84	C
ATOM	1712	CB	VAL	A	107	18.164	16.189	16.438	1.00 39.84	C
ATOM	1714	CG1	VAL	A	107	16.708	16.499	16.819	1.00 41.12	C
ATOM	1718	CG2	VAL	A	107	19.051	16.042	17.654	1.00 40.84	C
ATOM	1722	C	VAL	A	107	17.111	13.965	15.699	1.00 41.13	C
ATOM	1723	O	VAL	A	107	16.209	13.900	14.883	1.00 39.11	O
ATOM	1724	N	GLU	A	108	17.206	13.131	16.742	1.00 43.96	N
ATOM	1726	CA	GLU	A	108	16.154	12.191	17.101	1.00 45.60	C
ATOM	1728	CB	GLU	A	108	16.655	11.205	18.153	1.00 46.48	C
ATOM	1731	CG	GLU	A	108	16.853	11.803	19.554	1.00 49.27	C
ATOM	1734	CD	GLU	A	108	17.315	10.781	20.597	1.00 50.73	C
ATOM	1735	OE1	GLU	A	108	16.443	10.260	21.322	1.00 53.24	O
ATOM	1736	OE2	GLU	A	108	18.534	10.491	20.678	1.00 52.15	O
ATOM	1737	C	GLU	A	108	14.945	12.990	17.598	1.00 46.20	C
ATOM	1738	O	GLU	A	108	15.093	14.039	18.216	1.00 46.11	O
ATOM	1739	N	ARG	A	109	13.758	12.489	17.273	1.00 47.18	N
ATOM	1741	CA	ARG	A	109	12.485	13.206	17.405	1.00 47.92	C
ATOM	1743	CB	ARG	A	109	11.354	12.240	17.060	1.00 48.57	C
ATOM	1746	CG	ARG	A	109	10.212	12.830	16.289	1.00 51.83	C
ATOM	1749	CD	ARG	A	109	9.210	11.735	15.848	1.00 56.99	C
ATOM	1752	NE	ARG	A	109	9.487	11.138	14.518	1.00 60.06	N

ATOM	1754	CZ	ARG A 109	9.854	9.865	14.263	1.00	61.83		C
ATOM	1755	NH1	ARG A 109	10.063	8.967	15.235	1.00	62.86		N
ATOM	1758	NH2	ARG A 109	10.033	9.493	12.998	1.00	61.82		N
ATOM	1761	C	ARG A 109	12.239	13.791	18.787	1.00	47.56		C
ATOM	1762	O	ARG A 109	11.794	14.919	18.918	1.00	47.61		O
ATOM	1763	N	LYS A 110	12.532	13.031	19.829	1.00	47.69		N
ATOM	1765	CA	LYS A 110	12.315	13.531	21.184	1.00	48.15		C
ATOM	1767	CB	LYS A 110	12.628	12.451	22.240	1.00	48.87		C
ATOM	1770	CG	LYS A 110	11.385	11.729	22.769	1.00	51.10		C
ATOM	1773	CD	LYS A 110	11.620	10.231	22.973	1.00	54.19		C
ATOM	1776	CE	LYS A 110	10.287	9.450	23.014	1.00	55.19		C
ATOM	1779	NZ	LYS A 110	10.430	8.272	23.898	1.00	56.27		N
ATOM	1783	C	LYS A 110	13.133	14.783	21.454	1.00	47.55		C
ATOM	1784	O	LYS A 110	12.786	15.571	22.343	1.00	48.18		O
ATOM	1785	N	GLN A 111	14.218	14.977	20.702	1.00	46.41		N
ATOM	1787	CA	GLN A 111	15.099	16.130	20.929	1.00	45.84		C
ATOM	1789	CB	GLN A 111	16.574	15.706	20.772	1.00	45.92		C
ATOM	1792	CG	GLN A 111	17.027	14.819	21.894	1.00	46.33		C
ATOM	1795	CD	GLN A 111	16.640	15.407	23.248	1.00	49.72		C
ATOM	1796	OE1	GLN A 111	16.854	16.596	23.501	1.00	50.29		O
ATOM	1797	NE2	GLN A 111	16.036	14.589	24.104	1.00	52.15		N
ATOM	1800	C	GLN A 111	14.784	17.389	20.103	1.00	44.54		C
ATOM	1801	O	GLN A 111	15.442	18.416	20.284	1.00	43.99		O
ATOM	1802	N	LEU A 112	13.770	17.323	19.239	1.00	42.92		N
ATOM	1804	CA	LEU A 112	13.448	18.432	18.322	1.00	41.76		C
ATOM	1806	CB	LEU A 112	12.275	18.050	17.417	1.00	41.52		C
ATOM	1809	CG	LEU A 112	12.626	17.165	16.229	1.00	39.96		C
ATOM	1811	CD1	LEU A 112	11.372	16.611	15.544	1.00	39.04		C
ATOM	1815	CD2	LEU A 112	13.479	17.942	15.241	1.00	38.26		C
ATOM	1819	C	LEU A 112	13.115	19.727	19.020	1.00	41.45		C
ATOM	1820	O	LEU A 112	13.450	20.821	18.547	1.00	41.20		O
ATOM	1821	N	LYS A 113	12.439	19.587	20.148	1.00	41.39		N
ATOM	1823	CA	LYS A 113	11.992	20.705	20.954	1.00	41.10		C
ATOM	1825	CB	LYS A 113	11.170	20.170	22.146	1.00	41.83		C
ATOM	1828	CG	LYS A 113	10.296	21.199	22.873	1.00	43.95		C
ATOM	1831	CD	LYS A 113	9.783	20.659	24.231	1.00	47.47		C
ATOM	1834	CE	LYS A 113	9.338	21.819	25.115	1.00	50.42		C
ATOM	1837	NZ	LYS A 113	8.940	21.486	26.528	1.00	52.83		N
ATOM	1841	C	LYS A 113	13.157	21.536	21.437	1.00	40.27		C
ATOM	1842	O	LYS A 113	13.201	22.747	21.223	1.00	40.21		O
ATOM	1843	N	ASN A 114	14.104	20.894	22.107	1.00	40.18		N
ATOM	1845	CA	ASN A 114	15.261	21.606	22.647	1.00	40.14		C
ATOM	1847	CB	ASN A 114	16.100	20.695	23.528	1.00	40.53		C
ATOM	1850	CG	ASN A 114	15.406	20.372	24.834	1.00	41.37		C
ATOM	1851	OD1	ASN A 114	14.752	21.242	25.415	1.00	40.97		O
ATOM	1852	ND2	ASN A 114	15.540	19.135	25.296	1.00	38.81		N
ATOM	1855	C	ASN A 114	16.133	22.201	21.577	1.00	39.74		C
ATOM	1856	O	ASN A 114	16.672	23.269	21.770	1.00	40.13		O
ATOM	1857	N	ILE A 115	16.215	21.513	20.446	1.00	39.54		N
ATOM	1859	CA	ILE A 115	17.033	21.911	19.308	1.00	39.95		C
ATOM	1861	CB	ILE A 115	17.259	20.717	18.336	1.00	40.02		C
ATOM	1863	CG1	ILE A 115	18.114	19.666	19.035	1.00	40.10		C
ATOM	1866	CD1	ILE A 115	19.569	20.130	19.289	1.00	39.69		C
ATOM	1870	CG2	ILE A 115	17.944	21.164	17.046	1.00	39.83		C
ATOM	1874	C	ILE A 115	16.464	23.077	18.558	1.00	39.30		C
ATOM	1875	O	ILE A 115	17.223	23.839	17.991	1.00	39.27		O
ATOM	1876	N	ILE A 116	15.141	23.233	18.568	1.00	38.50		N
ATOM	1878	CA	ILE A 116	14.527	24.442	18.010	1.00	37.04		C
ATOM	1880	CB	ILE A 116	13.007	24.311	17.963	1.00	36.69		C
ATOM	1882	CG1	ILE A 116	12.609	23.328	16.891	1.00	37.21		C
ATOM	1885	CD1	ILE A 116	11.150	22.929	16.923	1.00	39.01		C
ATOM	1889	CG2	ILE A 116	12.362	25.657	17.676	1.00	38.72		C
ATOM	1893	C	ILE A 116	14.951	25.652	18.816	1.00	36.04		C
ATOM	1894	O	ILE A 116	15.152	26.728	18.275	1.00	36.65		O
ATOM	1895	N	THR A 117	15.104	25.494	20.113	1.00	35.32		N
ATOM	1897	CA	THR A 117	15.478	26.630	20.946	1.00	35.46		C
ATOM	1899	CB	THR A 117	15.410	26.253	22.438	1.00	35.71		C

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ATOM   1901  OG1 THR A 117      14.070  25.911  22.795  1.00 38.07           O
ATOM   1903  CG2 THR A 117      15.769  27.451  23.314  1.00 35.66           C
ATOM   1907  C   THR A 117      16.889  27.083  20.613  1.00 34.93           C
ATOM   1908  O   THR A 117      17.182  28.258  20.579  1.00 34.85           O
ATOM   1909  N   VAL A 118      17.764  26.105  20.423  1.00 35.53           N
ATOM   1911  CA  VAL A 118      19.124  26.309  19.915  1.00 34.93           C
ATOM   1913  CB  VAL A 118      19.896  24.943  19.756  1.00 34.77           C
ATOM   1915  CG1 VAL A 118      21.254  25.170  19.043  1.00 34.53           C
ATOM   1919  CG2 VAL A 118      20.081  24.247  21.117  1.00 33.15           C
ATOM   1923  C   VAL A 118      19.135  26.945  18.543  1.00 34.18           C
ATOM   1924  O   VAL A 118      19.924  27.817  18.279  1.00 34.29           O
ATOM   1925  N   VAL A 119      18.265  26.510  17.654  1.00 34.32           N
ATOM   1927  CA  VAL A 119      18.327  27.020  16.294  1.00 34.52           C
ATOM   1929  CB  VAL A 119      17.592  26.108  15.328  1.00 34.36           C
ATOM   1931  CG1 VAL A 119      17.622  26.666  13.931  1.00 34.98           C
ATOM   1935  CG2 VAL A 119      18.239  24.755  15.314  1.00 34.90           C
ATOM   1939  C   VAL A 119      17.790  28.442  16.284  1.00 34.90           C
ATOM   1940  O   VAL A 119      18.166  29.267  15.441  1.00 35.68           O
ATOM   1941  N   ILE A 120      16.929  28.762  17.234  1.00 35.43           N
ATOM   1943  CA  ILE A 120      16.327  30.084  17.229  1.00 36.04           C
ATOM   1945  CB  ILE A 120      15.039  30.132  18.088  1.00 36.33           C
ATOM   1947  CG1 ILE A 120      13.868  29.485  17.337  1.00 36.72           C
ATOM   1950  CD1 ILE A 120      12.644  29.169  18.210  1.00 37.57           C
ATOM   1954  CG2 ILE A 120      14.710  31.572  18.436  1.00 36.41           C
ATOM   1958  C   ILE A 120      17.350  31.084  17.736  1.00 35.78           C
ATOM   1959  O   ILE A 120      17.441  32.209  17.246  1.00 36.24           O
ATOM   1960  N   LYS A 121      18.089  30.686  18.748  1.00 35.46           N
ATOM   1962  CA  LYS A 121      19.104  31.559  19.306  1.00 36.02           C
ATOM   1964  CB  LYS A 121      19.728  30.889  20.527  1.00 35.91           C
ATOM   1967  CG  LYS A 121      20.756  31.687  21.232  1.00 37.80           C
ATOM   1970  CD  LYS A 121      20.199  32.409  22.420  1.00 41.04           C
ATOM   1973  CE  LYS A 121      21.115  33.557  22.847  1.00 43.11           C
ATOM   1976  NZ  LYS A 121      21.846  33.286  24.105  1.00 45.06           N
ATOM   1980  C   LYS A 121      20.149  31.858  18.229  1.00 36.23           C
ATOM   1981  O   LYS A 121      20.590  33.010  18.078  1.00 37.01           O
ATOM   1982  N   CYS A 122      20.532  30.816  17.482  1.00 35.58           N
ATOM   1984  CA  CYS A 122      21.423  30.944  16.363  1.00 34.73           C
ATOM   1986  CB  CYS A 122      21.591  29.599  15.656  1.00 34.74           C
ATOM   1989  SG  CYS A 122      22.885  29.643  14.404  1.00 30.88           S
ATOM   1990  C   CYS A 122      20.915  31.979  15.398  1.00 35.78           C
ATOM   1991  O   CYS A 122      21.640  32.868  15.034  1.00 35.60           O
ATOM   1992  N   SER A 123      19.670  31.836  14.970  1.00 37.20           N
ATOM   1994  CA  SER A 123      19.006  32.790  14.079  1.00 38.51           C
ATOM   1996  CB  SER A 123      17.499  32.484  14.008  1.00 38.96           C
ATOM   1999  OG  SER A 123      17.230  31.272  13.338  1.00 38.95           O
ATOM   2001  C   SER A 123      19.137  34.246  14.525  1.00 39.71           C
ATOM   2002  O   SER A 123      19.417  35.140  13.715  1.00 39.98           O
ATOM   2003  N   LEU A 124      18.893  34.504  15.802  1.00 40.57           N
ATOM   2005  CA  LEU A 124      18.882  35.876  16.262  1.00 41.46           C
ATOM   2007  CB  LEU A 124      18.054  36.056  17.540  1.00 41.77           C
ATOM   2010  CG  LEU A 124      16.599  35.551  17.564  1.00 40.54           C
ATOM   2012  CD1 LEU A 124      16.243  35.118  18.938  1.00 38.97           C
ATOM   2016  CD2 LEU A 124      15.640  36.595  17.100  1.00 40.53           C
ATOM   2020  C   LEU A 124      20.318  36.375  16.447  1.00 42.57           C
ATOM   2021  O   LEU A 124      20.570  37.550  16.267  1.00 43.01           O
ATOM   2022  N   GLU A 125      21.268  35.504  16.768  1.00 43.74           N
ATOM   2024  CA  GLU A 125      22.669  35.909  16.707  1.00 44.81           C
ATOM   2026  CB  GLU A 125      23.596  34.907  17.417  1.00 45.36           C
ATOM   2029  CG  GLU A 125      23.467  34.897  18.955  1.00 46.41           C
ATOM   2032  CD  GLU A 125      24.636  34.212  19.674  1.00 49.22           C
ATOM   2033  OE1 GLU A 125      25.673  33.946  19.007  1.00 55.10           O
ATOM   2034  OE2 GLU A 125      24.542  33.922  20.901  1.00 48.19           O
ATOM   2035  C   GLU A 125      23.094  36.201  15.244  1.00 45.39           C
ATOM   2036  O   GLU A 125      23.891  37.104  15.007  1.00 45.69           O
ATOM   2037  N   ILE A 126      22.526  35.510  14.263  1.00 46.43           N
ATOM   2039  CA  ILE A 126      22.828  35.813  12.864  1.00 47.54           C
ATOM   2041  CB  ILE A 126      22.247  34.735  11.891  1.00 47.20           C
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ATOM	2043	CG1	ILE	A	126	23.031	33.425	11.995	1.00 47.01	C
ATOM	2046	CD1	ILE	A	126	22.280	32.209	11.494	1.00 46.44	C
ATOM	2050	CG2	ILE	A	126	22.282	35.224	10.462	1.00 45.88	C
ATOM	2054	C	ILE	A	126	22.311	37.211	12.492	1.00 49.46	C
ATOM	2055	O	ILE	A	126	22.972	37.948	11.748	1.00 49.28	O
ATOM	2056	N	HIS	A	127	21.140	37.581	13.010	1.00 51.31	N
ATOM	2058	CA	HIS	A	127	20.594	38.919	12.765	1.00 52.87	C
ATOM	2060	CB	HIS	A	127	19.137	38.989	13.192	1.00 52.90	C
ATOM	2063	CG	HIS	A	127	18.222	38.307	12.232	1.00 52.62	C
ATOM	2064	ND1	HIS	A	127	18.291	38.508	10.871	1.00 53.42	N
ATOM	2066	CE1	HIS	A	127	17.374	37.775	10.268	1.00 52.79	C
ATOM	2068	NE2	HIS	A	127	16.727	37.088	11.189	1.00 54.14	N
ATOM	2070	CD2	HIS	A	127	17.240	37.403	12.427	1.00 53.18	C
ATOM	2072	C	HIS	A	127	21.420	40.011	13.431	1.00 54.45	C
ATOM	2073	O	HIS	A	127	21.640	41.063	12.846	1.00 55.22	O
ATOM	2074	N	GLY	A	128	21.918	39.744	14.624	1.00 56.54	N
ATOM	2076	CA	GLY	A	128	22.824	40.659	15.301	1.00 58.75	C
ATOM	2079	C	GLY	A	128	24.231	40.825	14.719	1.00 60.46	C
ATOM	2080	O	GLY	A	128	25.037	41.581	15.265	1.00 60.62	O
ATOM	2081	N	LEU	A	129	24.548	40.104	13.644	1.00 62.84	N
ATOM	2083	CA	LEU	A	129	25.782	40.348	12.879	1.00 64.46	C
ATOM	2085	CB	LEU	A	129	26.165	39.141	12.017	1.00 64.07	C
ATOM	2088	CG	LEU	A	129	26.332	37.796	12.722	1.00 63.64	C
ATOM	2090	CD1	LEU	A	129	26.335	36.658	11.701	1.00 62.49	C
ATOM	2094	CD2	LEU	A	129	27.605	37.812	13.554	1.00 63.76	C
ATOM	2098	C	LEU	A	129	25.541	41.530	11.966	1.00 66.22	C
ATOM	2099	O	LEU	A	129	26.429	42.331	11.723	1.00 66.22	O
ATOM	2100	N	PHE	A	130	24.310	41.610	11.480	1.00 68.90	N
ATOM	2102	CA	PHE	A	130	23.889	42.606	10.520	1.00 71.25	C
ATOM	2104	CB	PHE	A	130	23.254	41.869	9.342	1.00 70.99	C
ATOM	2107	CG	PHE	A	130	24.167	40.817	8.767	1.00 70.65	C
ATOM	2108	CD1	PHE	A	130	23.900	39.457	8.944	1.00 69.55	C
ATOM	2110	CE1	PHE	A	130	24.764	38.499	8.436	1.00 68.59	C
ATOM	2112	CZ	PHE	A	130	25.929	38.895	7.769	1.00 68.42	C
ATOM	2114	CE2	PHE	A	130	26.215	40.245	7.612	1.00 68.29	C
ATOM	2116	CD2	PHE	A	130	25.345	41.195	8.108	1.00 68.74	C
ATOM	2118	C	PHE	A	130	22.965	43.655	11.145	1.00 73.87	C
ATOM	2119	O	PHE	A	130	21.940	44.025	10.563	1.00 74.10	O
ATOM	2120	N	GLU	A	131	23.357	44.123	12.336	1.00 76.91	N
ATOM	2122	CA	GLU	A	131	22.735	45.282	12.990	1.00 79.38	C
ATOM	2124	CB	GLU	A	131	22.728	45.128	14.538	1.00 79.63	C
ATOM	2127	CG	GLU	A	131	21.328	45.083	15.174	1.00 80.28	C
ATOM	2130	CD	GLU	A	131	21.168	44.044	16.291	1.00 80.84	C
ATOM	2131	OE1	GLU	A	131	22.128	43.821	17.070	1.00 80.28	O
ATOM	2132	OE2	GLU	A	131	20.062	43.461	16.399	1.00 79.85	O
ATOM	2133	C	GLU	A	131	23.505	46.537	12.542	1.00 81.43	C
ATOM	2134	O	GLU	A	131	23.004	47.316	11.715	1.00 81.38	O
ATOM	2135	N	THR	A	132	24.730	46.707	13.058	1.00 83.90	N
ATOM	2137	CA	THR	A	132	25.611	47.806	12.629	1.00 85.83	C
ATOM	2139	CB	THR	A	132	26.649	48.228	13.760	1.00 86.12	C
ATOM	2141	OG1	THR	A	132	27.678	47.236	13.922	1.00 86.52	O
ATOM	2143	CG2	THR	A	132	25.998	48.318	15.160	1.00 86.29	C
ATOM	2147	C	THR	A	132	26.335	47.397	11.331	1.00 87.30	C
ATOM	2148	O	THR	A	132	27.438	46.838	11.383	1.00 87.40	O
ATOM	2149	N	GLN	A	133	25.704	47.662	10.176	1.00 88.84	N
ATOM	2151	CA	GLN	A	133	26.229	47.211	8.870	1.00 89.90	C
ATOM	2153	CB	GLN	A	133	25.818	45.752	8.620	1.00 89.99	C
ATOM	2156	CG	GLN	A	133	26.923	44.876	8.050	1.00 90.51	C
ATOM	2159	CD	GLN	A	133	27.776	44.231	9.126	1.00 91.33	C
ATOM	2160	OE1	GLN	A	133	28.900	44.672	9.385	1.00 92.16	O
ATOM	2161	NE2	GLN	A	133	27.256	43.178	9.742	1.00 90.99	N
ATOM	2164	C	GLN	A	133	25.788	48.075	7.670	1.00 90.72	C
ATOM	2165	O	GLN	A	133	24.878	48.896	7.796	1.00 91.17	O
ATOM	2166	N	GLU	A	134	26.448	47.868	6.518	1.00 91.43	N
ATOM	2168	CA	GLU	A	134	26.153	48.540	5.232	1.00 91.76	C
ATOM	2170	CB	GLU	A	134	24.707	48.223	4.738	1.00 92.03	C
ATOM	2173	CG	GLU	A	134	23.732	49.384	4.472	1.00 93.02	C

ATOM	2176	CD	GLU	A	134	23.878	50.012	3.085	1.00	93.91	C
ATOM	2177	OE1	GLU	A	134	24.184	51.233	3.005	1.00	93.28	O
ATOM	2178	OE2	GLU	A	134	23.675	49.285	2.079	1.00	94.10	O
ATOM	2179	C	GLU	A	134	26.534	50.040	5.219	1.00	91.83	C
ATOM	2180	O	GLU	A	134	25.790	50.934	5.635	1.00	91.81	O
ATOM	2181	N	ILE	A	141	22.230	46.101	3.919	1.00	66.08	N
ATOM	2183	CA	ILE	A	141	21.697	44.808	3.468	1.00	65.52	C
ATOM	2185	CB	ILE	A	141	22.682	44.115	2.488	1.00	65.80	C
ATOM	2187	CG1	ILE	A	141	23.240	45.105	1.454	1.00	67.05	C
ATOM	2190	CD1	ILE	A	141	24.773	45.165	1.463	1.00	68.19	C
ATOM	2194	CG2	ILE	A	141	22.014	42.973	1.784	1.00	65.41	C
ATOM	2198	C	ILE	A	141	21.459	43.895	4.683	1.00	64.66	C
ATOM	2199	O	ILE	A	141	22.198	43.973	5.688	1.00	64.83	O
ATOM	2200	N	ARG	A	142	20.442	43.030	4.596	1.00	63.17	N
ATOM	2202	CA	ARG	A	142	20.144	42.078	5.680	1.00	61.79	C
ATOM	2204	CB	ARG	A	142	19.141	42.694	6.691	1.00	62.39	C
ATOM	2207	CG	ARG	A	142	19.474	44.129	7.214	1.00	64.87	C
ATOM	2210	CD	ARG	A	142	19.460	44.270	8.743	1.00	68.17	C
ATOM	2213	NE	ARG	A	142	18.925	45.550	9.235	1.00	70.51	N
ATOM	2215	CZ	ARG	A	142	17.636	45.930	9.176	1.00	72.69	C
ATOM	2216	NH1	ARG	A	142	16.705	45.153	8.620	1.00	74.00	N
ATOM	2219	NH2	ARG	A	142	17.274	47.109	9.670	1.00	73.26	N
ATOM	2222	C	ARG	A	142	19.670	40.670	5.197	1.00	59.44	C
ATOM	2223	O	ARG	A	142	19.581	40.384	3.991	1.00	58.17	O
ATOM	2224	N	VAL	A	143	19.395	39.793	6.165	1.00	56.91	N
ATOM	2226	CA	VAL	A	143	18.928	38.447	5.884	1.00	54.88	C
ATOM	2228	CB	VAL	A	143	19.878	37.395	6.518	1.00	55.23	C
ATOM	2230	CG1	VAL	A	143	21.342	37.880	6.463	1.00	55.75	C
ATOM	2234	CG2	VAL	A	143	19.513	37.087	7.960	1.00	55.65	C
ATOM	2238	C	VAL	A	143	17.508	38.257	6.363	1.00	52.83	C
ATOM	2239	O	VAL	A	143	17.062	38.942	7.280	1.00	52.38	O
ATOM	2240	N	LYS	A	144	16.797	37.348	5.699	1.00	51.00	N
ATOM	2242	CA	LYS	A	144	15.514	36.806	6.176	1.00	49.62	C
ATOM	2244	CB	LYS	A	144	14.398	36.933	5.121	1.00	49.79	C
ATOM	2247	CG	LYS	A	144	14.411	38.180	4.208	1.00	51.17	C
ATOM	2250	CD	LYS	A	144	13.360	38.056	3.074	1.00	52.57	C
ATOM	2253	CE	LYS	A	144	13.270	39.323	2.156	1.00	53.62	C
ATOM	2256	NZ	LYS	A	144	12.513	39.077	0.842	1.00	52.28	N
ATOM	2260	C	LYS	A	144	15.716	35.320	6.496	1.00	47.59	C
ATOM	2261	O	LYS	A	144	16.368	34.615	5.732	1.00	48.24	O
ATOM	2262	N	ILE	A	145	15.143	34.843	7.597	1.00	44.98	N
ATOM	2264	CA	ILE	A	145	15.339	33.463	8.045	1.00	43.05	C
ATOM	2266	CB	ILE	A	145	16.210	33.392	9.323	1.00	42.67	C
ATOM	2268	CG1	ILE	A	145	17.583	33.977	9.042	1.00	42.52	C
ATOM	2271	CD1	ILE	A	145	18.375	34.266	10.251	1.00	42.64	C
ATOM	2275	CG2	ILE	A	145	16.357	31.956	9.787	1.00	40.59	C
ATOM	2279	C	ILE	A	145	14.020	32.775	8.318	1.00	41.95	C
ATOM	2280	O	ILE	A	145	13.191	33.297	9.074	1.00	41.40	O
ATOM	2281	N	GLY	A	146	13.844	31.608	7.699	1.00	40.55	N
ATOM	2283	CA	GLY	A	146	12.787	30.683	8.061	1.00	40.22	C
ATOM	2286	C	GLY	A	146	13.310	29.374	8.671	1.00	39.26	C
ATOM	2287	O	GLY	A	146	14.284	28.812	8.191	1.00	37.71	O
ATOM	2288	N	LEU	A	147	12.630	28.917	9.724	1.00	38.56	N
ATOM	2290	CA	LEU	A	147	12.883	27.647	10.398	1.00	38.30	C
ATOM	2292	CB	LEU	A	147	13.102	27.890	11.888	1.00	38.19	C
ATOM	2295	CG	LEU	A	147	14.060	29.011	12.270	1.00	38.71	C
ATOM	2297	CD1	LEU	A	147	14.241	29.061	13.760	1.00	38.19	C
ATOM	2301	CD2	LEU	A	147	15.401	28.826	11.598	1.00	40.07	C
ATOM	2305	C	LEU	A	147	11.726	26.657	10.206	1.00	38.18	C
ATOM	2306	O	LEU	A	147	10.581	27.038	10.106	1.00	38.68	O
ATOM	2307	N	ALA	A	148	12.034	25.377	10.139	1.00	38.21	N
ATOM	2309	CA	ALA	A	148	11.028	24.334	9.998	1.00	37.47	C
ATOM	2311	CB	ALA	A	148	10.856	23.973	8.582	1.00	37.49	C
ATOM	2315	C	ALA	A	148	11.545	23.153	10.786	1.00	37.79	C
ATOM	2316	O	ALA	A	148	12.722	23.126	11.130	1.00	38.32	O
ATOM	2317	N	ALA	A	149	10.663	22.209	11.112	1.00	37.30	N
ATOM	2319	CA	ALA	A	149	10.999	21.047	11.945	1.00	36.75	C

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ATOM   2321  CB  ALA A 149      10.859  21.389  13.397  1.00 36.97           C
ATOM   2325  C   ALA A 149      10.097  19.879  11.588  1.00 36.54           C
ATOM   2326  O   ALA A 149       8.959  20.071  11.178  1.00 37.23           O
ATOM   2327  N   GLY A 150      10.609  18.663  11.708  1.00 36.53           N
ATOM   2329  CA  GLY A 150       9.843  17.474  11.401  1.00 35.52           C
ATOM   2332  C   GLY A 150      10.557  16.488  10.531  1.00 35.96           C
ATOM   2333  O   GLY A 150      11.777  16.405  10.501  1.00 36.00           O
ATOM   2334  N   HIS A 151       9.766  15.720   9.795  1.00 36.64           N
ATOM   2336  CA  HIS A 151      10.283  14.638   8.972  1.00 37.07           C
ATOM   2338  CB  HIS A 151       9.158  13.690   8.528  1.00 37.64           C
ATOM   2341  CG  HIS A 151       8.303  13.214   9.664  1.00 41.45           C
ATOM   2342  ND1 HIS A 151       8.825  12.561  10.765  1.00 45.31           N
ATOM   2344  CE1 HIS A 151       7.849  12.304  11.620  1.00 46.72           C
ATOM   2346  NE2 HIS A 151       6.717  12.770  11.116  1.00 47.30           N
ATOM   2348  CD2 HIS A 151       6.977  13.352   9.900  1.00 44.24           C
ATOM   2350  C   HIS A 151      10.997  15.221   7.780  1.00 36.09           C
ATOM   2351  O   HIS A 151      10.567  16.257   7.268  1.00 36.45           O
ATOM   2352  N   ILE A 152      12.100  14.553   7.392  1.00 34.84           N
ATOM   2354  CA  ILE A 152      12.988  14.919   6.268  1.00 33.50           C
ATOM   2356  CB  ILE A 152      14.210  15.768   6.742  1.00 33.01           C
ATOM   2358  CG1 ILE A 152      13.723  17.013   7.448  1.00 30.34           C
ATOM   2361  CD1 ILE A 152      14.762  17.735   8.099  1.00 29.29           C
ATOM   2365  CG2 ILE A 152      15.092  16.221   5.559  1.00 33.61           C
ATOM   2369  C   ILE A 152      13.475  13.652   5.585  1.00 33.65           C
ATOM   2370  O   ILE A 152      13.807  12.660   6.232  1.00 32.96           O
ATOM   2371  N   SER A 153      13.478  13.670   4.261  1.00 33.73           N
ATOM   2373  CA  SER A 153      14.054  12.580   3.494  1.00 34.43           C
ATOM   2375  CB  SER A 153      13.018  11.962   2.568  1.00 34.41           C
ATOM   2378  OG  SER A 153      11.787  11.862   3.240  1.00 36.80           O
ATOM   2380  C   SER A 153      15.209  13.106   2.691  1.00 33.89           C
ATOM   2381  O   SER A 153      15.227  14.237   2.297  1.00 34.32           O
ATOM   2382  N   MET A 154      16.195  12.282   2.469  1.00 34.47           N
ATOM   2384  CA  MET A 154      17.326  12.696   1.676  1.00 35.05           C
ATOM   2386  CB  MET A 154      18.615  12.554   2.471  1.00 35.89           C
ATOM   2389  CG  MET A 154      19.842  12.625   1.600  1.00 38.13           C
ATOM   2392  SD  MET A 154      21.055  11.578   2.256  1.00 46.76           S
ATOM   2393  CE  MET A 154      22.390  12.551   1.927  1.00 46.97           C
ATOM   2397  C   MET A 154      17.357  11.804   0.470  1.00 34.27           C
ATOM   2398  O   MET A 154      17.111  10.618   0.561  1.00 34.88           O
ATOM   2399  N   LEU A 155      17.630  12.377  -0.677  1.00 33.56           N
ATOM   2401  CA  LEU A 155      17.717  11.598  -1.888  1.00 33.25           C
ATOM   2403  CB  LEU A 155      16.675  12.095  -2.883  1.00 33.22           C
ATOM   2406  CG  LEU A 155      16.713  11.405  -4.236  1.00 36.11           C
ATOM   2408  CD1 LEU A 155      16.039  10.040  -4.148  1.00 37.42           C
ATOM   2412  CD2 LEU A 155      16.071  12.281  -5.333  1.00 37.91           C
ATOM   2416  C   LEU A 155      19.107  11.780  -2.444  1.00 32.30           C
ATOM   2417  O   LEU A 155      19.538  12.909  -2.609  1.00 32.27           O
ATOM   2418  N   VAL A 156      19.796  10.674  -2.704  1.00 31.68           N
ATOM   2420  CA  VAL A 156      21.040  10.668  -3.423  1.00 31.81           C
ATOM   2422  CB  VAL A 156      22.111   9.898  -2.660  1.00 31.88           C
ATOM   2424  CG1 VAL A 156      23.392   9.764  -3.511  1.00 32.37           C
ATOM   2428  CG2 VAL A 156      22.418  10.611  -1.388  1.00 32.10           C
ATOM   2432  C   VAL A 156      20.839  10.055  -4.809  1.00 32.37           C
ATOM   2433  O   VAL A 156      20.287   8.972  -4.946  1.00 31.87           O
ATOM   2434  N   PHE A 157      21.271  10.760  -5.853  1.00 33.08           N
ATOM   2436  CA  PHE A 157      21.144  10.218  -7.209  1.00 33.50           C
ATOM   2438  CB  PHE A 157      19.850  10.723  -7.862  1.00 33.75           C
ATOM   2441  CG  PHE A 157      19.785  12.191  -7.977  1.00 33.30           C
ATOM   2442  CD1 PHE A 157      20.294  12.817  -9.094  1.00 32.37           C
ATOM   2444  CE1 PHE A 157      20.270  14.182  -9.208  1.00 34.82           C
ATOM   2446  CZ  PHE A 157      19.719  14.954  -8.176  1.00 35.49           C
ATOM   2448  CE2 PHE A 157      19.199  14.327  -7.037  1.00 35.47           C
ATOM   2450  CD2 PHE A 157      19.237  12.958  -6.946  1.00 35.66           C
ATOM   2452  C   PHE A 157      22.379  10.522  -8.025  1.00 33.27           C
ATOM   2453  O   PHE A 157      23.168  11.346  -7.636  1.00 33.97           O
ATOM   2454  N   GLY A 158      22.574   9.795  -9.114  1.00 33.94           N
ATOM   2456  CA  GLY A 158      23.680  10.006 -10.023  1.00 34.21           C
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ATOM   2459  C   GLY A 158      24.168   8.725 -10.663  1.00 35.09           C
ATOM   2460  O   GLY A 158      23.592   7.665 -10.549  1.00 35.81           O
ATOM   2461  N   ASP A 159      25.292   8.807 -11.330  1.00 36.17           N
ATOM   2463  CA  ASP A 159      25.823   7.647 -12.011  1.00 36.62           C
ATOM   2465  CB  ASP A 159      25.920   7.939 -13.511  1.00 36.40           C
ATOM   2468  CG  ASP A 159      26.673   9.230 -13.818  1.00 36.93           C
ATOM   2469  OD1 ASP A 159      27.681   9.531 -13.152  1.00 30.83           O
ATOM   2470  OD2 ASP A 159      26.337   9.999 -14.737  1.00 38.94           O
ATOM   2471  C   ASP A 159      27.164   7.268 -11.397  1.00 37.66           C
ATOM   2472  O   ASP A 159      27.395   7.525 -10.215  1.00 37.68           O
ATOM   2473  N   GLU A 160      28.022   6.653 -12.208  1.00 38.96           N
ATOM   2475  CA  GLU A 160      29.322   6.149 -11.799  1.00 40.26           C
ATOM   2477  CB  GLU A 160      29.878   5.174 -12.859  1.00 41.32           C
ATOM   2480  CG  GLU A 160      29.038   3.902 -13.067  1.00 46.41           C
ATOM   2483  CD  GLU A 160      28.992   3.002 -11.825  1.00 51.86           C
ATOM   2484  OE1 GLU A 160      30.045   2.796 -11.145  1.00 53.25           O
ATOM   2485  OE2 GLU A 160      27.873   2.501 -11.528  1.00 56.43           O
ATOM   2486  C   GLU A 160      30.378   7.217 -11.540  1.00 39.18           C
ATOM   2487  O   GLU A 160      31.300   6.969 -10.769  1.00 39.77           O
ATOM   2488  N   THR A 161      30.277   8.359 -12.209  1.00 37.58           N
ATOM   2490  CA  THR A 161      31.177   9.470 -11.967  1.00 36.82           C
ATOM   2492  CB  THR A 161      31.743   9.988 -13.276  1.00 36.86           C
ATOM   2494  OG1 THR A 161      30.741   9.947 -14.300  1.00 38.87           O
ATOM   2496  CG2 THR A 161      32.767   9.042 -13.799  1.00 38.34           C
ATOM   2500  C   THR A 161      30.582  10.638 -11.166  1.00 35.83           C
ATOM   2501  O   THR A 161      31.338  11.430 -10.658  1.00 36.56           O
ATOM   2502  N   HIS A 162      29.260  10.756 -11.048  1.00 33.92           N
ATOM   2504  CA  HIS A 162      28.653  11.949 -10.448  1.00 32.61           C
ATOM   2506  CB  HIS A 162      27.977  12.816 -11.511  1.00 33.06           C
ATOM   2509  CG  HIS A 162      28.905  13.300 -12.580  1.00 36.47           C
ATOM   2510  ND1 HIS A 162      30.132  13.867 -12.305  1.00 41.42           N
ATOM   2512  CE1 HIS A 162      30.738  14.169 -13.437  1.00 42.10           C
ATOM   2514  NE2 HIS A 162      29.950  13.816 -14.436  1.00 41.68           N
ATOM   2516  CD2 HIS A 162      28.801  13.266 -13.927  1.00 40.58           C
ATOM   2518  C   HIS A 162      27.623  11.599  -9.433  1.00 30.36           C
ATOM   2519  O   HIS A 162      26.946  10.608  -9.578  1.00 30.29           O
ATOM   2520  N   SER A 163      27.499  12.433  -8.413  1.00 28.50           N
ATOM   2522  CA  SER A 163      26.473  12.280  -7.399  1.00 27.45           C
ATOM   2524  CB  SER A 163      27.017  11.540  -6.189  1.00 26.67           C
ATOM   2527  OG  SER A 163      27.638  10.353  -6.618  1.00 25.10           O
ATOM   2529  C   SER A 163      25.926  13.630  -6.988  1.00 27.41           C
ATOM   2530  O   SER A 163      26.612  14.611  -7.036  1.00 26.64           O
ATOM   2531  N   HIS A 164      24.674  13.638  -6.566  1.00 28.16           N
ATOM   2533  CA  HIS A 164      23.981  14.829  -6.125  1.00 29.14           C
ATOM   2535  CB  HIS A 164      23.112  15.421  -7.253  1.00 30.05           C
ATOM   2538  CG  HIS A 164      23.893  15.908  -8.423  1.00 29.62           C
ATOM   2539  ND1 HIS A 164      24.390  17.193  -8.506  1.00 30.90           N
ATOM   2541  CE1 HIS A 164      25.075  17.321  -9.622  1.00 30.20           C
ATOM   2543  NE2 HIS A 164      25.040  16.166 -10.265  1.00 30.21           N
ATOM   2545  CD2 HIS A 164      24.300  15.271  -9.540  1.00 30.53           C
ATOM   2547  C   HIS A 164      23.083  14.370  -4.990  1.00 29.45           C
ATOM   2548  O   HIS A 164      22.729  13.207  -4.938  1.00 29.78           O
ATOM   2549  N   PHE A 165      22.764  15.264  -4.060  1.00 29.77           N
ATOM   2551  CA  PHE A 165      21.805  14.955  -3.001  1.00 29.85           C
ATOM   2553  CB  PHE A 165      22.488  14.687  -1.644  1.00 29.28           C
ATOM   2556  CG  PHE A 165      22.942  15.933  -0.950  1.00 26.40           C
ATOM   2557  CD1 PHE A 165      22.156  16.536  -0.003  1.00 24.73           C
ATOM   2559  CE1 PHE A 165      22.559  17.706   0.609  1.00 22.69           C
ATOM   2561  CZ  PHE A 165      23.718  18.286   0.229  1.00 20.39           C
ATOM   2563  CE2 PHE A 165      24.523  17.680  -0.693  1.00 22.99           C
ATOM   2565  CD2 PHE A 165      24.148  16.517  -1.276  1.00 24.62           C
ATOM   2567  C   PHE A 165      20.837  16.104  -2.863  1.00 30.71           C
ATOM   2568  O   PHE A 165      21.138  17.217  -3.243  1.00 31.88           O
ATOM   2569  N   LEU A 166      19.672  15.811  -2.321  1.00 32.14           N
ATOM   2571  CA  LEU A 166      18.648  16.794  -2.031  1.00 33.34           C
ATOM   2573  CB  LEU A 166      17.492  16.685  -3.022  1.00 34.37           C
ATOM   2576  CG  LEU A 166      17.625  16.943  -4.498  1.00 37.05           C
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ATOM	2578	CD1	LEU	A	166	16.698	16.063	-5.287	1.00	39.57	C
ATOM	2582	CD2	LEU	A	166	17.227	18.345	-4.682	1.00	41.06	C
ATOM	2586	C	LEU	A	166	18.002	16.366	-0.758	1.00	33.28	C
ATOM	2587	O	LEU	A	166	17.936	15.186	-0.494	1.00	32.23	O
ATOM	2588	N	VAL	A	167	17.428	17.321	-0.031	1.00	34.59	N
ATOM	2590	CA	VAL	A	167	16.427	16.998	0.981	1.00	35.43	C
ATOM	2592	CB	VAL	A	167	16.758	17.624	2.333	1.00	35.12	C
ATOM	2594	CG1	VAL	A	167	17.946	16.903	2.949	1.00	34.48	C
ATOM	2598	CG2	VAL	A	167	17.046	19.060	2.207	1.00	35.01	C
ATOM	2602	C	VAL	A	167	14.990	17.330	0.513	1.00	36.79	C
ATOM	2603	O	VAL	A	167	14.760	18.314	-0.195	1.00	36.56	O
ATOM	2604	N	ILE	A	168	14.049	16.494	0.964	1.00	38.34	N
ATOM	2606	CA	ILE	A	168	12.695	16.354	0.425	1.00	39.25	C
ATOM	2608	CB	ILE	A	168	12.562	14.934	-0.214	1.00	40.02	C
ATOM	2610	CG1	ILE	A	168	13.504	14.743	-1.413	1.00	41.60	C
ATOM	2613	CD1	ILE	A	168	13.155	15.535	-2.578	1.00	43.69	C
ATOM	2617	CG2	ILE	A	168	11.093	14.569	-0.614	1.00	40.36	C
ATOM	2621	C	ILE	A	168	11.700	16.411	1.577	1.00	39.25	C
ATOM	2622	O	ILE	A	168	12.039	16.083	2.705	1.00	38.61	O
ATOM	2623	N	GLY	A	169	10.455	16.771	1.289	1.00	39.56	N
ATOM	2625	CA	GLY	A	169	9.374	16.590	2.249	1.00	39.72	C
ATOM	2628	C	GLY	A	169	8.878	17.841	2.902	1.00	39.76	C
ATOM	2629	O	GLY	A	169	9.314	18.928	2.588	1.00	39.76	O
ATOM	2630	N	GLN	A	170	7.998	17.682	3.879	1.00	40.57	N
ATOM	2632	CA	GLN	A	170	7.137	18.790	4.290	1.00	40.86	C
ATOM	2634	CB	GLN	A	170	5.838	18.269	4.948	1.00	41.08	C
ATOM	2637	CG	GLN	A	170	4.706	19.319	5.134	1.00	43.38	C
ATOM	2640	CD	GLN	A	170	4.193	19.958	3.825	1.00	47.12	C
ATOM	2641	OE1	GLN	A	170	3.870	19.259	2.841	1.00	50.11	O
ATOM	2642	NE2	GLN	A	170	4.121	21.296	3.819	1.00	47.41	N
ATOM	2645	C	GLN	A	170	7.867	19.795	5.150	1.00	40.69	C
ATOM	2646	O	GLN	A	170	7.543	20.995	5.114	1.00	40.08	O
ATOM	2647	N	ALA	A	171	8.857	19.345	5.919	1.00	40.67	N
ATOM	2649	CA	ALA	A	171	9.711	20.316	6.616	1.00	40.63	C
ATOM	2651	CB	ALA	A	171	10.638	19.627	7.595	1.00	41.10	C
ATOM	2655	C	ALA	A	171	10.516	21.159	5.609	1.00	40.54	C
ATOM	2656	O	ALA	A	171	10.804	22.342	5.854	1.00	40.03	O
ATOM	2657	N	VAL	A	172	10.860	20.570	4.472	1.00	40.46	N
ATOM	2659	CA	VAL	A	172	11.588	21.326	3.470	1.00	41.53	C
ATOM	2661	CB	VAL	A	172	12.258	20.429	2.452	1.00	41.20	C
ATOM	2663	CG1	VAL	A	172	12.813	21.245	1.299	1.00	41.08	C
ATOM	2667	CG2	VAL	A	172	13.375	19.645	3.134	1.00	41.57	C
ATOM	2671	C	VAL	A	172	10.725	22.350	2.767	1.00	42.31	C
ATOM	2672	O	VAL	A	172	11.153	23.483	2.588	1.00	42.57	O
ATOM	2673	N	ASP	A	173	9.530	21.943	2.352	1.00	43.69	N
ATOM	2675	CA	ASP	A	173	8.572	22.852	1.696	1.00	44.79	C
ATOM	2677	CB	ASP	A	173	7.269	22.108	1.342	1.00	44.66	C
ATOM	2680	CG	ASP	A	173	7.514	20.873	0.492	1.00	43.05	C
ATOM	2681	OD1	ASP	A	173	8.523	20.832	-0.226	1.00	43.75	O
ATOM	2682	OD2	ASP	A	173	6.774	19.876	0.476	1.00	43.34	O
ATOM	2683	C	ASP	A	173	8.258	24.007	2.630	1.00	45.88	C
ATOM	2684	O	ASP	A	173	8.333	25.145	2.248	1.00	47.11	O
ATOM	2685	N	ASP	A	174	7.951	23.679	3.881	1.00	47.33	N
ATOM	2687	CA	ASP	A	174	7.752	24.653	4.953	1.00	48.09	C
ATOM	2689	CB	ASP	A	174	7.485	23.948	6.301	1.00	48.42	C
ATOM	2692	CG	ASP	A	174	6.165	23.163	6.328	1.00	50.03	C
ATOM	2693	OD1	ASP	A	174	5.231	23.494	5.546	1.00	54.40	O
ATOM	2694	OD2	ASP	A	174	5.974	22.187	7.094	1.00	49.92	O
ATOM	2695	C	ASP	A	174	8.909	25.639	5.156	1.00	48.39	C
ATOM	2696	O	ASP	A	174	8.668	26.808	5.491	1.00	48.60	O
ATOM	2697	N	VAL	A	175	10.158	25.198	5.018	1.00	48.46	N
ATOM	2699	CA	VAL	A	175	11.263	26.101	5.371	1.00	48.31	C
ATOM	2701	CB	VAL	A	175	12.617	25.354	5.634	1.00	47.54	C
ATOM	2703	CG1	VAL	A	175	13.303	24.874	4.363	1.00	46.49	C
ATOM	2707	CG2	VAL	A	175	13.540	26.213	6.470	1.00	46.95	C
ATOM	2711	C	VAL	A	175	11.322	27.223	4.332	1.00	49.96	C
ATOM	2712	O	VAL	A	175	11.651	28.351	4.656	1.00	48.56	O

ATOM	2713	N	ARG	A	176	10.928	26.892	3.099	1.00 52.44	N
ATOM	2715	CA	ARG	A	176	10.829	27.858	2.016	1.00 54.67	C
ATOM	2717	CB	ARG	A	176	10.700	27.128	0.677	1.00 55.46	C
ATOM	2720	CG	ARG	A	176	10.855	28.032	-0.534	1.00 59.35	C
ATOM	2723	CD	ARG	A	176	12.278	28.579	-0.752	1.00 64.20	C
ATOM	2726	NE	ARG	A	176	13.218	27.515	-1.159	1.00 68.23	N
ATOM	2728	CZ	ARG	A	176	14.081	27.584	-2.183	1.00 71.06	C
ATOM	2729	NH1	ARG	A	176	14.157	28.665	-2.964	1.00 71.61	N
ATOM	2732	NH2	ARG	A	176	14.882	26.545	-2.437	1.00 72.57	N
ATOM	2735	C	ARG	A	176	9.642	28.806	2.212	1.00 55.19	C
ATOM	2736	O	ARG	A	176	9.816	30.027	2.288	1.00 54.93	O
ATOM	2737	N	LEU	A	177	8.441	28.240	2.289	1.00 56.14	N
ATOM	2739	CA	LEU	A	177	7.238	29.032	2.559	1.00 56.87	C
ATOM	2741	CB	LEU	A	177	6.070	28.118	2.955	1.00 56.83	C
ATOM	2744	CG	LEU	A	177	5.718	26.931	2.051	1.00 56.15	C
ATOM	2746	CD1	LEU	A	177	4.450	26.213	2.557	1.00 55.74	C
ATOM	2750	CD2	LEU	A	177	5.559	27.354	0.601	1.00 57.39	C
ATOM	2754	C	LEU	A	177	7.493	30.060	3.670	1.00 57.60	C
ATOM	2755	O	LEU	A	177	7.249	31.255	3.492	1.00 57.68	O
ATOM	2756	N	ALA	A	178	8.028	29.577	4.788	1.00 58.80	N
ATOM	2758	CA	ALA	A	178	8.361	30.389	5.962	1.00 59.94	C
ATOM	2760	CB	ALA	A	178	8.940	29.513	7.039	1.00 59.70	C
ATOM	2764	C	ALA	A	178	9.323	31.525	5.664	1.00 61.31	C
ATOM	2765	O	ALA	A	178	9.191	32.618	6.211	1.00 61.35	O
ATOM	2766	N	GLN	A	179	10.297	31.265	4.806	1.00 63.20	N
ATOM	2768	CA	GLN	A	179	11.278	32.284	4.427	1.00 64.97	C
ATOM	2770	CB	GLN	A	179	12.422	31.640	3.627	1.00 65.32	C
ATOM	2773	CG	GLN	A	179	13.533	32.620	3.165	1.00 66.44	C
ATOM	2776	CD	GLN	A	179	13.456	32.971	1.682	1.00 67.42	C
ATOM	2777	OE1	GLN	A	179	13.791	34.102	1.295	1.00 69.94	O
ATOM	2778	NE2	GLN	A	179	13.007	32.018	0.852	1.00 67.19	N
ATOM	2781	C	GLN	A	179	10.672	33.494	3.661	1.00 66.03	C
ATOM	2782	O	GLN	A	179	10.761	34.625	4.143	1.00 66.24	O
ATOM	2783	N	ASN	A	180	10.073	33.261	2.489	1.00 67.40	N
ATOM	2785	CA	ASN	A	180	9.451	34.359	1.704	1.00 68.62	C
ATOM	2787	CB	ASN	A	180	9.085	33.928	0.264	1.00 68.72	C
ATOM	2790	CG	ASN	A	180	8.893	32.426	0.116	1.00 69.08	C
ATOM	2791	OD1	ASN	A	180	7.985	31.850	0.715	1.00 71.12	O
ATOM	2792	ND2	ASN	A	180	9.742	31.788	-0.691	1.00 68.20	N
ATOM	2795	C	ASN	A	180	8.262	35.121	2.366	1.00 69.28	C
ATOM	2796	O	ASN	A	180	7.915	36.212	1.908	1.00 69.90	O
ATOM	2797	N	MET	A	181	7.663	34.570	3.429	1.00 69.81	N
ATOM	2799	CA	MET	A	181	6.737	35.328	4.302	1.00 70.04	C
ATOM	2801	CB	MET	A	181	6.134	34.446	5.399	1.00 69.67	C
ATOM	2804	CG	MET	A	181	5.054	33.530	4.914	1.00 69.80	C
ATOM	2807	SD	MET	A	181	4.470	32.434	6.208	1.00 69.53	S
ATOM	2808	CE	MET	A	181	4.342	30.907	5.240	1.00 68.61	C
ATOM	2812	C	MET	A	181	7.451	36.453	5.018	1.00 70.67	C
ATOM	2813	O	MET	A	181	6.985	37.590	5.019	1.00 71.05	O
ATOM	2814	N	ALA	A	182	8.562	36.097	5.662	1.00 71.07	N
ATOM	2816	CA	ALA	A	182	9.421	37.022	6.411	1.00 71.37	C
ATOM	2818	CB	ALA	A	182	10.753	36.332	6.749	1.00 71.56	C
ATOM	2822	C	ALA	A	182	9.727	38.334	5.705	1.00 71.56	C
ATOM	2823	O	ALA	A	182	9.701	38.420	4.478	1.00 71.70	O
ATOM	2824	N	GLN	A	183	10.038	39.347	6.503	1.00 71.89	N
ATOM	2826	CA	GLN	A	183	10.514	40.634	5.992	1.00 72.32	C
ATOM	2828	CB	GLN	A	183	9.604	41.798	6.459	1.00 72.48	C
ATOM	2831	CG	GLN	A	183	8.092	41.472	6.602	1.00 73.16	C
ATOM	2834	CD	GLN	A	183	7.224	41.988	5.451	1.00 74.04	C
ATOM	2835	OE1	GLN	A	183	7.285	43.166	5.087	1.00 75.65	O
ATOM	2836	NE2	GLN	A	183	6.397	41.112	4.900	1.00 73.22	N
ATOM	2839	C	GLN	A	183	11.957	40.796	6.484	1.00 72.07	C
ATOM	2840	O	GLN	A	183	12.464	39.931	7.195	1.00 72.24	O
ATOM	2841	N	MET	A	184	12.639	41.869	6.107	1.00 71.76	N
ATOM	2843	CA	MET	A	184	14.021	42.039	6.554	1.00 71.74	C
ATOM	2845	CB	MET	A	184	14.581	43.421	6.196	1.00 72.65	C
ATOM	2848	CG	MET	A	184	15.044	43.565	4.733	1.00 76.17	C

ATOM	2851	SD	MET	A	184	16.745	42.939	4.386	1.00 83.40	S
ATOM	2852	CE	MET	A	184	17.671	44.578	3.879	1.00 82.08	C
ATOM	2856	C	MET	A	184	14.096	41.851	8.055	1.00 70.30	C
ATOM	2857	O	MET	A	184	13.216	42.302	8.793	1.00 70.50	O
ATOM	2858	N	ASN	A	185	15.146	41.167	8.496	1.00 68.44	N
ATOM	2860	CA	ASN	A	185	15.434	40.981	9.912	1.00 67.12	C
ATOM	2862	CB	ASN	A	185	15.445	42.339	10.654	1.00 67.71	C
ATOM	2865	CG	ASN	A	185	16.663	42.505	11.590	1.00 70.12	C
ATOM	2866	OD1	ASN	A	185	17.541	43.342	11.338	1.00 74.06	O
ATOM	2867	ND2	ASN	A	185	16.714	41.709	12.669	1.00 71.52	N
ATOM	2870	C	ASN	A	185	14.507	39.996	10.623	1.00 64.96	C
ATOM	2871	O	ASN	A	185	14.667	39.767	11.820	1.00 64.34	O
ATOM	2872	N	ASP	A	186	13.563	39.395	9.903	1.00 62.74	N
ATOM	2874	CA	ASP	A	186	12.610	38.465	10.530	1.00 61.47	C
ATOM	2876	CB	ASP	A	186	11.240	38.466	9.822	1.00 61.55	C
ATOM	2879	CG	ASP	A	186	10.370	39.686	10.179	1.00 62.26	C
ATOM	2880	OD1	ASP	A	186	10.777	40.545	11.000	1.00 62.79	O
ATOM	2881	OD2	ASP	A	186	9.244	39.860	9.667	1.00 63.93	O
ATOM	2882	C	ASP	A	186	13.147	37.031	10.573	1.00 59.45	C
ATOM	2883	O	ASP	A	186	14.028	36.646	9.789	1.00 59.42	O
ATOM	2884	N	VAL	A	187	12.595	36.267	11.510	1.00 57.00	N
ATOM	2886	CA	VAL	A	187	12.792	34.830	11.616	1.00 55.22	C
ATOM	2888	CB	VAL	A	187	13.595	34.438	12.901	1.00 55.28	C
ATOM	2890	CG1	VAL	A	187	13.897	32.945	12.917	1.00 55.22	C
ATOM	2894	CG2	VAL	A	187	14.868	35.242	13.031	1.00 55.26	C
ATOM	2898	C	VAL	A	187	11.404	34.189	11.701	1.00 53.24	C
ATOM	2899	O	VAL	A	187	10.752	34.274	12.736	1.00 52.41	O
ATOM	2900	N	ILE	A	188	10.951	33.544	10.635	1.00 51.63	N
ATOM	2902	CA	ILE	A	188	9.652	32.848	10.681	1.00 51.08	C
ATOM	2904	CB	ILE	A	188	8.925	32.989	9.324	1.00 50.85	C
ATOM	2906	CG1	ILE	A	188	8.865	34.444	8.878	1.00 51.56	C
ATOM	2909	CD1	ILE	A	188	8.113	35.351	9.828	1.00 52.61	C
ATOM	2913	CG2	ILE	A	188	7.517	32.446	9.403	1.00 51.92	C
ATOM	2917	C	ILE	A	188	9.740	31.359	11.053	1.00 49.84	C
ATOM	2918	O	ILE	A	188	10.425	30.601	10.380	1.00 49.64	O
ATOM	2919	N	LEU	A	189	9.019	30.942	12.095	1.00 48.91	N
ATOM	2921	CA	LEU	A	189	8.815	29.509	12.365	1.00 47.79	C
ATOM	2923	CB	LEU	A	189	8.534	29.226	13.826	1.00 47.30	C
ATOM	2926	CG	LEU	A	189	9.328	29.973	14.879	1.00 46.44	C
ATOM	2928	CD1	LEU	A	189	8.764	29.662	16.249	1.00 45.99	C
ATOM	2932	CD2	LEU	A	189	10.794	29.599	14.800	1.00 45.72	C
ATOM	2936	C	LEU	A	189	7.636	29.007	11.579	1.00 47.69	C
ATOM	2937	O	LEU	A	189	6.589	29.637	11.576	1.00 49.08	O
ATOM	2938	N	SER	A	190	7.795	27.859	10.926	1.00 47.10	N
ATOM	2940	CA	SER	A	190	6.710	27.203	10.207	1.00 45.85	C
ATOM	2942	CB	SER	A	190	7.249	26.042	9.404	1.00 45.41	C
ATOM	2945	OG	SER	A	190	7.587	24.998	10.287	1.00 45.23	O
ATOM	2947	C	SER	A	190	5.700	26.667	11.229	1.00 45.36	C
ATOM	2948	O	SER	A	190	6.002	26.615	12.396	1.00 44.48	O
ATOM	2949	N	PRO	A	191	4.509	26.271	10.790	1.00 45.35	N
ATOM	2950	CA	PRO	A	191	3.460	25.896	11.735	1.00 45.29	C
ATOM	2952	CB	PRO	A	191	2.303	25.456	10.814	1.00 45.53	C
ATOM	2955	CG	PRO	A	191	2.555	26.163	9.483	1.00 45.46	C
ATOM	2958	CD	PRO	A	191	4.049	26.169	9.384	1.00 45.45	C
ATOM	2961	C	PRO	A	191	3.912	24.765	12.664	1.00 45.00	C
ATOM	2962	O	PRO	A	191	3.736	24.837	13.895	1.00 45.18	O
ATOM	2963	N	ASN	A	192	4.507	23.741	12.069	1.00 44.80	N
ATOM	2965	CA	ASN	A	192	4.925	22.544	12.804	1.00 44.37	C
ATOM	2967	CB	ASN	A	192	5.305	21.434	11.817	1.00 44.35	C
ATOM	2970	CG	ASN	A	192	5.343	20.071	12.463	1.00 45.74	C
ATOM	2971	OD1	ASN	A	192	5.930	19.124	11.911	1.00 48.19	O
ATOM	2972	ND2	ASN	A	192	4.731	19.951	13.649	1.00 46.43	N
ATOM	2975	C	ASN	A	192	6.080	22.817	13.765	1.00 43.62	C
ATOM	2976	O	ASN	A	192	6.148	22.263	14.845	1.00 43.07	O
ATOM	2977	N	CYS	A	193	6.991	23.681	13.366	1.00 43.36	N
ATOM	2979	CA	CYS	A	193	8.073	24.098	14.248	1.00 43.62	C
ATOM	2981	CB	CYS	A	193	9.079	24.940	13.450	1.00 43.69	C

ATOM	2984	SG	CYS	A	193	10.405	25.660	14.398	1.00	42.01	S
ATOM	2985	C	CYS	A	193	7.486	24.890	15.409	1.00	44.54	C
ATOM	2986	O	CYS	A	193	7.854	24.702	16.567	1.00	43.69	O
ATOM	2987	N	TRP	A	194	6.559	25.782	15.095	1.00	45.82	N
ATOM	2989	CA	TRP	A	194	5.781	26.445	16.141	1.00	47.73	C
ATOM	2991	CB	TRP	A	194	4.810	27.459	15.513	1.00	48.32	C
ATOM	2994	CG	TRP	A	194	3.807	27.977	16.458	1.00	51.34	C
ATOM	2995	CD1	TRP	A	194	2.452	27.981	16.289	1.00	52.37	C
ATOM	2997	NE1	TRP	A	194	1.850	28.534	17.394	1.00	54.78	N
ATOM	2999	CE2	TRP	A	194	2.812	28.905	18.301	1.00	54.17	C
ATOM	3000	CD2	TRP	A	194	4.059	28.570	17.743	1.00	53.90	C
ATOM	3001	CE3	TRP	A	194	5.219	28.856	18.479	1.00	55.18	C
ATOM	3003	CZ3	TRP	A	194	5.101	29.454	19.737	1.00	55.53	C
ATOM	3005	CH2	TRP	A	194	3.842	29.776	20.260	1.00	57.25	C
ATOM	3007	CZ2	TRP	A	194	2.687	29.511	19.554	1.00	55.76	C
ATOM	3009	C	TRP	A	194	5.059	25.417	17.053	1.00	47.70	C
ATOM	3010	O	TRP	A	194	5.081	25.538	18.270	1.00	47.15	O
ATOM	3011	N	GLN	A	195	4.490	24.381	16.457	1.00	48.17	N
ATOM	3013	CA	GLN	A	195	3.736	23.376	17.196	1.00	49.25	C
ATOM	3015	CB	GLN	A	195	3.041	22.406	16.206	1.00	49.96	C
ATOM	3018	CG	GLN	A	195	1.560	22.004	16.466	1.00	52.49	C
ATOM	3021	CD	GLN	A	195	0.724	23.082	17.192	1.00	55.93	C
ATOM	3022	OE1	GLN	A	195	0.248	22.843	18.317	1.00	56.57	O
ATOM	3023	NE2	GLN	A	195	0.547	24.261	16.553	1.00	57.09	N
ATOM	3026	C	GLN	A	195	4.661	22.616	18.165	1.00	49.62	C
ATOM	3027	O	GLN	A	195	4.274	22.329	19.290	1.00	49.76	O
ATOM	3028	N	LEU	A	196	5.894	22.325	17.726	1.00	50.06	N
ATOM	3030	CA	LEU	A	196	6.858	21.510	18.469	1.00	49.42	C
ATOM	3032	CB	LEU	A	196	7.715	20.692	17.487	1.00	49.88	C
ATOM	3035	CG	LEU	A	196	7.092	19.739	16.462	1.00	49.82	C
ATOM	3037	CD1	LEU	A	196	8.127	19.384	15.445	1.00	48.46	C
ATOM	3041	CD2	LEU	A	196	6.517	18.464	17.067	1.00	49.91	C
ATOM	3045	C	LEU	A	196	7.823	22.284	19.379	1.00	49.18	C
ATOM	3046	O	LEU	A	196	8.627	21.672	20.054	1.00	49.15	O
ATOM	3047	N	CYS	A	197	7.770	23.607	19.399	1.00	49.43	N
ATOM	3049	CA	CYS	A	197	8.765	24.385	20.131	1.00	49.81	C
ATOM	3051	CB	CYS	A	197	9.023	25.709	19.428	1.00	49.36	C
ATOM	3054	SG	CYS	A	197	7.792	26.969	19.797	1.00	46.00	S
ATOM	3055	C	CYS	A	197	8.374	24.644	21.584	1.00	51.29	C
ATOM	3056	O	CYS	A	197	7.252	24.343	21.988	1.00	52.06	O
ATOM	3057	N	ASP	A	198	9.307	25.216	22.346	1.00	52.39	N
ATOM	3059	CA	ASP	A	198	9.150	25.438	23.778	1.00	53.89	C
ATOM	3061	CB	ASP	A	198	10.462	25.222	24.533	1.00	53.90	C
ATOM	3064	CG	ASP	A	198	10.305	25.365	26.061	1.00	55.59	C
ATOM	3065	OD1	ASP	A	198	11.145	24.814	26.801	1.00	57.45	O
ATOM	3066	OD2	ASP	A	198	9.392	26.000	26.630	1.00	56.49	O
ATOM	3067	C	ASP	A	198	8.710	26.864	23.960	1.00	55.01	C
ATOM	3068	O	ASP	A	198	9.548	27.774	23.951	1.00	55.27	O
ATOM	3069	N	ARG	A	199	7.402	27.022	24.163	1.00	56.35	N
ATOM	3071	CA	ARG	A	199	6.701	28.304	24.167	1.00	57.38	C
ATOM	3073	CB	ARG	A	199	5.217	28.040	23.962	1.00	57.16	C
ATOM	3076	CG	ARG	A	199	4.902	27.318	22.668	1.00	56.95	C
ATOM	3079	CD	ARG	A	199	3.515	26.703	22.604	1.00	57.01	C
ATOM	3082	NE	ARG	A	199	3.242	26.134	21.280	1.00	57.43	N
ATOM	3084	CZ	ARG	A	199	2.066	26.163	20.647	1.00	59.33	C
ATOM	3085	NH1	ARG	A	199	0.990	26.745	21.205	1.00	59.40	N
ATOM	3088	NH2	ARG	A	199	1.959	25.606	19.432	1.00	58.87	N
ATOM	3091	C	ARG	A	199	6.920	29.143	25.441	1.00	58.94	C
ATOM	3092	O	ARG	A	199	6.715	30.359	25.454	1.00	58.98	O
ATOM	3093	N	SER	A	200	7.358	28.500	26.512	1.00	60.66	N
ATOM	3095	CA	SER	A	200	7.770	29.235	27.695	1.00	62.01	C
ATOM	3097	CB	SER	A	200	7.956	28.275	28.892	1.00	62.14	C
ATOM	3100	OG	SER	A	200	9.313	27.889	29.089	1.00	62.59	O
ATOM	3102	C	SER	A	200	9.042	30.025	27.375	1.00	63.15	C
ATOM	3103	O	SER	A	200	9.448	30.926	28.124	1.00	63.66	O
ATOM	3104	N	MET	A	201	9.667	29.695	26.250	1.00	64.30	N
ATOM	3106	CA	MET	A	201	10.953	30.277	25.883	1.00	65.10	C

ATOM	3108	CB	MET A 201	11.858	29.212	25.224	1.00	65.53	C
ATOM	3111	CG	MET A 201	12.352	28.099	26.146	1.00	66.17	C
ATOM	3114	SD	MET A 201	13.851	28.430	27.128	1.00	67.75	S
ATOM	3115	CE	MET A 201	14.460	29.890	26.429	1.00	68.36	C
ATOM	3119	C	MET A 201	10.826	31.453	24.932	1.00	65.23	C
ATOM	3120	O	MET A 201	11.695	32.299	24.923	1.00	64.79	O
ATOM	3121	N	ILE A 202	9.785	31.503	24.107	1.00	66.35	N
ATOM	3123	CA	ILE A 202	9.811	32.443	22.986	1.00	67.53	C
ATOM	3125	CB	ILE A 202	10.251	31.721	21.710	1.00	67.54	C
ATOM	3127	CG1	ILE A 202	9.432	30.466	21.472	1.00	67.49	C
ATOM	3130	CD1	ILE A 202	9.457	30.064	20.037	1.00	68.11	C
ATOM	3134	CG2	ILE A 202	11.711	31.329	21.779	1.00	67.53	C
ATOM	3138	C	ILE A 202	8.524	33.212	22.700	1.00	68.93	C
ATOM	3139	O	ILE A 202	7.488	32.622	22.394	1.00	69.17	O
ATOM	3140	N	GLU A 203	8.620	34.539	22.785	1.00	70.52	N
ATOM	3142	CA	GLU A 203	7.528	35.440	22.445	1.00	71.46	C
ATOM	3144	CB	GLU A 203	7.765	36.854	23.002	1.00	71.51	C
ATOM	3147	CG	GLU A 203	7.703	36.988	24.526	1.00	71.92	C
ATOM	3150	CD	GLU A 203	6.538	36.229	25.153	1.00	72.29	C
ATOM	3151	OE1	GLU A 203	5.427	36.196	24.542	1.00	70.39	O
ATOM	3152	OE2	GLU A 203	6.747	35.667	26.257	1.00	71.37	O
ATOM	3153	C	GLU A 203	7.467	35.520	20.957	1.00	72.53	C
ATOM	3154	O	GLU A 203	8.430	35.949	20.327	1.00	72.40	O
ATOM	3155	N	ILE A 204	6.340	35.088	20.403	1.00	74.06	N
ATOM	3157	CA	ILE A 204	6.091	35.170	18.967	1.00	75.37	C
ATOM	3159	CB	ILE A 204	5.718	33.773	18.393	1.00	75.45	C
ATOM	3161	CG1	ILE A 204	4.404	33.249	18.995	1.00	75.66	C
ATOM	3164	CD1	ILE A 204	3.235	33.222	18.034	1.00	75.45	C
ATOM	3168	CG2	ILE A 204	6.859	32.798	18.637	1.00	75.89	C
ATOM	3172	C	ILE A 204	5.001	36.203	18.667	1.00	76.44	C
ATOM	3173	O	ILE A 204	4.734	37.077	19.487	1.00	76.60	O
ATOM	3174	N	GLU A 205	4.402	36.110	17.481	1.00	77.67	N
ATOM	3176	CA	GLU A 205	3.291	36.964	17.078	1.00	78.60	C
ATOM	3178	CB	GLU A 205	3.739	38.425	16.935	1.00	78.87	C
ATOM	3181	CG	GLU A 205	4.105	38.851	15.515	1.00	79.56	C
ATOM	3184	CD	GLU A 205	4.803	40.197	15.478	1.00	80.70	C
ATOM	3185	OE1	GLU A 205	5.074	40.698	14.358	1.00	81.51	O
ATOM	3186	OE2	GLU A 205	5.084	40.753	16.568	1.00	81.07	O
ATOM	3187	C	GLU A 205	2.699	36.471	15.759	1.00	79.14	C
ATOM	3188	O	GLU A 205	3.399	35.873	14.937	1.00	79.18	O
ATOM	3189	N	SER A 206	1.421	36.771	15.542	1.00	79.66	N
ATOM	3191	CA	SER A 206	0.684	36.212	14.413	1.00	80.00	C
ATOM	3193	CB	SER A 206	-0.814	36.507	14.553	1.00	80.14	C
ATOM	3196	OG	SER A 206	-1.269	36.200	15.862	1.00	80.58	O
ATOM	3198	C	SER A 206	1.198	36.740	13.079	1.00	80.19	C
ATOM	3199	O	SER A 206	1.880	37.771	13.029	1.00	80.08	O
ATOM	3200	N	VAL A 207	0.869	36.008	12.014	1.00	80.53	N
ATOM	3202	CA	VAL A 207	1.182	36.390	10.636	1.00	80.91	C
ATOM	3204	CB	VAL A 207	2.223	35.407	9.990	1.00	80.97	C
ATOM	3206	CG1	VAL A 207	2.638	35.867	8.589	1.00	80.92	C
ATOM	3210	CG2	VAL A 207	3.457	35.266	10.866	1.00	80.88	C
ATOM	3214	C	VAL A 207	-0.130	36.423	9.800	1.00	81.12	C
ATOM	3215	O	VAL A 207	-0.890	35.446	9.802	1.00	81.17	O
ATOM	3216	N	PRO A 208	-0.395	37.541	9.107	1.00	81.16	N
ATOM	3217	CA	PRO A 208	-1.572	37.678	8.236	1.00	81.13	C
ATOM	3219	CB	PRO A 208	-1.146	38.793	7.264	1.00	81.27	C
ATOM	3222	CG	PRO A 208	-0.213	39.665	8.058	1.00	81.29	C
ATOM	3225	CD	PRO A 208	0.409	38.780	9.113	1.00	81.32	C
ATOM	3228	C	PRO A 208	-1.965	36.421	7.442	1.00	81.02	C
ATOM	3229	O	PRO A 208	-1.196	35.985	6.577	1.00	81.31	O
ATOM	3230	N	ASP A 209	-3.144	35.860	7.741	1.00	80.70	N
ATOM	3232	CA	ASP A 209	-3.734	34.736	6.981	1.00	80.22	C
ATOM	3234	CB	ASP A 209	-4.101	35.188	5.553	1.00	80.49	C
ATOM	3237	CG	ASP A 209	-5.036	36.396	5.543	1.00	81.35	C
ATOM	3238	OD1	ASP A 209	-4.538	37.538	5.647	1.00	81.87	O
ATOM	3239	OD2	ASP A 209	-6.280	36.301	5.450	1.00	81.88	O
ATOM	3240	C	ASP A 209	-2.831	33.498	6.936	1.00	79.40	C

ATOM	3241	O	ASP	A	209	-2.878	32.703	5.998	1.00 79.34	O
ATOM	3242	N	GLN	A	210	-2.031	33.333	7.982	1.00 78.45	N
ATOM	3244	CA	GLN	A	210	-0.935	32.382	7.968	1.00 77.42	C
ATOM	3246	CB	GLN	A	210	0.352	33.100	7.547	1.00 77.35	C
ATOM	3249	CG	GLN	A	210	0.514	33.276	6.026	1.00 77.15	C
ATOM	3252	CD	GLN	A	210	0.796	31.970	5.291	1.00 76.13	C
ATOM	3253	OE1	GLN	A	210	1.029	31.976	4.080	1.00 75.18	O
ATOM	3254	NE2	GLN	A	210	0.782	30.855	6.018	1.00 75.18	N
ATOM	3257	C	GLN	A	210	-0.762	31.753	9.340	1.00 76.51	C
ATOM	3258	O	GLN	A	210	-0.730	32.456	10.349	1.00 76.68	O
ATOM	3259	N	ARG	A	211	-0.649	30.427	9.372	1.00 75.45	N
ATOM	3261	CA	ARG	A	211	-0.476	29.691	10.631	1.00 74.48	C
ATOM	3263	CB	ARG	A	211	-0.912	28.237	10.453	1.00 74.55	C
ATOM	3266	CG	ARG	A	211	-2.382	28.089	10.056	1.00 74.91	C
ATOM	3269	CD	ARG	A	211	-3.094	26.874	10.658	1.00 75.07	C
ATOM	3272	NE	ARG	A	211	-3.263	25.796	9.680	1.00 75.25	N
ATOM	3274	CZ	ARG	A	211	-2.399	24.796	9.467	1.00 76.05	C
ATOM	3275	NH1	ARG	A	211	-1.271	24.704	10.174	1.00 74.69	N
ATOM	3278	NH2	ARG	A	211	-2.671	23.872	8.535	1.00 75.75	N
ATOM	3281	C	ARG	A	211	0.964	29.765	11.168	1.00 73.17	C
ATOM	3282	O	ARG	A	211	1.209	29.537	12.359	1.00 72.48	O
ATOM	3283	N	ALA	A	212	1.904	30.097	10.286	1.00 71.82	N
ATOM	3285	CA	ALA	A	212	3.281	30.338	10.693	1.00 70.81	C
ATOM	3287	CB	ALA	A	212	4.168	30.551	9.478	1.00 70.90	C
ATOM	3291	C	ALA	A	212	3.336	31.552	11.596	1.00 69.96	C
ATOM	3292	O	ALA	A	212	2.471	32.429	11.537	1.00 70.09	O
ATOM	3293	N	VAL	A	213	4.370	31.601	12.425	1.00 68.74	N
ATOM	3295	CA	VAL	A	213	4.553	32.676	13.387	1.00 67.31	C
ATOM	3297	CB	VAL	A	213	4.409	32.147	14.818	1.00 67.06	C
ATOM	3299	CG1	VAL	A	213	3.141	31.317	14.949	1.00 67.42	C
ATOM	3303	CG2	VAL	A	213	5.591	31.318	15.226	1.00 67.19	C
ATOM	3307	C	VAL	A	213	5.900	33.391	13.200	1.00 66.32	C
ATOM	3308	O	VAL	A	213	6.794	32.906	12.516	1.00 66.33	O
ATOM	3309	N	LYS	A	214	6.018	34.558	13.811	1.00 64.97	N
ATOM	3311	CA	LYS	A	214	7.220	35.366	13.733	1.00 64.08	C
ATOM	3313	CB	LYS	A	214	6.876	36.746	13.153	1.00 63.91	C
ATOM	3316	CG	LYS	A	214	7.894	37.864	13.396	1.00 64.24	C
ATOM	3319	CD	LYS	A	214	7.487	39.162	12.675	1.00 64.43	C
ATOM	3322	CE	LYS	A	214	8.307	40.373	13.127	1.00 64.25	C
ATOM	3325	NZ	LYS	A	214	8.046	40.759	14.542	1.00 64.85	N
ATOM	3329	C	LYS	A	214	7.810	35.438	15.149	1.00 63.56	C
ATOM	3330	O	LYS	A	214	7.083	35.604	16.127	1.00 63.37	O
ATOM	3331	N	VAL	A	215	9.122	35.258	15.260	1.00 62.88	N
ATOM	3333	CA	VAL	A	215	9.790	35.315	16.548	1.00 62.24	C
ATOM	3335	CB	VAL	A	215	11.084	34.470	16.566	1.00 61.75	C
ATOM	3337	CG1	VAL	A	215	11.725	34.527	17.941	1.00 61.53	C
ATOM	3341	CG2	VAL	A	215	10.801	33.023	16.182	1.00 60.77	C
ATOM	3345	C	VAL	A	215	10.133	36.773	16.839	1.00 62.55	C
ATOM	3346	O	VAL	A	215	10.661	37.478	15.969	1.00 62.14	O
ATOM	3347	N	ASN	A	216	9.837	37.218	18.060	1.00 62.83	N
ATOM	3349	CA	ASN	A	216	10.268	38.525	18.513	1.00 63.24	C
ATOM	3351	CB	ASN	A	216	9.140	39.238	19.250	1.00 63.27	C
ATOM	3354	CG	ASN	A	216	8.126	39.833	18.305	1.00 63.33	C
ATOM	3355	OD1	ASN	A	216	8.472	40.665	17.456	1.00 61.87	O
ATOM	3356	ND2	ASN	A	216	6.869	39.388	18.418	1.00 62.91	N
ATOM	3359	C	ASN	A	216	11.497	38.428	19.396	1.00 64.05	C
ATOM	3360	O	ASN	A	216	12.535	39.003	19.093	1.00 64.40	O
ATOM	3361	N	PHE	A	217	11.375	37.720	20.504	1.00 64.95	N
ATOM	3363	CA	PHE	A	217	12.442	37.673	21.489	1.00 65.82	C
ATOM	3365	CB	PHE	A	217	12.248	38.763	22.574	1.00 66.61	C
ATOM	3368	CG	PHE	A	217	11.608	40.057	22.064	1.00 69.51	C
ATOM	3369	CD1	PHE	A	217	12.293	40.898	21.161	1.00 72.34	C
ATOM	3371	CE1	PHE	A	217	11.712	42.092	20.683	1.00 73.09	C
ATOM	3373	CZ	PHE	A	217	10.436	42.462	21.115	1.00 73.90	C
ATOM	3375	CE2	PHE	A	217	9.744	41.638	22.027	1.00 73.74	C
ATOM	3377	CD2	PHE	A	217	10.339	40.443	22.501	1.00 71.90	C
ATOM	3379	C	PHE	A	217	12.494	36.305	22.151	1.00 65.59	C

ATOM	3380	O	PHE A 217	11.508	35.580	22.196	1.00	65.43	O
ATOM	3381	N	LEU A 218	13.670	35.956	22.651	1.00	65.68	N
ATOM	3383	CA	LEU A 218	13.804	34.870	23.607	1.00	65.65	C
ATOM	3385	CB	LEU A 218	15.197	34.215	23.527	1.00	65.68	C
ATOM	3388	CG	LEU A 218	15.180	32.713	23.226	1.00	65.19	C
ATOM	3390	CD1	LEU A 218	14.863	32.474	21.782	1.00	64.95	C
ATOM	3394	CD2	LEU A 218	16.505	32.070	23.578	1.00	65.66	C
ATOM	3398	C	LEU A 218	13.558	35.469	24.995	1.00	65.66	C
ATOM	3399	O	LEU A 218	14.212	36.429	25.400	1.00	65.06	O
ATOM	3400	N	LYS A 219	12.560	34.926	25.680	1.00	66.10	N
ATOM	3402	CA	LYS A 219	12.298	35.203	27.086	1.00	66.47	C
ATOM	3404	CB	LYS A 219	10.850	35.712	27.257	1.00	66.85	C
ATOM	3407	CG	LYS A 219	10.648	36.717	28.388	1.00	68.35	C
ATOM	3410	CD	LYS A 219	11.247	38.101	28.060	1.00	70.66	C
ATOM	3413	CE	LYS A 219	11.586	38.915	29.336	1.00	71.27	C
ATOM	3416	NZ	LYS A 219	12.562	40.053	29.126	1.00	71.84	N
ATOM	3420	C	LYS A 219	12.560	33.887	27.861	1.00	66.19	C
ATOM	3421	O	LYS A 219	11.635	33.122	28.165	1.00	65.95	O
ATOM	3422	N	PRO A 220	13.828	33.605	28.159	1.00	65.96	N
ATOM	3423	CA	PRO A 220	14.157	32.377	28.879	1.00	65.78	C
ATOM	3425	CB	PRO A 220	15.691	32.352	28.858	1.00	65.76	C
ATOM	3428	CG	PRO A 220	16.083	33.780	28.720	1.00	65.71	C
ATOM	3431	CD	PRO A 220	15.032	34.403	27.869	1.00	65.58	C
ATOM	3434	C	PRO A 220	13.636	32.469	30.298	1.00	65.67	C
ATOM	3435	O	PRO A 220	13.616	33.573	30.847	1.00	65.31	O
ATOM	3436	N	PRO A 221	13.194	31.350	30.866	1.00	65.75	N
ATOM	3437	CA	PRO A 221	12.811	31.300	32.280	1.00	65.64	C
ATOM	3439	CB	PRO A 221	12.300	29.856	32.469	1.00	65.86	C
ATOM	3442	CG	PRO A 221	12.024	29.353	31.128	1.00	66.27	C
ATOM	3445	CD	PRO A 221	12.970	30.062	30.193	1.00	65.92	C
ATOM	3448	C	PRO A 221	13.964	31.567	33.262	1.00	65.34	C
ATOM	3449	O	PRO A 221	15.138	31.393	32.920	1.00	64.89	O
ATOM	3450	N	PRO A 222	13.587	31.958	34.485	1.00	65.23	N
ATOM	3451	CA	PRO A 222	14.499	32.276	35.584	1.00	64.87	C
ATOM	3453	CB	PRO A 222	13.605	32.033	36.804	1.00	65.02	C
ATOM	3456	CG	PRO A 222	12.324	32.556	36.378	1.00	64.81	C
ATOM	3459	CD	PRO A 222	12.188	32.144	34.928	1.00	65.23	C
ATOM	3462	C	PRO A 222	15.787	31.480	35.745	1.00	64.55	C
ATOM	3463	O	PRO A 222	16.814	32.072	36.100	1.00	64.43	O
ATOM	3464	N	ASN A 223	15.731	30.172	35.532	1.00	64.16	N
ATOM	3466	CA	ASN A 223	16.881	29.333	35.827	1.00	64.03	C
ATOM	3468	CB	ASN A 223	16.506	28.272	36.864	1.00	64.39	C
ATOM	3471	CG	ASN A 223	16.327	28.880	38.235	1.00	66.45	C
ATOM	3472	OD1	ASN A 223	15.196	29.076	38.698	1.00	68.85	O
ATOM	3473	ND2	ASN A 223	17.444	29.260	38.864	1.00	66.64	N
ATOM	3476	C	ASN A 223	17.464	28.739	34.562	1.00	62.96	C
ATOM	3477	O	ASN A 223	17.755	27.531	34.489	1.00	62.79	O
ATOM	3478	N	PHE A 224	17.646	29.622	33.581	1.00	61.16	N
ATOM	3480	CA	PHE A 224	18.230	29.243	32.317	1.00	59.98	C
ATOM	3482	CB	PHE A 224	17.451	29.866	31.182	1.00	59.76	C
ATOM	3485	CG	PHE A 224	17.590	29.134	29.895	1.00	59.31	C
ATOM	3486	CD1	PHE A 224	17.143	27.827	29.775	1.00	58.45	C
ATOM	3488	CE1	PHE A 224	17.268	27.153	28.569	1.00	58.10	C
ATOM	3490	CZ	PHE A 224	17.845	27.797	27.464	1.00	57.33	C
ATOM	3492	CE2	PHE A 224	18.296	29.092	27.579	1.00	57.51	C
ATOM	3494	CD2	PHE A 224	18.177	29.754	28.789	1.00	59.64	C
ATOM	3496	C	PHE A 224	19.699	29.652	32.230	1.00	58.78	C
ATOM	3497	O	PHE A 224	20.073	30.778	32.553	1.00	58.98	O
ATOM	3498	N	ASN A 225	20.534	28.704	31.830	1.00	57.15	N
ATOM	3500	CA	ASN A 225	21.890	29.003	31.386	1.00	55.67	C
ATOM	3502	CB	ASN A 225	22.925	28.348	32.300	1.00	55.76	C
ATOM	3505	CG	ASN A 225	24.295	28.963	32.148	1.00	56.53	C
ATOM	3506	OD1	ASN A 225	24.794	29.639	33.056	1.00	57.76	O
ATOM	3507	ND2	ASN A 225	24.906	28.755	30.998	1.00	55.26	N
ATOM	3510	C	ASN A 225	21.976	28.446	29.982	1.00	53.89	C
ATOM	3511	O	ASN A 225	21.926	27.230	29.791	1.00	52.85	O
ATOM	3512	N	PHE A 226	22.064	29.318	28.987	1.00	52.21	N

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ATOM   3514  CA  PHE A 226      22.034  28.820  27.620  1.00 50.73           C
ATOM   3516  CB  PHE A 226      22.019  29.917  26.562  1.00 50.41           C
ATOM   3519  CG  PHE A 226      21.870  29.354  25.200  1.00 49.49           C
ATOM   3520  CD1 PHE A 226      20.631  28.936  24.760  1.00 48.99           C
ATOM   3522  CE1 PHE A 226      20.485  28.345  23.533  1.00 49.16           C
ATOM   3524  CZ  PHE A 226      21.605  28.118  22.742  1.00 48.34           C
ATOM   3526  CE2 PHE A 226      22.859  28.493  23.200  1.00 48.53           C
ATOM   3528  CD2 PHE A 226      22.991  29.094  24.415  1.00 48.32           C
ATOM   3530  C   PHE A 226      23.199  27.858  27.332  1.00 49.83           C
ATOM   3531  O   PHE A 226      23.043  26.893  26.584  1.00 49.25           O
ATOM   3532  N   ASP A 227      24.355  28.133  27.924  1.00 48.84           N
ATOM   3534  CA  ASP A 227      25.550  27.335  27.692  1.00 48.46           C
ATOM   3536  CB  ASP A 227      26.798  28.017  28.252  1.00 49.15           C
ATOM   3539  CG  ASP A 227      27.070  29.350  27.595  1.00 51.23           C
ATOM   3540  OD1 ASP A 227      27.895  30.104  28.161  1.00 55.80           O
ATOM   3541  OD2 ASP A 227      26.501  29.731  26.530  1.00 53.13           O
ATOM   3542  C   ASP A 227      25.419  25.970  28.280  1.00 46.97           C
ATOM   3543  O   ASP A 227      25.922  25.025  27.692  1.00 46.96           O
ATOM   3544  N   GLU A 228      24.746  25.850  29.422  1.00 45.69           N
ATOM   3546  CA  GLU A 228      24.495  24.522  30.009  1.00 45.13           C
ATOM   3548  CB  GLU A 228      24.049  24.632  31.471  1.00 45.90           C
ATOM   3551  CG  GLU A 228      25.210  24.843  32.448  1.00 47.81           C
ATOM   3554  CD  GLU A 228      24.787  25.262  33.852  1.00 49.77           C
ATOM   3555  OE1 GLU A 228      25.700  25.416  34.696  1.00 51.27           O
ATOM   3556  OE2 GLU A 228      23.566  25.422  34.118  1.00 51.92           O
ATOM   3557  C   GLU A 228      23.446  23.782  29.196  1.00 43.85           C
ATOM   3558  O   GLU A 228      23.582  22.575  28.922  1.00 44.15           O
ATOM   3559  N   PHE A 229      22.395  24.512  28.811  1.00 41.75           N
ATOM   3561  CA  PHE A 229      21.366  23.999  27.902  1.00 40.24           C
ATOM   3563  CB  PHE A 229      20.334  25.107  27.672  1.00 39.73           C
ATOM   3566  CG  PHE A 229      19.282  24.757  26.695  1.00 39.02           C
ATOM   3567  CD1 PHE A 229      18.262  23.888  27.045  1.00 39.87           C
ATOM   3569  CE1 PHE A 229      17.301  23.565  26.156  1.00 38.92           C
ATOM   3571  CZ  PHE A 229      17.363  24.091  24.874  1.00 41.47           C
ATOM   3573  CE2 PHE A 229      18.352  24.978  24.528  1.00 37.31           C
ATOM   3575  CD2 PHE A 229      19.297  25.303  25.429  1.00 37.92           C
ATOM   3577  C   PHE A 229      21.998  23.484  26.565  1.00 39.15           C
ATOM   3578  O   PHE A 229      21.762  22.350  26.148  1.00 39.47           O
ATOM   3579  N   PHE A 230      22.809  24.312  25.922  1.00 37.57           N
ATOM   3581  CA  PHE A 230      23.588  23.907  24.747  1.00 36.60           C
ATOM   3583  CB  PHE A 230      24.517  25.037  24.269  1.00 36.01           C
ATOM   3586  CG  PHE A 230      25.160  24.731  22.952  1.00 35.26           C
ATOM   3587  CD1 PHE A 230      26.417  24.163  22.896  1.00 34.73           C
ATOM   3589  CE1 PHE A 230      26.986  23.810  21.705  1.00 34.41           C
ATOM   3591  CZ  PHE A 230      26.298  24.016  20.532  1.00 34.48           C
ATOM   3593  CE2 PHE A 230      25.036  24.566  20.563  1.00 33.56           C
ATOM   3595  CD2 PHE A 230      24.460  24.897  21.774  1.00 34.71           C
ATOM   3597  C   PHE A 230      24.408  22.629  24.948  1.00 36.63           C
ATOM   3598  O   PHE A 230      24.367  21.712  24.132  1.00 36.15           O
ATOM   3599  N   THR A 231      25.137  22.558  26.057  1.00 37.46           N
ATOM   3601  CA  THR A 231      25.942  21.388  26.375  1.00 37.06           C
ATOM   3603  CB  THR A 231      26.627  21.552  27.690  1.00 37.15           C
ATOM   3605  OG1 THR A 231      27.426  22.728  27.666  1.00 35.22           O
ATOM   3607  CG2 THR A 231      27.634  20.369  27.912  1.00 37.72           C
ATOM   3611  C   THR A 231      25.104  20.140  26.447  1.00 37.86           C
ATOM   3612  O   THR A 231      25.515  19.075  25.995  1.00 38.63           O
ATOM   3613  N   LYS A 232      23.930  20.266  27.032  1.00 37.88           N
ATOM   3615  CA  LYS A 232      23.033  19.136  27.122  1.00 38.51           C
ATOM   3617  CB  LYS A 232      21.786  19.491  27.954  1.00 39.16           C
ATOM   3620  CG  LYS A 232      22.064  19.592  29.444  1.00 43.89           C
ATOM   3623  CD  LYS A 232      20.746  19.558  30.256  1.00 51.01           C
ATOM   3626  CE  LYS A 232      20.987  19.540  31.779  1.00 53.21           C
ATOM   3629  NZ  LYS A 232      19.759  18.987  32.474  1.00 56.70           N
ATOM   3633  C   LYS A 232      22.620  18.726  25.727  1.00 36.83           C
ATOM   3634  O   LYS A 232      22.549  17.549  25.424  1.00 36.34           O
ATOM   3635  N   CYS A 233      22.327  19.719  24.896  1.00 35.54           N
ATOM   3637  CA  CYS A 233      21.960  19.475  23.509  1.00 34.97           C
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ATOM   3639  CB  CYS A 233      21.534  20.777  22.857  1.00 35.01           C
ATOM   3642  SG  CYS A 233      19.914  21.262  23.424  1.00 34.52           S
ATOM   3643  C   CYS A 233      23.052  18.794  22.658  1.00 34.16           C
ATOM   3644  O   CYS A 233      22.705  18.036  21.762  1.00 32.68           O
ATOM   3645  N   THR A 234      24.339  19.056  22.958  1.00 34.38           N
ATOM   3647  CA  THR A 234      25.477  18.452  22.210  1.00 35.19           C
ATOM   3649  CB  THR A 234      26.826  19.063  22.574  1.00 34.63           C
ATOM   3651  OG1 THR A 234      27.162  18.713  23.916  1.00 36.81           O
ATOM   3653  CG2 THR A 234      26.794  20.565  22.572  1.00 34.57           C
ATOM   3657  C   THR A 234      25.580  16.910  22.343  1.00 35.26           C
ATOM   3658  O   THR A 234      26.209  16.247  21.512  1.00 34.76           O
ATOM   3659  N   THR A 235      24.912  16.348  23.344  1.00 35.11           N
ATOM   3661  CA  THR A 235      24.791  14.899  23.470  1.00 35.27           C
ATOM   3663  CB  THR A 235      23.965  14.555  24.676  1.00 34.96           C
ATOM   3665  OG1 THR A 235      24.745  14.819  25.835  1.00 36.97           O
ATOM   3667  CG2 THR A 235      23.700  13.039  24.752  1.00 36.08           C
ATOM   3671  C   THR A 235      24.168  14.265  22.247  1.00 35.25           C
ATOM   3672  O   THR A 235      24.508  13.122  21.907  1.00 35.88           O
ATOM   3673  N   PHE A 236      23.256  15.009  21.610  1.00 34.74           N
ATOM   3675  CA  PHE A 236      22.536  14.575  20.407  1.00 34.27           C
ATOM   3677  CB  PHE A 236      21.070  14.962  20.555  1.00 34.52           C
ATOM   3680  CG  PHE A 236      20.541  14.658  21.915  1.00 35.73           C
ATOM   3681  CD1 PHE A 236      20.381  15.652  22.849  1.00 37.57           C
ATOM   3683  CE1 PHE A 236      19.944  15.344  24.133  1.00 42.15           C
ATOM   3685  CZ  PHE A 236      19.670  13.997  24.500  1.00 42.50           C
ATOM   3687  CE2 PHE A 236      19.858  12.998  23.583  1.00 41.29           C
ATOM   3689  CD2 PHE A 236      20.295  13.335  22.286  1.00 41.06           C
ATOM   3691  C   PHE A 236      23.116  15.101  19.100  1.00 33.24           C
ATOM   3692  O   PHE A 236      22.518  14.929  18.063  1.00 33.75           O
ATOM   3693  N   MET A 237      24.300  15.699  19.164  1.00 32.23           N
ATOM   3695  CA  MET A 237      25.018  16.216  18.003  1.00 31.28           C
ATOM   3697  CB  MET A 237      25.463  17.645  18.268  1.00 30.92           C
ATOM   3700  CG  MET A 237      24.324  18.587  18.510  1.00 31.02           C
ATOM   3703  SD  MET A 237      24.956  20.162  18.928  1.00 35.45           S
ATOM   3704  CE  MET A 237      23.365  21.050  19.127  1.00 35.18           C
ATOM   3708  C   MET A 237      26.232  15.339  17.744  1.00 31.03           C
ATOM   3709  O   MET A 237      27.262  15.405  18.467  1.00 31.78           O
ATOM   3710  N   HIS A 238      26.125  14.539  16.700  1.00 30.18           N
ATOM   3712  CA  HIS A 238      27.029  13.429  16.467  1.00 30.43           C
ATOM   3714  CB  HIS A 238      26.497  12.609  15.295  1.00 30.31           C
ATOM   3717  CG  HIS A 238      27.210  11.315  15.066  1.00 31.44           C
ATOM   3718  ND1 HIS A 238      28.423  11.008  15.643  1.00 34.88           N
ATOM   3720  CE1 HIS A 238      28.811   9.815  15.223  1.00 34.22           C
ATOM   3722  NE2 HIS A 238      27.895   9.344  14.397  1.00 30.68           N
ATOM   3724  CD2 HIS A 238      26.899  10.267  14.270  1.00 30.14           C
ATOM   3726  C   HIS A 238      28.454  13.897  16.194  1.00 30.26           C
ATOM   3727  O   HIS A 238      29.416  13.264  16.636  1.00 30.25           O
ATOM   3728  N   TYR A 239      28.580  15.002  15.459  1.00 29.66           N
ATOM   3730  CA  TYR A 239      29.869  15.425  14.943  1.00 28.62           C
ATOM   3732  CB  TYR A 239      29.796  15.434  13.443  1.00 28.49           C
ATOM   3735  CG  TYR A 239      29.274  14.144  12.829  1.00 29.16           C
ATOM   3736  CD1 TYR A 239      28.143  14.133  12.024  1.00 30.16           C
ATOM   3738  CE1 TYR A 239      27.684  12.943  11.459  1.00 32.60           C
ATOM   3740  CZ  TYR A 239      28.349  11.764  11.692  1.00 30.68           C
ATOM   3741  OH  TYR A 239      27.908  10.584  11.121  1.00 35.84           O
ATOM   3743  CE2 TYR A 239      29.464  11.766  12.453  1.00 30.59           C
ATOM   3745  CD2 TYR A 239      29.943  12.959  13.000  1.00 27.66           C
ATOM   3747  C   TYR A 239      30.323  16.788  15.460  1.00 28.41           C
ATOM   3748  O   TYR A 239      31.134  17.444  14.831  1.00 29.19           O
ATOM   3749  N   TYR A 240      29.822  17.194  16.622  1.00 28.52           N
ATOM   3751  CA  TYR A 240      30.167  18.470  17.225  1.00 28.22           C
ATOM   3753  CB  TYR A 240      29.255  18.799  18.407  1.00 27.63           C
ATOM   3756  CG  TYR A 240      29.377  20.242  18.778  1.00 25.70           C
ATOM   3757  CD1 TYR A 240      28.981  21.221  17.895  1.00 24.77           C
ATOM   3759  CE1 TYR A 240      29.117  22.570  18.204  1.00 26.29           C
ATOM   3761  CZ  TYR A 240      29.730  22.957  19.378  1.00 24.75           C
ATOM   3762  OH  TYR A 240      29.844  24.307  19.652  1.00 24.84           O
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ATOM	3764	CE2	TYR A 240	30.171	21.989	20.275	1.00	23.84		C
ATOM	3766	CD2	TYR A 240	29.988	20.637	19.969	1.00	25.18		C
ATOM	3768	C	TYR A 240	31.606	18.440	17.683	1.00	29.60		C
ATOM	3769	O	TYR A 240	31.952	17.609	18.500	1.00	31.09		O
ATOM	3770	N	PRO A 241	32.466	19.318	17.164	1.00	29.82		N
ATOM	3771	CA	PRO A 241	33.893	19.209	17.486	1.00	30.40		C
ATOM	3773	CB	PRO A 241	34.554	20.359	16.672	1.00	29.78		C
ATOM	3776	CG	PRO A 241	33.566	20.725	15.660	1.00	29.58		C
ATOM	3779	CD	PRO A 241	32.193	20.436	16.251	1.00	29.15		C
ATOM	3782	C	PRO A 241	34.131	19.357	18.975	1.00	31.29		C
ATOM	3783	O	PRO A 241	33.701	20.359	19.562	1.00	30.95		O
ATOM	3784	N	SER A 242	34.814	18.374	19.568	1.00	32.17		N
ATOM	3786	CA	SER A 242	34.975	18.322	21.023	1.00	33.30		C
ATOM	3788	CB	SER A 242	33.877	17.439	21.658	1.00	33.45		C
ATOM	3791	OG	SER A 242	32.625	17.634	21.017	1.00	32.07		O
ATOM	3793	C	SER A 242	36.321	17.751	21.429	1.00	34.27		C
ATOM	3794	O	SER A 242	37.056	17.177	20.601	1.00	34.36		O
ATOM	3795	N	GLY A 243	36.617	17.882	22.714	1.00	34.58		N
ATOM	3797	CA	GLY A 243	37.867	17.382	23.253	1.00	35.68		C
ATOM	3800	C	GLY A 243	39.085	18.074	22.673	1.00	35.81		C
ATOM	3801	O	GLY A 243	39.139	19.291	22.597	1.00	35.47		O
ATOM	3802	N	GLU A 244	40.068	17.292	22.253	1.00	36.74		N
ATOM	3804	CA	GLU A 244	41.256	17.872	21.674	1.00	38.26		C
ATOM	3806	CB	GLU A 244	42.413	16.865	21.565	1.00	39.45		C
ATOM	3809	CG	GLU A 244	42.101	15.547	20.897	1.00	44.01		C
ATOM	3812	CD	GLU A 244	43.369	14.732	20.593	1.00	53.29		C
ATOM	3813	OE1	GLU A 244	44.371	15.341	20.102	1.00	59.00		O
ATOM	3814	OE2	GLU A 244	43.369	13.482	20.829	1.00	55.21		O
ATOM	3815	C	GLU A 244	40.947	18.557	20.341	1.00	37.43		C
ATOM	3816	O	GLU A 244	41.751	19.335	19.876	1.00	37.43		O
ATOM	3817	N	HIS A 245	39.770	18.294	19.774	1.00	36.10		N
ATOM	3819	CA	HIS A 245	39.327	18.967	18.576	1.00	36.16		C
ATOM	3821	CB	HIS A 245	38.844	17.918	17.577	1.00	36.13		C
ATOM	3824	CG	HIS A 245	39.913	16.965	17.151	1.00	37.24		C
ATOM	3825	ND1	HIS A 245	39.710	15.604	17.071	1.00	38.33		N
ATOM	3827	CE1	HIS A 245	40.821	15.022	16.661	1.00	38.88		C
ATOM	3829	NE2	HIS A 245	41.738	15.956	16.473	1.00	38.14		N
ATOM	3831	CD2	HIS A 245	41.197	17.179	16.772	1.00	37.15		C
ATOM	3833	C	HIS A 245	38.254	20.051	18.758	1.00	35.73		C
ATOM	3834	O	HIS A 245	37.689	20.502	17.775	1.00	34.71		O
ATOM	3835	N	LYS A 246	38.004	20.490	19.993	1.00	36.48		N
ATOM	3837	CA	LYS A 246	37.069	21.604	20.264	1.00	37.62		C
ATOM	3839	CB	LYS A 246	36.924	21.858	21.785	1.00	38.10		C
ATOM	3842	CG	LYS A 246	38.135	22.518	22.472	1.00	40.51		C
ATOM	3845	CD	LYS A 246	37.985	22.677	24.016	1.00	43.75		C
ATOM	3848	CE	LYS A 246	36.521	22.784	24.524	1.00	46.40		C
ATOM	3851	NZ	LYS A 246	35.761	24.063	24.154	1.00	48.43		N
ATOM	3855	C	LYS A 246	37.424	22.940	19.596	1.00	37.44		C
ATOM	3856	O	LYS A 246	36.644	23.879	19.626	1.00	37.12		O
ATOM	3857	N	ASN A 247	38.634	23.030	19.065	1.00	37.36		N
ATOM	3859	CA	ASN A 247	39.169	24.268	18.529	1.00	37.47		C
ATOM	3861	CB	ASN A 247	40.689	24.307	18.791	1.00	38.43		C
ATOM	3864	CG	ASN A 247	41.463	23.107	18.151	1.00	41.03		C
ATOM	3865	OD1	ASN A 247	41.280	21.922	18.512	1.00	41.55		O
ATOM	3866	ND2	ASN A 247	42.354	23.439	17.215	1.00	43.93		N
ATOM	3869	C	ASN A 247	38.863	24.452	17.027	1.00	35.80		C
ATOM	3870	O	ASN A 247	39.041	25.549	16.458	1.00	36.80		O
ATOM	3871	N	LEU A 248	38.402	23.366	16.419	1.00	33.23		N
ATOM	3873	CA	LEU A 248	38.027	23.290	15.018	1.00	31.79		C
ATOM	3875	CB	LEU A 248	38.347	21.881	14.499	1.00	31.99		C
ATOM	3878	CG	LEU A 248	39.791	21.375	14.608	1.00	31.90		C
ATOM	3880	CD1	LEU A 248	39.882	19.977	14.095	1.00	31.93		C
ATOM	3884	CD2	LEU A 248	40.752	22.265	13.841	1.00	31.49		C
ATOM	3888	C	LEU A 248	36.540	23.579	14.803	1.00	29.65		C
ATOM	3889	O	LEU A 248	35.725	23.352	15.685	1.00	29.71		O
ATOM	3890	N	LEU A 249	36.197	24.090	13.632	1.00	28.07		N
ATOM	3892	CA	LEU A 249	34.796	24.356	13.285	1.00	26.89		C

ATOM	3894	CB	LEU	A	249	34.701	25.453	12.206	1.00	26.53	C
ATOM	3897	CG	LEU	A	249	35.093	26.857	12.652	1.00	26.17	C
ATOM	3899	CD1	LEU	A	249	35.327	27.708	11.477	1.00	26.47	C
ATOM	3903	CD2	LEU	A	249	34.018	27.470	13.528	1.00	28.38	C
ATOM	3907	C	LEU	A	249	34.085	23.133	12.755	1.00	25.92	C
ATOM	3908	O	LEU	A	249	32.867	23.039	12.893	1.00	25.62	O
ATOM	3909	N	ARG	A	250	34.823	22.260	12.050	1.00	24.45	N
ATOM	3911	CA	ARG	A	250	34.279	21.016	11.559	1.00	24.11	C
ATOM	3913	CB	ARG	A	250	34.122	21.040	10.067	1.00	22.79	C
ATOM	3916	CG	ARG	A	250	33.161	22.068	9.573	1.00	22.33	C
ATOM	3919	CD	ARG	A	250	32.913	21.960	8.090	1.00	20.00	C
ATOM	3922	NE	ARG	A	250	32.147	20.771	7.746	1.00	18.48	N
ATOM	3924	CZ	ARG	A	250	32.069	20.268	6.544	1.00	19.97	C
ATOM	3925	NH1	ARG	A	250	32.709	20.823	5.533	1.00	20.67	N
ATOM	3928	NH2	ARG	A	250	31.354	19.183	6.333	1.00	22.48	N
ATOM	3931	C	ARG	A	250	35.196	19.845	11.903	1.00	25.85	C
ATOM	3932	O	ARG	A	250	36.436	19.962	11.797	1.00	26.33	O
ATOM	3933	N	LEU	A	251	34.589	18.719	12.295	1.00	25.55	N
ATOM	3935	CA	LEU	A	251	35.314	17.485	12.488	1.00	26.46	C
ATOM	3937	CB	LEU	A	251	34.378	16.378	12.917	1.00	27.23	C
ATOM	3940	CG	LEU	A	251	34.993	15.041	13.265	1.00	29.83	C
ATOM	3942	CD1	LEU	A	251	35.830	15.163	14.516	1.00	30.09	C
ATOM	3946	CD2	LEU	A	251	33.888	13.965	13.467	1.00	32.28	C
ATOM	3950	C	LEU	A	251	35.955	17.064	11.193	1.00	26.30	C
ATOM	3951	O	LEU	A	251	37.045	16.497	11.210	1.00	27.02	O
ATOM	3952	N	ALA	A	252	35.277	17.331	10.076	1.00	25.33	N
ATOM	3954	CA	ALA	A	252	35.815	17.061	8.732	1.00	24.43	C
ATOM	3956	CB	ALA	A	252	34.812	17.468	7.656	1.00	24.18	C
ATOM	3960	C	ALA	A	252	37.174	17.722	8.445	1.00	24.23	C
ATOM	3961	O	ALA	A	252	37.835	17.328	7.511	1.00	24.66	O
ATOM	3962	N	CYS	A	253	37.590	18.708	9.230	1.00	23.20	N
ATOM	3964	CA	CYS	A	253	38.960	19.159	9.169	1.00	24.68	C
ATOM	3966	CB	CYS	A	253	39.139	20.447	9.977	1.00	24.83	C
ATOM	3969	SG	CYS	A	253	38.156	21.845	9.358	1.00	31.62	S
ATOM	3970	C	CYS	A	253	39.992	18.104	9.638	1.00	25.26	C
ATOM	3971	O	CYS	A	253	41.184	18.310	9.429	1.00	25.33	O
ATOM	3972	N	THR	A	254	39.554	16.991	10.238	1.00	24.35	N
ATOM	3974	CA	THR	A	254	40.453	15.999	10.754	1.00	25.64	C
ATOM	3976	CB	THR	A	254	40.070	15.571	12.197	1.00	25.79	C
ATOM	3978	OG1	THR	A	254	38.792	14.915	12.177	1.00	25.32	O
ATOM	3980	CG2	THR	A	254	39.886	16.755	13.126	1.00	26.91	C
ATOM	3984	C	THR	A	254	40.423	14.749	9.878	1.00	26.27	C
ATOM	3985	O	THR	A	254	40.992	13.750	10.240	1.00	26.34	O
ATOM	3986	N	LEU	A	255	39.704	14.809	8.766	1.00	26.96	N
ATOM	3988	CA	LEU	A	255	39.544	13.691	7.865	1.00	27.85	C
ATOM	3990	CB	LEU	A	255	38.692	14.120	6.668	1.00	28.08	C
ATOM	3993	CG	LEU	A	255	37.240	13.727	6.563	1.00	30.88	C
ATOM	3995	CD1	LEU	A	255	36.777	13.892	5.124	1.00	33.21	C
ATOM	3999	CD2	LEU	A	255	37.028	12.286	7.036	1.00	30.84	C
ATOM	4003	C	LEU	A	255	40.899	13.253	7.329	1.00	28.23	C
ATOM	4004	O	LEU	A	255	41.710	14.089	6.965	1.00	27.48	O
ATOM	4005	N	LYS	A	256	41.110	11.941	7.228	1.00	28.82	N
ATOM	4007	CA	LYS	A	256	42.386	11.397	6.776	1.00	29.23	C
ATOM	4009	CB	LYS	A	256	43.007	10.451	7.819	1.00	29.93	C
ATOM	4012	CG	LYS	A	256	43.030	11.029	9.215	1.00	31.97	C
ATOM	4015	CD	LYS	A	256	44.396	11.562	9.620	1.00	35.76	C
ATOM	4018	CE	LYS	A	256	44.651	12.993	9.265	1.00	35.30	C
ATOM	4021	NZ	LYS	A	256	44.777	13.878	10.460	1.00	33.92	N
ATOM	4025	C	LYS	A	256	42.190	10.664	5.486	1.00	29.13	C
ATOM	4026	O	LYS	A	256	41.086	10.154	5.216	1.00	30.03	O
ATOM	4027	N	PRO	A	257	43.259	10.628	4.686	1.00	28.96	N
ATOM	4028	CA	PRO	A	257	43.270	9.951	3.400	1.00	29.06	C
ATOM	4030	CB	PRO	A	257	44.769	9.872	3.071	1.00	29.06	C
ATOM	4033	CG	PRO	A	257	45.295	11.088	3.647	1.00	28.76	C
ATOM	4036	CD	PRO	A	257	44.561	11.260	4.947	1.00	28.72	C
ATOM	4039	C	PRO	A	257	42.683	8.573	3.500	1.00	29.36	C
ATOM	4040	O	PRO	A	257	43.018	7.865	4.414	1.00	30.27	O

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ATOM   4041  N   ASP A 258      41.833   8.231   2.539  1.00 30.17           N
ATOM   4043  CA  ASP A 258      41.057   7.007   2.500  1.00 29.72           C
ATOM   4045  CB  ASP A 258      39.891   7.145   3.462  1.00 30.01           C
ATOM   4048  CG  ASP A 258      38.972   5.939   3.448  1.00 29.67           C
ATOM   4049  OD1 ASP A 258      39.013   5.118   2.527  1.00 32.99           O
ATOM   4050  OD2 ASP A 258      38.165   5.757   4.356  1.00 30.55           O
ATOM   4051  C   ASP A 258      40.562   6.950   1.083  1.00 28.81           C
ATOM   4052  O   ASP A 258      39.631   7.648   0.764  1.00 28.97           O
ATOM   4053  N   PRO A 259      41.246   6.231   0.205  1.00 28.62           N
ATOM   4054  CA  PRO A 259      40.926   6.243  -1.239  1.00 28.92           C
ATOM   4056  CB  PRO A 259      41.783   5.119  -1.812  1.00 28.10           C
ATOM   4059  CG  PRO A 259      42.781   4.843  -0.805  1.00 29.11           C
ATOM   4062  CD  PRO A 259      42.461   5.473   0.487  1.00 28.10           C
ATOM   4065  C   PRO A 259      39.468   6.020  -1.633  1.00 28.61           C
ATOM   4066  O   PRO A 259      38.966   6.583  -2.599  1.00 28.69           O
ATOM   4067  N   GLU A 260      38.842   5.172  -0.868  1.00 29.21           N
ATOM   4069  CA  GLU A 260      37.488   4.742  -1.053  1.00 30.95           C
ATOM   4071  CB  GLU A 260      37.271   3.524  -0.133  1.00 32.24           C
ATOM   4074  CG  GLU A 260      36.260   2.531  -0.654  1.00 38.52           C
ATOM   4077  CD  GLU A 260      35.726   1.626   0.443  1.00 47.04           C
ATOM   4078  OE1 GLU A 260      34.529   1.787   0.808  1.00 52.69           O
ATOM   4079  OE2 GLU A 260      36.509   0.762   0.930  1.00 49.56           O
ATOM   4080  C   GLU A 260      36.464   5.843  -0.716  1.00 29.37           C
ATOM   4081  O   GLU A 260      35.509   6.048  -1.446  1.00 28.95           O
ATOM   4082  N   LEU A 261      36.656   6.480   0.431  1.00 28.52           N
ATOM   4084  CA  LEU A 261      35.867   7.627   0.838  1.00 28.52           C
ATOM   4086  CB  LEU A 261      36.252   8.060   2.251  1.00 27.97           C
ATOM   4089  CG  LEU A 261      35.472   9.256   2.777  1.00 29.22           C
ATOM   4091  CD1 LEU A 261      33.943   9.054   2.619  1.00 28.32           C
ATOM   4095  CD2 LEU A 261      35.855   9.529   4.247  1.00 28.41           C
ATOM   4099  C   LEU A 261      36.047   8.791  -0.149  1.00 27.92           C
ATOM   4100  O   LEU A 261      35.080   9.364  -0.600  1.00 27.39           O
ATOM   4101  N   GLU A 262      37.284   9.082  -0.529  1.00 27.18           N
ATOM   4103  CA  GLU A 262      37.552  10.166  -1.472  1.00 27.07           C
ATOM   4105  CB  GLU A 262      39.071  10.415  -1.625  1.00 26.23           C
ATOM   4108  CG  GLU A 262      39.411  11.576  -2.541  1.00 23.95           C
ATOM   4111  CD  GLU A 262      40.856  12.018  -2.479  1.00 23.10           C
ATOM   4112  OE1 GLU A 262      41.442  12.322  -3.545  1.00 24.16           O
ATOM   4113  OE2 GLU A 262      41.411  12.064  -1.379  1.00 22.15           O
ATOM   4114  C   GLU A 262      36.940   9.889  -2.834  1.00 27.65           C
ATOM   4115  O   GLU A 262      36.333  10.773  -3.434  1.00 28.46           O
ATOM   4116  N   MET A 263      37.063   8.670  -3.329  1.00 28.04           N
ATOM   4118  CA  MET A 263      36.471   8.351  -4.640  1.00 28.72           C
ATOM   4120  CB  MET A 263      36.695   6.884  -5.022  1.00 29.36           C
ATOM   4123  CG  MET A 263      37.873   6.578  -5.937  1.00 32.32           C
ATOM   4126  SD  MET A 263      38.189   4.740  -6.008  1.00 42.46           S
ATOM   4127  CE  MET A 263      36.476   4.090  -6.225  1.00 41.04           C
ATOM   4131  C   MET A 263      34.958   8.606  -4.609  1.00 27.67           C
ATOM   4132  O   MET A 263      34.396   9.082  -5.561  1.00 26.74           O
ATOM   4133  N   SER A 264      34.321   8.272  -3.502  1.00 26.83           N
ATOM   4135  CA  SER A 264      32.899   8.532  -3.322  1.00 27.53           C
ATOM   4137  CB  SER A 264      32.392   7.668  -2.150  1.00 27.24           C
ATOM   4140  OG  SER A 264      31.837   8.492  -1.149  1.00 30.25           O
ATOM   4142  C   SER A 264      32.538  10.056  -3.140  1.00 27.46           C
ATOM   4143  O   SER A 264      31.577  10.564  -3.738  1.00 27.28           O
ATOM   4144  N   LEU A 265      33.360  10.795  -2.390  1.00 26.50           N
ATOM   4146  CA  LEU A 265      33.143  12.222  -2.202  1.00 26.58           C
ATOM   4148  CB  LEU A 265      33.987  12.741  -1.026  1.00 26.73           C
ATOM   4151  CG  LEU A 265      33.653  12.106   0.311  1.00 26.71           C
ATOM   4153  CD1 LEU A 265      34.565  12.711   1.329  1.00 26.27           C
ATOM   4157  CD2 LEU A 265      32.175  12.286   0.699  1.00 26.01           C
ATOM   4161  C   LEU A 265      33.428  13.105  -3.401  1.00 25.92           C
ATOM   4162  O   LEU A 265      32.759  14.095  -3.619  1.00 26.80           O
ATOM   4163  N   GLN A 266      34.437  12.780  -4.181  1.00 26.33           N
ATOM   4165  CA  GLN A 266      34.823  13.626  -5.292  1.00 25.49           C
ATOM   4167  CB  GLN A 266      36.159  13.142  -5.867  1.00 26.29           C
ATOM   4170  CG  GLN A 266      36.114  11.848  -6.730  1.00 27.86           C
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ATOM	4173	CD	GLN	A	266	37.298	11.720	-7.682	1.00 32.57	C
ATOM	4174	OE1	GLN	A	266	37.124	11.866	-8.888	1.00 41.67	O
ATOM	4175	NE2	GLN	A	266	38.475	11.470	-7.164	1.00 30.15	N
ATOM	4178	C	GLN	A	266	33.727	13.698	-6.355	1.00 25.90	C
ATOM	4179	O	GLN	A	266	33.703	14.639	-7.166	1.00 27.35	O
ATOM	4180	N	LYS	A	267	32.841	12.714	-6.389	1.00 24.87	N
ATOM	4182	CA	LYS	A	267	31.815	12.661	-7.395	1.00 25.77	C
ATOM	4184	CB	LYS	A	267	31.066	11.335	-7.338	1.00 27.07	C
ATOM	4187	CG	LYS	A	267	31.873	10.077	-7.715	1.00 31.87	C
ATOM	4190	CD	LYS	A	267	31.111	8.860	-7.209	1.00 36.61	C
ATOM	4193	CE	LYS	A	267	31.410	7.649	-8.004	1.00 40.19	C
ATOM	4196	NZ	LYS	A	267	32.759	7.126	-7.718	1.00 41.81	N
ATOM	4200	C	LYS	A	267	30.781	13.764	-7.212	1.00 25.19	C
ATOM	4201	O	LYS	A	267	30.028	14.007	-8.108	1.00 23.78	O
ATOM	4202	N	TYR	A	268	30.710	14.381	-6.039	1.00 25.53	N
ATOM	4204	CA	TYR	A	268	29.787	15.498	-5.808	1.00 25.38	C
ATOM	4206	CB	TYR	A	268	29.400	15.570	-4.374	1.00 24.68	C
ATOM	4209	CG	TYR	A	268	28.675	14.376	-3.787	1.00 25.16	C
ATOM	4210	CD1	TYR	A	268	29.359	13.227	-3.381	1.00 25.61	C
ATOM	4212	CE1	TYR	A	268	28.661	12.165	-2.768	1.00 26.50	C
ATOM	4214	CZ	TYR	A	268	27.273	12.285	-2.573	1.00 25.36	C
ATOM	4215	OH	TYR	A	268	26.537	11.292	-2.018	1.00 26.31	O
ATOM	4217	CE2	TYR	A	268	26.603	13.404	-2.958	1.00 22.54	C
ATOM	4219	CD2	TYR	A	268	27.293	14.434	-3.555	1.00 25.07	C
ATOM	4221	C	TYR	A	268	30.335	16.849	-6.205	1.00 25.57	C
ATOM	4222	O	TYR	A	268	29.610	17.811	-6.161	1.00 24.82	O
ATOM	4223	N	VAL	A	269	31.604	16.895	-6.618	1.00 28.05	N
ATOM	4225	CA	VAL	A	269	32.354	18.128	-6.910	1.00 29.89	C
ATOM	4227	CB	VAL	A	269	33.684	18.196	-6.106	1.00 29.78	C
ATOM	4229	CG1	VAL	A	269	34.297	19.558	-6.240	1.00 30.56	C
ATOM	4233	CG2	VAL	A	269	33.469	17.957	-4.656	1.00 30.44	C
ATOM	4237	C	VAL	A	269	32.771	18.205	-8.388	1.00 30.70	C
ATOM	4238	O	VAL	A	269	33.251	17.221	-8.917	1.00 31.46	O
ATOM	4239	N	MET	A	270	32.647	19.375	-9.031	1.00 32.19	N
ATOM	4241	CA	MET	A	270	33.045	19.519	-10.460	1.00 33.00	C
ATOM	4243	CB	MET	A	270	32.780	20.929	-11.001	1.00 33.10	C
ATOM	4246	CG	MET	A	270	31.365	21.458	-10.866	1.00 35.28	C
ATOM	4249	SD	MET	A	270	31.020	22.936	-11.964	0.50 29.72	S
ATOM	4250	CE	MET	A	270	32.543	23.757	-11.947	0.50 26.19	C
ATOM	4254	C	MET	A	270	34.524	19.291	-10.646	1.00 33.16	C
ATOM	4255	O	MET	A	270	35.306	19.503	-9.717	1.00 33.34	O
ATOM	4256	N	GLU	A	271	34.927	18.938	-11.863	1.00 33.50	N
ATOM	4258	CA	GLU	A	271	36.318	18.551	-12.110	1.00 33.75	C
ATOM	4260	CB	GLU	A	271	36.453	17.735	-13.424	1.00 34.97	C
ATOM	4263	CG	GLU	A	271	37.007	18.508	-14.631	1.00 40.14	C
ATOM	4266	CD	GLU	A	271	37.166	17.651	-15.894	1.00 46.02	C
ATOM	4267	OE1	GLU	A	271	38.218	17.767	-16.568	1.00 48.95	O
ATOM	4268	OE2	GLU	A	271	36.241	16.863	-16.225	1.00 52.58	O
ATOM	4269	C	GLU	A	271	37.280	19.775	-12.035	1.00 32.09	C
ATOM	4270	O	GLU	A	271	38.450	19.657	-11.611	1.00 30.85	O
ATOM	4271	N	SER	A	272	36.755	20.945	-12.382	1.00 30.33	N
ATOM	4273	CA	SER	A	272	37.537	22.172	-12.359	1.00 29.33	C
ATOM	4275	CB	SER	A	272	36.796	23.316	-13.081	1.00 29.55	C
ATOM	4278	OG	SER	A	272	35.569	23.653	-12.450	1.00 30.42	O
ATOM	4280	C	SER	A	272	37.884	22.588	-10.947	1.00 27.95	C
ATOM	4281	O	SER	A	272	38.870	23.242	-10.735	1.00 27.12	O
ATOM	4282	N	ILE	A	273	37.031	22.236	-9.998	1.00 27.34	N
ATOM	4284	CA	ILE	A	273	37.264	22.514	-8.569	1.00 27.31	C
ATOM	4286	CB	ILE	A	273	35.972	22.315	-7.768	1.00 27.53	C
ATOM	4288	CG1	ILE	A	273	34.856	23.279	-8.235	1.00 29.94	C
ATOM	4291	CD1	ILE	A	273	34.902	24.653	-7.624	1.00 31.68	C
ATOM	4295	CG2	ILE	A	273	36.237	22.488	-6.314	1.00 27.98	C
ATOM	4299	C	ILE	A	273	38.296	21.556	-7.976	1.00 26.13	C
ATOM	4300	O	ILE	A	273	39.074	21.933	-7.114	1.00 25.72	O
ATOM	4301	N	LEU	A	274	38.217	20.296	-8.389	1.00 25.41	N
ATOM	4303	CA	LEU	A	274	39.189	19.299	-8.022	1.00 25.16	C
ATOM	4305	CB	LEU	A	274	38.790	17.919	-8.555	1.00 25.68	C

ATOM	4308	CG	LEU	A	274	37.512	17.337	-7.930	1.00	26.07	C
ATOM	4310	CD1	LEU	A	274	37.054	16.180	-8.776	1.00	27.10	C
ATOM	4314	CD2	LEU	A	274	37.751	16.896	-6.534	1.00	26.64	C
ATOM	4318	C	LEU	A	274	40.534	19.674	-8.566	1.00	24.61	C
ATOM	4319	O	LEU	A	274	41.514	19.357	-7.956	1.00	24.22	O
ATOM	4320	N	LYS	A	275	40.578	20.327	-9.713	1.00	25.28	N
ATOM	4322	CA	LYS	A	275	41.826	20.734	-10.320	1.00	26.46	C
ATOM	4324	CB	LYS	A	275	41.569	21.381	-11.686	1.00	27.89	C
ATOM	4327	CG	LYS	A	275	42.729	21.193	-12.676	1.00	30.24	C
ATOM	4330	CD	LYS	A	275	42.465	21.940	-13.976	1.00	33.88	C
ATOM	4333	CE	LYS	A	275	43.681	21.827	-14.921	1.00	35.65	C
ATOM	4336	NZ	LYS	A	275	43.401	22.414	-16.253	1.00	34.35	N
ATOM	4340	C	LYS	A	275	42.517	21.718	-9.392	1.00	26.08	C
ATOM	4341	O	LYS	A	275	43.685	21.586	-9.105	1.00	24.37	O
ATOM	4342	N	GLN	A	276	41.747	22.682	-8.905	1.00	26.26	N
ATOM	4344	CA	GLN	A	276	42.205	23.662	-7.927	1.00	26.49	C
ATOM	4346	CB	GLN	A	276	41.069	24.603	-7.572	1.00	26.61	C
ATOM	4349	CG	GLN	A	276	41.533	25.849	-6.879	1.00	30.26	C
ATOM	4352	CD	GLN	A	276	40.384	26.656	-6.335	1.00	32.64	C
ATOM	4353	OE1	GLN	A	276	40.152	26.633	-5.102	1.00	37.07	O
ATOM	4354	NE2	GLN	A	276	39.647	27.357	-7.221	1.00	23.76	N
ATOM	4357	C	GLN	A	276	42.675	22.950	-6.659	1.00	25.72	C
ATOM	4358	O	GLN	A	276	43.745	23.233	-6.151	1.00	27.12	O
ATOM	4359	N	ILE	A	277	41.873	22.016	-6.174	1.00	24.22	N
ATOM	4361	CA	ILE	A	277	42.203	21.207	-5.032	1.00	23.80	C
ATOM	4363	CB	ILE	A	277	41.015	20.271	-4.747	1.00	23.28	C
ATOM	4365	CG1	ILE	A	277	39.903	21.087	-4.051	1.00	24.99	C
ATOM	4368	CD1	ILE	A	277	38.508	20.434	-3.935	1.00	23.86	C
ATOM	4372	CG2	ILE	A	277	41.427	19.133	-3.882	1.00	23.49	C
ATOM	4376	C	ILE	A	277	43.493	20.444	-5.222	1.00	23.37	C
ATOM	4377	O	ILE	A	277	44.257	20.282	-4.294	1.00	23.25	O
ATOM	4378	N	ASP	A	278	43.732	19.945	-6.424	1.00	23.75	N
ATOM	4380	CA	ASP	A	278	44.949	19.210	-6.692	1.00	24.18	C
ATOM	4382	CB	ASP	A	278	44.712	18.246	-7.816	1.00	24.09	C
ATOM	4385	CG	ASP	A	278	43.837	17.127	-7.397	1.00	23.78	C
ATOM	4386	OD1	ASP	A	278	43.890	16.768	-6.205	1.00	22.02	O
ATOM	4387	OD2	ASP	A	278	43.036	16.587	-8.175	1.00	23.46	O
ATOM	4388	C	ASP	A	278	46.169	20.064	-6.989	1.00	24.51	C
ATOM	4389	O	ASP	A	278	47.219	19.518	-7.303	1.00	24.37	O
ATOM	4390	N	ASN	A	279	46.017	21.377	-6.833	1.00	24.68	N
ATOM	4392	CA	ASN	A	279	47.053	22.371	-7.064	1.00	25.00	C
ATOM	4394	CB	ASN	A	279	48.244	22.131	-6.181	1.00	24.16	C
ATOM	4397	CG	ASN	A	279	47.979	22.428	-4.751	1.00	24.53	C
ATOM	4398	OD1	ASN	A	279	48.551	21.777	-3.899	1.00	27.03	O
ATOM	4399	ND2	ASN	A	279	47.212	23.459	-4.467	1.00	19.07	N
ATOM	4402	C	ASN	A	279	47.529	22.341	-8.461	1.00	25.32	C
ATOM	4403	O	ASN	A	279	48.728	22.444	-8.704	1.00	25.44	O
ATOM	4404	N	LYS	A	280	46.589	22.158	-9.362	1.00	26.01	N
ATOM	4406	CA	LYS	A	280	46.851	22.097	-10.797	1.00	27.44	C
ATOM	4408	CB	LYS	A	280	46.388	20.749	-11.369	1.00	27.56	C
ATOM	4411	CG	LYS	A	280	47.451	19.621	-11.132	1.00	30.21	C
ATOM	4414	CD	LYS	A	280	46.971	18.228	-11.585	1.00	34.92	C
ATOM	4417	CE	LYS	A	280	48.106	17.150	-11.360	1.00	38.14	C
ATOM	4420	NZ	LYS	A	280	48.262	16.608	-9.881	1.00	36.74	N
ATOM	4424	C	LYS	A	280	46.202	23.287	-11.494	1.00	27.60	C
ATOM	4425	O	LYS	A	280	46.277	23.449	-12.697	1.00	27.67	O
ATOM	4426	N	GLN	A	281	45.610	24.168	-10.711	1.00	28.39	N
ATOM	4428	CA	GLN	A	281	45.076	25.364	-11.264	1.00	29.17	C
ATOM	4430	CB	GLN	A	281	43.662	25.011	-11.769	1.00	29.38	C
ATOM	4433	CG	GLN	A	281	42.698	26.111	-12.157	1.00	31.67	C
ATOM	4436	CD	GLN	A	281	41.238	25.577	-12.168	1.00	37.58	C
ATOM	4437	OE1	GLN	A	281	40.559	25.591	-11.120	1.00	40.17	O
ATOM	4438	NE2	GLN	A	281	40.774	25.082	-13.327	1.00	35.90	N
ATOM	4441	C	GLN	A	281	45.183	26.451	-10.178	1.00	29.69	C
ATOM	4442	O	GLN	A	281	45.026	26.181	-8.997	1.00	29.66	O
ATOM	4443	N	LEU	A	282	45.479	27.679	-10.596	1.00	30.72	N
ATOM	4445	CA	LEU	A	282	45.445	28.873	-9.724	1.00	31.33	C

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ATOM   4447  CB  LEU A 282      45.765  30.113 -10.581  1.00 30.83           C
ATOM   4450  CG  LEU A 282      47.166  30.100 -11.231  1.00 31.53           C
ATOM   4452  CD1 LEU A 282      47.429  31.219 -12.220  1.00 31.18           C
ATOM   4456  CD2 LEU A 282      48.187  30.182 -10.169  1.00 32.25           C
ATOM   4460  C   LEU A 282      44.101  29.081  -8.961  1.00 32.72           C
ATOM   4461  O   LEU A 282      43.031  28.950  -9.575  1.00 30.69           O
ATOM   4462  N   GLN A 283      44.177  29.435  -7.652  1.00 35.29           N
ATOM   4464  CA  GLN A 283      42.989  29.517  -6.768  1.00 37.85           C
ATOM   4466  CB  GLN A 283      43.299  29.783  -5.284  1.00 38.96           C
ATOM   4469  CG  GLN A 283      44.160  28.724  -4.510  1.00 43.66           C
ATOM   4472  CD  GLN A 283      43.465  27.350  -4.302  1.00 49.44           C
ATOM   4473  OE1 GLN A 283      42.292  27.307  -3.941  1.00 54.30           O
ATOM   4474  NE2 GLN A 283      44.206  26.236  -4.517  1.00 51.37           N
ATOM   4477  C   GLN A 283      42.016  30.579  -7.215  1.00 38.52           C
ATOM   4478  O   GLN A 283      40.831  30.446  -6.972  1.00 40.65           O
ATOM   4479  N   GLY A 284      42.481  31.602  -7.915  1.00 38.54           N
ATOM   4481  CA  GLY A 284      41.611  32.704  -8.296  1.00 38.48           C
ATOM   4484  C   GLY A 284      41.000  32.579  -9.659  1.00 38.25           C
ATOM   4485  O   GLY A 284      40.265  33.444 -10.121  1.00 38.65           O
ATOM   4486  N   TYR A 285      41.293  31.480 -10.303  1.00 38.09           N
ATOM   4488  CA  TYR A 285      40.826  31.230 -11.656  1.00 38.79           C
ATOM   4490  CB  TYR A 285      41.590  29.995 -12.198  1.00 39.62           C
ATOM   4493  CG  TYR A 285      41.155  29.474 -13.550  1.00 43.20           C
ATOM   4494  CD1 TYR A 285      41.728  29.975 -14.741  1.00 47.33           C
ATOM   4496  CE1 TYR A 285      41.344  29.486 -15.995  1.00 47.04           C
ATOM   4498  CZ  TYR A 285      40.379  28.489 -16.053  1.00 49.73           C
ATOM   4499  OH  TYR A 285      39.981  27.988 -17.283  1.00 54.61           O
ATOM   4501  CE2 TYR A 285      39.812  27.967 -14.882  1.00 47.72           C
ATOM   4503  CD2 TYR A 285      40.205  28.455 -13.648  1.00 44.81           C
ATOM   4505  C   TYR A 285      39.312  30.989 -11.705  1.00 37.15           C
ATOM   4506  O   TYR A 285      38.702  31.267 -12.693  1.00 37.37           O
ATOM   4507  N   LEU A 286      38.714  30.454 -10.655  1.00 35.65           N
ATOM   4509  CA  LEU A 286      37.293  30.142 -10.697  1.00 35.00           C
ATOM   4511  CB  LEU A 286      36.978  28.881  -9.876  1.00 35.00           C
ATOM   4514  CG  LEU A 286      37.265  27.572 -10.595  1.00 34.08           C
ATOM   4516  CD1 LEU A 286      37.038  26.435  -9.648  1.00 33.44           C
ATOM   4520  CD2 LEU A 286      36.434  27.431 -11.847  1.00 33.69           C
ATOM   4524  C   LEU A 286      36.384  31.294 -10.256  1.00 34.68           C
ATOM   4525  O   LEU A 286      35.186  31.173 -10.375  1.00 34.64           O
ATOM   4526  N   SER A 287      36.942  32.406  -9.782  1.00 34.16           N
ATOM   4528  CA  SER A 287      36.152  33.597  -9.526  1.00 33.53           C
ATOM   4530  CB  SER A 287      36.718  34.385  -8.377  1.00 33.15           C
ATOM   4533  OG  SER A 287      36.551  33.660  -7.218  1.00 31.43           O
ATOM   4535  C   SER A 287      36.094  34.515 -10.747  1.00 34.72           C
ATOM   4536  O   SER A 287      37.075  35.172 -11.096  1.00 34.92           O
ATOM   4537  N   GLU A 288      34.907  34.601 -11.340  1.00 35.02           N
ATOM   4539  CA  GLU A 288      34.705  35.348 -12.560  1.00 35.27           C
ATOM   4541  CB  GLU A 288      34.954  34.415 -13.732  1.00 35.58           C
ATOM   4544  CG  GLU A 288      36.036  34.944 -14.651  1.00 39.96           C
ATOM   4547  CD  GLU A 288      36.038  34.261 -15.988  1.00 44.45           C
ATOM   4548  OE1 GLU A 288      36.433  33.067 -15.998  1.00 46.68           O
ATOM   4549  OE2 GLU A 288      35.664  34.914 -17.008  1.00 47.32           O
ATOM   4550  C   GLU A 288      33.314  35.958 -12.687  1.00 34.24           C
ATOM   4551  O   GLU A 288      32.331  35.351 -12.296  1.00 34.34           O
ATOM   4552  N   LEU A 289      33.257  37.183 -13.188  1.00 34.12           N
ATOM   4554  CA  LEU A 289      32.059  37.716 -13.850  1.00 34.11           C
ATOM   4556  CB  LEU A 289      31.959  39.220 -13.745  1.00 33.35           C
ATOM   4559  CG  LEU A 289      31.593  39.640 -12.357  1.00 31.86           C
ATOM   4561  CD1 LEU A 289      32.049  41.061 -12.252  1.00 33.30           C
ATOM   4565  CD2 LEU A 289      30.062  39.482 -12.123  1.00 31.80           C
ATOM   4569  C   LEU A 289      32.170  37.349 -15.306  1.00 35.20           C
ATOM   4570  O   LEU A 289      32.970  37.930 -16.048  1.00 34.96           O
ATOM   4571  N   ARG A 290      31.340  36.388 -15.686  1.00 36.11           N
ATOM   4573  CA  ARG A 290      31.482  35.615 -16.905  1.00 37.20           C
ATOM   4575  CB  ARG A 290      31.807  34.196 -16.476  1.00 37.70           C
ATOM   4578  CG  ARG A 290      32.589  33.403 -17.444  1.00 41.36           C
ATOM   4581  CD  ARG A 290      32.527  31.903 -17.203  1.00 43.91           C
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ATOM   4584  NE  ARG A 290      32.981  31.173 -18.387  1.00 45.16           N
ATOM   4586  CZ  ARG A 290      34.243  31.095 -18.795  1.00 47.49           C
ATOM   4587  NH1 ARG A 290      35.208  31.725 -18.145  1.00 49.16           N
ATOM   4590  NH2 ARG A 290      34.549  30.384 -19.879  1.00 48.71           N
ATOM   4593  C   ARG A 290      30.134  35.603 -17.650  1.00 37.55           C
ATOM   4594  O   ARG A 290      29.052  35.651 -17.024  1.00 37.74           O
ATOM   4595  N   PRO A 291      30.165  35.568 -18.973  1.00 37.42           N
ATOM   4596  CA  PRO A 291      28.936  35.287 -19.731  1.00 36.70           C
ATOM   4598  CB  PRO A 291      29.215  35.857 -21.115  1.00 37.05           C
ATOM   4601  CG  PRO A 291      30.751  35.809 -21.249  1.00 37.91           C
ATOM   4604  CD  PRO A 291      31.323  35.820 -19.850  1.00 37.96           C
ATOM   4607  C   PRO A 291      28.648  33.786 -19.799  1.00 35.26           C
ATOM   4608  O   PRO A 291      29.466  32.998 -20.283  1.00 33.35           O
ATOM   4609  N   VAL A 292      27.468  33.432 -19.298  1.00 34.89           N
ATOM   4611  CA  VAL A 292      26.962  32.060 -19.309  1.00 34.93           C
ATOM   4613  CB  VAL A 292      27.157  31.387 -17.920  1.00 34.38           C
ATOM   4615  CG1 VAL A 292      28.534  31.608 -17.410  1.00 33.82           C
ATOM   4619  CG2 VAL A 292      26.175  31.926 -16.907  1.00 35.14           C
ATOM   4623  C   VAL A 292      25.474  32.032 -19.677  1.00 34.69           C
ATOM   4624  O   VAL A 292      24.781  33.023 -19.545  1.00 35.40           O
ATOM   4625  N   THR A 293      24.995  30.880 -20.125  1.00 34.55           N
ATOM   4627  CA  THR A 293      23.575  30.609 -20.262  1.00 33.50           C
ATOM   4629  CB  THR A 293      23.357  29.970 -21.605  1.00 33.51           C
ATOM   4631  OG1 THR A 293      23.778  30.898 -22.599  1.00 34.18           O
ATOM   4633  CG2 THR A 293      21.836  29.726 -21.915  1.00 33.59           C
ATOM   4637  C   THR A 293      23.107  29.684 -19.133  1.00 33.43           C
ATOM   4638  O   THR A 293      23.604  28.565 -18.995  1.00 34.16           O
ATOM   4639  N   ILE A 294      22.210  30.191 -18.296  1.00 32.56           N
ATOM   4641  CA  ILE A 294      21.504  29.421 -17.301  1.00 31.87           C
ATOM   4643  CB  ILE A 294      20.911  30.367 -16.242  1.00 31.57           C
ATOM   4645  CG1 ILE A 294      21.959  31.288 -15.617  1.00 30.27           C
ATOM   4648  CD1 ILE A 294      23.125  30.542 -14.888  1.00 31.10           C
ATOM   4652  CG2 ILE A 294      20.172  29.571 -15.142  1.00 31.39           C
ATOM   4656  C   ILE A 294      20.342  28.680 -17.998  1.00 33.07           C
ATOM   4657  O   ILE A 294      19.570  29.298 -18.765  1.00 33.22           O
ATOM   4658  N   VAL A 295      20.219  27.380 -17.730  1.00 32.73           N
ATOM   4660  CA  VAL A 295      19.016  26.595 -18.039  1.00 32.64           C
ATOM   4662  CB  VAL A 295      19.370  25.472 -18.970  1.00 32.70           C
ATOM   4664  CG1 VAL A 295      18.139  24.637 -19.275  1.00 33.33           C
ATOM   4668  CG2 VAL A 295      19.963  26.055 -20.224  1.00 32.65           C
ATOM   4672  C   VAL A 295      18.445  26.009 -16.751  1.00 31.92           C
ATOM   4673  O   VAL A 295      19.025  25.108 -16.184  1.00 31.70           O
ATOM   4674  N   PHE A 296      17.355  26.572 -16.254  1.00 31.63           N
ATOM   4676  CA  PHE A 296      16.794  26.163 -14.978  1.00 31.66           C
ATOM   4678  CB  PHE A 296      16.309  27.394 -14.217  1.00 31.79           C
ATOM   4681  CG  PHE A 296      16.750  27.441 -12.779  1.00 33.04           C
ATOM   4682  CD1 PHE A 296      16.496  26.379 -11.918  1.00 36.68           C
ATOM   4684  CE1 PHE A 296      16.908  26.437 -10.578  1.00 38.19           C
ATOM   4686  CZ  PHE A 296      17.592  27.575 -10.117  1.00 38.28           C
ATOM   4688  CE2 PHE A 296      17.837  28.642 -10.988  1.00 34.82           C
ATOM   4690  CD2 PHE A 296      17.420  28.563 -12.279  1.00 35.09           C
ATOM   4692  C   PHE A 296      15.668  25.193 -15.250  1.00 32.01           C
ATOM   4693  O   PHE A 296      14.655  25.579 -15.818  1.00 31.86           O
ATOM   4694  N   VAL A 297      15.861  23.919 -14.906  1.00 32.41           N
ATOM   4696  CA  VAL A 297      14.873  22.880 -15.172  1.00 32.98           C
ATOM   4698  CB  VAL A 297      15.531  21.585 -15.598  1.00 33.25           C
ATOM   4700  CG1 VAL A 297      14.507  20.472 -15.669  1.00 33.11           C
ATOM   4704  CG2 VAL A 297      16.250  21.754 -16.944  1.00 34.11           C
ATOM   4708  C   VAL A 297      14.071  22.563 -13.923  1.00 33.55           C
ATOM   4709  O   VAL A 297      14.648  22.300 -12.903  1.00 34.29           O
ATOM   4710  N   ASN A 298      12.747  22.561 -14.021  1.00 33.86           N
ATOM   4712  CA  ASN A 298      11.875  22.275 -12.905  1.00 34.82           C
ATOM   4714  CB  ASN A 298      11.069  23.475 -12.512  1.00 34.92           C
ATOM   4717  CG  ASN A 298      10.260  23.236 -11.254  1.00 37.77           C
ATOM   4718  OD1 ASN A 298      10.715  23.519 -10.154  1.00 42.22           O
ATOM   4719  ND2 ASN A 298       9.027  22.757 -11.417  1.00 42.26           N
ATOM   4722  C   ASN A 298      10.932  21.137 -13.232  1.00 35.54           C
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ATOM	4723	O	ASN	A	298	10.272	21.150	-14.271	1.00 35.32	O
ATOM	4724	N	LEU	A	299	10.896	20.152	-12.335	1.00 36.42	N
ATOM	4726	CA	LEU	A	299	10.091	18.955	-12.470	1.00 37.38	C
ATOM	4728	CB	LEU	A	299	10.985	17.721	-12.378	1.00 36.61	C
ATOM	4731	CG	LEU	A	299	12.164	17.589	-13.340	1.00 35.74	C
ATOM	4733	CD1	LEU	A	299	13.040	16.307	-13.067	1.00 35.80	C
ATOM	4737	CD2	LEU	A	299	11.736	17.583	-14.777	1.00 34.83	C
ATOM	4741	C	LEU	A	299	9.071	18.964	-11.346	1.00 38.98	C
ATOM	4742	O	LEU	A	299	9.426	19.025	-10.185	1.00 39.03	O
ATOM	4743	N	MET	A	300	7.793	18.898	-11.672	1.00 42.31	N
ATOM	4745	CA	MET	A	300	6.754	18.857	-10.629	1.00 44.59	C
ATOM	4747	CB	MET	A	300	5.704	19.891	-10.949	1.00 45.27	C
ATOM	4750	CG	MET	A	300	6.272	21.269	-10.721	1.00 49.50	C
ATOM	4753	SD	MET	A	300	5.110	22.559	-10.272	1.00 60.18	S
ATOM	4754	CE	MET	A	300	6.023	23.397	-8.794	1.00 60.09	C
ATOM	4758	C	MET	A	300	6.149	17.484	-10.455	1.00 45.61	C
ATOM	4759	O	MET	A	300	6.155	16.691	-11.363	1.00 44.72	O
ATOM	4760	N	PHE	A	301	5.671	17.184	-9.259	1.00 48.49	N
ATOM	4762	CA	PHE	A	301	5.093	15.861	-8.987	1.00 50.88	C
ATOM	4764	CB	PHE	A	301	6.037	15.045	-8.097	1.00 50.74	C
ATOM	4767	CG	PHE	A	301	7.457	15.034	-8.575	1.00 49.36	C
ATOM	4768	CD1	PHE	A	301	8.345	16.024	-8.166	1.00 47.77	C
ATOM	4770	CE1	PHE	A	301	9.656	16.027	-8.605	1.00 48.04	C
ATOM	4772	CZ	PHE	A	301	10.094	15.034	-9.491	1.00 48.22	C
ATOM	4774	CE2	PHE	A	301	9.212	14.048	-9.917	1.00 47.97	C
ATOM	4776	CD2	PHE	A	301	7.901	14.047	-9.450	1.00 47.99	C
ATOM	4778	C	PHE	A	301	3.753	16.013	-8.303	1.00 53.36	C
ATOM	4779	O	PHE	A	301	3.494	17.059	-7.726	1.00 53.85	O
ATOM	4780	N	GLU	A	302	2.904	14.982	-8.355	1.00 56.50	N
ATOM	4782	CA	GLU	A	302	1.672	14.976	-7.537	1.00 59.21	C
ATOM	4784	CB	GLU	A	302	0.821	13.715	-7.742	1.00 59.69	C
ATOM	4787	CG	GLU	A	302	-0.481	13.787	-6.943	1.00 63.12	C
ATOM	4790	CD	GLU	A	302	-1.557	12.816	-7.408	1.00 67.57	C
ATOM	4791	OE1	GLU	A	302	-1.770	11.775	-6.727	1.00 69.90	O
ATOM	4792	OE2	GLU	A	302	-2.207	13.109	-8.442	1.00 70.50	O
ATOM	4793	C	GLU	A	302	1.946	15.154	-6.029	1.00 60.53	C
ATOM	4794	O	GLU	A	302	1.439	16.100	-5.434	1.00 60.69	O
ATOM	4795	N	ASP	A	303	2.723	14.239	-5.427	1.00 62.52	N
ATOM	4797	CA	ASP	A	303	3.195	14.382	-4.030	1.00 63.88	C
ATOM	4799	CB	ASP	A	303	2.600	13.298	-3.103	1.00 64.11	C
ATOM	4802	CG	ASP	A	303	2.790	13.615	-1.590	1.00 65.80	C
ATOM	4803	OD1	ASP	A	303	3.276	14.708	-1.219	1.00 67.38	O
ATOM	4804	OD2	ASP	A	303	2.472	12.821	-0.676	1.00 69.07	O
ATOM	4805	C	ASP	A	303	4.751	14.415	-3.959	1.00 64.59	C
ATOM	4806	O	ASP	A	303	5.437	13.384	-4.001	1.00 64.93	O
ATOM	4807	N	GLN	A	304	5.269	15.636	-3.863	1.00 64.84	N
ATOM	4809	CA	GLN	A	304	6.709	15.946	-3.825	1.00 65.55	C
ATOM	4811	CB	GLN	A	304	6.887	17.415	-4.211	1.00 66.01	C
ATOM	4814	CG	GLN	A	304	5.972	18.310	-3.357	1.00 69.01	C
ATOM	4817	CD	GLN	A	304	6.701	19.182	-2.369	1.00 72.80	C
ATOM	4818	OE1	GLN	A	304	6.246	20.305	-2.098	1.00 74.88	O
ATOM	4819	NE2	GLN	A	304	7.809	18.674	-1.796	1.00 75.35	N
ATOM	4822	C	GLN	A	304	7.394	15.757	-2.456	1.00 64.81	C
ATOM	4823	O	GLN	A	304	8.574	16.111	-2.303	1.00 64.44	O
ATOM	4824	N	ASP	A	305	6.638	15.262	-1.469	1.00 63.94	N
ATOM	4826	CA	ASP	A	305	7.164	14.894	-0.155	1.00 63.07	C
ATOM	4828	CB	ASP	A	305	6.109	15.173	0.933	1.00 63.29	C
ATOM	4831	CG	ASP	A	305	5.545	16.599	0.880	1.00 63.59	C
ATOM	4832	OD1	ASP	A	305	6.289	17.514	0.460	1.00 63.12	O
ATOM	4833	OD2	ASP	A	305	4.378	16.892	1.257	1.00 63.24	O
ATOM	4834	C	ASP	A	305	7.541	13.403	-0.105	1.00 62.30	C
ATOM	4835	O	ASP	A	305	8.068	12.921	0.905	1.00 62.58	O
ATOM	4836	N	LYS	A	306	7.268	12.695	-1.206	1.00 61.31	N
ATOM	4838	CA	LYS	A	306	7.258	11.232	-1.268	1.00 60.42	C
ATOM	4840	CB	LYS	A	306	6.020	10.742	-2.032	1.00 60.92	C
ATOM	4843	CG	LYS	A	306	4.788	10.479	-1.189	1.00 63.33	C
ATOM	4846	CD	LYS	A	306	3.700	9.837	-2.074	1.00 65.96	C

ATOM	4849	CE	LYS	A	306	2.426	9.396	-1.309	1.00 66.35	C
ATOM	4852	NZ	LYS	A	306	1.633	8.365	-2.072	1.00 65.82	N
ATOM	4856	C	LYS	A	306	8.471	10.732	-2.007	1.00 58.78	C
ATOM	4857	O	LYS	A	306	8.392	10.491	-3.211	1.00 58.50	O
ATOM	4858	N	ALA	A	307	9.580	10.562	-1.295	1.00 56.99	N
ATOM	4860	CA	ALA	A	307	10.837	10.179	-1.931	1.00 55.94	C
ATOM	4862	CB	ALA	A	307	11.975	10.194	-0.914	1.00 55.75	C
ATOM	4866	C	ALA	A	307	10.798	8.833	-2.702	1.00 55.25	C
ATOM	4867	O	ALA	A	307	11.568	8.643	-3.642	1.00 54.89	O
ATOM	4868	N	GLU	A	308	9.893	7.927	-2.328	1.00 54.11	N
ATOM	4870	CA	GLU	A	308	9.780	6.615	-2.973	1.00 53.49	C
ATOM	4872	CB	GLU	A	308	8.899	5.637	-2.161	1.00 54.11	C
ATOM	4875	CG	GLU	A	308	8.855	5.861	-0.645	1.00 55.62	C
ATOM	4878	CD	GLU	A	308	7.922	7.002	-0.209	1.00 57.73	C
ATOM	4879	OE1	GLU	A	308	6.807	7.127	-0.787	1.00 59.41	O
ATOM	4880	OE2	GLU	A	308	8.311	7.778	0.719	1.00 58.27	O
ATOM	4881	C	GLU	A	308	9.181	6.758	-4.350	1.00 52.28	C
ATOM	4882	O	GLU	A	308	9.528	6.026	-5.260	1.00 51.85	O
ATOM	4883	N	GLU	A	309	8.247	7.681	-4.489	1.00 51.33	N
ATOM	4885	CA	GLU	A	309	7.654	7.969	-5.789	1.00 51.44	C
ATOM	4887	CB	GLU	A	309	6.302	8.661	-5.595	1.00 52.21	C
ATOM	4890	CG	GLU	A	309	5.189	7.763	-5.050	1.00 55.33	C
ATOM	4893	CD	GLU	A	309	3.800	8.321	-5.358	1.00 59.82	C
ATOM	4894	OE1	GLU	A	309	3.554	8.684	-6.535	1.00 63.28	O
ATOM	4895	OE2	GLU	A	309	2.945	8.415	-4.443	1.00 61.73	O
ATOM	4896	C	GLU	A	309	8.575	8.831	-6.695	1.00 50.03	C
ATOM	4897	O	GLU	A	309	8.835	8.476	-7.839	1.00 50.68	O
ATOM	4898	N	ILE	A	310	9.080	9.945	-6.172	1.00 47.89	N
ATOM	4900	CA	ILE	A	310	9.819	10.900	-6.985	1.00 46.00	C
ATOM	4902	CB	ILE	A	310	9.769	12.316	-6.358	1.00 45.65	C
ATOM	4904	CG1	ILE	A	310	10.651	12.449	-5.136	1.00 45.66	C
ATOM	4907	CD1	ILE	A	310	10.627	13.848	-4.572	1.00 45.01	C
ATOM	4911	CG2	ILE	A	310	8.348	12.680	-5.923	1.00 45.80	C
ATOM	4915	C	ILE	A	310	11.263	10.443	-7.267	1.00 44.68	C
ATOM	4916	O	ILE	A	310	11.733	10.535	-8.382	1.00 45.49	O
ATOM	4917	N	GLY	A	311	11.965	9.925	-6.278	1.00 42.43	N
ATOM	4919	CA	GLY	A	311	13.347	9.516	-6.463	1.00 40.45	C
ATOM	4922	C	GLY	A	311	13.758	8.872	-7.775	1.00 39.22	C
ATOM	4923	O	GLY	A	311	14.755	9.280	-8.406	1.00 38.17	O
ATOM	4924	N	PRO	A	312	13.061	7.811	-8.172	1.00 37.71	N
ATOM	4925	CA	PRO	A	312	13.338	7.171	-9.466	1.00 36.72	C
ATOM	4927	CB	PRO	A	312	12.340	6.002	-9.517	1.00 36.80	C
ATOM	4930	CG	PRO	A	312	11.834	5.821	-8.132	1.00 36.81	C
ATOM	4933	CD	PRO	A	312	12.028	7.102	-7.402	1.00 37.93	C
ATOM	4936	C	PRO	A	312	13.131	8.109	-10.662	1.00 35.31	C
ATOM	4937	O	PRO	A	312	13.873	8.039	-11.634	1.00 34.76	O
ATOM	4938	N	ALA	A	313	12.088	8.917	-10.595	1.00 34.56	N
ATOM	4940	CA	ALA	A	313	11.782	9.928	-11.623	1.00 34.64	C
ATOM	4942	CB	ALA	A	313	10.499	10.744	-11.219	1.00 34.66	C
ATOM	4946	C	ALA	A	313	12.951	10.894	-11.824	1.00 33.85	C
ATOM	4947	O	ALA	A	313	13.324	11.209	-12.944	1.00 33.58	O
ATOM	4948	N	ILE	A	314	13.500	11.350	-10.708	1.00 33.60	N
ATOM	4950	CA	ILE	A	314	14.610	12.302	-10.684	1.00 33.55	C
ATOM	4952	CB	ILE	A	314	14.780	12.861	-9.262	1.00 33.49	C
ATOM	4954	CG1	ILE	A	314	13.533	13.668	-8.879	1.00 34.20	C
ATOM	4957	CD1	ILE	A	314	13.556	14.270	-7.480	1.00 35.10	C
ATOM	4961	CG2	ILE	A	314	16.010	13.728	-9.183	1.00 34.53	C
ATOM	4965	C	ILE	A	314	15.890	11.654	-11.210	1.00 33.20	C
ATOM	4966	O	ILE	A	314	16.633	12.273	-11.997	1.00 33.58	O
ATOM	4967	N	GLN	A	315	16.121	10.406	-10.812	1.00 32.75	N
ATOM	4969	CA	GLN	A	315	17.285	9.632	-11.232	1.00 32.68	C
ATOM	4971	CB	GLN	A	315	17.280	8.259	-10.533	1.00 33.08	C
ATOM	4974	CG	GLN	A	315	18.330	7.226	-11.028	1.00 32.99	C
ATOM	4977	CD	GLN	A	315	19.785	7.700	-10.889	1.00 33.18	C
ATOM	4978	OE1	GLN	A	315	20.630	7.360	-11.721	1.00 37.45	O
ATOM	4979	NE2	GLN	A	315	20.068	8.464	-9.857	1.00 28.06	N
ATOM	4982	C	GLN	A	315	17.229	9.485	-12.720	1.00 33.03	C

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ATOM   4983  O   GLN A 315      18.131   9.887 -13.458  1.00 32.67           O
ATOM   4984  N   ASP A 316      16.109   8.969 -13.187  1.00 34.46           N
ATOM   4986  CA  ASP A 316      15.862   8.883 -14.614  1.00 35.34           C
ATOM   4988  CB  ASP A 316      14.527   8.168 -14.859  1.00 37.01           C
ATOM   4991  CG  ASP A 316      14.596   6.691 -14.440  1.00 43.09           C
ATOM   4992  OD1 ASP A 316      13.583   6.185 -13.882  1.00 51.61           O
ATOM   4993  OD2 ASP A 316      15.653   5.980 -14.576  1.00 48.37           O
ATOM   4994  C   ASP A 316      15.973  10.210 -15.374  1.00 33.96           C
ATOM   4995  O   ASP A 316      16.479  10.223 -16.494  1.00 33.32           O
ATOM   4996  N   ALA A 317      15.528  11.309 -14.778  1.00 32.87           N
ATOM   4998  CA  ALA A 317      15.711  12.642 -15.395  1.00 33.02           C
ATOM   5000  CB  ALA A 317      14.849  13.708 -14.690  1.00 32.87           C
ATOM   5004  C   ALA A 317      17.181  13.069 -15.358  1.00 32.98           C
ATOM   5005  O   ALA A 317      17.708  13.570 -16.349  1.00 33.24           O
ATOM   5006  N   TYR A 318      17.818  12.906 -14.194  1.00 32.79           N
ATOM   5008  CA  TYR A 318      19.246  13.108 -14.069  1.00 32.48           C
ATOM   5010  CB  TYR A 318      19.778  12.711 -12.664  1.00 32.66           C
ATOM   5013  CG  TYR A 318      21.258  12.641 -12.712  1.00 34.41           C
ATOM   5014  CD1 TYR A 318      22.040  13.788 -12.563  1.00 37.82           C
ATOM   5016  CE1 TYR A 318      23.433  13.745 -12.682  1.00 37.61           C
ATOM   5018  CZ  TYR A 318      24.041  12.556 -12.986  1.00 38.42           C
ATOM   5019  OH  TYR A 318      25.405  12.449 -13.144  1.00 37.21           O
ATOM   5021  CE2 TYR A 318      23.270  11.418 -13.152  1.00 39.21           C
ATOM   5023  CD2 TYR A 318      21.889  11.469 -13.018  1.00 36.42           C
ATOM   5025  C   TYR A 318      19.981  12.351 -15.181  1.00 32.08           C
ATOM   5026  O   TYR A 318      20.794  12.928 -15.876  1.00 31.88           O
ATOM   5027  N   MET A 319      19.708  11.058 -15.376  1.00 31.79           N
ATOM   5029  CA  MET A 319      20.501  10.295 -16.339  1.00 31.35           C
ATOM   5031  CB  MET A 319      20.096   8.826 -16.412  1.00 31.34           C
ATOM   5034  CG  MET A 319      20.453   7.982 -15.201  1.00 34.00           C
ATOM   5037  SD  MET A 319      22.201   8.096 -14.745  1.00 37.62           S
ATOM   5038  CE  MET A 319      22.837   6.801 -15.839  1.00 35.65           C
ATOM   5042  C   MET A 319      20.404  10.888 -17.731  1.00 31.55           C
ATOM   5043  O   MET A 319      21.423  10.922 -18.462  1.00 31.02           O
ATOM   5044  N   HIS A 320      19.199  11.325 -18.116  1.00 30.77           N
ATOM   5046  CA  HIS A 320      19.035  11.961 -19.409  1.00 31.50           C
ATOM   5048  CB  HIS A 320      17.566  11.995 -19.876  1.00 31.92           C
ATOM   5051  CG  HIS A 320      17.412  12.409 -21.308  1.00 33.73           C
ATOM   5052  ND1 HIS A 320      17.537  11.524 -22.359  1.00 36.96           N
ATOM   5054  CE1 HIS A 320      17.375  12.170 -23.504  1.00 34.98           C
ATOM   5056  NE2 HIS A 320      17.172  13.446 -23.236  1.00 32.49           N
ATOM   5058  CD2 HIS A 320      17.201  13.625 -21.871  1.00 35.44           C
ATOM   5060  C   HIS A 320      19.654  13.356 -19.435  1.00 31.74           C
ATOM   5061  O   HIS A 320      20.325  13.705 -20.389  1.00 31.30           O
ATOM   5062  N   ILE A 321      19.432  14.161 -18.405  1.00 32.65           N
ATOM   5064  CA  ILE A 321      20.016  15.471 -18.409  1.00 33.94           C
ATOM   5066  CB  ILE A 321      19.686  16.234 -17.172  1.00 34.18           C
ATOM   5068  CG1 ILE A 321      18.200  16.574 -17.148  1.00 33.71           C
ATOM   5071  CD1 ILE A 321      17.752  17.142 -15.869  1.00 33.41           C
ATOM   5075  CG2 ILE A 321      20.510  17.556 -17.162  1.00 34.44           C
ATOM   5079  C   ILE A 321      21.532  15.359 -18.532  1.00 35.77           C
ATOM   5080  O   ILE A 321      22.161  15.983 -19.418  1.00 35.75           O
ATOM   5081  N   THR A 322      22.128  14.545 -17.663  1.00 36.76           N
ATOM   5083  CA  THR A 322      23.568  14.459 -17.652  1.00 37.94           C
ATOM   5085  CB  THR A 322      24.100  13.514 -16.509  1.00 37.50           C
ATOM   5087  OG1 THR A 322      25.392  13.970 -16.077  1.00 40.79           O
ATOM   5089  CG2 THR A 322      24.388  12.136 -16.985  1.00 37.84           C
ATOM   5093  C   THR A 322      24.111  14.179 -19.076  1.00 38.24           C
ATOM   5094  O   THR A 322      25.031  14.859 -19.491  1.00 39.11           O
ATOM   5095  N   SER A 323      23.506  13.275 -19.855  1.00 39.08           N
ATOM   5097  CA  SER A 323      23.996  13.007 -21.231  1.00 39.94           C
ATOM   5099  CB  SER A 323      23.629  11.586 -21.729  1.00 39.95           C
ATOM   5102  OG  SER A 323      22.261  11.425 -22.026  1.00 40.00           O
ATOM   5104  C   SER A 323      23.660  14.045 -22.321  1.00 40.96           C
ATOM   5105  O   SER A 323      24.328  14.092 -23.338  1.00 41.50           O
ATOM   5106  N   VAL A 324      22.617  14.838 -22.139  1.00 42.65           N
ATOM   5108  CA  VAL A 324      22.345  15.948 -23.046  1.00 44.01           C
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ATOM   5110  CB  VAL A 324      20.931  16.491 -22.814  1.00 43.71           C
ATOM   5112  CG1 VAL A 324      20.790  17.914 -23.315  1.00 45.21           C
ATOM   5116  CG2 VAL A 324      19.940  15.597 -23.506  1.00 43.30           C
ATOM   5120  C   VAL A 324      23.392  17.081 -22.910  1.00 45.45           C
ATOM   5121  O   VAL A 324      23.804  17.692 -23.914  1.00 45.30           O
ATOM   5122  N   LEU A 325      23.796  17.342 -21.661  1.00 46.82           N
ATOM   5124  CA  LEU A 325      24.745  18.398 -21.321  1.00 47.42           C
ATOM   5126  CB  LEU A 325      24.723  18.686 -19.819  1.00 46.71           C
ATOM   5129  CG  LEU A 325      23.438  19.163 -19.172  1.00 45.22           C
ATOM   5131  CD1 LEU A 325      23.648  19.182 -17.695  1.00 44.99           C
ATOM   5135  CD2 LEU A 325      23.065  20.516 -19.646  1.00 45.08           C
ATOM   5139  C   LEU A 325      26.175  18.035 -21.653  1.00 49.00           C
ATOM   5140  O   LEU A 325      26.994  18.912 -21.787  1.00 49.63           O
ATOM   5141  N   LYS A 326      26.491  16.748 -21.714  1.00 50.79           N
ATOM   5143  CA  LYS A 326      27.881  16.312 -21.819  1.00 51.96           C
ATOM   5145  CB  LYS A 326      27.992  14.795 -21.609  1.00 52.26           C
ATOM   5148  CG  LYS A 326      29.366  14.210 -21.931  1.00 53.58           C
ATOM   5151  CD  LYS A 326      29.592  12.834 -21.285  1.00 54.71           C
ATOM   5154  CE  LYS A 326      30.941  12.249 -21.710  1.00 55.22           C
ATOM   5157  NZ  LYS A 326      30.836  11.476 -22.987  1.00 56.49           N
ATOM   5161  C   LYS A 326      28.401  16.707 -23.184  1.00 52.69           C
ATOM   5162  O   LYS A 326      29.584  16.983 -23.362  1.00 52.40           O
ATOM   5163  N   ILE A 327      27.476  16.767 -24.132  1.00 54.02           N
ATOM   5165  CA  ILE A 327      27.771  17.112 -25.518  1.00 55.21           C
ATOM   5167  CB  ILE A 327      26.433  17.146 -26.347  1.00 55.78           C
ATOM   5169  CG1 ILE A 327      25.673  15.806 -26.250  1.00 57.05           C
ATOM   5172  CD1 ILE A 327      24.255  15.870 -26.867  1.00 58.40           C
ATOM   5176  CG2 ILE A 327      26.702  17.440 -27.823  1.00 56.38           C
ATOM   5180  C   ILE A 327      28.490  18.473 -25.589  1.00 55.21           C
ATOM   5181  O   ILE A 327      29.478  18.639 -26.316  1.00 54.90           O
ATOM   5182  N   PHE A 328      27.995  19.428 -24.798  1.00 55.39           N
ATOM   5184  CA  PHE A 328      28.410  20.821 -24.885  1.00 55.09           C
ATOM   5186  CB  PHE A 328      27.191  21.636 -25.295  1.00 55.56           C
ATOM   5189  CG  PHE A 328      26.560  21.138 -26.558  1.00 56.81           C
ATOM   5190  CD1 PHE A 328      25.285  20.575 -26.540  1.00 58.30           C
ATOM   5192  CE1 PHE A 328      24.694  20.094 -27.723  1.00 59.02           C
ATOM   5194  CZ  PHE A 328      25.402  20.153 -28.928  1.00 59.42           C
ATOM   5196  CE2 PHE A 328      26.704  20.694 -28.946  1.00 59.34           C
ATOM   5198  CD2 PHE A 328      27.274  21.175 -27.757  1.00 57.72           C
ATOM   5200  C   PHE A 328      28.994  21.362 -23.602  1.00 54.44           C
ATOM   5201  O   PHE A 328      28.916  22.573 -23.341  1.00 54.36           O
ATOM   5202  N   GLN A 329      29.577  20.473 -22.797  1.00 53.49           N
ATOM   5204  CA  GLN A 329      30.146  20.856 -21.502  1.00 52.81           C
ATOM   5206  CB  GLN A 329      31.352  21.812 -21.707  1.00 53.54           C
ATOM   5209  CG  GLN A 329      32.724  21.167 -21.503  1.00 55.75           C
ATOM   5212  CD  GLN A 329      33.145  20.419 -22.741  1.00 57.43           C
ATOM   5213  OE1 GLN A 329      32.473  19.470 -23.146  1.00 58.32           O
ATOM   5214  NE2 GLN A 329      34.225  20.867 -23.374  1.00 56.95           N
ATOM   5217  C   GLN A 329      29.153  21.511 -20.520  1.00 50.94           C
ATOM   5218  O   GLN A 329      29.580  22.093 -19.504  1.00 51.46           O
ATOM   5219  N   GLY A 330      27.851  21.467 -20.804  1.00 48.25           N
ATOM   5221  CA  GLY A 330      26.888  21.935 -19.829  1.00 46.19           C
ATOM   5224  C   GLY A 330      27.148  21.223 -18.519  1.00 44.06           C
ATOM   5225  O   GLY A 330      27.624  20.101 -18.524  1.00 43.43           O
ATOM   5226  N   GLN A 331      26.875  21.895 -17.411  1.00 42.43           N
ATOM   5228  CA  GLN A 331      27.066  21.357 -16.074  1.00 41.26           C
ATOM   5230  CB  GLN A 331      28.093  22.198 -15.301  1.00 41.49           C
ATOM   5233  CG  GLN A 331      29.552  22.092 -15.714  1.00 43.00           C
ATOM   5236  CD  GLN A 331      30.187  20.757 -15.354  1.00 45.32           C
ATOM   5237  OE1 GLN A 331      31.104  20.317 -16.039  1.00 47.62           O
ATOM   5238  NE2 GLN A 331      29.701  20.112 -14.292  1.00 45.93           N
ATOM   5241  C   GLN A 331      25.782  21.480 -15.288  1.00 40.53           C
ATOM   5242  O   GLN A 331      25.060  22.465 -15.406  1.00 39.96           O
ATOM   5243  N   ILE A 332      25.538  20.515 -14.419  1.00 40.19           N
ATOM   5245  CA  ILE A 332      24.582  20.688 -13.342  1.00 39.80           C
ATOM   5247  CB  ILE A 332      23.971  19.326 -12.888  1.00 39.39           C
ATOM   5249  CG1 ILE A 332      23.395  18.572 -14.067  1.00 40.27           C
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ATOM   5252  CD1 ILE A 332      22.949  17.144 -13.766  1.00 42.49           C
ATOM   5256  CG2 ILE A 332      22.889  19.561 -11.899  1.00 39.70           C
ATOM   5260  C   ILE A 332      25.308  21.354 -12.186  1.00 39.43           C
ATOM   5261  O   ILE A 332      26.058  20.721 -11.486  1.00 39.22           O
ATOM   5262  N   ASN A 333      25.063  22.638 -11.987  1.00 39.89           N
ATOM   5264  CA  ASN A 333      25.603  23.347 -10.848  1.00 40.08           C
ATOM   5266  CB  ASN A 333      25.422  24.860 -11.039  1.00 40.09           C
ATOM   5269  CG  ASN A 333      25.923  25.675  -9.848  1.00 40.66           C
ATOM   5270  OD1 ASN A 333      27.093  25.624  -9.492  1.00 43.48           O
ATOM   5271  ND2 ASN A 333      25.034  26.404  -9.219  1.00 40.25           N
ATOM   5274  C   ASN A 333      25.027  22.903  -9.517  1.00 40.82           C
ATOM   5275  O   ASN A 333      25.766  22.820  -8.557  1.00 41.90           O
ATOM   5276  N   LYS A 334      23.724  22.638  -9.464  1.00 41.77           N
ATOM   5278  CA  LYS A 334      22.966  22.318  -8.248  1.00 42.80           C
ATOM   5280  CB  LYS A 334      22.660  23.541  -7.375  1.00 42.85           C
ATOM   5283  CG  LYS A 334      23.821  24.401  -6.911  1.00 46.38           C
ATOM   5286  CD  LYS A 334      24.257  24.180  -5.431  1.00 46.98           C
ATOM   5289  CE  LYS A 334      25.461  25.105  -5.109  1.00 46.15           C
ATOM   5292  NZ  LYS A 334      26.563  24.386  -4.472  1.00 45.99           N
ATOM   5296  C   LYS A 334      21.579  21.726  -8.549  1.00 43.15           C
ATOM   5297  O   LYS A 334      20.997  21.965  -9.589  1.00 42.16           O
ATOM   5298  N   VAL A 335      21.042  20.991  -7.582  1.00 43.96           N
ATOM   5300  CA  VAL A 335      19.695  20.446  -7.644  1.00 44.82           C
ATOM   5302  CB  VAL A 335      19.707  18.923  -7.988  1.00 44.56           C
ATOM   5304  CG1 VAL A 335      18.331  18.443  -8.360  1.00 44.88           C
ATOM   5308  CG2 VAL A 335      20.646  18.622  -9.143  1.00 44.66           C
ATOM   5312  C   VAL A 335      19.059  20.724  -6.281  1.00 45.90           C
ATOM   5313  O   VAL A 335      19.711  20.619  -5.279  1.00 46.44           O
ATOM   5314  N   PHE A 336      17.801  21.124  -6.232  1.00 48.25           N
ATOM   5316  CA  PHE A 336      17.145  21.407  -4.953  1.00 49.55           C
ATOM   5318  CB  PHE A 336      17.690  22.713  -4.388  1.00 49.82           C
ATOM   5321  CG  PHE A 336      17.528  23.852  -5.305  1.00 50.47           C
ATOM   5322  CD1 PHE A 336      16.395  24.650  -5.231  1.00 51.10           C
ATOM   5324  CE1 PHE A 336      16.217  25.701  -6.104  1.00 51.37           C
ATOM   5326  CZ  PHE A 336      17.157  25.939  -7.070  1.00 51.38           C
ATOM   5328  CE2 PHE A 336      18.295  25.127  -7.179  1.00 51.24           C
ATOM   5330  CD2 PHE A 336      18.472  24.097  -6.298  1.00 51.63           C
ATOM   5332  C   PHE A 336      15.622  21.473  -5.080  1.00 51.16           C
ATOM   5333  O   PHE A 336      15.119  21.855  -6.114  1.00 50.79           O
ATOM   5334  N   MET A 337      14.905  21.102  -4.020  1.00 54.17           N
ATOM   5336  CA  MET A 337      13.440  21.267  -3.939  1.00 56.65           C
ATOM   5338  CB  MET A 337      12.795  20.298  -2.947  1.00 56.48           C
ATOM   5341  CG  MET A 337      13.076  18.850  -3.202  1.00 56.38           C
ATOM   5344  SD  MET A 337      12.547  18.197  -4.794  1.00 59.15           S
ATOM   5345  CE  MET A 337      10.734  18.430  -4.738  1.00 59.00           C
ATOM   5349  C   MET A 337      13.037  22.666  -3.527  1.00 58.98           C
ATOM   5350  O   MET A 337      13.667  23.275  -2.660  1.00 59.15           O
ATOM   5351  N   PHE A 338      11.963  23.171  -4.138  1.00 62.24           N
ATOM   5353  CA  PHE A 338      11.544  24.568  -3.915  1.00 64.72           C
ATOM   5355  CB  PHE A 338      12.653  25.526  -4.415  1.00 65.46           C
ATOM   5358  CG  PHE A 338      12.209  26.582  -5.412  1.00 69.23           C
ATOM   5359  CD1 PHE A 338      11.323  27.611  -5.038  1.00 72.99           C
ATOM   5361  CE1 PHE A 338      10.943  28.607  -5.949  1.00 74.22           C
ATOM   5363  CZ  PHE A 338      11.475  28.593  -7.246  1.00 75.25           C
ATOM   5365  CE2 PHE A 338      12.375  27.576  -7.624  1.00 74.57           C
ATOM   5367  CD2 PHE A 338      12.742  26.588  -6.702  1.00 72.24           C
ATOM   5369  C   PHE A 338      10.168  24.885  -4.511  1.00 65.36           C
ATOM   5370  O   PHE A 338       9.987  24.832  -5.744  1.00 65.84           O
ATOM   5371  N   ASP A 339       9.216  25.241  -3.632  1.00 66.05           N
ATOM   5373  CA  ASP A 339       7.814  25.437  -4.032  1.00 66.30           C
ATOM   5375  CB  ASP A 339       7.579  26.863  -4.515  1.00 67.12           C
ATOM   5378  CG  ASP A 339       7.396  27.853  -3.356  1.00 69.18           C
ATOM   5379  OD1 ASP A 339       7.912  27.602  -2.231  1.00 70.75           O
ATOM   5380  OD2 ASP A 339       6.734  28.911  -3.500  1.00 71.99           O
ATOM   5381  C   ASP A 339       7.532  24.359  -5.089  1.00 65.48           C
ATOM   5382  O   ASP A 339       7.376  24.588  -6.296  1.00 65.53           O
ATOM   5383  N   LYS A 340       7.463  23.167  -4.517  1.00 64.35           N
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ATOM	5385	CA	LYS	A	340	7.841	21.876	-5.101	1.00 62.93	C
ATOM	5387	CB	LYS	A	340	6.804	20.822	-4.724	1.00 63.44	C
ATOM	5390	CG	LYS	A	340	5.474	20.882	-5.471	1.00 65.22	C
ATOM	5393	CD	LYS	A	340	5.289	19.689	-6.456	1.00 66.48	C
ATOM	5396	CE	LYS	A	340	4.689	20.162	-7.756	1.00 67.31	C
ATOM	5399	NZ	LYS	A	340	3.846	21.402	-7.613	1.00 67.66	N
ATOM	5403	C	LYS	A	340	8.200	21.683	-6.561	1.00 60.05	C
ATOM	5404	O	LYS	A	340	7.477	21.065	-7.330	1.00 61.25	O
ATOM	5405	N	GLY	A	341	9.379	22.089	-6.933	1.00 56.00	N
ATOM	5407	CA	GLY	A	341	9.956	21.398	-8.046	1.00 52.63	C
ATOM	5410	C	GLY	A	341	11.156	20.699	-7.531	1.00 48.70	C
ATOM	5411	O	GLY	A	341	11.732	21.131	-6.567	1.00 47.99	O
ATOM	5412	N	CYS	A	342	11.536	19.622	-8.176	1.00 45.04	N
ATOM	5414	CA	CYS	A	342	12.935	19.343	-8.238	1.00 42.76	C
ATOM	5416	CB	CYS	A	342	13.166	17.897	-8.556	1.00 42.15	C
ATOM	5419	SG	CYS	A	342	14.896	17.567	-8.617	1.00 42.32	S
ATOM	5420	C	CYS	A	342	13.530	20.280	-9.321	1.00 40.66	C
ATOM	5421	O	CYS	A	342	13.213	20.150	-10.491	1.00 39.32	O
ATOM	5422	N	SER	A	343	14.365	21.236	-8.919	1.00 38.98	N
ATOM	5424	CA	SER	A	343	15.021	22.126	-9.876	1.00 38.35	C
ATOM	5426	CB	SER	A	343	14.878	23.567	-9.449	1.00 38.31	C
ATOM	5429	OG	SER	A	343	13.523	23.886	-9.185	1.00 39.47	O
ATOM	5431	C	SER	A	343	16.502	21.778	-10.076	1.00 37.53	C
ATOM	5432	O	SER	A	343	17.251	21.545	-9.114	1.00 37.91	O
ATOM	5433	N	PHE	A	344	16.895	21.703	-11.345	1.00 36.23	N
ATOM	5435	CA	PHE	A	344	18.285	21.545	-11.778	1.00 34.77	C
ATOM	5437	CB	PHE	A	344	18.401	20.570	-12.955	1.00 34.42	C
ATOM	5440	CG	PHE	A	344	18.095	19.166	-12.613	1.00 34.36	C
ATOM	5441	CD1	PHE	A	344	16.818	18.794	-12.221	1.00 34.53	C
ATOM	5443	CE1	PHE	A	344	16.526	17.472	-11.905	1.00 35.09	C
ATOM	5445	CZ	PHE	A	344	17.500	16.505	-11.966	1.00 33.34	C
ATOM	5447	CE2	PHE	A	344	18.788	16.865	-12.343	1.00 35.27	C
ATOM	5449	CD2	PHE	A	344	19.081	18.203	-12.662	1.00 34.77	C
ATOM	5451	C	PHE	A	344	18.726	22.882	-12.285	1.00 33.26	C
ATOM	5452	O	PHE	A	344	18.134	23.383	-13.212	1.00 33.34	O
ATOM	5453	N	LEU	A	345	19.745	23.475	-11.680	1.00 32.11	N
ATOM	5455	CA	LEU	A	345	20.343	24.681	-12.208	1.00 30.84	C
ATOM	5457	CB	LEU	A	345	20.801	25.534	-11.057	1.00 31.14	C
ATOM	5460	CG	LEU	A	345	21.271	26.968	-11.312	1.00 30.82	C
ATOM	5462	CD1	LEU	A	345	21.759	27.544	-10.024	1.00 29.74	C
ATOM	5466	CD2	LEU	A	345	22.313	27.084	-12.375	1.00 30.51	C
ATOM	5470	C	LEU	A	345	21.509	24.221	-13.056	1.00 30.79	C
ATOM	5471	O	LEU	A	345	22.522	23.771	-12.514	1.00 30.63	O
ATOM	5472	N	CYS	A	346	21.347	24.291	-14.379	1.00 30.03	N
ATOM	5474	CA	CYS	A	346	22.390	23.944	-15.318	1.00 29.54	C
ATOM	5476	CB	CYS	A	346	21.820	23.109	-16.435	1.00 29.27	C
ATOM	5479	SG	CYS	A	346	20.835	21.748	-15.806	1.00 30.50	S
ATOM	5480	C	CYS	A	346	23.024	25.200	-15.889	1.00 30.39	C
ATOM	5481	O	CYS	A	346	22.370	26.254	-15.974	1.00 29.89	O
ATOM	5482	N	VAL	A	347	24.292	25.083	-16.305	1.00 30.90	N
ATOM	5484	CA	VAL	A	347	25.079	26.240	-16.741	1.00 31.29	C
ATOM	5486	CB	VAL	A	347	26.018	26.716	-15.625	1.00 30.57	C
ATOM	5488	CG1	VAL	A	347	26.700	28.034	-15.983	1.00 31.99	C
ATOM	5492	CG2	VAL	A	347	25.265	26.919	-14.349	1.00 29.62	C
ATOM	5496	C	VAL	A	347	25.872	25.904	-17.989	1.00 33.23	C
ATOM	5497	O	VAL	A	347	26.555	24.891	-18.043	1.00 33.75	O
ATOM	5498	N	PHE	A	348	25.749	26.730	-19.026	1.00 36.07	N
ATOM	5500	CA	PHE	A	348	26.608	26.606	-20.208	1.00 37.95	C
ATOM	5502	CB	PHE	A	348	25.786	26.631	-21.484	1.00 38.14	C
ATOM	5505	CG	PHE	A	348	24.971	25.388	-21.707	1.00 37.43	C
ATOM	5506	CD1	PHE	A	348	23.742	25.227	-21.087	1.00 37.59	C
ATOM	5508	CE1	PHE	A	348	22.977	24.092	-21.308	1.00 35.60	C
ATOM	5510	CZ	PHE	A	348	23.441	23.100	-22.121	1.00 37.35	C
ATOM	5512	CE2	PHE	A	348	24.673	23.235	-22.747	1.00 38.48	C
ATOM	5514	CD2	PHE	A	348	25.432	24.379	-22.531	1.00 39.06	C
ATOM	5516	C	PHE	A	348	27.661	27.723	-20.178	1.00 40.25	C
ATOM	5517	O	PHE	A	348	27.353	28.852	-19.819	1.00 39.49	O

ATOM	5518	N	GLY	A	349	28.906	27.365	-20.505	1.00	43.95	N
ATOM	5520	CA	GLY	A	349	30.080	28.219	-20.337	1.00	46.60	C
ATOM	5523	C	GLY	A	349	30.597	28.424	-18.893	1.00	49.53	C
ATOM	5524	O	GLY	A	349	31.048	29.522	-18.594	1.00	50.59	O
ATOM	5525	N	PHE	A	350	30.474	27.405	-18.018	1.00	51.56	N
ATOM	5527	CA	PHE	A	350	31.153	27.241	-16.681	1.00	52.86	C
ATOM	5529	CB	PHE	A	350	32.127	28.385	-16.318	1.00	53.54	C
ATOM	5532	CG	PHE	A	350	33.588	28.056	-16.630	1.00	55.91	C
ATOM	5533	CD1	PHE	A	350	33.939	27.388	-17.808	1.00	58.67	C
ATOM	5535	CE1	PHE	A	350	35.287	27.063	-18.087	1.00	59.85	C
ATOM	5537	CZ	PHE	A	350	36.266	27.413	-17.203	1.00	58.22	C
ATOM	5539	CE2	PHE	A	350	35.922	28.073	-16.027	1.00	58.50	C
ATOM	5541	CD2	PHE	A	350	34.592	28.386	-15.745	1.00	56.88	C
ATOM	5543	C	PHE	A	350	30.215	26.848	-15.484	1.00	53.28	C
ATOM	5544	O	PHE	A	350	30.103	27.529	-14.449	1.00	52.79	O
ATOM	5545	N	ASP	A	357	28.702	28.512	-30.115	1.00	53.73	N
ATOM	5547	CA	ASP	A	357	27.265	28.548	-30.436	1.00	54.37	C
ATOM	5549	CB	ASP	A	357	26.930	27.581	-31.587	1.00	54.96	C
ATOM	5552	CG	ASP	A	357	26.722	28.289	-32.912	1.00	57.96	C
ATOM	5553	OD1	ASP	A	357	25.784	29.140	-33.013	1.00	60.63	O
ATOM	5554	OD2	ASP	A	357	27.450	28.041	-33.909	1.00	60.59	O
ATOM	5555	C	ASP	A	357	26.466	28.188	-29.187	1.00	53.26	C
ATOM	5556	O	ASP	A	357	25.521	27.414	-29.235	1.00	53.44	O
ATOM	5557	N	GLU	A	358	26.867	28.786	-28.070	1.00	52.42	N
ATOM	5559	CA	GLU	A	358	26.368	28.439	-26.748	1.00	51.62	C
ATOM	5561	CB	GLU	A	358	26.924	29.431	-25.716	1.00	51.78	C
ATOM	5564	CG	GLU	A	358	26.846	29.003	-24.250	1.00	51.14	C
ATOM	5567	CD	GLU	A	358	27.483	30.037	-23.328	1.00	51.65	C
ATOM	5568	OE1	GLU	A	358	26.818	31.078	-23.068	1.00	50.50	O
ATOM	5569	OE2	GLU	A	358	28.649	29.824	-22.880	1.00	49.58	O
ATOM	5570	C	GLU	A	358	24.840	28.414	-26.689	1.00	50.82	C
ATOM	5571	O	GLU	A	358	24.261	27.512	-26.089	1.00	50.34	O
ATOM	5572	N	LEU	A	359	24.219	29.395	-27.347	1.00	49.70	N
ATOM	5574	CA	LEU	A	359	22.818	29.721	-27.149	1.00	48.50	C
ATOM	5576	CB	LEU	A	359	22.561	31.151	-27.572	1.00	47.99	C
ATOM	5579	CG	LEU	A	359	23.306	32.187	-26.758	1.00	47.01	C
ATOM	5581	CD1	LEU	A	359	23.036	33.521	-27.388	1.00	48.24	C
ATOM	5585	CD2	LEU	A	359	22.848	32.200	-25.362	1.00	45.75	C
ATOM	5589	C	LEU	A	359	21.932	28.807	-27.944	1.00	48.04	C
ATOM	5590	O	LEU	A	359	20.923	28.330	-27.455	1.00	46.64	O
ATOM	5591	N	THR	A	360	22.312	28.577	-29.189	1.00	47.85	N
ATOM	5593	CA	THR	A	360	21.621	27.579	-29.992	1.00	47.86	C
ATOM	5595	CB	THR	A	360	22.356	27.340	-31.302	1.00	47.82	C
ATOM	5597	OG1	THR	A	360	22.895	28.574	-31.820	1.00	49.71	O
ATOM	5599	CG2	THR	A	360	21.380	26.845	-32.343	1.00	48.75	C
ATOM	5603	C	THR	A	360	21.567	26.248	-29.218	1.00	47.07	C
ATOM	5604	O	THR	A	360	20.567	25.539	-29.236	1.00	47.32	O
ATOM	5605	N	HIS	A	361	22.655	25.913	-28.539	1.00	45.98	N
ATOM	5607	CA	HIS	A	361	22.784	24.597	-27.947	1.00	45.08	C
ATOM	5609	CB	HIS	A	361	24.246	24.251	-27.756	1.00	46.01	C
ATOM	5612	CG	HIS	A	361	24.972	24.039	-29.044	1.00	47.79	C
ATOM	5613	ND1	HIS	A	361	24.382	23.441	-30.136	1.00	50.43	N
ATOM	5615	CE1	HIS	A	361	25.254	23.377	-31.127	1.00	50.48	C
ATOM	5617	NE2	HIS	A	361	26.391	23.906	-30.711	1.00	49.98	N
ATOM	5619	CD2	HIS	A	361	26.240	24.330	-29.412	1.00	49.21	C
ATOM	5621	C	HIS	A	361	22.043	24.514	-26.643	1.00	43.23	C
ATOM	5622	O	HIS	A	361	21.474	23.472	-26.333	1.00	43.45	O
ATOM	5623	N	ALA	A	362	22.053	25.610	-25.897	1.00	40.86	N
ATOM	5625	CA	ALA	A	362	21.308	25.713	-24.662	1.00	39.70	C
ATOM	5627	CB	ALA	A	362	21.489	27.103	-24.047	1.00	39.12	C
ATOM	5631	C	ALA	A	362	19.842	25.448	-24.985	1.00	38.55	C
ATOM	5632	O	ALA	A	362	19.143	24.682	-24.305	1.00	38.23	O
ATOM	5633	N	LEU	A	363	19.404	26.052	-26.072	1.00	37.01	N
ATOM	5635	CA	LEU	A	363	18.014	26.007	-26.448	1.00	36.36	C
ATOM	5637	CB	LEU	A	363	17.724	27.050	-27.528	1.00	35.23	C
ATOM	5640	CG	LEU	A	363	17.505	28.474	-27.024	1.00	33.61	C
ATOM	5642	CD1	LEU	A	363	17.219	29.421	-28.217	1.00	32.02	C

ATOM	5646	CD2	LEU	A	363	16.358	28.557	-26.035	1.00	32.67	C
ATOM	5650	C	LEU	A	363	17.603	24.599	-26.874	1.00	36.18	C
ATOM	5651	O	LEU	A	363	16.567	24.134	-26.470	1.00	36.38	O
ATOM	5652	N	GLU	A	364	18.425	23.922	-27.653	1.00	37.00	N
ATOM	5654	CA	GLU	A	364	18.116	22.573	-28.115	1.00	37.76	C
ATOM	5656	CB	GLU	A	364	19.065	22.142	-29.221	1.00	37.95	C
ATOM	5659	CG	GLU	A	364	18.864	22.872	-30.518	1.00	40.43	C
ATOM	5662	CD	GLU	A	364	20.002	22.672	-31.484	1.00	42.90	C
ATOM	5663	OE1	GLU	A	364	21.055	22.093	-31.109	1.00	47.54	O
ATOM	5664	OE2	GLU	A	364	19.845	23.117	-32.625	1.00	44.66	O
ATOM	5665	C	GLU	A	364	18.252	21.555	-27.012	1.00	38.56	C
ATOM	5666	O	GLU	A	364	17.532	20.525	-27.023	1.00	38.90	O
ATOM	5667	N	CYS	A	365	19.208	21.784	-26.094	1.00	38.45	N
ATOM	5669	CA	CYS	A	365	19.323	20.917	-24.927	1.00	38.99	C
ATOM	5671	CB	CYS	A	365	20.608	21.194	-24.118	1.00	39.40	C
ATOM	5674	SG	CYS	A	365	22.118	20.708	-24.995	1.00	43.18	S
ATOM	5675	C	CYS	A	365	18.074	21.105	-24.059	1.00	38.21	C
ATOM	5676	O	CYS	A	365	17.549	20.152	-23.551	1.00	38.42	O
ATOM	5677	N	ALA	A	366	17.592	22.327	-23.905	1.00	37.60	N
ATOM	5679	CA	ALA	A	366	16.403	22.538	-23.100	1.00	37.56	C
ATOM	5681	CB	ALA	A	366	16.075	24.012	-23.009	1.00	37.51	C
ATOM	5685	C	ALA	A	366	15.230	21.761	-23.693	1.00	37.65	C
ATOM	5686	O	ALA	A	366	14.557	21.036	-23.002	1.00	37.94	O
ATOM	5687	N	MET	A	367	15.005	21.877	-24.990	1.00	37.59	N
ATOM	5689	CA	MET	A	367	13.880	21.187	-25.611	1.00	37.64	C
ATOM	5691	CB	MET	A	367	13.851	21.461	-27.117	1.00	38.28	C
ATOM	5694	CG	MET	A	367	12.620	20.909	-27.838	1.00	40.90	C
ATOM	5697	SD	MET	A	367	11.142	21.586	-27.094	1.00	50.53	S
ATOM	5698	CE	MET	A	367	10.862	22.973	-28.130	1.00	48.94	C
ATOM	5702	C	MET	A	367	13.989	19.705	-25.369	1.00	36.45	C
ATOM	5703	O	MET	A	367	13.031	19.057	-24.996	1.00	36.19	O
ATOM	5704	N	ASP	A	368	15.184	19.181	-25.584	1.00	35.93	N
ATOM	5706	CA	ASP	A	368	15.451	17.756	-25.483	1.00	35.13	C
ATOM	5708	CB	ASP	A	368	16.919	17.520	-25.822	1.00	35.81	C
ATOM	5711	CG	ASP	A	368	17.286	16.046	-25.883	1.00	37.67	C
ATOM	5712	OD1	ASP	A	368	18.217	15.715	-26.647	1.00	42.60	O
ATOM	5713	OD2	ASP	A	368	16.719	15.148	-25.229	1.00	38.87	O
ATOM	5714	C	ASP	A	368	15.133	17.251	-24.079	1.00	34.07	C
ATOM	5715	O	ASP	A	368	14.553	16.168	-23.901	1.00	32.86	O
ATOM	5716	N	ILE	A	369	15.515	18.040	-23.078	1.00	33.22	N
ATOM	5718	CA	ILE	A	369	15.229	17.691	-21.686	1.00	33.18	C
ATOM	5720	CB	ILE	A	369	16.011	18.584	-20.717	1.00	32.36	C
ATOM	5722	CG1	ILE	A	369	17.486	18.267	-20.774	1.00	33.23	C
ATOM	5725	CD1	ILE	A	369	18.327	19.346	-20.210	1.00	32.95	C
ATOM	5729	CG2	ILE	A	369	15.506	18.410	-19.328	1.00	30.46	C
ATOM	5733	C	ILE	A	369	13.744	17.842	-21.412	1.00	33.36	C
ATOM	5734	O	ILE	A	369	13.179	17.115	-20.611	1.00	33.29	O
ATOM	5735	N	PHE	A	370	13.137	18.845	-22.033	1.00	33.73	N
ATOM	5737	CA	PHE	A	370	11.719	19.041	-21.913	1.00	34.39	C
ATOM	5739	CB	PHE	A	370	11.262	20.286	-22.668	1.00	34.56	C
ATOM	5742	CG	PHE	A	370	9.809	20.509	-22.555	1.00	34.36	C
ATOM	5743	CD1	PHE	A	370	9.303	21.210	-21.501	1.00	34.58	C
ATOM	5745	CE1	PHE	A	370	7.951	21.377	-21.369	1.00	36.71	C
ATOM	5747	CZ	PHE	A	370	7.089	20.821	-22.300	1.00	36.97	C
ATOM	5749	CE2	PHE	A	370	7.592	20.095	-23.344	1.00	36.78	C
ATOM	5751	CD2	PHE	A	370	8.940	19.939	-23.468	1.00	36.29	C
ATOM	5753	C	PHE	A	370	10.945	17.835	-22.434	1.00	35.24	C
ATOM	5754	O	PHE	A	370	10.011	17.382	-21.804	1.00	33.90	O
ATOM	5755	N	ASP	A	371	11.331	17.329	-23.594	1.00	36.93	N
ATOM	5757	CA	ASP	A	371	10.581	16.246	-24.205	1.00	38.69	C
ATOM	5759	CB	ASP	A	371	10.981	16.032	-25.662	1.00	39.04	C
ATOM	5762	CG	ASP	A	371	10.516	17.154	-26.530	1.00	42.69	C
ATOM	5763	OD1	ASP	A	371	11.122	17.391	-27.608	1.00	49.45	O
ATOM	5764	OD2	ASP	A	371	9.552	17.881	-26.195	1.00	45.34	O
ATOM	5765	C	ASP	A	371	10.782	14.985	-23.429	1.00	39.08	C
ATOM	5766	O	ASP	A	371	9.799	14.304	-23.141	1.00	39.71	O
ATOM	5767	N	PHE	A	372	12.029	14.681	-23.056	1.00	39.53	N

ATOM	5769	CA	PHE	A	372	12.301	13.441	-22.325	1.00 39.75	C
ATOM	5771	CB	PHE	A	372	13.785	13.215	-22.176	1.00 39.49	C
ATOM	5774	CG	PHE	A	372	14.134	11.926	-21.476	1.00 41.69	C
ATOM	5775	CD1	PHE	A	372	14.492	10.787	-22.210	1.00 41.86	C
ATOM	5777	CE1	PHE	A	372	14.838	9.586	-21.559	1.00 41.17	C
ATOM	5779	CZ	PHE	A	372	14.801	9.521	-20.205	1.00 41.09	C
ATOM	5781	CE2	PHE	A	372	14.423	10.653	-19.461	1.00 43.56	C
ATOM	5783	CD2	PHE	A	372	14.109	11.845	-20.088	1.00 40.06	C
ATOM	5785	C	PHE	A	372	11.618	13.428	-20.969	1.00 39.96	C
ATOM	5786	O	PHE	A	372	10.951	12.454	-20.600	1.00 40.08	O
ATOM	5787	N	CYS	A	373	11.758	14.517	-20.228	1.00 40.45	N
ATOM	5789	CA	CYS	A	373	11.202	14.563	-18.876	1.00 40.64	C
ATOM	5791	CB	CYS	A	373	11.780	15.747	-18.113	1.00 40.27	C
ATOM	5794	SG	CYS	A	373	13.563	15.529	-17.835	1.00 35.42	S
ATOM	5795	C	CYS	A	373	9.660	14.543	-18.860	1.00 42.27	C
ATOM	5796	O	CYS	A	373	9.039	14.004	-17.938	1.00 42.30	O
ATOM	5797	N	SER	A	374	9.052	15.076	-19.907	1.00 43.89	N
ATOM	5799	CA	SER	A	374	7.597	15.052	-20.058	1.00 45.39	C
ATOM	5801	CB	SER	A	374	7.168	15.856	-21.293	1.00 45.06	C
ATOM	5804	OG	SER	A	374	7.458	17.229	-21.126	1.00 44.35	O
ATOM	5806	C	SER	A	374	7.050	13.623	-20.142	1.00 46.74	C
ATOM	5807	O	SER	A	374	5.970	13.346	-19.627	1.00 47.14	O
ATOM	5808	N	GLN	A	375	7.809	12.721	-20.762	1.00 48.39	N
ATOM	5810	CA	GLN	A	375	7.413	11.320	-20.896	1.00 49.34	C
ATOM	5812	CB	GLN	A	375	8.034	10.685	-22.145	1.00 49.96	C
ATOM	5815	CG	GLN	A	375	8.018	11.514	-23.411	1.00 52.13	C
ATOM	5818	CD	GLN	A	375	6.628	11.746	-23.936	1.00 56.55	C
ATOM	5819	OE1	GLN	A	375	5.699	11.954	-23.160	1.00 60.92	O
ATOM	5820	NE2	GLN	A	375	6.471	11.712	-25.261	1.00 59.78	N
ATOM	5823	C	GLN	A	375	7.804	10.472	-19.687	1.00 50.03	C
ATOM	5824	O	GLN	A	375	7.633	9.252	-19.710	1.00 50.21	O
ATOM	5825	N	VAL	A	376	8.330	11.080	-18.632	1.00 50.98	N
ATOM	5827	CA	VAL	A	376	8.774	10.298	-17.474	1.00 51.84	C
ATOM	5829	CB	VAL	A	376	9.996	10.917	-16.729	1.00 51.92	C
ATOM	5831	CG1	VAL	A	376	10.402	10.063	-15.568	1.00 52.26	C
ATOM	5835	CG2	VAL	A	376	11.185	11.051	-17.642	1.00 52.98	C
ATOM	5839	C	VAL	A	376	7.623	10.061	-16.493	1.00 52.53	C
ATOM	5840	O	VAL	A	376	6.824	10.957	-16.192	1.00 51.78	O
ATOM	5841	N	HIS	A	377	7.582	8.827	-15.992	1.00 53.52	N
ATOM	5843	CA	HIS	A	377	6.483	8.338	-15.174	1.00 54.28	C
ATOM	5845	CB	HIS	A	377	6.578	6.801	-15.013	1.00 54.96	C
ATOM	5848	CG	HIS	A	377	5.577	6.221	-14.058	1.00 58.40	C
ATOM	5849	ND1	HIS	A	377	4.223	6.480	-14.144	1.00 60.48	N
ATOM	5851	CE1	HIS	A	377	3.594	5.854	-13.166	1.00 60.83	C
ATOM	5853	NE2	HIS	A	377	4.487	5.190	-12.453	1.00 62.14	N
ATOM	5855	CD2	HIS	A	377	5.736	5.401	-12.989	1.00 61.09	C
ATOM	5857	C	HIS	A	377	6.539	9.050	-13.830	1.00 53.65	C
ATOM	5858	O	HIS	A	377	7.557	9.002	-13.131	1.00 54.47	O
ATOM	5859	N	LYS	A	378	5.455	9.748	-13.511	1.00 52.26	N
ATOM	5861	CA	LYS	A	378	5.280	10.456	-12.249	1.00 51.06	C
ATOM	5863	CB	LYS	A	378	5.954	9.728	-11.083	1.00 51.77	C
ATOM	5866	CG	LYS	A	378	5.302	8.388	-10.759	1.00 53.69	C
ATOM	5869	CD	LYS	A	378	4.135	8.561	-9.788	1.00 56.41	C
ATOM	5872	CE	LYS	A	378	3.752	7.234	-9.115	1.00 58.63	C
ATOM	5875	NZ	LYS	A	378	4.723	6.776	-8.072	1.00 59.79	N
ATOM	5879	C	LYS	A	378	5.685	11.914	-12.283	1.00 48.94	C
ATOM	5880	O	LYS	A	378	5.398	12.640	-11.345	1.00 49.31	O
ATOM	5881	N	ILE	A	379	6.317	12.357	-13.358	1.00 46.90	N
ATOM	5883	CA	ILE	A	379	6.565	13.789	-13.574	1.00 45.31	C
ATOM	5885	CB	ILE	A	379	7.835	14.000	-14.474	1.00 44.91	C
ATOM	5887	CG1	ILE	A	379	9.029	13.252	-13.864	1.00 43.68	C
ATOM	5890	CD1	ILE	A	379	10.395	13.846	-14.173	1.00 44.88	C
ATOM	5894	CG2	ILE	A	379	8.171	15.495	-14.665	1.00 44.41	C
ATOM	5898	C	ILE	A	379	5.290	14.410	-14.178	1.00 44.86	C
ATOM	5899	O	ILE	A	379	4.864	14.044	-15.242	1.00 44.64	O
ATOM	5900	N	GLN	A	380	4.682	15.328	-13.444	1.00 44.70	N
ATOM	5902	CA	GLN	A	380	3.458	15.998	-13.815	1.00 44.94	C

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ATOM   5904  CB  GLN A 380       2.823  16.555 -12.526  1.00 46.05           C
ATOM   5907  CG  GLN A 380       1.344  17.033 -12.593  1.00 49.09           C
ATOM   5910  CD  GLN A 380       0.799  17.422 -11.190  1.00 53.39           C
ATOM   5911  OE1 GLN A 380       1.332  18.346 -10.544  1.00 56.59           O
ATOM   5912  NE2 GLN A 380      -0.234  16.705 -10.715  1.00 53.60           N
ATOM   5915  C   GLN A 380       3.746  17.128 -14.802  1.00 43.82           C
ATOM   5916  O   GLN A 380       3.093  17.244 -15.826  1.00 43.80           O
ATOM   5917  N   THR A 381       4.752  17.943 -14.496  1.00 42.94           N
ATOM   5919  CA  THR A 381       5.060  19.155 -15.263  1.00 41.85           C
ATOM   5921  CB  THR A 381       4.310  20.316 -14.644  1.00 41.59           C
ATOM   5923  OG1 THR A 381       2.913  20.015 -14.670  1.00 46.92           O
ATOM   5925  CG2 THR A 381       4.395  21.544 -15.497  1.00 42.63           C
ATOM   5929  C   THR A 381       6.553  19.520 -15.359  1.00 40.01           C
ATOM   5930  O   THR A 381       7.212  19.727 -14.336  1.00 39.85           O
ATOM   5931  N   VAL A 382       7.044  19.627 -16.597  1.00 37.65           N
ATOM   5933  CA  VAL A 382       8.342  20.204 -16.900  1.00 36.42           C
ATOM   5935  CB  VAL A 382       9.095  19.448 -18.032  1.00 36.01           C
ATOM   5937  CG1 VAL A 382      10.572  19.805 -17.996  1.00 35.49           C
ATOM   5941  CG2 VAL A 382       8.894  17.955 -17.907  1.00 35.86           C
ATOM   5945  C   VAL A 382       8.199  21.661 -17.328  1.00 35.55           C
ATOM   5946  O   VAL A 382       7.360  22.004 -18.162  1.00 35.75           O
ATOM   5947  N   SER A 383       9.034  22.498 -16.731  1.00 34.21           N
ATOM   5949  CA  SER A 383       9.137  23.895 -17.024  1.00 33.04           C
ATOM   5951  CB  SER A 383       8.484  24.715 -15.938  1.00 33.21           C
ATOM   5954  OG  SER A 383       7.232  24.196 -15.574  1.00 33.60           O
ATOM   5956  C   SER A 383      10.625  24.185 -17.054  1.00 32.70           C
ATOM   5957  O   SER A 383      11.346  23.745 -16.171  1.00 32.68           O
ATOM   5958  N   ILE A 384      11.101  24.873 -18.089  1.00 31.34           N
ATOM   5960  CA  ILE A 384      12.495  25.227 -18.174  1.00 30.21           C
ATOM   5962  CB  ILE A 384      13.204  24.331 -19.231  1.00 30.68           C
ATOM   5964  CG1 ILE A 384      12.977  22.856 -18.912  1.00 28.23           C
ATOM   5967  CD1 ILE A 384      13.497  21.968 -19.983  1.00 29.62           C
ATOM   5971  CG2 ILE A 384      14.742  24.612 -19.288  1.00 29.22           C
ATOM   5975  C   ILE A 384      12.623  26.687 -18.523  1.00 30.10           C
ATOM   5976  O   ILE A 384      11.977  27.154 -19.453  1.00 29.65           O
ATOM   5977  N   GLY A 385      13.426  27.423 -17.755  1.00 30.33           N
ATOM   5979  CA  GLY A 385      13.780  28.814 -18.063  1.00 30.37           C
ATOM   5982  C   GLY A 385      15.224  28.954 -18.577  1.00 30.70           C
ATOM   5983  O   GLY A 385      16.146  28.338 -18.022  1.00 31.67           O
ATOM   5984  N   VAL A 386      15.429  29.773 -19.609  1.00 29.80           N
ATOM   5986  CA  VAL A 386      16.737  29.961 -20.236  1.00 29.04           C
ATOM   5988  CB  VAL A 386      16.814  29.354 -21.671  1.00 29.12           C
ATOM   5990  CG1 VAL A 386      18.223  29.401 -22.216  1.00 28.57           C
ATOM   5994  CG2 VAL A 386      16.248  27.901 -21.741  1.00 28.89           C
ATOM   5998  C   VAL A 386      17.034  31.480 -20.293  1.00 29.41           C
ATOM   5999  O   VAL A 386      16.269  32.255 -20.871  1.00 28.76           O
ATOM   6000  N   ALA A 387      18.118  31.888 -19.640  1.00 29.36           N
ATOM   6002  CA  ALA A 387      18.545  33.284 -19.559  1.00 30.08           C
ATOM   6004  CB  ALA A 387      18.164  33.870 -18.217  1.00 29.28           C
ATOM   6008  C   ALA A 387      20.062  33.332 -19.789  1.00 30.99           C
ATOM   6009  O   ALA A 387      20.787  32.374 -19.450  1.00 31.91           O
ATOM   6010  N   SER A 388      20.552  34.400 -20.409  1.00 31.57           N
ATOM   6012  CA  SER A 388      21.961  34.477 -20.802  1.00 31.69           C
ATOM   6014  CB  SER A 388      22.129  34.205 -22.296  1.00 31.96           C
ATOM   6017  OG  SER A 388      21.954  32.831 -22.575  0.50 31.47           O
ATOM   6019  C   SER A 388      22.555  35.813 -20.452  1.00 32.97           C
ATOM   6020  O   SER A 388      21.878  36.831 -20.500  1.00 33.88           O
ATOM   6021  N   GLY A 389      23.840  35.809 -20.084  1.00 34.13           N
ATOM   6023  CA  GLY A 389      24.526  37.016 -19.665  1.00 33.79           C
ATOM   6026  C   GLY A 389      25.657  36.852 -18.646  1.00 34.21           C
ATOM   6027  O   GLY A 389      26.226  35.771 -18.437  1.00 33.65           O
ATOM   6028  N   ILE A 390      25.964  37.977 -18.010  1.00 33.96           N
ATOM   6030  CA  ILE A 390      27.053  38.067 -17.058  1.00 33.92           C
ATOM   6032  CB  ILE A 390      27.652  39.480 -17.046  1.00 33.76           C
ATOM   6034  CG1 ILE A 390      28.360  39.744 -18.366  1.00 35.35           C
ATOM   6037  CD1 ILE A 390      28.559  41.225 -18.577  1.00 38.88           C
ATOM   6041  CG2 ILE A 390      28.641  39.630 -15.883  1.00 34.64           C
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ATOM   6045  C   ILE A 390      26.558  37.707 -15.665  1.00 32.80           C
ATOM   6046  O   ILE A 390      25.757  38.420 -15.067  1.00 31.92           O
ATOM   6047  N   VAL A 391      27.099  36.612 -15.151  1.00 32.12           N
ATOM   6049  CA  VAL A 391      26.800  36.151 -13.807  1.00 31.54           C
ATOM   6051  CB  VAL A 391      26.048  34.818 -13.856  1.00 31.14           C
ATOM   6053  CG1 VAL A 391      24.728  34.922 -14.624  1.00 29.48           C
ATOM   6057  CG2 VAL A 391      26.885  33.808 -14.498  1.00 33.79           C
ATOM   6061  C   VAL A 391      28.092  35.945 -13.027  1.00 31.02           C
ATOM   6062  O   VAL A 391      29.131  35.622 -13.610  1.00 31.50           O
ATOM   6063  N   PHE A 392      28.022  36.103 -11.716  1.00 30.79           N
ATOM   6065  CA  PHE A 392      29.147  35.800 -10.868  1.00 31.01           C
ATOM   6067  CB  PHE A 392      29.056  36.472  -9.506  1.00 31.63           C
ATOM   6070  CG  PHE A 392      30.145  36.032  -8.575  1.00 34.77           C
ATOM   6071  CD1 PHE A 392      31.452  36.468  -8.768  1.00 38.11           C
ATOM   6073  CE1 PHE A 392      32.482  36.015  -7.943  1.00 40.09           C
ATOM   6075  CZ  PHE A 392      32.200  35.105  -6.917  1.00 40.79           C
ATOM   6077  CE2 PHE A 392      30.903  34.651  -6.738  1.00 39.55           C
ATOM   6079  CD2 PHE A 392      29.890  35.098  -7.585  1.00 38.05           C
ATOM   6081  C   PHE A 392      29.260  34.309 -10.670  1.00 30.75           C
ATOM   6082  O   PHE A 392      28.292  33.625 -10.337  1.00 30.12           O
ATOM   6083  N   CYS A 393      30.476  33.818 -10.865  1.00 30.81           N
ATOM   6085  CA  CYS A 393      30.793  32.409 -10.746  1.00 30.85           C
ATOM   6087  CB  CYS A 393      31.287  31.895 -12.092  1.00 30.89           C
ATOM   6090  SG  CYS A 393      29.987  31.739 -13.314  1.00 35.98           S
ATOM   6091  C   CYS A 393      31.919  32.322  -9.736  1.00 29.97           C
ATOM   6092  O   CYS A 393      32.939  32.988  -9.915  1.00 29.82           O
ATOM   6093  N   GLY A 394      31.778  31.513  -8.686  1.00 29.04           N
ATOM   6095  CA  GLY A 394      32.848  31.447  -7.707  1.00 27.69           C
ATOM   6098  C   GLY A 394      32.575  30.538  -6.567  1.00 27.10           C
ATOM   6099  O   GLY A 394      31.457  30.057  -6.423  1.00 27.27           O
ATOM   6100  N   ILE A 395      33.599  30.280  -5.747  1.00 26.38           N
ATOM   6102  CA  ILE A 395      33.425  29.489  -4.529  1.00 25.51           C
ATOM   6104  CB  ILE A 395      34.741  28.709  -4.162  1.00 25.35           C
ATOM   6106  CG1 ILE A 395      34.990  27.572  -5.149  1.00 26.53           C
ATOM   6109  CD1 ILE A 395      36.403  27.039  -5.087  1.00 27.86           C
ATOM   6113  CG2 ILE A 395      34.645  28.080  -2.821  1.00 23.38           C
ATOM   6117  C   ILE A 395      32.962  30.408  -3.388  1.00 24.94           C
ATOM   6118  O   ILE A 395      33.671  31.297  -3.001  1.00 26.96           O
ATOM   6119  N   VAL A 396      31.778  30.172  -2.845  1.00 24.33           N
ATOM   6121  CA  VAL A 396      31.153  31.003  -1.795  1.00 23.65           C
ATOM   6123  CB  VAL A 396      29.713  31.436  -2.242  1.00 24.20           C
ATOM   6125  CG1 VAL A 396      28.965  32.186  -1.136  1.00 24.43           C
ATOM   6129  CG2 VAL A 396      29.810  32.299  -3.479  1.00 24.75           C
ATOM   6133  C   VAL A 396      31.028  30.251  -0.466  1.00 22.80           C
ATOM   6134  O   VAL A 396      30.631  29.089  -0.418  1.00 23.70           O
ATOM   6135  N   GLY A 397      31.385  30.920   0.608  1.00 21.62           N
ATOM   6137  CA  GLY A 397      31.207  30.423   1.946  1.00 21.79           C
ATOM   6140  C   GLY A 397      32.489  30.620   2.718  1.00 21.62           C
ATOM   6141  O   GLY A 397      33.192  31.609   2.484  1.00 22.89           O
ATOM   6142  N   HIS A 398      32.770  29.678   3.618  1.00 20.45           N
ATOM   6144  CA  HIS A 398      33.831  29.775   4.618  1.00 20.38           C
ATOM   6146  CB  HIS A 398      33.248  29.348   6.003  1.00 20.19           C
ATOM   6149  CG  HIS A 398      34.122  29.645   7.172  1.00 19.97           C
ATOM   6150  ND1 HIS A 398      35.347  29.039   7.365  1.00 20.62           N
ATOM   6152  CE1 HIS A 398      35.910  29.524   8.462  1.00 20.04           C
ATOM   6154  NE2 HIS A 398      35.087  30.412   8.993  1.00 19.93           N
ATOM   6156  CD2 HIS A 398      33.952  30.489   8.220  1.00 21.09           C
ATOM   6158  C   HIS A 398      34.954  28.870   4.138  1.00 20.03           C
ATOM   6159  O   HIS A 398      34.729  27.898   3.387  1.00 19.96           O
ATOM   6160  N   THR A 399      36.172  29.199   4.522  1.00 20.57           N
ATOM   6162  CA  THR A 399      37.299  28.271   4.334  1.00 22.07           C
ATOM   6164  CB  THR A 399      38.418  28.654   5.291  1.00 22.27           C
ATOM   6166  OG1 THR A 399      38.927  29.916   4.888  1.00 24.57           O
ATOM   6168  CG2 THR A 399      39.669  27.704   5.216  1.00 22.38           C
ATOM   6172  C   THR A 399      36.896  26.797   4.559  1.00 22.13           C
ATOM   6173  O   THR A 399      37.176  25.976   3.709  1.00 24.91           O
ATOM   6174  N   VAL A 400      36.186  26.480   5.646  1.00 21.88           N
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ATOM	6176	CA	VAL	A	400	35.913	25.071	6.031	1.00	20.77	C
ATOM	6178	CB	VAL	A	400	35.856	24.884	7.580	1.00	20.41	C
ATOM	6180	CG1	VAL	A	400	37.119	25.307	8.266	1.00	17.28	C
ATOM	6184	CG2	VAL	A	400	34.702	25.635	8.187	1.00	21.77	C
ATOM	6188	C	VAL	A	400	34.628	24.524	5.460	1.00	21.14	C
ATOM	6189	O	VAL	A	400	34.362	23.341	5.588	1.00	20.22	O
ATOM	6190	N	ARG	A	401	33.829	25.390	4.824	1.00	21.91	N
ATOM	6192	CA	ARG	A	401	32.541	25.013	4.246	1.00	21.70	C
ATOM	6194	CB	ARG	A	401	31.491	24.959	5.374	1.00	21.40	C
ATOM	6197	CG	ARG	A	401	30.136	24.425	4.941	1.00	23.05	C
ATOM	6200	CD	ARG	A	401	30.143	22.905	4.602	1.00	23.23	C
ATOM	6203	NE	ARG	A	401	28.886	22.482	3.960	1.00	21.05	N
ATOM	6205	CZ	ARG	A	401	28.678	22.487	2.643	1.00	20.97	C
ATOM	6206	NH1	ARG	A	401	29.631	22.839	1.786	1.00	20.07	N
ATOM	6209	NH2	ARG	A	401	27.510	22.127	2.167	1.00	20.90	N
ATOM	6212	C	ARG	A	401	32.067	25.968	3.110	1.00	21.40	C
ATOM	6213	O	ARG	A	401	31.518	27.042	3.343	1.00	20.68	O
ATOM	6214	N	HIS	A	402	32.270	25.549	1.877	1.00	22.54	N
ATOM	6216	CA	HIS	A	402	32.075	26.435	0.709	1.00	23.15	C
ATOM	6218	CB	HIS	A	402	33.328	27.272	0.350	1.00	22.83	C
ATOM	6221	CG	HIS	A	402	34.602	26.490	0.230	1.00	24.00	C
ATOM	6222	ND1	HIS	A	402	35.827	27.013	0.599	1.00	25.43	N
ATOM	6224	CE1	HIS	A	402	36.769	26.115	0.394	1.00	23.48	C
ATOM	6226	NE2	HIS	A	402	36.212	25.035	-0.123	1.00	24.18	N
ATOM	6228	CD2	HIS	A	402	34.860	25.248	-0.248	1.00	26.07	C
ATOM	6230	C	HIS	A	402	31.654	25.625	-0.446	1.00	22.62	C
ATOM	6231	O	HIS	A	402	31.838	24.426	-0.413	1.00	24.50	O
ATOM	6232	N	GLU	A	403	31.060	26.267	-1.448	1.00	23.17	N
ATOM	6234	CA	GLU	A	403	30.610	25.620	-2.691	1.00	24.04	C
ATOM	6236	CB	GLU	A	403	29.130	25.175	-2.598	1.00	23.75	C
ATOM	6239	CG	GLU	A	403	28.892	24.122	-1.509	1.00	25.78	C
ATOM	6242	CD	GLU	A	403	27.448	23.744	-1.311	1.00	27.64	C
ATOM	6243	OE1	GLU	A	403	26.489	24.387	-1.841	1.00	27.66	O
ATOM	6244	OE2	GLU	A	403	27.276	22.783	-0.590	1.00	29.83	O
ATOM	6245	C	GLU	A	403	30.725	26.568	-3.885	1.00	25.37	C
ATOM	6246	O	GLU	A	403	30.569	27.801	-3.769	1.00	24.63	O
ATOM	6247	N	TYR	A	404	30.944	25.980	-5.052	1.00	26.49	N
ATOM	6249	CA	TYR	A	404	30.884	26.746	-6.286	1.00	28.11	C
ATOM	6251	CB	TYR	A	404	31.468	25.923	-7.432	1.00	28.56	C
ATOM	6254	CG	TYR	A	404	31.717	26.700	-8.667	1.00	28.16	C
ATOM	6255	CD1	TYR	A	404	32.747	27.631	-8.734	1.00	27.74	C
ATOM	6257	CE1	TYR	A	404	32.988	28.349	-9.906	1.00	29.60	C
ATOM	6259	CZ	TYR	A	404	32.155	28.115	-10.993	1.00	34.10	C
ATOM	6260	OH	TYR	A	404	32.278	28.772	-12.176	1.00	39.16	O
ATOM	6262	CE2	TYR	A	404	31.132	27.187	-10.928	1.00	33.42	C
ATOM	6264	CD2	TYR	A	404	30.929	26.484	-9.781	1.00	30.48	C
ATOM	6266	C	TYR	A	404	29.445	27.161	-6.583	1.00	28.36	C
ATOM	6267	O	TYR	A	404	28.571	26.322	-6.655	1.00	28.99	O
ATOM	6268	N	THR	A	405	29.211	28.458	-6.698	1.00	28.61	N
ATOM	6270	CA	THR	A	405	27.886	28.992	-6.943	1.00	29.68	C
ATOM	6272	CB	THR	A	405	27.345	29.768	-5.709	1.00	30.13	C
ATOM	6274	OG1	THR	A	405	27.925	29.291	-4.490	1.00	29.05	O
ATOM	6276	CG2	THR	A	405	25.936	29.420	-5.536	1.00	31.92	C
ATOM	6280	C	THR	A	405	27.818	29.967	-8.123	1.00	30.05	C
ATOM	6281	O	THR	A	405	28.832	30.499	-8.545	1.00	29.11	O
ATOM	6282	N	VAL	A	406	26.595	30.191	-8.632	1.00	31.02	N
ATOM	6284	CA	VAL	A	406	26.320	31.286	-9.583	1.00	31.66	C
ATOM	6286	CB	VAL	A	406	25.784	30.846	-10.942	1.00	31.66	C
ATOM	6288	CG1A	VAL	A	406	26.864	30.185	-11.765	0.50	31.50	C
ATOM	6289	CG1B	VAL	A	406	26.930	30.872	-11.919	0.50	33.81	C
ATOM	6296	CG2A	VAL	A	406	24.639	29.834	-10.752	0.50	32.24	C
ATOM	6297	CG2B	VAL	A	406	25.190	29.444	-10.956	0.50	33.15	C
ATOM	6304	C	VAL	A	406	25.349	32.271	-8.957	1.00	31.60	C
ATOM	6305	O	VAL	A	406	24.393	31.869	-8.298	1.00	31.20	O
ATOM	6306	N	ILE	A	407	25.635	33.559	-9.139	1.00	31.40	N
ATOM	6308	CA	ILE	A	407	24.835	34.652	-8.589	1.00	31.96	C
ATOM	6310	CB	ILE	A	407	25.576	35.325	-7.406	1.00	32.02	C

ATOM	6312	CG1	ILE	A	407	25.970	34.272	-6.383	1.00 31.73	C
ATOM	6315	CD1	ILE	A	407	26.489	34.865	-5.125	1.00 31.52	C
ATOM	6319	CG2	ILE	A	407	24.735	36.466	-6.746	1.00 31.26	C
ATOM	6323	C	ILE	A	407	24.632	35.684	-9.698	1.00 33.04	C
ATOM	6324	O	ILE	A	407	25.583	36.053	-10.392	1.00 31.99	O
ATOM	6325	N	GLY	A	408	23.410	36.179	-9.844	1.00 33.79	N
ATOM	6327	CA	GLY	A	408	23.141	37.165	-10.881	1.00 35.16	C
ATOM	6330	C	GLY	A	408	21.672	37.346	-11.196	1.00 35.63	C
ATOM	6331	O	GLY	A	408	20.879	36.435	-11.021	1.00 35.77	O
ATOM	6332	N	GLN	A	409	21.313	38.543	-11.640	1.00 36.73	N
ATOM	6334	CA	GLN	A	409	19.954	38.808	-12.113	1.00 36.67	C
ATOM	6336	CB	GLN	A	409	19.812	40.239	-12.635	1.00 37.36	C
ATOM	6339	CG	GLN	A	409	19.282	41.257	-11.585	1.00 41.78	C
ATOM	6342	CD	GLN	A	409	17.863	40.915	-11.053	1.00 46.41	C
ATOM	6343	OE1	GLN	A	409	16.949	40.565	-11.829	1.00 48.68	O
ATOM	6344	NE2	GLN	A	409	17.689	41.007	-9.738	1.00 49.91	N
ATOM	6347	C	GLN	A	409	19.533	37.781	-13.180	1.00 35.52	C
ATOM	6348	O	GLN	A	409	18.422	37.313	-13.157	1.00 35.55	O
ATOM	6349	N	LYS	A	410	20.415	37.371	-14.069	1.00 34.48	N
ATOM	6351	CA	LYS	A	410	20.038	36.327	-15.006	1.00 34.56	C
ATOM	6353	CB	LYS	A	410	21.101	36.154	-16.076	1.00 34.87	C
ATOM	6356	CG	LYS	A	410	21.266	37.396	-16.913	1.00 35.59	C
ATOM	6359	CD	LYS	A	410	20.039	37.695	-17.735	1.00 36.87	C
ATOM	6362	CE	LYS	A	410	20.346	38.747	-18.817	1.00 36.55	C
ATOM	6365	NZ	LYS	A	410	19.119	39.075	-19.536	1.00 34.90	N
ATOM	6369	C	LYS	A	410	19.707	34.965	-14.394	1.00 34.66	C
ATOM	6370	O	LYS	A	410	18.899	34.236	-14.969	1.00 34.94	O
ATOM	6371	N	VAL	A	411	20.338	34.600	-13.269	1.00 34.45	N
ATOM	6373	CA	VAL	A	411	20.029	33.340	-12.577	1.00 33.29	C
ATOM	6375	CB	VAL	A	411	21.063	32.928	-11.429	1.00 33.24	C
ATOM	6377	CG1	VAL	A	411	20.784	31.523	-10.942	1.00 31.98	C
ATOM	6381	CG2	VAL	A	411	22.563	33.046	-11.869	1.00 32.16	C
ATOM	6385	C	VAL	A	411	18.646	33.486	-11.980	1.00 33.12	C
ATOM	6386	O	VAL	A	411	17.844	32.583	-12.089	1.00 32.04	O
ATOM	6387	N	ASN	A	412	18.361	34.632	-11.376	1.00 33.10	N
ATOM	6389	CA	ASN	A	412	17.032	34.875	-10.781	1.00 34.00	C
ATOM	6391	CB	ASN	A	412	16.928	36.255	-10.102	1.00 34.20	C
ATOM	6394	CG	ASN	A	412	17.917	36.458	-8.973	1.00 34.07	C
ATOM	6395	OD1	ASN	A	412	18.853	35.688	-8.800	1.00 34.41	O
ATOM	6396	ND2	ASN	A	412	17.723	37.537	-8.215	1.00 33.87	N
ATOM	6399	C	ASN	A	412	15.936	34.833	-11.847	1.00 34.23	C
ATOM	6400	O	ASN	A	412	14.843	34.363	-11.599	1.00 35.10	O
ATOM	6401	N	LEU	A	413	16.279	35.291	-13.039	1.00 34.35	N
ATOM	6403	CA	LEU	A	413	15.362	35.410	-14.136	1.00 34.89	C
ATOM	6405	CB	LEU	A	413	15.983	36.255	-15.246	1.00 34.45	C
ATOM	6408	CG	LEU	A	413	15.073	37.078	-16.166	1.00 36.20	C
ATOM	6410	CD1	LEU	A	413	15.476	36.912	-17.634	1.00 36.11	C
ATOM	6414	CD2	LEU	A	413	13.594	36.831	-15.980	1.00 35.26	C
ATOM	6418	C	LEU	A	413	14.949	34.050	-14.666	1.00 35.08	C
ATOM	6419	O	LEU	A	413	13.760	33.774	-14.735	1.00 35.10	O
ATOM	6420	N	ALA	A	414	15.917	33.219	-15.052	1.00 34.97	N
ATOM	6422	CA	ALA	A	414	15.645	31.840	-15.451	1.00 35.11	C
ATOM	6424	CB	ALA	A	414	16.936	31.072	-15.681	1.00 34.61	C
ATOM	6428	C	ALA	A	414	14.774	31.096	-14.434	1.00 36.06	C
ATOM	6429	O	ALA	A	414	13.876	30.332	-14.809	1.00 35.95	O
ATOM	6430	N	ALA	A	415	15.026	31.316	-13.148	1.00 36.83	N
ATOM	6432	CA	ALA	A	415	14.271	30.618	-12.104	1.00 37.30	C
ATOM	6434	CB	ALA	A	415	14.972	30.782	-10.758	1.00 36.83	C
ATOM	6438	C	ALA	A	415	12.811	31.117	-12.014	1.00 37.98	C
ATOM	6439	O	ALA	A	415	11.861	30.333	-11.776	1.00 38.03	O
ATOM	6440	N	ARG	A	416	12.652	32.432	-12.135	1.00 38.22	N
ATOM	6442	CA	ARG	A	416	11.349	33.068	-12.006	1.00 38.51	C
ATOM	6444	CB	ARG	A	416	11.457	34.603	-11.872	1.00 38.84	C
ATOM	6447	CG	ARG	A	416	11.810	35.171	-10.474	1.00 41.72	C
ATOM	6450	CD	ARG	A	416	11.596	34.212	-9.292	1.00 46.87	C
ATOM	6453	NE	ARG	A	416	11.703	34.888	-7.996	1.00 49.35	N
ATOM	6455	CZ	ARG	A	416	11.158	34.447	-6.854	1.00 52.27	C

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ATOM   6456  NH1 ARG A 416      10.460  33.315  -6.813  1.00 53.95           N
ATOM   6459  NH2 ARG A 416      11.283  35.163  -5.741  1.00 51.92           N
ATOM   6462  C   ARG A 416      10.511  32.695 -13.226  1.00 38.19           C
ATOM   6463  O   ARG A 416       9.323  32.471 -13.080  1.00 38.37           O
ATOM   6464  N   MET A 417      11.149  32.596 -14.400  1.00 37.89           N
ATOM   6466  CA  MET A 417      10.518  32.171 -15.666  1.00 37.43           C
ATOM   6468  CB  MET A 417      11.531  32.177 -16.828  1.00 36.65           C
ATOM   6471  CG  MET A 417      11.869  33.548 -17.417  1.00 37.76           C
ATOM   6474  SD  MET A 417      13.466  33.632 -18.295  1.00 36.68           S
ATOM   6475  CE  MET A 417      13.148  32.660 -19.600  1.00 38.56           C
ATOM   6479  C   MET A 417       9.906  30.774 -15.582  1.00 37.74           C
ATOM   6480  O   MET A 417       8.748  30.589 -15.891  1.00 38.01           O
ATOM   6481  N   MET A 418      10.676  29.779 -15.190  1.00 38.13           N
ATOM   6483  CA  MET A 418      10.121  28.433 -15.071  1.00 39.41           C
ATOM   6485  CB  MET A 418      11.235  27.411 -14.795  1.00 39.75           C
ATOM   6488  CG  MET A 418      11.410  26.978 -13.353  1.00 43.41           C
ATOM   6491  SD  MET A 418      13.123  26.448 -13.041  1.00 48.55           S
ATOM   6492  CE  MET A 418      13.217  26.969 -11.321  1.00 49.47           C
ATOM   6496  C   MET A 418       8.903  28.311 -14.090  1.00 39.21           C
ATOM   6497  O   MET A 418       8.078  27.406 -14.214  1.00 39.72           O
ATOM   6498  N   MET A 419       8.764  29.247 -13.166  1.00 39.43           N
ATOM   6500  CA  MET A 419       7.622  29.268 -12.269  1.00 39.83           C
ATOM   6502  CB  MET A 419       8.013  29.865 -10.917  1.00 40.29           C
ATOM   6505  CG  MET A 419       9.106  29.040 -10.175  1.00 44.86           C
ATOM   6508  SD  MET A 419       9.152  27.167 -10.469  1.00 55.77           S
ATOM   6509  CE  MET A 419       7.604  26.643  -9.511  1.00 55.18           C
ATOM   6513  C   MET A 419       6.444  30.026 -12.848  1.00 39.05           C
ATOM   6514  O   MET A 419       5.306  29.581 -12.734  1.00 38.59           O
ATOM   6515  N   TYR A 420       6.694  31.167 -13.472  1.00 38.30           N
ATOM   6517  CA  TYR A 420       5.595  32.006 -13.914  1.00 38.09           C
ATOM   6519  CB  TYR A 420       6.004  33.474 -13.969  1.00 38.10           C
ATOM   6522  CG  TYR A 420       6.064  34.223 -12.658  1.00 41.64           C
ATOM   6523  CD1 TYR A 420       7.127  34.055 -11.741  1.00 44.16           C
ATOM   6525  CE1 TYR A 420       7.187  34.808 -10.565  1.00 43.72           C
ATOM   6527  CZ  TYR A 420       6.182  35.721 -10.300  1.00 44.89           C
ATOM   6528  OH  TYR A 420       6.154  36.496  -9.158  1.00 46.36           O
ATOM   6530  CE2 TYR A 420       5.154  35.895 -11.180  1.00 44.53           C
ATOM   6532  CD2 TYR A 420       5.104  35.169 -12.352  1.00 44.78           C
ATOM   6534  C   TYR A 420       5.093  31.531 -15.289  1.00 36.81           C
ATOM   6535  O   TYR A 420       3.998  31.847 -15.680  1.00 36.83           O
ATOM   6536  N   TYR A 421       5.901  30.765 -16.006  1.00 35.99           N
ATOM   6538  CA  TYR A 421       5.530  30.216 -17.298  1.00 35.30           C
ATOM   6540  CB  TYR A 421       6.405  30.814 -18.393  1.00 35.07           C
ATOM   6543  CG  TYR A 421       6.332  32.323 -18.536  1.00 35.80           C
ATOM   6544  CD1 TYR A 421       7.264  33.147 -17.927  1.00 36.70           C
ATOM   6546  CE1 TYR A 421       7.201  34.533 -18.050  1.00 39.46           C
ATOM   6548  CZ  TYR A 421       6.209  35.113 -18.811  1.00 39.87           C
ATOM   6549  OH  TYR A 421       6.135  36.472 -18.950  1.00 39.43           O
ATOM   6551  CE2 TYR A 421       5.267  34.313 -19.431  1.00 41.42           C
ATOM   6553  CD2 TYR A 421       5.340  32.916 -19.289  1.00 38.74           C
ATOM   6555  C   TYR A 421       5.741  28.715 -17.232  1.00 35.46           C
ATOM   6556  O   TYR A 421       6.669  28.180 -17.855  1.00 35.59           O
ATOM   6557  N   PRO A 422       4.922  28.028 -16.437  1.00 35.07           N
ATOM   6558  CA  PRO A 422       5.093  26.590 -16.221  1.00 34.75           C
ATOM   6560  CB  PRO A 422       4.136  26.308 -15.085  1.00 34.57           C
ATOM   6563  CG  PRO A 422       3.102  27.331 -15.227  1.00 34.69           C
ATOM   6566  CD  PRO A 422       3.800  28.567 -15.656  1.00 35.14           C
ATOM   6569  C   PRO A 422       4.687  25.819 -17.434  1.00 34.81           C
ATOM   6570  O   PRO A 422       3.851  26.332 -18.142  1.00 36.69           O
ATOM   6571  N   GLY A 423       5.263  24.649 -17.682  1.00 34.29           N
ATOM   6573  CA  GLY A 423       4.785  23.736 -18.706  1.00 33.66           C
ATOM   6576  C   GLY A 423       5.444  23.957 -20.038  1.00 33.32           C
ATOM   6577  O   GLY A 423       5.197  23.227 -20.985  1.00 32.86           O
ATOM   6578  N   ILE A 424       6.276  24.992 -20.129  1.00 33.17           N
ATOM   6580  CA  ILE A 424       7.011  25.253 -21.346  1.00 32.24           C
ATOM   6582  CB  ILE A 424       6.318  26.387 -22.113  1.00 32.22           C
ATOM   6584  CG1 ILE A 424       6.229  27.642 -21.265  1.00 32.34           C
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ATOM   6587  CD1 ILE A 424       6.006  28.873 -22.077  1.00 31.78           C
ATOM   6591  CG2 ILE A 424       4.885  25.972 -22.512  1.00 33.13           C
ATOM   6595  C   ILE A 424       8.491  25.572 -21.100  1.00 32.16           C
ATOM   6596  O   ILE A 424       8.911  25.819 -19.958  1.00 31.64           O
ATOM   6597  N   VAL A 425       9.252  25.571 -22.204  1.00 31.72           N
ATOM   6599  CA  VAL A 425      10.567  26.191 -22.318  1.00 31.85           C
ATOM   6601  CB  VAL A 425      11.418  25.513 -23.429  1.00 32.12           C
ATOM   6603  CG1 VAL A 425      12.834  26.120 -23.471  1.00 32.06           C
ATOM   6607  CG2 VAL A 425      11.480  23.971 -23.224  1.00 31.50           C
ATOM   6611  C   VAL A 425      10.441  27.680 -22.639  1.00 31.94           C
ATOM   6612  O   VAL A 425       9.804  28.052 -23.613  1.00 32.76           O
ATOM   6613  N   THR A 426      11.045  28.538 -21.821  1.00 32.31           N
ATOM   6615  CA  THR A 426      11.076  29.985 -22.064  1.00 32.17           C
ATOM   6617  CB  THR A 426      10.464  30.769 -20.892  1.00 32.30           C
ATOM   6619  OG1 THR A 426      10.947  30.227 -19.671  1.00 32.90           O
ATOM   6621  CG2 THR A 426       8.975  30.578 -20.782  1.00 33.55           C
ATOM   6625  C   THR A 426      12.502  30.454 -22.196  1.00 32.25           C
ATOM   6626  O   THR A 426      13.399  29.935 -21.536  1.00 32.34           O
ATOM   6627  N   CYS A 427      12.731  31.449 -23.031  1.00 32.51           N
ATOM   6629  CA  CYS A 427      14.008  32.144 -22.997  1.00 32.87           C
ATOM   6631  CB  CYS A 427      14.883  31.705 -24.152  1.00 32.97           C
ATOM   6634  SG  CYS A 427      14.368  32.279 -25.784  1.00 35.88           S
ATOM   6635  C   CYS A 427      13.875  33.650 -22.956  1.00 32.55           C
ATOM   6636  O   CYS A 427      12.792  34.193 -23.162  1.00 32.78           O
ATOM   6637  N   ASP A 428      14.993  34.303 -22.639  1.00 32.34           N
ATOM   6639  CA  ASP A 428      15.117  35.753 -22.632  1.00 32.19           C
ATOM   6641  CB  ASP A 428      16.030  36.222 -21.467  1.00 31.97           C
ATOM   6644  CG  ASP A 428      17.525  35.951 -21.695  1.00 32.13           C
ATOM   6645  OD1 ASP A 428      17.949  35.296 -22.677  1.00 31.28           O
ATOM   6646  OD2 ASP A 428      18.379  36.349 -20.879  1.00 32.87           O
ATOM   6647  C   ASP A 428      15.572  36.326 -23.994  1.00 32.81           C
ATOM   6648  O   ASP A 428      15.844  35.585 -24.946  1.00 32.47           O
ATOM   6649  N   SER A 429      15.638  37.653 -24.063  1.00 33.96           N
ATOM   6651  CA  SER A 429      16.020  38.377 -25.278  1.00 35.27           C
ATOM   6653  CB  SER A 429      15.801  39.866 -25.102  1.00 35.32           C
ATOM   6656  OG  SER A 429      14.466  40.053 -24.639  1.00 40.41           O
ATOM   6658  C   SER A 429      17.441  38.182 -25.708  1.00 35.18           C
ATOM   6659  O   SER A 429      17.687  38.065 -26.898  1.00 35.46           O
ATOM   6660  N   VAL A 430      18.379  38.187 -24.759  1.00 35.43           N
ATOM   6662  CA  VAL A 430      19.779  37.884 -25.090  1.00 35.35           C
ATOM   6664  CB  VAL A 430      20.701  37.906 -23.837  1.00 35.05           C
ATOM   6666  CG1 VAL A 430      22.081  37.384 -24.190  1.00 36.32           C
ATOM   6670  CG2 VAL A 430      20.813  39.289 -23.270  1.00 33.42           C
ATOM   6674  C   VAL A 430      19.873  36.524 -25.790  1.00 35.40           C
ATOM   6675  O   VAL A 430      20.573  36.373 -26.801  1.00 36.02           O
ATOM   6676  N   THR A 431      19.127  35.548 -25.282  1.00 35.53           N
ATOM   6678  CA  THR A 431      19.140  34.194 -25.835  1.00 36.19           C
ATOM   6680  CB  THR A 431      18.427  33.219 -24.856  1.00 36.01           C
ATOM   6682  OG1 THR A 431      19.023  33.306 -23.572  1.00 36.30           O
ATOM   6684  CG2 THR A 431      18.589  31.779 -25.256  1.00 34.56           C
ATOM   6688  C   THR A 431      18.433  34.143 -27.173  1.00 37.00           C
ATOM   6689  O   THR A 431      18.865  33.483 -28.072  1.00 36.75           O
ATOM   6690  N   TYR A 432      17.292  34.794 -27.277  1.00 39.33           N
ATOM   6692  CA  TYR A 432      16.488  34.744 -28.501  1.00 41.26           C
ATOM   6694  CB  TYR A 432      15.191  35.502 -28.255  1.00 41.30           C
ATOM   6697  CG  TYR A 432      14.377  35.815 -29.468  1.00 43.88           C
ATOM   6698  CD1 TYR A 432      13.712  34.808 -30.150  1.00 46.45           C
ATOM   6700  CE1 TYR A 432      12.940  35.089 -31.254  1.00 47.35           C
ATOM   6702  CZ  TYR A 432      12.814  36.393 -31.692  1.00 47.64           C
ATOM   6703  OH  TYR A 432      12.036  36.638 -32.813  1.00 48.40           O
ATOM   6705  CE2 TYR A 432      13.461  37.421 -31.017  1.00 46.40           C
ATOM   6707  CD2 TYR A 432      14.231  37.127 -29.915  1.00 45.15           C
ATOM   6709  C   TYR A 432      17.300  35.332 -29.681  1.00 42.82           C
ATOM   6710  O   TYR A 432      17.559  34.644 -30.692  1.00 42.28           O
ATOM   6711  N   ASN A 433      17.748  36.578 -29.520  1.00 44.71           N
ATOM   6713  CA  ASN A 433      18.535  37.246 -30.568  1.00 46.52           C
ATOM   6715  CB  ASN A 433      18.764  38.730 -30.254  1.00 46.27           C
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ATOM	6718	CG	ASN	A	433	17.499	39.513	-30.289	1.00	45.43	C
ATOM	6719	OD1	ASN	A	433	17.100	40.087	-29.290	1.00	44.90	O
ATOM	6720	ND2	ASN	A	433	16.814	39.493	-31.435	1.00	46.54	N
ATOM	6723	C	ASN	A	433	19.869	36.592	-30.769	1.00	48.19	C
ATOM	6724	O	ASN	A	433	20.363	36.513	-31.885	1.00	49.84	O
ATOM	6725	N	GLY	A	434	20.458	36.117	-29.689	1.00	49.90	N
ATOM	6727	CA	GLY	A	434	21.779	35.535	-29.772	1.00	51.17	C
ATOM	6730	C	GLY	A	434	21.802	34.196	-30.488	1.00	52.24	C
ATOM	6731	O	GLY	A	434	22.831	33.844	-31.068	1.00	52.66	O
ATOM	6732	N	SER	A	435	20.693	33.446	-30.437	1.00	53.24	N
ATOM	6734	CA	SER	A	435	20.591	32.136	-31.114	1.00	53.86	C
ATOM	6736	CB	SER	A	435	19.235	31.463	-30.823	1.00	53.71	C
ATOM	6739	OG	SER	A	435	18.156	32.164	-31.460	1.00	53.40	O
ATOM	6741	C	SER	A	435	20.714	32.325	-32.624	1.00	54.46	C
ATOM	6742	O	SER	A	435	21.285	31.485	-33.333	1.00	54.57	O
ATOM	6743	N	ASN	A	436	20.120	33.416	-33.104	1.00	55.48	N
ATOM	6745	CA	ASN	A	436	19.985	33.676	-34.540	1.00	56.41	C
ATOM	6747	CB	ASN	A	436	21.369	33.754	-35.204	1.00	57.10	C
ATOM	6750	CG	ASN	A	436	21.406	34.734	-36.333	1.00	58.97	C
ATOM	6751	OD1	ASN	A	436	21.148	35.935	-36.132	1.00	61.77	O
ATOM	6752	ND2	ASN	A	436	21.710	34.239	-37.544	1.00	59.56	N
ATOM	6755	C	ASN	A	436	19.088	32.656	-35.280	1.00	56.01	C
ATOM	6756	O	ASN	A	436	18.830	32.832	-36.484	1.00	56.43	O
ATOM	6757	N	LEU	A	437	18.620	31.608	-34.562	1.00	54.87	N
ATOM	6759	CA	LEU	A	437	17.643	30.646	-35.079	1.00	53.38	C
ATOM	6761	CB	LEU	A	437	17.158	29.690	-33.986	1.00	53.15	C
ATOM	6764	CG	LEU	A	437	18.108	28.581	-33.577	1.00	53.88	C
ATOM	6766	CD1	LEU	A	437	17.512	27.773	-32.452	1.00	53.25	C
ATOM	6770	CD2	LEU	A	437	18.437	27.692	-34.769	1.00	55.67	C
ATOM	6774	C	LEU	A	437	16.459	31.421	-35.589	1.00	52.20	C
ATOM	6775	O	LEU	A	437	16.178	32.519	-35.088	1.00	52.02	O
ATOM	6776	N	PRO	A	438	15.740	30.842	-36.549	1.00	51.01	N
ATOM	6777	CA	PRO	A	438	14.634	31.553	-37.194	1.00	50.11	C
ATOM	6779	CB	PRO	A	438	14.038	30.512	-38.141	1.00	50.02	C
ATOM	6782	CG	PRO	A	438	15.057	29.482	-38.299	1.00	50.87	C
ATOM	6785	CD	PRO	A	438	15.873	29.460	-37.051	1.00	51.23	C
ATOM	6788	C	PRO	A	438	13.601	31.954	-36.168	1.00	49.14	C
ATOM	6789	O	PRO	A	438	13.386	31.215	-35.207	1.00	49.64	O
ATOM	6790	N	ALA	A	439	12.939	33.071	-36.400	1.00	47.56	N
ATOM	6792	CA	ALA	A	439	12.055	33.642	-35.414	1.00	46.51	C
ATOM	6794	CB	ALA	A	439	11.682	35.055	-35.837	1.00	47.04	C
ATOM	6798	C	ALA	A	439	10.808	32.800	-35.134	1.00	44.86	C
ATOM	6799	O	ALA	A	439	10.218	32.909	-34.072	1.00	45.09	O
ATOM	6800	N	TYR	A	440	10.432	31.940	-36.070	1.00	43.38	N
ATOM	6802	CA	TYR	A	440	9.267	31.042	-35.917	1.00	41.28	C
ATOM	6804	CB	TYR	A	440	8.761	30.607	-37.313	1.00	41.40	C
ATOM	6807	CG	TYR	A	440	9.772	29.877	-38.184	1.00	41.06	C
ATOM	6808	CD1	TYR	A	440	9.930	28.503	-38.111	1.00	41.41	C
ATOM	6810	CE1	TYR	A	440	10.875	27.838	-38.906	1.00	41.15	C
ATOM	6812	CZ	TYR	A	440	11.653	28.558	-39.781	1.00	41.20	C
ATOM	6813	OH	TYR	A	440	12.572	27.922	-40.585	1.00	42.64	O
ATOM	6815	CE2	TYR	A	440	11.514	29.919	-39.868	1.00	41.77	C
ATOM	6817	CD2	TYR	A	440	10.582	30.575	-39.078	1.00	42.98	C
ATOM	6819	C	TYR	A	440	9.523	29.792	-35.031	1.00	40.06	C
ATOM	6820	O	TYR	A	440	8.608	28.961	-34.798	1.00	38.26	O
ATOM	6821	N	PHE	A	441	10.767	29.659	-34.545	1.00	38.69	N
ATOM	6823	CA	PHE	A	441	11.097	28.666	-33.513	1.00	38.32	C
ATOM	6825	CB	PHE	A	441	12.611	28.448	-33.395	1.00	38.76	C
ATOM	6828	CG	PHE	A	441	13.201	27.553	-34.464	1.00	40.05	C
ATOM	6829	CD1	PHE	A	441	12.973	27.797	-35.814	1.00	40.38	C
ATOM	6831	CE1	PHE	A	441	13.512	27.003	-36.768	1.00	42.42	C
ATOM	6833	CZ	PHE	A	441	14.302	25.931	-36.407	1.00	43.46	C
ATOM	6835	CE2	PHE	A	441	14.563	25.684	-35.078	1.00	42.40	C
ATOM	6837	CD2	PHE	A	441	14.022	26.496	-34.110	1.00	41.98	C
ATOM	6839	C	PHE	A	441	10.566	29.150	-32.176	1.00	37.46	C
ATOM	6840	O	PHE	A	441	10.438	28.365	-31.236	1.00	36.50	O
ATOM	6841	N	PHE	A	442	10.254	30.440	-32.108	1.00	36.70	N

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ATOM   6843  CA  PHE A 442       9.881  31.101 -30.877  1.00 37.51           C
ATOM   6845  CB  PHE A 442      10.827  32.264 -30.658  1.00 37.79           C
ATOM   6848  CG  PHE A 442      12.287  31.861 -30.588  1.00 38.26           C
ATOM   6849  CD1 PHE A 442      13.082  31.905 -31.709  1.00 38.81           C
ATOM   6851  CE1 PHE A 442      14.433  31.546 -31.632  1.00 40.96           C
ATOM   6853  CZ  PHE A 442      14.979  31.157 -30.419  1.00 39.01           C
ATOM   6855  CE2 PHE A 442      14.190  31.120 -29.302  1.00 38.01           C
ATOM   6857  CD2 PHE A 442      12.857  31.465 -29.381  1.00 38.18           C
ATOM   6859  C   PHE A 442       8.470  31.635 -30.910  1.00 38.13           C
ATOM   6860  O   PHE A 442       7.920  31.831 -31.982  1.00 39.28           O
ATOM   6861  N   LYS A 443       7.883  31.848 -29.731  1.00 38.63           N
ATOM   6863  CA  LYS A 443       6.653  32.601 -29.578  1.00 38.79           C
ATOM   6865  CB  LYS A 443       5.504  31.715 -29.126  1.00 38.90           C
ATOM   6868  CG  LYS A 443       4.330  32.569 -28.661  1.00 38.06           C
ATOM   6871  CD  LYS A 443       3.291  31.848 -27.847  1.00 37.33           C
ATOM   6874  CE  LYS A 443       2.147  32.836 -27.652  1.00 39.70           C
ATOM   6877  NZ  LYS A 443       0.889  32.219 -27.212  1.00 40.16           N
ATOM   6881  C   LYS A 443       6.845  33.707 -28.544  1.00 39.47           C
ATOM   6882  O   LYS A 443       7.216  33.427 -27.408  1.00 39.51           O
ATOM   6883  N   GLU A 444       6.582  34.958 -28.920  1.00 39.85           N
ATOM   6885  CA  GLU A 444       6.736  36.083 -28.001  1.00 40.07           C
ATOM   6887  CB  GLU A 444       6.680  37.357 -28.800  1.00 40.83           C
ATOM   6890  CG  GLU A 444       6.849  38.642 -28.008  1.00 43.47           C
ATOM   6893  CD  GLU A 444       6.895  39.860 -28.925  1.00 46.53           C
ATOM   6894  OE1 GLU A 444       7.257  40.952 -28.413  1.00 45.22           O
ATOM   6895  OE2 GLU A 444       6.571  39.704 -30.154  1.00 48.16           O
ATOM   6896  C   GLU A 444       5.621  36.037 -26.981  1.00 39.95           C
ATOM   6897  O   GLU A 444       4.510  35.755 -27.338  1.00 41.26           O
ATOM   6898  N   LEU A 445       5.911  36.292 -25.708  1.00 39.71           N
ATOM   6900  CA  LEU A 445       4.969  36.045 -24.609  1.00 39.08           C
ATOM   6902  CB  LEU A 445       5.653  35.201 -23.525  1.00 39.32           C
ATOM   6905  CG  LEU A 445       6.067  33.757 -23.826  1.00 39.15           C
ATOM   6907  CD1 LEU A 445       7.078  33.285 -22.842  1.00 40.17           C
ATOM   6911  CD2 LEU A 445       4.871  32.861 -23.741  1.00 41.56           C
ATOM   6915  C   LEU A 445       4.471  37.340 -23.964  1.00 39.12           C
ATOM   6916  O   LEU A 445       5.107  38.375 -24.066  1.00 38.44           O
ATOM   6917  N   PRO A 446       3.331  37.293 -23.289  1.00 39.87           N
ATOM   6918  CA  PRO A 446       2.865  38.441 -22.489  1.00 40.97           C
ATOM   6920  CB  PRO A 446       1.495  37.999 -21.988  1.00 40.22           C
ATOM   6923  CG  PRO A 446       1.312  36.597 -22.417  1.00 39.24           C
ATOM   6926  CD  PRO A 446       2.381  36.174 -23.288  1.00 39.13           C
ATOM   6929  C   PRO A 446       3.766  38.799 -21.305  1.00 43.14           C
ATOM   6930  O   PRO A 446       4.252  37.899 -20.616  1.00 43.34           O
ATOM   6931  N   LYS A 447       3.970  40.095 -21.063  1.00 46.25           N
ATOM   6933  CA  LYS A 447       4.783  40.558 -19.931  1.00 48.56           C
ATOM   6935  CB  LYS A 447       4.981  42.081 -19.944  1.00 49.30           C
ATOM   6938  CG  LYS A 447       5.499  42.667 -21.276  1.00 52.67           C
ATOM   6941  CD  LYS A 447       6.590  43.732 -21.076  1.00 56.78           C
ATOM   6944  CE  LYS A 447       7.964  43.092 -20.706  1.00 59.25           C
ATOM   6947  NZ  LYS A 447       9.138  43.989 -21.051  1.00 60.67           N
ATOM   6951  C   LYS A 447       4.099  40.134 -18.634  1.00 49.57           C
ATOM   6952  O   LYS A 447       2.875  40.188 -18.521  1.00 49.79           O
ATOM   6953  N   LYS A 448       4.895  39.654 -17.687  1.00 50.93           N
ATOM   6955  CA  LYS A 448       4.423  39.321 -16.338  1.00 51.98           C
ATOM   6957  CB  LYS A 448       4.463  37.796 -16.111  1.00 52.03           C
ATOM   6960  CG  LYS A 448       3.119  37.080 -16.321  1.00 50.78           C
ATOM   6963  CD  LYS A 448       3.310  35.625 -16.696  1.00 50.56           C
ATOM   6966  CE  LYS A 448       1.958  34.886 -16.803  1.00 50.56           C
ATOM   6969  NZ  LYS A 448       2.018  33.607 -17.589  1.00 49.36           N
ATOM   6973  C   LYS A 448       5.321  40.059 -15.329  1.00 53.16           C
ATOM   6974  O   LYS A 448       6.547  40.056 -15.466  1.00 53.26           O
ATOM   6975  N   VAL A 449       4.731  40.733 -14.346  1.00 54.48           N
ATOM   6977  CA  VAL A 449       5.547  41.273 -13.259  1.00 55.46           C
ATOM   6979  CB  VAL A 449       4.778  42.254 -12.342  1.00 55.93           C
ATOM   6981  CG1 VAL A 449       5.682  42.667 -11.144  1.00 56.13           C
ATOM   6985  CG2 VAL A 449       4.272  43.498 -13.150  1.00 55.39           C
ATOM   6989  C   VAL A 449       6.070  40.086 -12.437  1.00 55.93           C
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ATOM	6990	O	VAL A 449	5.300	39.354	-11.803	1.00	56.14	O
ATOM	6991	N	MET A 450	7.382	39.901	-12.463	1.00	56.39	N
ATOM	6993	CA	MET A 450	8.016	38.776	-11.801	1.00	56.74	C
ATOM	6995	CB	MET A 450	8.870	38.033	-12.806	1.00	56.06	C
ATOM	6998	CG	MET A 450	8.073	37.122	-13.696	1.00	53.17	C
ATOM	7001	SD	MET A 450	9.172	36.166	-14.709	1.00	48.55	S
ATOM	7002	CE	MET A 450	10.126	37.545	-15.508	1.00	46.44	C
ATOM	7006	C	MET A 450	8.831	39.220	-10.583	1.00	58.17	C
ATOM	7007	O	MET A 450	9.657	40.134	-10.660	1.00	58.01	O
ATOM	7008	N	LYS A 451	8.576	38.559	-9.458	1.00	60.31	N
ATOM	7010	CA	LYS A 451	9.018	39.049	-8.148	1.00	62.29	C
ATOM	7012	CB	LYS A 451	8.062	38.584	-7.026	1.00	63.13	C
ATOM	7015	CG	LYS A 451	6.561	39.036	-7.231	1.00	64.76	C
ATOM	7018	CD	LYS A 451	5.949	39.851	-6.056	1.00	66.97	C
ATOM	7021	CE	LYS A 451	4.986	39.000	-5.183	1.00	67.88	C
ATOM	7024	NZ	LYS A 451	3.647	38.751	-5.833	1.00	67.44	N
ATOM	7028	C	LYS A 451	10.439	38.585	-7.900	1.00	62.92	C
ATOM	7029	O	LYS A 451	10.724	37.395	-7.999	1.00	63.25	O
ATOM	7030	N	GLY A 452	11.326	39.544	-7.624	1.00	63.50	N
ATOM	7032	CA	GLY A 452	12.757	39.300	-7.553	1.00	64.01	C
ATOM	7035	C	GLY A 452	13.504	39.566	-8.849	1.00	64.42	C
ATOM	7036	O	GLY A 452	14.658	39.137	-8.999	1.00	64.35	O
ATOM	7037	N	VAL A 453	12.864	40.282	-9.779	1.00	65.06	N
ATOM	7039	CA	VAL A 453	13.471	40.570	-11.094	1.00	65.52	C
ATOM	7041	CB	VAL A 453	13.256	39.388	-12.112	1.00	65.81	C
ATOM	7043	CG1	VAL A 453	11.851	38.838	-12.046	1.00	66.42	C
ATOM	7047	CG2	VAL A 453	13.598	39.808	-13.565	1.00	66.41	C
ATOM	7051	C	VAL A 453	13.058	41.940	-11.713	1.00	65.31	C
ATOM	7052	O	VAL A 453	11.868	42.326	-11.736	1.00	65.18	O
ATOM	7053	N	ALA A 454	14.072	42.647	-12.209	1.00	64.67	N
ATOM	7055	CA	ALA A 454	13.913	44.004	-12.716	1.00	64.68	C
ATOM	7057	CB	ALA A 454	14.988	44.919	-12.105	1.00	64.86	C
ATOM	7061	C	ALA A 454	14.034	43.985	-14.236	1.00	64.22	C
ATOM	7062	O	ALA A 454	15.090	43.638	-14.770	1.00	64.64	O
ATOM	7063	N	ASP A 455	12.972	44.421	-14.913	1.00	63.53	N
ATOM	7065	CA	ASP A 455	12.721	44.131	-16.337	1.00	62.39	C
ATOM	7067	CB	ASP A 455	12.998	45.332	-17.258	1.00	62.75	C
ATOM	7070	CG	ASP A 455	12.317	45.185	-18.630	1.00	63.48	C
ATOM	7071	OD1	ASP A 455	11.162	44.696	-18.693	1.00	63.71	O
ATOM	7072	OD2	ASP A 455	12.870	45.514	-19.705	1.00	64.53	O
ATOM	7073	C	ASP A 455	13.447	42.897	-16.860	1.00	60.77	C
ATOM	7074	O	ASP A 455	14.661	42.905	-17.093	1.00	60.87	O
ATOM	7075	N	SER A 456	12.659	41.838	-17.029	1.00	58.76	N
ATOM	7077	CA	SER A 456	13.022	40.663	-17.806	1.00	56.13	C
ATOM	7079	CB	SER A 456	11.832	39.719	-17.793	1.00	56.35	C
ATOM	7082	OG	SER A 456	10.656	40.391	-18.226	1.00	56.24	O
ATOM	7084	C	SER A 456	13.366	41.000	-19.260	1.00	54.24	C
ATOM	7085	O	SER A 456	14.081	40.240	-19.959	1.00	53.96	O
ATOM	7086	N	GLY A 457	12.823	42.124	-19.727	1.00	51.90	N
ATOM	7088	CA	GLY A 457	12.869	42.470	-21.136	1.00	49.92	C
ATOM	7091	C	GLY A 457	11.835	41.580	-21.791	1.00	48.19	C
ATOM	7092	O	GLY A 457	11.073	40.907	-21.083	1.00	48.35	O
ATOM	7093	N	PRO A 458	11.790	41.564	-23.118	1.00	45.52	N
ATOM	7094	CA	PRO A 458	10.845	40.701	-23.826	1.00	43.77	C
ATOM	7096	CB	PRO A 458	11.024	41.105	-25.301	1.00	43.83	C
ATOM	7099	CG	PRO A 458	11.856	42.353	-25.289	1.00	44.40	C
ATOM	7102	CD	PRO A 458	12.612	42.385	-24.024	1.00	45.04	C
ATOM	7105	C	PRO A 458	11.171	39.220	-23.613	1.00	42.20	C
ATOM	7106	O	PRO A 458	12.325	38.842	-23.731	1.00	42.70	O
ATOM	7107	N	LEU A 459	10.174	38.404	-23.298	1.00	40.41	N
ATOM	7109	CA	LEU A 459	10.354	36.966	-23.157	1.00	39.28	C
ATOM	7111	CB	LEU A 459	9.803	36.490	-21.825	1.00	39.18	C
ATOM	7114	CG	LEU A 459	10.547	37.110	-20.663	1.00	38.60	C
ATOM	7116	CD1	LEU A 459	9.888	36.768	-19.375	1.00	39.56	C
ATOM	7120	CD2	LEU A 459	11.983	36.642	-20.714	1.00	39.96	C
ATOM	7124	C	LEU A 459	9.718	36.149	-24.266	1.00	38.57	C
ATOM	7125	O	LEU A 459	8.748	36.558	-24.879	1.00	38.84	O

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ATOM   7126  N   TYR A 460      10.283  34.968 -24.483  1.00 37.85           N
ATOM   7128  CA  TYR A 460       9.882  34.064 -25.543  1.00 37.05           C
ATOM   7130  CB  TYR A 460      10.976  34.055 -26.596  1.00 36.80           C
ATOM   7133  CG  TYR A 460      11.240  35.424 -27.099  1.00 36.03           C
ATOM   7134  CD1 TYR A 460      12.174  36.243 -26.478  1.00 35.43           C
ATOM   7136  CE1 TYR A 460      12.404  37.544 -26.917  1.00 36.51           C
ATOM   7138  CZ  TYR A 460      11.684  38.050 -27.989  1.00 37.54           C
ATOM   7139  OH  TYR A 460      11.917  39.339 -28.448  1.00 37.33           O
ATOM   7141  CE2 TYR A 460      10.744  37.247 -28.622  1.00 37.75           C
ATOM   7143  CD2 TYR A 460      10.517  35.932 -28.164  1.00 36.42           C
ATOM   7145  C   TYR A 460       9.664  32.648 -25.037  1.00 36.79           C
ATOM   7146  O   TYR A 460      10.292  32.217 -24.091  1.00 36.37           O
ATOM   7147  N   GLN A 461       8.754  31.926 -25.674  1.00 36.27           N
ATOM   7149  CA  GLN A 461       8.678  30.502 -25.501  1.00 35.48           C
ATOM   7151  CB  GLN A 461       7.237  30.047 -25.563  1.00 34.85           C
ATOM   7154  CG  GLN A 461       7.055  28.605 -26.074  1.00 34.04           C
ATOM   7157  CD  GLN A 461       5.666  28.101 -25.908  1.00 32.56           C
ATOM   7158  OE1 GLN A 461       5.459  26.923 -25.671  1.00 37.49           O
ATOM   7159  NE2 GLN A 461       4.704  28.974 -26.028  1.00 31.37           N
ATOM   7162  C   GLN A 461       9.492  29.902 -26.637  1.00 36.04           C
ATOM   7163  O   GLN A 461       9.348  30.311 -27.766  1.00 36.46           O
ATOM   7164  N   TYR A 462      10.363  28.949 -26.349  1.00 36.26           N
ATOM   7166  CA  TYR A 462      10.974  28.184 -27.398  1.00 36.60           C
ATOM   7168  CB  TYR A 462      12.279  27.592 -26.924  1.00 36.82           C
ATOM   7171  CG  TYR A 462      13.039  26.879 -27.995  1.00 35.62           C
ATOM   7172  CD1 TYR A 462      13.547  27.564 -29.061  1.00 34.54           C
ATOM   7174  CE1 TYR A 462      14.255  26.922 -30.049  1.00 37.23           C
ATOM   7176  CZ  TYR A 462      14.506  25.583 -29.970  1.00 36.37           C
ATOM   7177  OH  TYR A 462      15.227  24.982 -30.970  1.00 36.22           O
ATOM   7179  CE2 TYR A 462      14.034  24.861 -28.906  1.00 37.03           C
ATOM   7181  CD2 TYR A 462      13.296  25.518 -27.912  1.00 38.36           C
ATOM   7183  C   TYR A 462       9.997  27.090 -27.820  1.00 37.85           C
ATOM   7184  O   TYR A 462       9.820  26.062 -27.140  1.00 38.01           O
ATOM   7185  N   TRP A 463       9.340  27.351 -28.943  1.00 38.82           N
ATOM   7187  CA  TRP A 463       8.343  26.476 -29.505  1.00 39.08           C
ATOM   7189  CB  TRP A 463       7.615  27.226 -30.626  1.00 38.14           C
ATOM   7192  CG  TRP A 463       6.359  26.582 -31.101  1.00 35.45           C
ATOM   7193  CD1 TRP A 463       6.228  25.668 -32.107  1.00 32.10           C
ATOM   7195  NE1 TRP A 463       4.909  25.320 -32.258  1.00 28.49           N
ATOM   7197  CE2 TRP A 463       4.164  25.987 -31.332  1.00 30.66           C
ATOM   7198  CD2 TRP A 463       5.040  26.799 -30.592  1.00 32.05           C
ATOM   7199  CE3 TRP A 463       4.511  27.607 -29.594  1.00 32.81           C
ATOM   7201  CZ3 TRP A 463       3.143  27.579 -29.371  1.00 32.46           C
ATOM   7203  CH2 TRP A 463       2.307  26.763 -30.131  1.00 30.21           C
ATOM   7205  CZ2 TRP A 463       2.795  25.953 -31.100  1.00 30.46           C
ATOM   7207  C   TRP A 463       8.967  25.178 -30.033  1.00 41.72           C
ATOM   7208  O   TRP A 463       8.412  24.100 -29.852  1.00 41.14           O
ATOM   7209  N   GLY A 464      10.107  25.283 -30.710  1.00 44.76           N
ATOM   7211  CA  GLY A 464      10.721  24.136 -31.346  1.00 47.53           C
ATOM   7214  C   GLY A 464      10.803  24.224 -32.855  1.00 50.43           C
ATOM   7215  O   GLY A 464      10.219  25.107 -33.476  1.00 50.34           O
ATOM   7216  N   ARG A 465      11.523  23.266 -33.433  1.00 54.24           N
ATOM   7218  CA  ARG A 465      11.754  23.186 -34.882  1.00 57.59           C
ATOM   7220  CB  ARG A 465      12.673  21.994 -35.243  1.00 58.17           C
ATOM   7223  CG  ARG A 465      14.000  21.937 -34.480  1.00 62.02           C
ATOM   7226  CD  ARG A 465      15.097  21.165 -35.201  1.00 66.29           C
ATOM   7229  NE  ARG A 465      15.758  21.984 -36.224  1.00 69.90           N
ATOM   7231  CZ  ARG A 465      16.848  21.625 -36.910  1.00 72.70           C
ATOM   7232  NH1 ARG A 465      17.433  20.442 -36.712  1.00 74.13           N
ATOM   7235  NH2 ARG A 465      17.353  22.453 -37.812  1.00 73.28           N
ATOM   7238  C   ARG A 465      10.477  23.075 -35.726  1.00 59.12           C
ATOM   7239  O   ARG A 465      10.435  23.613 -36.836  1.00 59.79           O
ATOM   7240  N   THR A 466       9.452  22.402 -35.207  1.00 60.74           N
ATOM   7242  CA  THR A 466       8.312  21.997 -36.028  1.00 62.33           C
ATOM   7244  CB  THR A 466       8.200  20.447 -36.010  1.00 62.46           C
ATOM   7246  OG1 THR A 466       8.646  19.923 -34.745  1.00 62.34           O
ATOM   7248  CG2 THR A 466       9.139  19.824 -37.050  1.00 62.48           C
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ATOM   7252  C   THR A 466       6.955  22.613 -35.640  1.00 63.81           C
ATOM   7253  O   THR A 466       6.846  23.372 -34.676  1.00 64.23           O
ATOM   7254  N   GLU A 467       5.933  22.266 -36.428  1.00 65.31           N
ATOM   7256  CA  GLU A 467       4.522  22.458 -36.082  1.00 66.02           C
ATOM   7258  CB  GLU A 467       4.137  21.641 -34.827  1.00 66.31           C
ATOM   7261  CG  GLU A 467       4.199  20.124 -34.992  1.00 66.94           C
ATOM   7264  CD  GLU A 467       4.890  19.444 -33.817  1.00 67.71           C
ATOM   7265  OE1 GLU A 467       5.811  18.625 -34.042  1.00 68.55           O
ATOM   7266  OE2 GLU A 467       4.509  19.724 -32.663  1.00 68.10           O
ATOM   7267  C   GLU A 467       4.157  23.906 -35.839  1.00 66.32           C
ATOM   7268  O   GLU A 467       4.144  24.317 -34.685  1.00 67.30           O
ATOM   7269  N   LYS A 468       3.803  24.647 -36.901  1.00 66.03           N
ATOM   7271  CA  LYS A 468       3.443  26.083 -36.827  1.00 65.44           C
ATOM   7273  CB  LYS A 468       2.598  26.448 -35.589  1.00 65.14           C
ATOM   7276  CG  LYS A 468       1.195  25.875 -35.563  1.00 64.25           C
ATOM   7279  CD  LYS A 468       0.587  25.883 -34.175  1.00 61.30           C
ATOM   7282  CE  LYS A 468      -0.097  24.564 -33.812  1.00 60.44           C
ATOM   7285  NZ  LYS A 468       0.798  23.473 -33.364  1.00 57.34           N
ATOM   7289  C   LYS A 468       4.701  26.937 -36.837  1.00 65.64           C
ATOM   7291  O1A APC X1500      14.642  35.192  -3.712  1.00 77.56           O
ATOM   7292  PA  APC X1500      14.545  36.207  -4.931  1.00 79.51           P
ATOM   7293  O2A APC X1500      13.272  37.153  -4.778  1.00 79.38           O
ATOM   7295  C3A APC X1500      16.052  37.237  -4.999  1.00 80.06           C
ATOM   7298  PB  APC X1500      16.354  38.279  -3.526  1.00 79.28           P
ATOM   7299  O1B APC X1500      16.566  37.424  -2.208  1.00 78.48           O
ATOM   7300  O2B APC X1500      15.106  39.227  -3.261  1.00 81.04           O
ATOM   7302  O3B APC X1500      17.612  39.277  -3.751  1.00 80.48           O
ATOM   7303  PG  APC X1500      19.016  38.919  -4.450  1.00 78.83           P
ATOM   7304  O3G APC X1500      19.865  38.004  -3.466  1.00 83.17           O
ATOM   7306  O2G APC X1500      19.802  40.269  -4.652  1.00 80.55           O
ATOM   7308  O1G APC X1500      18.827  38.178  -5.838  1.00 80.41           O
ATOM   7309  O5* APC X1500      14.385  35.372  -6.305  1.00 80.93           O
ATOM   7310  C5* APC X1500      15.454  34.604  -6.870  1.00 81.37           C
ATOM   7313  C4* APC X1500      14.984  33.227  -7.333  1.00 81.05           C
ATOM   7315  O4* APC X1500      16.008  32.656  -8.143  1.00 80.69           O
ATOM   7316  C1* APC X1500      16.482  31.411  -7.611  1.00 81.08           C
ATOM   7318  C2* APC X1500      15.727  31.127  -6.306  1.00 81.26           C
ATOM   7320  O2* APC X1500      15.072  29.854  -6.305  1.00 80.49           O
ATOM   7322  C3* APC X1500      14.735  32.271  -6.174  1.00 81.32           C
ATOM   7324  O3* APC X1500      13.413  31.755  -6.301  1.00 81.68           O
ATOM   7326  N9  APC X1500      17.968  31.472  -7.527  1.00 80.85           N
ATOM   7327  C8  APC X1500      18.757  32.561  -7.731  1.00 81.06           C
ATOM   7329  N7  APC X1500      20.091  32.268  -7.602  1.00 81.44           N
ATOM   7330  C5  APC X1500      20.174  30.956  -7.324  1.00 80.84           C
ATOM   7331  C6  APC X1500      21.203  29.914  -7.068  1.00 80.14           C
ATOM   7332  N6  APC X1500      22.509  30.230  -7.072  1.00 80.07           N
ATOM   7335  C4  APC X1500      18.808  30.480  -7.296  1.00 80.40           C
ATOM   7336  N3  APC X1500      18.512  29.103  -7.020  1.00 79.78           N
ATOM   7337  C2  APC X1500      19.537  28.265  -6.804  1.00 79.81           C
ATOM   7339  N1  APC X1500      20.821  28.647  -6.824  1.00 79.59           N
ATOM   7340 CA   CA  X   2      18.573  36.031  -1.913  1.00102.93          CA
ATOM   7341  O   HOH W   1      19.061  20.130  -0.740  1.00 12.75           O
ATOM   7344  O   HOH W   2      37.270  44.823   0.226  1.00 22.39           O
ATOM   7347  O   HOH W   3      28.559  21.712   7.481  1.00 22.40           O
ATOM   7350  O   HOH W   4      32.392  18.000  10.294  1.00 18.69           O
ATOM   7353  O   HOH W   5      33.726  24.530  16.941  1.00 28.88           O
ATOM   7356  O   HOH W   6      30.091  20.600   9.840  1.00 16.14           O
ATOM   7359  O   HOH W   7       8.235  25.180 -25.121  1.00 29.63           O
ATOM   7362  O   HOH W   8      30.734  21.302  12.286  1.00 17.88           O
ATOM   7365  O   HOH W   9       9.383  28.096 -18.458  1.00 26.49           O
ATOM   7368  O   HOH W  10      31.661  18.850  12.633  1.00 17.24           O
ATOM   7371  O   HOH W  11      12.043  25.336  21.153  1.00 31.37           O
ATOM   7374  O   HOH W  12      38.115  23.374  -0.184  1.00 18.89           O
ATOM   7377  O   HOH W  13      28.387  22.183  13.459  1.00 26.94           O
ATOM   7380  O   HOH W  14      35.354  43.961  -1.703  1.00 26.37           O
ATOM   7383  O   HOH W  15      21.349  34.853  -8.449  1.00 28.99           O
ATOM   7386  O   HOH W  16      51.731  32.888 -13.583  1.00 36.14           O
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ATOM	7389	O	HOH	W	17	26.447	8.240	-7.880	1.00	28.36	O
ATOM	7392	O	HOH	W	18	24.413	27.690	-7.252	1.00	42.96	O
ATOM	7395	O	HOH	W	19	35.820	16.262	17.994	1.00	25.21	O
ATOM	7398	O	HOH	W	20	27.117	17.995	11.782	1.00	32.89	O
ATOM	7401	O	HOH	W	21	32.863	20.589	22.278	1.00	41.43	O
ATOM	7404	O	HOH	W	22	31.555	21.644	-7.276	1.00	26.95	O
ATOM	7407	O	HOH	W	23	40.726	27.366	-9.681	1.00	34.76	O
ATOM	7410	O	HOH	W	24	40.763	38.256	-5.049	1.00	22.88	O
ATOM	7413	O	HOH	W	25	38.405	29.852	-6.813	1.00	32.17	O
ATOM	7416	O	HOH	W	26	24.616	17.746	-4.466	1.00	23.03	O
ATOM	7419	O	HOH	W	27	36.542	32.104	5.331	1.00	32.12	O
ATOM	7422	O	HOH	W	28	27.756	9.279	-1.630	1.00	28.52	O
ATOM	7425	O	HOH	W	29	38.673	25.382	12.299	1.00	31.95	O
ATOM	7428	O	HOH	W	30	13.374	17.773	22.924	1.00	45.81	O
ATOM	7431	O	HOH	W	31	40.040	9.192	-7.151	1.00	55.75	O
ATOM	7434	O	HOH	W	32	46.981	29.617	-6.447	1.00	42.48	O
ATOM	7437	O	HOH	W	33	40.464	35.905	-7.062	1.00	25.51	O
ATOM	7440	O	HOH	W	34	36.709	25.770	21.540	1.00	28.75	O
ATOM	7443	O	HOH	W	35	11.933	38.129	13.873	1.00	35.30	O
ATOM	7446	O	HOH	W	36	7.427	22.376	-13.679	1.00	45.02	O
ATOM	7449	O	HOH	W	37	34.391	30.097	-12.598	1.00	46.31	O
ATOM	7452	O	HOH	W	38	25.708	20.719	-1.007	1.00	40.49	O
ATOM	7455	O	HOH	W	39	7.854	22.272	9.804	1.00	39.76	O
ATOM	7458	O	HOH	W	40	23.305	38.200	-14.761	1.00	33.57	O
ATOM	7461	O	HOH	W	41	32.293	13.157	16.537	1.00	48.66	O
ATOM	7464	O	HOH	W	42	35.930	38.286	-13.980	1.00	24.89	O
ATOM	7467	O	HOH	W	43	38.542	37.947	-3.737	1.00	34.16	O
ATOM	7470	O	HOH	W	44	37.134	12.796	10.601	1.00	31.85	O
ATOM	7473	O	HOH	W	45	16.655	11.933	13.436	1.00	39.51	O
ATOM	7476	O	HOH	W	46	26.475	11.909	29.075	1.00	39.26	O
ATOM	7479	O	HOH	W	47	24.156	13.773	9.452	1.00	39.53	O
ATOM	7482	O	HOH	W	48	0.156	33.150	12.733	1.00	50.53	O
ATOM	7485	O	HOH	W	49	40.133	11.331	17.441	1.00	33.87	O
ATOM	7488	O	HOH	W	50	29.320	9.424	-4.605	1.00	32.58	O
ATOM	7491	O	HOH	W	51	65.249	20.275	23.949	1.00	31.54	O
ATOM	7494	O	HOH	W	52	43.455	40.807	-10.590	1.00	25.95	O
ATOM	7497	O	HOH	W	53	41.179	24.586	6.328	1.00	32.22	O
ATOM	7500	O	HOH	W	54	23.494	16.566	9.191	1.00	29.22	O
ATOM	7503	O	HOH	W	55	38.415	36.572	-1.399	1.00	25.90	O
ATOM	7506	O	HOH	W	56	18.923	10.680	12.864	1.00	32.66	O
ATOM	7509	O	HOH	W	57	6.842	25.138	-13.234	1.00	45.59	O
ATOM	7512	O	HOH	W	58	48.924	17.969	5.122	1.00	37.67	O
ATOM	7515	O	HOH	W	59	27.271	5.190	7.348	1.00	55.30	O
ATOM	7518	O	HOH	W	60	26.222	16.822	14.046	1.00	34.94	O
ATOM	7521	O	HOH	W	61	18.438	8.726	-21.525	1.00	45.59	O
ATOM	7524	O	HOH	W	62	34.230	21.177	-14.091	1.00	30.07	O
ATOM	7527	O	HOH	W	63	41.836	46.922	-11.153	1.00	34.29	O
ATOM	7530	O	HOH	W	64	37.104	19.064	26.036	1.00	47.81	O
ATOM	7533	O	HOH	W	65	24.140	4.650	-11.485	1.00	43.07	O
ATOM	7536	O	HOH	W	66	30.184	17.489	22.169	1.00	31.01	O
ATOM	7539	O	HOH	W	67	28.738	19.622	14.300	1.00	29.89	O
ATOM	7542	O	HOH	W	68	39.363	28.343	8.909	1.00	46.77	O
ATOM	7545	O	HOH	W	69	37.904	29.510	13.212	1.00	38.78	O
ATOM	7548	O	HOH	W	70	31.681	23.971	15.143	1.00	36.34	O
ATOM	7551	O	HOH	W	71	45.821	18.834	-2.633	1.00	33.88	O
ATOM	7554	O	HOH	W	72	25.434	9.128	-17.116	1.00	49.45	O
ATOM	7557	O	HOH	W	73	26.779	17.187	-6.396	1.00	36.52	O
ATOM	7560	O	HOH	W	74	47.135	19.446	-0.392	1.00	36.25	O
ATOM	7563	O	HOH	W	75	4.352	22.806	8.825	1.00	46.26	O
ATOM	7566	O	HOH	W	76	16.067	36.605	-33.483	1.00	70.71	O
ATOM	7569	O	HOH	W	77	35.325	44.713	-13.257	1.00	46.00	O
ATOM	7572	O	HOH	W	78	27.291	15.877	-18.510	1.00	49.02	O
ATOM	7575	O	HOH	W	79	24.621	44.354	5.780	1.00	77.18	O
ATOM	7578	O	HOH	W	80	22.652	40.769	-15.641	1.00	39.29	O
ATOM	7581	O	HOH	W	81	2.205	19.976	-12.114	1.00	52.95	O
ATOM	7584	O	HOH	W	82	15.398	5.143	-11.331	1.00	37.65	O
ATOM	7587	O	HOH	W	83	34.138	4.593	-2.996	1.00	39.69	O

ATOM	7590	O	HOH W	84	14.202	40.625	-27.961	1.00	46.11	O
ATOM	7593	O	HOH W	85	6.419	23.611	-28.632	1.00	34.08	O
ATOM	7596	O	HOH W	86	26.649	12.073	23.579	1.00	43.85	O
ATOM	7599	O	HOH W	87	21.339	32.052	29.205	1.00	47.62	O
ATOM	7602	O	HOH W	88	37.274	29.626	-20.881	1.00	51.10	O
ATOM	7605	O	HOH W	89	20.520	30.211	-35.401	1.00	42.10	O
ATOM	7608	O	HOH W	90	26.157	19.420	-3.092	1.00	37.01	O
ATOM	7611	O	HOH W	91	36.116	30.920	-6.574	1.00	28.75	O
ATOM	7614	O	HOH W	92	34.291	25.797	-13.969	1.00	41.55	O
ATOM	7617	O	HOH W	93	23.499	9.265	-18.450	1.00	35.04	O
ATOM	7620	O	HOH W	94	11.239	17.596	4.802	1.00	41.97	O
ATOM	7623	O	HOH W	95	36.838	34.640	-0.701	1.00	30.26	O
ATOM	7626	O	HOH W	96	29.733	21.380	-3.335	1.00	40.74	O
ATOM	7629	O	HOH W	97	27.095	18.072	-14.226	1.00	34.22	O
ATOM	7632	O	HOH W	98	41.156	27.192	17.566	1.00	65.13	O
ATOM	7635	O	HOH W	99	24.116	7.689	7.017	1.00	38.78	O
ATOM	7638	O	HOH W	100	29.568	24.933	-18.097	1.00	28.88	O
ATOM	7641	O	HOH W	101	41.343	25.906	8.444	1.00	52.08	O
ATOM	7644	O	HOH W	102	22.726	17.661	11.398	1.00	30.87	O
ATOM	7647	O	HOH W	103	11.720	21.098	27.247	1.00	66.21	O
ATOM	7650	O	HOH W	104	41.245	33.360	-4.627	1.00	40.93	O
ATOM	7653	O	HOH W	105	21.501	9.667	6.044	1.00	43.28	O
ATOM	7656	O	HOH W	106	33.835	34.056	9.875	1.00	42.78	O
ATOM	7659	O	HOH W	107	20.145	18.151	-28.246	1.00	70.91	O
ATOM	7662	O	HOH W	108	22.919	8.604	20.110	1.00	33.76	O
ATOM	7665	O	HOH W	109	31.087	27.232	-28.895	1.00	53.28	O
ATOM	7668	O	HOH W	110	28.082	20.683	-4.383	1.00	46.03	O
ATOM	7671	O	HOH W	111	24.962	31.714	-32.631	1.00	52.50	O
ATOM	7674	O	HOH W	112	48.292	21.897	12.949	1.00	51.38	O
ATOM	7677	O	HOH W	113	21.661	34.296	-6.071	1.00	49.92	O
ATOM	7680	O	HOH W	114	33.426	15.312	17.768	1.00	34.16	O
ATOM	7683	O	HOH W	115	23.260	19.618	-5.852	1.00	34.54	O
ATOM	7686	O	HOH W	116	34.642	47.182	-13.576	1.00	43.02	O
ATOM	7689	O	HOH W	117	37.875	33.076	1.757	1.00	43.51	O
ATOM	7692	O	HOH W	118	21.830	28.547	-34.926	1.00	46.59	O
ATOM	7695	O	HOH W	119	25.246	31.154	29.211	1.00	47.68	O
ATOM	7698	O	HOH W	120	18.572	3.938	4.184	1.00	55.62	O
ATOM	7701	O	HOH W	121	23.238	10.423	21.707	1.00	39.41	O
ATOM	7704	O	HOH W	122	13.881	9.892	19.522	1.00	50.73	O
ATOM	7707	O	HOH W	123	26.537	16.925	-16.188	1.00	46.19	O
ATOM	7710	O	HOH W	124	0.926	6.719	-4.415	1.00	63.02	O
ATOM	7713	O	HOH W	125	38.728	34.309	-5.286	1.00	45.99	O
ATOM	7716	O	HOH W	126	8.380	26.433	-34.907	1.00	44.52	O
ATOM	7719	O	HOH W	127	41.725	21.695	21.446	1.00	73.30	O
ATOM	7722	O	HOH W	128	38.827	8.783	6.586	1.00	43.82	O
ATOM	7725	O	HOH W	129	29.687	6.821	-4.703	1.00	51.72	O
ATOM	7728	O	HOH W	130	27.108	27.729	33.874	1.00	49.34	O
ATOM	7731	O	HOH W	131	18.341	38.358	-34.473	1.00	61.24	O
ATOM	7734	O	HOH W	132	8.201	22.218	-32.459	1.00	57.35	O
ATOM	7737	O	HOH W	133	5.114	23.562	-1.213	1.00	57.42	O
ATOM	7740	O	HOH W	134	29.990	16.412	-15.925	1.00	48.93	O
ATOM	7743	O	HOH W	135	24.879	19.169	12.437	1.00	69.54	O
ATOM	7746	O	HOH W	136	18.353	43.027	-7.857	1.00	56.91	O
ATOM	7749	O	HOH W	137	-3.547	39.076	4.044	1.00	53.20	O
ATOM	7752	O	HOH W	138	30.312	20.250	24.116	1.00	46.42	O
ATOM	7755	O	HOH W	139	9.516	42.251	-29.098	1.00	57.26	O
ATOM	7758	O	HOH W	140	41.817	24.683	-3.760	1.00	54.89	O
ATOM	7761	O	HOH W	141	14.745	35.049	-34.385	1.00	65.78	O
ATOM	7764	O	HOH W	142	32.676	10.985	15.023	1.00	35.80	O
ATOM	7767	O	HOH W	143	27.695	1.882	4.427	1.00	67.75	O
ATOM	7770	O	HOH W	144	30.362	51.642	-15.746	1.00	40.86	O
ATOM	7773	O	HOH W	145	38.588	27.326	-2.194	1.00	36.10	O
ATOM	7776	O	HOH W	146	33.324	37.023	8.110	1.00	42.17	O
ATOM	7779	O	HOH W	147	23.325	35.583	24.627	1.00	64.62	O
ATOM	7782	O	HOH W	148	23.959	10.732	6.610	1.00	42.74	O
ATOM	7785	O	HOH W	149	17.157	3.680	-0.504	1.00	47.10	O
ATOM	7788	O	HOH W	150	26.714	48.257	-14.524	1.00	48.55	O

ATOM	7791	O	HOH W 151	33.930	9.034	6.801	1.00	35.45	O
ATOM	7794	O	HOH W 152	20.236	12.533	18.128	1.00	46.31	O
ATOM	7797	O	HOH W 153	7.229	16.495	-25.345	1.00	58.18	O
ATOM	7800	O	HOH W 154	57.014	11.660	20.342	1.00	47.90	O
ATOM	7803	O	HOH W 155	29.851	7.587	-16.115	1.00	42.39	O
ATOM	7806	O	HOH W 156	-1.032	8.218	-5.088	1.00	64.15	O
ATOM	7809	O	HOH W 157	9.077	42.001	-16.300	1.00	71.33	O
ATOM	7812	O	HOH W 158	27.094	18.545	15.356	1.00	58.90	O
ATOM	7815	O	HOH W 159	42.639	24.762	-15.582	1.00	48.33	O
ATOM	7818	O	HOH W 160	14.995	20.718	28.336	1.00	54.85	O
ATOM	7821	O	HOH W 161	0.993	38.379	-6.017	1.00	68.35	O
ATOM	7824	O	HOH W 162	30.957	31.336	-30.778	1.00	49.45	O
ATOM	7827	O	HOH W 163	30.962	8.620	3.832	1.00	42.26	O
ATOM	7830	O	HOH W 164	50.013	13.252	12.898	1.00	58.11	O
ATOM	7833	O	HOH W 165	14.098	18.490	29.288	1.00	64.25	O
ATOM	7836	O	HOH W 166	19.171	13.225	-26.186	1.00	36.10	O
ATOM	7839	O	HOH W 167	26.058	15.382	-13.503	1.00	53.60	O
ATOM	7842	O	HOH W 168	35.734	30.106	0.617	1.00	42.98	O
ATOM	7845	O	HOH W 169	48.331	17.203	0.152	1.00	34.96	O
ATOM	7848	O	HOH W 170	41.504	40.199	-11.926	1.00	46.35	O
ATOM	7851	O	HOH W 171	34.686	26.879	24.143	1.00	70.52	O
ATOM	7854	O	HOH W 172	19.066	31.429	-4.049	1.00	42.68	O
ATOM	7857	O	HOH W 173	49.743	19.988	4.361	1.00	48.13	O
ATOM	7860	O	HOH W 174	33.069	23.844	23.831	1.00	61.81	O
ATOM	7863	O	HOH W 175	4.611	22.733	-24.098	1.00	59.04	O
ATOM	7866	O	HOH W 176	27.642	13.149	26.542	1.00	47.54	O
ATOM	7869	O	HOH W 177	23.562	16.508	13.903	1.00	55.24	O
ATOM	7872	O	HOH W 178	15.149	6.121	9.649	1.00	44.97	O
ATOM	7875	O	HOH W 179	5.411	45.328	5.271	1.00	62.99	O
ATOM	7878	O	HOH W 180	24.294	40.922	-17.804	1.00	58.83	O
ATOM	7881	O	HOH W 181	39.747	23.593	4.647	1.00	46.83	O
ATOM	7884	O	HOH W 182	39.313	13.269	14.670	1.00	37.93	O
ATOM	7887	O	HOH W 183	8.768	6.816	-11.062	1.00	55.70	O
ATOM	7890	O	HOH W 184	15.250	24.019	-0.353	1.00	42.06	O
ATOM	7893	O	HOH W 185	26.260	50.599	-2.197	1.00	46.67	O
ATOM	7896	O	HOH W 186	44.747	24.153	20.161	1.00	60.61	O
ATOM	7899	O	HOH W 187	15.118	22.475	-31.133	1.00	47.87	O
ATOM	7902	O	HOH W 188	13.188	16.129	-28.084	1.00	56.80	O
ATOM	7905	O	HOH W 189	19.064	41.104	9.545	1.00	56.47	O
ATOM	7908	O	HOH W 190	18.093	24.026	-1.014	1.00	34.26	O
ATOM	7911	O	HOH W 191	4.595	14.832	-18.350	1.00	39.60	O
ATOM	7914	O	HOH W 192	41.126	26.602	13.382	1.00	43.91	O
ATOM	7917	O	HOH W 193	27.875	6.439	-1.722	1.00	36.57	O
ATOM	7920	O	HOH W 194	25.493	38.175	16.992	1.00	38.82	O
ATOM	7923	O	HOH W 195	14.320	14.085	-25.998	1.00	48.88	O
ATOM	7926	O	HOH W 196	28.527	17.926	-11.631	1.00	44.31	O
ATOM	7929	O	HOH W 197	15.800	37.853	21.846	1.00	53.10	O
ATOM	7932	O	HOH W 198	3.045	12.481	-10.264	1.00	60.33	O
ATOM	7935	O	HOH W 199	26.888	51.299	2.448	1.00	74.93	O
ATOM	7938	O	HOH W 200	22.075	38.369	-27.838	1.00	53.98	O
ATOM	7941	O	HOH W 201	49.460	17.389	3.166	1.00	48.81	O
ATOM	7944	O	HOH W 202	21.176	10.097	19.274	1.00	56.70	O
ATOM	7947	O	HOH W 203	28.864	9.257	1.811	1.00	42.59	O
ATOM	7950	O	HOH W 204	41.808	10.380	16.601	1.00	51.06	O
ATOM	7953	O	HOH W 205	28.691	6.086	0.941	1.00	43.59	O
ATOM	7956	O	HOH W 206	17.609	26.302	-2.191	1.00	59.28	O
ATOM	7959	O	HOH W 207	44.626	42.979	-12.072	1.00	37.23	O
ATOM	7962	O	HOH W 208	37.701	24.392	11.172	1.00	53.07	O
ATOM	7965	O	HOH W 209	43.481	45.309	-12.390	1.00	33.63	O
ATOM	7968	O	HOH W 210	43.239	4.825	4.650	1.00	50.06	O
ATOM	7971	O	HOH W 211	4.277	14.449	-22.604	1.00	56.76	O
ATOM	7974	O	HOH W 212	30.834	7.612	1.625	1.00	39.90	O
ATOM	7977	O	HOH W 213	20.063	41.571	-16.437	1.00	42.74	O
ATOM	7980	O	HOH W 214	16.233	20.725	-1.359	1.00	43.38	O
ATOM	7983	O	HOH W 215	31.399	33.229	-28.219	1.00	72.18	O
ATOM	7986	O	HOH W 216	23.019	38.940	18.512	1.00	54.11	O
ATOM	7989	O	HOH W 217	21.520	40.932	-26.873	1.00	44.44	O

ATOM	7992	O	HOH W 218	19.760	42.920	-18.279	1.00	52.18	O
ATOM	7995	O	HOH W 219	35.547	32.383	2.847	1.00	35.78	O
ATOM	7998	O	HOH W 220	30.729	31.806	-22.518	1.00	55.22	O
ATOM	8001	O	HOH W 221	38.923	29.058	-3.734	1.00	47.83	O
ATOM	8004	O	HOH W 222	17.548	39.635	-22.203	1.00	40.86	O
ATOM	8007	O	HOH W 223	31.045	18.238	-13.317	1.00	56.23	O
ATOM	8010	O	HOH W 224	24.569	30.762	-30.694	1.00	57.92	O
ATOM	8013	O	HOH W 225	39.004	26.630	20.950	1.00	57.40	O
ATOM	8016	O	HOH W 226	33.637	15.037	-10.200	1.00	37.02	O
ATOM	8019	O	HOH W 227	32.497	32.934	-32.110	1.00	55.61	O
ATOM	8022	O	HOH W 228	27.127	-0.833	0.359	1.00	56.54	O
ATOM	8025	O	HOH W 229	16.391	40.493	-6.706	1.00	52.57	O
ATOM	8028	O	HOH W 230	33.566	10.413	12.234	1.00	46.03	O
ATOM	8031	O	HOH W 231	2.456	28.562	-39.766	1.00	44.71	O
ATOM	8034	O	HOH W 232	24.247	33.193	-34.155	1.00	68.30	O
ATOM	8037	O	HOH W 233	17.414	19.979	29.076	1.00	53.58	O
ATOM	8040	O	HOH W 234	18.893	35.303	-5.348	1.00	47.88	O
ATOM	8043	O	HOH W 235	23.200	30.972	-35.648	1.00	58.03	O
ATOM	8046	O	HOH W 236	39.919	9.543	8.621	1.00	62.41	O
ATOM	8049	O	HOH W 237	18.739	16.649	31.839	1.00	66.78	O
ATOM	8052	O	HOH W 238	28.084	6.687	-6.425	1.00	56.52	O
ATOM	8055	O	HOH W 239	15.997	12.101	-26.614	1.00	49.32	O
ATOM	8058	O	HOH W 240	4.198	19.429	-23.172	1.00	57.46	O
ATOM	8061	O	HOH W 241	16.026	37.983	-12.555	1.00	80.05	O
ATOM	8064	O	HOH W 242	27.862	29.109	31.807	1.00	67.80	O
ATOM	8067	O	HOH W 243	28.893	30.571	-32.042	1.00	62.45	O
ATOM	8070	O	HOH W 244	28.828	26.048	-29.729	1.00	53.63	O
ATOM	8073	O	HOH W 245	48.648	22.087	-14.057	1.00	62.16	O
ATOM	8076	O	HOH W 246	46.793	25.689	19.600	1.00	53.46	O
ATOM	8079	O	HOH W 247	14.632	21.212	-38.397	1.00	63.64	O
ATOM	8082	O	HOH W 248	30.798	14.387	-17.774	1.00	73.12	O
ATOM	8085	O	HOH W 249	25.257	19.338	-7.297	1.00	45.03	O
ATOM	8088	O	HOH W 250	47.650	31.756	-15.845	1.00	52.06	O
ATOM	8091	O	HOH W 251	7.278	22.908	-25.415	1.00	60.20	O
ATOM	8094	O	HOH W 252	29.727	5.371	-2.756	1.00	41.48	O
ATOM	8097	O	HOH W 253	12.710	39.836	-4.380	1.00	52.70	O
ATOM	8100	O	HOH W 254	30.102	34.695	13.302	1.00	38.00	O
ATOM	8103	O	HOH W 255	41.932	13.064	14.629	1.00	43.40	O
ATOM	8106	O	HOH W 256	29.391	15.257	26.710	1.00	54.38	O
ATOM	8109	O	HOH W 257	3.114	10.748	-15.023	1.00	58.49	O
ATOM	8112	O	HOH W 258	8.032	9.906	26.520	1.00	59.26	O
ATOM	8115	O	HOH W 259	24.711	4.727	-13.975	1.00	48.58	O
ATOM	8118	O	HOH W 260	35.417	9.017	8.479	1.00	47.29	O
ATOM	8121	O	HOH W 261	9.708	7.507	-12.613	1.00	44.81	O
ATOM	8124	O	HOH W 262	0.915	10.880	-10.308	1.00	61.12	O
ATOM	8127	O	HOH W 263	26.291	53.546	1.625	1.00	46.14	O
ATOM	8130	O	HOH W 264	16.101	7.572	-17.623	1.00	58.55	O
ATOM	8133	O	HOH W 265	44.928	3.207	3.034	1.00	54.95	O
ATOM	8136	O	HOH W 266	34.576	35.929	9.211	1.00	63.67	O
ATOM	8139	O	HOH W 267	39.542	25.092	2.399	1.00	43.34	O
ATOM	8142	O	HOH W 268	41.038	23.911	-1.918	1.00	38.28	O
ATOM	8145	O	HOH W 269	26.998	32.136	-31.674	1.00	83.38	O
ATOM	8148	O	HOH W 270	18.605	40.909	-26.757	1.00	56.12	O
ATOM	8151	O	HOH W 271	1.228	10.559	-4.546	1.00	66.98	O
ATOM	8154	O	HOH W 272	17.996	2.765	2.048	1.00	47.26	O
ATOM	8157	O	HOH W 273	15.033	39.125	19.611	1.00	50.01	O
ATOM	8160	O	HOH W 274	7.107	25.854	-37.190	1.00	49.80	O
ATOM	8163	O	HOH W 275	3.924	17.315	-18.511	1.00	52.57	O
ATOM	8166	O	HOH W 276	50.235	28.537	-6.078	0.33	52.59	O
ATOM	8169	O	HOH W 277	7.860	34.379	-7.205	1.00	51.25	O
ATOM	8172	O	HOH W 278	17.471	35.124	-33.517	1.00	68.84	O
ATOM	8175	O	HOH W 279	34.265	12.483	-10.336	1.00	44.35	O
ATOM	8178	O	HOH W 280	36.274	10.824	12.241	1.00	52.53	O
ATOM	8181	O	HOH W 281	31.315	23.110	-4.804	1.00	20.01	O
ATOM	8184	O	HOH W 282	38.128	24.414	-2.879	1.00	33.49	O
ATOM	8187	O	HOH W 283	13.900	2.886	-6.302	1.00	44.91	O
ATOM	8190	O	HOH W 284	23.859	40.507	-11.734	1.00	38.15	O

ATOM	8193	O	HOH W 285	33.259	48.405	-16.819	1.00	64.24	O
ATOM	8196	O	HOH W 286	35.192	31.271	-14.626	1.00	49.14	O
ATOM	8199	O	HOH W 287	7.183	41.389	-26.125	1.00	43.52	O
ATOM	8202	O	HOH W 288	17.949	34.110	-3.610	1.00	50.93	O
ATOM	8205	O	HOH W 289	27.782	41.937	-13.726	1.00	56.94	O
ATOM	8208	O	HOH W 290	24.053	46.748	-5.102	1.00	59.22	O
ATOM	8211	O	HOH W 291	19.877	42.347	-5.478	1.00	52.33	O
ATOM	8214	O	HOH W 292	27.545	42.091	1.265	1.00	59.47	O
ATOM	8217	O	HOH W 293	10.468	31.074	-8.713	1.00	59.29	O
ATOM	8220	O	HOH W 294	23.667	14.548	15.860	1.00	39.31	O
ATOM	8223	O	HOH W 295	33.332	53.658	-3.291	1.00	49.10	O
ATOM	8226	O	HOH W 296	33.924	5.123	2.089	1.00	48.95	O
ATOM	8229	O	HOH W 297	0.457	33.517	19.803	1.00	52.66	O
ATOM	8232	O	HOH W 298	38.098	37.231	-12.867	1.00	43.60	O
ATOM	8235	O	HOH W 299	33.231	27.494	-23.459	1.00	47.45	O
ATOM	8238	O	HOH W 300	21.178	35.910	20.994	1.00	50.55	O
ATOM	8241	O	HOH W 301	3.851	28.450	26.965	1.00	51.52	O
ATOM	8244	O	HOH W 302	7.196	31.924	-8.107	1.00	49.65	O
ATOM	8247	O	HOH W 303	25.372	8.895	8.657	1.00	54.69	O
ATOM	8250	O	HOH W 304	37.330	37.716	8.382	1.00	53.67	O
ATOM	8253	O	HOH W 305	19.872	5.233	-13.595	1.00	48.10	O
ATOM	8256	O	HOH W 306	22.826	40.263	-20.803	1.00	50.95	O
ATOM	8259	O	HOH W 307	11.362	44.161	7.368	1.00	49.34	O
ATOM	8262	O	HOH W 308	5.275	22.650	21.800	1.00	39.25	O
ATOM	8265	O	HOH W 309	4.645	29.972	29.255	1.00	51.26	O
ATOM	8268	O	HOH W 310	12.534	21.087	-31.099	1.00	56.59	O
ATOM	8271	O	HOH W 311	10.217	22.361	-1.892	1.00	52.94	O
ATOM	8274	O	HOH W 312	41.992	43.519	-13.138	1.00	49.53	O
ATOM	8277	O	HOH W 313	-1.060	42.276	-7.461	1.00	52.38	O
ATOM	8280	O	HOH W 314	6.600	16.217	9.858	1.00	52.66	O
ATOM	8283	O	HOH W 315	26.752	34.397	-23.448	1.00	41.95	O
ATOM	8286	O	HOH W 316	32.481	29.829	-22.517	1.00	52.21	O
ATOM	8289	O	HOH W 317	41.363	31.494	-0.643	1.00	54.26	O
ATOM	8292	O	HOH W 318	31.997	26.361	-25.638	1.00	53.28	O
ATOM	8295	O	HOH W 319	28.064	53.889	-5.085	1.00	48.90	O
ATOM	8298	O	HOH W 320	7.958	38.917	-18.408	1.00	43.17	O
ATOM	8301	O	HOH W 321	28.238	46.511	-15.443	1.00	59.40	O
ATOM	8304	O	HOH W 322	22.545	22.610	-33.274	1.00	59.22	O
ATOM	8307	O	HOH W 323	5.021	19.932	-18.603	1.00	52.28	O

Table 3

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CRYST1   99.673   99.673   96.824  90.00  90.00 120.00 P 63
SCALE1      0.010033  0.005792  0.000000        0.00000
SCALE2      0.000000  0.011585  0.000000        0.00000
SCALE3      0.000000  0.000000  0.010328        0.00000
ATOM      1  O   HOH W   1      33.402  24.338  14.214  1.00  8.73       W     O
ATOM      2  O   HOH W   2      36.852  44.282  -2.905  1.00 29.37       W     O
ATOM      3  O   HOH W   3      28.233  21.787  10.770  1.00 24.14       W     O
ATOM      4  O   HOH W   4      38.942   9.167   3.516  1.00 35.00       W     O
ATOM      5  O   HOH W   5      26.391  48.437 -14.903  1.00 45.30       W     O
ATOM      6  O   HOH W   6      27.534  21.261   4.683  1.00 28.34       W     O
ATOM      7  O   HOH W   7      17.777  35.339 -36.619  1.00 59.90       W     O
ATOM      8  O   HOH W   8      35.890  15.484  14.966  1.00 37.21       W     O
ATOM      9  O   HOH W   9      36.755  13.056   8.184  1.00 25.06       W     O
ATOM     10  O   HOH W  10      37.456  24.675   8.999  1.00 20.54       W     O
ATOM     11  O   HOH W  12      44.617  24.768  17.290  1.00 38.32       W     O
ATOM     12  O   HOH W  13      36.380  40.638 -14.773  1.00 39.51       W     O
ATOM     13  O   HOH W  14      15.900  39.512 -24.850  1.00 28.03       W     O
ATOM     14  O   HOH W  17      -2.875  31.876  -0.298  1.00 61.83       W     O
ATOM     15  O   HOH W  18       7.672  21.795   7.006  1.00 30.28       W     O
ATOM     16  O   HOH W  19      47.459  20.042  -2.429  1.00 48.31       W     O
ATOM     17  O   HOH W  20       8.737  24.730 -28.341  1.00 17.13       W     O
ATOM     18  O   HOH W  22      29.380  31.690  24.578  1.00 39.73       W     O
ATOM     19  O   HOH W  23      16.748  38.917 -36.971  1.00 55.21       W     O
ATOM     20  O   HOH W  24       3.888  15.372 -21.170  1.00 50.59       W     O
ATOM     21  O   HOH W  25       8.085   6.115  10.882  1.00 34.36       W     O
ATOM     22  O   HOH W  26      22.555  17.380   8.737  1.00 18.42       W     O
ATOM     23  O   HOH W  27      21.147  34.545 -42.995  1.00 34.94       W     O
ATOM     24  O   HOH W  28      22.228  35.697  22.738  1.00 63.21       W     O
ATOM     25  O   HOH W  29      48.438  17.577 -10.414  1.00 30.23       W     O
ATOM     26  O   HOH W  30      29.679  21.300  -6.000  1.00  7.10       W     O
ATOM     27  O   HOH W  31      29.894  46.568 -19.660  1.00 42.24       W     O
ATOM     28  O   HOH W  32      41.550  46.904 -14.358  1.00 39.22       W     O
ATOM     29  O   HOH W  33      16.932   2.751  -3.428  1.00 42.52       W     O
ATOM     30  O   HOH W  34      22.311  38.412 -32.195  1.00 65.83       W     O
ATOM     31  O   HOH W  35      14.249  24.710  22.632  1.00 45.06       W     O
ATOM     32  O   HOH W  38      19.897  25.648  28.961  1.00 42.34       W     O
ATOM     33  O   HOH W  39      33.756  39.588 -20.586  1.00 33.70       W     O
ATOM     34  O   HOH W  40      39.165  23.802  -5.422  1.00 21.14       W     O
ATOM     35  O   HOH W  41       3.029  29.262 -22.318  1.00 58.53       W     O
ATOM     36  O   HOH W  43      24.208  19.020  -9.763  1.00 32.02       W     O
ATOM     37  O   HOH W  44      14.900   6.126   7.609  1.00 49.43       W     O
ATOM     38  O   HOH W  45       9.517  35.349 -35.423  1.00 49.19       W     O
ATOM     39  O   HOH W  47      18.445  40.132   6.458  1.00 35.36       W     O
ATOM     40  O   HOH W  49      29.558  19.427  21.459  1.00 43.38       W     O
ATOM     41  O   HOH W  51       2.500  10.742 -17.044  1.00 47.89       W     O
ATOM     42  O   HOH W  52      35.942  31.555  -8.742  1.00 27.62       W     O
ATOM     43  O   HOH W  53      30.722  48.601 -18.295  1.00 50.31       W     O
ATOM     44  O   HOH W  54      38.655  27.794  -4.962  1.00 25.47       W     O
ATOM     45  O   HOH W  55      28.997   8.673  -0.885  1.00 46.55       W     O
ATOM     46  O   HOH W  56      36.495  31.737   2.868  1.00 25.27       W     O
ATOM     47  O   HOH W  57      32.749  14.081  15.777  1.00 45.54       W     O
ATOM     48  O   HOH W  58      19.519  23.151  28.268  1.00 44.26       W     O
ATOM     49  O   HOH W  59       1.458  12.762 -16.556  1.00 35.85       W     O
ATOM     50  O   HOH W  60      51.250  20.208   7.580  1.00 48.49       W     O
ATOM     51  O   HOH W  61      32.136  18.165   7.751  1.00 21.77       W     O
ATOM     52  O   HOH W  63      23.626  21.959 -36.161  1.00 80.22       W     O
ATOM     53  O   HOH W  64      32.889  12.301  13.827  1.00 26.19       W     O
ATOM     54  O   HOH W  66      31.339  23.057  -7.319  1.00 21.76       W     O
ATOM     55  O   HOH W  67      30.759  21.162   9.955  1.00 31.99       W     O
ATOM     56  O   HOH W  68      32.147  46.208 -18.058  1.00 37.40       W     O
ATOM     57  O   HOH W  70       9.955  28.153 -21.781  1.00 58.24       W     O
ATOM     58  O   HOH W  74       1.077  17.753  -5.278  1.00 37.63       W     O
ATOM     59  O   HOH W  75      15.587  35.172 -37.222  1.00 80.21       W     O
ATOM     60  O   HOH W  76      31.457  18.773  10.193  1.00 17.40       W     O
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ATOM	61	O	HOH	W	77	3.754	8.778	-19.462	1.00	60.89	W	O
ATOM	62	O	HOH	W	78	43.634	17.442	-13.796	1.00	52.62	W	O
ATOM	63	O	HOH	W	79	36.354	31.711	8.223	1.00	38.99	W	O
ATOM	64	O	HOH	W	80	3.013	19.428	-2.871	1.00	57.92	W	O
ATOM	65	O	HOH	W	82	27.689	47.159	-17.512	1.00	40.42	W	O
ATOM	66	O	HOH	W	83	62.194	16.540	20.801	1.00	65.87	W	O
ATOM	67	O	HOH	W	84	7.620	39.211	-26.530	1.00	28.61	W	O
ATOM	68	O	HOH	W	85	8.729	6.533	-22.328	1.00	45.75	W	O
ATOM	69	O	HOH	W	86	28.617	18.037	-15.201	1.00	38.82	W	O
ATOM	70	O	HOH	W	88	26.265	31.920	-35.098	1.00	48.33	W	O
ATOM	71	O	HOH	W	91	34.193	46.779	-16.234	1.00	30.11	W	O
ATOM	72	O	HOH	W	93	29.601	15.857	-12.903	1.00	39.53	W	O
ATOM	73	O	HOH	W	95	47.953	20.919	6.116	1.00	43.62	W	O
ATOM	74	O	HOH	W	96	7.086	33.169	-35.915	1.00	35.74	W	O
ATOM	75	O	HOH	W	98	7.546	41.245	-28.176	1.00	46.92	W	O
ATOM	76	O	HOH	W	99	51.822	21.169	10.166	1.00	36.57	W	O
ATOM	77	O	HOH	W	100	11.531	24.998	18.405	1.00	37.76	W	O
ATOM	78	O	HOH	W	102	30.211	7.876	-18.957	1.00	42.65	W	O
ATOM	79	O	HOH	W	103	7.383	22.705	-16.223	1.00	29.44	W	O
ATOM	80	O	HOH	W	105	22.505	30.525	-39.296	1.00	84.84	W	O
ATOM	81	O	HOH	W	106	30.249	17.246	19.250	1.00	34.32	W	O
ATOM	82	O	HOH	W	107	27.453	19.763	-7.628	1.00	30.10	W	O
ATOM	83	O	HOH	W	108	23.211	38.192	-17.033	1.00	61.62	W	O
ATOM	84	O	HOH	W	109	28.630	19.142	11.159	1.00	8.54	W	O
ATOM	85	O	HOH	W	110	25.445	18.104	-5.960	1.00	34.59	W	O
ATOM	86	O	HOH	W	111	14.556	40.731	-31.242	1.00	51.24	W	O
ATOM	87	O	HOH	W	112	22.772	40.777	-19.182	1.00	57.73	W	O
ATOM	88	O1	BCT	X	1	17.861	19.507	-3.772	1.00	58.33	W	O
ATOM	89	C2	BCT	X	1	16.862	20.351	-3.850	1.00	57.86	W	C
ATOM	90	O3	BCT	X	1	17.043	21.532	-4.390	1.00	55.32	W	O
ATOM	91	O4	BCT	X	1	15.684	20.012	-3.387	1.00	57.07	W	O
ATOM	92	O	HOH	W	113	22.520	38.962	-12.047	1.00	51.73	W	O
ATOM	93	O	HOH	W	114	39.041	29.892	-10.030	1.00	41.70	W	O
ATOM	94	O	HOH	W	115	27.282	17.952	9.233	1.00	23.53	W	O
ATOM	95	O	HOH	W	116	17.229	40.889	-6.249	1.00	39.06	W	O
ATOM	96	O	HOH	W	117	38.666	37.960	-6.951	1.00	15.88	W	O
ATOM	97	O	HOH	W	118	29.231	51.182	-17.966	1.00	57.22	W	O
ATOM	98	O	HOH	W	119	19.731	4.270	5.496	1.00	52.97	W	O
ATOM	99	O	HOH	W	120	25.515	32.776	20.719	1.00	32.89	W	O
ATOM	100	O	HOH	W	121	9.100	22.957	-11.349	1.00	36.54	W	O
ATOM	101	O	HOH	W	122	25.290	33.944	-36.580	1.00	52.22	W	O
ATOM	102	O	HOH	W	123	10.231	9.623	-25.075	1.00	61.80	W	O
ATOM	103	O	HOH	W	124	33.432	21.447	-16.349	1.00	43.48	W	O
ATOM	104	O	HOH	W	125	1.866	41.757	-25.299	1.00	51.89	W	O
ATOM	105	O	HOH	W	126	27.384	2.706	3.672	1.00	45.35	W	O
ATOM	106	O	HOH	W	127	20.279	23.860	31.927	1.00	58.73	W	O
ATOM	107	O	HOH	W	128	41.078	1.599	-2.688	1.00	66.74	W	O
ATOM	108	O	HOH	W	129	27.890	22.061	-7.223	1.00	25.67	W	O
ATOM	109	O	HOH	W	130	-0.409	32.198	10.000	1.00	60.17	W	O
ATOM	110	O	HOH	W	131	51.141	20.575	-4.771	1.00	40.21	W	O
ATOM	111	O	HOH	W	132	6.468	4.695	9.645	1.00	41.21	W	O
ATOM	112	O	HOH	W	133	18.724	33.003	-42.496	1.00	55.27	W	O
ATOM	113	O	HOH	W	134	27.279	0.804	0.100	1.00	62.95	W	O
ATOM	114	O	HOH	W	135	38.218	22.911	-3.112	1.00	33.58	W	O
ATOM	115	O	HOH	W	136	33.557	14.779	-12.896	1.00	29.84	W	O
ATOM	116	O	HOH	W	137	21.841	15.736	25.138	1.00	36.74	W	O
ATOM	117	O	HOH	W	138	8.358	25.563	-38.029	1.00	29.33	W	O
ATOM	118	O	HOH	W	139	36.250	32.373	0.263	1.00	64.56	W	O
ATOM	119	O	HOH	W	140	14.522	47.011	4.461	1.00	45.29	W	O
ATOM	120	O	HOH	W	141	41.877	24.823	-5.174	1.00	42.53	W	O
ATOM	121	O	HOH	W	142	-8.160	37.735	1.634	1.00	67.23	W	O
ATOM	122	O	HOH	W	143	26.215	40.161	-15.651	1.00	58.66	W	O
ATOM	123	O	HOH	W	144	29.541	17.391	-21.724	1.00	51.61	W	O
ATOM	124	O	HOH	W	145	21.584	35.074	-10.468	1.00	56.48	W	O
ATOM	125	O	HOH	W	146	29.869	10.102	-20.720	1.00	50.37	W	O
ATOM	126	O	HOH	W	147	13.951	38.771	16.248	1.00	39.66	W	O
ATOM	127	O	HOH	W	148	27.877	34.058	22.762	1.00	43.92	W	O

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ATOM    128  O   HOH W 149      26.416  16.247 -19.989  1.00 32.17      W    O
ATOM    129  O   HOH W 150      23.224  30.263  -7.083  1.00 45.24      W    O
ATOM    130  O   HOH W 151      28.645  23.126 -10.736  1.00 46.02      W    O
ATOM    131  O   HOH W 152      16.903  44.540 -18.660  1.00 52.13      W    O
ATOM    132  O   HOH W 153      39.820   9.625   5.548  1.00 28.37      W    O
ATOM    133  O   HOH W 154      13.158  37.248  11.975  1.00 48.58      W    O
ATOM    134  O   HOH W 155      26.912  16.505  24.205  1.00 32.31      W    O
ATOM    135  O   HOH W 156      10.724  40.085 -33.855  1.00 35.11      W    O
ATOM    136  O   HOH W 157      26.461  16.916 -17.394  1.00 57.07      W    O
ATOM    137  O   HOH W 158       9.097  19.533 -31.246  1.00 66.18      W    O
ATOM    138  O   HOH W 159      38.736  29.782 -22.001  1.00 47.15      W    O
ATOM    139  O   HOH W 160      47.744  21.150   9.799  1.00 46.15      W    O
ATOM    140  O   HOH W 162       4.242  12.620  -9.690  1.00 57.24      W    O
ATOM    141  O   HOH W 163      24.248  31.461  32.390  1.00 62.84      W    O
ATOM    142  O   HOH W 164       1.875  17.471  -2.034  1.00 50.93      W    O
ATOM    143  O   HOH W 165      23.201  19.072  -7.528  1.00 55.22      W    O
ATOM    144  O   HOH W 166       9.073  32.044  27.336  1.00 47.92      W    O
ATOM    145  O   HOH W 167      17.768   3.268  -0.134  1.00 56.28      W    O
ATOM    146  O   HOH W 168       5.319  19.888  20.241  1.00 54.55      W    O
ATOM    147  O   HOH W 169       4.789  12.575  10.485  1.00 66.26      W    O
ATOM    148  O   HOH W 170      52.520  16.085  15.667  1.00 47.82      W    O
ATOM    149  O   HOH W 171       9.468  43.077 -23.539  1.00 45.35      W    O
ATOM    150  O   HOH W 172      29.820  34.189  10.525  1.00 39.49      W    O
ATOM    151  O   HOH W 173      38.893  23.892   0.109  1.00 21.18      W    O
ATOM    152  O   HOH W 174       5.622  17.302 -28.546  1.00 61.29      W    O
ATOM    153  O   HOH W 175      33.495  17.758 -16.703  1.00 51.38      W    O
ATOM    154  O   HOH W 176      18.184  10.598   9.953  1.00 69.65      W    O
ATOM    155  O   HOH W 177      31.799  22.479 -20.935  1.00 41.17      W    O
ATOM    156  O   HOH W 178      34.399  32.653 -24.587  1.00 31.29      W    O
ATOM    157  O   HOH W 179      24.858  26.222 -38.055  1.00 63.58      W    O
ATOM    158  O   HOH W 180       1.397  33.453 -24.662  1.00 44.84      W    O
ATOM    159  O   HOH W 181       9.963  42.734 -11.930  1.00 43.15      W    O
ATOM    160  O   HOH W 182      28.751  50.982 -11.155  1.00 33.27      W    O
ATOM    161  O   HOH W 183      24.247  22.074  -6.415  1.00 39.82      W    O
ATOM    162  O   HOH W 184      30.024  35.703  20.242  1.00 38.53      W    O
ATOM    163  O   HOH W 185      19.606  38.579  -0.431  1.00 25.98      W    O
ATOM    164  O   HOH W 186       6.381  15.568   7.956  1.00 55.35      W    O
ATOM    165  O   HOH W 187       4.753  12.395   5.533  1.00 74.65      W    O
ATOM    166  O   HOH W 188      -6.200  38.328   5.670  1.00 55.20      W    O
ATOM    167  O   HOH W 189      -4.238  39.097   4.501  1.00 67.73      W    O
ATOM    168  O   HOH W 190      38.851   1.691  -5.201  1.00 50.58      W    O
ATOM    169  O   HOH W 191      25.790  20.129  -3.693  1.00 26.12      W    O
ATOM    170  O   HOH W 192      31.849  23.548  12.327  1.00 39.46      W    O
ATOM    171  N   MET A   1      62.692  12.639  21.630  1.00 32.03      A    N
ATOM    172  CA  MET A   1      62.458  12.512  20.193  1.00 32.05      A    C
ATOM    173  C   MET A   1      61.520  13.639  19.718  1.00 39.53      A    C
ATOM    174  O   MET A   1      60.547  13.954  20.403  1.00 40.17      A    O
ATOM    175  CB  MET A   1      61.844  11.145  19.902  1.00 33.87      A    C
ATOM    176  CG  MET A   1      62.001  10.668  18.464  1.00 37.05      A    C
ATOM    177  SD  MET A   1      61.939   8.856  18.335  1.00 40.19      A    S
ATOM    178  CE  MET A   1      60.752   8.457  19.592  1.00 36.51      A    C
ATOM    179  N   ASN A   2      61.808  14.271  18.577  1.00 37.10      A    N
ATOM    180  CA  ASN A   2      61.020  15.454  18.188  1.00 38.91      A    C
ATOM    181  C   ASN A   2      59.610  15.066  17.857  1.00 47.89      A    C
ATOM    182  O   ASN A   2      59.368  13.974  17.374  1.00 47.17      A    O
ATOM    183  CB  ASN A   2      61.585  16.167  16.962  1.00 34.93      A    C
ATOM    184  CG  ASN A   2      62.738  17.027  17.287  1.00 43.13      A    C
ATOM    185  OD1 ASN A   2      63.119  17.186  18.445  1.00 51.53      A    O
ATOM    186  ND2 ASN A   2      63.322  17.593  16.273  1.00 31.44      A    N
ATOM    187  N   THR A   3      58.679  15.981  18.079  1.00 49.21      A    N
ATOM    188  CA  THR A   3      57.294  15.739  17.669  1.00 51.26      A    C
ATOM    189  C   THR A   3      56.688  16.893  16.856  1.00 61.01      A    C
ATOM    190  O   THR A   3      55.758  17.572  17.322  1.00 61.29      A    O
ATOM    191  CB  THR A   3      56.404  15.418  18.871  1.00 55.92      A    C
ATOM    192  OG1 THR A   3      55.848  16.631  19.399  1.00 48.26      A    O
ATOM    193  CG2 THR A   3      57.213  14.703  19.951  1.00 56.25      A    C
ATOM    194  N   PRO A   4      57.225  17.121  15.654  1.00 60.61      A    N
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ATOM	195	CA	PRO	A	4	56.702	18.154	14.766	1.00	61.63	A C
ATOM	196	C	PRO	A	4	55.229	17.873	14.495	1.00	69.73	A C
ATOM	197	O	PRO	A	4	54.850	16.757	14.135	1.00	68.83	A O
ATOM	198	CB	PRO	A	4	57.540	17.978	13.496	1.00	62.86	A C
ATOM	199	CG	PRO	A	4	58.863	17.497	14.010	1.00	66.80	A C
ATOM	200	CD	PRO	A	4	58.512	16.583	15.169	1.00	61.84	A C
ATOM	201	N	LYS	A	5	54.405	18.896	14.669	1.00	70.18	A N
ATOM	202	CA	LYS	A	5	52.966	18.699	14.802	1.00	71.96	A C
ATOM	203	C	LYS	A	5	52.225	18.724	13.482	1.00	79.53	A C
ATOM	204	O	LYS	A	5	52.812	18.949	12.420	1.00	78.77	A O
ATOM	205	CB	LYS	A	5	52.364	19.770	15.716	1.00	74.51	A C
ATOM	206	CG	LYS	A	5	51.932	21.043	15.000	1.00	83.30	A C
ATOM	207	CD	LYS	A	5	51.206	21.965	15.962	1.00	93.67	A C
ATOM	208	CE	LYS	A	5	52.007	22.145	17.247	1.00	102.63	A C
ATOM	209	NZ	LYS	A	5	53.417	22.559	16.984	1.00	110.34	A N
ATOM	210	N	GLU	A	6	50.921	18.441	13.565	1.00	79.06	A N
ATOM	211	CA	GLU	A	6	49.941	18.871	12.574	1.00	80.23	A C
ATOM	212	C	GLU	A	6	49.899	18.061	11.279	1.00	84.42	A C
ATOM	213	O	GLU	A	6	50.793	18.172	10.436	1.00	84.35	A O
ATOM	214	CB	GLU	A	6	50.096	20.373	12.243	1.00	82.16	A C
ATOM	215	CG	GLU	A	6	49.317	21.364	13.142	1.00	97.44	A C
ATOM	216	CD	GLU	A	6	47.809	21.174	13.066	1.00	127.15	A C
ATOM	217	OE1	GLU	A	6	47.073	22.146	13.354	1.00	135.58	A O
ATOM	218	OE2	GLU	A	6	47.365	20.057	12.722	1.00	117.12	A O
ATOM	219	N	GLU	A	7	48.832	17.287	11.105	1.00	80.17	A N
ATOM	220	CA	GLU	A	7	48.604	16.607	9.844	1.00	79.37	A C
ATOM	221	C	GLU	A	7	48.610	17.646	8.717	1.00	81.29	A C
ATOM	222	O	GLU	A	7	48.150	18.779	8.896	1.00	79.83	A O
ATOM	223	CB	GLU	A	7	47.295	15.785	9.873	1.00	80.70	A C
ATOM	224	CG	GLU	A	7	46.083	16.458	10.566	1.00	90.74	A C
ATOM	225	CD	GLU	A	7	44.804	15.587	10.559	1.00	97.56	A C
ATOM	226	OE1	GLU	A	7	44.572	14.859	9.569	1.00	105.75	A O
ATOM	227	OE2	GLU	A	7	44.011	15.640	11.529	1.00	59.43	A O
ATOM	228	N	PHE	A	8	49.219	17.286	7.590	1.00	77.09	A N
ATOM	229	CA	PHE	A	8	49.021	18.033	6.353	1.00	76.41	A C
ATOM	230	C	PHE	A	8	47.557	17.812	5.982	1.00	76.58	A C
ATOM	231	O	PHE	A	8	46.977	16.796	6.371	1.00	77.23	A O
ATOM	232	CB	PHE	A	8	49.940	17.492	5.245	1.00	78.51	A C
ATOM	233	CG	PHE	A	8	49.656	18.061	3.881	1.00	80.24	A C
ATOM	234	CD1	PHE	A	8	49.871	17.306	2.742	1.00	83.52	A C
ATOM	235	CD2	PHE	A	8	49.158	19.343	3.739	1.00	83.01	A C
ATOM	236	CE1	PHE	A	8	49.635	17.839	1.490	1.00	84.63	A C
ATOM	237	CE2	PHE	A	8	48.898	19.868	2.490	1.00	85.93	A C
ATOM	238	CZ	PHE	A	8	49.134	19.112	1.368	1.00	83.90	A C
ATOM	239	N	GLN	A	9	46.950	18.761	5.270	1.00	68.24	A N
ATOM	240	CA	GLN	A	9	45.541	18.633	4.890	1.00	66.03	A C
ATOM	241	C	GLN	A	9	45.156	19.470	3.660	1.00	63.84	A C
ATOM	242	O	GLN	A	9	44.099	20.120	3.669	1.00	64.58	A O
ATOM	243	CB	GLN	A	9	44.625	19.035	6.058	1.00	67.51	A C
ATOM	244	CG	GLN	A	9	45.077	18.576	7.445	1.00	90.42	A C
ATOM	245	CD	GLN	A	9	44.422	19.384	8.562	1.00	117.02	A C
ATOM	246	OE1	GLN	A	9	44.677	19.156	9.749	1.00	111.79	A O
ATOM	247	NE2	GLN	A	9	43.576	20.340	8.182	1.00	111.93	A N
ATOM	248	N	ASP	A	10	45.992	19.479	2.617	1.00	52.57	A N
ATOM	249	CA	ASP	A	10	45.617	20.200	1.411	1.00	49.67	A C
ATOM	250	C	ASP	A	10	45.351	19.226	0.303	1.00	44.34	A C
ATOM	251	O	ASP	A	10	45.321	19.588	-0.867	1.00	43.73	A O
ATOM	252	CB	ASP	A	10	46.686	21.204	0.980	1.00	53.13	A C
ATOM	253	CG	ASP	A	10	46.133	22.263	0.018	1.00	70.70	A C
ATOM	254	OD1	ASP	A	10	45.188	21.940	-0.734	1.00	71.53	A O
ATOM	255	OD2	ASP	A	10	46.593	23.426	0.056	1.00	80.84	A O
ATOM	256	N	TRP	A	11	45.167	17.974	0.687	1.00	32.71	A N
ATOM	257	CA	TRP	A	11	45.114	16.899	-0.270	1.00	28.15	A C
ATOM	258	C	TRP	A	11	43.943	17.215	-1.184	1.00	26.55	A C
ATOM	259	O	TRP	A	11	43.041	17.959	-0.772	1.00	28.33	A O
ATOM	260	CB	TRP	A	11	44.864	15.610	0.468	1.00	26.20	A C
ATOM	261	CG	TRP	A	11	45.915	15.211	1.476	1.00	28.24	A C

ATOM	262	CD1	TRP	A	11	45.738	15.034	2.821	1.00	30.90	A	C
ATOM	263	CD2	TRP	A	11	47.203	14.667	1.175	1.00	28.82	A	C
ATOM	264	NE1	TRP	A	11	46.834	14.431	3.370	1.00	30.52	A	N
ATOM	265	CE2	TRP	A	11	47.746	14.186	2.378	1.00	32.58	A	C
ATOM	266	CE3	TRP	A	11	47.956	14.553	-0.001	1.00	30.51	A	C
ATOM	267	CZ2	TRP	A	11	49.025	13.634	2.448	1.00	32.29	A	C
ATOM	268	CZ3	TRP	A	11	49.203	13.940	0.055	1.00	31.88	A	C
ATOM	269	CH2	TRP	A	11	49.745	13.542	1.270	1.00	32.81	A	C
ATOM	270	N	PRO	A	12	43.950	16.674	-2.410	1.00	15.89	A	N
ATOM	271	CA	PRO	A	12	42.919	16.976	-3.388	1.00	11.79	A	C
ATOM	272	C	PRO	A	12	41.591	16.531	-2.967	1.00	17.62	A	C
ATOM	273	O	PRO	A	12	40.573	17.186	-3.260	1.00	23.67	A	O
ATOM	274	CB	PRO	A	12	43.357	16.176	-4.592	1.00	14.21	A	C
ATOM	275	CG	PRO	A	12	44.832	16.357	-4.581	1.00	20.23	A	C
ATOM	276	CD	PRO	A	12	45.183	16.207	-3.088	1.00	16.45	A	C
ATOM	277	N	ILE	A	13	41.557	15.419	-2.255	1.00	10.24	A	N
ATOM	278	CA	ILE	A	13	40.272	14.838	-1.871	1.00	8.85	A	C
ATOM	279	C	ILE	A	13	39.649	15.801	-0.902	1.00	15.81	A	C
ATOM	280	O	ILE	A	13	38.431	15.932	-0.874	1.00	22.92	A	O
ATOM	281	CB	ILE	A	13	40.488	13.461	-1.201	1.00	12.57	A	C
ATOM	282	CG1	ILE	A	13	39.200	12.626	-1.120	1.00	14.14	A	C
ATOM	283	CG2	ILE	A	13	41.319	13.555	0.055	1.00	7.55	A	C
ATOM	284	CD1	ILE	A	13	39.350	11.370	-0.282	1.00	11.89	A	C
ATOM	285	N	VAL	A	14	40.475	16.494	-0.100	1.00	9.07	A	N
ATOM	286	CA	VAL	A	14	39.929	17.505	0.809	1.00	6.71	A	C
ATOM	287	C	VAL	A	14	39.358	18.637	-0.014	1.00	13.54	A	C
ATOM	288	O	VAL	A	14	38.288	19.105	0.271	1.00	21.52	A	O
ATOM	289	CB	VAL	A	14	40.984	18.158	1.691	1.00	9.58	A	C
ATOM	290	CG1	VAL	A	14	40.356	19.346	2.388	1.00	5.12	A	C
ATOM	291	CG2	VAL	A	14	41.499	17.177	2.780	1.00	9.77	A	C
ATOM	292	N	ARG	A	15	40.067	19.083	-1.052	1.00	5.83	A	N
ATOM	293	CA	ARG	A	15	39.545	20.131	-1.918	1.00	3.00	A	C
ATOM	294	C	ARG	A	15	38.247	19.695	-2.554	1.00	11.01	A	C
ATOM	295	O	ARG	A	15	37.242	20.430	-2.523	1.00	5.69	A	O
ATOM	296	CB	ARG	A	15	40.573	20.498	-2.992	1.00	5.95	A	C
ATOM	297	CG	ARG	A	15	41.933	21.043	-2.408	1.00	20.32	A	C
ATOM	298	CD	ARG	A	15	42.930	21.314	-3.565	1.00	37.00	A	C
ATOM	299	NE	ARG	A	15	44.005	22.242	-3.205	1.00	60.07	A	N
ATOM	300	CZ	ARG	A	15	44.621	23.054	-4.068	1.00	68.56	A	C
ATOM	301	NH1	ARG	A	15	45.575	23.884	-3.656	1.00	56.55	A	N
ATOM	302	NH2	ARG	A	15	44.265	23.060	-5.339	1.00	41.16	A	N
ATOM	303	N	ILE	A	16	38.252	18.524	-3.202	1.00	7.94	A	N
ATOM	304	CA	ILE	A	16	37.019	18.119	-3.813	1.00	3.00	A	C
ATOM	305	C	ILE	A	16	35.875	18.108	-2.809	1.00	12.37	A	C
ATOM	306	O	ILE	A	16	34.791	18.527	-3.159	1.00	18.78	A	O
ATOM	307	CB	ILE	A	16	37.058	16.717	-4.332	1.00	3.00	A	C
ATOM	308	CG1	ILE	A	16	38.108	16.547	-5.439	1.00	3.00	A	C
ATOM	309	CG2	ILE	A	16	35.688	16.387	-4.705	1.00	3.00	A	C
ATOM	310	CD1	ILE	A	16	38.477	15.034	-5.803	1.00	18.68	A	C
ATOM	311	N	ALA	A	17	36.040	17.543	-1.615	1.00	9.70	A	N
ATOM	312	CA	ALA	A	17	34.909	17.601	-0.630	1.00	11.83	A	C
ATOM	313	C	ALA	A	17	34.530	19.005	-0.248	1.00	17.50	A	C
ATOM	314	O	ALA	A	17	33.513	19.259	0.441	1.00	16.53	A	O
ATOM	315	CB	ALA	A	17	35.178	16.831	0.581	1.00	12.99	A	C
ATOM	316	N	ALA	A	18	35.385	19.946	-0.601	1.00	15.89	A	N
ATOM	317	CA	ALA	A	18	35.097	21.318	-0.172	1.00	16.00	A	C
ATOM	318	C	ALA	A	18	33.872	21.752	-0.956	1.00	21.82	A	C
ATOM	319	O	ALA	A	18	33.139	22.617	-0.532	1.00	25.75	A	O
ATOM	320	CB	ALA	A	18	36.250	22.236	-0.428	1.00	15.53	A	C
ATOM	321	N	HIS	A	19	33.631	21.064	-2.054	1.00	19.57	A	N
ATOM	322	CA	HIS	A	19	32.549	21.377	-3.013	1.00	20.34	A	C
ATOM	323	C	HIS	A	19	31.243	20.579	-2.799	1.00	21.16	A	C
ATOM	324	O	HIS	A	19	30.287	20.692	-3.586	1.00	18.92	A	O
ATOM	325	CB	HIS	A	19	33.084	21.081	-4.421	1.00	22.00	A	C
ATOM	326	CG	HIS	A	19	34.008	22.143	-4.968	1.00	25.52	A	C
ATOM	327	ND1	HIS	A	19	33.601	23.108	-5.870	1.00	25.94	A	N
ATOM	328	CD2	HIS	A	19	35.319	22.388	-4.736	1.00	27.84	A	C

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ATOM    329  CE1 HIS A  19      34.626  23.874  -6.198  1.00 24.96      A    C
ATOM    330  NE2 HIS A  19      35.680  23.469  -5.510  1.00 26.49      A    N
ATOM    331  N   LEU A  20      31.209  19.755  -1.738  1.00 17.51      A    N
ATOM    332  CA  LEU A  20      30.015  18.996  -1.377  1.00 14.30      A    C
ATOM    333  C   LEU A  20      29.563  19.049   0.077  1.00 16.94      A    C
ATOM    334  O   LEU A  20      30.375  19.281   0.977  1.00 19.88      A    O
ATOM    335  CB  LEU A  20      30.220  17.543  -1.729  1.00 13.33      A    C
ATOM    336  CG  LEU A  20      30.963  17.340  -3.041  1.00 16.46      A    C
ATOM    337  CD1 LEU A  20      31.460  15.944  -3.060  1.00 14.47      A    C
ATOM    338  CD2 LEU A  20      30.052  17.604  -4.182  1.00 23.35      A    C
ATOM    339  N   PRO A  21      28.339  18.590   0.315  1.00 10.73      A    N
ATOM    340  CA  PRO A  21      27.744  18.527   1.665  1.00 10.85      A    C
ATOM    341  C   PRO A  21      28.151  17.187   2.324  1.00 23.00      A    C
ATOM    342  O   PRO A  21      28.152  16.157   1.663  1.00 26.69      A    O
ATOM    343  CB  PRO A  21      26.237  18.458   1.341  1.00 11.59      A    C
ATOM    344  CG  PRO A  21      26.150  17.732   0.085  1.00 12.56      A    C
ATOM    345  CD  PRO A  21      27.437  18.001  -0.698  1.00  8.52      A    C
ATOM    346  N   ASP A  22      28.521  17.192   3.602  1.00 21.10      A    N
ATOM    347  CA  ASP A  22      28.622  15.947   4.390  1.00 19.43      A    C
ATOM    348  C   ASP A  22      27.483  14.953   4.062  1.00 22.54      A    C
ATOM    349  O   ASP A  22      27.603  13.777   4.286  1.00 22.72      A    O
ATOM    350  CB  ASP A  22      28.614  16.287   5.876  1.00 21.17      A    C
ATOM    351  CG  ASP A  22      29.569  17.417   6.212  1.00 25.85      A    C
ATOM    352  OD1 ASP A  22      30.639  17.515   5.528  1.00 16.19      A    O
ATOM    353  OD2 ASP A  22      29.289  18.167   7.179  1.00 26.34      A    O
ATOM    354  N   LEU A  23      26.394  15.404   3.455  1.00 18.34      A    N
ATOM    355  CA  LEU A  23      25.339  14.442   3.060  1.00 16.92      A    C
ATOM    356  C   LEU A  23      25.790  13.466   2.003  1.00 24.76      A    C
ATOM    357  O   LEU A  23      25.140  12.429   1.752  1.00 24.56      A    O
ATOM    358  CB  LEU A  23      24.098  15.152   2.551  1.00 16.80      A    C
ATOM    359  CG  LEU A  23      23.079  14.131   2.024  1.00 22.92      A    C
ATOM    360  CD1 LEU A  23      22.662  13.399   3.246  1.00 24.10      A    C
ATOM    361  CD2 LEU A  23      21.856  14.733   1.286  1.00 20.70      A    C
ATOM    362  N   ILE A  24      26.871  13.842   1.323  1.00 22.51      A    N
ATOM    363  CA  ILE A  24      27.323  13.135   0.125  1.00 21.83      A    C
ATOM    364  C   ILE A  24      28.685  12.584   0.460  1.00 29.03      A    C
ATOM    365  O   ILE A  24      29.010  11.422   0.172  1.00 30.89      A    O
ATOM    366  CB  ILE A  24      27.489  14.094  -1.035  1.00 24.60      A    C
ATOM    367  CG1 ILE A  24      26.106  14.469  -1.563  1.00 24.58      A    C
ATOM    368  CG2 ILE A  24      28.273  13.420  -2.184  1.00 24.25      A    C
ATOM    369  CD1 ILE A  24      25.468  13.301  -2.245  1.00 12.20      A    C
ATOM    370  N   VAL A  25      29.478  13.412   1.131  1.00 23.03      A    N
ATOM    371  CA  VAL A  25      30.812  12.951   1.543  1.00 19.23      A    C
ATOM    372  C   VAL A  25      30.806  11.680   2.370  1.00 28.81      A    C
ATOM    373  O   VAL A  25      31.490  10.701   2.037  1.00 31.17      A    O
ATOM    374  CB  VAL A  25      31.619  14.058   2.175  1.00 15.16      A    C
ATOM    375  CG1 VAL A  25      32.883  13.503   2.732  1.00 13.56      A    C
ATOM    376  CG2 VAL A  25      31.909  15.138   1.124  1.00 12.91      A    C
ATOM    377  N   TYR A  26      30.004  11.662   3.424  1.00 27.36      A    N
ATOM    378  CA  TYR A  26      29.955  10.457   4.230  1.00 28.79      A    C
ATOM    379  C   TYR A  26      28.716   9.613   3.990  1.00 37.58      A    C
ATOM    380  O   TYR A  26      28.272   8.880   4.859  1.00 37.58      A    O
ATOM    381  CB  TYR A  26      30.106  10.797   5.697  1.00 29.21      A    C
ATOM    382  CG  TYR A  26      31.227  11.771   6.016  1.00 29.40      A    C
ATOM    383  CD1 TYR A  26      30.970  13.096   6.183  1.00 31.09      A    C
ATOM    384  CD2 TYR A  26      32.510  11.324   6.297  1.00 28.21      A    C
ATOM    385  CE1 TYR A  26      31.940  13.961   6.586  1.00 30.47      A    C
ATOM    386  CE2 TYR A  26      33.490  12.193   6.689  1.00 26.76      A    C
ATOM    387  CZ  TYR A  26      33.200  13.508   6.844  1.00 29.74      A    C
ATOM    388  OH  TYR A  26      34.174  14.397   7.284  1.00 27.91      A    O
ATOM    389  N   GLY A  27      28.177   9.691   2.788  1.00 38.85      A    N
ATOM    390  CA  GLY A  27      26.998   8.912   2.445  1.00 40.47      A    C
ATOM    391  C   GLY A  27      27.358   7.454   2.190  1.00 49.95      A    C
ATOM    392  O   GLY A  27      27.093   6.583   3.021  1.00 49.93      A    O
ATOM    393  N   HIS A  28      27.954   7.180   1.037  1.00 50.81      A    N
ATOM    394  CA  HIS A  28      28.300   5.805   0.709  1.00 53.63      A    C
ATOM    395  C   HIS A  28      27.012   4.987   0.634  1.00 56.74      A    C
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ATOM	396	O	HIS	A	28	26.711	4.204	1.534	1.00	56.98	A	O
ATOM	397	CB	HIS	A	28	29.191	5.217	1.822	1.00	56.71	A	C
ATOM	398	CG	HIS	A	28	30.503	5.922	1.992	1.00	62.09	A	C
ATOM	399	ND1	HIS	A	28	30.626	7.133	2.644	1.00	64.66	A	N
ATOM	400	CD2	HIS	A	28	31.756	5.574	1.605	1.00	64.85	A	C
ATOM	401	CE1	HIS	A	28	31.897	7.502	2.645	1.00	64.28	A	C
ATOM	402	NE2	HIS	A	28	32.603	6.571	2.028	1.00	64.71	A	N
ATOM	403	N	PHE	A	29	26.240	5.194	-0.427	1.00	51.01	A	N
ATOM	404	CA	PHE	A	29	24.964	4.514	-0.578	1.00	49.14	A	C
ATOM	405	C	PHE	A	29	25.038	3.581	-1.758	1.00	52.23	A	C
ATOM	406	O	PHE	A	29	25.975	3.666	-2.551	1.00	50.61	A	O
ATOM	407	CB	PHE	A	29	23.847	5.531	-0.794	1.00	50.09	A	C
ATOM	408	CG	PHE	A	29	24.331	6.944	-0.951	1.00	49.23	A	C
ATOM	409	CD1	PHE	A	29	23.953	7.924	-0.042	1.00	49.01	A	C
ATOM	410	CD2	PHE	A	29	25.154	7.294	-2.006	1.00	49.26	A	C
ATOM	411	CE1	PHE	A	29	24.373	9.217	-0.189	1.00	48.31	A	C
ATOM	412	CE2	PHE	A	29	25.593	8.592	-2.145	1.00	50.60	A	C
ATOM	413	CZ	PHE	A	29	25.200	9.551	-1.234	1.00	47.74	A	C
ATOM	414	N	SER	A	30	24.036	2.713	-1.896	1.00	50.95	A	N
ATOM	415	CA	SER	A	30	24.050	1.675	-2.929	1.00	51.46	A	C
ATOM	416	C	SER	A	30	24.514	2.223	-4.270	1.00	57.96	A	C
ATOM	417	O	SER	A	30	24.648	3.442	-4.452	1.00	59.14	A	O
ATOM	418	CB	SER	A	30	22.687	1.005	-3.068	1.00	56.97	A	C
ATOM	419	OG	SER	A	30	22.187	0.564	-1.811	1.00	69.51	A	O
ATOM	420	N	PRO	A	31	24.812	1.327	-5.198	1.00	54.03	A	N
ATOM	421	CA	PRO	A	31	25.363	1.742	-6.489	1.00	53.24	A	C
ATOM	422	C	PRO	A	31	24.275	1.997	-7.540	1.00	57.22	A	C
ATOM	423	O	PRO	A	31	24.568	2.391	-8.682	1.00	57.06	A	O
ATOM	424	CB	PRO	A	31	26.221	0.543	-6.901	1.00	54.63	A	C
ATOM	425	CG	PRO	A	31	25.572	-0.623	-6.218	1.00	59.36	A	C
ATOM	426	CD	PRO	A	31	25.138	-0.075	-4.882	1.00	54.58	A	C
ATOM	427	N	GLU	A	32	23.019	1.771	-7.172	1.00	52.33	A	N
ATOM	428	CA	GLU	A	32	21.982	1.869	-8.178	1.00	51.40	A	C
ATOM	429	C	GLU	A	32	21.664	3.332	-8.409	1.00	52.79	A	C
ATOM	430	O	GLU	A	32	21.923	4.183	-7.553	1.00	54.39	A	O
ATOM	431	CB	GLU	A	32	20.724	1.063	-7.825	1.00	53.03	A	C
ATOM	432	CG	GLU	A	32	19.880	1.625	-6.686	1.00	64.09	A	C
ATOM	433	CD	GLU	A	32	20.209	0.976	-5.363	1.00	77.28	A	C
ATOM	434	OE1	GLU	A	32	19.533	1.279	-4.357	1.00	73.26	A	O
ATOM	435	OE2	GLU	A	32	21.166	0.178	-5.328	1.00	59.35	A	O
ATOM	436	N	ARG	A	33	21.168	3.620	-9.605	1.00	43.13	A	N
ATOM	437	CA	ARG	A	33	20.574	4.894	-9.928	1.00	39.59	A	C
ATOM	438	C	ARG	A	33	19.263	4.503	-10.547	1.00	41.97	A	C
ATOM	439	O	ARG	A	33	19.231	3.625	-11.407	1.00	39.08	A	O
ATOM	440	CB	ARG	A	33	21.431	5.628	-10.956	1.00	32.05	A	C
ATOM	441	CG	ARG	A	33	22.791	5.901	-10.442	1.00	26.83	A	C
ATOM	442	CD	ARG	A	33	22.709	6.788	-9.222	1.00	45.59	A	C
ATOM	443	NE	ARG	A	33	24.048	7.052	-8.715	1.00	49.24	A	N
ATOM	444	CZ	ARG	A	33	24.567	6.474	-7.643	1.00	60.55	A	C
ATOM	445	NH1	ARG	A	33	23.854	5.624	-6.918	1.00	41.38	A	N
ATOM	446	NH2	ARG	A	33	25.804	6.772	-7.288	1.00	52.80	A	N
ATOM	447	N	PRO	A	34	18.194	5.154	-10.099	1.00	39.97	A	N
ATOM	448	CA	PRO	A	34	18.323	6.227	-9.116	1.00	40.17	A	C
ATOM	449	C	PRO	A	34	18.563	5.610	-7.771	1.00	47.19	A	C
ATOM	450	O	PRO	A	34	18.577	4.388	-7.634	1.00	47.73	A	O
ATOM	451	CB	PRO	A	34	16.936	6.872	-9.117	1.00	41.44	A	C
ATOM	452	CG	PRO	A	34	16.049	5.858	-9.712	1.00	44.55	A	C
ATOM	453	CD	PRO	A	34	16.871	5.164	-10.730	1.00	39.68	A	C
ATOM	454	N	PHE	A	35	18.755	6.447	-6.769	1.00	45.10	A	N
ATOM	455	CA	PHE	A	35	18.951	5.925	-5.443	1.00	46.08	A	C
ATOM	456	C	PHE	A	35	18.236	6.816	-4.463	1.00	53.65	A	C
ATOM	457	O	PHE	A	35	18.339	8.039	-4.525	1.00	53.72	A	O
ATOM	458	CB	PHE	A	35	20.423	5.856	-5.076	1.00	47.91	A	C
ATOM	459	CG	PHE	A	35	20.641	5.711	-3.615	1.00	50.01	A	C
ATOM	460	CD1	PHE	A	35	20.543	4.470	-3.013	1.00	54.61	A	C
ATOM	461	CD2	PHE	A	35	20.769	6.827	-2.813	1.00	51.92	A	C
ATOM	462	CE1	PHE	A	35	20.698	4.339	-1.639	1.00	55.41	A	C

ATOM	463	CE2	PHE	A	35	20.923	6.696	-1.442	1.00	54.91	A	C
ATOM	464	CZ	PHE	A	35	20.874	5.453	-0.857	1.00	52.71	A	C
ATOM	465	N	MET	A	36	17.529	6.194	-3.535	1.00	51.22	A	N
ATOM	466	CA	MET	A	36	16.700	6.945	-2.620	1.00	50.54	A	C
ATOM	467	C	MET	A	36	16.904	6.499	-1.189	1.00	49.64	A	C
ATOM	468	O	MET	A	36	16.852	5.309	-0.871	1.00	49.18	A	O
ATOM	469	CB	MET	A	36	15.240	6.796	-3.030	1.00	53.76	A	C
ATOM	470	CG	MET	A	36	14.957	7.340	-4.419	1.00	57.85	A	C
ATOM	471	SD	MET	A	36	13.732	6.374	-5.289	1.00	62.37	A	S
ATOM	472	CE	MET	A	36	14.757	5.291	-6.195	1.00	58.97	A	C
ATOM	473	N	ASP	A	37	17.168	7.478	-0.339	1.00	43.55	A	N
ATOM	474	CA	ASP	A	37	17.199	7.274	1.089	1.00	42.15	A	C
ATOM	475	C	ASP	A	37	16.227	8.260	1.681	1.00	44.92	A	C
ATOM	476	O	ASP	A	37	15.882	9.241	1.050	1.00	45.83	A	O
ATOM	477	CB	ASP	A	37	18.590	7.554	1.637	1.00	44.49	A	C
ATOM	478	CG	ASP	A	37	18.875	6.769	2.889	1.00	63.34	A	C
ATOM	479	OD1	ASP	A	37	17.936	6.113	3.398	1.00	66.73	A	O
ATOM	480	OD2	ASP	A	37	20.043	6.754	3.326	1.00	69.73	A	O
ATOM	481	N	TYR	A	38	15.784	7.997	2.901	1.00	39.86	A	N
ATOM	482	CA	TYR	A	38	14.783	8.829	3.525	1.00	38.20	A	C
ATOM	483	C	TYR	A	38	15.177	9.081	4.976	1.00	37.56	A	C
ATOM	484	O	TYR	A	38	15.954	8.322	5.576	1.00	38.74	A	O
ATOM	485	CB	TYR	A	38	13.404	8.164	3.430	1.00	40.56	A	C
ATOM	486	CG	TYR	A	38	13.055	7.600	2.042	1.00	44.09	A	C
ATOM	487	CD1	TYR	A	38	13.635	6.424	1.579	1.00	46.64	A	C
ATOM	488	CD2	TYR	A	38	12.097	8.214	1.231	1.00	44.72	A	C
ATOM	489	CE1	TYR	A	38	13.293	5.889	0.341	1.00	49.41	A	C
ATOM	490	CE2	TYR	A	38	11.746	7.686	-0.012	1.00	45.71	A	C
ATOM	491	CZ	TYR	A	38	12.336	6.517	-0.448	1.00	56.91	A	C
ATOM	492	OH	TYR	A	38	11.984	5.978	-1.678	1.00	61.68	A	O
ATOM	493	N	PHE	A	39	14.658	10.160	5.541	1.00	27.86	A	N
ATOM	494	CA	PHE	A	39	15.030	10.542	6.885	1.00	24.39	A	C
ATOM	495	C	PHE	A	39	14.268	11.807	7.226	1.00	26.78	A	C
ATOM	496	O	PHE	A	39	13.354	12.177	6.482	1.00	26.34	A	O
ATOM	497	CB	PHE	A	39	16.535	10.780	6.960	1.00	25.77	A	C
ATOM	498	CG	PHE	A	39	17.064	11.691	5.874	1.00	26.13	A	C
ATOM	499	CD1	PHE	A	39	16.890	13.050	5.948	1.00	26.37	A	C
ATOM	500	CD2	PHE	A	39	17.761	11.179	4.798	1.00	27.31	A	C
ATOM	501	CE1	PHE	A	39	17.375	13.871	4.975	1.00	24.86	A	C
ATOM	502	CE2	PHE	A	39	18.244	12.015	3.827	1.00	27.56	A	C
ATOM	503	CZ	PHE	A	39	18.039	13.346	3.918	1.00	23.73	A	C
ATOM	504	N	ASP	A	40	14.656	12.476	8.314	1.00	22.06	A	N
ATOM	505	CA	ASP	A	40	13.929	13.638	8.812	1.00	24.09	A	C
ATOM	506	C	ASP	A	40	14.971	14.668	9.174	1.00	33.07	A	C
ATOM	507	O	ASP	A	40	16.088	14.325	9.517	1.00	34.42	A	O
ATOM	508	CB	ASP	A	40	13.172	13.311	10.100	1.00	26.45	A	C
ATOM	509	CG	ASP	A	40	11.926	12.504	9.860	1.00	46.61	A	C
ATOM	510	OD1	ASP	A	40	10.861	12.914	10.376	1.00	48.54	A	O
ATOM	511	OD2	ASP	A	40	12.036	11.412	9.255	1.00	51.99	A	O
ATOM	512	N	GLY	A	41	14.615	15.938	9.116	1.00	32.00	A	N
ATOM	513	CA	GLY	A	41	15.584	16.948	9.487	1.00	32.42	A	C
ATOM	514	C	GLY	A	41	14.862	18.256	9.434	1.00	35.63	A	C
ATOM	515	O	GLY	A	41	13.708	18.287	8.986	1.00	33.11	A	O
ATOM	516	N	VAL	A	42	15.537	19.282	9.970	1.00	31.36	A	N
ATOM	517	CA	VAL	A	42	15.224	20.698	9.810	1.00	30.94	A	C
ATOM	518	C	VAL	A	42	15.990	21.354	8.646	1.00	37.37	A	C
ATOM	519	O	VAL	A	42	17.178	21.077	8.432	1.00	39.62	A	O
ATOM	520	CB	VAL	A	42	15.642	21.456	11.066	1.00	32.35	A	C
ATOM	521	CG1	VAL	A	42	15.204	22.881	10.987	1.00	31.37	A	C
ATOM	522	CG2	VAL	A	42	15.095	20.781	12.287	1.00	31.51	A	C
ATOM	523	N	LEU	A	43	15.334	22.271	7.939	1.00	32.09	A	N
ATOM	524	CA	LEU	A	43	15.878	22.810	6.690	1.00	31.47	A	C
ATOM	525	C	LEU	A	43	15.826	24.334	6.730	1.00	39.22	A	C
ATOM	526	O	LEU	A	43	14.930	24.897	7.324	1.00	41.95	A	O
ATOM	527	CB	LEU	A	43	15.117	22.280	5.475	1.00	29.85	A	C
ATOM	528	CG	LEU	A	43	15.383	20.869	4.890	1.00	33.10	A	C
ATOM	529	CD1	LEU	A	43	14.479	20.580	3.731	1.00	31.93	A	C

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ATOM    530  CD2 LEU A  43      16.818  20.554   4.514  1.00 30.51      A    C
ATOM    531  N   MET A  44      16.826  24.987   6.135  1.00 35.35      A    N
ATOM    532  CA  MET A  44      16.949  26.442   6.098  1.00 34.00      A    C
ATOM    533  C   MET A  44      17.213  26.835   4.661  1.00 33.80      A    C
ATOM    534  O   MET A  44      18.170  26.376   4.065  1.00 33.01      A    O
ATOM    535  CB  MET A  44      18.120  26.923   6.966  1.00 36.59      A    C
ATOM    536  CG  MET A  44      18.380  28.439   6.891  1.00 41.02      A    C
ATOM    537  SD  MET A  44      19.869  29.129   7.748  1.00 46.95      A    S
ATOM    538  CE  MET A  44      19.810  28.284   9.357  1.00 44.16      A    C
ATOM    539  N   PHE A  45      16.321  27.634   4.092  1.00 29.39      A    N
ATOM    540  CA  PHE A  45      16.547  28.192   2.787  1.00 30.08      A    C
ATOM    541  C   PHE A  45      16.938  29.632   2.966  1.00 38.50      A    C
ATOM    542  O   PHE A  45      16.109  30.433   3.366  1.00 40.27      A    O
ATOM    543  CB  PHE A  45      15.265  28.175   2.005  1.00 32.15      A    C
ATOM    544  CG  PHE A  45      15.478  28.147   0.527  1.00 34.56      A    C
ATOM    545  CD1 PHE A  45      16.103  27.055  -0.062  1.00 38.48      A    C
ATOM    546  CD2 PHE A  45      15.069  29.193  -0.265  1.00 37.83      A    C
ATOM    547  CE1 PHE A  45      16.351  27.018  -1.411  1.00 39.86      A    C
ATOM    548  CE2 PHE A  45      15.288  29.158  -1.614  1.00 42.46      A    C
ATOM    549  CZ  PHE A  45      15.937  28.054  -2.192  1.00 40.82      A    C
ATOM    550  N   VAL A  46      18.194  29.976   2.701  1.00 34.50      A    N
ATOM    551  CA  VAL A  46      18.563  31.383   2.724  1.00 33.77      A    C
ATOM    552  C   VAL A  46      18.616  32.018   1.342  1.00 41.33      A    C
ATOM    553  O   VAL A  46      19.209  31.476   0.405  1.00 40.64      A    O
ATOM    554  CB  VAL A  46      19.828  31.624   3.506  1.00 35.61      A    C
ATOM    555  CG1 VAL A  46      20.305  33.060   3.309  1.00 34.28      A    C
ATOM    556  CG2 VAL A  46      19.551  31.347   4.926  1.00 35.37      A    C
ATOM    557  N   ASP A  47      17.951  33.160   1.218  1.00 41.20      A    N
ATOM    558  CA  ASP A  47      17.763  33.830  -0.072  1.00 40.89      A    C
ATOM    559  C   ASP A  47      18.807  34.916  -0.222  1.00 43.46      A    C
ATOM    560  O   ASP A  47      18.630  36.035   0.289  1.00 44.15      A    O
ATOM    561  CB  ASP A  47      16.374  34.456  -0.120  1.00 43.40      A    C
ATOM    562  CG  ASP A  47      16.140  35.292  -1.372  1.00 52.29      A    C
ATOM    563  OD1 ASP A  47      16.890  35.125  -2.358  1.00 52.91      A    O
ATOM    564  OD2 ASP A  47      15.157  36.068  -1.382  1.00 52.27      A    O
ATOM    565  N   ILE A  48      19.872  34.584  -0.948  1.00 38.88      A    N
ATOM    566  CA  ILE A  48      21.097  35.389  -1.017  1.00 37.40      A    C
ATOM    567  C   ILE A  48      21.059  36.146  -2.330  1.00 46.30      A    C
ATOM    568  O   ILE A  48      22.075  36.604  -2.865  1.00 46.62      A    O
ATOM    569  CB  ILE A  48      22.316  34.482  -0.991  1.00 38.40      A    C
ATOM    570  CG1 ILE A  48      22.449  33.732  -2.319  1.00 39.19      A    C
ATOM    571  CG2 ILE A  48      22.154  33.426   0.079  1.00 35.71      A    C
ATOM    572  CD1 ILE A  48      23.522  34.304  -3.231  1.00 52.22      A    C
ATOM    573  N   SER A  49      19.850  36.252  -2.851  1.00 44.69      A    N
ATOM    574  CA  SER A  49      19.597  36.931  -4.097  1.00 44.45      A    C
ATOM    575  C   SER A  49      19.989  38.382  -4.029  1.00 48.42      A    C
ATOM    576  O   SER A  49      20.271  38.981  -5.052  1.00 48.43      A    O
ATOM    577  CB  SER A  49      18.112  36.841  -4.445  1.00 47.67      A    C
ATOM    578  OG  SER A  49      17.667  38.101  -4.894  1.00 56.19      A    O
ATOM    579  N   GLY A  50      19.954  38.959  -2.834  1.00 46.55      A    N
ATOM    580  CA  GLY A  50      20.268  40.376  -2.646  1.00 46.06      A    C
ATOM    581  C   GLY A  50      21.662  40.690  -3.162  1.00 51.62      A    C
ATOM    582  O   GLY A  50      21.864  41.689  -3.864  1.00 50.83      A    O
ATOM    583  N   PHE A  51      22.614  39.815  -2.837  1.00 49.96      A    N
ATOM    584  CA  PHE A  51      24.006  39.983  -3.264  1.00 50.52      A    C
ATOM    585  C   PHE A  51      24.197  39.686  -4.747  1.00 55.27      A    C
ATOM    586  O   PHE A  51      24.920  40.401  -5.431  1.00 56.22      A    O
ATOM    587  CB  PHE A  51      24.986  39.142  -2.422  1.00 52.23      A    C
ATOM    588  CG  PHE A  51      24.709  39.175  -0.948  1.00 52.89      A    C
ATOM    589  CD1 PHE A  51      24.759  40.360  -0.236  1.00 55.75      A    C
ATOM    590  CD2 PHE A  51      24.392  38.022  -0.277  1.00 53.61      A    C
ATOM    591  CE1 PHE A  51      24.450  40.381   1.115  1.00 56.01      A    C
ATOM    592  CE2 PHE A  51      24.112  38.042   1.078  1.00 55.77      A    C
ATOM    593  CZ  PHE A  51      24.145  39.216   1.770  1.00 53.50      A    C
ATOM    594  N   THR A  52      23.529  38.662  -5.262  1.00 49.89      A    N
ATOM    595  CA  THR A  52      23.645  38.389  -6.682  1.00 48.99      A    C
ATOM    596  C   THR A  52      23.337  39.569  -7.609  1.00 52.52      A    C
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ATOM    597  O   THR A  52      24.075  39.810  -8.561  1.00 55.04      A    O
ATOM    598  CB  THR A  52      22.954  37.097  -7.114  1.00 57.41      A    C
ATOM    599  OG1 THR A  52      21.539  37.288  -7.120  1.00 58.36      A    O
ATOM    600  CG2 THR A  52      23.318  35.950  -6.160  1.00 52.87      A    C
ATOM    601  N   ALA A  53      22.289  40.330  -7.332  1.00 45.48      A    N
ATOM    602  CA  ALA A  53      22.041  41.565  -8.079  1.00 43.35      A    C
ATOM    603  C   ALA A  53      23.264  42.460  -8.337  1.00 47.23      A    C
ATOM    604  O   ALA A  53      23.230  43.317  -9.229  1.00 48.34      A    O
ATOM    605  CB  ALA A  53      20.949  42.362  -7.431  1.00 43.74      A    C
ATOM    606  N   MET A  54      24.328  42.300  -7.555  1.00 41.24      A    N
ATOM    607  CA  MET A  54      25.532  43.118  -7.765  1.00 40.03      A    C
ATOM    608  C   MET A  54      26.217  42.771  -9.079  1.00 39.39      A    C
ATOM    609  O   MET A  54      27.079  43.489  -9.542  1.00 33.18      A    O
ATOM    610  CB  MET A  54      26.542  42.941  -6.631  1.00 42.68      A    C
ATOM    611  CG  MET A  54      26.207  43.684  -5.349  1.00 47.10      A    C
ATOM    612  SD  MET A  54      27.144  42.958  -3.952  1.00 51.80      A    S
ATOM    613  CE  MET A  54      27.307  41.208  -4.461  1.00 48.20      A    C
ATOM    614  N   THR A  55      25.855  41.636  -9.655  1.00 38.32      A    N
ATOM    615  CA  THR A  55      26.430  41.247 -10.918  1.00 38.61      A    C
ATOM    616  C   THR A  55      26.264  42.425 -11.888  1.00 45.13      A    C
ATOM    617  O   THR A  55      27.129  42.698 -12.722  1.00 45.26      A    O
ATOM    618  CB  THR A  55      25.702  40.027 -11.465  1.00 48.53      A    C
ATOM    619  OG1 THR A  55      25.868  38.928 -10.558  1.00 46.71      A    O
ATOM    620  CG2 THR A  55      26.230  39.651 -12.863  1.00 51.00      A    C
ATOM    621  N   GLU A  56      25.158  43.142 -11.747  1.00 42.95      A    N
ATOM    622  CA  GLU A  56      24.875  44.261 -12.630  1.00 43.82      A    C
ATOM    623  C   GLU A  56      25.724  45.456 -12.223  1.00 48.32      A    C
ATOM    624  O   GLU A  56      26.211  46.232 -13.065  1.00 49.06      A    O
ATOM    625  CB  GLU A  56      23.383  44.606 -12.589  1.00 45.46      A    C
ATOM    626  CG  GLU A  56      22.480  43.455 -13.064  1.00 56.28      A    C
ATOM    627  CD  GLU A  56      22.979  42.832 -14.364  1.00 73.21      A    C
ATOM    628  OE1 GLU A  56      23.466  41.676 -14.328  1.00 62.09      A    O
ATOM    629  OE2 GLU A  56      22.927  43.521 -15.408  1.00 63.37      A    O
ATOM    630  N   LYS A  57      25.932  45.553 -10.918  1.00 42.34      A    N
ATOM    631  CA  LYS A  57      26.688  46.626 -10.303  1.00 40.48      A    C
ATOM    632  C   LYS A  57      28.136  46.655 -10.788  1.00 46.03      A    C
ATOM    633  O   LYS A  57      28.709  47.728 -10.968  1.00 46.32      A    O
ATOM    634  CB  LYS A  57      26.634  46.464  -8.774  1.00 40.65      A    C
ATOM    635  CG  LYS A  57      27.838  47.072  -8.056  1.00 41.16      A    C
ATOM    636  CD  LYS A  57      27.663  47.144  -6.537  1.00 51.12      A    C
ATOM    637  CE  LYS A  57      28.975  47.532  -5.840  1.00 52.07      A    C
ATOM    638  NZ  LYS A  57      28.815  48.203  -4.528  1.00 59.19      A    N
ATOM    639  N   PHE A  58      28.723  45.464 -10.930  1.00 42.82      A    N
ATOM    640  CA  PHE A  58      30.109  45.257 -11.374  1.00 41.22      A    C
ATOM    641  C   PHE A  58      30.112  44.995 -12.857  1.00 48.18      A    C
ATOM    642  O   PHE A  58      31.036  44.401 -13.407  1.00 47.96      A    O
ATOM    643  CB  PHE A  58      30.705  44.046 -10.671  1.00 41.16      A    C
ATOM    644  CG  PHE A  58      30.792  44.225  -9.204  1.00 41.32      A    C
ATOM    645  CD1 PHE A  58      29.760  43.816  -8.382  1.00 43.04      A    C
ATOM    646  CD2 PHE A  58      31.891  44.843  -8.650  1.00 41.65      A    C
ATOM    647  CE1 PHE A  58      29.802  44.064  -7.030  1.00 42.72      A    C
ATOM    648  CE2 PHE A  58      31.948  45.072  -7.293  1.00 43.58      A    C
ATOM    649  CZ  PHE A  58      30.864  44.747  -6.490  1.00 41.60      A    C
ATOM    650  N   SER A  59      29.038  45.413 -13.497  1.00 48.29      A    N
ATOM    651  CA  SER A  59      28.988  45.356 -14.937  1.00 50.08      A    C
ATOM    652  C   SER A  59      29.525  46.676 -15.473  1.00 58.08      A    C
ATOM    653  O   SER A  59      29.975  46.737 -16.608  1.00 59.95      A    O
ATOM    654  CB  SER A  59      27.552  45.120 -15.405  1.00 54.71      A    C
ATOM    655  OG  SER A  59      27.529  44.377 -16.614  1.00 67.47      A    O
ATOM    656  N   SER A  60      29.507  47.724 -14.647  1.00 55.77      A    N
ATOM    657  CA  SER A  60      29.890  49.067 -15.098  1.00 56.58      A    C
ATOM    658  C   SER A  60      31.403  49.224 -15.314  1.00 64.10      A    C
ATOM    659  O   SER A  60      32.201  48.928 -14.424  1.00 66.10      A    O
ATOM    660  CB  SER A  60      29.368  50.146 -14.126  1.00 58.87      A    C
ATOM    661  OG  SER A  60      30.374  50.629 -13.245  1.00 58.73      A    O
ATOM    662  N   ALA A  61      31.801  49.737 -16.472  1.00 60.39      A    N
ATOM    663  CA  ALA A  61      33.215  49.979 -16.750  1.00 60.18      A    C
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ATOM	664	C	ALA	A	61	33.903	50.762	-15.635	1.00	63.51	A	C
ATOM	665	O	ALA	A	61	35.092	51.050	-15.699	1.00	63.27	A	O
ATOM	666	CB	ALA	A	61	33.379	50.709	-18.082	1.00	60.96	A	C
ATOM	667	N	MET	A	62	33.147	51.151	-14.628	1.00	60.33	A	N
ATOM	668	CA	MET	A	62	33.724	51.852	-13.503	1.00	60.51	A	C
ATOM	669	C	MET	A	62	34.797	50.957	-12.888	1.00	61.12	A	C
ATOM	670	O	MET	A	62	35.799	51.436	-12.345	1.00	60.28	A	O
ATOM	671	CB	MET	A	62	32.628	52.101	-12.486	1.00	63.68	A	C
ATOM	672	CG	MET	A	62	32.874	53.273	-11.605	1.00	68.70	A	C
ATOM	673	SD	MET	A	62	31.329	53.663	-10.808	1.00	74.62	A	S
ATOM	674	CE	MET	A	62	30.986	52.111	-9.964	1.00	71.74	A	C
ATOM	675	N	TYR	A	63	34.567	49.649	-12.992	1.00	55.14	A	N
ATOM	676	CA	TYR	A	63	35.406	48.639	-12.340	1.00	53.54	A	C
ATOM	677	C	TYR	A	63	36.603	48.226	-13.180	1.00	53.92	A	C
ATOM	678	O	TYR	A	63	37.362	47.315	-12.807	1.00	54.82	A	O
ATOM	679	CB	TYR	A	63	34.570	47.426	-11.904	1.00	53.43	A	C
ATOM	680	CG	TYR	A	63	33.714	47.765	-10.717	1.00	52.80	A	C
ATOM	681	CD1	TYR	A	63	32.347	47.955	-10.849	1.00	53.98	A	C
ATOM	682	CD2	TYR	A	63	34.304	48.093	-9.504	1.00	52.95	A	C
ATOM	683	CE1	TYR	A	63	31.565	48.341	-9.760	1.00	53.48	A	C
ATOM	684	CE2	TYR	A	63	33.547	48.504	-8.429	1.00	53.40	A	C
ATOM	685	CZ	TYR	A	63	32.182	48.632	-8.556	1.00	58.94	A	C
ATOM	686	OH	TYR	A	63	31.448	49.033	-7.462	1.00	56.95	A	O
ATOM	687	N	MET	A	64	36.795	48.956	-14.277	1.00	44.25	A	N
ATOM	688	CA	MET	A	64	37.830	48.647	-15.224	1.00	40.91	A	C
ATOM	689	C	MET	A	64	37.690	47.142	-15.478	1.00	45.20	A	C
ATOM	690	O	MET	A	64	36.578	46.613	-15.456	1.00	46.25	A	O
ATOM	691	CB	MET	A	64	39.178	49.095	-14.653	1.00	42.12	A	C
ATOM	692	CG	MET	A	64	39.088	50.543	-14.099	1.00	43.31	A	C
ATOM	693	SD	MET	A	64	40.414	51.186	-13.029	1.00	44.38	A	S
ATOM	694	CE	MET	A	64	39.495	52.098	-11.887	1.00	40.13	A	C
ATOM	695	N	ASP	A	65	38.761	46.421	-15.709	1.00	40.77	A	N
ATOM	696	CA	ASP	A	65	38.521	45.054	-16.119	1.00	40.83	A	C
ATOM	697	C	ASP	A	65	38.510	44.034	-14.996	1.00	42.78	A	C
ATOM	698	O	ASP	A	65	38.650	42.833	-15.247	1.00	42.95	A	O
ATOM	699	CB	ASP	A	65	39.418	44.618	-17.284	1.00	43.38	A	C
ATOM	700	CG	ASP	A	65	39.297	45.541	-18.519	1.00	50.17	A	C
ATOM	701	OD1	ASP	A	65	40.361	45.805	-19.104	1.00	53.42	A	O
ATOM	702	OD2	ASP	A	65	38.182	46.002	-18.899	1.00	43.60	A	O
ATOM	703	N	ARG	A	66	38.276	44.469	-13.760	1.00	36.10	A	N
ATOM	704	CA	ARG	A	66	38.202	43.477	-12.696	1.00	33.28	A	C
ATOM	705	C	ARG	A	66	36.826	43.272	-12.045	1.00	41.63	A	C
ATOM	706	O	ARG	A	66	36.725	42.925	-10.853	1.00	45.56	A	O
ATOM	707	CB	ARG	A	66	39.309	43.685	-11.687	1.00	22.88	A	C
ATOM	708	CG	ARG	A	66	40.713	43.754	-12.321	1.00	23.58	A	C
ATOM	709	CD	ARG	A	66	41.750	44.141	-11.256	1.00	19.22	A	C
ATOM	710	NE	ARG	A	66	41.831	43.213	-10.114	1.00	21.13	A	N
ATOM	711	CZ	ARG	A	66	41.306	43.445	-8.912	1.00	29.31	A	C
ATOM	712	NH1	ARG	A	66	40.643	44.572	-8.691	1.00	24.28	A	N
ATOM	713	NH2	ARG	A	66	41.438	42.547	-7.928	1.00	14.09	A	N
ATOM	714	N	GLY	A	67	35.757	43.448	-12.820	1.00	34.23	A	N
ATOM	715	CA	GLY	A	67	34.426	43.202	-12.275	1.00	31.79	A	C
ATOM	716	C	GLY	A	67	34.349	41.770	-11.727	1.00	30.20	A	C
ATOM	717	O	GLY	A	67	33.852	41.541	-10.636	1.00	28.66	A	O
ATOM	718	N	ALA	A	68	34.862	40.821	-12.494	1.00	22.62	A	N
ATOM	719	CA	ALA	A	68	34.648	39.416	-12.222	1.00	22.44	A	C
ATOM	720	C	ALA	A	68	35.286	39.190	-10.889	1.00	25.22	A	C
ATOM	721	O	ALA	A	68	34.626	38.807	-9.938	1.00	25.29	A	O
ATOM	722	CB	ALA	A	68	35.373	38.575	-13.279	1.00	22.98	A	C
ATOM	723	N	GLU	A	69	36.561	39.581	-10.826	1.00	17.49	A	N
ATOM	724	CA	GLU	A	69	37.448	39.309	-9.678	1.00	15.51	A	C
ATOM	725	C	GLU	A	69	37.095	40.181	-8.463	1.00	21.23	A	C
ATOM	726	O	GLU	A	69	37.446	39.830	-7.339	1.00	26.31	A	O
ATOM	727	CB	GLU	A	69	38.884	39.651	-10.105	1.00	16.04	A	C
ATOM	728	CG	GLU	A	69	39.429	38.792	-11.225	1.00	8.14	A	C
ATOM	729	CD	GLU	A	69	39.131	39.295	-12.597	1.00	39.79	A	C
ATOM	730	OE1	GLU	A	69	38.495	40.351	-12.714	1.00	44.60	A	O

ATOM	731	OE2	GLU	A	69	39.584	38.642	-13.564	1.00	43.78	A	O
ATOM	732	N	GLN	A	70	36.524	41.368	-8.680	1.00	11.90	A	N
ATOM	733	CA	GLN	A	70	36.080	42.209	-7.535	1.00	10.90	A	C
ATOM	734	C	GLN	A	70	34.759	41.664	-7.018	1.00	21.72	A	C
ATOM	735	O	GLN	A	70	34.518	41.642	-5.841	1.00	28.00	A	O
ATOM	736	CB	GLN	A	70	35.805	43.653	-7.989	1.00	10.60	A	C
ATOM	737	CG	GLN	A	70	36.979	44.591	-8.089	1.00	39.17	A	C
ATOM	738	CD	GLN	A	70	36.867	45.732	-7.103	1.00	53.42	A	C
ATOM	739	OE1	GLN	A	70	36.720	46.891	-7.495	1.00	55.58	A	O
ATOM	740	NE2	GLN	A	70	36.912	45.410	-5.813	1.00	17.72	A	N
ATOM	741	N	LEU	A	71	33.859	41.332	-7.936	1.00	20.13	A	N
ATOM	742	CA	LEU	A	71	32.566	40.749	-7.618	1.00	18.63	A	C
ATOM	743	C	LEU	A	71	32.554	39.494	-6.745	1.00	22.00	A	C
ATOM	744	O	LEU	A	71	31.728	39.382	-5.847	1.00	25.08	A	O
ATOM	745	CB	LEU	A	71	31.756	40.509	-8.878	1.00	17.13	A	C
ATOM	746	CG	LEU	A	71	30.569	39.566	-8.705	1.00	20.54	A	C
ATOM	747	CD1	LEU	A	71	29.641	39.986	-7.597	1.00	21.26	A	C
ATOM	748	CD2	LEU	A	71	29.753	39.423	-9.971	1.00	20.10	A	C
ATOM	749	N	VAL	A	72	33.443	38.550	-6.994	1.00	14.92	A	N
ATOM	750	CA	VAL	A	72	33.438	37.266	-6.262	1.00	13.56	A	C
ATOM	751	C	VAL	A	72	34.107	37.467	-4.893	1.00	20.20	A	C
ATOM	752	O	VAL	A	72	33.759	36.818	-3.909	1.00	21.54	A	O
ATOM	753	CB	VAL	A	72	34.310	36.281	-7.011	1.00	18.03	A	C
ATOM	754	CG1	VAL	A	72	35.693	36.324	-6.434	1.00	19.60	A	C
ATOM	755	CG2	VAL	A	72	33.830	34.903	-6.914	1.00	17.50	A	C
ATOM	756	N	GLU	A	73	35.098	38.348	-4.836	1.00	15.72	A	N
ATOM	757	CA	GLU	A	73	35.721	38.717	-3.556	1.00	13.77	A	C
ATOM	758	C	GLU	A	73	34.583	39.135	-2.634	1.00	18.42	A	C
ATOM	759	O	GLU	A	73	34.159	38.362	-1.799	1.00	20.80	A	O
ATOM	760	CB	GLU	A	73	36.724	39.889	-3.761	1.00	14.54	A	C
ATOM	761	CG	GLU	A	73	37.508	40.303	-2.483	1.00	27.69	A	C
ATOM	762	CD	GLU	A	73	38.545	41.405	-2.705	1.00	48.97	A	C
ATOM	763	OE1	GLU	A	73	39.512	41.489	-1.903	1.00	51.84	A	O
ATOM	764	OE2	GLU	A	73	38.403	42.176	-3.687	1.00	20.13	A	O
ATOM	765	N	ILE	A	74	34.008	40.308	-2.860	1.00	9.64	A	N
ATOM	766	CA	ILE	A	74	32.971	40.882	-1.918	1.00	7.09	A	C
ATOM	767	C	ILE	A	74	31.881	39.853	-1.608	1.00	20.47	A	C
ATOM	768	O	ILE	A	74	31.892	39.271	-0.553	1.00	27.71	A	O
ATOM	769	CB	ILE	A	74	32.350	42.128	-2.568	1.00	7.28	A	C
ATOM	770	CG1	ILE	A	74	31.562	42.936	-1.536	1.00	3.94	A	C
ATOM	771	CG2	ILE	A	74	31.534	41.717	-3.804	1.00	3.00	A	C
ATOM	772	CD1	ILE	A	74	32.465	43.401	-0.373	1.00	7.17	A	C
ATOM	773	N	LEU	A	75	31.065	39.479	-2.584	1.00	18.92	A	N
ATOM	774	CA	LEU	A	75	30.116	38.350	-2.475	1.00	20.04	A	C
ATOM	775	C	LEU	A	75	30.597	37.192	-1.622	1.00	25.37	A	C
ATOM	776	O	LEU	A	75	29.896	36.727	-0.714	1.00	27.37	A	O
ATOM	777	CB	LEU	A	75	29.808	37.807	-3.869	1.00	20.66	A	C
ATOM	778	CG	LEU	A	75	28.673	36.797	-4.078	1.00	26.55	A	C
ATOM	779	CD1	LEU	A	75	27.291	37.402	-3.977	1.00	26.14	A	C
ATOM	780	CD2	LEU	A	75	28.852	36.106	-5.431	1.00	27.17	A	C
ATOM	781	N	ASN	A	76	31.788	36.699	-1.928	1.00	20.61	A	N
ATOM	782	CA	ASN	A	76	32.387	35.638	-1.119	1.00	20.51	A	C
ATOM	783	C	ASN	A	76	32.557	36.027	0.330	1.00	26.10	A	C
ATOM	784	O	ASN	A	76	32.254	35.240	1.255	1.00	26.44	A	O
ATOM	785	CB	ASN	A	76	33.712	35.210	-1.714	1.00	17.58	A	C
ATOM	786	CG	ASN	A	76	33.527	34.080	-2.636	1.00	33.61	A	C
ATOM	787	OD1	ASN	A	76	34.462	33.592	-3.271	1.00	34.45	A	O
ATOM	788	ND2	ASN	A	76	32.288	33.561	-2.644	1.00	5.17	A	N
ATOM	789	N	TYR	A	77	32.998	37.267	0.505	1.00	21.55	A	N
ATOM	790	CA	TYR	A	77	33.224	37.888	1.811	1.00	21.87	A	C
ATOM	791	C	TYR	A	77	32.027	37.672	2.712	1.00	32.07	A	C
ATOM	792	O	TYR	A	77	32.168	37.263	3.864	1.00	35.81	A	O
ATOM	793	CB	TYR	A	77	33.426	39.400	1.634	1.00	21.63	A	C
ATOM	794	CG	TYR	A	77	33.748	40.140	2.906	1.00	23.99	A	C
ATOM	795	CD1	TYR	A	77	34.562	39.573	3.891	1.00	25.02	A	C
ATOM	796	CD2	TYR	A	77	33.229	41.406	3.132	1.00	26.05	A	C
ATOM	797	CE1	TYR	A	77	34.848	40.272	5.086	1.00	26.58	A	C

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ATOM    798  CE2 TYR A  77      33.426  42.070   4.339  1.00 27.21      A    C
ATOM    799  CZ  TYR A  77      34.239  41.512   5.306  1.00 39.93      A    C
ATOM    800  OH  TYR A  77      34.480  42.232   6.459  1.00 43.75      A    O
ATOM    801  N   HIS A  78      30.842  37.922   2.171  1.00 27.53      A    N
ATOM    802  CA  HIS A  78      29.618  37.931   2.972  1.00 25.10      A    C
ATOM    803  C   HIS A  78      29.024  36.555   3.018  1.00 29.16      A    C
ATOM    804  O   HIS A  78      28.270  36.222   3.944  1.00 31.07      A    O
ATOM    805  CB  HIS A  78      28.581  38.866   2.321  1.00 24.94      A    C
ATOM    806  CG  HIS A  78      28.925  40.306   2.448  1.00 27.86      A    C
ATOM    807  ND1 HIS A  78      29.149  41.111   1.361  1.00 29.92      A    N
ATOM    808  CD2 HIS A  78      29.134  41.075   3.540  1.00 30.95      A    C
ATOM    809  CE1 HIS A  78      29.500  42.316   1.776  1.00 30.93      A    C
ATOM    810  NE2 HIS A  78      29.532  42.310   3.095  1.00 31.25      A    N
ATOM    811  N   ILE A  79      29.238  35.799   1.950  1.00 23.59      A    N
ATOM    812  CA  ILE A  79      28.732  34.450   1.908  1.00 22.23      A    C
ATOM    813  C   ILE A  79      29.462  33.523   2.885  1.00 28.73      A    C
ATOM    814  O   ILE A  79      28.847  32.701   3.534  1.00 31.35      A    O
ATOM    815  CB  ILE A  79      28.757  33.909   0.526  1.00 23.22      A    C
ATOM    816  CG1 ILE A  79      27.651  34.537  -0.289  1.00 20.64      A    C
ATOM    817  CG2 ILE A  79      28.533  32.409   0.521  1.00 21.84      A    C
ATOM    818  CD1 ILE A  79      27.287  33.580  -1.328  1.00 21.29      A    C
ATOM    819  N   SER A  80      30.772  33.662   2.990  1.00 23.46      A    N
ATOM    820  CA  SER A  80      31.504  33.033   4.093  1.00 23.02      A    C
ATOM    821  C   SER A  80      30.942  33.199   5.514  1.00 32.11      A    C
ATOM    822  O   SER A  80      31.043  32.295   6.329  1.00 36.53      A    O
ATOM    823  CB  SER A  80      32.923  33.503   4.080  1.00 23.28      A    C
ATOM    824  OG  SER A  80      33.306  33.593   2.744  1.00 35.11      A    O
ATOM    825  N   ALA A  81      30.420  34.359   5.855  1.00 25.54      A    N
ATOM    826  CA  ALA A  81      29.926  34.557   7.215  1.00 24.31      A    C
ATOM    827  C   ALA A  81      28.596  33.864   7.337  1.00 27.82      A    C
ATOM    828  O   ALA A  81      28.203  33.382   8.388  1.00 31.38      A    O
ATOM    829  CB  ALA A  81      29.772  36.024   7.497  1.00 24.33      A    C
ATOM    830  N   ILE A  82      27.866  33.827   6.243  1.00 22.04      A    N
ATOM    831  CA  ILE A  82      26.683  33.001   6.235  1.00 18.51      A    C
ATOM    832  C   ILE A  82      27.076  31.535   6.400  1.00 25.73      A    C
ATOM    833  O   ILE A  82      26.725  30.941   7.397  1.00 25.46      A    O
ATOM    834  CB  ILE A  82      25.848  33.235   5.039  1.00 19.07      A    C
ATOM    835  CG1 ILE A  82      25.373  34.680   5.020  1.00 18.31      A    C
ATOM    836  CG2 ILE A  82      24.667  32.314   5.051  1.00 20.61      A    C
ATOM    837  CD1 ILE A  82      24.482  35.008   3.775  1.00 10.47      A    C
ATOM    838  N   VAL A  83      27.804  30.950   5.439  1.00 23.74      A    N
ATOM    839  CA  VAL A  83      28.282  29.573   5.610  1.00 21.54      A    C
ATOM    840  C   VAL A  83      28.872  29.378   7.006  1.00 25.82      A    C
ATOM    841  O   VAL A  83      28.338  28.607   7.782  1.00 29.09      A    O
ATOM    842  CB  VAL A  83      29.297  29.142   4.540  1.00 23.55      A    C
ATOM    843  CG1 VAL A  83      29.629  27.679   4.721  1.00 22.64      A    C
ATOM    844  CG2 VAL A  83      28.767  29.403   3.128  1.00 22.15      A    C
ATOM    845  N   GLU A  84      29.878  30.153   7.385  1.00 17.60      A    N
ATOM    846  CA  GLU A  84      30.481  30.002   8.733  1.00 17.85      A    C
ATOM    847  C   GLU A  84      29.483  29.965   9.899  1.00 23.55      A    C
ATOM    848  O   GLU A  84      29.822  29.474  10.984  1.00 24.40      A    O
ATOM    849  CB  GLU A  84      31.411  31.165   9.018  1.00 19.77      A    C
ATOM    850  CG  GLU A  84      32.093  31.142  10.353  1.00 25.71      A    C
ATOM    851  CD  GLU A  84      33.544  31.529  10.198  1.00 54.40      A    C
ATOM    852  OE1 GLU A  84      34.199  31.833  11.211  1.00 58.79      A    O
ATOM    853  OE2 GLU A  84      34.014  31.546   9.038  1.00 47.81      A    O
ATOM    854  N   LYS A  85      28.302  30.548   9.731  1.00 15.70      A    N
ATOM    855  CA  LYS A  85      27.267  30.446  10.802  1.00 16.90      A    C
ATOM    856  C   LYS A  85      26.560  29.138  10.707  1.00 22.17      A    C
ATOM    857  O   LYS A  85      26.155  28.531  11.703  1.00 25.84      A    O
ATOM    858  CB  LYS A  85      26.199  31.537  10.658  1.00 22.02      A    C
ATOM    859  CG  LYS A  85      26.665  32.941  11.100  1.00 42.37      A    C
ATOM    860  CD  LYS A  85      26.600  33.130  12.612  1.00 37.67      A    C
ATOM    861  CE  LYS A  85      27.429  34.340  13.033  1.00 38.94      A    C
ATOM    862  NZ  LYS A  85      27.545  34.488  14.525  1.00 45.83      A    N
ATOM    863  N   VAL A  86      26.271  28.745   9.489  1.00 16.51      A    N
ATOM    864  CA  VAL A  86      25.443  27.572   9.345  1.00 14.22      A    C
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ATOM	865	C	VAL	A	86	26.264	26.395	9.797	1.00	21.89	A C
ATOM	866	O	VAL	A	86	25.753	25.462	10.383	1.00	26.00	A O
ATOM	867	CB	VAL	A	86	24.976	27.417	7.932	1.00	17.56	A C
ATOM	868	CG1	VAL	A	86	24.433	26.022	7.724	1.00	17.87	A C
ATOM	869	CG2	VAL	A	86	23.872	28.474	7.648	1.00	17.11	A C
ATOM	870	N	LEU	A	87	27.562	26.449	9.582	1.00	15.99	A N
ATOM	871	CA	LEU	A	87	28.401	25.302	9.935	1.00	13.53	A C
ATOM	872	C	LEU	A	87	28.627	25.178	11.440	1.00	22.36	A C
ATOM	873	O	LEU	A	87	28.829	24.093	11.949	1.00	25.32	A O
ATOM	874	CB	LEU	A	87	29.744	25.376	9.190	1.00	9.43	A C
ATOM	875	CG	LEU	A	87	29.763	25.125	7.702	1.00	9.07	A C
ATOM	876	CD1	LEU	A	87	31.117	25.231	7.012	1.00	7.73	A C
ATOM	877	CD2	LEU	A	87	29.053	23.869	7.263	1.00	3.00	A C
ATOM	878	N	ILE	A	88	28.659	26.306	12.147	1.00	19.45	A N
ATOM	879	CA	ILE	A	88	28.903	26.308	13.566	1.00	17.54	A C
ATOM	880	C	ILE	A	88	27.749	25.847	14.474	1.00	25.57	A C
ATOM	881	O	ILE	A	88	28.008	25.136	15.466	1.00	26.59	A O
ATOM	882	CB	ILE	A	88	29.325	27.667	14.044	1.00	22.05	A C
ATOM	883	CG1	ILE	A	88	30.565	28.153	13.291	1.00	24.50	A C
ATOM	884	CG2	ILE	A	88	29.683	27.569	15.502	1.00	23.24	A C
ATOM	885	CD1	ILE	A	88	31.333	29.208	14.060	1.00	33.79	A C
ATOM	886	N	PHE	A	89	26.526	26.355	14.232	1.00	19.74	A N
ATOM	887	CA	PHE	A	89	25.293	25.767	14.768	1.00	18.67	A C
ATOM	888	C	PHE	A	89	25.012	24.428	14.074	1.00	27.39	A C
ATOM	889	O	PHE	A	89	23.856	23.960	13.997	1.00	26.53	A O
ATOM	890	CB	PHE	A	89	24.071	26.707	14.490	1.00	21.76	A C
ATOM	891	CG	PHE	A	89	24.151	28.058	15.197	1.00	21.84	A C
ATOM	892	CD1	PHE	A	89	25.097	28.995	14.813	1.00	19.42	A C
ATOM	893	CD2	PHE	A	89	23.280	28.374	16.242	1.00	23.47	A C
ATOM	894	CE1	PHE	A	89	25.200	30.196	15.436	1.00	18.64	A C
ATOM	895	CE2	PHE	A	89	23.387	29.581	16.892	1.00	25.67	A C
ATOM	896	CZ	PHE	A	89	24.364	30.513	16.474	1.00	21.45	A C
ATOM	897	N	GLY	A	90	26.048	23.834	13.493	1.00	27.59	A N
ATOM	898	CA	GLY	A	90	25.956	22.424	13.093	1.00	27.06	A C
ATOM	899	C	GLY	A	90	24.989	22.057	11.965	1.00	32.24	A C
ATOM	900	O	GLY	A	90	24.336	21.005	12.027	1.00	32.43	A O
ATOM	901	N	GLY	A	91	24.929	22.870	10.900	1.00	26.55	A N
ATOM	902	CA	GLY	A	91	24.156	22.516	9.680	1.00	21.94	A C
ATOM	903	C	GLY	A	91	25.048	21.950	8.590	1.00	20.00	A C
ATOM	904	O	GLY	A	91	26.268	21.892	8.781	1.00	16.68	A O
ATOM	905	N	ASP	A	92	24.437	21.499	7.485	1.00	13.17	A N
ATOM	906	CA	ASP	A	92	25.114	20.915	6.290	1.00	15.27	A C
ATOM	907	C	ASP	A	92	24.574	21.779	5.170	1.00	19.90	A C
ATOM	908	O	ASP	A	92	23.375	21.778	4.963	1.00	20.24	A O
ATOM	909	CB	ASP	A	92	24.570	19.488	5.927	1.00	14.96	A C
ATOM	910	CG	ASP	A	92	25.490	18.716	4.983	1.00	27.84	A C
ATOM	911	OD1	ASP	A	92	25.080	17.645	4.459	1.00	28.64	A O
ATOM	912	OD2	ASP	A	92	26.654	19.149	4.791	1.00	35.91	A O
ATOM	913	N	ILE	A	93	25.422	22.506	4.460	1.00	16.02	A N
ATOM	914	CA	ILE	A	93	24.936	23.365	3.404	1.00	16.16	A C
ATOM	915	C	ILE	A	93	24.875	22.512	2.122	1.00	24.09	A C
ATOM	916	O	ILE	A	93	25.899	22.194	1.542	1.00	24.72	A O
ATOM	917	CB	ILE	A	93	25.870	24.613	3.275	1.00	19.08	A C
ATOM	918	CG1	ILE	A	93	25.447	25.702	4.264	1.00	19.82	A C
ATOM	919	CG2	ILE	A	93	25.886	25.167	1.896	1.00	15.74	A C
ATOM	920	CD1	ILE	A	93	26.587	26.341	4.933	1.00	24.36	A C
ATOM	921	N	LEU	A	94	23.675	22.137	1.675	1.00	19.62	A N
ATOM	922	CA	LEU	A	94	23.582	21.075	0.667	1.00	16.38	A C
ATOM	923	C	LEU	A	94	23.786	21.639	-0.698	1.00	19.23	A C
ATOM	924	O	LEU	A	94	24.102	20.903	-1.634	1.00	16.68	A O
ATOM	925	CB	LEU	A	94	22.197	20.429	0.668	1.00	14.56	A C
ATOM	926	CG	LEU	A	94	21.537	19.966	1.954	1.00	16.15	A C
ATOM	927	CD1	LEU	A	94	20.147	19.632	1.669	1.00	12.39	A C
ATOM	928	CD2	LEU	A	94	22.277	18.739	2.483	1.00	20.71	A C
ATOM	929	N	LYS	A	95	23.452	22.906	-0.875	1.00	20.91	A N
ATOM	930	CA	LYS	A	95	23.599	23.506	-2.206	1.00	22.21	A C
ATOM	931	C	LYS	A	95	23.651	24.999	-2.207	1.00	29.19	A C

ATOM	932	O	LYS	A	95	23.376	25.631	-1.180	1.00	27.60	A	O
ATOM	933	CB	LYS	A	95	22.562	22.991	-3.202	1.00	23.87	A	C
ATOM	934	CG	LYS	A	95	21.338	22.409	-2.596	1.00	29.52	A	C
ATOM	935	CD	LYS	A	95	20.455	21.807	-3.658	1.00	24.32	A	C
ATOM	936	CE	LYS	A	95	21.045	20.547	-4.264	1.00	14.27	A	C
ATOM	937	NZ	LYS	A	95	20.210	20.120	-5.425	1.00	14.17	A	N
ATOM	938	N	PHE	A	96	24.122	25.541	-3.326	1.00	28.64	A	N
ATOM	939	CA	PHE	A	96	23.998	26.977	-3.661	1.00	31.20	A	C
ATOM	940	C	PHE	A	96	23.279	27.022	-5.015	1.00	42.99	A	C
ATOM	941	O	PHE	A	96	23.916	26.750	-6.040	1.00	43.10	A	O
ATOM	942	CB	PHE	A	96	25.391	27.571	-3.906	1.00	32.50	A	C
ATOM	943	CG	PHE	A	96	26.282	27.550	-2.713	1.00	32.36	A	C
ATOM	944	CD1	PHE	A	96	26.875	26.381	-2.305	1.00	34.57	A	C
ATOM	945	CD2	PHE	A	96	26.519	28.702	-1.996	1.00	33.85	A	C
ATOM	946	CE1	PHE	A	96	27.705	26.351	-1.169	1.00	35.00	A	C
ATOM	947	CE2	PHE	A	96	27.336	28.682	-0.874	1.00	36.01	A	C
ATOM	948	CZ	PHE	A	96	27.935	27.499	-0.466	1.00	33.47	A	C
ATOM	949	N	ALA	A	97	21.975	27.299	-5.047	1.00	42.92	A	N
ATOM	950	CA	ALA	A	97	21.215	26.917	-6.244	1.00	43.74	A	C
ATOM	951	C	ALA	A	97	20.253	27.931	-6.851	1.00	51.18	A	C
ATOM	952	O	ALA	A	97	20.366	28.283	-8.028	1.00	51.28	A	O
ATOM	953	CB	ALA	A	97	20.562	25.557	-6.081	1.00	44.28	A	C
ATOM	954	N	GLY	A	98	19.283	28.407	-6.091	1.00	49.09	A	N
ATOM	955	CA	GLY	A	98	18.465	29.472	-6.654	1.00	48.73	A	C
ATOM	956	C	GLY	A	98	19.394	30.670	-6.700	1.00	52.70	A	C
ATOM	957	O	GLY	A	98	20.469	30.633	-7.286	1.00	54.94	A	O
ATOM	958	N	ASP	A	99	18.980	31.740	-6.061	1.00	46.01	A	N
ATOM	959	CA	ASP	A	99	19.944	32.658	-5.535	1.00	43.99	A	C
ATOM	960	C	ASP	A	99	19.789	32.398	-4.041	1.00	46.05	A	C
ATOM	961	O	ASP	A	99	19.451	33.293	-3.273	1.00	48.83	A	O
ATOM	962	CB	ASP	A	99	19.559	34.093	-5.901	1.00	45.68	A	C
ATOM	963	CG	ASP	A	99	19.887	34.446	-7.357	1.00	52.97	A	C
ATOM	964	OD1	ASP	A	99	20.992	34.075	-7.829	1.00	50.10	A	O
ATOM	965	OD2	ASP	A	99	19.070	35.176	-7.993	1.00	57.93	A	O
ATOM	966	N	ALA	A	100	19.993	31.149	-3.644	1.00	39.36	A	N
ATOM	967	CA	ALA	A	100	19.828	30.754	-2.250	1.00	38.37	A	C
ATOM	968	C	ALA	A	100	20.775	29.674	-1.774	1.00	37.77	A	C
ATOM	969	O	ALA	A	100	21.361	28.927	-2.553	1.00	36.53	A	O
ATOM	970	CB	ALA	A	100	18.391	30.310	-1.988	1.00	39.27	A	C
ATOM	971	N	LEU	A	101	20.872	29.579	-0.457	1.00	33.16	A	N
ATOM	972	CA	LEU	A	101	21.615	28.516	0.194	1.00	32.44	A	C
ATOM	973	C	LEU	A	101	20.648	27.597	0.870	1.00	29.84	A	C
ATOM	974	O	LEU	A	101	19.900	28.055	1.710	1.00	29.16	A	O
ATOM	975	CB	LEU	A	101	22.461	29.092	1.305	1.00	32.25	A	C
ATOM	976	CG	LEU	A	101	23.930	29.295	1.062	1.00	35.54	A	C
ATOM	977	CD1	LEU	A	101	24.067	30.670	0.547	1.00	34.63	A	C
ATOM	978	CD2	LEU	A	101	24.567	29.160	2.413	1.00	40.04	A	C
ATOM	979	N	LEU	A	102	20.701	26.309	0.545	1.00	25.15	A	N
ATOM	980	CA	LEU	A	102	19.814	25.308	1.156	1.00	24.95	A	C
ATOM	981	C	LEU	A	102	20.647	24.547	2.121	1.00	30.50	A	C
ATOM	982	O	LEU	A	102	21.613	23.901	1.717	1.00	32.16	A	O
ATOM	983	CB	LEU	A	102	19.321	24.301	0.104	1.00	24.11	A	C
ATOM	984	CG	LEU	A	102	18.403	23.207	0.651	1.00	23.46	A	C
ATOM	985	CD1	LEU	A	102	17.204	23.882	1.197	1.00	21.89	A	C
ATOM	986	CD2	LEU	A	102	17.984	22.304	-0.429	1.00	21.08	A	C
ATOM	987	N	ALA	A	103	20.264	24.584	3.385	1.00	28.63	A	N
ATOM	988	CA	ALA	A	103	20.993	23.876	4.452	1.00	28.71	A	C
ATOM	989	C	ALA	A	103	20.165	22.772	5.123	1.00	33.85	A	C
ATOM	990	O	ALA	A	103	18.917	22.779	5.085	1.00	33.77	A	O
ATOM	991	CB	ALA	A	103	21.495	24.876	5.503	1.00	29.30	A	C
ATOM	992	N	LEU	A	104	20.852	21.832	5.779	1.00	28.42	A	N
ATOM	993	CA	LEU	A	104	20.150	20.722	6.419	1.00	25.49	A	C
ATOM	994	C	LEU	A	104	20.744	20.286	7.759	1.00	36.73	A	C
ATOM	995	O	LEU	A	104	21.957	20.087	7.868	1.00	39.79	A	O
ATOM	996	CB	LEU	A	104	20.076	19.512	5.492	1.00	22.83	A	C
ATOM	997	CG	LEU	A	104	19.642	18.299	6.315	1.00	21.34	A	C
ATOM	998	CD1	LEU	A	104	18.169	18.390	6.654	1.00	21.45	A	C

ATOM	999	CD2	LEU	A	104	19.969	17.005	5.606	1.00	7.45	A C
ATOM	1000	N	TRP	A	105	19.878	20.205	8.770	1.00	32.65	A N
ATOM	1001	CA	TRP	A	105	20.152	19.544	10.044	1.00	31.43	A C
ATOM	1002	C	TRP	A	105	19.435	18.206	9.998	1.00	37.13	A C
ATOM	1003	O	TRP	A	105	18.240	18.136	10.261	1.00	38.00	A O
ATOM	1004	CB	TRP	A	105	19.575	20.367	11.194	1.00	29.38	A C
ATOM	1005	CG	TRP	A	105	20.483	21.477	11.659	1.00	30.77	A C
ATOM	1006	CD1	TRP	A	105	21.332	21.446	12.722	1.00	33.49	A C
ATOM	1007	CD2	TRP	A	105	20.677	22.759	11.028	1.00	31.03	A C
ATOM	1008	NE1	TRP	A	105	22.045	22.628	12.800	1.00	33.14	A N
ATOM	1009	CE2	TRP	A	105	21.676	23.439	11.760	1.00	34.09	A C
ATOM	1010	CE3	TRP	A	105	20.166	23.360	9.860	1.00	32.65	A C
ATOM	1011	CZ2	TRP	A	105	22.157	24.691	11.379	1.00	33.45	A C
ATOM	1012	CZ3	TRP	A	105	20.598	24.651	9.529	1.00	33.17	A C
ATOM	1013	CH2	TRP	A	105	21.552	25.309	10.309	1.00	33.58	A C
ATOM	1014	N	ARG	A	106	20.143	17.154	9.609	1.00	34.13	A N
ATOM	1015	CA	ARG	A	106	19.570	15.821	9.627	1.00	34.92	A C
ATOM	1016	C	ARG	A	106	19.626	15.295	11.043	1.00	45.16	A C
ATOM	1017	O	ARG	A	106	20.647	15.437	11.725	1.00	46.85	A O
ATOM	1018	CB	ARG	A	106	20.354	14.902	8.720	1.00	30.75	A C
ATOM	1019	CG	ARG	A	106	19.834	13.510	8.673	1.00	31.41	A C
ATOM	1020	CD	ARG	A	106	20.593	12.693	7.666	1.00	16.84	A C
ATOM	1021	NE	ARG	A	106	19.960	11.393	7.471	1.00	31.98	A N
ATOM	1022	CZ	ARG	A	106	20.327	10.497	6.562	1.00	57.19	A C
ATOM	1023	NH1	ARG	A	106	21.297	10.780	5.717	1.00	48.06	A N
ATOM	1024	NH2	ARG	A	106	19.723	9.314	6.500	1.00	54.66	A N
ATOM	1025	N	VAL	A	107	18.529	14.704	11.495	1.00	42.63	A N
ATOM	1026	CA	VAL	A	107	18.377	14.420	12.908	1.00	41.84	A C
ATOM	1027	C	VAL	A	107	17.275	13.384	13.032	1.00	49.58	A C
ATOM	1028	O	VAL	A	107	16.590	13.097	12.047	1.00	51.17	A O
ATOM	1029	CB	VAL	A	107	17.965	15.691	13.663	1.00	43.27	A C
ATOM	1030	CG1	VAL	A	107	16.551	15.575	14.142	1.00	42.58	A C
ATOM	1031	CG2	VAL	A	107	18.929	16.016	14.792	1.00	42.74	A C
ATOM	1032	N	GLU	A	108	17.142	12.801	14.229	1.00	46.31	A N
ATOM	1033	CA	GLU	A	108	16.060	11.866	14.567	1.00	45.88	A C
ATOM	1034	C	GLU	A	108	14.805	12.606	15.038	1.00	46.49	A C
ATOM	1035	O	GLU	A	108	14.909	13.591	15.777	1.00	44.34	A O
ATOM	1036	CB	GLU	A	108	16.502	10.951	15.714	1.00	47.73	A C
ATOM	1037	CG	GLU	A	108	15.326	10.242	16.375	1.00	66.91	A C
ATOM	1038	CD	GLU	A	108	15.465	10.103	17.881	1.00	95.15	A C
ATOM	1039	OE1	GLU	A	108	14.418	9.951	18.548	1.00	92.40	A O
ATOM	1040	OE2	GLU	A	108	16.609	10.147	18.393	1.00	91.34	A O
ATOM	1041	N	ARG	A	109	13.631	12.099	14.652	1.00	42.93	A N
ATOM	1042	CA	ARG	A	109	12.353	12.770	14.952	1.00	42.72	A C
ATOM	1043	C	ARG	A	109	12.254	13.355	16.361	1.00	46.79	A C
ATOM	1044	O	ARG	A	109	12.058	14.560	16.521	1.00	46.30	A O
ATOM	1045	CB	ARG	A	109	11.160	11.869	14.650	1.00	42.69	A C
ATOM	1046	CG	ARG	A	109	10.916	11.647	13.160	1.00	49.99	A C
ATOM	1047	CD	ARG	A	109	10.322	10.294	12.901	1.00	58.91	A C
ATOM	1048	NE	ARG	A	109	9.893	10.128	11.516	1.00	69.26	A N
ATOM	1049	CZ	ARG	A	109	9.687	8.946	10.944	1.00	89.03	A C
ATOM	1050	NH1	ARG	A	109	9.901	7.834	11.636	1.00	82.32	A N
ATOM	1051	NH2	ARG	A	109	9.273	8.872	9.684	1.00	75.08	A N
ATOM	1052	N	LYS	A	110	12.472	12.526	17.380	1.00	41.97	A N
ATOM	1053	CA	LYS	A	110	12.384	12.992	18.763	1.00	41.56	A C
ATOM	1054	C	LYS	A	110	13.145	14.299	18.954	1.00	45.85	A C
ATOM	1055	O	LYS	A	110	12.886	15.050	19.899	1.00	45.57	A O
ATOM	1056	CB	LYS	A	110	12.909	11.949	19.755	1.00	44.27	A C
ATOM	1057	CG	LYS	A	110	11.995	10.747	19.966	1.00	71.57	A C
ATOM	1058	CD	LYS	A	110	12.388	9.942	21.218	1.00	83.79	A C
ATOM	1059	CE	LYS	A	110	11.455	8.745	21.432	1.00	95.38	A C
ATOM	1060	NZ	LYS	A	110	11.693	8.013	22.712	1.00	104.67	A N
ATOM	1061	N	GLN	A	111	14.054	14.588	18.023	1.00	40.99	A N
ATOM	1062	CA	GLN	A	111	14.980	15.695	18.197	1.00	39.73	A C
ATOM	1063	C	GLN	A	111	14.773	16.930	17.338	1.00	41.54	A C
ATOM	1064	O	GLN	A	111	15.320	17.989	17.634	1.00	42.99	A O
ATOM	1065	CB	GLN	A	111	16.407	15.202	18.156	1.00	41.53	A C

ATOM	1066	CG	GLN	A	111	16.790	14.416	19.412	1.00	51.64	A	C
ATOM	1067	CD	GLN	A	111	16.725	15.266	20.669	1.00	78.31	A	C
ATOM	1068	OE1	GLN	A	111	17.030	16.457	20.644	1.00	73.29	A	O
ATOM	1069	NE2	GLN	A	111	16.311	14.660	21.771	1.00	79.13	A	N
ATOM	1070	N	LEU	A	112	13.983	16.782	16.278	1.00	35.06	A	N
ATOM	1071	CA	LEU	A	112	13.475	17.893	15.483	1.00	33.04	A	C
ATOM	1072	C	LEU	A	112	13.106	19.087	16.348	1.00	43.04	A	C
ATOM	1073	O	LEU	A	112	13.394	20.230	16.000	1.00	45.94	A	O
ATOM	1074	CB	LEU	A	112	12.230	17.457	14.722	1.00	31.91	A	C
ATOM	1075	CG	LEU	A	112	12.388	16.618	13.460	1.00	35.61	A	C
ATOM	1076	CD1	LEU	A	112	11.477	17.237	12.433	1.00	35.99	A	C
ATOM	1077	CD2	LEU	A	112	13.839	16.677	12.956	1.00	40.97	A	C
ATOM	1078	N	LYS	A	113	12.431	18.817	17.459	1.00	40.29	A	N
ATOM	1079	CA	LYS	A	113	11.989	19.872	18.354	1.00	39.03	A	C
ATOM	1080	C	LYS	A	113	13.188	20.739	18.691	1.00	39.36	A	C
ATOM	1081	O	LYS	A	113	13.439	21.740	18.037	1.00	39.99	A	O
ATOM	1082	CB	LYS	A	113	11.354	19.250	19.597	1.00	40.62	A	C
ATOM	1083	CG	LYS	A	113	10.928	20.220	20.679	1.00	52.01	A	C
ATOM	1084	CD	LYS	A	113	9.746	19.626	21.432	1.00	63.85	A	C
ATOM	1085	CE	LYS	A	113	9.195	20.536	22.505	1.00	68.15	A	C
ATOM	1086	NZ	LYS	A	113	7.725	20.309	22.577	1.00	78.18	A	N
ATOM	1087	N	ASN	A	114	13.983	20.287	19.640	1.00	34.24	A	N
ATOM	1088	CA	ASN	A	114	15.112	21.052	20.146	1.00	34.26	A	C
ATOM	1089	C	ASN	A	114	15.981	21.697	19.075	1.00	38.10	A	C
ATOM	1090	O	ASN	A	114	16.529	22.760	19.287	1.00	36.43	A	O
ATOM	1091	CB	ASN	A	114	16.007	20.134	20.965	1.00	40.33	A	C
ATOM	1092	CG	ASN	A	114	15.284	19.478	22.103	1.00	61.82	A	C
ATOM	1093	OD1	ASN	A	114	14.770	20.143	23.011	1.00	54.76	A	O
ATOM	1094	ND2	ASN	A	114	15.229	18.155	22.061	1.00	54.36	A	N
ATOM	1095	N	ILE	A	115	16.145	20.992	17.957	1.00	35.93	A	N
ATOM	1096	CA	ILE	A	115	17.064	21.371	16.893	1.00	36.34	A	C
ATOM	1097	C	ILE	A	115	16.532	22.574	16.139	1.00	41.39	A	C
ATOM	1098	O	ILE	A	115	17.270	23.509	15.850	1.00	41.22	A	O
ATOM	1099	CB	ILE	A	115	17.215	20.206	15.888	1.00	39.37	A	C
ATOM	1100	CG1	ILE	A	115	18.012	19.061	16.525	1.00	39.45	A	C
ATOM	1101	CG2	ILE	A	115	17.785	20.693	14.564	1.00	38.39	A	C
ATOM	1102	CD1	ILE	A	115	19.419	19.422	16.902	1.00	35.25	A	C
ATOM	1103	N	ILE	A	116	15.247	22.517	15.808	1.00	38.10	A	N
ATOM	1104	CA	ILE	A	116	14.525	23.668	15.287	1.00	36.45	A	C
ATOM	1105	C	ILE	A	116	14.931	24.924	16.023	1.00	37.91	A	C
ATOM	1106	O	ILE	A	116	15.201	25.942	15.420	1.00	38.35	A	O
ATOM	1107	CB	ILE	A	116	13.016	23.467	15.388	1.00	38.39	A	C
ATOM	1108	CG1	ILE	A	116	12.497	22.865	14.098	1.00	38.02	A	C
ATOM	1109	CG2	ILE	A	116	12.334	24.758	15.718	1.00	39.01	A	C
ATOM	1110	CD1	ILE	A	116	11.274	22.023	14.244	1.00	34.05	A	C
ATOM	1111	N	THR	A	117	15.067	24.824	17.325	1.00	34.23	A	N
ATOM	1112	CA	THR	A	117	15.481	25.969	18.123	1.00	34.35	A	C
ATOM	1113	C	THR	A	117	16.925	26.362	17.847	1.00	40.72	A	C
ATOM	1114	O	THR	A	117	17.335	27.500	18.101	1.00	40.26	A	O
ATOM	1115	CB	THR	A	117	15.372	25.640	19.607	1.00	40.00	A	C
ATOM	1116	OG1	THR	A	117	14.081	25.067	19.876	1.00	44.75	A	O
ATOM	1117	CG2	THR	A	117	15.552	26.890	20.427	1.00	37.57	A	C
ATOM	1118	N	VAL	A	118	17.730	25.392	17.421	1.00	38.85	A	N
ATOM	1119	CA	VAL	A	118	19.103	25.700	17.042	1.00	37.90	A	C
ATOM	1120	C	VAL	A	118	19.066	26.462	15.742	1.00	38.81	A	C
ATOM	1121	O	VAL	A	118	19.690	27.507	15.610	1.00	38.24	A	O
ATOM	1122	CB	VAL	A	118	19.958	24.449	16.856	1.00	41.93	A	C
ATOM	1123	CG1	VAL	A	118	21.310	24.845	16.284	1.00	42.08	A	C
ATOM	1124	CG2	VAL	A	118	20.145	23.753	18.209	1.00	41.85	A	C
ATOM	1125	N	VAL	A	119	18.288	25.966	14.788	1.00	34.11	A	N
ATOM	1126	CA	VAL	A	119	18.184	26.665	13.515	1.00	34.53	A	C
ATOM	1127	C	VAL	A	119	17.620	28.083	13.652	1.00	40.57	A	C
ATOM	1128	O	VAL	A	119	17.978	28.973	12.864	1.00	41.13	A	O
ATOM	1129	CB	VAL	A	119	17.363	25.897	12.477	1.00	38.88	A	C
ATOM	1130	CG1	VAL	A	119	17.458	26.590	11.140	1.00	38.65	A	C
ATOM	1131	CG2	VAL	A	119	17.844	24.473	12.365	1.00	38.83	A	C
ATOM	1132	N	ILE	A	120	16.732	28.292	14.627	1.00	35.58	A	N

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ATOM   1133  CA  ILE A 120      16.037  29.562  14.728  1.00 34.48      A    C
ATOM   1134  C   ILE A 120      16.994  30.566  15.305  1.00 41.14      A    C
ATOM   1135  O   ILE A 120      16.985  31.732  14.927  1.00 40.94      A    O
ATOM   1136  CB  ILE A 120      14.801  29.495  15.595  1.00 35.43      A    C
ATOM   1137  CG1 ILE A 120      13.595  29.069  14.755  1.00 34.22      A    C
ATOM   1138  CG2 ILE A 120      14.577  30.842  16.249  1.00 34.84      A    C
ATOM   1139  CD1 ILE A 120      12.349  28.614  15.592  1.00 33.79      A    C
ATOM   1140  N   LYS A 121      17.841  30.098  16.212  1.00 37.61      A    N
ATOM   1141  CA  LYS A 121      18.869  30.952  16.787  1.00 37.55      A    C
ATOM   1142  C   LYS A 121      19.864  31.396  15.696  1.00 43.01      A    C
ATOM   1143  O   LYS A 121      20.275  32.571  15.637  1.00 43.09      A    O
ATOM   1144  CB  LYS A 121      19.604  30.200  17.906  1.00 39.22      A    C
ATOM   1145  CG  LYS A 121      20.663  31.035  18.589  1.00 45.08      A    C
ATOM   1146  CD  LYS A 121      20.056  32.025  19.574  1.00 46.23      A    C
ATOM   1147  CE  LYS A 121      21.035  33.118  19.916  1.00 52.61      A    C
ATOM   1148  NZ  LYS A 121      22.408  32.533  20.016  1.00 65.19      A    N
ATOM   1149  N   CYS A 122      20.212  30.439  14.833  1.00 38.32      A    N
ATOM   1150  CA  CYS A 122      21.159  30.598  13.723  1.00 37.21      A    C
ATOM   1151  C   CYS A 122      20.620  31.504  12.631  1.00 40.74      A    C
ATOM   1152  O   CYS A 122      21.307  32.405  12.152  1.00 42.45      A    O
ATOM   1153  CB  CYS A 122      21.424  29.222  13.105  1.00 37.09      A    C
ATOM   1154  SG  CYS A 122      22.547  29.226  11.686  1.00 40.88      A    S
ATOM   1155  N   SER A 123      19.401  31.226  12.196  1.00 33.51      A    N
ATOM   1156  CA  SER A 123      18.739  32.086  11.259  1.00 32.39      A    C
ATOM   1157  C   SER A 123      18.733  33.521  11.774  1.00 39.69      A    C
ATOM   1158  O   SER A 123      18.988  34.462  11.028  1.00 40.29      A    O
ATOM   1159  CB  SER A 123      17.341  31.564  10.967  1.00 33.83      A    C
ATOM   1160  OG  SER A 123      17.387  30.160  10.707  1.00 38.26      A    O
ATOM   1161  N   LEU A 124      18.540  33.712  13.065  1.00 37.01      A    N
ATOM   1162  CA  LEU A 124      18.457  35.088  13.546  1.00 36.97      A    C
ATOM   1163  C   LEU A 124      19.815  35.772  13.699  1.00 42.74      A    C
ATOM   1164  O   LEU A 124      19.936  36.985  13.572  1.00 46.00      A    O
ATOM   1165  CB  LEU A 124      17.645  35.158  14.834  1.00 36.28      A    C
ATOM   1166  CG  LEU A 124      16.214  34.670  14.679  1.00 38.71      A    C
ATOM   1167  CD1 LEU A 124      15.760  34.086  16.006  1.00 38.44      A    C
ATOM   1168  CD2 LEU A 124      15.322  35.840  14.287  1.00 39.10      A    C
ATOM   1169  N   GLU A 125      20.853  35.003  13.960  1.00 37.76      A    N
ATOM   1170  CA  GLU A 125      22.196  35.577  13.974  1.00 36.30      A    C
ATOM   1171  C   GLU A 125      22.680  35.828  12.545  1.00 40.26      A    C
ATOM   1172  O   GLU A 125      23.464  36.744  12.291  1.00 38.45      A    O
ATOM   1173  CB  GLU A 125      23.162  34.655  14.723  1.00 37.39      A    C
ATOM   1174  CG  GLU A 125      22.902  34.591  16.228  1.00 42.08      A    C
ATOM   1175  CD  GLU A 125      24.060  33.969  16.979  1.00 62.60      A    C
ATOM   1176  OE1 GLU A 125      25.166  33.885  16.396  1.00 45.36      A    O
ATOM   1177  OE2 GLU A 125      23.867  33.550  18.142  1.00 55.39      A    O
ATOM   1178  N   ILE A 126      22.200  35.027  11.598  1.00 37.04      A    N
ATOM   1179  CA  ILE A 126      22.479  35.310  10.203  1.00 37.50      A    C
ATOM   1180  C   ILE A 126      22.021  36.720   9.831  1.00 42.61      A    C
ATOM   1181  O   ILE A 126      22.769  37.503   9.238  1.00 43.05      A    O
ATOM   1182  CB  ILE A 126      21.871  34.254   9.236  1.00 40.19      A    C
ATOM   1183  CG1 ILE A 126      22.667  32.935   9.314  1.00 39.16      A    C
ATOM   1184  CG2 ILE A 126      21.910  34.782   7.827  1.00 39.68      A    C
ATOM   1185  CD1 ILE A 126      22.054  31.773   8.547  1.00 34.02      A    C
ATOM   1186  N   HIS A 127      20.803  37.073  10.216  1.00 35.91      A    N
ATOM   1187  CA  HIS A 127      20.330  38.418   9.939  1.00 32.99      A    C
ATOM   1188  C   HIS A 127      21.192  39.473  10.631  1.00 39.66      A    C
ATOM   1189  O   HIS A 127      21.541  40.492  10.045  1.00 39.16      A    O
ATOM   1190  CB  HIS A 127      18.849  38.554  10.327  1.00 31.57      A    C
ATOM   1191  CG  HIS A 127      17.927  37.739   9.474  1.00 33.52      A    C
ATOM   1192  ND1 HIS A 127      17.797  37.941   8.115  1.00 34.16      A    N
ATOM   1193  CD2 HIS A 127      17.056  36.756   9.792  1.00 35.15      A    C
ATOM   1194  CE1 HIS A 127      16.902  37.107   7.628  1.00 33.99      A    C
ATOM   1195  NE2 HIS A 127      16.440  36.371   8.624  1.00 35.10      A    N
ATOM   1196  N   GLY A 128      21.557  39.224  11.879  1.00 38.54      A    N
ATOM   1197  CA  GLY A 128      22.421  40.148  12.596  1.00 38.19      A    C
ATOM   1198  C   GLY A 128      23.669  40.423  11.768  1.00 46.54      A    C
ATOM   1199  O   GLY A 128      24.377  41.390  12.008  1.00 49.72      A    O
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ATOM	1200	N	LEU	A	129	23.962	39.571	10.800	1.00	43.10	A N
ATOM	1201	CA	LEU	A	129	25.234	39.713	10.107	1.00	43.44	A C
ATOM	1202	C	LEU	A	129	25.208	41.011	9.309	1.00	50.56	A C
ATOM	1203	O	LEU	A	129	26.242	41.599	9.012	1.00	51.06	A O
ATOM	1204	CB	LEU	A	129	25.502	38.512	9.180	1.00	42.95	A C
ATOM	1205	CG	LEU	A	129	25.988	37.209	9.824	1.00	45.22	A C
ATOM	1206	CD1	LEU	A	129	26.457	36.233	8.768	1.00	43.51	A C
ATOM	1207	CD2	LEU	A	129	27.118	37.536	10.769	1.00	46.48	A C
ATOM	1208	N	PHE	A	130	24.007	41.459	8.978	1.00	49.10	A N
ATOM	1209	CA	PHE	A	130	23.830	42.540	8.019	1.00	49.27	A C
ATOM	1210	C	PHE	A	130	22.928	43.607	8.604	1.00	59.98	A C
ATOM	1211	O	PHE	A	130	21.915	43.952	7.998	1.00	58.79	A O
ATOM	1212	CB	PHE	A	130	23.183	42.010	6.745	1.00	49.94	A C
ATOM	1213	CG	PHE	A	130	23.845	40.784	6.188	1.00	50.18	A C
ATOM	1214	CD1	PHE	A	130	23.122	39.629	5.988	1.00	50.48	A C
ATOM	1215	CD2	PHE	A	130	25.204	40.781	5.888	1.00	52.38	A C
ATOM	1216	CE1	PHE	A	130	23.726	38.501	5.488	1.00	51.19	A C
ATOM	1217	CE2	PHE	A	130	25.816	39.647	5.397	1.00	53.99	A C
ATOM	1218	CZ	PHE	A	130	25.069	38.511	5.185	1.00	51.38	A C
ATOM	1219	N	GLU	A	131	23.303	44.131	9.773	1.00	63.29	A N
ATOM	1220	CA	GLU	A	131	22.479	45.106	10.500	1.00	65.82	A C
ATOM	1221	C	GLU	A	131	22.781	46.527	10.088	1.00	75.76	A C
ATOM	1222	O	GLU	A	131	21.989	47.441	10.323	1.00	76.04	A O
ATOM	1223	CB	GLU	A	131	22.674	44.973	12.006	1.00	66.88	A C
ATOM	1224	CG	GLU	A	131	21.689	44.039	12.665	1.00	73.75	A C
ATOM	1225	CD	GLU	A	131	21.897	43.991	14.144	1.00	85.09	A C
ATOM	1226	OE1	GLU	A	131	22.958	44.479	14.590	1.00	53.63	A O
ATOM	1227	OE2	GLU	A	131	21.003	43.489	14.856	1.00	89.43	A O
ATOM	1228	N	THR	A	132	23.948	46.701	9.491	1.00	76.27	A N
ATOM	1229	CA	THR	A	132	24.361	47.992	8.991	1.00	78.31	A C
ATOM	1230	C	THR	A	132	25.263	47.745	7.795	1.00	86.33	A C
ATOM	1231	O	THR	A	132	26.134	48.554	7.475	1.00	85.85	A O
ATOM	1232	CB	THR	A	132	25.116	48.785	10.072	1.00	93.87	A C
ATOM	1233	OG1	THR	A	132	25.976	47.900	10.810	1.00	95.44	A O
ATOM	1234	CG2	THR	A	132	24.127	49.455	11.027	1.00	95.09	A C
ATOM	1235	N	GLN	A	133	25.047	46.611	7.135	1.00	86.46	A N
ATOM	1236	CA	GLN	A	133	25.870	46.237	5.993	1.00	87.91	A C
ATOM	1237	C	GLN	A	133	25.207	46.380	4.619	1.00	94.96	A C
ATOM	1238	O	GLN	A	133	24.310	45.608	4.253	1.00	94.15	A O
ATOM	1239	CB	GLN	A	133	26.519	44.860	6.179	1.00	89.36	A C
ATOM	1240	CG	GLN	A	133	27.870	44.900	6.891	1.00	106.49	A C
ATOM	1241	CD	GLN	A	133	28.874	43.917	6.312	1.00	130.43	A C
ATOM	1242	OE1	GLN	A	133	30.034	44.263	6.049	1.00	127.12	A O
ATOM	1243	NE2	GLN	A	133	28.440	42.676	6.072	1.00	122.42	A N
ATOM	1244	N	GLU	A	134	25.659	47.394	3.883	1.00	94.45	A N
ATOM	1245	CA	GLU	A	134	25.297	47.608	2.485	1.00	95.54	A C
ATOM	1246	C	GLU	A	134	26.407	48.436	1.847	1.00	102.70	A C
ATOM	1247	O	GLU	A	134	27.158	49.113	2.546	1.00	101.76	A O
ATOM	1248	CB	GLU	A	134	23.982	48.380	2.380	1.00	96.91	A C
ATOM	1249	CG	GLU	A	134	24.145	49.860	2.015	1.00	107.70	A C
ATOM	1250	CD	GLU	A	134	24.759	50.705	3.125	1.00	121.12	A C
ATOM	1251	OE1	GLU	A	134	24.932	51.926	2.921	1.00	100.79	A O
ATOM	1252	OE2	GLU	A	134	25.069	50.153	4.199	1.00	115.70	A O
ATOM	1253	N	TRP	A	135	26.511	48.382	0.525	1.00	103.05	A N
ATOM	1254	CA	TRP	A	135	27.439	49.256	-0.185	1.00	104.85	A C
ATOM	1255	C	TRP	A	135	26.699	50.285	-1.026	1.00	110.16	A C
ATOM	1256	O	TRP	A	135	25.484	50.192	-1.218	1.00	109.04	A O
ATOM	1257	CB	TRP	A	135	28.418	48.459	-1.057	1.00	104.43	A C
ATOM	1258	CG	TRP	A	135	29.234	47.445	-0.299	1.00	106.08	A C
ATOM	1259	CD1	TRP	A	135	29.171	46.086	-0.428	1.00	109.09	A C
ATOM	1260	CD2	TRP	A	135	30.252	47.708	0.682	1.00	106.27	A C
ATOM	1261	NE1	TRP	A	135	30.066	45.485	0.425	1.00	108.74	A N
ATOM	1262	CE2	TRP	A	135	30.735	46.456	1.125	1.00	110.36	A C
ATOM	1263	CE3	TRP	A	135	30.780	48.875	1.248	1.00	107.78	A C
ATOM	1264	CZ2	TRP	A	135	31.746	46.338	2.081	1.00	109.85	A C
ATOM	1265	CZ3	TRP	A	135	31.779	48.756	2.205	1.00	109.50	A C
ATOM	1266	CH2	TRP	A	135	32.256	47.494	2.606	1.00	110.20	A C

ATOM	1267	N	GLU	A	136	27.447	51.268	-1.519	1.00108.80	A	N
ATOM	1268	CA	GLU	A	136	26.900	52.331	-2.360	1.00109.38	A	C
ATOM	1269	C	GLU	A	136	25.634	52.986	-1.797	1.00113.78	A	C
ATOM	1270	O	GLU	A	136	24.513	52.687	-2.237	1.00113.53	A	O
ATOM	1271	CB	GLU	A	136	26.681	51.844	-3.797	1.00110.82	A	C
ATOM	1272	CG	GLU	A	136	25.618	50.779	-3.951	1.00121.14	A	C
ATOM	1273	CD	GLU	A	136	25.527	50.274	-5.371	1.00143.09	A	C
ATOM	1274	OE1	GLU	A	136	26.272	50.787	-6.235	1.00138.44	A	O
ATOM	1275	OE2	GLU	A	136	24.713	49.363	-5.622	1.00137.71	A	O
ATOM	1276	N	GLU	A	137	25.829	53.889	-0.835	1.00109.41	A	N
ATOM	1277	CA	GLU	A	137	24.730	54.639	-0.231	1.00108.52	A	C
ATOM	1278	C	GLU	A	137	23.616	53.703	0.225	1.00109.88	A	C
ATOM	1279	O	GLU	A	137	23.701	53.085	1.292	1.00108.84	A	O
ATOM	1280	CB	GLU	A	137	24.176	55.672	-1.221	1.00110.08	A	C
ATOM	1281	CG	GLU	A	137	23.139	56.633	-0.635	1.00122.16	A	C
ATOM	1282	CD	GLU	A	137	23.763	57.749	0.192	1.00147.14	A	C
ATOM	1283	OE1	GLU	A	137	24.832	57.521	0.800	1.00143.80	A	O
ATOM	1284	OE2	GLU	A	137	23.191	58.861	0.223	1.00142.71	A	O
ATOM	1285	N	GLY	A	138	22.568	53.610	-0.588	1.00105.01	A	N
ATOM	1286	CA	GLY	A	138	21.446	52.730	-0.294	1.00103.89	A	C
ATOM	1287	C	GLY	A	138	21.805	51.278	-0.593	1.00104.66	A	C
ATOM	1288	O	GLY	A	138	22.906	50.821	-0.285	1.00104.29	A	O
ATOM	1289	N	LEU	A	139	20.871	50.564	-1.208	1.00 98.79	A	N
ATOM	1290	CA	LEU	A	139	21.059	49.145	-1.482	1.00 97.57	A	C
ATOM	1291	C	LEU	A	139	20.999	48.360	-0.172	1.00 97.23	A	C
ATOM	1292	O	LEU	A	139	21.711	48.672	0.792	1.00 97.01	A	O
ATOM	1293	CB	LEU	A	139	22.395	48.900	-2.199	1.00 97.66	A	C
ATOM	1294	CG	LEU	A	139	22.557	47.614	-3.011	1.00102.09	A	C
ATOM	1295	CD1	LEU	A	139	24.027	47.381	-3.327	1.00101.96	A	C
ATOM	1296	CD2	LEU	A	139	21.952	46.423	-2.280	1.00104.63	A	C
ATOM	1297	N	ASP	A	140	20.131	47.352	-0.142	1.00 89.22	A	N
ATOM	1298	CA	ASP	A	140	19.947	46.544	1.047	1.00 86.54	A	C
ATOM	1299	C	ASP	A	140	21.199	45.757	1.429	1.00 84.38	A	C
ATOM	1300	O	ASP	A	140	21.949	46.172	2.321	1.00 84.22	A	O
ATOM	1301	CB	ASP	A	140	18.733	45.624	0.895	1.00 88.15	A	C
ATOM	1302	CG	ASP	A	140	17.458	46.268	1.395	1.00 97.95	A	C
ATOM	1303	OD1	ASP	A	140	16.478	45.536	1.658	1.00 98.19	A	O
ATOM	1304	OD2	ASP	A	140	17.456	47.506	1.571	1.00104.33	A	O
ATOM	1305	N	ILE	A	141	21.446	44.655	0.715	1.00 74.94	A	N
ATOM	1306	CA	ILE	A	141	22.328	43.588	1.205	1.00 71.07	A	C
ATOM	1307	C	ILE	A	141	21.695	43.035	2.469	1.00 65.97	A	C
ATOM	1308	O	ILE	A	141	22.043	43.411	3.600	1.00 65.04	A	O
ATOM	1309	CB	ILE	A	141	23.780	44.054	1.477	1.00 73.88	A	C
ATOM	1310	CG1	ILE	A	141	24.537	44.226	0.156	1.00 74.03	A	C
ATOM	1311	CG2	ILE	A	141	24.511	43.068	2.387	1.00 74.02	A	C
ATOM	1312	CD1	ILE	A	141	24.150	43.218	-0.885	1.00 79.04	A	C
ATOM	1313	N	ARG	A	142	20.708	42.175	2.244	1.00 54.74	A	N
ATOM	1314	CA	ARG	A	142	19.887	41.628	3.311	1.00 50.23	A	C
ATOM	1315	C	ARG	A	142	19.477	40.226	2.890	1.00 45.96	A	C
ATOM	1316	O	ARG	A	142	19.686	39.839	1.745	1.00 45.31	A	O
ATOM	1317	CB	ARG	A	142	18.651	42.515	3.510	1.00 47.03	A	C
ATOM	1318	CG	ARG	A	142	18.949	43.869	4.149	1.00 43.70	A	C
ATOM	1319	CD	ARG	A	142	19.453	43.676	5.553	1.00 62.55	A	C
ATOM	1320	NE	ARG	A	142	19.976	44.909	6.130	1.00 86.17	A	N
ATOM	1321	CZ	ARG	A	142	19.268	45.740	6.888	1.00115.07	A	C
ATOM	1322	NH1	ARG	A	142	18.000	45.464	7.170	1.00110.67	A	N
ATOM	1323	NH2	ARG	A	142	19.831	46.840	7.373	1.00107.56	A	N
ATOM	1324	N	VAL	A	143	18.895	39.454	3.799	1.00 37.70	A	N
ATOM	1325	CA	VAL	A	143	18.458	38.118	3.421	1.00 35.27	A	C
ATOM	1326	C	VAL	A	143	17.024	37.808	3.827	1.00 37.32	A	C
ATOM	1327	O	VAL	A	143	16.452	38.484	4.672	1.00 34.12	A	O
ATOM	1328	CB	VAL	A	143	19.421	37.017	3.916	1.00 39.30	A	C
ATOM	1329	CG1	VAL	A	143	20.877	37.440	3.738	1.00 39.19	A	C
ATOM	1330	CG2	VAL	A	143	19.131	36.650	5.371	1.00 39.58	A	C
ATOM	1331	N	LYS	A	144	16.442	36.819	3.155	1.00 37.46	A	N
ATOM	1332	CA	LYS	A	144	15.156	36.229	3.524	1.00 39.23	A	C
ATOM	1333	C	LYS	A	144	15.364	34.773	3.932	1.00 45.74	A	C

ATOM	1334	O	LYS	A	144	15.920	33.983	3.153	1.00	47.14	A	O
ATOM	1335	CB	LYS	A	144	14.186	36.282	2.335	1.00	41.70	A	C
ATOM	1336	CG	LYS	A	144	13.733	37.686	1.989	1.00	47.09	A	C
ATOM	1337	CD	LYS	A	144	12.916	37.749	0.710	1.00	42.30	A	C
ATOM	1338	CE	LYS	A	144	12.907	39.175	0.196	1.00	34.41	A	C
ATOM	1339	NZ	LYS	A	144	12.155	39.312	-1.062	1.00	43.96	A	N
ATOM	1340	N	ILE	A	145	14.920	34.408	5.140	1.00	41.32	A	N
ATOM	1341	CA	ILE	A	145	15.088	33.032	5.603	1.00	39.21	A	C
ATOM	1342	C	ILE	A	145	13.827	32.204	5.728	1.00	44.62	A	C
ATOM	1343	O	ILE	A	145	12.876	32.591	6.407	1.00	46.04	A	O
ATOM	1344	CB	ILE	A	145	15.891	32.914	6.906	1.00	40.43	A	C
ATOM	1345	CG1	ILE	A	145	17.337	33.344	6.673	1.00	39.56	A	C
ATOM	1346	CG2	ILE	A	145	15.883	31.464	7.375	1.00	39.40	A	C
ATOM	1347	CD1	ILE	A	145	18.048	33.763	7.916	1.00	41.94	A	C
ATOM	1348	N	GLY	A	146	13.871	31.031	5.104	1.00	39.69	A	N
ATOM	1349	CA	GLY	A	146	12.824	30.032	5.216	1.00	38.95	A	C
ATOM	1350	C	GLY	A	146	13.286	28.867	6.070	1.00	42.33	A	C
ATOM	1351	O	GLY	A	146	14.453	28.448	6.021	1.00	43.78	A	O
ATOM	1352	N	LEU	A	147	12.369	28.335	6.862	1.00	35.28	A	N
ATOM	1353	CA	LEU	A	147	12.700	27.206	7.717	1.00	33.29	A	C
ATOM	1354	C	LEU	A	147	11.572	26.209	7.599	1.00	35.76	A	C
ATOM	1355	O	LEU	A	147	10.421	26.583	7.691	1.00	35.11	A	O
ATOM	1356	CB	LEU	A	147	12.795	27.681	9.168	1.00	32.05	A	C
ATOM	1357	CG	LEU	A	147	14.007	28.471	9.628	1.00	32.78	A	C
ATOM	1358	CD1	LEU	A	147	13.789	28.817	11.069	1.00	31.01	A	C
ATOM	1359	CD2	LEU	A	147	15.189	27.569	9.506	1.00	32.44	A	C
ATOM	1360	N	ALA	A	148	11.890	24.950	7.363	1.00	33.48	A	N
ATOM	1361	CA	ALA	A	148	10.863	23.925	7.372	1.00	33.97	A	C
ATOM	1362	C	ALA	A	148	11.353	22.817	8.280	1.00	41.02	A	C
ATOM	1363	O	ALA	A	148	12.312	23.028	9.031	1.00	41.04	A	O
ATOM	1364	CB	ALA	A	148	10.572	23.424	6.000	1.00	34.78	A	C
ATOM	1365	N	ALA	A	149	10.681	21.666	8.267	1.00	37.80	A	N
ATOM	1366	CA	ALA	A	149	10.914	20.643	9.300	1.00	36.68	A	C
ATOM	1367	C	ALA	A	149	9.961	19.492	9.082	1.00	39.67	A	C
ATOM	1368	O	ALA	A	149	8.759	19.709	8.966	1.00	40.86	A	O
ATOM	1369	CB	ALA	A	149	10.693	21.250	10.668	1.00	37.56	A	C
ATOM	1370	N	GLY	A	150	10.475	18.271	8.991	1.00	35.44	A	N
ATOM	1371	CA	GLY	A	150	9.642	17.165	8.541	1.00	34.64	A	C
ATOM	1372	C	GLY	A	150	10.487	16.076	7.925	1.00	42.29	A	C
ATOM	1373	O	GLY	A	150	11.669	15.982	8.219	1.00	41.76	A	O
ATOM	1374	N	HIS	A	151	9.861	15.252	7.079	1.00	44.03	A	N
ATOM	1375	CA	HIS	A	151	10.491	14.062	6.543	1.00	46.43	A	C
ATOM	1376	C	HIS	A	151	11.048	14.456	5.203	1.00	49.76	A	C
ATOM	1377	O	HIS	A	151	10.401	15.173	4.438	1.00	52.12	A	O
ATOM	1378	CB	HIS	A	151	9.469	12.913	6.292	1.00	49.33	A	C
ATOM	1379	CG	HIS	A	151	8.524	12.656	7.429	1.00	55.20	A	C
ATOM	1380	ND1	HIS	A	151	8.809	11.790	8.467	1.00	57.88	A	N
ATOM	1381	CD2	HIS	A	151	7.267	13.104	7.653	1.00	58.96	A	C
ATOM	1382	CE1	HIS	A	151	7.775	11.731	9.287	1.00	58.13	A	C
ATOM	1383	NE2	HIS	A	151	6.825	12.519	8.816	1.00	59.01	A	N
ATOM	1384	N	ILE	A	152	12.212	13.914	4.888	1.00	42.33	A	N
ATOM	1385	CA	ILE	A	152	12.916	14.257	3.671	1.00	40.03	A	C
ATOM	1386	C	ILE	A	152	13.354	12.970	3.025	1.00	46.17	A	C
ATOM	1387	O	ILE	A	152	13.662	11.996	3.716	1.00	48.56	A	O
ATOM	1388	CB	ILE	A	152	14.129	15.102	4.002	1.00	41.56	A	C
ATOM	1389	CG1	ILE	A	152	13.668	16.398	4.671	1.00	40.11	A	C
ATOM	1390	CG2	ILE	A	152	14.953	15.351	2.750	1.00	42.61	A	C
ATOM	1391	CD1	ILE	A	152	14.695	17.019	5.575	1.00	48.77	A	C
ATOM	1392	N	SER	A	153	13.313	12.946	1.701	1.00	41.25	A	N
ATOM	1393	CA	SER	A	153	13.858	11.854	0.924	1.00	40.95	A	C
ATOM	1394	C	SER	A	153	15.028	12.449	0.136	1.00	44.61	A	C
ATOM	1395	O	SER	A	153	15.211	13.669	0.092	1.00	43.84	A	O
ATOM	1396	CB	SER	A	153	12.808	11.301	-0.064	1.00	45.66	A	C
ATOM	1397	OG	SER	A	153	11.481	11.395	0.437	1.00	57.42	A	O
ATOM	1398	N	MET	A	154	15.804	11.592	-0.506	1.00	40.36	A	N
ATOM	1399	CA	MET	A	154	17.022	12.041	-1.118	1.00	40.67	A	C
ATOM	1400	C	MET	A	154	17.253	11.271	-2.372	1.00	42.71	A	C

ATOM	1401	O	MET	A	154	17.422	10.070	-2.346	1.00	46.17	A	O
ATOM	1402	CB	MET	A	154	18.195	11.784	-0.182	1.00	43.71	A	C
ATOM	1403	CG	MET	A	154	19.493	12.332	-0.720	1.00	48.10	A	C
ATOM	1404	SD	MET	A	154	20.846	11.159	-0.680	1.00	53.73	A	S
ATOM	1405	CE	MET	A	154	22.170	12.332	-0.472	1.00	50.28	A	C
ATOM	1406	N	LEU	A	155	17.309	11.948	-3.486	1.00	37.92	A	N
ATOM	1407	CA	LEU	A	155	17.461	11.209	-4.727	1.00	38.32	A	C
ATOM	1408	C	LEU	A	155	18.861	11.425	-5.291	1.00	39.11	A	C
ATOM	1409	O	LEU	A	155	19.265	12.549	-5.570	1.00	40.87	A	O
ATOM	1410	CB	LEU	A	155	16.387	11.674	-5.706	1.00	39.09	A	C
ATOM	1411	CG	LEU	A	155	16.168	10.978	-7.047	1.00	43.72	A	C
ATOM	1412	CD1	LEU	A	155	15.718	9.546	-6.841	1.00	43.45	A	C
ATOM	1413	CD2	LEU	A	155	15.120	11.765	-7.797	1.00	45.67	A	C
ATOM	1414	N	VAL	A	156	19.618	10.353	-5.409	1.00	31.00	A	N
ATOM	1415	CA	VAL	A	156	20.879	10.397	-6.124	1.00	29.69	A	C
ATOM	1416	C	VAL	A	156	20.711	9.649	-7.443	1.00	35.05	A	C
ATOM	1417	O	VAL	A	156	20.415	8.468	-7.440	1.00	36.31	A	O
ATOM	1418	CB	VAL	A	156	21.988	9.715	-5.337	1.00	31.76	A	C
ATOM	1419	CG1	VAL	A	156	23.315	9.977	-5.989	1.00	30.82	A	C
ATOM	1420	CG2	VAL	A	156	21.967	10.181	-3.868	1.00	31.63	A	C
ATOM	1421	N	PHE	A	157	20.878	10.358	-8.556	1.00	28.84	A	N
ATOM	1422	CA	PHE	A	157	20.852	9.780	-9.909	1.00	27.81	A	C
ATOM	1423	C	PHE	A	157	22.097	10.264	-10.668	1.00	32.41	A	C
ATOM	1424	O	PHE	A	157	22.733	11.258	-10.275	1.00	33.55	A	O
ATOM	1425	CB	PHE	A	157	19.656	10.355	-10.665	1.00	28.39	A	C
ATOM	1426	CG	PHE	A	157	19.617	11.871	-10.642	1.00	28.27	A	C
ATOM	1427	CD1	PHE	A	157	20.262	12.614	-11.628	1.00	32.76	A	C
ATOM	1428	CD2	PHE	A	157	19.006	12.541	-9.598	1.00	27.27	A	C
ATOM	1429	CE1	PHE	A	157	20.230	14.018	-11.608	1.00	33.71	A	C
ATOM	1430	CE2	PHE	A	157	18.925	13.927	-9.573	1.00	30.63	A	C
ATOM	1431	CZ	PHE	A	157	19.560	14.679	-10.578	1.00	30.53	A	C
ATOM	1432	N	GLY	A	158	22.409	9.589	-11.769	1.00	26.54	A	N
ATOM	1433	CA	GLY	A	158	23.534	9.954	-12.616	1.00	25.39	A	C
ATOM	1434	C	GLY	A	158	24.025	8.702	-13.346	1.00	29.79	A	C
ATOM	1435	O	GLY	A	158	23.223	7.821	-13.704	1.00	30.79	A	O
ATOM	1436	N	ASP	A	159	25.335	8.622	-13.553	1.00	24.46	A	N
ATOM	1437	CA	ASP	A	159	25.939	7.555	-14.339	1.00	25.65	A	C
ATOM	1438	C	ASP	A	159	27.333	7.298	-13.812	1.00	35.22	A	C
ATOM	1439	O	ASP	A	159	27.635	7.635	-12.660	1.00	36.55	A	O
ATOM	1440	CB	ASP	A	159	25.969	7.860	-15.852	1.00	27.35	A	C
ATOM	1441	CG	ASP	A	159	26.781	9.127	-16.227	1.00	42.00	A	C
ATOM	1442	OD1	ASP	A	159	27.521	9.688	-15.395	1.00	44.35	A	O
ATOM	1443	OD2	ASP	A	159	26.666	9.560	-17.397	1.00	45.68	A	O
ATOM	1444	N	GLU	A	160	28.181	6.699	-14.644	1.00	32.02	A	N
ATOM	1445	CA	GLU	A	160	29.423	6.153	-14.130	1.00	33.63	A	C
ATOM	1446	C	GLU	A	160	30.462	7.248	-14.009	1.00	39.77	A	C
ATOM	1447	O	GLU	A	160	31.496	7.062	-13.359	1.00	41.81	A	O
ATOM	1448	CB	GLU	A	160	29.926	5.004	-15.007	1.00	35.50	A	C
ATOM	1449	CG	GLU	A	160	28.926	3.844	-15.154	1.00	41.67	A	C
ATOM	1450	CD	GLU	A	160	28.778	3.039	-13.876	1.00	78.71	A	C
ATOM	1451	OE1	GLU	A	160	29.817	2.735	-13.236	1.00	73.97	A	O
ATOM	1452	OE2	GLU	A	160	27.622	2.722	-13.508	1.00	82.43	A	O
ATOM	1453	N	THR	A	161	30.192	8.386	-14.653	1.00	31.75	A	N
ATOM	1454	CA	THR	A	161	31.073	9.527	-14.556	1.00	29.73	A	C
ATOM	1455	C	THR	A	161	30.376	10.698	-13.861	1.00	32.83	A	C
ATOM	1456	O	THR	A	161	31.013	11.526	-13.260	1.00	31.21	A	O
ATOM	1457	CB	THR	A	161	31.620	9.932	-15.943	1.00	36.61	A	C
ATOM	1458	OG1	THR	A	161	30.536	10.192	-16.856	1.00	43.33	A	O
ATOM	1459	CG2	THR	A	161	32.497	8.833	-16.510	1.00	28.36	A	C
ATOM	1460	N	HIS	A	162	29.054	10.754	-13.888	1.00	30.81	A	N
ATOM	1461	CA	HIS	A	162	28.406	11.888	-13.250	1.00	31.04	A	C
ATOM	1462	C	HIS	A	162	27.492	11.479	-12.116	1.00	31.67	A	C
ATOM	1463	O	HIS	A	162	26.943	10.383	-12.116	1.00	32.80	A	O
ATOM	1464	CB	HIS	A	162	27.659	12.716	-14.278	1.00	34.41	A	C
ATOM	1465	CG	HIS	A	162	28.515	13.190	-15.412	1.00	40.70	A	C
ATOM	1466	ND1	HIS	A	162	29.771	13.734	-15.227	1.00	43.63	A	N
ATOM	1467	CD2	HIS	A	162	28.280	13.230	-16.748	1.00	45.06	A	C

ATOM	1468	CE1	HIS	A	162	30.269	14.090	-16.400	1.00	44.09	A C
ATOM	1469	NE2	HIS	A	162	29.384	13.802	-17.338	1.00	44.65	A N
ATOM	1470	N	SER	A	163	27.352	12.337	-11.111	1.00	23.37	A N
ATOM	1471	CA	SER	A	163	26.292	12.149	-10.159	1.00	22.14	A C
ATOM	1472	C	SER	A	163	25.680	13.483	-9.715	1.00	24.24	A C
ATOM	1473	O	SER	A	163	26.371	14.511	-9.675	1.00	19.62	A O
ATOM	1474	CB	SER	A	163	26.776	11.311	-8.968	1.00	26.83	A C
ATOM	1475	OG	SER	A	163	26.948	9.955	-9.362	1.00	37.99	A O
ATOM	1476	N	HIS	A	164	24.385	13.483	-9.383	1.00	19.77	A N
ATOM	1477	CA	HIS	A	164	23.817	14.687	-8.819	1.00	21.18	A C
ATOM	1478	C	HIS	A	164	22.914	14.268	-7.693	1.00	26.56	A C
ATOM	1479	O	HIS	A	164	22.639	13.097	-7.543	1.00	28.46	A O
ATOM	1480	CB	HIS	A	164	23.021	15.441	-9.889	1.00	24.01	A C
ATOM	1481	CG	HIS	A	164	23.773	15.664	-11.166	1.00	28.88	A C
ATOM	1482	ND1	HIS	A	164	24.504	16.813	-11.414	1.00	30.68	A N
ATOM	1483	CD2	HIS	A	164	23.908	14.884	-12.272	1.00	31.41	A C
ATOM	1484	CE1	HIS	A	164	25.088	16.706	-12.599	1.00	30.82	A C
ATOM	1485	NE2	HIS	A	164	24.728	15.554	-13.150	1.00	30.92	A N
ATOM	1486	N	PHE	A	165	22.381	15.194	-6.922	1.00	24.70	A N
ATOM	1487	CA	PHE	A	165	21.337	14.768	-5.991	1.00	24.41	A C
ATOM	1488	C	PHE	A	165	20.339	15.861	-5.750	1.00	28.51	A C
ATOM	1489	O	PHE	A	165	20.615	17.026	-6.052	1.00	28.28	A O
ATOM	1490	CB	PHE	A	165	21.970	14.401	-4.656	1.00	25.90	A C
ATOM	1491	CG	PHE	A	165	22.285	15.591	-3.798	1.00	26.35	A C
ATOM	1492	CD1	PHE	A	165	21.391	16.029	-2.873	1.00	27.35	A C
ATOM	1493	CD2	PHE	A	165	23.500	16.234	-3.891	1.00	28.11	A C
ATOM	1494	CE1	PHE	A	165	21.696	17.115	-2.054	1.00	26.73	A C
ATOM	1495	CE2	PHE	A	165	23.765	17.335	-3.131	1.00	28.46	A C
ATOM	1496	CZ	PHE	A	165	22.855	17.770	-2.226	1.00	25.71	A C
ATOM	1497	N	LEU	A	166	19.246	15.487	-5.086	1.00	24.52	A N
ATOM	1498	CA	LEU	A	166	18.130	16.362	-4.777	1.00	25.27	A C
ATOM	1499	C	LEU	A	166	17.480	15.925	-3.464	1.00	33.54	A C
ATOM	1500	O	LEU	A	166	17.264	14.724	-3.252	1.00	31.86	A O
ATOM	1501	CB	LEU	A	166	17.077	16.150	-5.862	1.00	25.48	A C
ATOM	1502	CG	LEU	A	166	17.153	16.778	-7.235	1.00	29.44	A C
ATOM	1503	CD1	LEU	A	166	16.419	15.832	-8.201	1.00	28.08	A C
ATOM	1504	CD2	LEU	A	166	16.425	18.091	-7.154	1.00	33.95	A C
ATOM	1505	N	VAL	A	167	17.097	16.879	-2.610	1.00	31.32	A N
ATOM	1506	CA	VAL	A	167	16.212	16.556	-1.484	1.00	29.87	A C
ATOM	1507	C	VAL	A	167	14.760	16.987	-1.713	1.00	38.36	A C
ATOM	1508	O	VAL	A	167	14.501	18.086	-2.222	1.00	39.12	A O
ATOM	1509	CB	VAL	A	167	16.711	17.132	-0.151	1.00	31.28	A C
ATOM	1510	CG1	VAL	A	167	17.924	16.346	0.354	1.00	30.23	A C
ATOM	1511	CG2	VAL	A	167	17.065	18.597	-0.321	1.00	30.54	A C
ATOM	1512	N	ILE	A	168	13.814	16.144	-1.298	1.00	35.15	A N
ATOM	1513	CA	ILE	A	168	12.442	16.217	-1.785	1.00	35.84	A C
ATOM	1514	C	ILE	A	168	11.503	16.117	-0.589	1.00	46.62	A C
ATOM	1515	O	ILE	A	168	11.973	16.145	0.564	1.00	49.15	A O
ATOM	1516	CB	ILE	A	168	12.152	15.072	-2.762	1.00	38.52	A C
ATOM	1517	CG1	ILE	A	168	13.199	15.073	-3.865	1.00	39.47	A C
ATOM	1518	CG2	ILE	A	168	10.791	15.212	-3.372	1.00	37.48	A C
ATOM	1519	CD1	ILE	A	168	13.536	16.464	-4.347	1.00	52.28	A C
ATOM	1520	N	GLY	A	169	10.190	16.074	-0.841	1.00	41.81	A N
ATOM	1521	CA	GLY	A	169	9.221	15.883	0.230	1.00	40.70	A C
ATOM	1522	C	GLY	A	169	8.507	17.169	0.657	1.00	44.85	A C
ATOM	1523	O	GLY	A	169	8.851	18.271	0.202	1.00	43.16	A O
ATOM	1524	N	GLN	A	170	7.506	17.015	1.511	1.00	42.07	A N
ATOM	1525	CA	GLN	A	170	6.714	18.157	1.912	1.00	43.77	A C
ATOM	1526	C	GLN	A	170	7.666	19.134	2.527	1.00	48.65	A C
ATOM	1527	O	GLN	A	170	7.633	20.341	2.225	1.00	50.15	A O
ATOM	1528	CB	GLN	A	170	5.640	17.773	2.962	1.00	46.02	A C
ATOM	1529	CG	GLN	A	170	4.979	19.015	3.608	1.00	78.39	A C
ATOM	1530	CD	GLN	A	170	4.238	18.670	4.921	1.00	114.67	A C
ATOM	1531	OE1	GLN	A	170	3.501	17.698	4.995	1.00	111.85	A O
ATOM	1532	NE2	GLN	A	170	4.455	19.530	5.930	1.00	111.52	A N
ATOM	1533	N	ALA	A	171	8.536	18.595	3.379	1.00	43.52	A N
ATOM	1534	CA	ALA	A	171	9.518	19.404	4.094	1.00	42.42	A C

ATOM	1535	C	ALA	A	171	10.262	20.315	3.134	1.00	46.47	A	C
ATOM	1536	O	ALA	A	171	10.445	21.502	3.428	1.00	45.11	A	O
ATOM	1537	CB	ALA	A	171	10.485	18.512	4.844	1.00	42.98	A	C
ATOM	1538	N	VAL	A	172	10.667	19.754	1.984	1.00	43.40	A	N
ATOM	1539	CA	VAL	A	172	11.411	20.501	0.983	1.00	43.88	A	C
ATOM	1540	C	VAL	A	172	10.599	21.579	0.305	1.00	48.87	A	C
ATOM	1541	O	VAL	A	172	11.046	22.717	0.228	1.00	50.70	A	O
ATOM	1542	CB	VAL	A	172	12.002	19.634	-0.107	1.00	48.30	A	C
ATOM	1543	CG1	VAL	A	172	12.297	20.509	-1.300	1.00	48.82	A	C
ATOM	1544	CG2	VAL	A	172	13.271	18.959	0.369	1.00	47.80	A	C
ATOM	1545	N	ASP	A	173	9.423	21.231	-0.212	1.00	44.33	A	N
ATOM	1546	CA	ASP	A	173	8.517	22.251	-0.741	1.00	43.60	A	C
ATOM	1547	C	ASP	A	173	8.335	23.330	0.323	1.00	48.73	A	C
ATOM	1548	O	ASP	A	173	8.393	24.526	0.043	1.00	47.37	A	O
ATOM	1549	CB	ASP	A	173	7.140	21.664	-1.066	1.00	44.99	A	C
ATOM	1550	CG	ASP	A	173	7.205	20.430	-1.971	1.00	48.19	A	C
ATOM	1551	OD1	ASP	A	173	8.163	20.307	-2.754	1.00	47.58	A	O
ATOM	1552	OD2	ASP	A	173	6.274	19.585	-1.908	1.00	50.20	A	O
ATOM	1553	N	ASP	A	174	8.107	22.899	1.556	1.00	47.91	A	N
ATOM	1554	CA	ASP	A	174	7.720	23.840	2.601	1.00	48.48	A	C
ATOM	1555	C	ASP	A	174	8.716	24.950	2.828	1.00	53.38	A	C
ATOM	1556	O	ASP	A	174	8.331	26.052	3.218	1.00	54.64	A	O
ATOM	1557	CB	ASP	A	174	7.466	23.137	3.932	1.00	50.34	A	C
ATOM	1558	CG	ASP	A	174	6.273	22.255	3.886	1.00	58.36	A	C
ATOM	1559	OD1	ASP	A	174	5.829	21.983	2.756	1.00	56.80	A	O
ATOM	1560	OD2	ASP	A	174	5.803	21.826	4.966	1.00	66.16	A	O
ATOM	1561	N	VAL	A	175	10.002	24.643	2.669	1.00	49.05	A	N
ATOM	1562	CA	VAL	A	175	11.042	25.580	3.068	1.00	47.49	A	C
ATOM	1563	C	VAL	A	175	11.184	26.632	1.997	1.00	54.99	A	C
ATOM	1564	O	VAL	A	175	11.529	27.782	2.279	1.00	56.12	A	O
ATOM	1565	CB	VAL	A	175	12.385	24.896	3.190	1.00	48.66	A	C
ATOM	1566	CG1	VAL	A	175	12.888	24.511	1.827	1.00	47.51	A	C
ATOM	1567	CG2	VAL	A	175	13.356	25.799	3.868	1.00	48.22	A	C
ATOM	1568	N	ARG	A	176	10.942	26.220	0.757	1.00	51.17	A	N
ATOM	1569	CA	ARG	A	176	11.064	27.114	-0.384	1.00	50.72	A	C
ATOM	1570	C	ARG	A	176	9.887	28.089	-0.364	1.00	54.39	A	C
ATOM	1571	O	ARG	A	176	10.054	29.293	-0.539	1.00	54.58	A	O
ATOM	1572	CB	ARG	A	176	11.060	26.285	-1.664	1.00	51.15	A	C
ATOM	1573	CG	ARG	A	176	12.037	26.735	-2.752	1.00	57.65	A	C
ATOM	1574	CD	ARG	A	176	13.453	26.182	-2.609	1.00	48.78	A	C
ATOM	1575	NE	ARG	A	176	13.590	24.778	-2.989	1.00	52.18	A	N
ATOM	1576	CZ	ARG	A	176	14.724	24.233	-3.422	1.00	62.32	A	C
ATOM	1577	NH1	ARG	A	176	15.808	24.979	-3.581	1.00	47.08	A	N
ATOM	1578	NH2	ARG	A	176	14.774	22.940	-3.709	1.00	48.31	A	N
ATOM	1579	N	LEU	A	177	8.700	27.564	-0.081	1.00	50.79	A	N
ATOM	1580	CA	LEU	A	177	7.488	28.370	0.035	1.00	50.61	A	C
ATOM	1581	C	LEU	A	177	7.441	29.349	1.201	1.00	54.33	A	C
ATOM	1582	O	LEU	A	177	6.817	30.403	1.108	1.00	53.36	A	O
ATOM	1583	CB	LEU	A	177	6.279	27.458	0.067	1.00	51.26	A	C
ATOM	1584	CG	LEU	A	177	6.048	26.820	-1.299	1.00	56.61	A	C
ATOM	1585	CD1	LEU	A	177	5.485	25.403	-1.159	1.00	56.94	A	C
ATOM	1586	CD2	LEU	A	177	5.099	27.717	-2.076	1.00	58.83	A	C
ATOM	1587	N	ALA	A	178	8.088	28.993	2.303	1.00	51.62	A	N
ATOM	1588	CA	ALA	A	178	8.306	29.920	3.405	1.00	51.30	A	C
ATOM	1589	C	ALA	A	178	9.177	31.071	2.946	1.00	57.42	A	C
ATOM	1590	O	ALA	A	178	8.856	32.227	3.211	1.00	58.87	A	O
ATOM	1591	CB	ALA	A	178	8.961	29.209	4.570	1.00	51.76	A	C
ATOM	1592	N	GLN	A	179	10.276	30.745	2.260	1.00	52.91	A	N
ATOM	1593	CA	GLN	A	179	11.214	31.736	1.715	1.00	51.84	A	C
ATOM	1594	C	GLN	A	179	10.544	32.890	0.962	1.00	58.30	A	C
ATOM	1595	O	GLN	A	179	10.821	34.055	1.250	1.00	57.40	A	O
ATOM	1596	CB	GLN	A	179	12.307	31.056	0.863	1.00	52.39	A	C
ATOM	1597	CG	GLN	A	179	13.114	31.963	-0.100	1.00	45.44	A	C
ATOM	1598	CD	GLN	A	179	12.585	31.927	-1.536	1.00	64.57	A	C
ATOM	1599	OE1	GLN	A	179	12.330	32.971	-2.132	1.00	68.58	A	O
ATOM	1600	NE2	GLN	A	179	12.405	30.724	-2.087	1.00	41.58	A	N
ATOM	1601	N	ASN	A	180	9.675	32.573	-0.001	1.00	57.77	A	N

ATOM	1602	CA	ASN	A	180	8.909	33.616	-0.690	1.00	58.70	A	C
ATOM	1603	C	ASN	A	180	7.623	34.020	0.030	1.00	63.29	A	C
ATOM	1604	O	ASN	A	180	6.592	34.271	-0.606	1.00	64.65	A	O
ATOM	1605	CB	ASN	A	180	8.663	33.315	-2.183	1.00	62.42	A	C
ATOM	1606	CG	ASN	A	180	8.645	31.832	-2.496	1.00	91.92	A	C
ATOM	1607	OD1	ASN	A	180	7.838	31.074	-1.952	1.00	89.75	A	O
ATOM	1608	ND2	ASN	A	180	9.528	31.412	-3.397	1.00	82.36	A	N
ATOM	1609	N	MET	A	181	7.689	34.051	1.361	1.00	56.61	A	N
ATOM	1610	CA	MET	A	181	6.695	34.727	2.175	1.00	54.83	A	C
ATOM	1611	C	MET	A	181	7.426	35.667	3.100	1.00	58.87	A	C
ATOM	1612	O	MET	A	181	6.835	36.573	3.663	1.00	58.25	A	O
ATOM	1613	CB	MET	A	181	5.900	33.737	3.013	1.00	56.79	A	C
ATOM	1614	CG	MET	A	181	4.951	32.872	2.222	1.00	60.67	A	C
ATOM	1615	SD	MET	A	181	3.994	31.814	3.327	1.00	65.55	A	S
ATOM	1616	CE	MET	A	181	3.549	30.444	2.234	1.00	62.42	A	C
ATOM	1617	N	ALA	A	182	8.719	35.425	3.269	1.00	57.38	A	N
ATOM	1618	CA	ALA	A	182	9.571	36.252	4.129	1.00	58.25	A	C
ATOM	1619	C	ALA	A	182	9.800	37.664	3.553	1.00	63.66	A	C
ATOM	1620	O	ALA	A	182	9.460	37.938	2.400	1.00	64.11	A	O
ATOM	1621	CB	ALA	A	182	10.902	35.551	4.356	1.00	58.70	A	C
ATOM	1622	N	GLN	A	183	10.378	38.554	4.352	1.00	58.58	A	N
ATOM	1623	CA	GLN	A	183	10.894	39.800	3.815	1.00	58.26	A	C
ATOM	1624	C	GLN	A	183	12.356	39.959	4.204	1.00	62.55	A	C
ATOM	1625	O	GLN	A	183	12.958	39.074	4.800	1.00	63.55	A	O
ATOM	1626	CB	GLN	A	183	10.099	40.980	4.360	1.00	60.51	A	C
ATOM	1627	CG	GLN	A	183	8.615	40.966	4.023	1.00	85.97	A	C
ATOM	1628	CD	GLN	A	183	8.261	41.907	2.901	1.00	109.08	A	C
ATOM	1629	OE1	GLN	A	183	8.728	43.053	2.842	1.00	108.57	A	O
ATOM	1630	NE2	GLN	A	183	7.432	41.446	1.976	1.00	98.60	A	N
ATOM	1631	N	MET	A	184	12.948	41.090	3.874	1.00	58.49	A	N
ATOM	1632	CA	MET	A	184	14.282	41.323	4.363	1.00	58.29	A	C
ATOM	1633	C	MET	A	184	14.220	41.293	5.868	1.00	56.67	A	C
ATOM	1634	O	MET	A	184	13.419	41.989	6.465	1.00	54.24	A	O
ATOM	1635	CB	MET	A	184	14.845	42.653	3.860	1.00	61.78	A	C
ATOM	1636	CG	MET	A	184	15.819	42.489	2.685	1.00	66.57	A	C
ATOM	1637	SD	MET	A	184	15.281	41.205	1.506	1.00	71.59	A	S
ATOM	1638	CE	MET	A	184	16.865	40.626	0.814	1.00	68.34	A	C
ATOM	1639	N	ASN	A	185	15.047	40.439	6.457	1.00	51.28	A	N
ATOM	1640	CA	ASN	A	185	15.186	40.308	7.896	1.00	50.27	A	C
ATOM	1641	C	ASN	A	185	14.182	39.352	8.529	1.00	51.92	A	C
ATOM	1642	O	ASN	A	185	14.201	39.157	9.737	1.00	53.38	A	O
ATOM	1643	CB	ASN	A	185	15.207	41.671	8.587	1.00	54.45	A	C
ATOM	1644	CG	ASN	A	185	15.785	41.599	10.004	1.00	94.19	A	C
ATOM	1645	OD1	ASN	A	185	16.871	42.127	10.282	1.00	86.67	A	O
ATOM	1646	ND2	ASN	A	185	15.057	40.944	10.906	1.00	90.36	A	N
ATOM	1647	N	ASP	A	186	13.338	38.730	7.704	1.00	45.60	A	N
ATOM	1648	CA	ASP	A	186	12.322	37.780	8.166	1.00	44.20	A	C
ATOM	1649	C	ASP	A	186	12.738	36.318	8.300	1.00	47.16	A	C
ATOM	1650	O	ASP	A	186	13.437	35.752	7.443	1.00	46.62	A	O
ATOM	1651	CB	ASP	A	186	11.042	37.860	7.328	1.00	45.54	A	C
ATOM	1652	CG	ASP	A	186	10.121	38.979	7.787	1.00	52.16	A	C
ATOM	1653	OD1	ASP	A	186	10.512	39.737	8.704	1.00	51.25	A	O
ATOM	1654	OD2	ASP	A	186	9.034	39.130	7.197	1.00	59.36	A	O
ATOM	1655	N	VAL	A	187	12.290	35.707	9.395	1.00	40.92	A	N
ATOM	1656	CA	VAL	A	187	12.394	34.270	9.536	1.00	39.64	A	C
ATOM	1657	C	VAL	A	187	10.998	33.717	9.593	1.00	42.16	A	C
ATOM	1658	O	VAL	A	187	10.215	34.096	10.442	1.00	42.79	A	O
ATOM	1659	CB	VAL	A	187	13.134	33.874	10.808	1.00	42.70	A	C
ATOM	1660	CG1	VAL	A	187	13.387	32.375	10.836	1.00	41.96	A	C
ATOM	1661	CG2	VAL	A	187	14.420	34.673	10.944	1.00	42.86	A	C
ATOM	1662	N	ILE	A	188	10.709	32.789	8.702	1.00	37.62	A	N
ATOM	1663	CA	ILE	A	188	9.356	32.287	8.497	1.00	36.50	A	C
ATOM	1664	C	ILE	A	188	9.429	30.780	8.594	1.00	41.07	A	C
ATOM	1665	O	ILE	A	188	10.141	30.164	7.808	1.00	42.81	A	O
ATOM	1666	CB	ILE	A	188	8.907	32.634	7.059	1.00	38.72	A	C
ATOM	1667	CG1	ILE	A	188	8.698	34.127	6.948	1.00	38.15	A	C
ATOM	1668	CG2	ILE	A	188	7.632	31.904	6.689	1.00	38.38	A	C

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ATOM   1669  CD1 ILE A 188       7.696  34.603   7.983  1.00 49.87      A    C
ATOM   1670  N   LEU A 189       8.736  30.188   9.568  1.00 36.56      A    N
ATOM   1671  CA  LEU A 189       8.698  28.731   9.721  1.00 34.67      A    C
ATOM   1672  C   LEU A 189       7.422  28.220   9.052  1.00 38.82      A    C
ATOM   1673  O   LEU A 189       6.373  28.851   9.164  1.00 37.30      A    O
ATOM   1674  CB  LEU A 189       8.667  28.345  11.198  1.00 34.21      A    C
ATOM   1675  CG  LEU A 189       9.073  29.384  12.251  1.00 36.87      A    C
ATOM   1676  CD1 LEU A 189       8.426  29.036  13.558  1.00 34.73      A    C
ATOM   1677  CD2 LEU A 189      10.575  29.481  12.433  1.00 40.86      A    C
ATOM   1678  N   SER A 190       7.523  27.073   8.382  1.00 35.92      A    N
ATOM   1679  CA  SER A 190       6.442  26.546   7.578  1.00 36.64      A    C
ATOM   1680  C   SER A 190       5.328  26.084   8.490  1.00 46.21      A    C
ATOM   1681  O   SER A 190       5.493  26.086   9.692  1.00 45.40      A    O
ATOM   1682  CB  SER A 190       6.923  25.382   6.705  1.00 38.79      A    C
ATOM   1683  OG  SER A 190       7.489  24.353   7.485  1.00 49.62      A    O
ATOM   1684  N   PRO A 191       4.169  25.759   7.913  1.00 47.23      A    N
ATOM   1685  CA  PRO A 191       3.057  25.197   8.671  1.00 46.47      A    C
ATOM   1686  C   PRO A 191       3.542  24.193   9.719  1.00 50.50      A    C
ATOM   1687  O   PRO A 191       3.601  24.499  10.917  1.00 52.08      A    O
ATOM   1688  CB  PRO A 191       2.254  24.459   7.588  1.00 47.99      A    C
ATOM   1689  CG  PRO A 191       2.760  24.993   6.233  1.00 51.72      A    C
ATOM   1690  CD  PRO A 191       3.760  26.069   6.529  1.00 47.38      A    C
ATOM   1691  N   ASN A 192       3.873  22.993   9.263  1.00 45.09      A    N
ATOM   1692  CA  ASN A 192       4.381  21.978  10.164  1.00 44.70      A    C
ATOM   1693  C   ASN A 192       5.443  22.533  11.131  1.00 47.83      A    C
ATOM   1694  O   ASN A 192       5.155  22.728  12.301  1.00 48.94      A    O
ATOM   1695  CB  ASN A 192       4.863  20.750   9.397  1.00 43.29      A    C
ATOM   1696  CG  ASN A 192       5.269  19.627  10.312  1.00 72.65      A    C
ATOM   1697  OD1 ASN A 192       6.155  19.790  11.145  1.00 73.88      A    O
ATOM   1698  ND2 ASN A 192       4.550  18.518  10.242  1.00 62.84      A    N
ATOM   1699  N   CYS A 193       6.628  22.856  10.634  1.00 42.87      A    N
ATOM   1700  CA  CYS A 193       7.724  23.342  11.484  1.00 41.49      A    C
ATOM   1701  C   CYS A 193       7.333  24.267  12.636  1.00 48.22      A    C
ATOM   1702  O   CYS A 193       8.082  24.436  13.594  1.00 50.98      A    O
ATOM   1703  CB  CYS A 193       8.826  23.987  10.632  1.00 40.34      A    C
ATOM   1704  SG  CYS A 193       9.910  25.122  11.547  1.00 43.34      A    S
ATOM   1705  N   TRP A 194       6.169  24.887  12.543  1.00 45.03      A    N
ATOM   1706  CA  TRP A 194       5.630  25.626  13.685  1.00 45.19      A    C
ATOM   1707  C   TRP A 194       5.012  24.642  14.697  1.00 50.55      A    C
ATOM   1708  O   TRP A 194       5.171  24.811  15.903  1.00 51.97      A    O
ATOM   1709  CB  TRP A 194       4.617  26.669  13.209  1.00 43.16      A    C
ATOM   1710  CG  TRP A 194       3.642  27.203  14.245  1.00 43.83      A    C
ATOM   1711  CD1 TRP A 194       2.288  27.362  14.083  1.00 46.67      A    C
ATOM   1712  CD2 TRP A 194       3.970  27.875  15.473  1.00 43.34      A    C
ATOM   1713  NE1 TRP A 194       1.745  27.988  15.182  1.00 45.44      A    N
ATOM   1714  CE2 TRP A 194       2.753  28.312  16.052  1.00 46.36      A    C
ATOM   1715  CE3 TRP A 194       5.154  28.042  16.200  1.00 43.99      A    C
ATOM   1716  CZ2 TRP A 194       2.697  28.928  17.301  1.00 44.76      A    C
ATOM   1717  CZ3 TRP A 194       5.099  28.716  17.417  1.00 45.15      A    C
ATOM   1718  CH2 TRP A 194       3.874  29.137  17.960  1.00 45.26      A    C
ATOM   1719  N   GLN A 195       4.332  23.611  14.196  1.00 45.25      A    N
ATOM   1720  CA  GLN A 195       3.806  22.518  15.021  1.00 45.02      A    C
ATOM   1721  C   GLN A 195       4.876  21.884  15.893  1.00 48.42      A    C
ATOM   1722  O   GLN A 195       4.761  21.867  17.120  1.00 47.60      A    O
ATOM   1723  CB  GLN A 195       3.209  21.426  14.127  1.00 46.78      A    C
ATOM   1724  CG  GLN A 195       1.687  21.369  14.150  1.00 77.26      A    C
ATOM   1725  CD  GLN A 195       1.034  22.722  13.913  1.00107.69      A    C
ATOM   1726  OE1 GLN A 195       0.165  23.146  14.681  1.00102.93      A    O
ATOM   1727  NE2 GLN A 195       1.405  23.379  12.812  1.00105.25      A    N
ATOM   1728  N   LEU A 196       5.907  21.349  15.235  1.00 44.86      A    N
ATOM   1729  CA  LEU A 196       7.045  20.692  15.879  1.00 43.74      A    C
ATOM   1730  C   LEU A 196       7.821  21.555  16.883  1.00 46.70      A    C
ATOM   1731  O   LEU A 196       8.359  21.042  17.856  1.00 44.20      A    O
ATOM   1732  CB  LEU A 196       7.998  20.163  14.815  1.00 43.59      A    C
ATOM   1733  CG  LEU A 196       7.306  19.187  13.874  1.00 48.36      A    C
ATOM   1734  CD1 LEU A 196       8.299  18.509  12.959  1.00 48.58      A    C
ATOM   1735  CD2 LEU A 196       6.579  18.154  14.707  1.00 49.40      A    C
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ATOM	1736	N	CYS	A	197	7.878	22.862	16.658	1.00	44.74	A	N
ATOM	1737	CA	CYS	A	197	8.777	23.686	17.450	1.00	46.01	A	C
ATOM	1738	C	CYS	A	197	8.400	23.819	18.923	1.00	52.57	A	C
ATOM	1739	O	CYS	A	197	7.240	23.624	19.314	1.00	53.20	A	O
ATOM	1740	CB	CYS	A	197	8.938	25.071	16.824	1.00	46.76	A	C
ATOM	1741	SG	CYS	A	197	7.550	26.227	17.061	1.00	50.17	A	S
ATOM	1742	N	ASP	A	198	9.399	24.158	19.734	1.00	49.15	A	N
ATOM	1743	CA	ASP	A	198	9.192	24.534	21.136	1.00	48.93	A	C
ATOM	1744	C	ASP	A	198	8.732	25.987	21.232	1.00	52.21	A	C
ATOM	1745	O	ASP	A	198	9.538	26.927	21.198	1.00	51.36	A	O
ATOM	1746	CB	ASP	A	198	10.480	24.321	21.945	1.00	50.86	A	C
ATOM	1747	CG	ASP	A	198	10.425	24.933	23.336	1.00	66.34	A	C
ATOM	1748	OD1	ASP	A	198	11.504	25.102	23.959	1.00	67.59	A	O
ATOM	1749	OD2	ASP	A	198	9.311	25.192	23.835	1.00	76.10	A	O
ATOM	1750	N	ARG	A	199	7.424	26.153	21.378	1.00	47.73	A	N
ATOM	1751	CA	ARG	A	199	6.813	27.468	21.448	1.00	46.50	A	C
ATOM	1752	C	ARG	A	199	7.169	28.257	22.691	1.00	55.28	A	C
ATOM	1753	O	ARG	A	199	6.981	29.473	22.736	1.00	57.14	A	O
ATOM	1754	CB	ARG	A	199	5.303	27.343	21.298	1.00	40.95	A	C
ATOM	1755	CG	ARG	A	199	4.937	26.324	20.255	1.00	43.17	A	C
ATOM	1756	CD	ARG	A	199	3.520	26.457	19.797	1.00	44.64	A	C
ATOM	1757	NE	ARG	A	199	3.207	25.464	18.775	1.00	57.02	A	N
ATOM	1758	CZ	ARG	A	199	2.101	25.494	18.040	1.00	82.95	A	C
ATOM	1759	NH1	ARG	A	199	1.215	26.465	18.223	1.00	78.85	A	N
ATOM	1760	NH2	ARG	A	199	1.886	24.566	17.117	1.00	68.21	A	N
ATOM	1761	N	SER	A	200	7.685	27.598	23.716	1.00	53.43	A	N
ATOM	1762	CA	SER	A	200	8.112	28.370	24.875	1.00	54.36	A	C
ATOM	1763	C	SER	A	200	9.197	29.376	24.466	1.00	57.99	A	C
ATOM	1764	O	SER	A	200	9.304	30.459	25.036	1.00	58.15	A	O
ATOM	1765	CB	SER	A	200	8.619	27.449	25.984	1.00	59.71	A	C
ATOM	1766	OG	SER	A	200	10.003	27.183	25.835	1.00	70.54	A	O
ATOM	1767	N	MET	A	201	9.977	29.021	23.449	1.00	54.26	A	N
ATOM	1768	CA	MET	A	201	11.202	29.754	23.129	1.00	52.97	A	C
ATOM	1769	C	MET	A	201	10.905	31.006	22.325	1.00	54.71	A	C
ATOM	1770	O	MET	A	201	11.512	32.043	22.544	1.00	51.52	A	O
ATOM	1771	CB	MET	A	201	12.181	28.880	22.336	1.00	54.84	A	C
ATOM	1772	CG	MET	A	201	12.493	27.492	22.911	1.00	57.93	A	C
ATOM	1773	SD	MET	A	201	13.634	27.496	24.306	1.00	61.71	A	S
ATOM	1774	CE	MET	A	201	14.172	29.220	24.301	1.00	58.07	A	C
ATOM	1775	N	ILE	A	202	9.965	30.889	21.400	1.00	53.81	A	N
ATOM	1776	CA	ILE	A	202	9.805	31.871	20.343	1.00	55.20	A	C
ATOM	1777	C	ILE	A	202	8.669	32.841	20.592	1.00	63.72	A	C
ATOM	1778	O	ILE	A	202	7.968	32.752	21.602	1.00	63.27	A	O
ATOM	1779	CB	ILE	A	202	9.511	31.194	19.006	1.00	58.14	A	C
ATOM	1780	CG1	ILE	A	202	8.129	30.554	19.051	1.00	58.70	A	C
ATOM	1781	CG2	ILE	A	202	10.542	30.130	18.714	1.00	59.42	A	C
ATOM	1782	CD1	ILE	A	202	7.927	29.486	17.996	1.00	66.72	A	C
ATOM	1783	N	GLU	A	203	8.527	33.773	19.647	1.00	63.23	A	N
ATOM	1784	CA	GLU	A	203	7.418	34.726	19.567	1.00	63.58	A	C
ATOM	1785	C	GLU	A	203	7.079	34.830	18.088	1.00	67.39	A	C
ATOM	1786	O	GLU	A	203	7.845	35.416	17.317	1.00	67.78	A	O
ATOM	1787	CB	GLU	A	203	7.870	36.113	20.048	1.00	65.10	A	C
ATOM	1788	CG	GLU	A	203	8.298	36.171	21.498	1.00	76.46	A	C
ATOM	1789	CD	GLU	A	203	7.169	35.802	22.433	1.00	104.95	A	C
ATOM	1790	OE1	GLU	A	203	6.015	35.687	21.947	1.00	100.84	A	O
ATOM	1791	OE2	GLU	A	203	7.440	35.615	23.641	1.00	97.80	A	O
ATOM	1792	N	ILE	A	204	5.962	34.244	17.677	1.00	62.85	A	N
ATOM	1793	CA	ILE	A	204	5.594	34.309	16.273	1.00	63.57	A	C
ATOM	1794	C	ILE	A	204	4.568	35.397	15.961	1.00	68.74	A	C
ATOM	1795	O	ILE	A	204	4.194	36.192	16.832	1.00	68.92	A	O
ATOM	1796	CB	ILE	A	204	5.114	32.945	15.695	1.00	66.84	A	C
ATOM	1797	CG1	ILE	A	204	3.774	32.523	16.293	1.00	67.45	A	C
ATOM	1798	CG2	ILE	A	204	6.151	31.866	15.887	1.00	67.75	A	C
ATOM	1799	CD1	ILE	A	204	2.562	33.005	15.501	1.00	74.39	A	C
ATOM	1800	N	GLU	A	205	4.136	35.427	14.701	1.00	64.34	A	N
ATOM	1801	CA	GLU	A	205	3.065	36.304	14.261	1.00	64.17	A	C
ATOM	1802	C	GLU	A	205	2.408	35.725	13.020	1.00	71.56	A	C

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ATOM   1803  O   GLU A 205       3.014  34.950  12.285  1.00 71.53      A    O
ATOM   1804  CB  GLU A 205       3.598  37.708  13.999  1.00 65.10      A    C
ATOM   1805  CG  GLU A 205       2.850  38.498  12.950  1.00 74.40      A    C
ATOM   1806  CD  GLU A 205       3.595  39.769  12.593  1.00 97.67      A    C
ATOM   1807  OE1 GLU A 205       3.535  40.202  11.416  1.00109.07      A    O
ATOM   1808  OE2 GLU A 205       4.294  40.297  13.488  1.00 78.80      A    O
ATOM   1809  N   SER A 206       1.152  36.085  12.804  1.00 70.31      A    N
ATOM   1810  CA  SER A 206       0.351  35.407  11.806  1.00 71.37      A    C
ATOM   1811  C   SER A 206       0.746  35.834  10.404  1.00 75.46      A    C
ATOM   1812  O   SER A 206       1.149  36.978  10.161  1.00 74.74      A    O
ATOM   1813  CB  SER A 206      -1.143  35.655  12.051  1.00 77.09      A    C
ATOM   1814  OG  SER A 206      -1.453  35.628  13.442  1.00 88.19      A    O
ATOM   1815  N   VAL A 207       0.654  34.885   9.489  1.00 72.31      A    N
ATOM   1816  CA  VAL A 207       0.818  35.169   8.078  1.00 72.69      A    C
ATOM   1817  C   VAL A 207      -0.523  34.979   7.351  1.00 78.08      A    C
ATOM   1818  O   VAL A 207      -0.925  33.853   7.034  1.00 76.58      A    O
ATOM   1819  CB  VAL A 207       1.900  34.272   7.454  1.00 76.62      A    C
ATOM   1820  CG1 VAL A 207       1.826  34.316   5.929  1.00 76.35      A    C
ATOM   1821  CG2 VAL A 207       3.276  34.681   7.961  1.00 76.46      A    C
ATOM   1822  N   PRO A 208      -1.212  36.090   7.119  1.00 76.42      A    N
ATOM   1823  CA  PRO A 208      -2.512  36.123   6.440  1.00 76.47      A    C
ATOM   1824  C   PRO A 208      -2.583  35.144   5.235  1.00 81.25      A    C
ATOM   1825  O   PRO A 208      -1.540  34.791   4.681  1.00 80.07      A    O
ATOM   1826  CB  PRO A 208      -2.612  37.581   6.004  1.00 78.04      A    C
ATOM   1827  CG  PRO A 208      -1.796  38.357   7.045  1.00 82.20      A    C
ATOM   1828  CD  PRO A 208      -0.805  37.402   7.657  1.00 77.25      A    C
ATOM   1829  N   ASP A 209      -3.805  34.731   4.855  1.00 79.83      A    N
ATOM   1830  CA  ASP A 209      -4.100  33.531   4.010  1.00 80.86      A    C
ATOM   1831  C   ASP A 209      -2.898  32.592   3.830  1.00 83.21      A    C
ATOM   1832  O   ASP A 209      -2.468  32.292   2.708  1.00 83.31      A    O
ATOM   1833  CB  ASP A 209      -4.669  33.923   2.642  1.00 83.81      A    C
ATOM   1834  CG  ASP A 209      -3.783  34.954   1.943  1.00101.77      A    C
ATOM   1835  OD1 ASP A 209      -3.243  34.658   0.856  1.00103.76      A    O
ATOM   1836  OD2 ASP A 209      -3.587  36.053   2.516  1.00109.50      A    O
ATOM   1837  N   GLN A 210      -2.357  32.184   4.974  1.00 77.21      A    N
ATOM   1838  CA  GLN A 210      -1.219  31.271   5.079  1.00 75.45      A    C
ATOM   1839  C   GLN A 210      -1.220  30.722   6.509  1.00 77.35      A    C
ATOM   1840  O   GLN A 210      -1.644  31.412   7.454  1.00 78.51      A    O
ATOM   1841  CB  GLN A 210       0.082  32.036   4.827  1.00 76.24      A    C
ATOM   1842  CG  GLN A 210       0.256  32.479   3.409  1.00 80.75      A    C
ATOM   1843  CD  GLN A 210       0.536  31.308   2.513  1.00100.85      A    C
ATOM   1844  OE1 GLN A 210       0.450  31.403   1.288  1.00 97.70      A    O
ATOM   1845  NE2 GLN A 210       0.863  30.165   3.123  1.00 89.62      A    N
ATOM   1846  N   ARG A 211      -0.732  29.489   6.663  1.00 69.31      A    N
ATOM   1847  CA  ARG A 211      -0.591  28.859   7.982  1.00 66.56      A    C
ATOM   1848  C   ARG A 211       0.762  29.060   8.667  1.00 64.97      A    C
ATOM   1849  O   ARG A 211       0.845  28.970   9.892  1.00 65.41      A    O
ATOM   1850  CB  ARG A 211      -0.913  27.372   7.913  1.00 66.11      A    C
ATOM   1851  CG  ARG A 211      -2.086  27.058   7.019  1.00 74.98      A    C
ATOM   1852  CD  ARG A 211      -2.670  25.712   7.362  1.00 84.76      A    C
ATOM   1853  NE  ARG A 211      -1.694  24.647   7.176  1.00 93.31      A    N
ATOM   1854  CZ  ARG A 211      -1.006  24.075   8.159  1.00107.69      A    C
ATOM   1855  NH1 ARG A 211      -1.175  24.462   9.419  1.00 90.07      A    N
ATOM   1856  NH2 ARG A 211      -0.150  23.104   7.877  1.00 99.33      A    N
ATOM   1857  N   ALA A 212       1.810  29.339   7.884  1.00 56.25      A    N
ATOM   1858  CA  ALA A 212       3.158  29.563   8.426  1.00 54.27      A    C
ATOM   1859  C   ALA A 212       3.159  30.672   9.449  1.00 55.22      A    C
ATOM   1860  O   ALA A 212       2.115  31.221   9.757  1.00 54.75      A    O
ATOM   1861  CB  ALA A 212       4.128  29.869   7.333  1.00 55.02      A    C
ATOM   1862  N   VAL A 213       4.320  30.991  10.000  1.00 51.86      A    N
ATOM   1863  CA  VAL A 213       4.403  32.015  11.044  1.00 51.22      A    C
ATOM   1864  C   VAL A 213       5.718  32.766  10.926  1.00 55.27      A    C
ATOM   1865  O   VAL A 213       6.656  32.277  10.316  1.00 56.62      A    O
ATOM   1866  CB  VAL A 213       4.304  31.410  12.445  1.00 54.60      A    C
ATOM   1867  CG1 VAL A 213       2.997  30.672  12.607  1.00 54.50      A    C
ATOM   1868  CG2 VAL A 213       5.450  30.472  12.677  1.00 54.76      A    C
ATOM   1869  N   LYS A 214       5.781  33.966  11.484  1.00 49.84      A    N
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ATOM	1870	CA	LYS	A	214	6.962	34.801	11.324	1.00	48.92	A	C
ATOM	1871	C	LYS	A	214	7.648	35.105	12.665	1.00	52.39	A	C
ATOM	1872	O	LYS	A	214	7.147	35.884	13.480	1.00	52.32	A	O
ATOM	1873	CB	LYS	A	214	6.613	36.100	10.591	1.00	50.51	A	C
ATOM	1874	CG	LYS	A	214	7.426	37.295	11.076	1.00	60.16	A	C
ATOM	1875	CD	LYS	A	214	7.277	38.479	10.151	1.00	73.11	A	C
ATOM	1876	CE	LYS	A	214	8.350	39.532	10.416	1.00	88.21	A	C
ATOM	1877	NZ	LYS	A	214	8.394	39.985	11.832	1.00	100.38	A	N
ATOM	1878	N	VAL	A	215	8.805	34.496	12.879	1.00	47.69	A	N
ATOM	1879	CA	VAL	A	215	9.443	34.543	14.179	1.00	47.82	A	C
ATOM	1880	C	VAL	A	215	9.777	35.974	14.524	1.00	57.32	A	C
ATOM	1881	O	VAL	A	215	10.585	36.615	13.851	1.00	58.57	A	O
ATOM	1882	CB	VAL	A	215	10.729	33.714	14.211	1.00	50.24	A	C
ATOM	1883	CG1	VAL	A	215	11.377	33.825	15.570	1.00	49.14	A	C
ATOM	1884	CG2	VAL	A	215	10.434	32.261	13.858	1.00	49.73	A	C
ATOM	1885	N	ASN	A	216	9.144	36.496	15.562	1.00	55.63	A	N
ATOM	1886	CA	ASN	A	216	9.440	37.850	15.971	1.00	56.51	A	C
ATOM	1887	C	ASN	A	216	10.618	37.831	16.914	1.00	64.20	A	C
ATOM	1888	O	ASN	A	216	11.538	38.635	16.780	1.00	63.97	A	O
ATOM	1889	CB	ASN	A	216	8.237	38.478	16.657	1.00	57.39	A	C
ATOM	1890	CG	ASN	A	216	7.349	39.224	15.701	1.00	82.40	A	C
ATOM	1891	OD1	ASN	A	216	7.699	40.313	15.244	1.00	74.96	A	O
ATOM	1892	ND2	ASN	A	216	6.163	38.677	15.437	1.00	75.33	A	N
ATOM	1893	N	PHE	A	217	10.589	36.914	17.878	1.00	63.13	A	N
ATOM	1894	CA	PHE	A	217	11.562	36.966	18.964	1.00	64.22	A	C
ATOM	1895	C	PHE	A	217	11.792	35.615	19.600	1.00	68.13	A	C
ATOM	1896	O	PHE	A	217	10.935	34.739	19.531	1.00	67.12	A	O
ATOM	1897	CB	PHE	A	217	11.144	37.984	20.028	1.00	66.80	A	C
ATOM	1898	CG	PHE	A	217	10.816	39.342	19.469	1.00	69.20	A	C
ATOM	1899	CD1	PHE	A	217	11.811	40.297	19.294	1.00	73.01	A	C
ATOM	1900	CD2	PHE	A	217	9.523	39.645	19.082	1.00	71.60	A	C
ATOM	1901	CE1	PHE	A	217	11.512	41.548	18.757	1.00	74.16	A	C
ATOM	1902	CE2	PHE	A	217	9.218	40.879	18.535	1.00	75.04	A	C
ATOM	1903	CZ	PHE	A	217	10.214	41.835	18.390	1.00	73.41	A	C
ATOM	1904	N	LEU	A	218	12.963	35.464	20.216	1.00	65.47	A	N
ATOM	1905	CA	LEU	A	218	13.393	34.211	20.837	1.00	65.22	A	C
ATOM	1906	C	LEU	A	218	13.546	34.407	22.348	1.00	69.93	A	C
ATOM	1907	O	LEU	A	218	14.615	34.192	22.915	1.00	68.81	A	O
ATOM	1908	CB	LEU	A	218	14.737	33.762	20.249	1.00	65.08	A	C
ATOM	1909	CG	LEU	A	218	15.408	32.532	20.880	1.00	68.78	A	C
ATOM	1910	CD1	LEU	A	218	15.296	31.310	19.997	1.00	68.25	A	C
ATOM	1911	CD2	LEU	A	218	16.847	32.809	21.307	1.00	69.42	A	C
ATOM	1912	N	LYS	A	219	12.476	34.852	22.991	1.00	67.75	A	N
ATOM	1913	CA	LYS	A	219	12.461	34.966	24.438	1.00	68.42	A	C
ATOM	1914	C	LYS	A	219	12.497	33.541	24.998	1.00	75.35	A	C
ATOM	1915	O	LYS	A	219	11.531	32.785	24.863	1.00	76.31	A	O
ATOM	1916	CB	LYS	A	219	11.185	35.700	24.892	1.00	70.82	A	C
ATOM	1917	CG	LYS	A	219	11.418	36.856	25.871	1.00	78.56	A	C
ATOM	1918	CD	LYS	A	219	12.132	38.034	25.194	1.00	86.30	A	C
ATOM	1919	CE	LYS	A	219	12.679	39.049	26.213	1.00	95.52	A	C
ATOM	1920	NZ	LYS	A	219	13.347	40.247	25.596	1.00	98.39	A	N
ATOM	1921	N	PRO	A	220	13.620	33.163	25.598	1.00	72.99	A	N
ATOM	1922	CA	PRO	A	220	13.753	31.822	26.154	1.00	72.71	A	C
ATOM	1923	C	PRO	A	220	13.224	31.880	27.572	1.00	75.03	A	C
ATOM	1924	O	PRO	A	220	13.127	32.964	28.156	1.00	75.39	A	O
ATOM	1925	CB	PRO	A	220	15.271	31.620	26.187	1.00	74.25	A	C
ATOM	1926	CG	PRO	A	220	15.850	33.049	26.301	1.00	78.25	A	C
ATOM	1927	CD	PRO	A	220	14.719	34.033	26.055	1.00	73.50	A	C
ATOM	1928	N	PRO	A	221	12.879	30.727	28.127	1.00	69.55	A	N
ATOM	1929	CA	PRO	A	221	12.385	30.679	29.492	1.00	68.57	A	C
ATOM	1930	C	PRO	A	221	13.487	31.119	30.445	1.00	71.37	A	C
ATOM	1931	O	PRO	A	221	14.674	30.924	30.173	1.00	70.50	A	O
ATOM	1932	CB	PRO	A	221	12.032	29.211	29.685	1.00	70.08	A	C
ATOM	1933	CG	PRO	A	221	11.600	28.783	28.340	1.00	74.95	A	C
ATOM	1934	CD	PRO	A	221	12.542	29.503	27.387	1.00	70.44	A	C
ATOM	1935	N	PRO	A	222	13.076	31.727	31.554	1.00	66.92	A	N
ATOM	1936	CA	PRO	A	222	13.973	32.509	32.384	1.00	65.92	A	C

ATOM	1937	C	PRO	A	222	15.259	31.778	32.715	1.00	70.85	A C
ATOM	1938	O	PRO	A	222	16.320	32.394	32.798	1.00	71.82	A O
ATOM	1939	CB	PRO	A	222	13.161	32.763	33.653	1.00	67.07	A C
ATOM	1940	CG	PRO	A	222	11.762	32.564	33.252	1.00	71.80	A C
ATOM	1941	CD	PRO	A	222	11.791	31.484	32.224	1.00	67.25	A C
ATOM	1942	N	ASN	A	223	15.178	30.464	32.881	1.00	65.98	A N
ATOM	1943	CA	ASN	A	223	16.365	29.702	33.222	1.00	65.89	A C
ATOM	1944	C	ASN	A	223	16.727	28.735	32.115	1.00	69.46	A C
ATOM	1945	O	ASN	A	223	16.018	27.750	31.870	1.00	69.52	A O
ATOM	1946	CB	ASN	A	223	16.185	28.995	34.558	1.00	70.85	A C
ATOM	1947	CG	ASN	A	223	16.240	29.958	35.726	1.00	106.18	A C
ATOM	1948	OD1	ASN	A	223	15.207	30.428	36.211	1.00	101.99	A O
ATOM	1949	ND2	ASN	A	223	17.453	30.300	36.150	1.00	100.67	A N
ATOM	1950	N	PHE	A	224	17.847	29.025	31.456	1.00	64.03	A N
ATOM	1951	CA	PHE	A	224	18.149	28.441	30.158	1.00	62.72	A C
ATOM	1952	C	PHE	A	224	19.498	28.931	29.640	1.00	64.15	A C
ATOM	1953	O	PHE	A	224	19.870	30.087	29.859	1.00	64.79	A O
ATOM	1954	CB	PHE	A	224	17.064	28.828	29.160	1.00	64.10	A C
ATOM	1955	CG	PHE	A	224	17.330	28.351	27.767	1.00	65.52	A C
ATOM	1956	CD1	PHE	A	224	17.095	27.036	27.417	1.00	68.81	A C
ATOM	1957	CD2	PHE	A	224	17.803	29.214	26.805	1.00	67.25	A C
ATOM	1958	CE1	PHE	A	224	17.332	26.589	26.131	1.00	69.48	A C
ATOM	1959	CE2	PHE	A	224	18.031	28.773	25.516	1.00	70.10	A C
ATOM	1960	CZ	PHE	A	224	17.795	27.460	25.179	1.00	68.09	A C
ATOM	1961	N	ASN	A	225	20.231	28.052	28.959	1.00	57.38	A N
ATOM	1962	CA	ASN	A	225	21.548	28.417	28.435	1.00	56.37	A C
ATOM	1963	C	ASN	A	225	21.786	27.803	27.073	1.00	59.01	A C
ATOM	1964	O	ASN	A	225	22.157	26.625	26.958	1.00	59.78	A O
ATOM	1965	CB	ASN	A	225	22.669	28.005	29.386	1.00	55.80	A C
ATOM	1966	CG	ASN	A	225	24.016	28.598	28.997	1.00	75.32	A C
ATOM	1967	OD1	ASN	A	225	24.965	28.586	29.789	1.00	64.79	A O
ATOM	1968	ND2	ASN	A	225	24.113	29.098	27.765	1.00	67.22	A N
ATOM	1969	N	PHE	A	226	21.595	28.617	26.044	1.00	51.25	A N
ATOM	1970	CA	PHE	A	226	21.749	28.138	24.697	1.00	48.68	A C
ATOM	1971	C	PHE	A	226	23.066	27.399	24.482	1.00	51.04	A C
ATOM	1972	O	PHE	A	226	23.146	26.525	23.615	1.00	49.64	A O
ATOM	1973	CB	PHE	A	226	21.615	29.262	23.688	1.00	49.13	A C
ATOM	1974	CG	PHE	A	226	21.764	28.797	22.280	1.00	49.20	A C
ATOM	1975	CD1	PHE	A	226	20.664	28.361	21.574	1.00	50.22	A C
ATOM	1976	CD2	PHE	A	226	23.021	28.679	21.710	1.00	50.25	A C
ATOM	1977	CE1	PHE	A	226	20.805	27.876	20.299	1.00	51.25	A C
ATOM	1978	CE2	PHE	A	226	23.172	28.209	20.427	1.00	52.63	A C
ATOM	1979	CZ	PHE	A	226	22.066	27.804	19.720	1.00	50.66	A C
ATOM	1980	N	ASP	A	227	24.092	27.725	25.264	1.00	46.61	A N
ATOM	1981	CA	ASP	A	227	25.357	27.028	25.083	1.00	47.19	A C
ATOM	1982	C	ASP	A	227	25.336	25.561	25.502	1.00	53.24	A C
ATOM	1983	O	ASP	A	227	25.771	24.675	24.749	1.00	53.99	A O
ATOM	1984	CB	ASP	A	227	26.514	27.800	25.694	1.00	49.86	A C
ATOM	1985	CG	ASP	A	227	26.983	28.937	24.796	1.00	61.15	A C
ATOM	1986	OD1	ASP	A	227	28.171	28.918	24.409	1.00	62.44	A O
ATOM	1987	OD2	ASP	A	227	26.144	29.787	24.405	1.00	65.37	A O
ATOM	1988	N	GLU	A	228	24.770	25.309	26.680	1.00	49.10	A N
ATOM	1989	CA	GLU	A	228	24.549	23.956	27.186	1.00	47.60	A C
ATOM	1990	C	GLU	A	228	23.380	23.296	26.469	1.00	47.21	A C
ATOM	1991	O	GLU	A	228	23.401	22.102	26.153	1.00	43.71	A O
ATOM	1992	CB	GLU	A	228	24.280	24.031	28.678	1.00	49.00	A C
ATOM	1993	CG	GLU	A	228	25.449	24.655	29.415	1.00	62.70	A C
ATOM	1994	CD	GLU	A	228	25.023	25.609	30.504	1.00	88.64	A C
ATOM	1995	OE1	GLU	A	228	25.884	26.411	30.942	1.00	88.43	A O
ATOM	1996	OE2	GLU	A	228	23.845	25.527	30.932	1.00	75.58	A O
ATOM	1997	N	PHE	A	229	22.351	24.087	26.218	1.00	43.22	A N
ATOM	1998	CA	PHE	A	229	21.298	23.653	25.327	1.00	41.89	A C
ATOM	1999	C	PHE	A	229	21.935	23.051	24.071	1.00	42.27	A C
ATOM	2000	O	PHE	A	229	21.775	21.855	23.806	1.00	42.58	A O
ATOM	2001	CB	PHE	A	229	20.419	24.838	24.980	1.00	43.56	A C
ATOM	2002	CG	PHE	A	229	19.357	24.529	23.974	1.00	45.54	A C
ATOM	2003	CD1	PHE	A	229	18.355	23.631	24.264	1.00	48.85	A C

ATOM	2004	CD2	PHE	A	229	19.322	25.200	22.768	1.00	48.22	A	C
ATOM	2005	CE1	PHE	A	229	17.362	23.369	23.355	1.00	50.33	A	C
ATOM	2006	CE2	PHE	A	229	18.334	24.952	21.851	1.00	52.06	A	C
ATOM	2007	CZ	PHE	A	229	17.351	24.027	22.137	1.00	50.52	A	C
ATOM	2008	N	PHE	A	230	22.730	23.855	23.365	1.00	34.16	A	N
ATOM	2009	CA	PHE	A	230	23.397	23.422	22.128	1.00	33.08	A	C
ATOM	2010	C	PHE	A	230	24.290	22.176	22.276	1.00	35.21	A	C
ATOM	2011	O	PHE	A	230	24.223	21.238	21.475	1.00	34.97	A	O
ATOM	2012	CB	PHE	A	230	24.188	24.592	21.533	1.00	35.13	A	C
ATOM	2013	CG	PHE	A	230	24.902	24.262	20.242	1.00	36.54	A	C
ATOM	2014	CD1	PHE	A	230	26.259	23.997	20.233	1.00	36.98	A	C
ATOM	2015	CD2	PHE	A	230	24.219	24.253	19.045	1.00	38.43	A	C
ATOM	2016	CE1	PHE	A	230	26.890	23.667	19.091	1.00	37.82	A	C
ATOM	2017	CE2	PHE	A	230	24.867	23.924	17.890	1.00	40.90	A	C
ATOM	2018	CZ	PHE	A	230	26.218	23.649	17.920	1.00	38.04	A	C
ATOM	2019	N	THR	A	231	25.147	22.175	23.281	1.00	31.21	A	N
ATOM	2020	CA	THR	A	231	25.909	20.981	23.575	1.00	31.94	A	C
ATOM	2021	C	THR	A	231	25.028	19.756	23.600	1.00	39.20	A	C
ATOM	2022	O	THR	A	231	25.252	18.795	22.873	1.00	41.65	A	O
ATOM	2023	CB	THR	A	231	26.525	21.070	24.919	1.00	40.81	A	C
ATOM	2024	OG1	THR	A	231	27.536	22.083	24.896	1.00	41.37	A	O
ATOM	2025	CG2	THR	A	231	27.103	19.704	25.288	1.00	32.16	A	C
ATOM	2026	N	LYS	A	232	24.007	19.791	24.433	1.00	34.98	A	N
ATOM	2027	CA	LYS	A	232	23.084	18.675	24.481	1.00	34.90	A	C
ATOM	2028	C	LYS	A	232	22.585	18.348	23.083	1.00	37.15	A	C
ATOM	2029	O	LYS	A	232	22.308	17.203	22.753	1.00	35.02	A	O
ATOM	2030	CB	LYS	A	232	21.918	18.990	25.413	1.00	38.71	A	C
ATOM	2031	CG	LYS	A	232	22.328	19.218	26.866	1.00	63.80	A	C
ATOM	2032	CD	LYS	A	232	21.102	19.504	27.744	1.00	80.48	A	C
ATOM	2033	CE	LYS	A	232	21.448	19.550	29.234	1.00	96.76	A	C
ATOM	2034	NZ	LYS	A	232	21.658	18.192	29.827	1.00	106.26	A	N
ATOM	2035	N	CYS	A	233	22.505	19.358	22.237	1.00	36.04	A	N
ATOM	2036	CA	CYS	A	233	22.062	19.114	20.868	1.00	35.49	A	C
ATOM	2037	C	CYS	A	233	23.138	18.415	20.065	1.00	37.89	A	C
ATOM	2038	O	CYS	A	233	22.872	17.437	19.347	1.00	38.55	A	O
ATOM	2039	CB	CYS	A	233	21.598	20.402	20.222	1.00	35.37	A	C
ATOM	2040	SG	CYS	A	233	19.976	20.878	20.868	1.00	38.97	A	S
ATOM	2041	N	THR	A	234	24.375	18.852	20.268	1.00	31.35	A	N
ATOM	2042	CA	THR	A	234	25.497	18.258	19.564	1.00	29.44	A	C
ATOM	2043	C	THR	A	234	25.511	16.731	19.626	1.00	35.95	A	C
ATOM	2044	O	THR	A	234	26.106	16.099	18.766	1.00	38.37	A	O
ATOM	2045	CB	THR	A	234	26.812	18.778	20.080	1.00	33.99	A	C
ATOM	2046	OG1	THR	A	234	27.198	18.029	21.241	1.00	36.93	A	O
ATOM	2047	CG2	THR	A	234	26.686	20.231	20.438	1.00	34.26	A	C
ATOM	2048	N	THR	A	235	24.840	16.120	20.599	1.00	32.19	A	N
ATOM	2049	CA	THR	A	235	24.897	14.647	20.703	1.00	31.39	A	C
ATOM	2050	C	THR	A	235	24.095	13.968	19.606	1.00	34.19	A	C
ATOM	2051	O	THR	A	235	24.102	12.742	19.476	1.00	38.41	A	O
ATOM	2052	CB	THR	A	235	24.379	14.108	22.068	1.00	44.79	A	C
ATOM	2053	OG1	THR	A	235	25.137	14.681	23.138	1.00	49.32	A	O
ATOM	2054	CG2	THR	A	235	24.564	12.608	22.135	1.00	44.82	A	C
ATOM	2055	N	PHE	A	236	23.373	14.753	18.831	1.00	27.38	A	N
ATOM	2056	CA	PHE	A	236	22.541	14.188	17.783	1.00	26.47	A	C
ATOM	2057	C	PHE	A	236	23.029	14.599	16.403	1.00	29.17	A	C
ATOM	2058	O	PHE	A	236	22.493	14.181	15.371	1.00	30.00	A	O
ATOM	2059	CB	PHE	A	236	21.103	14.545	18.025	1.00	29.80	A	C
ATOM	2060	CG	PHE	A	236	20.606	14.081	19.375	1.00	33.86	A	C
ATOM	2061	CD1	PHE	A	236	20.761	14.874	20.486	1.00	37.46	A	C
ATOM	2062	CD2	PHE	A	236	20.056	12.817	19.535	1.00	37.23	A	C
ATOM	2063	CE1	PHE	A	236	20.323	14.448	21.691	1.00	39.42	A	C
ATOM	2064	CE2	PHE	A	236	19.651	12.379	20.751	1.00	40.35	A	C
ATOM	2065	CZ	PHE	A	236	19.779	13.186	21.831	1.00	38.32	A	C
ATOM	2066	N	MET	A	237	24.162	15.286	16.413	1.00	22.23	A	N
ATOM	2067	CA	MET	A	237	24.807	15.785	15.230	1.00	21.58	A	C
ATOM	2068	C	MET	A	237	26.004	14.904	14.857	1.00	27.22	A	C
ATOM	2069	O	MET	A	237	27.092	15.060	15.392	1.00	26.06	A	O
ATOM	2070	CB	MET	A	237	25.278	17.185	15.568	1.00	24.47	A	C

ATOM	2071	CG	MET	A	237	24.159	18.199	15.585	1.00	29.32	A C
ATOM	2072	SD	MET	A	237	24.719	19.755	16.280	1.00	36.91	A S
ATOM	2073	CE	MET	A	237	23.108	20.590	16.350	1.00	33.18	A C
ATOM	2074	N	HIS	A	238	25.794	13.962	13.952	1.00	28.88	A N
ATOM	2075	CA	HIS	A	238	26.767	12.901	13.678	1.00	28.96	A C
ATOM	2076	C	HIS	A	238	28.170	13.447	13.444	1.00	29.73	A C
ATOM	2077	O	HIS	A	238	29.143	12.937	14.016	1.00	29.90	A O
ATOM	2078	CB	HIS	A	238	26.291	12.090	12.463	1.00	31.97	A C
ATOM	2079	CG	HIS	A	238	27.083	10.849	12.207	1.00	36.95	A C
ATOM	2080	ND1	HIS	A	238	28.380	10.690	12.653	1.00	39.99	A N
ATOM	2081	CD2	HIS	A	238	26.789	9.734	11.493	1.00	39.45	A C
ATOM	2082	CE1	HIS	A	238	28.834	9.511	12.259	1.00	39.41	A C
ATOM	2083	NE2	HIS	A	238	27.879	8.899	11.580	1.00	39.62	A N
ATOM	2084	N	TYR	A	239	28.276	14.524	12.664	1.00	21.52	A N
ATOM	2085	CA	TYR	A	239	29.579	14.991	12.202	1.00	19.53	A C
ATOM	2086	C	TYR	A	239	30.065	16.275	12.791	1.00	23.99	A C
ATOM	2087	O	TYR	A	239	30.870	16.948	12.164	1.00	21.36	A O
ATOM	2088	CB	TYR	A	239	29.526	15.228	10.722	1.00	20.33	A C
ATOM	2089	CG	TYR	A	239	29.164	14.020	9.954	1.00	20.81	A C
ATOM	2090	CD1	TYR	A	239	27.969	13.945	9.273	1.00	23.74	A C
ATOM	2091	CD2	TYR	A	239	29.990	12.925	9.942	1.00	20.80	A C
ATOM	2092	CE1	TYR	A	239	27.605	12.759	8.577	1.00	23.91	A C
ATOM	2093	CE2	TYR	A	239	29.657	11.774	9.220	1.00	21.15	A C
ATOM	2094	CZ	TYR	A	239	28.471	11.687	8.573	1.00	19.30	A C
ATOM	2095	OH	TYR	A	239	28.172	10.544	7.861	1.00	30.80	A O
ATOM	2096	N	TYR	A	240	29.590	16.678	13.961	1.00	22.02	A N
ATOM	2097	CA	TYR	A	240	30.037	17.995	14.444	1.00	20.82	A C
ATOM	2098	C	TYR	A	240	31.533	17.975	14.742	1.00	28.03	A C
ATOM	2099	O	TYR	A	240	32.062	16.950	15.155	1.00	32.05	A O
ATOM	2100	CB	TYR	A	240	29.255	18.404	15.668	1.00	21.13	A C
ATOM	2101	CG	TYR	A	240	29.335	19.861	15.967	1.00	19.57	A C
ATOM	2102	CD1	TYR	A	240	28.561	20.788	15.277	1.00	19.11	A C
ATOM	2103	CD2	TYR	A	240	30.166	20.320	16.957	1.00	19.56	A C
ATOM	2104	CE1	TYR	A	240	28.653	22.142	15.566	1.00	10.67	A C
ATOM	2105	CE2	TYR	A	240	30.280	21.629	17.208	1.00	19.42	A C
ATOM	2106	CZ	TYR	A	240	29.489	22.543	16.545	1.00	17.39	A C
ATOM	2107	OH	TYR	A	240	29.662	23.879	16.872	1.00	22.19	A O
ATOM	2108	N	PRO	A	241	32.234	19.082	14.520	1.00	21.06	A N
ATOM	2109	CA	PRO	A	241	33.678	19.045	14.679	1.00	19.71	A C
ATOM	2110	C	PRO	A	241	33.996	19.176	16.106	1.00	25.29	A C
ATOM	2111	O	PRO	A	241	33.553	20.107	16.754	1.00	24.34	A O
ATOM	2112	CB	PRO	A	241	34.148	20.259	13.886	1.00	19.11	A C
ATOM	2113	CG	PRO	A	241	33.183	20.237	12.770	1.00	23.39	A C
ATOM	2114	CD	PRO	A	241	31.876	19.977	13.409	1.00	19.60	A C
ATOM	2115	N	SER	A	242	34.783	18.232	16.601	1.00	27.93	A N
ATOM	2116	CA	SER	A	242	34.871	18.036	18.026	1.00	29.78	A C
ATOM	2117	C	SER	A	242	36.170	17.417	18.460	1.00	39.59	A C
ATOM	2118	O	SER	A	242	37.006	17.009	17.636	1.00	40.28	A O
ATOM	2119	CB	SER	A	242	33.654	17.257	18.542	1.00	33.52	A C
ATOM	2120	OG	SER	A	242	32.493	18.082	18.496	1.00	44.39	A O
ATOM	2121	N	GLY	A	243	36.357	17.416	19.771	1.00	37.62	A N
ATOM	2122	CA	GLY	A	243	37.533	16.813	20.361	1.00	38.02	A C
ATOM	2123	C	GLY	A	243	38.750	17.591	19.937	1.00	42.34	A C
ATOM	2124	O	GLY	A	243	38.913	18.760	20.295	1.00	42.29	A O
ATOM	2125	N	GLU	A	244	39.620	16.956	19.170	1.00	39.85	A N
ATOM	2126	CA	GLU	A	244	40.817	17.667	18.772	1.00	40.69	A C
ATOM	2127	C	GLU	A	244	40.605	18.526	17.528	1.00	47.25	A C
ATOM	2128	O	GLU	A	244	41.370	19.450	17.280	1.00	50.47	A O
ATOM	2129	CB	GLU	A	244	42.023	16.735	18.664	1.00	41.88	A C
ATOM	2130	CG	GLU	A	244	42.426	16.365	17.267	1.00	48.70	A C
ATOM	2131	CD	GLU	A	244	43.795	15.737	17.212	1.00	81.99	A C
ATOM	2132	OE1	GLU	A	244	43.876	14.491	17.275	1.00	96.86	A O
ATOM	2133	OE2	GLU	A	244	44.785	16.486	17.066	1.00	80.48	A O
ATOM	2134	N	HIS	A	245	39.538	18.254	16.783	1.00	42.10	A N
ATOM	2135	CA	HIS	A	245	39.261	18.959	15.540	1.00	41.61	A C
ATOM	2136	C	HIS	A	245	38.155	19.955	15.808	1.00	46.05	A C
ATOM	2137	O	HIS	A	245	37.254	20.146	14.996	1.00	46.05	A O

ATOM	2138	CB	HIS	A	245	38.759	17.958	14.504	1.00	42.67	A C
ATOM	2139	CG	HIS	A	245	39.746	16.892	14.164	1.00	46.20	A C
ATOM	2140	ND1	HIS	A	245	39.569	15.568	14.514	1.00	48.13	A N
ATOM	2141	CD2	HIS	A	245	40.928	16.955	13.509	1.00	48.04	A C
ATOM	2142	CE1	HIS	A	245	40.582	14.856	14.057	1.00	47.72	A C
ATOM	2143	NE2	HIS	A	245	41.427	15.675	13.454	1.00	48.16	A N
ATOM	2144	N	LYS	A	246	38.174	20.527	17.001	1.00	43.64	A N
ATOM	2145	CA	LYS	A	246	37.054	21.327	17.451	1.00	41.27	A C
ATOM	2146	C	LYS	A	246	37.266	22.711	16.889	1.00	40.37	A C
ATOM	2147	O	LYS	A	246	36.329	23.498	16.810	1.00	40.21	A O
ATOM	2148	CB	LYS	A	246	36.954	21.337	18.988	1.00	41.89	A C
ATOM	2149	CG	LYS	A	246	37.741	22.418	19.719	1.00	44.20	A C
ATOM	2150	CD	LYS	A	246	36.833	23.504	20.360	1.00	55.86	A C
ATOM	2151	CE	LYS	A	246	36.297	24.584	19.365	1.00	47.61	A C
ATOM	2152	NZ	LYS	A	246	37.368	25.287	18.592	1.00	31.11	A N
ATOM	2153	N	ASN	A	247	38.490	22.992	16.457	1.00	33.16	A N
ATOM	2154	CA	ASN	A	247	38.760	24.300	15.842	1.00	33.80	A C
ATOM	2155	C	ASN	A	247	38.534	24.358	14.329	1.00	38.46	A C
ATOM	2156	O	ASN	A	247	38.899	25.356	13.666	1.00	41.28	A O
ATOM	2157	CB	ASN	A	247	40.174	24.782	16.174	1.00	38.23	A C
ATOM	2158	CG	ASN	A	247	41.227	23.771	15.809	1.00	70.05	A C
ATOM	2159	OD1	ASN	A	247	40.955	22.562	15.760	1.00	51.57	A O
ATOM	2160	ND2	ASN	A	247	42.450	24.249	15.569	1.00	69.31	A N
ATOM	2161	N	LEU	A	248	37.907	23.310	13.793	1.00	30.04	A N
ATOM	2162	CA	LEU	A	248	37.649	23.189	12.356	1.00	26.79	A C
ATOM	2163	C	LEU	A	248	36.182	23.349	12.012	1.00	23.28	A C
ATOM	2164	O	LEU	A	248	35.279	22.836	12.762	1.00	20.40	A O
ATOM	2165	CB	LEU	A	248	38.118	21.835	11.864	1.00	26.06	A C
ATOM	2166	CG	LEU	A	248	39.604	21.493	11.723	1.00	27.76	A C
ATOM	2167	CD1	LEU	A	248	39.591	20.211	10.929	1.00	26.99	A C
ATOM	2168	CD2	LEU	A	248	40.322	22.550	10.961	1.00	29.02	A C
ATOM	2169	N	LEU	A	249	35.934	24.007	10.862	1.00	9.55	A N
ATOM	2170	CA	LEU	A	249	34.558	24.319	10.441	1.00	4.97	A C
ATOM	2171	C	LEU	A	249	33.939	23.056	9.902	1.00	14.50	A C
ATOM	2172	O	LEU	A	249	32.741	22.870	9.979	1.00	12.65	A O
ATOM	2173	CB	LEU	A	249	34.502	25.500	9.402	1.00	3.00	A C
ATOM	2174	CG	LEU	A	249	34.568	26.906	10.091	1.00	9.69	A C
ATOM	2175	CD1	LEU	A	249	34.501	28.010	9.071	1.00	9.44	A C
ATOM	2176	CD2	LEU	A	249	33.405	27.119	11.121	1.00	16.73	A C
ATOM	2177	N	ARG	A	250	34.768	22.168	9.362	1.00	14.19	A N
ATOM	2178	CA	ARG	A	250	34.224	20.937	8.791	1.00	14.28	A C
ATOM	2179	C	ARG	A	250	35.133	19.765	9.110	1.00	24.71	A C
ATOM	2180	O	ARG	A	250	36.344	19.842	8.934	1.00	23.38	A O
ATOM	2181	CB	ARG	A	250	34.139	21.054	7.287	1.00	11.57	A C
ATOM	2182	CG	ARG	A	250	33.093	21.991	6.777	1.00	3.00	A C
ATOM	2183	CD	ARG	A	250	32.770	21.798	5.247	1.00	11.92	A C
ATOM	2184	NE	ARG	A	250	31.999	20.613	5.002	1.00	19.89	A N
ATOM	2185	CZ	ARG	A	250	31.864	20.044	3.799	1.00	39.38	A C
ATOM	2186	NH1	ARG	A	250	32.451	20.544	2.712	1.00	3.00	A N
ATOM	2187	NH2	ARG	A	250	31.130	18.959	3.671	1.00	17.90	A N
ATOM	2188	N	LEU	A	251	34.535	18.704	9.637	1.00	25.37	A N
ATOM	2189	CA	LEU	A	251	35.200	17.421	9.758	1.00	25.84	A C
ATOM	2190	C	LEU	A	251	35.701	16.961	8.391	1.00	30.89	A C
ATOM	2191	O	LEU	A	251	36.458	16.043	8.352	1.00	33.21	A O
ATOM	2192	CB	LEU	A	251	34.174	16.359	10.176	1.00	25.07	A C
ATOM	2193	CG	LEU	A	251	34.840	15.050	10.518	1.00	26.06	A C
ATOM	2194	CD1	LEU	A	251	35.427	15.378	11.822	1.00	25.51	A C
ATOM	2195	CD2	LEU	A	251	33.805	13.940	10.664	1.00	28.70	A C
ATOM	2196	N	ALA	A	252	35.179	17.489	7.275	1.00	24.96	A N
ATOM	2197	CA	ALA	A	252	35.684	17.074	5.968	1.00	23.71	A C
ATOM	2198	C	ALA	A	252	37.041	17.625	5.583	1.00	29.92	A C
ATOM	2199	O	ALA	A	252	37.631	17.209	4.575	1.00	27.08	A O
ATOM	2200	CB	ALA	A	252	34.696	17.431	4.901	1.00	24.53	A C
ATOM	2201	N	CME	A	253	37.522	18.635	6.334	1.00	29.04	A N
ATOM	2202	CA	CME	A	253	38.834	19.190	6.120	1.00	30.77	A C
ATOM	2203	CB	CME	A	253	38.987	20.369	7.036	1.00	33.73	A C
ATOM	2204	SG	CME	A	253	37.846	21.827	6.928	1.00	40.66	A S

ATOM	2205	SD	CME	A	253	38.019	22.056	4.747	1.00	53.00	A S
ATOM	2206	CE	CME	A	253	36.399	21.797	3.828	1.00	33.10	A C
ATOM	2207	CZ	CME	A	253	36.325	20.402	3.193	1.00	38.83	A C
ATOM	2208	OH	CME	A	253	37.546	20.008	2.468	1.00	33.82	A O
ATOM	2209	C	CME	A	253	39.861	18.168	6.644	1.00	33.28	A C
ATOM	2210	O	CME	A	253	41.089	18.366	6.510	1.00	30.42	A O
ATOM	2211	N	THR	A	254	39.406	17.064	7.238	1.00	28.03	A N
ATOM	2212	CA	THR	A	254	40.410	16.081	7.756	1.00	26.60	A C
ATOM	2213	C	THR	A	254	40.323	14.792	6.935	1.00	32.34	A C
ATOM	2214	O	THR	A	254	40.847	13.749	7.347	1.00	33.10	A O
ATOM	2215	CB	THR	A	254	40.072	15.580	9.204	1.00	30.46	A C
ATOM	2216	OG1	THR	A	254	38.756	15.037	9.228	1.00	33.79	A O
ATOM	2217	CG2	THR	A	254	40.112	16.678	10.204	1.00	23.89	A C
ATOM	2218	N	LEU	A	255	39.633	14.803	5.812	1.00	25.43	A N
ATOM	2219	CA	LEU	A	255	39.620	13.616	4.986	1.00	22.72	A C
ATOM	2220	C	LEU	A	255	41.040	13.319	4.627	1.00	28.65	A C
ATOM	2221	O	LEU	A	255	41.849	14.242	4.416	1.00	25.71	A O
ATOM	2222	CB	LEU	A	255	38.896	13.884	3.674	1.00	21.63	A C
ATOM	2223	CG	LEU	A	255	37.383	13.958	3.679	1.00	24.69	A C
ATOM	2224	CD1	LEU	A	255	36.958	14.547	2.348	1.00	23.55	A C
ATOM	2225	CD2	LEU	A	255	36.786	12.566	3.851	1.00	22.22	A C
ATOM	2226	N	LYS	A	256	41.296	12.032	4.411	1.00	27.32	A N
ATOM	2227	CA	LYS	A	256	42.579	11.581	3.902	1.00	24.77	A C
ATOM	2228	C	LYS	A	256	42.400	10.874	2.594	1.00	27.91	A C
ATOM	2229	O	LYS	A	256	41.322	10.336	2.321	1.00	27.64	A O
ATOM	2230	CB	LYS	A	256	43.207	10.584	4.874	1.00	27.65	A C
ATOM	2231	CG	LYS	A	256	43.513	11.144	6.226	1.00	34.18	A C
ATOM	2232	CD	LYS	A	256	44.129	12.538	6.116	1.00	45.63	A C
ATOM	2233	CE	LYS	A	256	44.687	12.980	7.478	1.00	59.90	A C
ATOM	2234	NZ	LYS	A	256	45.265	14.356	7.449	1.00	62.89	A N
ATOM	2235	N	PRO	A	257	43.482	10.847	1.814	1.00	24.01	A N
ATOM	2236	CA	PRO	A	257	43.566	10.095	0.591	1.00	23.82	A C
ATOM	2237	C	PRO	A	257	43.081	8.679	0.764	1.00	35.58	A C
ATOM	2238	O	PRO	A	257	43.722	7.863	1.413	1.00	39.13	A O
ATOM	2239	CB	PRO	A	257	45.068	10.161	0.261	1.00	23.52	A C
ATOM	2240	CG	PRO	A	257	45.540	11.465	0.865	1.00	27.62	A C
ATOM	2241	CD	PRO	A	257	44.427	11.980	1.784	1.00	24.03	A C
ATOM	2242	N	ASP	A	258	41.899	8.419	0.223	1.00	32.99	A N
ATOM	2243	CA	ASP	A	258	41.401	7.065	-0.021	1.00	33.01	A C
ATOM	2244	C	ASP	A	258	40.998	7.175	-1.479	1.00	36.97	A C
ATOM	2245	O	ASP	A	258	40.222	8.071	-1.824	1.00	36.56	A O
ATOM	2246	CB	ASP	A	258	40.182	6.818	0.873	1.00	35.26	A C
ATOM	2247	CG	ASP	A	258	39.222	5.765	0.326	1.00	40.09	A C
ATOM	2248	OD1	ASP	A	258	39.511	5.126	-0.690	1.00	41.19	A O
ATOM	2249	OD2	ASP	A	258	38.208	5.489	1.007	1.00	41.98	A O
ATOM	2250	N	PRO	A	259	41.550	6.294	-2.330	1.00	31.79	A N
ATOM	2251	CA	PRO	A	259	41.282	6.306	-3.775	1.00	30.13	A C
ATOM	2252	C	PRO	A	259	39.824	6.032	-4.152	1.00	30.11	A C
ATOM	2253	O	PRO	A	259	39.279	6.681	-5.024	1.00	29.37	A O
ATOM	2254	CB	PRO	A	259	42.163	5.170	-4.283	1.00	31.57	A C
ATOM	2255	CG	PRO	A	259	43.296	5.180	-3.380	1.00	35.04	A C
ATOM	2256	CD	PRO	A	259	42.782	5.544	-2.031	1.00	30.05	A C
ATOM	2257	N	GLU	A	260	39.200	5.068	-3.489	1.00	25.77	A N
ATOM	2258	CA	GLU	A	260	37.812	4.689	-3.779	1.00	25.46	A C
ATOM	2259	C	GLU	A	260	36.765	5.722	-3.294	1.00	30.78	A C
ATOM	2260	O	GLU	A	260	35.704	5.884	-3.886	1.00	33.20	A O
ATOM	2261	CB	GLU	A	260	37.524	3.314	-3.181	1.00	26.96	A C
ATOM	2262	CG	GLU	A	260	36.420	2.573	-3.897	1.00	44.61	A C
ATOM	2263	CD	GLU	A	260	35.502	1.823	-2.948	1.00	77.38	A C
ATOM	2264	OE1	GLU	A	260	34.431	1.373	-3.417	1.00	84.66	A O
ATOM	2265	OE2	GLU	A	260	35.827	1.705	-1.744	1.00	61.89	A O
ATOM	2266	N	LEU	A	261	37.080	6.479	-2.256	1.00	25.50	A N
ATOM	2267	CA	LEU	A	261	36.156	7.551	-1.842	1.00	23.77	A C
ATOM	2268	C	LEU	A	261	36.307	8.771	-2.760	1.00	29.99	A C
ATOM	2269	O	LEU	A	261	35.395	9.580	-2.884	1.00	30.72	A O
ATOM	2270	CB	LEU	A	261	36.416	7.942	-0.394	1.00	22.48	A C
ATOM	2271	CG	LEU	A	261	35.644	9.163	0.085	1.00	25.06	A C

ATOM	2272	CD1	LEU	A	261	34.175	8.870	0.043	1.00	26.74	A	C
ATOM	2273	CD2	LEU	A	261	36.028	9.466	1.453	1.00	20.90	A	C
ATOM	2274	N	GLU	A	262	37.477	8.928	-3.385	1.00	25.07	A	N
ATOM	2275	CA	GLU	A	262	37.698	10.105	-4.222	1.00	26.16	A	C
ATOM	2276	C	GLU	A	262	36.994	9.931	-5.565	1.00	30.96	A	C
ATOM	2277	O	GLU	A	262	36.359	10.861	-6.080	1.00	31.79	A	O
ATOM	2278	CB	GLU	A	262	39.185	10.334	-4.488	1.00	27.23	A	C
ATOM	2279	CG	GLU	A	262	39.520	11.767	-4.867	1.00	31.13	A	C
ATOM	2280	CD	GLU	A	262	41.004	12.005	-5.107	1.00	26.68	A	C
ATOM	2281	OE1	GLU	A	262	41.363	12.718	-6.081	1.00	14.37	A	O
ATOM	2282	OE2	GLU	A	262	41.824	11.576	-4.267	1.00	16.19	A	O
ATOM	2283	N	MET	A	263	37.199	8.770	-6.171	1.00	27.56	A	N
ATOM	2284	CA	MET	A	263	36.423	8.370	-7.314	1.00	28.55	A	C
ATOM	2285	C	MET	A	263	34.979	8.756	-7.123	1.00	31.40	A	C
ATOM	2286	O	MET	A	263	34.444	9.523	-7.897	1.00	32.82	A	O
ATOM	2287	CB	MET	A	263	36.472	6.869	-7.459	1.00	32.41	A	C
ATOM	2288	CG	MET	A	263	37.742	6.356	-8.084	1.00	37.27	A	C
ATOM	2289	SD	MET	A	263	37.363	4.755	-8.772	1.00	42.48	A	S
ATOM	2290	CE	MET	A	263	35.577	4.874	-9.056	1.00	39.03	A	C
ATOM	2291	N	SER	A	264	34.323	8.233	-6.098	1.00	24.86	A	N
ATOM	2292	CA	SER	A	264	32.893	8.475	-6.026	1.00	23.83	A	C
ATOM	2293	C	SER	A	264	32.566	9.977	-5.885	1.00	28.07	A	C
ATOM	2294	O	SER	A	264	31.531	10.466	-6.372	1.00	29.35	A	O
ATOM	2295	CB	SER	A	264	32.281	7.730	-4.862	1.00	25.71	A	C
ATOM	2296	OG	SER	A	264	32.223	8.618	-3.775	1.00	43.62	A	O
ATOM	2297	N	LEU	A	265	33.444	10.713	-5.222	1.00	20.25	A	N
ATOM	2298	CA	LEU	A	265	33.122	12.090	-4.899	1.00	19.53	A	C
ATOM	2299	C	LEU	A	265	33.347	12.973	-6.096	1.00	23.57	A	C
ATOM	2300	O	LEU	A	265	32.729	14.007	-6.255	1.00	26.33	A	O
ATOM	2301	CB	LEU	A	265	34.026	12.602	-3.782	1.00	18.73	A	C
ATOM	2302	CG	LEU	A	265	33.657	12.117	-2.375	1.00	20.08	A	C
ATOM	2303	CD1	LEU	A	265	34.724	12.730	-1.457	1.00	17.23	A	C
ATOM	2304	CD2	LEU	A	265	32.355	12.806	-2.068	1.00	18.36	A	C
ATOM	2305	N	GLN	A	266	34.300	12.624	-6.922	1.00	13.52	A	N
ATOM	2306	CA	GLN	A	266	34.606	13.544	-7.983	1.00	10.36	A	C
ATOM	2307	C	GLN	A	266	33.564	13.439	-9.095	1.00	18.59	A	C
ATOM	2308	O	GLN	A	266	33.555	14.225	-10.035	1.00	23.12	A	O
ATOM	2309	CB	GLN	A	266	36.019	13.260	-8.496	1.00	11.80	A	C
ATOM	2310	CG	GLN	A	266	36.075	11.987	-9.329	1.00	27.56	A	C
ATOM	2311	CD	GLN	A	266	37.318	11.915	-10.180	1.00	32.19	A	C
ATOM	2312	OE1	GLN	A	266	37.247	12.022	-11.387	1.00	37.09	A	O
ATOM	2313	NE2	GLN	A	266	38.455	11.753	-9.556	1.00	22.47	A	N
ATOM	2314	N	LYS	A	267	32.667	12.472	-9.007	1.00	14.94	A	N
ATOM	2315	CA	LYS	A	267	31.624	12.378	-10.015	1.00	15.13	A	C
ATOM	2316	C	LYS	A	267	30.674	13.535	-9.838	1.00	23.56	A	C
ATOM	2317	O	LYS	A	267	29.890	13.855	-10.711	1.00	26.01	A	O
ATOM	2318	CB	LYS	A	267	30.920	11.063	-9.866	1.00	17.86	A	C
ATOM	2319	CG	LYS	A	267	31.836	9.902	-10.292	1.00	37.52	A	C
ATOM	2320	CD	LYS	A	267	31.181	8.555	-10.100	1.00	45.56	A	C
ATOM	2321	CE	LYS	A	267	32.095	7.425	-10.548	1.00	57.69	A	C
ATOM	2322	NZ	LYS	A	267	33.113	7.057	-9.524	1.00	77.43	A	N
ATOM	2323	N	TYR	A	268	30.796	14.226	-8.713	1.00	19.13	A	N
ATOM	2324	CA	TYR	A	268	29.831	15.284	-8.405	1.00	16.26	A	C
ATOM	2325	C	TYR	A	268	30.342	16.641	-8.747	1.00	22.83	A	C
ATOM	2326	O	TYR	A	268	29.659	17.633	-8.516	1.00	24.93	A	O
ATOM	2327	CB	TYR	A	268	29.530	15.273	-6.933	1.00	13.60	A	C
ATOM	2328	CG	TYR	A	268	28.723	14.113	-6.484	1.00	15.96	A	C
ATOM	2329	CD1	TYR	A	268	29.311	12.945	-6.130	1.00	18.72	A	C
ATOM	2330	CD2	TYR	A	268	27.359	14.210	-6.360	1.00	18.16	A	C
ATOM	2331	CE1	TYR	A	268	28.558	11.884	-5.669	1.00	19.90	A	C
ATOM	2332	CE2	TYR	A	268	26.628	13.209	-5.849	1.00	19.56	A	C
ATOM	2333	CZ	TYR	A	268	27.218	12.034	-5.529	1.00	30.99	A	C
ATOM	2334	OH	TYR	A	268	26.439	11.011	-5.060	1.00	36.11	A	O
ATOM	2335	N	VAL	A	269	31.547	16.706	-9.275	1.00	20.54	A	N
ATOM	2336	CA	VAL	A	269	32.185	17.994	-9.529	1.00	21.60	A	C
ATOM	2337	C	VAL	A	269	32.737	18.109	-10.941	1.00	31.67	A	C
ATOM	2338	O	VAL	A	269	33.120	17.116	-11.557	1.00	31.08	A	O

ATOM	2339	CB	VAL	A	269	33.298	18.194	-8.483	1.00	26.18	A C
ATOM	2340	CG1	VAL	A	269	34.053	19.498	-8.705	1.00	25.86	A C
ATOM	2341	CG2	VAL	A	269	32.674	18.163	-7.113	1.00	26.69	A C
ATOM	2342	N	MET	A	270	32.802	19.339	-11.441	1.00	32.92	A N
ATOM	2343	CA	MET	A	270	32.957	19.596	-12.871	1.00	34.13	A C
ATOM	2344	C	MET	A	270	34.418	19.515	-13.259	1.00	35.47	A C
ATOM	2345	O	MET	A	270	35.280	19.793	-12.445	1.00	33.01	A O
ATOM	2346	CB	MET	A	270	32.435	20.998	-13.189	1.00	38.58	A C
ATOM	2347	CG	MET	A	270	30.924	21.187	-13.018	1.00	45.06	A C
ATOM	2348	SD	MET	A	270	30.418	22.824	-13.635	1.00	52.64	A S
ATOM	2349	CE	MET	A	270	31.791	23.084	-14.857	1.00	49.57	A C
ATOM	2350	N	GLU	A	271	34.725	19.148	-14.500	1.00	34.02	A N
ATOM	2351	CA	GLU	A	271	36.137	18.948	-14.797	1.00	33.63	A C
ATOM	2352	C	GLU	A	271	36.916	20.231	-14.668	1.00	36.52	A C
ATOM	2353	O	GLU	A	271	37.996	20.264	-14.059	1.00	37.18	A O
ATOM	2354	CB	GLU	A	271	36.414	18.179	-16.091	1.00	35.52	A C
ATOM	2355	CG	GLU	A	271	36.023	18.864	-17.395	1.00	56.82	A C
ATOM	2356	CD	GLU	A	271	36.333	17.983	-18.605	1.00	83.78	A C
ATOM	2357	OE1	GLU	A	271	37.517	17.609	-18.770	1.00	74.99	A O
ATOM	2358	OE2	GLU	A	271	35.386	17.596	-19.332	1.00	74.70	A O
ATOM	2359	N	SER	A	272	36.317	21.310	-15.159	1.00	31.19	A N
ATOM	2360	CA	SER	A	272	36.950	22.623	-15.100	1.00	30.56	A C
ATOM	2361	C	SER	A	272	37.400	22.932	-13.681	1.00	32.85	A C
ATOM	2362	O	SER	A	272	38.255	23.796	-13.450	1.00	33.30	A O
ATOM	2363	CB	SER	A	272	35.981	23.702	-15.613	1.00	33.83	A C
ATOM	2364	OG	SER	A	272	35.215	24.266	-14.542	1.00	48.73	A O
ATOM	2365	N	ILE	A	273	36.796	22.219	-12.730	1.00	24.87	A N
ATOM	2366	CA	ILE	A	273	37.049	22.441	-11.314	1.00	21.65	A C
ATOM	2367	C	ILE	A	273	38.124	21.519	-10.747	1.00	27.11	A C
ATOM	2368	O	ILE	A	273	38.956	21.940	-9.943	1.00	27.74	A O
ATOM	2369	CB	ILE	A	273	35.797	22.134	-10.498	1.00	21.13	A C
ATOM	2370	CG1	ILE	A	273	34.690	23.156	-10.791	1.00	17.37	A C
ATOM	2371	CG2	ILE	A	273	36.197	22.137	-9.033	1.00	17.42	A C
ATOM	2372	CD1	ILE	A	273	34.889	24.436	-10.008	1.00	25.19	A C
ATOM	2373	N	LEU	A	274	38.013	20.234	-11.089	1.00	22.68	A N
ATOM	2374	CA	LEU	A	274	38.998	19.218	-10.748	1.00	20.72	A C
ATOM	2375	C	LEU	A	274	40.364	19.525	-11.348	1.00	19.61	A C
ATOM	2376	O	LEU	A	274	41.391	19.229	-10.751	1.00	23.98	A O
ATOM	2377	CB	LEU	A	274	38.515	17.850	-11.206	1.00	20.39	A C
ATOM	2378	CG	LEU	A	274	37.259	17.301	-10.520	1.00	21.55	A C
ATOM	2379	CD1	LEU	A	274	36.685	16.170	-11.411	1.00	19.07	A C
ATOM	2380	CD2	LEU	A	274	37.594	16.768	-9.160	1.00	23.77	A C
ATOM	2381	N	LYS	A	275	40.398	20.090	-12.535	1.00	12.73	A N
ATOM	2382	CA	LYS	A	275	41.684	20.554	-13.137	1.00	13.34	A C
ATOM	2383	C	LYS	A	275	42.289	21.512	-12.140	1.00	26.53	A C
ATOM	2384	O	LYS	A	275	43.412	21.338	-11.711	1.00	32.80	A O
ATOM	2385	CB	LYS	A	275	41.374	21.277	-14.446	1.00	16.54	A C
ATOM	2386	CG	LYS	A	275	42.486	21.500	-15.439	1.00	40.93	A C
ATOM	2387	CD	LYS	A	275	41.965	22.466	-16.512	1.00	50.46	A C
ATOM	2388	CE	LYS	A	275	43.003	22.811	-17.570	1.00	67.44	A C
ATOM	2389	NZ	LYS	A	275	42.555	24.004	-18.359	1.00	82.75	A N
ATOM	2390	N	GLN	A	276	41.507	22.476	-11.680	1.00	26.22	A N
ATOM	2391	CA	GLN	A	276	42.056	23.579	-10.910	1.00	26.65	A C
ATOM	2392	C	GLN	A	276	42.453	23.096	-9.533	1.00	34.07	A C
ATOM	2393	O	GLN	A	276	43.417	23.582	-8.936	1.00	36.74	A O
ATOM	2394	CB	GLN	A	276	40.987	24.673	-10.770	1.00	28.16	A C
ATOM	2395	CG	GLN	A	276	41.206	25.592	-9.565	1.00	36.37	A C
ATOM	2396	CD	GLN	A	276	40.246	26.773	-9.527	1.00	52.88	A C
ATOM	2397	OE1	GLN	A	276	40.070	27.390	-8.488	1.00	43.20	A O
ATOM	2398	NE2	GLN	A	276	39.681	27.129	-10.671	1.00	45.94	A N
ATOM	2399	N	ILE	A	277	41.652	22.178	-9.007	1.00	28.86	A N
ATOM	2400	CA	ILE	A	277	41.941	21.468	-7.769	1.00	26.78	A C
ATOM	2401	C	ILE	A	277	43.271	20.741	-7.880	1.00	29.16	A C
ATOM	2402	O	ILE	A	277	44.062	20.732	-6.947	1.00	28.03	A O
ATOM	2403	CB	ILE	A	277	40.807	20.451	-7.482	1.00	30.00	A C
ATOM	2404	CG1	ILE	A	277	39.747	21.056	-6.565	1.00	28.20	A C
ATOM	2405	CG2	ILE	A	277	41.343	19.126	-7.004	1.00	30.72	A C

ATOM	2406	CD1	ILE	A	277	38.431	20.323	-6.630	1.00	20.37	A	C
ATOM	2407	N	ASP	A	278	43.551	20.159	-9.036	1.00	25.65	A	N
ATOM	2408	CA	ASP	A	278	44.787	19.402	-9.180	1.00	26.13	A	C
ATOM	2409	C	ASP	A	278	46.023	20.261	-9.468	1.00	33.44	A	C
ATOM	2410	O	ASP	A	278	47.015	19.746	-10.014	1.00	33.90	A	O
ATOM	2411	CB	ASP	A	278	44.631	18.328	-10.247	1.00	27.28	A	C
ATOM	2412	CG	ASP	A	278	43.987	17.089	-9.717	1.00	35.59	A	C
ATOM	2413	OD1	ASP	A	278	44.346	16.685	-8.587	1.00	37.18	A	O
ATOM	2414	OD2	ASP	A	278	43.130	16.515	-10.427	1.00	41.56	A	O
ATOM	2415	N	ASN	A	279	45.997	21.529	-9.021	1.00	28.52	A	N
ATOM	2416	CA	ASN	A	279	46.901	22.577	-9.536	1.00	26.31	A	C
ATOM	2417	C	ASN	A	279	47.350	22.337	-10.932	1.00	31.17	A	C
ATOM	2418	O	ASN	A	279	48.549	22.351	-11.194	1.00	31.85	A	O
ATOM	2419	CB	ASN	A	279	48.148	22.748	-8.697	1.00	23.34	A	C
ATOM	2420	CG	ASN	A	279	47.862	22.754	-7.226	1.00	46.11	A	C
ATOM	2421	OD1	ASN	A	279	48.562	22.108	-6.445	1.00	47.46	A	O
ATOM	2422	ND2	ASN	A	279	46.840	23.495	-6.829	1.00	20.14	A	N
ATOM	2423	N	LYS	A	280	46.403	22.102	-11.834	1.00	27.84	A	N
ATOM	2424	CA	LYS	A	280	46.730	22.067	-13.240	1.00	27.98	A	C
ATOM	2425	C	LYS	A	280	46.135	23.255	-13.976	1.00	33.31	A	C
ATOM	2426	O	LYS	A	280	46.061	23.266	-15.203	1.00	32.81	A	O
ATOM	2427	CB	LYS	A	280	46.314	20.748	-13.877	1.00	31.84	A	C
ATOM	2428	CG	LYS	A	280	47.294	19.629	-13.524	1.00	50.47	A	C
ATOM	2429	CD	LYS	A	280	47.030	18.336	-14.252	1.00	60.69	A	C
ATOM	2430	CE	LYS	A	280	48.272	17.437	-14.210	1.00	72.01	A	C
ATOM	2431	NZ	LYS	A	280	48.727	17.155	-12.819	1.00	82.42	A	N
ATOM	2432	N	GLN	A	281	45.739	24.278	-13.228	1.00	27.73	A	N
ATOM	2433	CA	GLN	A	281	45.085	25.405	-13.837	1.00	27.57	A	C
ATOM	2434	C	GLN	A	281	45.130	26.525	-12.793	1.00	33.28	A	C
ATOM	2435	O	GLN	A	281	45.088	26.266	-11.590	1.00	30.02	A	O
ATOM	2436	CB	GLN	A	281	43.666	24.977	-14.200	1.00	29.49	A	C
ATOM	2437	CG	GLN	A	281	42.787	25.942	-15.000	1.00	43.52	A	C
ATOM	2438	CD	GLN	A	281	41.300	25.583	-14.839	1.00	60.51	A	C
ATOM	2439	OE1	GLN	A	281	40.858	25.225	-13.747	1.00	53.53	A	O
ATOM	2440	NE2	GLN	A	281	40.566	25.558	-15.945	1.00	54.63	A	N
ATOM	2441	N	LEU	A	282	45.319	27.761	-13.247	1.00	31.58	A	N
ATOM	2442	CA	LEU	A	282	45.441	28.884	-12.314	1.00	31.60	A	C
ATOM	2443	C	LEU	A	282	44.184	28.999	-11.493	1.00	39.07	A	C
ATOM	2444	O	LEU	A	282	43.061	28.835	-12.021	1.00	38.85	A	O
ATOM	2445	CB	LEU	A	282	45.685	30.188	-13.073	1.00	31.10	A	C
ATOM	2446	CG	LEU	A	282	47.082	30.138	-13.662	1.00	35.52	A	C
ATOM	2447	CD1	LEU	A	282	47.353	31.263	-14.657	1.00	35.39	A	C
ATOM	2448	CD2	LEU	A	282	48.074	30.172	-12.505	1.00	38.68	A	C
ATOM	2449	N	GLN	A	283	44.388	29.339	-10.222	1.00	37.86	A	N
ATOM	2450	CA	GLN	A	283	43.369	29.285	-9.187	1.00	39.76	A	C
ATOM	2451	C	GLN	A	283	42.246	30.307	-9.370	1.00	48.28	A	C
ATOM	2452	O	GLN	A	283	41.171	30.180	-8.758	1.00	47.70	A	O
ATOM	2453	CB	GLN	A	283	44.015	29.429	-7.792	1.00	41.47	A	C
ATOM	2454	CG	GLN	A	283	44.842	28.210	-7.326	1.00	61.32	A	C
ATOM	2455	CD	GLN	A	283	44.071	26.873	-7.424	1.00	70.68	A	C
ATOM	2456	OE1	GLN	A	283	42.877	26.795	-7.090	1.00	60.45	A	O
ATOM	2457	NE2	GLN	A	283	44.750	25.831	-7.927	1.00	50.26	A	N
ATOM	2458	N	GLY	A	284	42.495	31.316	-10.204	1.00	47.51	A	N
ATOM	2459	CA	GLY	A	284	41.491	32.356	-10.476	1.00	47.72	A	C
ATOM	2460	C	GLY	A	284	40.944	32.291	-11.891	1.00	52.37	A	C
ATOM	2461	O	GLY	A	284	40.001	33.001	-12.225	1.00	54.19	A	O
ATOM	2462	N	TYR	A	285	41.556	31.452	-12.722	1.00	47.24	A	N
ATOM	2463	CA	TYR	A	285	41.063	31.186	-14.076	1.00	46.63	A	C
ATOM	2464	C	TYR	A	285	39.532	31.057	-14.185	1.00	45.39	A	C
ATOM	2465	O	TYR	A	285	38.948	31.206	-15.252	1.00	45.00	A	O
ATOM	2466	CB	TYR	A	285	41.700	29.919	-14.610	1.00	48.74	A	C
ATOM	2467	CG	TYR	A	285	41.105	29.477	-15.923	1.00	53.17	A	C
ATOM	2468	CD1	TYR	A	285	41.582	29.925	-17.118	1.00	56.19	A	C
ATOM	2469	CD2	TYR	A	285	40.113	28.441	-15.952	1.00	54.92	A	C
ATOM	2470	CE1	TYR	A	285	41.053	29.502	-18.349	1.00	59.60	A	C
ATOM	2471	CE2	TYR	A	285	39.580	28.000	-17.164	1.00	56.02	A	C
ATOM	2472	CZ	TYR	A	285	40.043	28.512	-18.349	1.00	65.05	A	C

ATOM	2473	OH	TYR	A	285	39.504	28.168	-19.547	1.00	66.29	A O
ATOM	2474	N	LEU	A	286	38.889	30.730	-13.078	1.00	38.52	A N
ATOM	2475	CA	LEU	A	286	37.498	30.282	-13.118	1.00	35.69	A C
ATOM	2476	C	LEU	A	286	36.527	31.406	-12.806	1.00	38.80	A C
ATOM	2477	O	LEU	A	286	35.329	31.256	-13.075	1.00	40.46	A O
ATOM	2478	CB	LEU	A	286	37.277	29.108	-12.172	1.00	33.92	A C
ATOM	2479	CG	LEU	A	286	37.807	27.770	-12.698	1.00	34.87	A C
ATOM	2480	CD1	LEU	A	286	37.248	26.624	-11.910	1.00	31.77	A C
ATOM	2481	CD2	LEU	A	286	37.626	27.587	-14.210	1.00	29.98	A C
ATOM	2482	N	SER	A	287	37.060	32.516	-12.270	1.00	30.24	A N
ATOM	2483	CA	SER	A	287	36.330	33.781	-12.077	1.00	29.16	A C
ATOM	2484	C	SER	A	287	36.480	34.696	-13.303	1.00	34.32	A C
ATOM	2485	O	SER	A	287	37.580	35.097	-13.696	1.00	34.85	A O
ATOM	2486	CB	SER	A	287	36.854	34.531	-10.857	1.00	30.90	A C
ATOM	2487	OG	SER	A	287	37.083	33.659	-9.772	1.00	39.47	A O
ATOM	2488	N	GLU	A	288	35.358	35.014	-13.908	1.00	27.48	A N
ATOM	2489	CA	GLU	A	288	35.374	35.647	-15.171	1.00	27.70	A C
ATOM	2490	C	GLU	A	288	33.929	35.922	-15.480	1.00	31.22	A C
ATOM	2491	O	GLU	A	288	33.085	35.081	-15.243	1.00	30.90	A O
ATOM	2492	CB	GLU	A	288	36.010	34.723	-16.228	1.00	29.17	A C
ATOM	2493	CG	GLU	A	288	35.807	33.251	-15.980	1.00	41.48	A C
ATOM	2494	CD	GLU	A	288	35.943	32.385	-17.244	1.00	67.42	A C
ATOM	2495	OE1	GLU	A	288	35.541	31.189	-17.201	1.00	62.97	A O
ATOM	2496	OE2	GLU	A	288	36.474	32.891	-18.264	1.00	58.07	A O
ATOM	2497	N	LEU	A	289	33.658	37.158	-15.869	1.00	28.93	A N
ATOM	2498	CA	LEU	A	289	32.390	37.550	-16.448	1.00	28.99	A C
ATOM	2499	C	LEU	A	289	32.453	37.194	-17.911	1.00	35.00	A C
ATOM	2500	O	LEU	A	289	33.016	37.970	-18.700	1.00	35.02	A O
ATOM	2501	CB	LEU	A	289	32.281	39.041	-16.393	1.00	28.60	A C
ATOM	2502	CG	LEU	A	289	31.814	39.716	-15.137	1.00	34.80	A C
ATOM	2503	CD1	LEU	A	289	31.410	41.093	-15.618	1.00	35.77	A C
ATOM	2504	CD2	LEU	A	289	30.664	38.964	-14.441	1.00	38.09	A C
ATOM	2505	N	ARG	A	290	31.919	36.027	-18.265	1.00	31.27	A N
ATOM	2506	CA	ARG	A	290	32.072	35.519	-19.625	1.00	32.13	A C
ATOM	2507	C	ARG	A	290	30.708	35.327	-20.279	1.00	38.79	A C
ATOM	2508	O	ARG	A	290	29.659	35.607	-19.683	1.00	39.34	A O
ATOM	2509	CB	ARG	A	290	32.889	34.219	-19.667	1.00	32.90	A C
ATOM	2510	CG	ARG	A	290	32.107	32.938	-19.425	1.00	27.29	A C
ATOM	2511	CD	ARG	A	290	33.010	31.726	-19.147	1.00	44.79	A C
ATOM	2512	NE	ARG	A	290	33.157	30.825	-20.295	1.00	60.18	A N
ATOM	2513	CZ	ARG	A	290	34.219	30.790	-21.099	1.00	82.14	A C
ATOM	2514	NH1	ARG	A	290	35.259	31.589	-20.893	1.00	71.19	A N
ATOM	2515	NH2	ARG	A	290	34.244	29.952	-22.120	1.00	77.46	A N
ATOM	2516	N	PRO	A	291	30.730	34.860	-21.514	1.00	34.37	A N
ATOM	2517	CA	PRO	A	291	29.529	34.820	-22.316	1.00	33.81	A C
ATOM	2518	C	PRO	A	291	29.065	33.389	-22.545	1.00	36.16	A C
ATOM	2519	O	PRO	A	291	29.731	32.587	-23.219	1.00	32.29	A O
ATOM	2520	CB	PRO	A	291	29.962	35.487	-23.629	1.00	35.98	A C
ATOM	2521	CG	PRO	A	291	31.492	35.401	-23.616	1.00	40.16	A C
ATOM	2522	CD	PRO	A	291	31.805	35.605	-22.175	1.00	35.27	A C
ATOM	2523	N	VAL	A	292	27.890	33.088	-21.992	1.00	33.28	A N
ATOM	2524	CA	VAL	A	292	27.326	31.758	-22.112	1.00	33.86	A C
ATOM	2525	C	VAL	A	292	25.948	31.763	-22.737	1.00	38.54	A C
ATOM	2526	O	VAL	A	292	25.394	32.825	-22.989	1.00	40.91	A O
ATOM	2527	CB	VAL	A	292	27.213	31.067	-20.745	1.00	37.24	A C
ATOM	2528	CG1	VAL	A	292	28.560	30.554	-20.317	1.00	37.04	A C
ATOM	2529	CG2	VAL	A	292	26.631	32.005	-19.722	1.00	37.07	A C
ATOM	2530	N	THR	A	293	25.449	30.561	-23.017	1.00	31.74	A N
ATOM	2531	CA	THR	A	293	24.049	30.287	-23.323	1.00	31.82	A C
ATOM	2532	C	THR	A	293	23.503	29.348	-22.222	1.00	35.00	A C
ATOM	2533	O	THR	A	293	24.024	28.268	-22.005	1.00	37.18	A O
ATOM	2534	CB	THR	A	293	23.896	29.626	-24.743	1.00	36.14	A C
ATOM	2535	OG1	THR	A	293	24.131	30.603	-25.772	1.00	40.54	A O
ATOM	2536	CG2	THR	A	293	22.500	29.013	-24.957	1.00	25.36	A C
ATOM	2537	N	ILE	A	294	22.511	29.814	-21.484	1.00	29.70	A N
ATOM	2538	CA	ILE	A	294	21.866	29.067	-20.412	1.00	29.02	A C
ATOM	2539	C	ILE	A	294	20.600	28.375	-20.961	1.00	35.36	A C

ATOM	2540	O	ILE	A	294	19.592	29.053	-21.302	1.00	35.96	A	O
ATOM	2541	CB	ILE	A	294	21.357	30.039	-19.320	1.00	31.23	A	C
ATOM	2542	CG1	ILE	A	294	22.426	31.066	-18.939	1.00	30.71	A	C
ATOM	2543	CG2	ILE	A	294	20.788	29.273	-18.123	1.00	30.82	A	C
ATOM	2544	CD1	ILE	A	294	23.590	30.498	-18.158	1.00	34.90	A	C
ATOM	2545	N	VAL	A	295	20.646	27.046	-21.058	1.00	28.43	A	N
ATOM	2546	CA	VAL	A	295	19.417	26.281	-21.151	1.00	26.64	A	C
ATOM	2547	C	VAL	A	295	18.932	25.823	-19.751	1.00	34.25	A	C
ATOM	2548	O	VAL	A	295	19.645	25.083	-19.038	1.00	33.07	A	O
ATOM	2549	CB	VAL	A	295	19.561	25.066	-22.070	1.00	28.41	A	C
ATOM	2550	CG1	VAL	A	295	18.227	24.514	-22.318	1.00	28.31	A	C
ATOM	2551	CG2	VAL	A	295	20.201	25.461	-23.389	1.00	27.67	A	C
ATOM	2552	N	PHE	A	296	17.733	26.274	-19.359	1.00	29.05	A	N
ATOM	2553	CA	PHE	A	296	17.188	25.952	-18.060	1.00	26.94	A	C
ATOM	2554	C	PHE	A	296	15.983	25.048	-18.262	1.00	34.37	A	C
ATOM	2555	O	PHE	A	296	14.885	25.524	-18.540	1.00	36.00	A	O
ATOM	2556	CB	PHE	A	296	16.728	27.218	-17.402	1.00	29.24	A	C
ATOM	2557	CG	PHE	A	296	17.166	27.356	-15.966	1.00	31.57	A	C
ATOM	2558	CD1	PHE	A	296	17.014	26.299	-15.069	1.00	35.58	A	C
ATOM	2559	CD2	PHE	A	296	17.646	28.552	-15.496	1.00	32.26	A	C
ATOM	2560	CE1	PHE	A	296	17.338	26.443	-13.774	1.00	36.14	A	C
ATOM	2561	CE2	PHE	A	296	17.980	28.698	-14.197	1.00	36.15	A	C
ATOM	2562	CZ	PHE	A	296	17.812	27.653	-13.324	1.00	35.46	A	C
ATOM	2563	N	VAL	A	297	16.183	23.741	-18.116	1.00	29.50	A	N
ATOM	2564	CA	VAL	A	297	15.101	22.781	-18.250	1.00	27.40	A	C
ATOM	2565	C	VAL	A	297	14.341	22.591	-16.949	1.00	34.72	A	C
ATOM	2566	O	VAL	A	297	14.915	22.538	-15.864	1.00	34.59	A	O
ATOM	2567	CB	VAL	A	297	15.627	21.439	-18.723	1.00	28.24	A	C
ATOM	2568	CG1	VAL	A	297	14.487	20.436	-18.849	1.00	27.89	A	C
ATOM	2569	CG2	VAL	A	297	16.354	21.608	-20.017	1.00	26.27	A	C
ATOM	2570	N	ASN	A	298	13.034	22.460	-17.061	1.00	33.57	A	N
ATOM	2571	CA	ASN	A	298	12.196	22.370	-15.883	1.00	34.42	A	C
ATOM	2572	C	ASN	A	298	11.189	21.254	-16.097	1.00	41.92	A	C
ATOM	2573	O	ASN	A	298	10.379	21.333	-17.014	1.00	42.75	A	O
ATOM	2574	CB	ASN	A	298	11.457	23.688	-15.689	1.00	34.55	A	C
ATOM	2575	CG	ASN	A	298	11.085	23.937	-14.250	1.00	67.75	A	C
ATOM	2576	OD1	ASN	A	298	11.676	23.372	-13.336	1.00	73.27	A	O
ATOM	2577	ND2	ASN	A	298	10.112	24.802	-14.039	1.00	59.09	A	N
ATOM	2578	N	LEU	A	299	11.249	20.217	-15.261	1.00	38.76	A	N
ATOM	2579	CA	LEU	A	299	10.409	19.035	-15.420	1.00	37.62	A	C
ATOM	2580	C	LEU	A	299	9.382	19.025	-14.298	1.00	46.09	A	C
ATOM	2581	O	LEU	A	299	9.739	19.105	-13.125	1.00	45.31	A	O
ATOM	2582	CB	LEU	A	299	11.249	17.758	-15.367	1.00	36.48	A	C
ATOM	2583	CG	LEU	A	299	12.468	17.581	-16.295	1.00	40.39	A	C
ATOM	2584	CD1	LEU	A	299	13.433	16.511	-15.721	1.00	40.81	A	C
ATOM	2585	CD2	LEU	A	299	12.055	17.201	-17.691	1.00	40.65	A	C
ATOM	2586	N	MET	A	300	8.110	18.920	-14.671	1.00	46.04	A	N
ATOM	2587	CA	MET	A	300	6.987	19.036	-13.729	1.00	47.49	A	C
ATOM	2588	C	MET	A	300	6.235	17.710	-13.542	1.00	47.94	A	C
ATOM	2589	O	MET	A	300	5.830	17.081	-14.507	1.00	46.16	A	O
ATOM	2590	CB	MET	A	300	6.044	20.135	-14.205	1.00	51.54	A	C
ATOM	2591	CG	MET	A	300	4.695	20.166	-13.523	1.00	58.17	A	C
ATOM	2592	SD	MET	A	300	3.700	21.628	-14.048	1.00	65.32	A	S
ATOM	2593	CE	MET	A	300	2.029	21.153	-13.457	1.00	62.57	A	C
ATOM	2594	N	PHE	A	301	6.096	17.267	-12.294	1.00	44.72	A	N
ATOM	2595	CA	PHE	A	301	5.436	15.988	-11.974	1.00	43.54	A	C
ATOM	2596	C	PHE	A	301	4.200	16.322	-11.167	1.00	52.07	A	C
ATOM	2597	O	PHE	A	301	4.144	17.380	-10.553	1.00	50.72	A	O
ATOM	2598	CB	PHE	A	301	6.348	15.105	-11.112	1.00	43.34	A	C
ATOM	2599	CG	PHE	A	301	7.722	14.940	-11.668	1.00	42.43	A	C
ATOM	2600	CD1	PHE	A	301	8.704	15.884	-11.421	1.00	42.45	A	C
ATOM	2601	CD2	PHE	A	301	8.024	13.864	-12.480	1.00	42.74	A	C
ATOM	2602	CE1	PHE	A	301	9.950	15.750	-11.975	1.00	42.09	A	C
ATOM	2603	CE2	PHE	A	301	9.288	13.732	-13.050	1.00	43.18	A	C
ATOM	2604	CZ	PHE	A	301	10.234	14.681	-12.801	1.00	40.41	A	C
ATOM	2605	N	GLU	A	302	3.209	15.437	-11.142	1.00	54.35	A	N
ATOM	2606	CA	GLU	A	302	2.094	15.679	-10.235	1.00	57.16	A	C

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ATOM   2607  C   GLU A 302       2.445  15.416  -8.767  1.00 64.63      A    C
ATOM   2608  O   GLU A 302       1.863  16.026  -7.862  1.00 65.85      A    O
ATOM   2609  CB  GLU A 302       0.812  14.956 -10.664  1.00 59.38      A    C
ATOM   2610  CG  GLU A 302      -0.451  15.452  -9.942  1.00 74.62      A    C
ATOM   2611  CD  GLU A 302      -1.730  15.128 -10.703  1.00117.12      A    C
ATOM   2612  OE1 GLU A 302      -2.688  14.613 -10.076  1.00123.66      A    O
ATOM   2613  OE2 GLU A 302      -1.785  15.417 -11.925  1.00117.90      A    O
ATOM   2614  N   ASP A 303       3.415  14.533  -8.526  1.00 61.82      A    N
ATOM   2615  CA  ASP A 303       3.843  14.238  -7.156  1.00 61.93      A    C
ATOM   2616  C   ASP A 303       5.313  14.565  -6.971  1.00 64.92      A    C
ATOM   2617  O   ASP A 303       6.174  13.700  -7.067  1.00 64.48      A    O
ATOM   2618  CB  ASP A 303       3.589  12.774  -6.802  1.00 64.19      A    C
ATOM   2619  CG  ASP A 303       2.113  12.419  -6.800  1.00 71.93      A    C
ATOM   2620  OD1 ASP A 303       1.324  13.157  -6.173  1.00 72.76      A    O
ATOM   2621  OD2 ASP A 303       1.749  11.405  -7.435  1.00 75.31      A    O
ATOM   2622  N   GLN A 304       5.595  15.827  -6.696  1.00 61.47      A    N
ATOM   2623  CA  GLN A 304       6.966  16.305  -6.669  1.00 60.51      A    C
ATOM   2624  C   GLN A 304       7.623  15.923  -5.343  1.00 64.07      A    C
ATOM   2625  O   GLN A 304       8.800  16.205  -5.111  1.00 63.31      A    O
ATOM   2626  CB  GLN A 304       6.981  17.820  -6.884  1.00 61.09      A    C
ATOM   2627  CG  GLN A 304       6.267  18.619  -5.798  1.00 68.38      A    C
ATOM   2628  CD  GLN A 304       4.776  18.327  -5.705  1.00 78.63      A    C
ATOM   2629  OE1 GLN A 304       4.121  18.693  -4.731  1.00 76.33      A    O
ATOM   2630  NE2 GLN A 304       4.234  17.681  -6.723  1.00 59.41      A    N
ATOM   2631  N   ASP A 305       6.854  15.254  -4.489  1.00 60.84      A    N
ATOM   2632  CA  ASP A 305       7.265  14.996  -3.107  1.00 61.53      A    C
ATOM   2633  C   ASP A 305       7.484  13.509  -2.816  1.00 66.61      A    C
ATOM   2634  O   ASP A 305       8.170  13.140  -1.866  1.00 67.66      A    O
ATOM   2635  CB  ASP A 305       6.275  15.627  -2.106  1.00 63.17      A    C
ATOM   2636  CG  ASP A 305       4.803  15.309  -2.425  1.00 72.26      A    C
ATOM   2637  OD1 ASP A 305       3.949  15.551  -1.544  1.00 73.05      A    O
ATOM   2638  OD2 ASP A 305       4.488  14.840  -3.544  1.00 75.87      A    O
ATOM   2639  N   LYS A 306       6.897  12.662  -3.650  1.00 62.34      A    N
ATOM   2640  CA  LYS A 306       7.104  11.231  -3.553  1.00 61.11      A    C
ATOM   2641  C   LYS A 306       8.226  10.861  -4.498  1.00 62.12      A    C
ATOM   2642  O   LYS A 306       7.987  10.733  -5.696  1.00 62.42      A    O
ATOM   2643  CB  LYS A 306       5.831  10.494  -3.978  1.00 63.64      A    C
ATOM   2644  CG  LYS A 306       4.593  10.876  -3.182  1.00 73.98      A    C
ATOM   2645  CD  LYS A 306       3.435   9.969  -3.539  1.00 78.68      A    C
ATOM   2646  CE  LYS A 306       2.214  10.290  -2.717  1.00 83.65      A    C
ATOM   2647  NZ  LYS A 306       1.278   9.138  -2.705  1.00 93.81      A    N
ATOM   2648  N   ALA A 307       9.435  10.686  -3.966  1.00 56.18      A    N
ATOM   2649  CA  ALA A 307      10.574  10.235  -4.778  1.00 54.80      A    C
ATOM   2650  C   ALA A 307      10.368   8.880  -5.454  1.00 58.25      A    C
ATOM   2651  O   ALA A 307      11.116   8.514  -6.361  1.00 58.05      A    O
ATOM   2652  CB  ALA A 307      11.844  10.219  -3.962  1.00 55.33      A    C
ATOM   2653  N   GLU A 308       9.369   8.123  -5.005  1.00 54.89      A    N
ATOM   2654  CA  GLU A 308       9.155   6.767  -5.517  1.00 54.49      A    C
ATOM   2655  C   GLU A 308       8.675   6.925  -6.937  1.00 55.99      A    C
ATOM   2656  O   GLU A 308       8.920   6.085  -7.796  1.00 56.42      A    O
ATOM   2657  CB  GLU A 308       8.063   6.055  -4.705  1.00 56.33      A    C
ATOM   2658  CG  GLU A 308       8.100   6.320  -3.188  1.00 70.73      A    C
ATOM   2659  CD  GLU A 308       7.353   7.591  -2.766  1.00 88.37      A    C
ATOM   2660  OE1 GLU A 308       6.241   7.842  -3.276  1.00 75.88      A    O
ATOM   2661  OE2 GLU A 308       7.876   8.335  -1.906  1.00 84.19      A    O
ATOM   2662  N   GLU A 309       7.992   8.040  -7.153  1.00 49.95      A    N
ATOM   2663  CA  GLU A 309       7.318   8.374  -8.394  1.00 48.66      A    C
ATOM   2664  C   GLU A 309       8.250   9.059  -9.403  1.00 50.59      A    C
ATOM   2665  O   GLU A 309       8.364   8.632 -10.562  1.00 49.57      A    O
ATOM   2666  CB  GLU A 309       6.194   9.340  -8.039  1.00 50.04      A    C
ATOM   2667  CG  GLU A 309       5.258   8.808  -6.974  1.00 59.64      A    C
ATOM   2668  CD  GLU A 309       4.388   7.671  -7.487  1.00 81.89      A    C
ATOM   2669  OE1 GLU A 309       3.907   7.760  -8.643  1.00 67.95      A    O
ATOM   2670  OE2 GLU A 309       4.199   6.681  -6.743  1.00 76.57      A    O
ATOM   2671  N   ILE A 310       8.905  10.131  -8.960  1.00 44.89      A    N
ATOM   2672  CA  ILE A 310       9.578  11.017  -9.885  1.00 44.07      A    C
ATOM   2673  C   ILE A 310      11.005  10.621 -10.177  1.00 48.37      A    C
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ATOM	2674	O	ILE	A	310	11.526	10.936	-11.223	1.00	46.85	A O
ATOM	2675	CB	ILE	A	310	9.522	12.459	-9.433	1.00	46.75	A C
ATOM	2676	CG1	ILE	A	310	10.336	12.652	-8.167	1.00	46.23	A C
ATOM	2677	CG2	ILE	A	310	8.099	12.872	-9.195	1.00	49.09	A C
ATOM	2678	CD1	ILE	A	310	10.604	14.081	-7.891	1.00	43.52	A C
ATOM	2679	N	GLY	A	311	11.611	9.879	-9.266	1.00	47.29	A N
ATOM	2680	CA	GLY	A	311	13.024	9.547	-9.352	1.00	47.62	A C
ATOM	2681	C	GLY	A	311	13.485	8.866	-10.634	1.00	52.58	A C
ATOM	2682	O	GLY	A	311	14.585	9.133	-11.122	1.00	54.25	A O
ATOM	2683	N	PRO	A	312	12.682	7.956	-11.157	1.00	47.83	A N
ATOM	2684	CA	PRO	A	312	13.109	7.150	-12.302	1.00	47.17	A C
ATOM	2685	C	PRO	A	312	13.022	8.018	-13.533	1.00	50.52	A C
ATOM	2686	O	PRO	A	312	13.825	7.897	-14.462	1.00	51.80	A O
ATOM	2687	CB	PRO	A	312	12.052	6.051	-12.386	1.00	48.53	A C
ATOM	2688	CG	PRO	A	312	11.460	5.983	-11.020	1.00	53.82	A C
ATOM	2689	CD	PRO	A	312	11.591	7.336	-10.395	1.00	48.68	A C
ATOM	2690	N	ALA	A	313	12.033	8.901	-13.535	1.00	44.60	A N
ATOM	2691	CA	ALA	A	313	11.878	9.866	-14.617	1.00	42.69	A C
ATOM	2692	C	ALA	A	313	13.175	10.640	-14.724	1.00	41.10	A C
ATOM	2693	O	ALA	A	313	13.912	10.525	-15.692	1.00	42.43	A O
ATOM	2694	CB	ALA	A	313	10.732	10.806	-14.303	1.00	43.67	A C
ATOM	2695	N	ILE	A	314	13.445	11.417	-13.689	1.00	32.45	A N
ATOM	2696	CA	ILE	A	314	14.626	12.267	-13.589	1.00	27.47	A C
ATOM	2697	C	ILE	A	314	15.920	11.573	-14.021	1.00	27.38	A C
ATOM	2698	O	ILE	A	314	16.753	12.140	-14.772	1.00	22.99	A O
ATOM	2699	CB	ILE	A	314	14.736	12.784	-12.178	1.00	27.98	A C
ATOM	2700	CG1	ILE	A	314	13.559	13.722	-11.885	1.00	25.31	A C
ATOM	2701	CG2	ILE	A	314	16.082	13.434	-11.935	1.00	28.68	A C
ATOM	2702	CD1	ILE	A	314	13.370	13.991	-10.463	1.00	20.27	A C
ATOM	2703	N	GLN	A	315	16.083	10.340	-13.580	1.00	22.37	A N
ATOM	2704	CA	GLN	A	315	17.272	9.580	-13.983	1.00	22.70	A C
ATOM	2705	C	GLN	A	315	17.208	9.384	-15.486	1.00	31.18	A C
ATOM	2706	O	GLN	A	315	18.212	9.498	-16.167	1.00	35.68	A O
ATOM	2707	CB	GLN	A	315	17.320	8.216	-13.286	1.00	23.52	A C
ATOM	2708	CG	GLN	A	315	18.292	7.176	-13.920	1.00	25.38	A C
ATOM	2709	CD	GLN	A	315	19.775	7.514	-13.755	1.00	34.76	A C
ATOM	2710	OE1	GLN	A	315	20.580	7.238	-14.656	1.00	32.25	A O
ATOM	2711	NE2	GLN	A	315	20.121	8.220	-12.672	1.00	15.90	A N
ATOM	2712	N	ASP	A	316	16.031	9.078	-16.019	1.00	28.32	A N
ATOM	2713	CA	ASP	A	316	15.875	9.004	-17.469	1.00	29.86	A C
ATOM	2714	C	ASP	A	316	16.045	10.345	-18.178	1.00	35.80	A C
ATOM	2715	O	ASP	A	316	16.732	10.417	-19.192	1.00	36.19	A O
ATOM	2716	CB	ASP	A	316	14.572	8.344	-17.842	1.00	32.13	A C
ATOM	2717	CG	ASP	A	316	14.519	6.911	-17.379	1.00	45.39	A C
ATOM	2718	OD1	ASP	A	316	13.395	6.421	-17.149	1.00	42.76	A O
ATOM	2719	OD2	ASP	A	316	15.616	6.326	-17.158	1.00	53.02	A O
ATOM	2720	N	ALA	A	317	15.430	11.396	-17.647	1.00	33.69	A N
ATOM	2721	CA	ALA	A	317	15.710	12.752	-18.133	1.00	35.49	A C
ATOM	2722	C	ALA	A	317	17.215	13.044	-18.147	1.00	36.47	A C
ATOM	2723	O	ALA	A	317	17.815	13.280	-19.220	1.00	34.80	A O
ATOM	2724	CB	ALA	A	317	14.992	13.776	-17.268	1.00	37.32	A C
ATOM	2725	N	TYR	A	318	17.808	13.042	-16.952	1.00	32.75	A N
ATOM	2726	CA	TYR	A	318	19.249	13.175	-16.797	1.00	32.92	A C
ATOM	2727	C	TYR	A	318	20.067	12.452	-17.869	1.00	36.11	A C
ATOM	2728	O	TYR	A	318	20.985	13.022	-18.431	1.00	37.90	A O
ATOM	2729	CB	TYR	A	318	19.719	12.744	-15.406	1.00	36.45	A C
ATOM	2730	CG	TYR	A	318	21.217	12.535	-15.381	1.00	40.63	A C
ATOM	2731	CD1	TYR	A	318	22.075	13.596	-15.158	1.00	43.50	A C
ATOM	2732	CD2	TYR	A	318	21.769	11.331	-15.754	1.00	41.85	A C
ATOM	2733	CE1	TYR	A	318	23.433	13.440	-15.229	1.00	45.50	A C
ATOM	2734	CE2	TYR	A	318	23.135	11.165	-15.808	1.00	43.40	A C
ATOM	2735	CZ	TYR	A	318	23.960	12.226	-15.559	1.00	53.77	A C
ATOM	2736	OH	TYR	A	318	25.331	12.082	-15.661	1.00	63.02	A O
ATOM	2737	N	MET	A	319	19.752	11.195	-18.150	1.00	31.33	A N
ATOM	2738	CA	MET	A	319	20.530	10.421	-19.123	1.00	29.40	A C
ATOM	2739	C	MET	A	319	20.311	10.970	-20.513	1.00	35.44	A C
ATOM	2740	O	MET	A	319	21.239	11.072	-21.314	1.00	35.26	A O

ATOM	2741	CB	MET	A	319	20.115	8.947	-19.117	1.00	30.47	A	C
ATOM	2742	CG	MET	A	319	20.409	8.214	-17.835	1.00	33.14	A	C
ATOM	2743	SD	MET	A	319	22.128	8.336	-17.284	1.00	35.98	A	S
ATOM	2744	CE	MET	A	319	22.964	7.251	-18.437	1.00	29.42	A	C
ATOM	2745	N	HIS	A	320	19.077	11.302	-20.849	1.00	32.40	A	N
ATOM	2746	CA	HIS	A	320	18.942	11.928	-22.137	1.00	32.59	A	C
ATOM	2747	C	HIS	A	320	19.706	13.237	-22.164	1.00	33.75	A	C
ATOM	2748	O	HIS	A	320	20.584	13.423	-23.000	1.00	31.28	A	O
ATOM	2749	CB	HIS	A	320	17.496	12.143	-22.571	1.00	33.96	A	C
ATOM	2750	CG	HIS	A	320	17.379	12.546	-24.010	1.00	37.52	A	C
ATOM	2751	ND1	HIS	A	320	17.546	11.654	-25.050	1.00	38.85	A	N
ATOM	2752	CD2	HIS	A	320	17.171	13.754	-24.584	1.00	39.00	A	C
ATOM	2753	CE1	HIS	A	320	17.369	12.280	-26.199	1.00	38.18	A	C
ATOM	2754	NE2	HIS	A	320	17.174	13.560	-25.947	1.00	38.71	A	N
ATOM	2755	N	ILE	A	321	19.363	14.139	-21.247	1.00	28.95	A	N
ATOM	2756	CA	ILE	A	321	20.004	15.443	-21.200	1.00	29.19	A	C
ATOM	2757	C	ILE	A	321	21.519	15.339	-21.317	1.00	33.58	A	C
ATOM	2758	O	ILE	A	321	22.140	15.881	-22.221	1.00	35.62	A	O
ATOM	2759	CB	ILE	A	321	19.679	16.143	-19.896	1.00	33.01	A	C
ATOM	2760	CG1	ILE	A	321	18.189	16.493	-19.838	1.00	33.07	A	C
ATOM	2761	CG2	ILE	A	321	20.579	17.327	-19.706	1.00	35.22	A	C
ATOM	2762	CD1	ILE	A	321	17.820	17.389	-18.706	1.00	39.84	A	C
ATOM	2763	N	THR	A	322	22.111	14.593	-20.411	1.00	29.81	A	N
ATOM	2764	CA	THR	A	322	23.547	14.440	-20.363	1.00	28.35	A	C
ATOM	2765	C	THR	A	322	24.161	14.114	-21.732	1.00	34.98	A	C
ATOM	2766	O	THR	A	322	25.172	14.713	-22.137	1.00	34.46	A	O
ATOM	2767	CB	THR	A	322	23.875	13.404	-19.327	1.00	30.35	A	C
ATOM	2768	OG1	THR	A	322	25.288	13.255	-19.238	1.00	33.66	A	O
ATOM	2769	CG2	THR	A	322	23.241	12.106	-19.724	1.00	26.99	A	C
ATOM	2770	N	SER	A	323	23.498	13.239	-22.491	1.00	34.34	A	N
ATOM	2771	CA	SER	A	323	23.956	12.853	-23.847	1.00	34.57	A	C
ATOM	2772	C	SER	A	323	23.652	13.857	-24.957	1.00	40.00	A	C
ATOM	2773	O	SER	A	323	24.392	13.958	-25.934	1.00	40.46	A	O
ATOM	2774	CB	SER	A	323	23.436	11.469	-24.262	1.00	38.51	A	C
ATOM	2775	OG	SER	A	323	22.217	11.548	-24.999	1.00	50.11	A	O
ATOM	2776	N	VAL	A	324	22.551	14.579	-24.837	1.00	35.58	A	N
ATOM	2777	CA	VAL	A	324	22.302	15.658	-25.773	1.00	35.77	A	C
ATOM	2778	C	VAL	A	324	23.382	16.738	-25.625	1.00	41.86	A	C
ATOM	2779	O	VAL	A	324	23.909	17.250	-26.611	1.00	43.45	A	O
ATOM	2780	CB	VAL	A	324	20.924	16.247	-25.535	1.00	40.22	A	C
ATOM	2781	CG1	VAL	A	324	20.782	17.596	-26.200	1.00	40.69	A	C
ATOM	2782	CG2	VAL	A	324	19.871	15.278	-26.019	1.00	40.42	A	C
ATOM	2783	N	LEU	A	325	23.743	17.059	-24.385	1.00	37.42	A	N
ATOM	2784	CA	LEU	A	325	24.704	18.139	-24.150	1.00	36.90	A	C
ATOM	2785	C	LEU	A	325	26.095	17.786	-24.646	1.00	43.01	A	C
ATOM	2786	O	LEU	A	325	26.772	18.602	-25.281	1.00	42.61	A	O
ATOM	2787	CB	LEU	A	325	24.809	18.448	-22.672	1.00	35.59	A	C
ATOM	2788	CG	LEU	A	325	23.586	19.037	-22.022	1.00	38.73	A	C
ATOM	2789	CD1	LEU	A	325	23.956	19.217	-20.574	1.00	40.02	A	C
ATOM	2790	CD2	LEU	A	325	23.280	20.363	-22.669	1.00	40.28	A	C
ATOM	2791	N	LYS	A	326	26.514	16.576	-24.290	1.00	39.85	A	N
ATOM	2792	CA	LYS	A	326	27.897	16.111	-24.425	1.00	39.95	A	C
ATOM	2793	C	LYS	A	326	28.500	16.491	-25.762	1.00	45.27	A	C
ATOM	2794	O	LYS	A	326	29.650	16.902	-25.847	1.00	43.56	A	O
ATOM	2795	CB	LYS	A	326	27.946	14.590	-24.239	1.00	42.08	A	C
ATOM	2796	CG	LYS	A	326	29.160	13.892	-24.848	1.00	53.27	A	C
ATOM	2797	CD	LYS	A	326	29.175	12.384	-24.524	1.00	62.39	A	C
ATOM	2798	CE	LYS	A	326	30.522	11.749	-24.889	1.00	61.86	A	C
ATOM	2799	NZ	LYS	A	326	30.557	10.275	-24.668	1.00	65.13	A	N
ATOM	2800	N	ILE	A	327	27.686	16.365	-26.798	1.00	44.62	A	N
ATOM	2801	CA	ILE	A	327	28.094	16.644	-28.168	1.00	45.37	A	C
ATOM	2802	C	ILE	A	327	28.666	18.054	-28.346	1.00	51.25	A	C
ATOM	2803	O	ILE	A	327	29.669	18.237	-29.048	1.00	52.60	A	O
ATOM	2804	CB	ILE	A	327	26.881	16.509	-29.116	1.00	48.61	A	C
ATOM	2805	CG1	ILE	A	327	26.147	15.185	-28.871	1.00	47.90	A	C
ATOM	2806	CG2	ILE	A	327	27.322	16.643	-30.573	1.00	51.11	A	C
ATOM	2807	CD1	ILE	A	327	24.765	15.135	-29.519	1.00	57.03	A	C

ATOM	2808	N	PHE	A	328	28.009	19.048	-27.744	1.00	45.98	A N
ATOM	2809	CA	PHE	A	328	28.441	20.431	-27.873	1.00	44.86	A C
ATOM	2810	C	PHE	A	328	29.085	20.870	-26.596	1.00	49.65	A C
ATOM	2811	O	PHE	A	328	29.317	22.042	-26.364	1.00	51.59	A O
ATOM	2812	CB	PHE	A	328	27.275	21.337	-28.240	1.00	46.41	A C
ATOM	2813	CG	PHE	A	328	26.554	20.894	-29.481	1.00	47.36	A C
ATOM	2814	CD1	PHE	A	328	25.194	20.655	-29.460	1.00	48.74	A C
ATOM	2815	CD2	PHE	A	328	27.279	20.542	-30.621	1.00	49.44	A C
ATOM	2816	CE1	PHE	A	328	24.551	20.191	-30.585	1.00	49.66	A C
ATOM	2817	CE2	PHE	A	328	26.642	20.025	-31.741	1.00	51.50	A C
ATOM	2818	CZ	PHE	A	328	25.280	19.874	-31.733	1.00	49.26	A C
ATOM	2819	N	GLN	A	329	29.399	19.889	-25.775	1.00	44.16	A N
ATOM	2820	CA	GLN	A	329	30.034	20.146	-24.517	1.00	42.91	A C
ATOM	2821	C	GLN	A	329	29.142	21.050	-23.692	1.00	46.63	A C
ATOM	2822	O	GLN	A	329	29.559	22.106	-23.218	1.00	46.70	A O
ATOM	2823	CB	GLN	A	329	31.425	20.724	-24.741	1.00	44.13	A C
ATOM	2824	CG	GLN	A	329	32.482	19.651	-25.039	1.00	64.46	A C
ATOM	2825	CD	GLN	A	329	32.942	19.660	-26.490	1.00	97.47	A C
ATOM	2826	OE1	GLN	A	329	33.342	20.701	-27.018	1.00	95.81	A O
ATOM	2827	NE2	GLN	A	329	32.886	18.499	-27.142	1.00	92.17	A N
ATOM	2828	N	GLY	A	330	27.888	20.639	-23.546	1.00	41.59	A N
ATOM	2829	CA	GLY	A	330	26.987	21.342	-22.645	1.00	40.88	A C
ATOM	2830	C	GLY	A	330	27.264	20.797	-21.253	1.00	42.57	A C
ATOM	2831	O	GLY	A	330	27.782	19.684	-21.099	1.00	44.32	A O
ATOM	2832	N	GLN	A	331	26.925	21.553	-20.226	1.00	33.02	A N
ATOM	2833	CA	GLN	A	331	27.096	20.980	-18.919	1.00	30.91	A C
ATOM	2834	C	GLN	A	331	25.944	21.298	-18.022	1.00	32.85	A C
ATOM	2835	O	GLN	A	331	25.295	22.324	-18.172	1.00	32.96	A O
ATOM	2836	CB	GLN	A	331	28.393	21.449	-18.284	1.00	30.96	A C
ATOM	2837	CG	GLN	A	331	29.613	20.811	-18.893	1.00	47.08	A C
ATOM	2838	CD	GLN	A	331	30.792	20.812	-17.935	1.00	66.93	A C
ATOM	2839	OE1	GLN	A	331	31.438	19.784	-17.734	1.00	61.54	A O
ATOM	2840	NE2	GLN	A	331	31.042	21.957	-17.303	1.00	59.34	A N
ATOM	2841	N	ILE	A	332	25.717	20.404	-17.076	1.00	27.58	A N
ATOM	2842	CA	ILE	A	332	24.632	20.520	-16.120	1.00	25.87	A C
ATOM	2843	C	ILE	A	332	25.298	21.130	-14.889	1.00	28.66	A C
ATOM	2844	O	ILE	A	332	25.867	20.408	-14.090	1.00	29.10	A O
ATOM	2845	CB	ILE	A	332	24.081	19.104	-15.797	1.00	27.21	A C
ATOM	2846	CG1	ILE	A	332	23.679	18.409	-17.081	1.00	28.77	A C
ATOM	2847	CG2	ILE	A	332	22.908	19.160	-14.898	1.00	25.88	A C
ATOM	2848	CD1	ILE	A	332	22.851	17.166	-16.881	1.00	32.64	A C
ATOM	2849	N	ASN	A	333	25.294	22.457	-14.803	1.00	22.36	A N
ATOM	2850	CA	ASN	A	333	25.810	23.171	-13.652	1.00	22.91	A C
ATOM	2851	C	ASN	A	333	25.113	22.850	-12.318	1.00	33.53	A C
ATOM	2852	O	ASN	A	333	25.768	22.810	-11.283	1.00	36.35	A O
ATOM	2853	CB	ASN	A	333	25.801	24.691	-13.898	1.00	17.99	A C
ATOM	2854	CG	ASN	A	333	26.368	25.484	-12.726	1.00	40.15	A C
ATOM	2855	OD1	ASN	A	333	27.431	25.146	-12.213	1.00	53.01	A O
ATOM	2856	ND2	ASN	A	333	25.622	26.496	-12.241	1.00	19.28	A N
ATOM	2857	N	LYS	A	334	23.795	22.679	-12.325	1.00	27.92	A N
ATOM	2858	CA	LYS	A	334	23.047	22.511	-11.089	1.00	26.87	A C
ATOM	2859	C	LYS	A	334	21.719	21.851	-11.360	1.00	32.03	A C
ATOM	2860	O	LYS	A	334	21.292	21.743	-12.518	1.00	32.33	A O
ATOM	2861	CB	LYS	A	334	22.771	23.843	-10.403	1.00	26.10	A C
ATOM	2862	CG	LYS	A	334	23.999	24.657	-10.174	1.00	32.02	A C
ATOM	2863	CD	LYS	A	334	24.612	24.380	-8.836	1.00	39.38	A C
ATOM	2864	CE	LYS	A	334	25.524	25.546	-8.449	1.00	50.65	A C
ATOM	2865	NZ	LYS	A	334	26.640	25.131	-7.565	1.00	51.80	A N
ATOM	2866	N	VAL	A	335	21.073	21.430	-10.270	1.00	27.55	A N
ATOM	2867	CA	VAL	A	335	19.828	20.682	-10.310	1.00	27.52	A C
ATOM	2868	C	VAL	A	335	19.142	20.836	-8.979	1.00	34.47	A C
ATOM	2869	O	VAL	A	335	19.679	20.498	-7.943	1.00	35.49	A O
ATOM	2870	CB	VAL	A	335	20.056	19.210	-10.606	1.00	31.75	A C
ATOM	2871	CG1	VAL	A	335	18.731	18.511	-10.792	1.00	32.17	A C
ATOM	2872	CG2	VAL	A	335	20.908	19.049	-11.882	1.00	31.52	A C
ATOM	2873	N	PHE	A	336	17.970	21.435	-9.003	1.00	34.00	A N
ATOM	2874	CA	PHE	A	336	17.251	21.686	-7.779	1.00	33.82	A C

ATOM	2875	C	PHE	A	336	15.761	21.731	-8.069	1.00	39.34	A C
ATOM	2876	O	PHE	A	336	15.345	22.107	-9.157	1.00	38.35	A O
ATOM	2877	CB	PHE	A	336	17.728	23.004	-7.193	1.00	35.41	A C
ATOM	2878	CG	PHE	A	336	17.668	24.154	-8.154	1.00	35.98	A C
ATOM	2879	CD1	PHE	A	336	16.671	25.101	-8.059	1.00	37.62	A C
ATOM	2880	CD2	PHE	A	336	18.598	24.284	-9.164	1.00	37.51	A C
ATOM	2881	CE1	PHE	A	336	16.618	26.149	-8.962	1.00	38.66	A C
ATOM	2882	CE2	PHE	A	336	18.532	25.342	-10.070	1.00	38.70	A C
ATOM	2883	CZ	PHE	A	336	17.553	26.263	-9.964	1.00	35.61	A C
ATOM	2884	N	MET	A	337	14.973	21.306	-7.093	1.00	39.67	A N
ATOM	2885	CA	MET	A	337	13.513	21.314	-7.157	1.00	39.72	A C
ATOM	2886	C	MET	A	337	12.954	22.721	-7.171	1.00	51.31	A C
ATOM	2887	O	MET	A	337	13.439	23.604	-6.468	1.00	50.18	A O
ATOM	2888	CB	MET	A	337	12.947	20.625	-5.923	1.00	40.92	A C
ATOM	2889	CG	MET	A	337	13.515	19.273	-5.695	1.00	43.92	A C
ATOM	2890	SD	MET	A	337	12.969	18.192	-6.985	1.00	46.34	A S
ATOM	2891	CE	MET	A	337	11.305	18.617	-6.935	1.00	43.39	A C
ATOM	2892	N	PHE	A	338	11.889	22.919	-7.932	1.00	54.84	A N
ATOM	2893	CA	PHE	A	338	11.101	24.120	-7.760	1.00	57.30	A C
ATOM	2894	C	PHE	A	338	9.655	23.929	-8.127	1.00	61.29	A C
ATOM	2895	O	PHE	A	338	9.291	23.967	-9.310	1.00	60.11	A O
ATOM	2896	CB	PHE	A	338	11.688	25.323	-8.499	1.00	60.72	A C
ATOM	2897	CG	PHE	A	338	10.942	26.606	-8.238	1.00	64.38	A C
ATOM	2898	CD1	PHE	A	338	11.381	27.495	-7.265	1.00	69.04	A C
ATOM	2899	CD2	PHE	A	338	9.767	26.902	-8.928	1.00	67.77	A C
ATOM	2900	CE1	PHE	A	338	10.684	28.679	-7.015	1.00	70.07	A C
ATOM	2901	CE2	PHE	A	338	9.065	28.076	-8.678	1.00	70.64	A C
ATOM	2902	CZ	PHE	A	338	9.529	28.970	-7.730	1.00	68.98	A C
ATOM	2903	N	ASP	A	339	8.849	23.697	-7.092	1.00	58.33	A N
ATOM	2904	CA	ASP	A	339	7.433	24.033	-7.127	1.00	58.14	A C
ATOM	2905	C	ASP	A	339	6.742	23.178	-8.163	1.00	62.80	A C
ATOM	2906	O	ASP	A	339	6.522	23.615	-9.308	1.00	64.06	A O
ATOM	2907	CB	ASP	A	339	7.272	25.506	-7.483	1.00	59.66	A C
ATOM	2908	CG	ASP	A	339	5.842	25.961	-7.440	1.00	63.91	A C
ATOM	2909	OD1	ASP	A	339	5.476	26.625	-6.443	1.00	61.90	A O
ATOM	2910	OD2	ASP	A	339	5.135	25.765	-8.451	1.00	70.24	A O
ATOM	2911	N	LYS	A	340	6.419	21.957	-7.750	1.00	55.95	A N
ATOM	2912	CA	LYS	A	340	5.736	20.994	-8.598	1.00	54.03	A C
ATOM	2913	C	LYS	A	340	6.720	20.333	-9.566	1.00	54.32	A C
ATOM	2914	O	LYS	A	340	6.308	19.594	-10.472	1.00	53.09	A O
ATOM	2915	CB	LYS	A	340	4.580	21.655	-9.351	1.00	56.76	A C
ATOM	2916	CG	LYS	A	340	3.286	20.845	-9.401	1.00	66.82	A C
ATOM	2917	CD	LYS	A	340	2.774	20.527	-7.998	1.00	73.56	A C
ATOM	2918	CE	LYS	A	340	1.756	19.397	-8.043	1.00	67.89	A C
ATOM	2919	NZ	LYS	A	340	2.285	18.241	-8.831	1.00	56.21	A N
ATOM	2920	N	GLY	A	341	8.018	20.571	-9.354	1.00	47.44	A N
ATOM	2921	CA	GLY	A	341	9.045	19.933	-10.187	1.00	45.65	A C
ATOM	2922	C	GLY	A	341	10.513	20.184	-9.808	1.00	46.20	A C
ATOM	2923	O	GLY	A	341	10.824	20.739	-8.761	1.00	46.16	A O
ATOM	2924	N	CYS	A	342	11.417	19.783	-10.694	1.00	40.11	A N
ATOM	2925	CA	CYS	A	342	12.827	19.949	-10.443	1.00	37.94	A C
ATOM	2926	C	CYS	A	342	13.492	20.611	-11.628	1.00	36.57	A C
ATOM	2927	O	CYS	A	342	13.272	20.203	-12.751	1.00	35.34	A O
ATOM	2928	CB	CYS	A	342	13.448	18.584	-10.197	1.00	38.49	A C
ATOM	2929	SG	CYS	A	342	14.072	17.749	-11.689	1.00	42.49	A S
ATOM	2930	N	SER	A	343	14.317	21.625	-11.382	1.00	32.94	A N
ATOM	2931	CA	SER	A	343	14.978	22.355	-12.465	1.00	32.86	A C
ATOM	2932	C	SER	A	343	16.333	21.745	-12.861	1.00	38.68	A C
ATOM	2933	O	SER	A	343	16.987	21.096	-12.028	1.00	42.86	A O
ATOM	2934	CB	SER	A	343	15.179	23.804	-12.059	1.00	38.29	A C
ATOM	2935	OG	SER	A	343	13.967	24.399	-11.645	1.00	48.99	A O
ATOM	2936	N	PHE	A	344	16.749	21.932	-14.118	1.00	31.43	A N
ATOM	2937	CA	PHE	A	344	18.142	21.678	-14.552	1.00	29.14	A C
ATOM	2938	C	PHE	A	344	18.709	22.982	-15.098	1.00	33.96	A C
ATOM	2939	O	PHE	A	344	18.092	23.615	-15.972	1.00	34.64	A O
ATOM	2940	CB	PHE	A	344	18.220	20.670	-15.699	1.00	29.85	A C
ATOM	2941	CG	PHE	A	344	17.974	19.237	-15.301	1.00	30.60	A C

ATOM	2942	CD1	PHE	A	344	16.732	18.824	-14.875	1.00	34.18	A C
ATOM	2943	CD2	PHE	A	344	18.941	18.272	-15.528	1.00	32.16	A C
ATOM	2944	CE1	PHE	A	344	16.497	17.479	-14.584	1.00	35.17	A C
ATOM	2945	CE2	PHE	A	344	18.723	16.932	-15.203	1.00	33.29	A C
ATOM	2946	CZ	PHE	A	344	17.492	16.536	-14.761	1.00	31.40	A C
ATOM	2947	N	LEU	A	345	19.898	23.360	-14.637	1.00	25.75	A N
ATOM	2948	CA	LEU	A	345	20.514	24.592	-15.083	1.00	23.55	A C
ATOM	2949	C	LEU	A	345	21.679	24.162	-15.955	1.00	30.05	A C
ATOM	2950	O	LEU	A	345	22.689	23.653	-15.456	1.00	30.77	A O
ATOM	2951	CB	LEU	A	345	21.019	25.366	-13.878	1.00	21.81	A C
ATOM	2952	CG	LEU	A	345	21.617	26.750	-14.111	1.00	26.07	A C
ATOM	2953	CD1	LEU	A	345	22.328	27.326	-12.855	1.00	25.11	A C
ATOM	2954	CD2	LEU	A	345	22.495	26.857	-15.302	1.00	27.59	A C
ATOM	2955	N	CYS	A	346	21.534	24.336	-17.261	1.00	25.78	A N
ATOM	2956	CA	CYS	A	346	22.538	23.853	-18.226	1.00	24.84	A C
ATOM	2957	C	CYS	A	346	23.185	25.053	-18.889	1.00	32.54	A C
ATOM	2958	O	CYS	A	346	22.540	26.095	-19.097	1.00	31.09	A O
ATOM	2959	CB	CYS	A	346	21.903	22.974	-19.311	1.00	23.65	A C
ATOM	2960	SG	CYS	A	346	20.990	21.514	-18.709	1.00	26.96	A S
ATOM	2961	N	VAL	A	347	24.450	24.885	-19.260	1.00	31.14	A N
ATOM	2962	CA	VAL	A	347	25.280	26.002	-19.677	1.00	31.01	A C
ATOM	2963	C	VAL	A	347	26.148	25.623	-20.874	1.00	38.52	A C
ATOM	2964	O	VAL	A	347	26.762	24.544	-20.919	1.00	37.69	A O
ATOM	2965	CB	VAL	A	347	26.147	26.529	-18.472	1.00	33.24	A C
ATOM	2966	CG1	VAL	A	347	27.074	27.682	-18.894	1.00	32.92	A C
ATOM	2967	CG2	VAL	A	347	25.258	26.970	-17.310	1.00	31.31	A C
ATOM	2968	N	PHE	A	348	26.180	26.512	-21.863	1.00	38.49	A N
ATOM	2969	CA	PHE	A	348	27.033	26.313	-23.035	1.00	38.29	A C
ATOM	2970	C	PHE	A	348	28.063	27.397	-23.097	1.00	46.23	A C
ATOM	2971	O	PHE	A	348	27.767	28.545	-22.792	1.00	45.33	A O
ATOM	2972	CB	PHE	A	348	26.210	26.291	-24.321	1.00	39.27	A C
ATOM	2973	CG	PHE	A	348	25.442	25.020	-24.522	1.00	39.85	A C
ATOM	2974	CD1	PHE	A	348	24.144	24.903	-24.043	1.00	42.68	A C
ATOM	2975	CD2	PHE	A	348	26.033	23.931	-25.150	1.00	41.63	A C
ATOM	2976	CE1	PHE	A	348	23.435	23.731	-24.201	1.00	43.05	A C
ATOM	2977	CE2	PHE	A	348	25.341	22.747	-25.329	1.00	44.74	A C
ATOM	2978	CZ	PHE	A	348	24.031	22.643	-24.862	1.00	42.79	A C
ATOM	2979	N	GLY	A	349	29.282	27.026	-23.460	1.00	49.97	A N
ATOM	2980	CA	GLY	A	349	30.367	27.993	-23.593	1.00	54.02	A C
ATOM	2981	C	GLY	A	349	31.142	28.177	-22.281	1.00	68.90	A C
ATOM	2982	O	GLY	A	349	31.404	29.308	-21.842	1.00	67.92	A O
ATOM	2983	N	PHE	A	350	31.516	27.052	-21.673	1.00	74.28	A N
ATOM	2984	CA	PHE	A	350	32.262	27.026	-20.409	1.00	78.44	A C
ATOM	2985	C	PHE	A	350	33.787	27.014	-20.612	1.00	89.24	A C
ATOM	2986	O	PHE	A	350	34.320	26.098	-21.255	1.00	89.08	A O
ATOM	2987	CB	PHE	A	350	31.922	25.741	-19.649	1.00	81.00	A C
ATOM	2988	CG	PHE	A	350	30.865	25.898	-18.599	1.00	83.10	A C
ATOM	2989	CD1	PHE	A	350	29.735	25.093	-18.620	1.00	86.28	A C
ATOM	2990	CD2	PHE	A	350	31.046	26.764	-17.535	1.00	85.41	A C
ATOM	2991	CE1	PHE	A	350	28.791	25.168	-17.614	1.00	86.93	A C
ATOM	2992	CE2	PHE	A	350	30.091	26.856	-16.538	1.00	88.05	A C
ATOM	2993	CZ	PHE	A	350	28.968	26.046	-16.574	1.00	85.95	A C
ATOM	2994	N	PRO	A	351	34.478	27.975	-19.988	1.00	90.26	A N
ATOM	2995	CA	PRO	A	351	35.946	28.047	-19.991	1.00	91.24	A C
ATOM	2996	C	PRO	A	351	36.668	27.469	-21.226	1.00	99.48	A C
ATOM	2997	O	PRO	A	351	37.034	26.286	-21.250	1.00	100.01	A O
ATOM	2998	CB	PRO	A	351	36.328	27.278	-18.718	1.00	92.42	A C
ATOM	2999	CG	PRO	A	351	35.076	27.338	-17.823	1.00	96.20	A C
ATOM	3000	CD	PRO	A	351	33.951	27.984	-18.612	1.00	91.05	A C
ATOM	3001	N	GLY	A	352	36.873	28.308	-22.243	1.00	97.57	A N
ATOM	3002	CA	GLY	A	352	37.430	27.851	-23.515	1.00	97.83	A C
ATOM	3003	C	GLY	A	352	36.334	27.313	-24.435	1.00	102.54	A C
ATOM	3004	O	GLY	A	352	35.819	26.204	-24.232	1.00	102.32	A O
ATOM	3005	N	GLU	A	353	35.978	28.108	-25.440	1.00	99.19	A N
ATOM	3006	CA	GLU	A	353	34.924	27.740	-26.383	1.00	99.00	A C
ATOM	3007	C	GLU	A	353	35.296	28.097	-27.824	1.00	103.40	A C
ATOM	3008	O	GLU	A	353	35.138	29.249	-28.238	1.00	103.41	A O

ATOM	3009	CB	GLU	A	353	33.604	28.429	-26.001	1.00100.15	A	C
ATOM	3010	CG	GLU	A	353	32.596	28.553	-27.137	1.00108.05	A	C
ATOM	3011	CD	GLU	A	353	31.974	27.224	-27.515	1.00126.69	A	C
ATOM	3012	OE1	GLU	A	353	31.072	27.215	-28.378	1.00118.37	A	O
ATOM	3013	OE2	GLU	A	353	32.384	26.187	-26.948	1.00122.03	A	O
ATOM	3014	N	LYS	A	354	35.788	27.117	-28.585	1.00 99.46	A	N
ATOM	3015	CA	LYS	A	354	35.942	27.293	-30.031	1.00 98.82	A	C
ATOM	3016	C	LYS	A	354	34.611	27.008	-30.742	1.00102.16	A	C
ATOM	3017	O	LYS	A	354	33.607	26.689	-30.092	1.00102.42	A	O
ATOM	3018	CB	LYS	A	354	37.077	26.427	-30.598	1.00101.09	A	C
ATOM	3019	CG	LYS	A	354	36.688	25.000	-30.954	1.00115.81	A	C
ATOM	3020	CD	LYS	A	354	36.802	24.068	-29.759	1.00128.18	A	C
ATOM	3021	CE	LYS	A	354	36.473	22.631	-30.145	1.00141.97	A	C
ATOM	3022	NZ	LYS	A	354	36.781	21.666	-29.050	1.00151.86	A	N
ATOM	3023	N	VAL	A	355	34.599	27.138	-32.067	1.00 97.42	A	N
ATOM	3024	CA	VAL	A	355	33.375	26.959	-32.864	1.00 96.51	A	C
ATOM	3025	C	VAL	A	355	32.171	27.693	-32.258	1.00 98.18	A	C
ATOM	3026	O	VAL	A	355	31.324	27.076	-31.601	1.00 98.04	A	O
ATOM	3027	CB	VAL	A	355	33.013	25.456	-33.064	1.00100.33	A	C
ATOM	3028	CG1	VAL	A	355	31.890	25.307	-34.089	1.00100.09	A	C
ATOM	3029	CG2	VAL	A	355	34.249	24.635	-33.469	1.00100.06	A	C
ATOM	3030	N	PRO	A	356	32.089	29.003	-32.498	1.00 92.38	A	N
ATOM	3031	CA	PRO	A	356	31.130	29.847	-31.786	1.00 90.77	A	C
ATOM	3032	C	PRO	A	356	29.670	29.398	-31.892	1.00 91.43	A	C
ATOM	3033	O	PRO	A	356	28.868	29.696	-31.004	1.00 91.56	A	O
ATOM	3034	CB	PRO	A	356	31.319	31.231	-32.429	1.00 92.36	A	C
ATOM	3035	CG	PRO	A	356	32.081	30.992	-33.696	1.00 96.58	A	C
ATOM	3036	CD	PRO	A	356	32.912	29.781	-33.443	1.00 92.15	A	C
ATOM	3037	N	ASP	A	357	29.325	28.672	-32.958	1.00 84.14	A	N
ATOM	3038	CA	ASP	A	357	27.917	28.481	-33.315	1.00 81.45	A	C
ATOM	3039	C	ASP	A	357	27.078	27.718	-32.307	1.00 78.30	A	C
ATOM	3040	O	ASP	A	357	26.330	26.808	-32.672	1.00 77.22	A	O
ATOM	3041	CB	ASP	A	357	27.742	27.879	-34.705	1.00 83.60	A	C
ATOM	3042	CG	ASP	A	357	26.350	28.121	-35.262	1.00 96.57	A	C
ATOM	3043	OD1	ASP	A	357	25.420	28.374	-34.459	1.00 97.24	A	O
ATOM	3044	OD2	ASP	A	357	26.191	28.110	-36.501	1.00103.51	A	O
ATOM	3045	N	GLU	A	358	27.169	28.132	-31.046	1.00 70.24	A	N
ATOM	3046	CA	GLU	A	358	26.444	27.474	-29.966	1.00 67.69	A	C
ATOM	3047	C	GLU	A	358	24.954	27.801	-29.976	1.00 64.85	A	C
ATOM	3048	O	GLU	A	358	24.125	26.970	-29.604	1.00 64.46	A	O
ATOM	3049	CB	GLU	A	358	27.108	27.724	-28.588	1.00 69.06	A	C
ATOM	3050	CG	GLU	A	358	26.895	29.114	-27.957	1.00 80.78	A	C
ATOM	3051	CD	GLU	A	358	28.046	29.559	-27.027	1.00 97.12	A	C
ATOM	3052	OE1	GLU	A	358	27.922	30.629	-26.376	1.00 67.59	A	O
ATOM	3053	OE2	GLU	A	358	29.098	28.875	-26.992	1.00 92.00	A	O
ATOM	3054	N	LEU	A	359	24.608	28.992	-30.449	1.00 56.47	A	N
ATOM	3055	CA	LEU	A	359	23.225	29.446	-30.364	1.00 53.32	A	C
ATOM	3056	C	LEU	A	359	22.288	28.493	-31.081	1.00 51.77	A	C
ATOM	3057	O	LEU	A	359	21.298	28.042	-30.519	1.00 50.28	A	O
ATOM	3058	CB	LEU	A	359	23.085	30.857	-30.905	1.00 52.87	A	C
ATOM	3059	CG	LEU	A	359	23.738	31.956	-30.061	1.00 56.65	A	C
ATOM	3060	CD1	LEU	A	359	23.239	33.298	-30.530	1.00 57.04	A	C
ATOM	3061	CD2	LEU	A	359	23.463	31.799	-28.567	1.00 56.50	A	C
ATOM	3062	N	THR	A	360	22.629	28.164	-32.318	1.00 47.09	A	N
ATOM	3063	CA	THR	A	360	21.850	27.204	-33.089	1.00 45.99	A	C
ATOM	3064	C	THR	A	360	21.838	25.838	-32.432	1.00 49.86	A	C
ATOM	3065	O	THR	A	360	20.913	25.061	-32.594	1.00 49.15	A	O
ATOM	3066	CB	THR	A	360	22.384	27.044	-34.501	1.00 47.32	A	C
ATOM	3067	OG1	THR	A	360	21.986	28.172	-35.284	1.00 51.61	A	O
ATOM	3068	CG2	THR	A	360	21.816	25.802	-35.118	1.00 44.89	A	C
ATOM	3069	N	HIS	A	361	22.882	25.538	-31.683	1.00 46.85	A	N
ATOM	3070	CA	HIS	A	361	22.956	24.237	-31.081	1.00 46.07	A	C
ATOM	3071	C	HIS	A	361	22.191	24.271	-29.771	1.00 45.02	A	C
ATOM	3072	O	HIS	A	361	21.391	23.378	-29.484	1.00 45.46	A	O
ATOM	3073	CB	HIS	A	361	24.418	23.788	-30.929	1.00 47.76	A	C
ATOM	3074	CG	HIS	A	361	25.132	23.601	-32.240	1.00 52.41	A	C
ATOM	3075	ND1	HIS	A	361	24.548	22.981	-33.324	1.00 54.78	A	N

ATOM	3076	CD2	HIS	A	361	26.407	23.877	-32.608	1.00	55.34	A C
ATOM	3077	CE1	HIS	A	361	25.414	22.926	-34.318	1.00	54.91	A C
ATOM	3078	NE2	HIS	A	361	26.556	23.451	-33.906	1.00	55.43	A N
ATOM	3079	N	ALA	A	362	22.388	25.327	-28.999	1.00	37.77	A N
ATOM	3080	CA	ALA	A	362	21.619	25.467	-27.780	1.00	38.15	A C
ATOM	3081	C	ALA	A	362	20.120	25.333	-28.067	1.00	40.96	A C
ATOM	3082	O	ALA	A	362	19.428	24.557	-27.418	1.00	40.35	A O
ATOM	3083	CB	ALA	A	362	21.930	26.767	-27.088	1.00	39.17	A C
ATOM	3084	N	LEU	A	363	19.621	26.051	-29.070	1.00	38.05	A N
ATOM	3085	CA	LEU	A	363	18.219	25.901	-29.437	1.00	37.17	A C
ATOM	3086	C	LEU	A	363	17.923	24.442	-29.767	1.00	43.15	A C
ATOM	3087	O	LEU	A	363	17.148	23.820	-29.055	1.00	44.34	A O
ATOM	3088	CB	LEU	A	363	17.811	26.863	-30.549	1.00	36.71	A C
ATOM	3089	CG	LEU	A	363	17.725	28.321	-30.068	1.00	41.19	A C
ATOM	3090	CD1	LEU	A	363	17.652	29.326	-31.198	1.00	40.85	A C
ATOM	3091	CD2	LEU	A	363	16.535	28.526	-29.164	1.00	45.29	A C
ATOM	3092	N	GLU	A	364	18.607	23.864	-30.763	1.00	38.99	A N
ATOM	3093	CA	GLU	A	364	18.425	22.444	-31.106	1.00	38.82	A C
ATOM	3094	C	GLU	A	364	18.429	21.496	-29.872	1.00	45.63	A C
ATOM	3095	O	GLU	A	364	17.522	20.673	-29.702	1.00	47.16	A O
ATOM	3096	CB	GLU	A	364	19.492	21.956	-32.106	1.00	40.16	A C
ATOM	3097	CG	GLU	A	364	19.563	22.616	-33.494	1.00	45.70	A C
ATOM	3098	CD	GLU	A	364	20.692	22.025	-34.381	1.00	75.50	A C
ATOM	3099	OE1	GLU	A	364	21.321	20.998	-33.994	1.00	61.67	A O
ATOM	3100	OE2	GLU	A	364	20.974	22.612	-35.456	1.00	68.03	A O
ATOM	3101	N	CYS	A	365	19.456	21.574	-29.031	1.00	40.28	A N
ATOM	3102	CA	CYS	A	365	19.504	20.666	-27.898	1.00	39.73	A C
ATOM	3103	C	CYS	A	365	18.261	20.834	-27.020	1.00	37.97	A C
ATOM	3104	O	CYS	A	365	17.693	19.846	-26.536	1.00	39.40	A O
ATOM	3105	CB	CYS	A	365	20.754	20.901	-27.060	1.00	41.97	A C
ATOM	3106	SG	CYS	A	365	22.332	20.398	-27.822	1.00	47.03	A S
ATOM	3107	N	ALA	A	366	17.892	22.085	-26.767	1.00	27.28	A N
ATOM	3108	CA	ALA	A	366	16.757	22.413	-25.936	1.00	25.75	A C
ATOM	3109	C	ALA	A	366	15.619	21.607	-26.472	1.00	31.05	A C
ATOM	3110	O	ALA	A	366	15.019	20.809	-25.747	1.00	29.37	A O
ATOM	3111	CB	ALA	A	366	16.419	23.902	-26.051	1.00	26.51	A C
ATOM	3112	N	MET	A	367	15.345	21.790	-27.762	1.00	29.40	A N
ATOM	3113	CA	MET	A	367	14.222	21.114	-28.385	1.00	31.81	A C
ATOM	3114	C	MET	A	367	14.355	19.602	-28.285	1.00	35.94	A C
ATOM	3115	O	MET	A	367	13.411	18.915	-27.882	1.00	36.67	A O
ATOM	3116	CB	MET	A	367	14.064	21.546	-29.835	1.00	35.15	A C
ATOM	3117	CG	MET	A	367	12.942	20.819	-30.559	1.00	39.76	A C
ATOM	3118	SD	MET	A	367	11.383	21.045	-29.738	1.00	44.89	A S
ATOM	3119	CE	MET	A	367	11.047	22.748	-30.245	1.00	42.11	A C
ATOM	3120	N	ASP	A	368	15.524	19.074	-28.641	1.00	30.84	A N
ATOM	3121	CA	ASP	A	368	15.726	17.631	-28.529	1.00	29.69	A C
ATOM	3122	C	ASP	A	368	15.356	17.213	-27.124	1.00	31.33	A C
ATOM	3123	O	ASP	A	368	14.537	16.321	-26.928	1.00	29.29	A O
ATOM	3124	CB	ASP	A	368	17.170	17.232	-28.783	1.00	30.88	A C
ATOM	3125	CG	ASP	A	368	17.350	15.734	-28.832	1.00	51.92	A C
ATOM	3126	OD1	ASP	A	368	18.289	15.264	-29.525	1.00	54.19	A O
ATOM	3127	OD2	ASP	A	368	16.524	15.013	-28.213	1.00	60.55	A O
ATOM	3128	N	ILE	A	369	15.982	17.862	-26.155	1.00	26.74	A N
ATOM	3129	CA	ILE	A	369	15.754	17.523	-24.762	1.00	28.56	A C
ATOM	3130	C	ILE	A	369	14.256	17.586	-24.446	1.00	37.65	A C
ATOM	3131	O	ILE	A	369	13.676	16.623	-23.928	1.00	40.37	A O
ATOM	3132	CB	ILE	A	369	16.562	18.472	-23.833	1.00	31.57	A C
ATOM	3133	CG1	ILE	A	369	17.971	17.942	-23.592	1.00	30.07	A C
ATOM	3134	CG2	ILE	A	369	15.840	18.721	-22.556	1.00	33.17	A C
ATOM	3135	CD1	ILE	A	369	18.915	19.042	-23.218	1.00	21.80	A C
ATOM	3136	N	PHE	A	370	13.626	18.708	-24.784	1.00	35.65	A N
ATOM	3137	CA	PHE	A	370	12.171	18.851	-24.638	1.00	36.68	A C
ATOM	3138	C	PHE	A	370	11.409	17.669	-25.214	1.00	44.03	A C
ATOM	3139	O	PHE	A	370	10.464	17.206	-24.605	1.00	43.26	A O
ATOM	3140	CB	PHE	A	370	11.681	20.093	-25.363	1.00	37.92	A C
ATOM	3141	CG	PHE	A	370	10.184	20.202	-25.432	1.00	39.00	A C
ATOM	3142	CD1	PHE	A	370	9.507	21.085	-24.602	1.00	40.58	A C

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ATOM   3143  CD2 PHE A 370       9.455  19.479 -26.372  1.00 40.48      A    C
ATOM   3144  CE1 PHE A 370       8.141  21.255 -24.706  1.00 40.52      A    C
ATOM   3145  CE2 PHE A 370       8.078  19.629 -26.469  1.00 41.97      A    C
ATOM   3146  CZ  PHE A 370       7.422  20.509 -25.626  1.00 39.30      A    C
ATOM   3147  N   ASP A 371      11.750  17.255 -26.434  1.00 43.79      A    N
ATOM   3148  CA  ASP A 371      10.980  16.208 -27.095  1.00 45.47      A    C
ATOM   3149  C   ASP A 371      11.063  14.943 -26.281  1.00 51.07      A    C
ATOM   3150  O   ASP A 371      10.052  14.375 -25.884  1.00 53.39      A    O
ATOM   3151  CB  ASP A 371      11.482  15.944 -28.510  1.00 48.02      A    C
ATOM   3152  CG  ASP A 371      10.911  16.908 -29.502  1.00 63.66      A    C
ATOM   3153  OD1 ASP A 371      11.455  17.011 -30.624  1.00 66.85      A    O
ATOM   3154  OD2 ASP A 371       9.905  17.552 -29.154  1.00 70.22      A    O
ATOM   3155  N   PHE A 372      12.283  14.519 -26.010  1.00 45.55      A    N
ATOM   3156  CA  PHE A 372      12.490  13.295 -25.288  1.00 43.67      A    C
ATOM   3157  C   PHE A 372      11.794  13.345 -23.971  1.00 48.88      A    C
ATOM   3158  O   PHE A 372      11.065  12.429 -23.605  1.00 50.99      A    O
ATOM   3159  CB  PHE A 372      13.961  13.076 -25.046  1.00 44.49      A    C
ATOM   3160  CG  PHE A 372      14.241  11.866 -24.246  1.00 45.22      A    C
ATOM   3161  CD1 PHE A 372      14.579  10.683 -24.869  1.00 48.07      A    C
ATOM   3162  CD2 PHE A 372      14.073  11.884 -22.871  1.00 47.08      A    C
ATOM   3163  CE1 PHE A 372      14.794   9.535 -24.128  1.00 49.66      A    C
ATOM   3164  CE2 PHE A 372      14.276  10.741 -22.121  1.00 49.64      A    C
ATOM   3165  CZ  PHE A 372      14.660   9.584 -22.748  1.00 48.24      A    C
ATOM   3166  N   CYS A 373      12.035  14.405 -23.225  1.00 44.15      A    N
ATOM   3167  CA  CYS A 373      11.494  14.427 -21.881  1.00 43.35      A    C
ATOM   3168  C   CYS A 373       9.980  14.359 -21.846  1.00 49.08      A    C
ATOM   3169  O   CYS A 373       9.403  13.593 -21.079  1.00 48.67      A    O
ATOM   3170  CB  CYS A 373      12.041  15.602 -21.109  1.00 42.11      A    C
ATOM   3171  SG  CYS A 373      13.784  15.287 -20.737  1.00 45.45      A    S
ATOM   3172  N   SER A 374       9.346  15.144 -22.708  1.00 48.34      A    N
ATOM   3173  CA  SER A 374       7.894  15.220 -22.759  1.00 49.06      A    C
ATOM   3174  C   SER A 374       7.270  13.839 -22.932  1.00 54.55      A    C
ATOM   3175  O   SER A 374       6.190  13.565 -22.398  1.00 55.56      A    O
ATOM   3176  CB  SER A 374       7.457  16.155 -23.880  1.00 51.08      A    C
ATOM   3177  OG  SER A 374       7.468  17.490 -23.427  1.00 58.64      A    O
ATOM   3178  N   GLN A 375       7.975  12.978 -23.664  1.00 49.16      A    N
ATOM   3179  CA  GLN A 375       7.520  11.630 -23.934  1.00 48.33      A    C
ATOM   3180  C   GLN A 375       8.087  10.721 -22.859  1.00 54.62      A    C
ATOM   3181  O   GLN A 375       8.680   9.682 -23.163  1.00 55.09      A    O
ATOM   3182  CB  GLN A 375       7.999  11.178 -25.321  1.00 48.98      A    C
ATOM   3183  CG  GLN A 375       7.849  12.227 -26.425  1.00 69.37      A    C
ATOM   3184  CD  GLN A 375       6.477  12.917 -26.425  1.00 86.15      A    C
ATOM   3185  OE1 GLN A 375       5.438  12.269 -26.246  1.00 85.93      A    O
ATOM   3186  NE2 GLN A 375       6.476  14.241 -26.612  1.00 59.48      A    N
ATOM   3187  N   VAL A 376       7.937  11.128 -21.598  1.00 51.32      A    N
ATOM   3188  CA  VAL A 376       8.406  10.297 -20.490  1.00 51.24      A    C
ATOM   3189  C   VAL A 376       7.305  10.094 -19.486  1.00 56.19      A    C
ATOM   3190  O   VAL A 376       6.384  10.898 -19.391  1.00 55.73      A    O
ATOM   3191  CB  VAL A 376       9.647  10.882 -19.778  1.00 54.59      A    C
ATOM   3192  CG1 VAL A 376       9.892  10.162 -18.445  1.00 54.06      A    C
ATOM   3193  CG2 VAL A 376      10.877  10.766 -20.657  1.00 53.96      A    C
ATOM   3194  N   HIS A 377       7.427   9.016 -18.727  1.00 54.19      A    N
ATOM   3195  CA  HIS A 377       6.362   8.549 -17.870  1.00 55.18      A    C
ATOM   3196  C   HIS A 377       6.421   9.247 -16.519  1.00 56.46      A    C
ATOM   3197  O   HIS A 377       7.317   8.971 -15.718  1.00 55.85      A    O
ATOM   3198  CB  HIS A 377       6.503   7.017 -17.680  1.00 57.75      A    C
ATOM   3199  CG  HIS A 377       5.238   6.330 -17.262  1.00 62.47      A    C
ATOM   3200  ND1 HIS A 377       4.630   5.357 -18.029  1.00 64.77      A    N
ATOM   3201  CD2 HIS A 377       4.468   6.473 -16.156  1.00 65.31      A    C
ATOM   3202  CE1 HIS A 377       3.536   4.938 -17.419  1.00 64.70      A    C
ATOM   3203  NE2 HIS A 377       3.411   5.603 -16.283  1.00 65.35      A    N
ATOM   3204  N   LYS A 378       5.456  10.140 -16.295  1.00 51.29      A    N
ATOM   3205  CA  LYS A 378       5.162  10.782 -15.001  1.00 49.73      A    C
ATOM   3206  C   LYS A 378       5.543  12.240 -15.044  1.00 51.64      A    C
ATOM   3207  O   LYS A 378       5.042  13.049 -14.262  1.00 51.37      A    O
ATOM   3208  CB  LYS A 378       5.837  10.087 -13.818  1.00 51.35      A    C
ATOM   3209  CG  LYS A 378       5.470   8.622 -13.653  1.00 58.28      A    C
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ATOM	3210	CD	LYS	A	378	4.254	8.455	-12.750	1.00	65.26	A C
ATOM	3211	CE	LYS	A	378	4.180	7.047	-12.163	1.00	78.98	A C
ATOM	3212	NZ	LYS	A	378	5.271	6.729	-11.189	1.00	83.44	A N
ATOM	3213	N	ILE	A	379	6.470	12.541	-15.948	1.00	47.57	A N
ATOM	3214	CA	ILE	A	379	6.806	13.903	-16.327	1.00	46.61	A C
ATOM	3215	C	ILE	A	379	5.611	14.447	-17.071	1.00	49.39	A C
ATOM	3216	O	ILE	A	379	5.357	14.082	-18.212	1.00	49.07	A O
ATOM	3217	CB	ILE	A	379	8.040	13.952	-17.266	1.00	49.32	A C
ATOM	3218	CG1	ILE	A	379	9.306	13.563	-16.518	1.00	48.58	A C
ATOM	3219	CG2	ILE	A	379	8.242	15.343	-17.835	1.00	50.02	A C
ATOM	3220	CD1	ILE	A	379	10.470	13.438	-17.422	1.00	51.62	A C
ATOM	3221	N	GLN	A	380	4.880	15.303	-16.376	1.00	45.22	A N
ATOM	3222	CA	GLN	A	380	3.658	15.911	-16.851	1.00	44.30	A C
ATOM	3223	C	GLN	A	380	3.993	16.899	-17.953	1.00	45.33	A C
ATOM	3224	O	GLN	A	380	3.357	16.904	-19.020	1.00	43.48	A O
ATOM	3225	CB	GLN	A	380	3.024	16.680	-15.681	1.00	46.18	A C
ATOM	3226	CG	GLN	A	380	1.510	16.532	-15.536	1.00	68.65	A C
ATOM	3227	CD	GLN	A	380	1.023	16.851	-14.128	1.00	87.29	A C
ATOM	3228	OE1	GLN	A	380	1.579	17.713	-13.442	1.00	76.77	A O
ATOM	3229	NE2	GLN	A	380	0.006	16.119	-13.674	1.00	85.59	A N
ATOM	3230	N	THR	A	381	5.005	17.727	-17.681	1.00	39.69	A N
ATOM	3231	CA	THR	A	381	5.220	18.982	-18.411	1.00	37.71	A C
ATOM	3232	C	THR	A	381	6.677	19.433	-18.392	1.00	40.86	A C
ATOM	3233	O	THR	A	381	7.252	19.679	-17.324	1.00	40.49	A O
ATOM	3234	CB	THR	A	381	4.363	20.096	-17.808	1.00	40.42	A C
ATOM	3235	OG1	THR	A	381	3.012	19.630	-17.706	1.00	50.90	A O
ATOM	3236	CG2	THR	A	381	4.394	21.337	-18.685	1.00	33.96	A C
ATOM	3237	N	VAL	A	382	7.253	19.579	-19.583	1.00	34.67	A N
ATOM	3238	CA	VAL	A	382	8.594	20.097	-19.741	1.00	31.58	A C
ATOM	3239	C	VAL	A	382	8.532	21.469	-20.370	1.00	38.50	A C
ATOM	3240	O	VAL	A	382	8.158	21.592	-21.530	1.00	41.43	A O
ATOM	3241	CB	VAL	A	382	9.399	19.212	-20.683	1.00	33.55	A C
ATOM	3242	CG1	VAL	A	382	10.874	19.624	-20.702	1.00	31.39	A C
ATOM	3243	CG2	VAL	A	382	9.256	17.769	-20.254	1.00	34.00	A C
ATOM	3244	N	SER	A	383	8.922	22.483	-19.597	1.00	32.89	A N
ATOM	3245	CA	SER	A	383	9.165	23.845	-20.070	1.00	29.89	A C
ATOM	3246	C	SER	A	383	10.694	24.111	-20.128	1.00	32.29	A C
ATOM	3247	O	SER	A	383	11.444	23.693	-19.238	1.00	31.22	A O
ATOM	3248	CB	SER	A	383	8.544	24.816	-19.083	1.00	29.71	A C
ATOM	3249	OG	SER	A	383	7.530	24.185	-18.349	1.00	41.77	A O
ATOM	3250	N	ILE	A	384	11.159	24.830	-21.151	1.00	25.60	A N
ATOM	3251	CA	ILE	A	384	12.593	25.023	-21.311	1.00	24.41	A C
ATOM	3252	C	ILE	A	384	12.879	26.499	-21.526	1.00	32.43	A C
ATOM	3253	O	ILE	A	384	12.303	27.115	-22.435	1.00	32.89	A O
ATOM	3254	CB	ILE	A	384	13.140	24.200	-22.494	1.00	26.52	A C
ATOM	3255	CG1	ILE	A	384	12.930	22.700	-22.264	1.00	25.68	A C
ATOM	3256	CG2	ILE	A	384	14.615	24.507	-22.742	1.00	28.37	A C
ATOM	3257	CD1	ILE	A	384	13.910	21.826	-23.109	1.00	33.53	A C
ATOM	3258	N	GLY	A	385	13.723	27.092	-20.676	1.00	28.91	A N
ATOM	3259	CA	GLY	A	385	14.032	28.532	-20.806	1.00	29.57	A C
ATOM	3260	C	GLY	A	385	15.458	28.775	-21.319	1.00	34.65	A C
ATOM	3261	O	GLY	A	385	16.432	28.263	-20.715	1.00	36.69	A O
ATOM	3262	N	VAL	A	386	15.598	29.548	-22.401	1.00	26.25	A N
ATOM	3263	CA	VAL	A	386	16.925	29.688	-23.045	1.00	26.09	A C
ATOM	3264	C	VAL	A	386	17.451	31.103	-23.132	1.00	32.81	A C
ATOM	3265	O	VAL	A	386	16.750	32.011	-23.566	1.00	34.37	A O
ATOM	3266	CB	VAL	A	386	17.007	29.133	-24.478	1.00	28.50	A C
ATOM	3267	CG1	VAL	A	386	18.394	29.424	-25.031	1.00	28.72	A C
ATOM	3268	CG2	VAL	A	386	16.735	27.645	-24.532	1.00	26.99	A C
ATOM	3269	N	ALA	A	387	18.707	31.309	-22.774	1.00	30.40	A N
ATOM	3270	CA	ALA	A	387	19.240	32.672	-22.881	1.00	30.72	A C
ATOM	3271	C	ALA	A	387	20.723	32.685	-23.207	1.00	36.31	A C
ATOM	3272	O	ALA	A	387	21.459	31.838	-22.713	1.00	36.95	A O
ATOM	3273	CB	ALA	A	387	18.940	33.453	-21.630	1.00	30.56	A C
ATOM	3274	N	SER	A	388	21.145	33.585	-24.099	1.00	33.24	A N
ATOM	3275	CA	SER	A	388	22.583	33.839	-24.324	1.00	32.24	A C
ATOM	3276	C	SER	A	388	22.982	35.168	-23.683	1.00	36.02	A C

ATOM	3277	O	SER	A	388	22.105	35.998	-23.384	1.00	35.11	A	O
ATOM	3278	CB	SER	A	388	22.915	33.857	-25.805	1.00	32.03	A	C
ATOM	3279	OG	SER	A	388	22.039	32.994	-26.514	1.00	45.74	A	O
ATOM	3280	N	GLY	A	389	24.287	35.345	-23.426	1.00	32.96	A	N
ATOM	3281	CA	GLY	A	389	24.820	36.603	-22.864	1.00	32.50	A	C
ATOM	3282	C	GLY	A	389	26.044	36.512	-21.919	1.00	40.44	A	C
ATOM	3283	O	GLY	A	389	26.780	35.494	-21.866	1.00	41.41	A	O
ATOM	3284	N	ILE	A	390	26.253	37.594	-21.170	1.00	36.69	A	N
ATOM	3285	CA	ILE	A	390	27.356	37.663	-20.225	1.00	36.73	A	C
ATOM	3286	C	ILE	A	390	26.877	37.462	-18.812	1.00	40.16	A	C
ATOM	3287	O	ILE	A	390	25.937	38.132	-18.341	1.00	41.06	A	O
ATOM	3288	CB	ILE	A	390	28.156	38.977	-20.278	1.00	39.99	A	C
ATOM	3289	CG1	ILE	A	390	28.778	39.180	-21.667	1.00	40.42	A	C
ATOM	3290	CG2	ILE	A	390	29.322	38.884	-19.292	1.00	40.74	A	C
ATOM	3291	CD1	ILE	A	390	29.728	40.365	-21.706	1.00	38.91	A	C
ATOM	3292	N	VAL	A	391	27.535	36.523	-18.138	1.00	35.75	A	N
ATOM	3293	CA	VAL	A	391	27.127	36.066	-16.819	1.00	33.94	A	C
ATOM	3294	C	VAL	A	391	28.429	35.840	-16.050	1.00	36.91	A	C
ATOM	3295	O	VAL	A	391	29.425	35.436	-16.629	1.00	35.58	A	O
ATOM	3296	CB	VAL	A	391	26.353	34.747	-16.961	1.00	36.87	A	C
ATOM	3297	CG1	VAL	A	391	25.310	34.859	-18.066	1.00	35.63	A	C
ATOM	3298	CG2	VAL	A	391	27.299	33.645	-17.333	1.00	37.41	A	C
ATOM	3299	N	PHE	A	392	28.458	36.171	-14.766	1.00	33.94	A	N
ATOM	3300	CA	PHE	A	392	29.641	35.904	-13.982	1.00	33.23	A	C
ATOM	3301	C	PHE	A	392	29.656	34.434	-13.609	1.00	37.08	A	C
ATOM	3302	O	PHE	A	392	28.681	33.925	-13.069	1.00	38.06	A	O
ATOM	3303	CB	PHE	A	392	29.695	36.745	-12.712	1.00	36.57	A	C
ATOM	3304	CG	PHE	A	392	30.613	36.162	-11.653	1.00	41.36	A	C
ATOM	3305	CD1	PHE	A	392	31.945	36.569	-11.558	1.00	45.06	A	C
ATOM	3306	CD2	PHE	A	392	30.174	35.132	-10.812	1.00	45.91	A	C
ATOM	3307	CE1	PHE	A	392	32.808	35.971	-10.668	1.00	46.14	A	C
ATOM	3308	CE2	PHE	A	392	31.042	34.547	-9.899	1.00	49.36	A	C
ATOM	3309	CZ	PHE	A	392	32.362	34.965	-9.836	1.00	46.67	A	C
ATOM	3310	N	CYS	A	393	30.764	33.762	-13.911	1.00	32.76	A	N
ATOM	3311	CA	CYS	A	393	31.045	32.415	-13.435	1.00	31.65	A	C
ATOM	3312	C	CYS	A	393	32.163	32.532	-12.409	1.00	33.99	A	C
ATOM	3313	O	CYS	A	393	33.121	33.245	-12.632	1.00	31.56	A	O
ATOM	3314	CB	CYS	A	393	31.543	31.578	-14.600	1.00	31.56	A	C
ATOM	3315	SG	CYS	A	393	30.491	31.843	-16.036	1.00	36.42	A	S
ATOM	3316	N	GLY	A	394	32.029	31.836	-11.284	1.00	31.65	A	N
ATOM	3317	CA	GLY	A	394	33.113	31.766	-10.297	1.00	30.28	A	C
ATOM	3318	C	GLY	A	394	32.791	30.640	-9.337	1.00	32.74	A	C
ATOM	3319	O	GLY	A	394	31.683	30.078	-9.389	1.00	32.07	A	O
ATOM	3320	N	ILE	A	395	33.734	30.314	-8.452	1.00	26.88	A	N
ATOM	3321	CA	ILE	A	395	33.456	29.415	-7.323	1.00	25.06	A	C
ATOM	3322	C	ILE	A	395	33.038	30.273	-6.146	1.00	29.33	A	C
ATOM	3323	O	ILE	A	395	33.838	31.030	-5.683	1.00	29.37	A	O
ATOM	3324	CB	ILE	A	395	34.741	28.691	-6.874	1.00	26.72	A	C
ATOM	3325	CG1	ILE	A	395	34.935	27.361	-7.599	1.00	26.34	A	C
ATOM	3326	CG2	ILE	A	395	34.665	28.337	-5.470	1.00	23.99	A	C
ATOM	3327	CD1	ILE	A	395	36.392	26.905	-7.511	1.00	36.45	A	C
ATOM	3328	N	VAL	A	396	31.822	30.095	-5.621	1.00	28.92	A	N
ATOM	3329	CA	VAL	A	396	31.202	31.034	-4.678	1.00	28.57	A	C
ATOM	3330	C	VAL	A	396	30.881	30.385	-3.325	1.00	34.35	A	C
ATOM	3331	O	VAL	A	396	30.290	29.313	-3.277	1.00	34.77	A	O
ATOM	3332	CB	VAL	A	396	29.855	31.541	-5.217	1.00	33.75	A	C
ATOM	3333	CG1	VAL	A	396	29.067	32.189	-4.103	1.00	34.54	A	C
ATOM	3334	CG2	VAL	A	396	30.042	32.518	-6.333	1.00	33.18	A	C
ATOM	3335	N	GLY	A	397	31.251	31.056	-2.228	1.00	29.97	A	N
ATOM	3336	CA	GLY	A	397	31.029	30.545	-0.886	1.00	27.25	A	C
ATOM	3337	C	GLY	A	397	32.299	30.590	-0.042	1.00	28.35	A	C
ATOM	3338	O	GLY	A	397	33.202	31.407	-0.292	1.00	28.04	A	O
ATOM	3339	N	HIS	A	398	32.371	29.685	0.935	1.00	20.04	A	N
ATOM	3340	CA	HIS	A	398	33.462	29.657	1.896	1.00	21.84	A	C
ATOM	3341	C	HIS	A	398	34.609	28.723	1.452	1.00	26.90	A	C
ATOM	3342	O	HIS	A	398	34.388	27.689	0.807	1.00	29.50	A	O
ATOM	3343	CB	HIS	A	398	32.893	29.195	3.262	1.00	23.82	A	C

ATOM	3344	CG	HIS	A	398	33.805	29.438	4.416	1.00	27.51	A	C
ATOM	3345	ND1	HIS	A	398	34.816	28.570	4.759	1.00	29.63	A	N
ATOM	3346	CD2	HIS	A	398	33.829	30.427	5.341	1.00	28.60	A	C
ATOM	3347	CE1	HIS	A	398	35.444	29.027	5.827	1.00	28.69	A	C
ATOM	3348	NE2	HIS	A	398	34.834	30.122	6.229	1.00	28.83	A	N
ATOM	3349	N	THR	A	399	35.832	29.091	1.775	1.00	19.88	A	N
ATOM	3350	CA	THR	A	399	36.978	28.221	1.484	1.00	20.20	A	C
ATOM	3351	C	THR	A	399	36.681	26.726	1.759	1.00	25.04	A	C
ATOM	3352	O	THR	A	399	37.162	25.852	1.043	1.00	28.56	A	O
ATOM	3353	CB	THR	A	399	38.132	28.601	2.389	1.00	32.33	A	C
ATOM	3354	OG1	THR	A	399	38.449	29.989	2.215	1.00	38.52	A	O
ATOM	3355	CG2	THR	A	399	39.320	27.743	2.126	1.00	31.04	A	C
ATOM	3356	N	VAL	A	400	35.900	26.427	2.798	1.00	13.98	A	N
ATOM	3357	CA	VAL	A	400	35.732	25.019	3.252	1.00	11.80	A	C
ATOM	3358	C	VAL	A	400	34.453	24.467	2.676	1.00	14.99	A	C
ATOM	3359	O	VAL	A	400	34.201	23.250	2.766	1.00	17.70	A	O
ATOM	3360	CB	VAL	A	400	35.582	24.904	4.770	1.00	16.23	A	C
ATOM	3361	CG1	VAL	A	400	36.916	25.123	5.519	1.00	15.63	A	C
ATOM	3362	CG2	VAL	A	400	34.586	25.946	5.244	1.00	17.21	A	C
ATOM	3363	N	ARG	A	401	33.649	25.344	2.054	1.00	6.63	A	N
ATOM	3364	CA	ARG	A	401	32.362	24.925	1.432	1.00	5.36	A	C
ATOM	3365	C	ARG	A	401	32.024	26.023	0.353	1.00	15.91	A	C
ATOM	3366	O	ARG	A	401	31.624	27.168	0.667	1.00	14.66	A	O
ATOM	3367	CB	ARG	A	401	31.302	24.869	2.565	1.00	3.00	A	C
ATOM	3368	CG	ARG	A	401	29.976	24.050	2.439	1.00	6.12	A	C
ATOM	3369	CD	ARG	A	401	29.953	22.858	1.494	1.00	18.08	A	C
ATOM	3370	NE	ARG	A	401	28.610	22.668	0.898	1.00	5.97	A	N
ATOM	3371	CZ	ARG	A	401	28.410	22.405	-0.390	1.00	23.11	A	C
ATOM	3372	NH1	ARG	A	401	29.470	22.216	-1.162	1.00	13.68	A	N
ATOM	3373	NH2	ARG	A	401	27.180	22.242	-0.908	1.00	16.46	A	N
ATOM	3374	N	HIS	A	402	32.271	25.674	-0.910	1.00	19.17	A	N
ATOM	3375	CA	HIS	A	402	31.861	26.461	-2.037	1.00	20.63	A	C
ATOM	3376	C	HIS	A	402	31.321	25.632	-3.142	1.00	27.74	A	C
ATOM	3377	O	HIS	A	402	31.259	24.426	-3.037	1.00	31.08	A	O
ATOM	3378	CB	HIS	A	402	33.014	27.303	-2.532	1.00	22.57	A	C
ATOM	3379	CG	HIS	A	402	34.340	26.630	-2.423	1.00	25.76	A	C
ATOM	3380	ND1	HIS	A	402	35.454	27.279	-1.951	1.00	27.41	A	N
ATOM	3381	CD2	HIS	A	402	34.733	25.371	-2.719	1.00	27.92	A	C
ATOM	3382	CE1	HIS	A	402	36.484	26.450	-1.960	1.00	27.36	A	C
ATOM	3383	NE2	HIS	A	402	36.071	25.283	-2.414	1.00	27.95	A	N
ATOM	3384	N	GLU	A	403	30.872	26.283	-4.201	1.00	26.60	A	N
ATOM	3385	CA	GLU	A	403	30.362	25.550	-5.361	1.00	26.03	A	C
ATOM	3386	C	GLU	A	403	30.463	26.458	-6.546	1.00	29.97	A	C
ATOM	3387	O	GLU	A	403	30.021	27.611	-6.480	1.00	30.49	A	O
ATOM	3388	CB	GLU	A	403	28.888	25.215	-5.171	1.00	26.38	A	C
ATOM	3389	CG	GLU	A	403	28.617	23.761	-4.981	1.00	38.73	A	C
ATOM	3390	CD	GLU	A	403	27.327	23.541	-4.238	1.00	46.29	A	C
ATOM	3391	OE1	GLU	A	403	26.383	24.312	-4.516	1.00	34.14	A	O
ATOM	3392	OE2	GLU	A	403	27.296	22.675	-3.325	1.00	41.97	A	O
ATOM	3393	N	TYR	A	404	30.996	25.952	-7.645	1.00	26.55	A	N
ATOM	3394	CA	TYR	A	404	30.950	26.749	-8.879	1.00	27.81	A	C
ATOM	3395	C	TYR	A	404	29.504	27.161	-9.189	1.00	33.87	A	C
ATOM	3396	O	TYR	A	404	28.660	26.282	-9.414	1.00	37.56	A	O
ATOM	3397	CB	TYR	A	404	31.417	25.872	-10.022	1.00	29.74	A	C
ATOM	3398	CG	TYR	A	404	31.703	26.638	-11.255	1.00	31.33	A	C
ATOM	3399	CD1	TYR	A	404	32.806	27.475	-11.312	1.00	31.75	A	C
ATOM	3400	CD2	TYR	A	404	30.873	26.541	-12.368	1.00	32.98	A	C
ATOM	3401	CE1	TYR	A	404	33.115	28.151	-12.441	1.00	33.15	A	C
ATOM	3402	CE2	TYR	A	404	31.159	27.256	-13.528	1.00	34.05	A	C
ATOM	3403	CZ	TYR	A	404	32.295	28.047	-13.552	1.00	43.98	A	C
ATOM	3404	OH	TYR	A	404	32.625	28.757	-14.681	1.00	47.49	A	O
ATOM	3405	N	THR	A	405	29.222	28.464	-9.233	1.00	26.23	A	N
ATOM	3406	CA	THR	A	405	27.890	28.990	-9.589	1.00	23.30	A	C
ATOM	3407	C	THR	A	405	27.961	30.092	-10.716	1.00	24.94	A	C
ATOM	3408	O	THR	A	405	28.918	30.813	-10.792	1.00	24.54	A	O
ATOM	3409	CB	THR	A	405	27.233	29.643	-8.321	1.00	39.82	A	C
ATOM	3410	OG1	THR	A	405	27.801	29.089	-7.132	1.00	36.50	A	O

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ATOM   3411  CG2 THR A 405      25.723  29.385  -8.275  1.00 45.41      A    C
ATOM   3412  N   VAL A 406      26.933  30.225 -11.571  1.00 20.58      A    N
ATOM   3413  CA  VAL A 406      26.835  31.303 -12.593  1.00 17.22      A    C
ATOM   3414  C   VAL A 406      25.788  32.256 -12.078  1.00 26.39      A    C
ATOM   3415  O   VAL A 406      24.743  31.812 -11.586  1.00 24.68      A    O
ATOM   3416  CB  VAL A 406      26.185  30.801 -13.883  1.00 16.79      A    C
ATOM   3417  CG1 VAL A 406      27.159  30.110 -14.813  1.00 13.49      A    C
ATOM   3418  CG2 VAL A 406      25.044  29.884 -13.503  1.00 16.53      A    C
ATOM   3419  N   ILE A 407      26.045  33.552 -12.191  1.00 27.14      A    N
ATOM   3420  CA  ILE A 407      25.046  34.556 -11.861  1.00 27.93      A    C
ATOM   3421  C   ILE A 407      24.886  35.532 -13.030  1.00 36.59      A    C
ATOM   3422  O   ILE A 407      25.815  35.737 -13.829  1.00 35.54      A    O
ATOM   3423  CB  ILE A 407      25.468  35.376 -10.655  1.00 31.71      A    C
ATOM   3424  CG1 ILE A 407      26.316  34.554  -9.709  1.00 32.32      A    C
ATOM   3425  CG2 ILE A 407      24.227  35.854  -9.897  1.00 35.14      A    C
ATOM   3426  CD1 ILE A 407      26.894  35.393  -8.616  1.00 32.98      A    C
ATOM   3427  N   GLY A 408      23.711  36.142 -13.130  1.00 36.22      A    N
ATOM   3428  CA  GLY A 408      23.474  37.117 -14.179  1.00 37.55      A    C
ATOM   3429  C   GLY A 408      22.001  37.259 -14.542  1.00 44.28      A    C
ATOM   3430  O   GLY A 408      21.166  36.446 -14.130  1.00 43.26      A    O
ATOM   3431  N   GLN A 409      21.706  38.296 -15.329  1.00 41.80      A    N
ATOM   3432  CA  GLN A 409      20.335  38.629 -15.713  1.00 41.57      A    C
ATOM   3433  C   GLN A 409      19.842  37.524 -16.624  1.00 42.05      A    C
ATOM   3434  O   GLN A 409      18.664  37.162 -16.618  1.00 41.85      A    O
ATOM   3435  CB  GLN A 409      20.316  39.982 -16.442  1.00 43.97      A    C
ATOM   3436  CG  GLN A 409      19.163  40.904 -16.021  1.00 72.44      A    C
ATOM   3437  CD  GLN A 409      18.948  40.932 -14.504  1.00 95.72      A    C
ATOM   3438  OE1 GLN A 409      19.851  41.307 -13.742  1.00 90.43      A    O
ATOM   3439  NE2 GLN A 409      17.766  40.488 -14.060  1.00 84.45      A    N
ATOM   3440  N   LYS A 410      20.780  36.969 -17.384  1.00 35.46      A    N
ATOM   3441  CA  LYS A 410      20.483  35.910 -18.315  1.00 33.52      A    C
ATOM   3442  C   LYS A 410      20.100  34.663 -17.566  1.00 38.46      A    C
ATOM   3443  O   LYS A 410      19.429  33.798 -18.107  1.00 41.10      A    O
ATOM   3444  CB  LYS A 410      21.704  35.618 -19.176  1.00 35.11      A    C
ATOM   3445  CG  LYS A 410      22.002  36.695 -20.205  1.00 38.76      A    C
ATOM   3446  CD  LYS A 410      20.798  36.943 -21.055  1.00 39.34      A    C
ATOM   3447  CE  LYS A 410      20.849  38.267 -21.786  1.00 46.15      A    C
ATOM   3448  NZ  LYS A 410      19.524  38.451 -22.439  1.00 49.61      A    N
ATOM   3449  N   VAL A 411      20.570  34.518 -16.336  1.00 32.35      A    N
ATOM   3450  CA  VAL A 411      20.304  33.278 -15.609  1.00 29.96      A    C
ATOM   3451  C   VAL A 411      18.900  33.384 -15.017  1.00 35.31      A    C
ATOM   3452  O   VAL A 411      18.138  32.435 -15.049  1.00 35.76      A    O
ATOM   3453  CB  VAL A 411      21.322  33.039 -14.470  1.00 31.97      A    C
ATOM   3454  CG1 VAL A 411      21.098  31.672 -13.850  1.00 31.10      A    C
ATOM   3455  CG2 VAL A 411      22.743  33.138 -14.979  1.00 32.05      A    C
ATOM   3456  N   ASN A 412      18.575  34.567 -14.509  1.00 31.53      A    N
ATOM   3457  CA  ASN A 412      17.261  34.868 -13.967  1.00 31.80      A    C
ATOM   3458  C   ASN A 412      16.201  34.904 -15.043  1.00 36.03      A    C
ATOM   3459  O   ASN A 412      15.091  34.451 -14.805  1.00 38.38      A    O
ATOM   3460  CB  ASN A 412      17.283  36.190 -13.185  1.00 31.40      A    C
ATOM   3461  CG  ASN A 412      18.457  36.273 -12.211  1.00 50.16      A    C
ATOM   3462  OD1 ASN A 412      18.838  35.281 -11.565  1.00 41.70      A    O
ATOM   3463  ND2 ASN A 412      19.105  37.424 -12.183  1.00 43.52      A    N
ATOM   3464  N   LEU A 413      16.527  35.436 -16.221  1.00 29.64      A    N
ATOM   3465  CA  LEU A 413      15.653  35.280 -17.414  1.00 27.63      A    C
ATOM   3466  C   LEU A 413      15.264  33.847 -17.685  1.00 33.58      A    C
ATOM   3467  O   LEU A 413      14.168  33.455 -17.353  1.00 37.11      A    O
ATOM   3468  CB  LEU A 413      16.333  35.788 -18.683  1.00 26.69      A    C
ATOM   3469  CG  LEU A 413      15.682  37.051 -19.213  1.00 30.01      A    C
ATOM   3470  CD1 LEU A 413      16.111  37.290 -20.640  1.00 28.86      A    C
ATOM   3471  CD2 LEU A 413      14.139  36.983 -19.014  1.00 29.21      A    C
ATOM   3472  N   ALA A 414      16.146  33.091 -18.342  1.00 28.24      A    N
ATOM   3473  CA  ALA A 414      15.910  31.666 -18.626  1.00 28.63      A    C
ATOM   3474  C   ALA A 414      15.027  30.966 -17.588  1.00 37.06      A    C
ATOM   3475  O   ALA A 414      14.115  30.197 -17.917  1.00 36.79      A    O
ATOM   3476  CB  ALA A 414      17.240  30.914 -18.776  1.00 28.51      A    C
ATOM   3477  N   ALA A 415      15.296  31.266 -16.328  1.00 37.33      A    N
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ATOM   3478  CA  ALA A 415      14.573  30.661 -15.219  1.00 37.62      A    C
ATOM   3479  C   ALA A 415      13.155  31.227 -15.105  1.00 43.72      A    C
ATOM   3480  O   ALA A 415      12.212  30.497 -14.802  1.00 44.48      A    O
ATOM   3481  CB  ALA A 415      15.343  30.864 -13.941  1.00 37.70      A    C
ATOM   3482  N   ARG A 416      13.009  32.524 -15.344  1.00 41.44      A    N
ATOM   3483  CA  ARG A 416      11.688  33.128 -15.377  1.00 42.81      A    C
ATOM   3484  C   ARG A 416      10.866  32.576 -16.535  1.00 50.60      A    C
ATOM   3485  O   ARG A 416       9.663  32.356 -16.385  1.00 52.05      A    O
ATOM   3486  CB  ARG A 416      11.771  34.645 -15.473  1.00 44.02      A    C
ATOM   3487  CG  ARG A 416      12.429  35.311 -14.297  1.00 56.33      A    C
ATOM   3488  CD  ARG A 416      12.233  34.512 -13.017  1.00 77.78      A    C
ATOM   3489  NE  ARG A 416      12.863  35.177 -11.877  1.00 91.21      A    N
ATOM   3490  CZ  ARG A 416      13.518  34.552 -10.905  1.00102.54      A    C
ATOM   3491  NH1 ARG A 416      13.662  33.229 -10.933  1.00 83.24      A    N
ATOM   3492  NH2 ARG A 416      14.051  35.262  -9.921  1.00 91.08      A    N
ATOM   3493  N   MET A 417      11.517  32.335 -17.676  1.00 46.97      A    N
ATOM   3494  CA  MET A 417      10.838  31.900 -18.903  1.00 45.32      A    C
ATOM   3495  C   MET A 417      10.142  30.564 -18.727  1.00 48.53      A    C
ATOM   3496  O   MET A 417       9.011  30.379 -19.165  1.00 47.37      A    O
ATOM   3497  CB  MET A 417      11.819  31.819 -20.079  1.00 47.45      A    C
ATOM   3498  CG  MET A 417      12.243  33.165 -20.632  1.00 50.92      A    C
ATOM   3499  SD  MET A 417      13.769  33.095 -21.575  1.00 54.75      A    S
ATOM   3500  CE  MET A 417      13.296  32.153 -22.984  1.00 50.85      A    C
ATOM   3501  N   MET A 418      10.805  29.612 -18.085  1.00 46.99      A    N
ATOM   3502  CA  MET A 418      10.168  28.308 -17.895  1.00 47.04      A    C
ATOM   3503  C   MET A 418       8.922  28.323 -16.999  1.00 54.22      A    C
ATOM   3504  O   MET A 418       8.084  27.419 -17.063  1.00 53.24      A    O
ATOM   3505  CB  MET A 418      11.170  27.224 -17.478  1.00 48.93      A    C
ATOM   3506  CG  MET A 418      12.197  27.629 -16.418  1.00 51.37      A    C
ATOM   3507  SD  MET A 418      13.299  26.241 -16.077  1.00 53.63      A    S
ATOM   3508  CE  MET A 418      14.092  26.766 -14.635  1.00 50.17      A    C
ATOM   3509  N   MET A 419       8.774  29.375 -16.200  1.00 53.58      A    N
ATOM   3510  CA  MET A 419       7.665  29.445 -15.264  1.00 54.41      A    C
ATOM   3511  C   MET A 419       6.485  30.240 -15.773  1.00 57.97      A    C
ATOM   3512  O   MET A 419       5.334  29.888 -15.505  1.00 58.44      A    O
ATOM   3513  CB  MET A 419       8.138  29.963 -13.912  1.00 57.34      A    C
ATOM   3514  CG  MET A 419       9.094  28.996 -13.235  1.00 62.07      A    C
ATOM   3515  SD  MET A 419       8.318  27.396 -12.828  1.00 67.29      A    S
ATOM   3516  CE  MET A 419       7.351  27.842 -11.376  1.00 63.80      A    C
ATOM   3517  N   TYR A 420       6.772  31.300 -16.523  1.00 54.03      A    N
ATOM   3518  CA  TYR A 420       5.723  32.146 -17.092  1.00 53.50      A    C
ATOM   3519  C   TYR A 420       5.193  31.591 -18.406  1.00 53.03      A    C
ATOM   3520  O   TYR A 420       4.001  31.666 -18.672  1.00 53.34      A    O
ATOM   3521  CB  TYR A 420       6.214  33.581 -17.263  1.00 56.39      A    C
ATOM   3522  CG  TYR A 420       6.452  34.271 -15.943  1.00 61.58      A    C
ATOM   3523  CD1 TYR A 420       7.401  33.787 -15.044  1.00 64.83      A    C
ATOM   3524  CD2 TYR A 420       5.696  35.375 -15.570  1.00 63.28      A    C
ATOM   3525  CE1 TYR A 420       7.606  34.405 -13.811  1.00 67.75      A    C
ATOM   3526  CE2 TYR A 420       5.878  35.991 -14.337  1.00 65.00      A    C
ATOM   3527  CZ  TYR A 420       6.840  35.510 -13.462  1.00 75.46      A    C
ATOM   3528  OH  TYR A 420       7.025  36.128 -12.242  1.00 76.37      A    O
ATOM   3529  N   TYR A 421       6.081  31.015 -19.212  1.00 45.86      A    N
ATOM   3530  CA  TYR A 421       5.707  30.439 -20.505  1.00 43.87      A    C
ATOM   3531  C   TYR A 421       5.906  28.920 -20.479  1.00 42.42      A    C
ATOM   3532  O   TYR A 421       6.716  28.392 -21.224  1.00 40.64      A    O
ATOM   3533  CB  TYR A 421       6.617  31.013 -21.613  1.00 45.64      A    C
ATOM   3534  CG  TYR A 421       6.535  32.505 -21.858  1.00 47.92      A    C
ATOM   3535  CD1 TYR A 421       7.384  33.392 -21.204  1.00 50.18      A    C
ATOM   3536  CD2 TYR A 421       5.650  33.021 -22.793  1.00 48.76      A    C
ATOM   3537  CE1 TYR A 421       7.312  34.761 -21.446  1.00 51.22      A    C
ATOM   3538  CE2 TYR A 421       5.561  34.382 -23.029  1.00 49.57      A    C
ATOM   3539  CZ  TYR A 421       6.400  35.247 -22.363  1.00 56.27      A    C
ATOM   3540  OH  TYR A 421       6.339  36.598 -22.639  1.00 55.96      A    O
ATOM   3541  N   PRO A 422       5.196  28.218 -19.606  1.00 38.07      A    N
ATOM   3542  CA  PRO A 422       5.462  26.788 -19.378  1.00 36.93      A    C
ATOM   3543  C   PRO A 422       4.933  25.957 -20.528  1.00 38.11      A    C
ATOM   3544  O   PRO A 422       4.057  26.407 -21.253  1.00 37.94      A    O
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ATOM   3545  CB  PRO A 422       4.620  26.473 -18.152  1.00 38.17      A    C
ATOM   3546  CG  PRO A 422       3.443  27.450 -18.240  1.00 42.29      A    C
ATOM   3547  CD  PRO A 422       3.865  28.615 -19.123  1.00 38.28      A    C
ATOM   3548  N   GLY A 423       5.453  24.742 -20.685  1.00 31.27      A    N
ATOM   3549  CA  GLY A 423       4.937  23.840 -21.713  1.00 31.38      A    C
ATOM   3550  C   GLY A 423       5.546  23.982 -23.110  1.00 38.48      A    C
ATOM   3551  O   GLY A 423       5.252  23.178 -23.995  1.00 39.76      A    O
ATOM   3552  N   ILE A 424       6.412  24.976 -23.293  1.00 36.71      A    N
ATOM   3553  CA  ILE A 424       7.046  25.230 -24.579  1.00 37.37      A    C
ATOM   3554  C   ILE A 424       8.559  25.355 -24.411  1.00 41.83      A    C
ATOM   3555  O   ILE A 424       9.095  25.069 -23.348  1.00 42.12      A    O
ATOM   3556  CB  ILE A 424       6.490  26.538 -25.207  1.00 41.57      A    C
ATOM   3557  CG1 ILE A 424       6.913  27.749 -24.370  1.00 41.72      A    C
ATOM   3558  CG2 ILE A 424       4.965  26.494 -25.200  1.00 44.55      A    C
ATOM   3559  CD1 ILE A 424       6.073  28.933 -24.594  1.00 42.61      A    C
ATOM   3560  N   VAL A 425       9.237  25.760 -25.480  1.00 38.60      A    N
ATOM   3561  CA  VAL A 425      10.653  26.095 -25.447  1.00 37.65      A    C
ATOM   3562  C   VAL A 425      10.792  27.544 -25.900  1.00 39.69      A    C
ATOM   3563  O   VAL A 425      10.508  27.854 -27.055  1.00 39.20      A    O
ATOM   3564  CB  VAL A 425      11.437  25.227 -26.417  1.00 41.34      A    C
ATOM   3565  CG1 VAL A 425      12.821  25.763 -26.564  1.00 41.61      A    C
ATOM   3566  CG2 VAL A 425      11.456  23.769 -25.945  1.00 41.22      A    C
ATOM   3567  N   THR A 426      11.181  28.436 -24.993  1.00 33.48      A    N
ATOM   3568  CA  THR A 426      11.286  29.847 -25.330  1.00 33.65      A    C
ATOM   3569  C   THR A 426      12.751  30.308 -25.325  1.00 40.45      A    C
ATOM   3570  O   THR A 426      13.618  29.651 -24.731  1.00 41.13      A    O
ATOM   3571  CB  THR A 426      10.553  30.684 -24.313  1.00 38.27      A    C
ATOM   3572  OG1 THR A 426      11.045  30.339 -23.029  1.00 33.13      A    O
ATOM   3573  CG2 THR A 426       9.089  30.392 -24.354  1.00 38.28      A    C
ATOM   3574  N   CYS A 427      13.031  31.420 -26.007  1.00 36.92      A    N
ATOM   3575  CA  CYS A 427      14.386  31.986 -26.032  1.00 37.37      A    C
ATOM   3576  C   CYS A 427      14.374  33.508 -25.971  1.00 40.89      A    C
ATOM   3577  O   CYS A 427      13.337  34.124 -26.151  1.00 39.70      A    O
ATOM   3578  CB  CYS A 427      15.181  31.481 -27.246  1.00 38.48      A    C
ATOM   3579  SG  CYS A 427      14.614  32.003 -28.909  1.00 42.93      A    S
ATOM   3580  N   ASP A 428      15.514  34.123 -25.669  1.00 38.55      A    N
ATOM   3581  CA  ASP A 428      15.592  35.580 -25.601  1.00 36.65      A    C
ATOM   3582  C   ASP A 428      15.934  36.175 -26.964  1.00 41.68      A    C
ATOM   3583  O   ASP A 428      16.127  35.442 -27.921  1.00 44.04      A    O
ATOM   3584  CB  ASP A 428      16.575  36.045 -24.507  1.00 37.81      A    C
ATOM   3585  CG  ASP A 428      18.051  35.704 -24.821  1.00 35.01      A    C
ATOM   3586  OD1 ASP A 428      18.361  35.003 -25.821  1.00 26.46      A    O
ATOM   3587  OD2 ASP A 428      18.912  36.150 -24.026  1.00 42.27      A    O
ATOM   3588  N   SER A 429      15.960  37.498 -27.068  1.00 38.27      A    N
ATOM   3589  CA  SER A 429      16.419  38.159 -28.292  1.00 38.79      A    C
ATOM   3590  C   SER A 429      17.782  37.705 -28.752  1.00 43.92      A    C
ATOM   3591  O   SER A 429      17.919  37.249 -29.873  1.00 45.30      A    O
ATOM   3592  CB  SER A 429      16.441  39.682 -28.146  1.00 43.65      A    C
ATOM   3593  OG  SER A 429      15.130  40.216 -28.213  1.00 56.59      A    O
ATOM   3594  N   VAL A 430      18.793  37.860 -27.899  1.00 40.15      A    N
ATOM   3595  CA  VAL A 430      20.169  37.550 -28.289  1.00 38.34      A    C
ATOM   3596  C   VAL A 430      20.310  36.250 -29.061  1.00 40.65      A    C
ATOM   3597  O   VAL A 430      21.074  36.178 -30.019  1.00 37.63      A    O
ATOM   3598  CB  VAL A 430      21.055  37.364 -27.078  1.00 40.62      A    C
ATOM   3599  CG1 VAL A 430      22.318  36.610 -27.507  1.00 39.03      A    C
ATOM   3600  CG2 VAL A 430      21.344  38.702 -26.429  1.00 40.11      A    C
ATOM   3601  N   THR A 431      19.555  35.238 -28.628  1.00 38.41      A    N
ATOM   3602  CA  THR A 431      19.708  33.859 -29.102  1.00 38.06      A    C
ATOM   3603  C   THR A 431      19.008  33.724 -30.417  1.00 42.95      A    C
ATOM   3604  O   THR A 431      19.596  33.293 -31.414  1.00 42.29      A    O
ATOM   3605  CB  THR A 431      19.019  32.895 -28.147  1.00 37.56      A    C
ATOM   3606  OG1 THR A 431      19.720  32.888 -26.916  1.00 30.51      A    O
ATOM   3607  CG2 THR A 431      18.991  31.511 -28.713  1.00 36.81      A    C
ATOM   3608  N   TYR A 432      17.733  34.086 -30.392  1.00 42.52      A    N
ATOM   3609  CA  TYR A 432      16.939  34.305 -31.608  1.00 44.14      A    C
ATOM   3610  C   TYR A 432      17.774  34.917 -32.736  1.00 45.55      A    C
ATOM   3611  O   TYR A 432      18.091  34.276 -33.751  1.00 44.21      A    O
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ATOM	3612	CB	TYR	A	432	15.793	35.278	-31.303	1.00	46.75	A C
ATOM	3613	CG	TYR	A	432	14.841	35.463	-32.458	1.00	51.18	A C
ATOM	3614	CD1	TYR	A	432	14.172	34.379	-32.994	1.00	53.83	A C
ATOM	3615	CD2	TYR	A	432	14.605	36.716	-33.005	1.00	53.00	A C
ATOM	3616	CE1	TYR	A	432	13.282	34.524	-34.032	1.00	55.51	A C
ATOM	3617	CE2	TYR	A	432	13.722	36.876	-34.065	1.00	54.51	A C
ATOM	3618	CZ	TYR	A	432	13.069	35.766	-34.577	1.00	64.39	A C
ATOM	3619	OH	TYR	A	432	12.185	35.886	-35.629	1.00	68.88	A O
ATOM	3620	N	ASN	A	433	18.100	36.181	-32.549	1.00	41.17	A N
ATOM	3621	CA	ASN	A	433	18.832	36.922	-33.549	1.00	41.49	A C
ATOM	3622	C	ASN	A	433	20.093	36.180	-33.968	1.00	50.09	A C
ATOM	3623	O	ASN	A	433	20.304	35.920	-35.155	1.00	51.68	A O
ATOM	3624	CB	ASN	A	433	19.127	38.305	-33.012	1.00	37.13	A C
ATOM	3625	CG	ASN	A	433	17.900	39.178	-33.005	1.00	64.17	A C
ATOM	3626	OD1	ASN	A	433	17.852	40.202	-32.319	1.00	68.83	A O
ATOM	3627	ND2	ASN	A	433	16.902	38.800	-33.812	1.00	46.56	A N
ATOM	3628	N	GLY	A	434	20.870	35.746	-32.983	1.00	48.54	A N
ATOM	3629	CA	GLY	A	434	22.164	35.113	-33.225	1.00	49.17	A C
ATOM	3630	C	GLY	A	434	22.133	33.855	-34.106	1.00	55.85	A C
ATOM	3631	O	GLY	A	434	23.036	33.644	-34.911	1.00	56.26	A O
ATOM	3632	N	SER	A	435	21.125	32.999	-33.944	1.00	53.11	A N
ATOM	3633	CA	SER	A	435	21.137	31.714	-34.645	1.00	52.11	A C
ATOM	3634	C	SER	A	435	20.955	31.890	-36.137	1.00	54.75	A C
ATOM	3635	O	SER	A	435	21.425	31.068	-36.919	1.00	55.32	A O
ATOM	3636	CB	SER	A	435	20.072	30.763	-34.106	1.00	54.97	A C
ATOM	3637	OG	SER	A	435	18.777	31.279	-34.344	1.00	64.05	A O
ATOM	3638	N	ASN	A	436	20.298	32.976	-36.530	1.00	51.48	A N
ATOM	3639	CA	ASN	A	436	19.867	33.151	-37.921	1.00	51.97	A C
ATOM	3640	C	ASN	A	436	19.294	31.848	-38.515	1.00	58.89	A C
ATOM	3641	O	ASN	A	436	19.719	31.392	-39.587	1.00	59.18	A O
ATOM	3642	CB	ASN	A	436	20.995	33.718	-38.787	1.00	51.97	A C
ATOM	3643	CG	ASN	A	436	21.021	35.243	-38.794	1.00	81.31	A C
ATOM	3644	OD1	ASN	A	436	21.802	35.866	-38.071	1.00	67.17	A O
ATOM	3645	ND2	ASN	A	436	20.186	35.850	-39.639	1.00	79.43	A N
ATOM	3646	N	LEU	A	437	18.388	31.220	-37.756	1.00	55.43	A N
ATOM	3647	CA	LEU	A	437	17.514	30.177	-38.259	1.00	54.69	A C
ATOM	3648	C	LEU	A	437	16.371	30.959	-38.888	1.00	58.99	A C
ATOM	3649	O	LEU	A	437	16.112	32.105	-38.503	1.00	60.35	A O
ATOM	3650	CB	LEU	A	437	16.962	29.309	-37.110	1.00	54.84	A C
ATOM	3651	CG	LEU	A	437	17.911	28.499	-36.213	1.00	59.21	A C
ATOM	3652	CD1	LEU	A	437	17.141	27.670	-35.203	1.00	58.85	A C
ATOM	3653	CD2	LEU	A	437	18.856	27.618	-37.017	1.00	61.98	A C
ATOM	3654	N	PRO	A	438	15.700	30.358	-39.864	1.00	53.19	A N
ATOM	3655	CA	PRO	A	438	14.578	31.025	-40.488	1.00	51.39	A C
ATOM	3656	C	PRO	A	438	13.579	31.395	-39.400	1.00	51.62	A C
ATOM	3657	O	PRO	A	438	13.170	30.546	-38.610	1.00	50.00	A O
ATOM	3658	CB	PRO	A	438	13.998	29.947	-41.399	1.00	53.24	A C
ATOM	3659	CG	PRO	A	438	14.586	28.626	-40.904	1.00	58.28	A C
ATOM	3660	CD	PRO	A	438	15.474	28.909	-39.750	1.00	53.56	A C
ATOM	3661	N	ALA	A	439	13.205	32.670	-39.367	1.00	46.83	A N
ATOM	3662	CA	ALA	A	439	12.232	33.179	-38.403	1.00	45.78	A C
ATOM	3663	C	ALA	A	439	11.048	32.265	-38.024	1.00	47.91	A C
ATOM	3664	O	ALA	A	439	10.748	32.115	-36.852	1.00	47.84	A O
ATOM	3665	CB	ALA	A	439	11.748	34.525	-38.830	1.00	46.38	A C
ATOM	3666	N	TYR	A	440	10.385	31.657	-39.003	1.00	43.06	A N
ATOM	3667	CA	TYR	A	440	9.210	30.817	-38.742	1.00	43.29	A C
ATOM	3668	C	TYR	A	440	9.546	29.501	-38.030	1.00	47.08	A C
ATOM	3669	O	TYR	A	440	8.764	28.540	-38.067	1.00	45.98	A O
ATOM	3670	CB	TYR	A	440	8.572	30.446	-40.065	1.00	44.96	A C
ATOM	3671	CG	TYR	A	440	9.542	29.769	-40.979	1.00	47.03	A C
ATOM	3672	CD1	TYR	A	440	9.684	28.388	-40.961	1.00	49.03	A C
ATOM	3673	CD2	TYR	A	440	10.387	30.506	-41.796	1.00	48.32	A C
ATOM	3674	CE1	TYR	A	440	10.590	27.748	-41.776	1.00	48.90	A C
ATOM	3675	CE2	TYR	A	440	11.301	29.870	-42.629	1.00	49.62	A C
ATOM	3676	CZ	TYR	A	440	11.397	28.489	-42.606	1.00	58.48	A C
ATOM	3677	OH	TYR	A	440	12.308	27.832	-43.403	1.00	62.85	A O
ATOM	3678	N	PHE	A	441	10.731	29.436	-37.435	1.00	43.00	A N

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ATOM   3679  CA  PHE A 441      11.078  28.347 -36.515  1.00 40.94      A    C
ATOM   3680  C   PHE A 441      10.722  28.830 -35.109  1.00 41.69      A    C
ATOM   3681  O   PHE A 441      10.715  28.054 -34.155  1.00 42.57      A    O
ATOM   3682  CB  PHE A 441      12.590  28.085 -36.569  1.00 42.03      A    C
ATOM   3683  CG  PHE A 441      13.023  27.180 -37.683  1.00 41.90      A    C
ATOM   3684  CD1 PHE A 441      12.481  27.290 -38.951  1.00 44.97      A    C
ATOM   3685  CD2 PHE A 441      14.030  26.261 -37.476  1.00 42.12      A    C
ATOM   3686  CE1 PHE A 441      12.872  26.423 -39.972  1.00 44.71      A    C
ATOM   3687  CE2 PHE A 441      14.478  25.447 -38.509  1.00 44.60      A    C
ATOM   3688  CZ  PHE A 441      13.881  25.507 -39.749  1.00 42.50      A    C
ATOM   3689  N   PHE A 442      10.465  30.126 -34.986  1.00 35.30      A    N
ATOM   3690  CA  PHE A 442      10.187  30.757 -33.688  1.00 34.31      A    C
ATOM   3691  C   PHE A 442       8.745  31.266 -33.665  1.00 38.76      A    C
ATOM   3692  O   PHE A 442       8.000  31.089 -34.646  1.00 38.04      A    O
ATOM   3693  CB  PHE A 442      11.174  31.915 -33.427  1.00 35.88      A    C
ATOM   3694  CG  PHE A 442      12.624  31.536 -33.642  1.00 38.15      A    C
ATOM   3695  CD1 PHE A 442      13.180  31.561 -34.907  1.00 41.89      A    C
ATOM   3696  CD2 PHE A 442      13.384  31.015 -32.608  1.00 40.67      A    C
ATOM   3697  CE1 PHE A 442      14.478  31.089 -35.134  1.00 43.02      A    C
ATOM   3698  CE2 PHE A 442      14.681  30.560 -32.824  1.00 44.28      A    C
ATOM   3699  CZ  PHE A 442      15.233  30.609 -34.094  1.00 42.37      A    C
ATOM   3700  N   LYS A 443       8.341  31.854 -32.532  1.00 32.36      A    N
ATOM   3701  CA  LYS A 443       7.135  32.667 -32.483  1.00 29.67      A    C
ATOM   3702  C   LYS A 443       7.247  33.810 -31.471  1.00 29.40      A    C
ATOM   3703  O   LYS A 443       7.598  33.582 -30.335  1.00 27.99      A    O
ATOM   3704  CB  LYS A 443       5.937  31.800 -32.166  1.00 30.82      A    C
ATOM   3705  CG  LYS A 443       4.633  32.599 -32.067  1.00 40.31      A    C
ATOM   3706  CD  LYS A 443       3.556  31.823 -31.302  1.00 40.12      A    C
ATOM   3707  CE  LYS A 443       2.371  32.718 -31.036  1.00 41.53      A    C
ATOM   3708  NZ  LYS A 443       1.608  32.262 -29.863  1.00 45.27      A    N
ATOM   3709  N   GLU A 444       6.960  35.036 -31.872  1.00 26.62      A    N
ATOM   3710  CA  GLU A 444       7.137  36.161 -30.946  1.00 29.08      A    C
ATOM   3711  C   GLU A 444       6.081  36.134 -29.851  1.00 38.65      A    C
ATOM   3712  O   GLU A 444       4.902  36.323 -30.121  1.00 40.73      A    O
ATOM   3713  CB  GLU A 444       7.043  37.486 -31.688  1.00 30.33      A    C
ATOM   3714  CG  GLU A 444       7.466  38.652 -30.860  1.00 40.62      A    C
ATOM   3715  CD  GLU A 444       7.507  39.936 -31.665  1.00 66.55      A    C
ATOM   3716  OE1 GLU A 444       7.632  41.022 -31.049  1.00 48.32      A    O
ATOM   3717  OE2 GLU A 444       7.425  39.844 -32.917  1.00 62.85      A    O
ATOM   3718  N   LEU A 445       6.488  35.923 -28.610  1.00 36.13      A    N
ATOM   3719  CA  LEU A 445       5.492  35.698 -27.553  1.00 35.87      A    C
ATOM   3720  C   LEU A 445       4.974  37.022 -26.968  1.00 40.35      A    C
ATOM   3721  O   LEU A 445       5.660  38.043 -27.017  1.00 39.18      A    O
ATOM   3722  CB  LEU A 445       6.053  34.776 -26.440  1.00 34.31      A    C
ATOM   3723  CG  LEU A 445       6.550  33.462 -27.004  1.00 37.90      A    C
ATOM   3724  CD1 LEU A 445       6.331  32.292 -26.058  1.00 38.01      A    C
ATOM   3725  CD2 LEU A 445       5.779  33.255 -28.266  1.00 41.73      A    C
ATOM   3726  N   PRO A 446       3.790  36.979 -26.363  1.00 38.71      A    N
ATOM   3727  CA  PRO A 446       3.237  38.150 -25.677  1.00 39.22      A    C
ATOM   3728  C   PRO A 446       4.016  38.506 -24.406  1.00 52.42      A    C
ATOM   3729  O   PRO A 446       4.376  37.625 -23.598  1.00 55.72      A    O
ATOM   3730  CB  PRO A 446       1.806  37.733 -25.331  1.00 39.66      A    C
ATOM   3731  CG  PRO A 446       1.699  36.285 -25.591  1.00 42.85      A    C
ATOM   3732  CD  PRO A 446       2.857  35.837 -26.406  1.00 38.29      A    C
ATOM   3733  N   LYS A 447       4.281  39.793 -24.226  1.00 49.97      A    N
ATOM   3734  CA  LYS A 447       5.026  40.241 -23.062  1.00 51.75      A    C
ATOM   3735  C   LYS A 447       4.338  39.924 -21.737  1.00 59.23      A    C
ATOM   3736  O   LYS A 447       3.125  40.082 -21.598  1.00 59.14      A    O
ATOM   3737  CB  LYS A 447       5.348  41.727 -23.177  1.00 54.63      A    C
ATOM   3738  CG  LYS A 447       6.141  42.064 -24.427  1.00 65.20      A    C
ATOM   3739  CD  LYS A 447       6.686  43.478 -24.372  1.00 76.24      A    C
ATOM   3740  CE  LYS A 447       7.602  43.780 -25.559  1.00 80.87      A    C
ATOM   3741  NZ  LYS A 447       6.843  44.071 -26.807  1.00 90.44      A    N
ATOM   3742  N   LYS A 448       5.126  39.465 -20.771  1.00 58.54      A    N
ATOM   3743  CA  LYS A 448       4.654  39.237 -19.407  1.00 59.44      A    C
ATOM   3744  C   LYS A 448       5.588  39.948 -18.422  1.00 69.81      A    C
ATOM   3745  O   LYS A 448       6.728  40.269 -18.767  1.00 69.28      A    O
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ATOM	3746	CB	LYS	A	448	4.578	37.736	-19.104	1.00	60.27	A	C
ATOM	3747	CG	LYS	A	448	3.768	36.941	-20.129	1.00	66.75	A	C
ATOM	3748	CD	LYS	A	448	3.430	35.524	-19.665	1.00	65.67	A	C
ATOM	3749	CE	LYS	A	448	2.604	34.792	-20.722	1.00	73.05	A	C
ATOM	3750	NZ	LYS	A	448	1.961	33.530	-20.253	1.00	74.00	A	N
ATOM	3751	N	VAL	A	449	5.087	40.229	-17.219	1.00	71.54	A	N
ATOM	3752	CA	VAL	A	449	5.855	40.968	-16.215	1.00	73.43	A	C
ATOM	3753	C	VAL	A	449	6.304	40.056	-15.075	1.00	81.30	A	C
ATOM	3754	O	VAL	A	449	5.482	39.577	-14.287	1.00	80.69	A	O
ATOM	3755	CB	VAL	A	449	5.062	42.146	-15.640	1.00	77.48	A	C
ATOM	3756	CG1	VAL	A	449	5.868	42.829	-14.560	1.00	77.65	A	C
ATOM	3757	CG2	VAL	A	449	4.706	43.130	-16.741	1.00	77.14	A	C
ATOM	3758	N	MET	A	450	7.617	39.857	-14.978	1.00	80.70	A	N
ATOM	3759	CA	MET	A	450	8.177	38.711	-14.267	1.00	81.16	A	C
ATOM	3760	C	MET	A	450	8.891	39.101	-12.970	1.00	88.65	A	C
ATOM	3761	O	MET	A	450	9.746	39.989	-12.960	1.00	89.06	A	O
ATOM	3762	CB	MET	A	450	9.078	37.907	-15.215	1.00	83.01	A	C
ATOM	3763	CG	MET	A	450	8.378	37.544	-16.547	1.00	85.95	A	C
ATOM	3764	SD	MET	A	450	9.293	36.512	-17.749	1.00	89.49	A	S
ATOM	3765	CE	MET	A	450	10.624	37.607	-18.235	1.00	85.99	A	C
ATOM	3766	N	LYS	A	451	8.507	38.459	-11.872	1.00	86.99	A	N
ATOM	3767	CA	LYS	A	451	9.049	38.807	-10.564	1.00	88.04	A	C
ATOM	3768	C	LYS	A	451	10.413	38.166	-10.331	1.00	93.42	A	C
ATOM	3769	O	LYS	A	451	10.539	36.947	-10.230	1.00	92.17	A	O
ATOM	3770	CB	LYS	A	451	8.059	38.458	-9.446	1.00	91.55	A	C
ATOM	3771	CG	LYS	A	451	6.786	39.314	-9.466	1.00	109.28	A	C
ATOM	3772	CD	LYS	A	451	5.695	38.768	-8.544	1.00	119.76	A	C
ATOM	3773	CE	LYS	A	451	4.815	37.731	-9.240	1.00	129.62	A	C
ATOM	3774	NZ	LYS	A	451	3.911	38.329	-10.267	1.00	138.50	A	N
ATOM	3775	N	GLY	A	452	11.436	39.010	-10.257	1.00	92.25	A	N
ATOM	3776	CA	GLY	A	452	12.818	38.549	-10.204	1.00	92.83	A	C
ATOM	3777	C	GLY	A	452	13.592	39.232	-11.329	1.00	97.73	A	C
ATOM	3778	O	GLY	A	452	14.738	39.665	-11.152	1.00	97.76	A	O
ATOM	3779	N	VAL	A	453	12.943	39.350	-12.481	1.00	94.04	A	N
ATOM	3780	CA	VAL	A	453	13.557	40.003	-13.623	1.00	93.64	A	C
ATOM	3781	C	VAL	A	453	12.637	41.074	-14.221	1.00	97.10	A	C
ATOM	3782	O	VAL	A	453	11.496	40.797	-14.615	1.00	96.65	A	O
ATOM	3783	CB	VAL	A	453	14.036	38.974	-14.679	1.00	97.02	A	C
ATOM	3784	CG1	VAL	A	453	12.858	38.207	-15.269	1.00	96.73	A	C
ATOM	3785	CG2	VAL	A	453	14.877	39.643	-15.749	1.00	96.67	A	C
ATOM	3786	N	ALA	A	454	13.123	42.313	-14.227	1.00	92.81	A	N
ATOM	3787	CA	ALA	A	454	12.446	43.404	-14.918	1.00	92.05	A	C
ATOM	3788	C	ALA	A	454	13.098	43.635	-16.284	1.00	95.44	A	C
ATOM	3789	O	ALA	A	454	14.325	43.572	-16.421	1.00	95.43	A	O
ATOM	3790	CB	ALA	A	454	12.478	44.671	-14.081	1.00	92.69	A	C
ATOM	3791	N	ASP	A	455	12.261	43.895	-17.289	1.00	90.50	A	N
ATOM	3792	CA	ASP	A	455	12.666	43.935	-18.697	1.00	89.09	A	C
ATOM	3793	C	ASP	A	455	13.242	42.623	-19.220	1.00	90.33	A	C
ATOM	3794	O	ASP	A	455	14.216	42.107	-18.672	1.00	91.64	A	O
ATOM	3795	CB	ASP	A	455	13.665	45.048	-18.973	1.00	90.83	A	C
ATOM	3796	CG	ASP	A	455	14.174	45.012	-20.400	1.00	99.13	A	C
ATOM	3797	OD1	ASP	A	455	13.333	44.870	-21.311	1.00	100.06	A	O
ATOM	3798	OD2	ASP	A	455	15.407	45.011	-20.607	1.00	102.78	A	O
ATOM	3799	N	SER	A	456	12.657	42.104	-20.296	1.00	82.26	A	N
ATOM	3800	CA	SER	A	456	13.170	40.897	-20.937	1.00	79.70	A	C
ATOM	3801	C	SER	A	456	13.549	41.187	-22.387	1.00	78.03	A	C
ATOM	3802	O	SER	A	456	14.417	40.521	-22.976	1.00	76.61	A	O
ATOM	3803	CB	SER	A	456	12.136	39.764	-20.862	1.00	82.97	A	C
ATOM	3804	OG	SER	A	456	10.831	40.221	-21.177	1.00	90.87	A	O
ATOM	3805	N	GLY	A	457	12.916	42.219	-22.934	1.00	71.50	A	N
ATOM	3806	CA	GLY	A	457	12.944	42.483	-24.370	1.00	69.17	A	C
ATOM	3807	C	GLY	A	457	11.912	41.575	-25.032	1.00	67.24	A	C
ATOM	3808	O	GLY	A	457	11.036	41.020	-24.366	1.00	66.98	A	O
ATOM	3809	N	PRO	A	458	12.033	41.396	-26.338	1.00	58.96	A	N
ATOM	3810	CA	PRO	A	458	11.121	40.520	-27.063	1.00	56.54	A	C
ATOM	3811	C	PRO	A	458	11.507	39.048	-26.929	1.00	55.82	A	C
ATOM	3812	O	PRO	A	458	12.592	38.650	-27.312	1.00	55.53	A	O

ATOM	3813	CB	PRO	A	458	11.272	40.971	-28.516	1.00	58.04	A	C
ATOM	3814	CG	PRO	A	458	12.178	42.173	-28.485	1.00	62.63	A	C
ATOM	3815	CD	PRO	A	458	12.956	42.097	-27.235	1.00	58.49	A	C
ATOM	3816	N	LEU	A	459	10.597	38.236	-26.403	1.00	49.44	A	N
ATOM	3817	CA	LEU	A	459	10.879	36.828	-26.182	1.00	46.58	A	C
ATOM	3818	C	LEU	A	459	10.208	35.966	-27.238	1.00	48.51	A	C
ATOM	3819	O	LEU	A	459	9.197	36.365	-27.806	1.00	49.32	A	O
ATOM	3820	CB	LEU	A	459	10.474	36.414	-24.768	1.00	45.90	A	C
ATOM	3821	CG	LEU	A	459	11.238	37.252	-23.731	1.00	49.59	A	C
ATOM	3822	CD1	LEU	A	459	10.641	37.143	-22.326	1.00	49.48	A	C
ATOM	3823	CD2	LEU	A	459	12.742	36.944	-23.742	1.00	46.65	A	C
ATOM	3824	N	TYR	A	460	10.785	34.792	-27.504	1.00	40.80	A	N
ATOM	3825	CA	TYR	A	460	10.355	33.958	-28.605	1.00	39.55	A	C
ATOM	3826	C	TYR	A	460	10.175	32.514	-28.186	1.00	44.71	A	C
ATOM	3827	O	TYR	A	460	10.970	31.965	-27.414	1.00	47.06	A	O
ATOM	3828	CB	TYR	A	460	11.386	34.015	-29.717	1.00	40.77	A	C
ATOM	3829	CG	TYR	A	460	11.629	35.397	-30.267	1.00	43.73	A	C
ATOM	3830	CD1	TYR	A	460	12.466	36.302	-29.619	1.00	45.57	A	C
ATOM	3831	CD2	TYR	A	460	11.053	35.789	-31.475	1.00	44.89	A	C
ATOM	3832	CE1	TYR	A	460	12.706	37.572	-30.158	1.00	46.41	A	C
ATOM	3833	CE2	TYR	A	460	11.321	37.037	-32.031	1.00	44.76	A	C
ATOM	3834	CZ	TYR	A	460	12.126	37.920	-31.369	1.00	44.53	A	C
ATOM	3835	OH	TYR	A	460	12.309	39.154	-31.926	1.00	37.11	A	O
ATOM	3836	N	GLN	A	461	9.143	31.878	-28.708	1.00	38.70	A	N
ATOM	3837	CA	GLN	A	461	9.030	30.437	-28.529	1.00	37.18	A	C
ATOM	3838	C	GLN	A	461	9.749	29.800	-29.698	1.00	40.67	A	C
ATOM	3839	O	GLN	A	461	9.581	30.239	-30.844	1.00	39.19	A	O
ATOM	3840	CB	GLN	A	461	7.570	29.988	-28.555	1.00	36.91	A	C
ATOM	3841	CG	GLN	A	461	7.405	28.719	-29.355	1.00	33.18	A	C
ATOM	3842	CD	GLN	A	461	6.119	27.992	-29.059	1.00	45.76	A	C
ATOM	3843	OE1	GLN	A	461	6.068	26.753	-29.091	1.00	33.68	A	O
ATOM	3844	NE2	GLN	A	461	5.066	28.750	-28.769	1.00	31.14	A	N
ATOM	3845	N	TYR	A	462	10.548	28.773	-29.407	1.00	36.94	A	N
ATOM	3846	CA	TYR	A	462	11.248	28.013	-30.443	1.00	35.59	A	C
ATOM	3847	C	TYR	A	462	10.312	26.929	-30.922	1.00	41.65	A	C
ATOM	3848	O	TYR	A	462	9.927	26.037	-30.161	1.00	42.59	A	O
ATOM	3849	CB	TYR	A	462	12.568	27.414	-29.941	1.00	35.14	A	C
ATOM	3850	CG	TYR	A	462	13.277	26.596	-31.002	1.00	35.47	A	C
ATOM	3851	CD1	TYR	A	462	13.639	27.171	-32.208	1.00	37.67	A	C
ATOM	3852	CD2	TYR	A	462	13.590	25.264	-30.796	1.00	34.45	A	C
ATOM	3853	CE1	TYR	A	462	14.260	26.446	-33.181	1.00	38.46	A	C
ATOM	3854	CE2	TYR	A	462	14.237	24.540	-31.759	1.00	34.67	A	C
ATOM	3855	CZ	TYR	A	462	14.531	25.126	-32.969	1.00	41.85	A	C
ATOM	3856	OH	TYR	A	462	15.121	24.411	-33.984	1.00	44.17	A	O
ATOM	3857	N	TRP	A	463	9.935	27.020	-32.187	1.00	38.70	A	N
ATOM	3858	CA	TRP	A	463	8.866	26.197	-32.724	1.00	38.54	A	C
ATOM	3859	C	TRP	A	463	9.390	24.864	-33.219	1.00	47.13	A	C
ATOM	3860	O	TRP	A	463	8.812	23.814	-32.924	1.00	46.67	A	O
ATOM	3861	CB	TRP	A	463	8.168	26.958	-33.848	1.00	36.73	A	C
ATOM	3862	CG	TRP	A	463	6.856	26.408	-34.218	1.00	37.05	A	C
ATOM	3863	CD1	TRP	A	463	6.591	25.485	-35.198	1.00	39.22	A	C
ATOM	3864	CD2	TRP	A	463	5.613	26.681	-33.572	1.00	37.04	A	C
ATOM	3865	NE1	TRP	A	463	5.251	25.189	-35.210	1.00	38.25	A	N
ATOM	3866	CE2	TRP	A	463	4.624	25.913	-34.229	1.00	39.51	A	C
ATOM	3867	CE3	TRP	A	463	5.230	27.526	-32.523	1.00	38.12	A	C
ATOM	3868	CZ2	TRP	A	463	3.289	25.947	-33.855	1.00	38.31	A	C
ATOM	3869	CZ3	TRP	A	463	3.881	27.600	-32.192	1.00	38.70	A	C
ATOM	3870	CH2	TRP	A	463	2.932	26.835	-32.876	1.00	39.24	A	C
ATOM	3871	N	GLY	A	464	10.487	24.900	-33.963	1.00	48.93	A	N
ATOM	3872	CA	GLY	A	464	11.029	23.686	-34.554	1.00	51.73	A	C
ATOM	3873	C	GLY	A	464	11.020	23.737	-36.079	1.00	64.00	A	C
ATOM	3874	O	GLY	A	464	10.391	24.606	-36.673	1.00	63.49	A	O
ATOM	3875	N	ARG	A	465	11.715	22.781	-36.696	1.00	67.70	A	N
ATOM	3876	CA	ARG	A	465	11.990	22.779	-38.141	1.00	70.00	A	C
ATOM	3877	C	ARG	A	465	10.740	22.761	-39.012	1.00	77.33	A	C
ATOM	3878	O	ARG	A	465	10.687	23.443	-40.042	1.00	78.12	A	O
ATOM	3879	CB	ARG	A	465	12.879	21.589	-38.528	1.00	71.21	A	C

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ATOM   3880  CG  ARG A 465      14.281  21.625 -37.946  1.00 82.31      A    C
ATOM   3881  CD  ARG A 465      15.251  20.945 -38.890  1.00 93.35      A    C
ATOM   3882  NE  ARG A 465      15.396  21.722 -40.115  1.00103.60      A    N
ATOM   3883  CZ  ARG A 465      15.712  21.215 -41.300  1.00120.69      A    C
ATOM   3884  NH1 ARG A 465      15.915  19.913 -41.443  1.00111.33      A    N
ATOM   3885  NH2 ARG A 465      15.807  22.015 -42.351  1.00109.60      A    N
ATOM   3886  N   THR A 466       9.760  21.953 -38.622  1.00 74.20      A    N
ATOM   3887  CA  THR A 466       8.572  21.781 -39.435  1.00 74.51      A    C
ATOM   3888  C   THR A 466       7.334  22.252 -38.697  1.00 80.27      A    C
ATOM   3889  O   THR A 466       7.435  22.896 -37.648  1.00 79.04      A    O
ATOM   3890  CB  THR A 466       8.416  20.326 -39.945  1.00 81.11      A    C
ATOM   3891  OG1 THR A 466       8.684  19.403 -38.878  1.00 84.49      A    O
ATOM   3892  CG2 THR A 466       9.382  20.061 -41.101  1.00 75.65      A    C
ATOM   3893  N   GLU A 467       6.172  21.924 -39.253  1.00 78.90      A    N
ATOM   3894  CA  GLU A 467       4.906  22.487 -38.800  1.00 79.17      A    C
ATOM   3895  C   GLU A 467       4.892  23.998 -38.998  1.00 83.19      A    C
ATOM   3896  O   GLU A 467       5.593  24.725 -38.300  1.00 82.70      A    O
ATOM   3897  CB  GLU A 467       4.626  22.144 -37.332  1.00 80.61      A    C
ATOM   3898  CG  GLU A 467       4.349  20.671 -37.075  1.00 92.41      A    C
ATOM   3899  CD  GLU A 467       5.510  19.965 -36.406  1.00113.10      A    C
ATOM   3900  OE1 GLU A 467       5.823  18.824 -36.811  1.00107.09      A    O
ATOM   3901  OE2 GLU A 467       6.073  20.533 -35.442  1.00106.99      A    O
ATOM   3902  N   LYS A 468       4.105  24.461 -39.964  1.00 79.83      A    N
ATOM   3903  CA  LYS A 468       3.887  25.895 -40.165  1.00 81.78      A    C
ATOM   3904  CB  LYS A 468       3.225  26.526 -38.932  1.00 83.07      A    C
ATOM   3905  CG  LYS A 468       1.963  25.814 -38.467  1.00 83.77      A    C
ATOM   3906  CD  LYS A 468       1.297  26.527 -37.297  1.00 83.49      A    C
ATOM   3907  CE  LYS A 468       0.227  25.650 -36.648  1.00 75.58      A    C
ATOM   3908  NZ  LYS A 468       0.773  24.316 -36.242  1.00 70.32      A    N
ATOM   3909  C   LYS A 468       5.175  26.641 -40.515  1.00101.30      A    C
TER    3910       LYS A 468
END
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Table 4

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CRYST1   99.569   99.569   98.470  90.00  90.00 120.00 P 63
SCALE1      0.010043  0.005798  0.000000        0.00000
SCALE2      0.000000  0.011597  0.000000        0.00000
SCALE3      0.000000  0.000000  0.010155        0.00000
ATOM      1  N   MET A   1      63.186  13.169  25.258  1.00 43.01           N
ATOM      2  CA  MET A   1      62.639  12.853  23.891  1.00 47.67           C
ATOM      4  CB  MET A   1      62.075  11.424  23.830  1.00 49.49           C
ATOM      7  CG  MET A   1      61.520  11.016  22.456  1.00 50.18           C
ATOM     10  SD  MET A   1      61.773   9.263  22.062  1.00 53.20           S
ATOM     11  CE  MET A   1      61.139   8.491  23.539  1.00 52.78           C
ATOM     15  C   MET A   1      61.559  13.847  23.517  1.00 44.96           C
ATOM     16  O   MET A   1      60.576  13.995  24.247  1.00 45.19           O
ATOM     20  N   ASN A   2      61.729  14.520  22.383  1.00 42.51           N
ATOM     21  CA  ASN A   2      60.827  15.631  22.031  1.00 43.24           C
ATOM     23  CB  ASN A   2      61.393  16.455  20.889  1.00 39.58           C
ATOM     26  CG  ASN A   2      62.727  17.090  21.236  1.00 39.96           C
ATOM     27  OD1 ASN A   2      63.027  17.344  22.411  1.00 38.58           O
ATOM     28  ND2 ASN A   2      63.551  17.301  20.222  1.00 30.47           N
ATOM     31  C   ASN A   2      59.432  15.176  21.660  1.00 44.02           C
ATOM     32  O   ASN A   2      59.244  14.040  21.229  1.00 40.57           O
ATOM     34  N   THR A   3      58.465  16.080  21.841  1.00 49.62           N
ATOM     35  CA  THR A   3      57.049  15.817  21.546  1.00 53.01           C
ATOM     37  CB  THR A   3      56.206  15.628  22.849  1.00 54.93           C
ATOM     39  OG1 THR A   3      56.461  16.710  23.756  1.00 56.09           O
ATOM     41  CG2 THR A   3      56.523  14.314  23.536  1.00 54.90           C
ATOM     45  C   THR A   3      56.459  16.992  20.771  1.00 56.35           C
ATOM     46  O   THR A   3      55.740  17.804  21.358  1.00 58.69           O
ATOM     48  N   PRO A   4      56.766  17.102  19.459  1.00 60.43           N
ATOM     49  CA  PRO A   4      56.209  18.186  18.633  1.00 63.02           C
ATOM     51  CB  PRO A   4      56.852  17.947  17.260  1.00 60.98           C
ATOM     54  CG  PRO A   4      58.075  17.177  17.551  1.00 60.00           C
ATOM     57  CD  PRO A   4      57.672  16.257  18.665  1.00 61.07           C
ATOM     60  C   PRO A   4      54.683  18.142  18.539  1.00 65.81           C
ATOM     61  O   PRO A   4      54.092  17.060  18.572  1.00 66.57           O
ATOM     62  N   LYS A   5      54.064  19.313  18.414  1.00 71.55           N
ATOM     63  CA  LYS A   5      52.607  19.432  18.520  1.00 75.74           C
ATOM     65  CB  LYS A   5      52.240  20.458  19.603  1.00 78.95           C
ATOM     68  CG  LYS A   5      52.497  21.917  19.218  1.00 81.17           C
ATOM     71  CD  LYS A   5      52.651  22.812  20.453  1.00 83.29           C
ATOM     74  CE  LYS A   5      54.032  22.671  21.109  1.00 83.90           C
ATOM     77  NZ  LYS A   5      55.167  22.977  20.176  1.00 84.36           N
ATOM     81  C   LYS A   5      51.917  19.805  17.211  1.00 76.02           C
ATOM     82  O   LYS A   5      52.567  20.149  16.220  1.00 75.54           O
ATOM     84  N   GLU A   6      50.586  19.737  17.258  1.00 77.23           N
ATOM     85  CA  GLU A   6      49.671  20.008  16.135  1.00 78.09           C
ATOM     87  CB  GLU A   6      49.954  21.360  15.440  1.00 79.33           C
ATOM     90  CG  GLU A   6      49.076  22.514  15.954  1.00 81.50           C
ATOM     93  CD  GLU A   6      47.630  22.425  15.472  1.00 83.05           C
ATOM     94  OE1 GLU A   6      47.344  22.881  14.342  1.00 82.71           O
ATOM     95  OE2 GLU A   6      46.777  21.909  16.228  1.00 84.04           O
ATOM     96  C   GLU A   6      49.626  18.866  15.120  1.00 75.65           C
ATOM     97  O   GLU A   6      50.592  18.633  14.385  1.00 76.15           O
ATOM     99  N   GLU A   7      48.497  18.154  15.093  1.00 72.68           N
ATOM    100  CA  GLU A   7      48.237  17.208  14.018  1.00 69.08           C
ATOM    102  CB  GLU A   7      46.977  16.352  14.282  1.00 69.85           C
ATOM    105  CG  GLU A   7      45.631  17.079  14.182  1.00 70.51           C
ATOM    108  CD  GLU A   7      44.420  16.186  14.512  1.00 73.19           C
ATOM    109  OE1 GLU A   7      44.114  15.242  13.740  1.00 69.76           O
ATOM    110  OE2 GLU A   7      43.755  16.450  15.542  1.00 73.19           O
ATOM    111  C   GLU A   7      48.113  18.015  12.725  1.00 65.78           C
ATOM    112  O   GLU A   7      47.525  19.104  12.716  1.00 60.23           O
ATOM    114  N   PHE A   8      48.727  17.498  11.660  1.00 62.89           N
ATOM    115  CA  PHE A   8      48.535  18.015  10.310  1.00 59.52           C
ATOM    117  CB  PHE A   8      49.451  17.284   9.326  1.00 58.61           C
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ATOM	120	CG	PHE	A	8	49.354	17.774	7.907	1.00	56.60	C
ATOM	121	CD1	PHE	A	8	48.754	16.999	6.931	1.00	59.70	C
ATOM	123	CE1	PHE	A	8	48.681	17.432	5.602	1.00	58.18	C
ATOM	125	CZ	PHE	A	8	49.205	18.651	5.248	1.00	59.72	C
ATOM	127	CE2	PHE	A	8	49.806	19.440	6.213	1.00	58.58	C
ATOM	129	CD2	PHE	A	8	49.884	18.995	7.538	1.00	59.48	C
ATOM	131	C	PHE	A	8	47.080	17.780	9.939	1.00	57.69	C
ATOM	132	O	PHE	A	8	46.537	16.695	10.206	1.00	56.46	O
ATOM	134	N	GLN	A	9	46.440	18.790	9.349	1.00	49.00	N
ATOM	135	CA	GLN	A	9	45.042	18.631	8.960	1.00	49.88	C
ATOM	137	CB	GLN	A	9	44.130	19.337	9.985	1.00	51.33	C
ATOM	140	CG	GLN	A	9	44.306	18.835	11.445	1.00	52.25	C
ATOM	143	CD	GLN	A	9	43.294	19.443	12.439	1.00	56.38	C
ATOM	144	OE1	GLN	A	9	42.997	18.851	13.483	1.00	58.88	O
ATOM	145	NE2	GLN	A	9	42.777	20.627	12.116	1.00	55.22	N
ATOM	148	C	GLN	A	9	44.700	19.083	7.538	1.00	43.94	C
ATOM	149	O	GLN	A	9	43.530	19.166	7.203	1.00	51.71	O
ATOM	151	N	ASP	A	10	45.684	19.370	6.694	1.00	39.42	N
ATOM	152	CA	ASP	A	10	45.378	19.954	5.380	1.00	37.49	C
ATOM	154	CB	ASP	A	10	46.238	21.186	5.154	1.00	38.58	C
ATOM	157	CG	ASP	A	10	45.754	22.034	3.999	1.00	41.14	C
ATOM	158	OD1	ASP	A	10	44.517	22.143	3.757	1.00	33.77	O
ATOM	159	OD2	ASP	A	10	46.631	22.608	3.341	1.00	44.74	O
ATOM	160	C	ASP	A	10	45.518	18.943	4.230	1.00	32.52	C
ATOM	161	O	ASP	A	10	46.091	19.218	3.170	1.00	41.40	O
ATOM	163	N	TRP	A	11	44.976	17.767	4.463	1.00	24.39	N
ATOM	164	CA	TRP	A	11	44.937	16.705	3.469	1.00	21.23	C
ATOM	166	CB	TRP	A	11	44.607	15.401	4.173	1.00	25.59	C
ATOM	169	CG	TRP	A	11	45.568	14.942	5.225	1.00	19.99	C
ATOM	170	CD1	TRP	A	11	45.331	14.847	6.539	1.00	23.39	C
ATOM	172	NE1	TRP	A	11	46.437	14.329	7.184	1.00	21.47	N
ATOM	174	CE2	TRP	A	11	47.387	14.013	6.257	1.00	20.98	C
ATOM	175	CD2	TRP	A	11	46.881	14.387	5.010	1.00	20.04	C
ATOM	176	CE3	TRP	A	11	47.656	14.166	3.885	1.00	23.53	C
ATOM	178	CZ3	TRP	A	11	48.915	13.623	4.034	1.00	23.52	C
ATOM	180	CH2	TRP	A	11	49.410	13.289	5.289	1.00	25.51	C
ATOM	182	CZ2	TRP	A	11	48.665	13.470	6.417	1.00	22.90	C
ATOM	184	C	TRP	A	11	43.836	17.007	2.466	1.00	19.54	C
ATOM	185	O	TRP	A	11	42.828	17.637	2.829	1.00	16.55	O
ATOM	187	N	PRO	A	12	44.003	16.565	1.208	1.00	22.47	N
ATOM	188	CA	PRO	A	12	42.985	16.676	0.214	1.00	19.81	C
ATOM	190	CB	PRO	A	12	43.486	15.760	-0.904	1.00	20.84	C
ATOM	193	CG	PRO	A	12	44.931	15.832	-0.796	1.00	23.81	C
ATOM	196	CD	PRO	A	12	45.230	15.947	0.649	1.00	24.48	C
ATOM	199	C	PRO	A	12	41.593	16.223	0.687	1.00	16.03	C
ATOM	200	O	PRO	A	12	40.624	16.920	0.418	1.00	19.73	O
ATOM	201	N	ILE	A	13	41.504	15.121	1.422	1.00	18.89	N
ATOM	202	CA	ILE	A	13	40.204	14.642	1.892	1.00	20.59	C
ATOM	204	CB	ILE	A	13	40.284	13.224	2.539	1.00	18.66	C
ATOM	206	CG1	ILE	A	13	38.887	12.586	2.635	1.00	18.30	C
ATOM	209	CD1	ILE	A	13	38.879	11.099	3.147	1.00	19.13	C
ATOM	213	CG2	ILE	A	13	41.010	13.272	3.888	1.00	16.62	C
ATOM	217	C	ILE	A	13	39.505	15.665	2.804	1.00	20.16	C
ATOM	218	O	ILE	A	13	38.290	15.801	2.744	1.00	15.99	O
ATOM	220	N	VAL	A	14	40.272	16.384	3.620	1.00	18.56	N
ATOM	221	CA	VAL	A	14	39.736	17.472	4.490	1.00	17.21	C
ATOM	223	CB	VAL	A	14	40.815	17.940	5.536	1.00	22.29	C
ATOM	225	CG1	VAL	A	14	40.399	19.242	6.298	1.00	21.20	C
ATOM	229	CG2	VAL	A	14	41.112	16.758	6.519	1.00	21.47	C
ATOM	233	C	VAL	A	14	39.259	18.685	3.668	1.00	18.21	C
ATOM	234	O	VAL	A	14	38.173	19.237	3.878	1.00	17.82	O
ATOM	236	N	ARG	A	15	40.062	19.076	2.706	1.00	13.73	N
ATOM	237	CA	ARG	A	15	39.640	20.104	1.754	1.00	19.17	C
ATOM	239	CB	ARG	A	15	40.760	20.462	0.777	1.00	14.07	C
ATOM	242	CG	ARG	A	15	42.010	21.024	1.384	1.00	20.43	C
ATOM	245	CD	ARG	A	15	42.983	21.263	0.220	1.00	24.24	C
ATOM	248	NE	ARG	A	15	44.111	22.046	0.647	1.00	36.69	N

ATOM	250	CZ	ARG	A	15	44.996	22.623	-0.162	1.00	45.84	C
ATOM	251	NH1	ARG	A	15	45.993	23.328	0.378	1.00	46.78	N
ATOM	254	NH2	ARG	A	15	44.892	22.523	-1.484	1.00	38.75	N
ATOM	257	C	ARG	A	15	38.367	19.722	0.982	1.00	12.20	C
ATOM	258	O	ARG	A	15	37.493	20.556	0.774	1.00	18.92	O
ATOM	260	N	ILE	A	16	38.243	18.484	0.555	1.00	16.44	N
ATOM	261	CA	ILE	A	16	37.009	18.050	-0.070	1.00	14.67	C
ATOM	263	CB	ILE	A	16	37.159	16.649	-0.646	1.00	20.01	C
ATOM	265	CG1	ILE	A	16	38.195	16.669	-1.782	1.00	20.45	C
ATOM	268	CD1	ILE	A	16	38.698	15.269	-2.224	1.00	14.36	C
ATOM	272	CG2	ILE	A	16	35.814	16.142	-1.139	1.00	16.01	C
ATOM	276	C	ILE	A	16	35.830	18.147	0.897	1.00	15.97	C
ATOM	277	O	ILE	A	16	34.716	18.586	0.538	1.00	18.10	O
ATOM	279	N	ALA	A	17	36.067	17.752	2.143	1.00	16.32	N
ATOM	280	CA	ALA	A	17	35.011	17.731	3.145	1.00	15.41	C
ATOM	282	CB	ALA	A	17	35.490	16.995	4.445	1.00	11.91	C
ATOM	286	C	ALA	A	17	34.437	19.100	3.462	1.00	15.09	C
ATOM	287	O	ALA	A	17	33.237	19.205	3.841	1.00	19.26	O
ATOM	289	N	ALA	A	18	35.240	20.161	3.285	1.00	18.70	N
ATOM	290	CA	ALA	A	18	34.733	21.528	3.453	1.00	15.57	C
ATOM	292	CB	ALA	A	18	35.788	22.590	3.208	1.00	17.32	C
ATOM	296	C	ALA	A	18	33.500	21.823	2.600	1.00	16.50	C
ATOM	297	O	ALA	A	18	32.676	22.642	2.981	1.00	18.05	O
ATOM	299	N	HIS	A	19	33.416	21.188	1.444	1.00	17.06	N
ATOM	300	CA	HIS	A	19	32.342	21.433	0.467	1.00	17.25	C
ATOM	302	CB	HIS	A	19	32.868	21.111	-0.960	1.00	18.48	C
ATOM	305	CG	HIS	A	19	33.891	22.082	-1.446	1.00	17.03	C
ATOM	306	ND1	HIS	A	19	33.578	23.114	-2.309	1.00	19.99	N
ATOM	308	CE1	HIS	A	19	34.659	23.844	-2.529	1.00	17.22	C
ATOM	310	NE2	HIS	A	19	35.666	23.316	-1.854	1.00	19.61	N
ATOM	312	CD2	HIS	A	19	35.210	22.215	-1.162	1.00	25.07	C
ATOM	314	C	HIS	A	19	31.082	20.624	0.741	1.00	18.43	C
ATOM	315	O	HIS	A	19	30.102	20.747	-0.005	1.00	15.93	O
ATOM	317	N	LEU	A	20	31.084	19.808	1.812	1.00	16.95	N
ATOM	318	CA	LEU	A	20	29.971	18.896	2.110	1.00	16.33	C
ATOM	320	CB	LEU	A	20	30.396	17.433	1.814	1.00	18.05	C
ATOM	323	CG	LEU	A	20	30.856	17.143	0.384	1.00	18.91	C
ATOM	325	CD1	LEU	A	20	31.448	15.746	0.227	1.00	16.76	C
ATOM	329	CD2	LEU	A	20	29.679	17.318	-0.553	1.00	21.79	C
ATOM	333	C	LEU	A	20	29.518	18.976	3.555	1.00	18.18	C
ATOM	334	O	LEU	A	20	30.296	19.322	4.439	1.00	17.79	O
ATOM	336	N	PRO	A	21	28.238	18.669	3.806	1.00	18.36	N
ATOM	337	CA	PRO	A	21	27.749	18.647	5.155	1.00	17.37	C
ATOM	339	CB	PRO	A	21	26.244	18.735	4.973	1.00	19.50	C
ATOM	342	CG	PRO	A	21	26.008	18.015	3.701	1.00	18.70	C
ATOM	345	CD	PRO	A	21	27.180	18.347	2.830	1.00	14.36	C
ATOM	348	C	PRO	A	21	28.123	17.330	5.820	1.00	17.89	C
ATOM	349	O	PRO	A	21	28.440	16.368	5.139	1.00	21.00	O
ATOM	350	N	ASP	A	22	28.041	17.298	7.138	1.00	19.53	N
ATOM	351	CA	ASP	A	22	28.184	16.068	7.922	1.00	20.14	C
ATOM	353	CB	ASP	A	22	28.070	16.394	9.414	1.00	20.69	C
ATOM	356	CG	ASP	A	22	29.159	17.343	9.893	1.00	22.70	C
ATOM	357	OD1	ASP	A	22	30.264	17.421	9.280	1.00	21.84	O
ATOM	358	OD2	ASP	A	22	28.907	18.013	10.926	1.00	25.94	O
ATOM	359	C	ASP	A	22	27.206	14.980	7.553	1.00	19.55	C
ATOM	360	O	ASP	A	22	27.551	13.780	7.668	1.00	20.65	O
ATOM	362	N	LEU	A	23	25.994	15.375	7.122	1.00	23.00	N
ATOM	363	CA	LEU	A	23	25.007	14.449	6.563	1.00	19.59	C
ATOM	365	CB	LEU	A	23	23.835	15.211	5.969	1.00	23.12	C
ATOM	368	CG	LEU	A	23	22.578	14.442	5.502	1.00	26.50	C
ATOM	370	CD1	LEU	A	23	21.815	13.802	6.669	1.00	25.19	C
ATOM	374	CD2	LEU	A	23	21.635	15.370	4.730	1.00	27.51	C
ATOM	378	C	LEU	A	23	25.594	13.546	5.484	1.00	20.97	C
ATOM	379	O	LEU	A	23	25.221	12.389	5.395	1.00	22.71	O
ATOM	381	N	ILE	A	24	26.488	14.090	4.644	1.00	19.12	N
ATOM	382	CA	ILE	A	24	27.140	13.306	3.621	1.00	17.12	C
ATOM	384	CB	ILE	A	24	27.320	14.132	2.317	1.00	18.09	C

ATOM	386	CG1	ILE	A	24	25.961	14.485	1.704	1.00	19.94	C
ATOM	389	CD1	ILE	A	24	25.054	13.263	1.426	1.00	18.25	C
ATOM	393	CG2	ILE	A	24	28.247	13.394	1.304	1.00	14.04	C
ATOM	397	C	ILE	A	24	28.496	12.779	4.107	1.00	18.69	C
ATOM	398	O	ILE	A	24	28.778	11.578	4.000	1.00	18.54	O
ATOM	400	N	VAL	A	25	29.326	13.647	4.683	1.00	16.25	N
ATOM	401	CA	VAL	A	25	30.692	13.230	5.103	1.00	15.99	C
ATOM	403	CB	VAL	A	25	31.455	14.356	5.767	1.00	18.46	C
ATOM	405	CG1	VAL	A	25	32.768	13.849	6.449	1.00	20.30	C
ATOM	409	CG2	VAL	A	25	31.759	15.493	4.706	1.00	16.64	C
ATOM	413	C	VAL	A	25	30.688	11.979	6.002	1.00	18.24	C
ATOM	414	O	VAL	A	25	31.504	11.067	5.805	1.00	16.32	O
ATOM	416	N	TYR	A	26	29.770	11.970	6.971	1.00	22.52	N
ATOM	417	CA	TYR	A	26	29.680	10.887	7.946	1.00	25.97	C
ATOM	419	CB	TYR	A	26	29.554	11.480	9.360	1.00	24.87	C
ATOM	422	CG	TYR	A	26	30.828	12.186	9.786	1.00	21.94	C
ATOM	423	CD1	TYR	A	26	30.878	13.562	9.981	1.00	21.91	C
ATOM	425	CE1	TYR	A	26	32.091	14.206	10.320	1.00	22.03	C
ATOM	427	CZ	TYR	A	26	33.227	13.430	10.519	1.00	23.92	C
ATOM	428	OH	TYR	A	26	34.455	13.962	10.875	1.00	27.65	O
ATOM	430	CE2	TYR	A	26	33.173	12.070	10.320	1.00	26.54	C
ATOM	432	CD2	TYR	A	26	31.991	11.465	9.950	1.00	24.72	C
ATOM	434	C	TYR	A	26	28.527	9.940	7.655	1.00	28.89	C
ATOM	435	O	TYR	A	26	28.136	9.157	8.524	1.00	28.98	O
ATOM	437	N	GLY	A	27	28.013	9.966	6.427	1.00	24.98	N
ATOM	438	CA	GLY	A	27	26.814	9.215	6.092	1.00	28.91	C
ATOM	441	C	GLY	A	27	26.981	7.718	5.919	1.00	32.75	C
ATOM	442	O	GLY	A	27	26.061	6.956	6.223	1.00	36.60	O
ATOM	444	N	HIS	A	28	28.138	7.286	5.437	1.00	32.92	N
ATOM	445	CA	HIS	A	28	28.319	5.875	5.059	1.00	47.36	C
ATOM	447	CB	HIS	A	28	29.157	5.159	6.129	1.00	53.16	C
ATOM	450	CG	HIS	A	28	30.625	5.452	6.006	1.00	62.35	C
ATOM	451	ND1	HIS	A	28	31.264	6.417	6.759	1.00	68.69	N
ATOM	453	CE1	HIS	A	28	32.543	6.465	6.419	1.00	67.26	C
ATOM	455	NE2	HIS	A	28	32.752	5.585	5.456	1.00	66.45	N
ATOM	457	CD2	HIS	A	28	31.565	4.948	5.168	1.00	65.85	C
ATOM	459	C	HIS	A	28	27.013	5.121	4.715	1.00	48.50	C
ATOM	460	O	HIS	A	28	26.415	4.455	5.560	1.00	54.68	O
ATOM	462	N	PHE	A	29	26.582	5.245	3.460	1.00	49.16	N
ATOM	463	CA	PHE	A	29	25.391	4.560	2.970	1.00	43.66	C
ATOM	465	CB	PHE	A	29	24.165	5.503	2.852	1.00	43.66	C
ATOM	468	CG	PHE	A	29	24.481	6.917	2.400	1.00	36.82	C
ATOM	469	CD1	PHE	A	29	24.303	7.995	3.273	1.00	34.18	C
ATOM	471	CE1	PHE	A	29	24.578	9.335	2.862	1.00	32.30	C
ATOM	473	CZ	PHE	A	29	25.045	9.566	1.568	1.00	29.62	C
ATOM	475	CE2	PHE	A	29	25.210	8.478	0.683	1.00	33.59	C
ATOM	477	CD2	PHE	A	29	24.930	7.162	1.113	1.00	35.33	C
ATOM	479	C	PHE	A	29	25.664	3.810	1.663	1.00	46.84	C
ATOM	480	O	PHE	A	29	26.760	3.868	1.115	1.00	50.96	O
ATOM	482	N	SER	A	30	24.655	3.092	1.193	1.00	50.88	N
ATOM	483	CA	SER	A	30	24.772	2.148	0.080	1.00	56.29	C
ATOM	485	CB	SER	A	30	23.380	1.603	-0.253	1.00	58.51	C
ATOM	488	OG	SER	A	30	22.822	0.945	0.868	1.00	63.88	O
ATOM	490	C	SER	A	30	25.384	2.711	-1.197	1.00	58.77	C
ATOM	491	O	SER	A	30	25.530	3.943	-1.354	1.00	54.19	O
ATOM	493	N	PRO	A	31	25.772	1.802	-2.108	1.00	57.32	N
ATOM	494	CA	PRO	A	31	26.128	2.203	-3.468	1.00	57.46	C
ATOM	496	CB	PRO	A	31	26.859	0.967	-4.019	1.00	58.97	C
ATOM	499	CG	PRO	A	31	26.292	-0.177	-3.257	1.00	59.39	C
ATOM	502	CD	PRO	A	31	25.949	0.351	-1.895	1.00	58.59	C
ATOM	505	C	PRO	A	31	24.922	2.525	-4.326	1.00	52.57	C
ATOM	506	O	PRO	A	31	25.000	3.397	-5.171	1.00	58.27	O
ATOM	507	N	GLU	A	32	23.828	1.813	-4.104	1.00	50.27	N
ATOM	508	CA	GLU	A	32	22.622	1.970	-4.890	1.00	52.00	C
ATOM	510	CB	GLU	A	32	21.460	1.237	-4.210	1.00	55.32	C
ATOM	513	CG	GLU	A	32	20.935	1.966	-2.968	1.00	61.42	C
ATOM	516	CD	GLU	A	32	19.998	1.126	-2.127	1.00	63.71	C

ATOM	517	OE1	GLU	A	32	20.144	1.135	-0.887	1.00	64.62	O
ATOM	518	OE2	GLU	A	32	19.111	0.467	-2.704	1.00	66.45	O
ATOM	519	C	GLU	A	32	22.237	3.450	-5.120	1.00	49.68	C
ATOM	520	O	GLU	A	32	22.418	4.308	-4.254	1.00	45.84	O
ATOM	522	N	ARG	A	33	21.703	3.716	-6.301	1.00	44.34	N
ATOM	523	CA	ARG	A	33	21.149	5.004	-6.623	1.00	43.72	C
ATOM	525	CB	ARG	A	33	22.065	5.760	-7.589	1.00	40.53	C
ATOM	528	CG	ARG	A	33	23.427	6.138	-6.982	1.00	40.43	C
ATOM	531	CD	ARG	A	33	23.272	7.091	-5.832	1.00	35.86	C
ATOM	534	NE	ARG	A	33	24.531	7.522	-5.240	1.00	36.80	N
ATOM	536	CZ	ARG	A	33	25.038	7.067	-4.096	1.00	38.61	C
ATOM	537	NH1	ARG	A	33	24.438	6.113	-3.411	1.00	37.73	N
ATOM	540	NH2	ARG	A	33	26.184	7.558	-3.638	1.00	44.45	N
ATOM	543	C	ARG	A	33	19.807	4.739	-7.248	1.00	41.83	C
ATOM	544	O	ARG	A	33	19.726	3.943	-8.180	1.00	46.84	O
ATOM	546	N	PRO	A	34	18.742	5.391	-6.744	1.00	38.96	N
ATOM	547	CA	PRO	A	34	18.688	6.342	-5.627	1.00	35.68	C
ATOM	549	CB	PRO	A	34	17.272	6.922	-5.742	1.00	37.78	C
ATOM	552	CG	PRO	A	34	16.484	5.822	-6.336	1.00	34.84	C
ATOM	555	CD	PRO	A	34	17.410	5.209	-7.347	1.00	36.61	C
ATOM	558	C	PRO	A	34	18.856	5.676	-4.276	1.00	35.24	C
ATOM	559	O	PRO	A	34	18.641	4.486	-4.149	1.00	31.52	O
ATOM	560	N	PHE	A	35	19.301	6.440	-3.289	1.00	29.90	N
ATOM	561	CA	PHE	A	35	19.313	6.003	-1.910	1.00	28.46	C
ATOM	563	CB	PHE	A	35	20.721	6.078	-1.326	1.00	28.32	C
ATOM	566	CG	PHE	A	35	20.756	5.911	0.185	1.00	31.85	C
ATOM	567	CD1	PHE	A	35	20.551	4.649	0.763	1.00	37.48	C
ATOM	569	CE1	PHE	A	35	20.558	4.482	2.138	1.00	38.22	C
ATOM	571	CZ	PHE	A	35	20.755	5.595	2.971	1.00	40.47	C
ATOM	573	CE2	PHE	A	35	20.956	6.857	2.401	1.00	35.29	C
ATOM	575	CD2	PHE	A	35	20.945	7.005	1.016	1.00	35.42	C
ATOM	577	C	PHE	A	35	18.453	6.981	-1.145	1.00	25.86	C
ATOM	578	O	PHE	A	35	18.629	8.182	-1.292	1.00	22.51	O
ATOM	580	N	MET	A	36	17.601	6.473	-0.274	1.00	25.56	N
ATOM	581	CA	MET	A	36	16.733	7.308	0.538	1.00	29.98	C
ATOM	583	CB	MET	A	36	15.268	7.146	0.119	1.00	37.29	C
ATOM	586	CG	MET	A	36	14.944	7.714	-1.268	1.00	42.18	C
ATOM	589	SD	MET	A	36	14.516	6.496	-2.549	1.00	64.94	S
ATOM	590	CE	MET	A	36	15.883	5.342	-2.453	1.00	54.55	C
ATOM	594	C	MET	A	36	16.905	6.957	2.001	1.00	29.48	C
ATOM	595	O	MET	A	36	17.096	5.787	2.357	1.00	31.01	O
ATOM	597	N	ASP	A	37	16.874	7.975	2.849	1.00	30.75	N
ATOM	598	CA	ASP	A	37	16.885	7.786	4.304	1.00	31.98	C
ATOM	600	CB	ASP	A	37	18.277	8.041	4.878	1.00	37.44	C
ATOM	603	CG	ASP	A	37	18.447	7.478	6.295	1.00	43.09	C
ATOM	604	OD1	ASP	A	37	17.580	6.682	6.775	1.00	43.81	O
ATOM	605	OD2	ASP	A	37	19.452	7.857	6.922	1.00	44.43	O
ATOM	606	C	ASP	A	37	15.897	8.732	4.917	1.00	31.73	C
ATOM	607	O	ASP	A	37	15.461	9.684	4.267	1.00	31.57	O
ATOM	609	N	TYR	A	38	15.510	8.459	6.153	1.00	30.43	N
ATOM	610	CA	TYR	A	38	14.414	9.181	6.803	1.00	33.00	C
ATOM	612	CB	TYR	A	38	13.128	8.316	6.769	1.00	35.12	C
ATOM	615	CG	TYR	A	38	12.830	7.757	5.382	1.00	41.44	C
ATOM	616	CD1	TYR	A	38	13.376	6.545	4.963	1.00	42.29	C
ATOM	618	CE1	TYR	A	38	13.135	6.046	3.697	1.00	43.74	C
ATOM	620	CZ	TYR	A	38	12.345	6.761	2.819	1.00	44.69	C
ATOM	621	OH	TYR	A	38	12.102	6.267	1.560	1.00	49.35	O
ATOM	623	CE2	TYR	A	38	11.778	7.969	3.207	1.00	48.05	C
ATOM	625	CD2	TYR	A	38	12.031	8.464	4.478	1.00	43.48	C
ATOM	627	C	TYR	A	38	14.824	9.494	8.232	1.00	31.59	C
ATOM	628	O	TYR	A	38	15.346	8.635	8.926	1.00	31.28	O
ATOM	630	N	PHE	A	39	14.587	10.717	8.678	1.00	29.27	N
ATOM	631	CA	PHE	A	39	14.958	11.113	10.029	1.00	25.93	C
ATOM	633	CB	PHE	A	39	16.458	11.392	10.130	1.00	22.58	C
ATOM	636	CG	PHE	A	39	16.991	12.380	9.086	1.00	22.45	C
ATOM	637	CD1	PHE	A	39	16.938	13.739	9.324	1.00	24.60	C
ATOM	639	CE1	PHE	A	39	17.402	14.637	8.391	1.00	23.34	C

ATOM	641	CZ	PHE	A	39	17.910	14.192	7.185	1.00	26.13	C
ATOM	643	CE2	PHE	A	39	17.979	12.862	6.905	1.00	20.25	C
ATOM	645	CD2	PHE	A	39	17.514	11.936	7.870	1.00	27.43	C
ATOM	647	C	PHE	A	39	14.123	12.320	10.475	1.00	24.94	C
ATOM	648	O	PHE	A	39	13.258	12.765	9.746	1.00	26.42	O
ATOM	650	N	ASP	A	40	14.391	12.833	11.669	1.00	25.17	N
ATOM	651	CA	ASP	A	40	13.724	14.026	12.171	1.00	26.27	C
ATOM	653	CB	ASP	A	40	12.902	13.712	13.433	1.00	29.36	C
ATOM	656	CG	ASP	A	40	11.746	12.771	13.149	1.00	30.80	C
ATOM	657	OD1	ASP	A	40	10.685	13.230	12.700	1.00	38.10	O
ATOM	658	OD2	ASP	A	40	11.919	11.560	13.327	1.00	40.05	O
ATOM	659	C	ASP	A	40	14.781	15.076	12.478	1.00	23.77	C
ATOM	660	O	ASP	A	40	15.932	14.752	12.712	1.00	27.64	O
ATOM	662	N	GLY	A	41	14.389	16.334	12.458	1.00	23.73	N
ATOM	663	CA	GLY	A	41	15.320	17.393	12.835	1.00	20.97	C
ATOM	666	C	GLY	A	41	14.680	18.764	12.780	1.00	21.98	C
ATOM	667	O	GLY	A	41	13.478	18.912	12.523	1.00	22.33	O
ATOM	669	N	VAL	A	42	15.503	19.762	13.059	1.00	20.47	N
ATOM	670	CA	VAL	A	42	15.151	21.161	12.950	1.00	18.58	C
ATOM	672	CB	VAL	A	42	15.499	21.905	14.224	1.00	20.37	C
ATOM	674	CG1	VAL	A	42	14.968	23.331	14.141	1.00	19.68	C
ATOM	678	CG2	VAL	A	42	14.963	21.132	15.469	1.00	21.89	C
ATOM	682	C	VAL	A	42	15.962	21.783	11.851	1.00	18.94	C
ATOM	683	O	VAL	A	42	17.209	21.595	11.789	1.00	20.92	O
ATOM	685	N	LEU	A	43	15.283	22.542	11.008	1.00	22.32	N
ATOM	686	CA	LEU	A	43	15.896	23.177	9.851	1.00	24.95	C
ATOM	688	CB	LEU	A	43	15.102	22.835	8.583	1.00	22.56	C
ATOM	691	CG	LEU	A	43	15.228	21.409	8.032	1.00	23.76	C
ATOM	693	CD1	LEU	A	43	14.207	21.244	6.922	1.00	26.66	C
ATOM	697	CD2	LEU	A	43	16.608	21.075	7.507	1.00	25.26	C
ATOM	701	C	LEU	A	43	15.884	24.679	10.045	1.00	25.24	C
ATOM	702	O	LEU	A	43	14.930	25.218	10.605	1.00	21.75	O
ATOM	704	N	MET	A	44	16.950	25.343	9.591	1.00	23.71	N
ATOM	705	CA	MET	A	44	17.074	26.780	9.631	1.00	18.86	C
ATOM	707	CB	MET	A	44	18.204	27.212	10.547	1.00	21.59	C
ATOM	710	CG	MET	A	44	18.460	28.736	10.550	1.00	24.03	C
ATOM	713	SD	MET	A	44	20.059	29.192	11.245	1.00	24.83	S
ATOM	714	CE	MET	A	44	19.728	29.068	13.009	1.00	26.27	C
ATOM	718	C	MET	A	44	17.357	27.278	8.220	1.00	22.85	C
ATOM	719	O	MET	A	44	18.293	26.829	7.599	1.00	18.28	O
ATOM	721	N	PHE	A	45	16.531	28.194	7.739	1.00	21.91	N
ATOM	722	CA	PHE	A	45	16.689	28.844	6.431	1.00	24.95	C
ATOM	724	CB	PHE	A	45	15.353	28.852	5.731	1.00	26.86	C
ATOM	727	CG	PHE	A	45	15.360	29.446	4.343	1.00	30.71	C
ATOM	728	CD1	PHE	A	45	15.211	28.630	3.250	1.00	31.27	C
ATOM	730	CE1	PHE	A	45	15.171	29.147	1.969	1.00	33.33	C
ATOM	732	CZ	PHE	A	45	15.253	30.503	1.754	1.00	35.31	C
ATOM	734	CE2	PHE	A	45	15.379	31.354	2.820	1.00	34.12	C
ATOM	736	CD2	PHE	A	45	15.413	30.826	4.136	1.00	37.67	C
ATOM	738	C	PHE	A	45	17.100	30.253	6.706	1.00	22.17	C
ATOM	739	O	PHE	A	45	16.322	30.996	7.315	1.00	26.33	O
ATOM	741	N	VAL	A	46	18.316	30.628	6.304	1.00	22.00	N
ATOM	742	CA	VAL	A	46	18.836	31.996	6.498	1.00	19.39	C
ATOM	744	CB	VAL	A	46	20.239	32.060	7.096	1.00	25.53	C
ATOM	746	CG1	VAL	A	46	20.599	33.500	7.397	1.00	19.36	C
ATOM	750	CG2	VAL	A	46	20.347	31.218	8.363	1.00	21.74	C
ATOM	754	C	VAL	A	46	18.853	32.718	5.151	1.00	28.07	C
ATOM	755	O	VAL	A	46	19.545	32.289	4.206	1.00	25.05	O
ATOM	757	N	ASP	A	47	18.046	33.776	5.071	1.00	25.18	N
ATOM	758	CA	ASP	A	47	17.790	34.497	3.835	1.00	27.89	C
ATOM	760	CB	ASP	A	47	16.384	35.092	3.811	1.00	32.62	C
ATOM	763	CG	ASP	A	47	16.126	35.956	2.574	1.00	35.63	C
ATOM	764	OD1	ASP	A	47	15.058	36.573	2.503	1.00	46.22	O
ATOM	765	OD2	ASP	A	47	16.969	36.004	1.662	1.00	35.12	O
ATOM	766	C	ASP	A	47	18.807	35.603	3.819	1.00	25.31	C
ATOM	767	O	ASP	A	47	18.798	36.490	4.693	1.00	27.73	O
ATOM	769	N	ILE	A	48	19.701	35.518	2.853	1.00	25.53	N

ATOM	770	CA	ILE	A	48	20.802	36.480	2.728	1.00	25.01	C
ATOM	772	CB	ILE	A	48	22.168	35.760	2.704	1.00	29.42	C
ATOM	774	CG1	ILE	A	48	22.273	34.825	1.507	1.00	27.08	C
ATOM	777	CD1	ILE	A	48	23.679	34.198	1.327	1.00	26.65	C
ATOM	781	CG2	ILE	A	48	22.382	34.964	4.036	1.00	27.43	C
ATOM	785	C	ILE	A	48	20.641	37.375	1.483	1.00	30.81	C
ATOM	786	O	ILE	A	48	21.571	38.091	1.127	1.00	28.63	O
ATOM	788	N	SER	A	49	19.459	37.309	0.855	1.00	26.66	N
ATOM	789	CA	SER	A	49	18.992	38.219	-0.204	1.00	28.78	C
ATOM	791	CB	SER	A	49	17.453	38.204	-0.236	1.00	26.16	C
ATOM	794	OG	SER	A	49	17.017	37.314	-1.198	1.00	36.93	O
ATOM	796	C	SER	A	49	19.352	39.683	-0.061	1.00	32.38	C
ATOM	797	O	SER	A	49	19.619	40.378	-1.059	1.00	35.20	O
ATOM	799	N	GLY	A	50	19.239	40.176	1.164	1.00	33.47	N
ATOM	800	CA	GLY	A	50	19.453	41.595	1.455	1.00	34.23	C
ATOM	803	C	GLY	A	50	20.767	42.112	0.931	1.00	37.55	C
ATOM	804	O	GLY	A	50	20.841	43.273	0.518	1.00	43.19	O
ATOM	806	N	PHE	A	51	21.798	41.261	0.941	1.00	36.34	N
ATOM	807	CA	PHE	A	51	23.134	41.649	0.473	1.00	39.96	C
ATOM	809	CB	PHE	A	51	24.100	41.776	1.661	1.00	41.32	C
ATOM	812	CG	PHE	A	51	24.244	40.514	2.501	1.00	42.88	C
ATOM	813	CD1	PHE	A	51	23.468	40.328	3.645	1.00	36.19	C
ATOM	815	CE1	PHE	A	51	23.613	39.201	4.432	1.00	39.65	C
ATOM	817	CZ	PHE	A	51	24.543	38.234	4.085	1.00	37.26	C
ATOM	819	CE2	PHE	A	51	25.322	38.405	2.948	1.00	38.26	C
ATOM	821	CD2	PHE	A	51	25.169	39.538	2.163	1.00	41.29	C
ATOM	823	C	PHE	A	51	23.789	40.790	-0.640	1.00	39.40	C
ATOM	824	O	PHE	A	51	24.918	41.079	-1.025	1.00	35.41	O
ATOM	826	N	THR	A	52	23.125	39.738	-1.127	1.00	38.72	N
ATOM	827	CA	THR	A	52	23.544	39.096	-2.376	1.00	41.25	C
ATOM	829	CB	THR	A	52	23.277	37.597	-2.372	1.00	41.33	C
ATOM	831	OG1	THR	A	52	21.863	37.348	-2.241	1.00	35.61	O
ATOM	833	CG2	THR	A	52	24.056	36.958	-1.216	1.00	36.97	C
ATOM	837	C	THR	A	52	22.837	39.736	-3.568	1.00	45.47	C
ATOM	838	O	THR	A	52	23.012	39.314	-4.716	1.00	47.49	O
ATOM	840	N	ALA	A	53	22.007	40.729	-3.270	1.00	48.54	N
ATOM	841	CA	ALA	A	53	21.502	41.685	-4.249	1.00	50.93	C
ATOM	843	CB	ALA	A	53	20.363	42.472	-3.626	1.00	50.53	C
ATOM	847	C	ALA	A	53	22.618	42.640	-4.700	1.00	53.37	C
ATOM	848	O	ALA	A	53	22.528	43.240	-5.778	1.00	51.43	O
ATOM	850	N	MET	A	54	23.657	42.779	-3.861	1.00	56.89	N
ATOM	851	CA	MET	A	54	24.904	43.539	-4.181	1.00	57.13	C
ATOM	853	CB	MET	A	54	25.989	43.267	-3.107	1.00	58.30	C
ATOM	856	CG	MET	A	54	26.063	44.212	-1.883	1.00	60.43	C
ATOM	859	SD	MET	A	54	27.603	44.090	-0.845	1.00	66.43	S
ATOM	860	CE	MET	A	54	27.536	42.413	-0.197	1.00	44.42	C
ATOM	864	C	MET	A	54	25.555	43.237	-5.563	1.00	55.51	C
ATOM	865	O	MET	A	54	26.400	44.002	-6.014	1.00	54.60	O
ATOM	867	N	THR	A	55	25.192	42.138	-6.226	1.00	52.93	N
ATOM	868	CA	THR	A	55	25.994	41.635	-7.353	1.00	49.50	C
ATOM	870	CB	THR	A	55	25.500	40.233	-7.823	1.00	49.54	C
ATOM	872	OG1	THR	A	55	25.664	39.299	-6.747	1.00	50.93	O
ATOM	874	CG2	THR	A	55	26.270	39.721	-9.044	1.00	45.64	C
ATOM	878	C	THR	A	55	26.164	42.614	-8.536	1.00	50.37	C
ATOM	879	O	THR	A	55	27.281	42.875	-8.943	1.00	44.26	O
ATOM	881	N	GLU	A	56	25.085	43.170	-9.080	1.00	50.42	N
ATOM	882	CA	GLU	A	56	25.191	43.897	-10.354	1.00	48.48	C
ATOM	884	CB	GLU	A	56	23.791	44.255	-10.912	1.00	52.72	C
ATOM	887	CG	GLU	A	56	22.771	43.064	-10.968	1.00	51.32	C
ATOM	890	CD	GLU	A	56	23.234	41.885	-11.839	1.00	55.60	C
ATOM	891	OE1	GLU	A	56	23.272	40.713	-11.339	1.00	36.75	O
ATOM	892	OE2	GLU	A	56	23.556	42.142	-13.038	1.00	58.42	O
ATOM	893	C	GLU	A	56	26.120	45.141	-10.267	1.00	47.21	C
ATOM	894	O	GLU	A	56	26.842	45.476	-11.239	1.00	43.90	O
ATOM	896	N	LYS	A	57	26.142	45.792	-9.105	1.00	38.84	N
ATOM	897	CA	LYS	A	57	27.046	46.933	-8.902	1.00	40.21	C
ATOM	899	CB	LYS	A	57	26.715	47.671	-7.600	1.00	42.49	C

ATOM	902	CG	LYS	A	57	27.054	46.934	-6.325	1.00	45.26	C
ATOM	905	CD	LYS	A	57	27.260	47.893	-5.141	1.00	49.76	C
ATOM	908	CE	LYS	A	57	27.709	47.137	-3.907	1.00	52.50	C
ATOM	911	NZ	LYS	A	57	27.743	47.953	-2.668	1.00	54.27	N
ATOM	915	C	LYS	A	57	28.551	46.573	-8.908	1.00	35.89	C
ATOM	916	O	LYS	A	57	29.389	47.441	-9.147	1.00	31.61	O
ATOM	918	N	PHE	A	58	28.893	45.302	-8.657	1.00	31.87	N
ATOM	919	CA	PHE	A	58	30.295	44.900	-8.611	1.00	26.67	C
ATOM	921	CB	PHE	A	58	30.492	43.655	-7.740	1.00	28.65	C
ATOM	924	CG	PHE	A	58	30.524	43.965	-6.276	1.00	26.83	C
ATOM	925	CD1	PHE	A	58	29.388	43.935	-5.530	1.00	32.04	C
ATOM	927	CE1	PHE	A	58	29.421	44.253	-4.169	1.00	36.50	C
ATOM	929	CZ	PHE	A	58	30.596	44.628	-3.572	1.00	31.45	C
ATOM	931	CE2	PHE	A	58	31.735	44.683	-4.321	1.00	30.90	C
ATOM	933	CD2	PHE	A	58	31.691	44.372	-5.671	1.00	24.85	C
ATOM	935	C	PHE	A	58	30.843	44.759	-10.009	1.00	30.81	C
ATOM	936	O	PHE	A	58	32.061	44.641	-10.200	1.00	31.76	O
ATOM	938	N	SER	A	59	29.943	44.792	-11.000	1.00	34.76	N
ATOM	939	CA	SER	A	59	30.349	44.902	-12.418	1.00	36.16	C
ATOM	941	CB	SER	A	59	29.311	44.260	-13.343	1.00	40.51	C
ATOM	944	OG	SER	A	59	29.451	42.848	-13.319	1.00	43.02	O
ATOM	946	C	SER	A	59	30.669	46.329	-12.891	1.00	36.37	C
ATOM	947	O	SER	A	59	31.277	46.507	-13.936	1.00	42.83	O
ATOM	949	N	SER	A	60	30.301	47.346	-12.130	1.00	37.29	N
ATOM	950	CA	SER	A	60	30.648	48.714	-12.529	1.00	37.00	C
ATOM	952	CB	SER	A	60	29.915	49.757	-11.696	1.00	38.18	C
ATOM	955	OG	SER	A	60	30.243	49.679	-10.338	1.00	36.84	O
ATOM	957	C	SER	A	60	32.157	48.999	-12.537	1.00	36.76	C
ATOM	958	O	SER	A	60	33.000	48.331	-11.870	1.00	32.79	O
ATOM	960	N	ALA	A	61	32.472	50.012	-13.329	1.00	31.16	N
ATOM	961	CA	ALA	A	61	33.832	50.453	-13.582	1.00	29.98	C
ATOM	963	CB	ALA	A	61	33.799	51.640	-14.548	1.00	23.52	C
ATOM	967	C	ALA	A	61	34.520	50.870	-12.314	1.00	24.06	C
ATOM	968	O	ALA	A	61	35.741	50.902	-12.235	1.00	28.06	O
ATOM	970	N	MET	A	62	33.712	51.262	-11.337	1.00	24.59	N
ATOM	971	CA	MET	A	62	34.190	51.673	-10.034	1.00	27.28	C
ATOM	973	CB	MET	A	62	32.958	52.027	-9.212	1.00	28.88	C
ATOM	976	CG	MET	A	62	32.923	51.698	-7.799	1.00	38.64	C
ATOM	979	SD	MET	A	62	31.383	52.341	-7.111	1.00	47.50	S
ATOM	980	CE	MET	A	62	30.222	51.030	-7.536	1.00	51.19	C
ATOM	984	C	MET	A	62	35.108	50.623	-9.378	1.00	25.53	C
ATOM	985	O	MET	A	62	36.097	50.979	-8.730	1.00	24.54	O
ATOM	987	N	TYR	A	63	34.797	49.339	-9.595	1.00	24.17	N
ATOM	988	CA	TYR	A	63	35.566	48.226	-8.993	1.00	22.55	C
ATOM	990	CB	TYR	A	63	34.680	47.002	-8.730	1.00	21.90	C
ATOM	993	CG	TYR	A	63	33.778	47.300	-7.573	1.00	28.07	C
ATOM	994	CD1	TYR	A	63	32.464	47.691	-7.773	1.00	34.00	C
ATOM	996	CE1	TYR	A	63	31.657	48.023	-6.706	1.00	34.28	C
ATOM	998	CZ	TYR	A	63	32.175	47.982	-5.429	1.00	40.01	C
ATOM	999	OH	TYR	A	63	31.388	48.317	-4.354	1.00	43.35	O
ATOM	1001	CE2	TYR	A	63	33.489	47.616	-5.212	1.00	38.56	C
ATOM	1003	CD2	TYR	A	63	34.273	47.279	-6.270	1.00	33.65	C
ATOM	1005	C	TYR	A	63	36.756	47.868	-9.814	1.00	24.30	C
ATOM	1006	O	TYR	A	63	37.524	46.936	-9.478	1.00	20.98	O
ATOM	1008	N	MET	A	64	36.927	48.638	-10.882	1.00	25.82	N
ATOM	1009	CA	MET	A	64	38.116	48.597	-11.666	1.00	25.39	C
ATOM	1011	CB	MET	A	64	39.321	49.045	-10.812	1.00	26.31	C
ATOM	1014	CG	MET	A	64	39.313	50.600	-10.769	1.00	28.23	C
ATOM	1017	SD	MET	A	64	40.264	51.503	-9.525	1.00	27.33	S
ATOM	1018	CE	MET	A	64	39.551	50.836	-8.000	1.00	27.33	C
ATOM	1022	C	MET	A	64	37.988	47.184	-12.179	1.00	29.94	C
ATOM	1023	O	MET	A	64	36.896	46.810	-12.613	1.00	39.81	O
ATOM	1025	N	ASP	A	65	38.948	46.328	-12.188	1.00	30.73	N
ATOM	1026	CA	ASP	A	65	38.433	45.037	-12.720	1.00	30.65	C
ATOM	1028	CB	ASP	A	65	39.087	44.655	-14.038	1.00	33.63	C
ATOM	1031	CG	ASP	A	65	38.546	45.479	-15.196	1.00	35.76	C
ATOM	1032	OD1	ASP	A	65	39.163	46.503	-15.511	1.00	38.11	O

ATOM	1033	OD2	ASP	A	65	37.469	45.133	-15.729	1.00	35.78	O
ATOM	1034	C	ASP	A	65	38.498	43.951	-11.679	1.00	27.30	C
ATOM	1035	O	ASP	A	65	38.755	42.810	-12.005	1.00	25.37	O
ATOM	1037	N	ARG	A	66	38.162	44.328	-10.437	1.00	18.89	N
ATOM	1038	CA	ARG	A	66	38.267	43.415	-9.285	1.00	22.07	C
ATOM	1040	CB	ARG	A	66	39.347	43.936	-8.311	1.00	18.45	C
ATOM	1043	CG	ARG	A	66	40.738	43.897	-8.946	1.00	21.78	C
ATOM	1046	CD	ARG	A	66	41.854	44.222	-7.964	1.00	19.27	C
ATOM	1049	NE	ARG	A	66	41.862	43.293	-6.836	1.00	20.51	N
ATOM	1051	CZ	ARG	A	66	41.353	43.529	-5.625	1.00	22.08	C
ATOM	1052	NH1	ARG	A	66	40.850	44.706	-5.314	1.00	20.86	N
ATOM	1055	NH2	ARG	A	66	41.369	42.561	-4.699	1.00	22.26	N
ATOM	1058	C	ARG	A	66	36.942	43.218	-8.579	1.00	19.49	C
ATOM	1059	O	ARG	A	66	36.903	42.912	-7.377	1.00	18.12	O
ATOM	1061	N	GLY	A	67	35.850	43.406	-9.322	1.00	20.81	N
ATOM	1062	CA	GLY	A	67	34.527	43.199	-8.799	1.00	21.92	C
ATOM	1065	C	GLY	A	67	34.307	41.831	-8.164	1.00	19.45	C
ATOM	1066	O	GLY	A	67	33.749	41.742	-7.076	1.00	17.55	O
ATOM	1068	N	ALA	A	68	34.694	40.773	-8.874	1.00	19.61	N
ATOM	1069	CA	ALA	A	68	34.478	39.409	-8.396	1.00	22.44	C
ATOM	1071	CB	ALA	A	68	34.895	38.377	-9.467	1.00	17.11	C
ATOM	1075	C	ALA	A	68	35.261	39.169	-7.120	1.00	19.89	C
ATOM	1076	O	ALA	A	68	34.742	38.585	-6.175	1.00	21.72	O
ATOM	1078	N	GLU	A	69	36.509	39.643	-7.106	1.00	19.74	N
ATOM	1079	CA	GLU	A	69	37.416	39.501	-5.964	1.00	17.96	C
ATOM	1081	CB	GLU	A	69	38.789	40.014	-6.389	1.00	22.32	C
ATOM	1084	CG	GLU	A	69	39.494	39.113	-7.406	1.00	22.43	C
ATOM	1087	CD	GLU	A	69	39.101	39.338	-8.856	1.00	21.27	C
ATOM	1088	OE1	GLU	A	69	38.228	40.188	-9.184	1.00	22.51	O
ATOM	1089	OE2	GLU	A	69	39.686	38.644	-9.706	1.00	30.78	O
ATOM	1090	C	GLU	A	69	36.911	40.246	-4.717	1.00	19.36	C
ATOM	1091	O	GLU	A	69	36.856	39.702	-3.603	1.00	16.95	O
ATOM	1093	N	GLN	A	70	36.457	41.477	-4.915	1.00	17.65	N
ATOM	1094	CA	GLN	A	70	35.844	42.256	-3.844	1.00	17.35	C
ATOM	1096	CB	GLN	A	70	35.562	43.677	-4.326	1.00	21.18	C
ATOM	1099	CG	GLN	A	70	36.800	44.516	-4.511	1.00	20.11	C
ATOM	1102	CD	GLN	A	70	36.905	45.694	-3.548	1.00	19.48	C
ATOM	1103	OE1	GLN	A	70	37.334	46.795	-3.953	1.00	27.69	O
ATOM	1104	NE2	GLN	A	70	36.517	45.493	-2.283	1.00	16.48	N
ATOM	1107	C	GLN	A	70	34.537	41.654	-3.359	1.00	19.18	C
ATOM	1108	O	GLN	A	70	34.282	41.618	-2.154	1.00	20.42	O
ATOM	1110	N	LEU	A	71	33.693	41.200	-4.297	1.00	17.39	N
ATOM	1111	CA	LEU	A	71	32.406	40.611	-3.948	1.00	18.63	C
ATOM	1113	CB	LEU	A	71	31.562	40.280	-5.187	1.00	18.10	C
ATOM	1116	CG	LEU	A	71	30.193	39.665	-4.951	1.00	19.50	C
ATOM	1118	CD1	LEU	A	71	29.389	40.544	-3.991	1.00	26.24	C
ATOM	1122	CD2	LEU	A	71	29.435	39.496	-6.293	1.00	19.70	C
ATOM	1126	C	LEU	A	71	32.548	39.366	-3.081	1.00	21.05	C
ATOM	1127	O	LEU	A	71	31.858	39.255	-2.057	1.00	18.36	O
ATOM	1129	N	VAL	A	72	33.402	38.438	-3.486	1.00	18.60	N
ATOM	1130	CA	VAL	A	72	33.590	37.213	-2.705	1.00	21.90	C
ATOM	1132	CB	VAL	A	72	34.375	36.110	-3.474	1.00	23.70	C
ATOM	1134	CG1	VAL	A	72	35.882	36.366	-3.518	1.00	18.93	C
ATOM	1138	CG2	VAL	A	72	34.115	34.747	-2.815	1.00	25.38	C
ATOM	1142	C	VAL	A	72	34.181	37.477	-1.315	1.00	22.30	C
ATOM	1143	O	VAL	A	72	33.783	36.864	-0.308	1.00	21.35	O
ATOM	1145	N	GLU	A	73	35.090	38.434	-1.249	1.00	17.97	N
ATOM	1146	CA	GLU	A	73	35.651	38.865	0.016	1.00	23.55	C
ATOM	1148	CB	GLU	A	73	36.679	39.961	-0.247	1.00	20.67	C
ATOM	1151	CG	GLU	A	73	37.328	40.490	1.021	1.00	22.16	C
ATOM	1154	CD	GLU	A	73	38.429	41.461	0.721	1.00	19.52	C
ATOM	1155	OE1	GLU	A	73	39.280	41.667	1.603	1.00	15.79	O
ATOM	1156	OE2	GLU	A	73	38.472	42.019	-0.412	1.00	15.42	O
ATOM	1157	C	GLU	A	73	34.601	39.384	0.999	1.00	18.32	C
ATOM	1158	O	GLU	A	73	34.514	38.929	2.139	1.00	15.59	O
ATOM	1160	N	ILE	A	74	33.802	40.334	0.563	1.00	17.95	N
ATOM	1161	CA	ILE	A	74	32.810	40.932	1.462	1.00	17.69	C

ATOM	1163	CB	ILE	A	74	32.276	42.305	0.932	1.00	21.92	C
ATOM	1165	CG1	ILE	A	74	31.609	43.080	2.072	1.00	23.07	C
ATOM	1168	CD1	ILE	A	74	32.480	43.250	3.327	1.00	27.16	C
ATOM	1172	CG2	ILE	A	74	31.353	42.122	-0.219	1.00	22.11	C
ATOM	1176	C	ILE	A	74	31.676	39.958	1.803	1.00	13.55	C
ATOM	1177	O	ILE	A	74	31.211	39.888	2.953	1.00	19.55	O
ATOM	1179	N	LEU	A	75	31.258	39.168	0.816	1.00	20.13	N
ATOM	1180	CA	LEU	A	75	30.232	38.131	1.025	1.00	23.38	C
ATOM	1182	CB	LEU	A	75	29.950	37.473	-0.321	1.00	20.88	C
ATOM	1185	CG	LEU	A	75	28.697	36.681	-0.598	1.00	36.48	C
ATOM	1187	CD1	LEU	A	75	27.480	37.213	0.195	1.00	38.86	C
ATOM	1191	CD2	LEU	A	75	28.484	36.697	-2.153	1.00	34.57	C
ATOM	1195	C	LEU	A	75	30.715	37.082	2.037	1.00	20.56	C
ATOM	1196	O	LEU	A	75	30.039	36.728	3.003	1.00	23.32	O
ATOM	1198	N	ASN	A	76	31.913	36.599	1.820	1.00	19.22	N
ATOM	1199	CA	ASN	A	76	32.476	35.614	2.750	1.00	20.66	C
ATOM	1201	CB	ASN	A	76	33.749	34.998	2.176	1.00	22.59	C
ATOM	1204	CG	ASN	A	76	33.434	33.976	1.105	1.00	26.22	C
ATOM	1205	OD1	ASN	A	76	34.314	33.462	0.415	1.00	23.24	O
ATOM	1206	ND2	ASN	A	76	32.160	33.674	0.967	1.00	16.18	N
ATOM	1209	C	ASN	A	76	32.704	36.159	4.144	1.00	21.27	C
ATOM	1210	O	ASN	A	76	32.632	35.397	5.125	1.00	20.45	O
ATOM	1212	N	TYR	A	77	32.980	37.459	4.234	1.00	21.12	N
ATOM	1213	CA	TYR	A	77	33.169	38.124	5.527	1.00	23.30	C
ATOM	1215	CB	TYR	A	77	33.520	39.603	5.315	1.00	23.53	C
ATOM	1218	CG	TYR	A	77	33.663	40.387	6.599	1.00	24.75	C
ATOM	1219	CD1	TYR	A	77	34.546	39.969	7.617	1.00	27.48	C
ATOM	1221	CE1	TYR	A	77	34.651	40.686	8.804	1.00	25.25	C
ATOM	1223	CZ	TYR	A	77	33.892	41.808	8.979	1.00	26.22	C
ATOM	1224	OH	TYR	A	77	33.995	42.528	10.154	1.00	29.91	O
ATOM	1226	CE2	TYR	A	77	33.033	42.230	7.993	1.00	28.55	C
ATOM	1228	CD2	TYR	A	77	32.914	41.512	6.819	1.00	22.74	C
ATOM	1230	C	TYR	A	77	31.915	37.963	6.396	1.00	23.03	C
ATOM	1231	O	TYR	A	77	31.976	37.512	7.540	1.00	21.67	O
ATOM	1233	N	HIS	A	78	30.781	38.248	5.801	1.00	21.30	N
ATOM	1234	CA	HIS	A	78	29.502	38.154	6.489	1.00	22.51	C
ATOM	1236	CB	HIS	A	78	28.483	39.071	5.805	1.00	21.29	C
ATOM	1239	CG	HIS	A	78	28.779	40.529	5.986	1.00	26.20	C
ATOM	1240	ND1	HIS	A	78	29.132	41.357	4.941	1.00	31.37	N
ATOM	1242	CE1	HIS	A	78	29.380	42.567	5.409	1.00	22.50	C
ATOM	1244	NE2	HIS	A	78	29.215	42.552	6.717	1.00	31.10	N
ATOM	1246	CD2	HIS	A	78	28.846	41.289	7.105	1.00	24.17	C
ATOM	1248	C	HIS	A	78	28.995	36.712	6.595	1.00	20.89	C
ATOM	1249	O	HIS	A	78	28.564	36.305	7.662	1.00	19.05	O
ATOM	1251	N	ILE	A	79	29.050	35.948	5.499	1.00	17.14	N
ATOM	1252	CA	ILE	A	79	28.552	34.588	5.514	1.00	18.54	C
ATOM	1254	CB	ILE	A	79	28.457	33.972	4.095	1.00	23.68	C
ATOM	1256	CG1	ILE	A	79	27.444	34.742	3.260	1.00	25.53	C
ATOM	1259	CD1	ILE	A	79	27.525	34.351	1.759	1.00	27.52	C
ATOM	1263	CG2	ILE	A	79	28.108	32.461	4.150	1.00	19.01	C
ATOM	1267	C	ILE	A	79	29.382	33.711	6.442	1.00	18.39	C
ATOM	1268	O	ILE	A	79	28.821	32.882	7.158	1.00	17.72	O
ATOM	1270	N	SER	A	80	30.702	33.929	6.491	1.00	18.73	N
ATOM	1271	CA	SER	A	80	31.552	33.178	7.404	1.00	18.51	C
ATOM	1273	CB	SER	A	80	33.029	33.633	7.338	1.00	16.32	C
ATOM	1276	OG	SER	A	80	33.578	33.051	6.169	1.00	29.86	O
ATOM	1278	C	SER	A	80	31.089	33.298	8.847	1.00	22.19	C
ATOM	1279	O	SER	A	80	31.147	32.309	9.591	1.00	19.16	O
ATOM	1281	N	ALA	A	81	30.690	34.507	9.244	1.00	20.03	N
ATOM	1282	CA	ALA	A	81	30.220	34.737	10.611	1.00	22.58	C
ATOM	1284	CB	ALA	A	81	30.098	36.310	10.917	1.00	20.47	C
ATOM	1288	C	ALA	A	81	28.913	34.005	10.904	1.00	20.43	C
ATOM	1289	O	ALA	A	81	28.701	33.500	12.016	1.00	16.95	O
ATOM	1291	N	ILE	A	82	28.019	33.948	9.911	1.00	20.35	N
ATOM	1292	CA	ILE	A	82	26.783	33.214	10.065	1.00	19.72	C
ATOM	1294	CB	ILE	A	82	25.836	33.395	8.883	1.00	16.71	C
ATOM	1296	CG1	ILE	A	82	25.440	34.879	8.690	1.00	20.50	C

ATOM	1299	CD1	ILE	A	82	24.708	35.138	7.356	1.00	15.86	C
ATOM	1303	CG2	ILE	A	82	24.648	32.424	9.016	1.00	18.11	C
ATOM	1307	C	ILE	A	82	27.074	31.720	10.198	1.00	20.33	C
ATOM	1308	O	ILE	A	82	26.489	31.012	11.029	1.00	22.40	O
ATOM	1310	N	VAL	A	83	27.978	31.233	9.373	1.00	21.08	N
ATOM	1311	CA	VAL	A	83	28.343	29.827	9.403	1.00	19.63	C
ATOM	1313	CB	VAL	A	83	29.307	29.466	8.254	1.00	20.55	C
ATOM	1315	CG1	VAL	A	83	29.957	28.071	8.485	1.00	19.58	C
ATOM	1319	CG2	VAL	A	83	28.546	29.559	6.905	1.00	13.10	C
ATOM	1323	C	VAL	A	83	28.955	29.438	10.747	1.00	20.03	C
ATOM	1324	O	VAL	A	83	28.657	28.372	11.314	1.00	16.78	O
ATOM	1326	N	GLU	A	84	29.810	30.289	11.264	1.00	19.14	N
ATOM	1327	CA	GLU	A	84	30.480	29.981	12.519	1.00	22.93	C
ATOM	1329	CB	GLU	A	84	31.535	31.027	12.822	1.00	26.36	C
ATOM	1332	CG	GLU	A	84	32.503	30.623	13.837	1.00	34.52	C
ATOM	1335	CD	GLU	A	84	33.789	31.448	13.781	1.00	41.27	C
ATOM	1336	OE1	GLU	A	84	34.043	32.135	14.785	1.00	43.74	O
ATOM	1337	OE2	GLU	A	84	34.535	31.412	12.750	1.00	44.65	O
ATOM	1338	C	GLU	A	84	29.457	29.861	13.666	1.00	23.78	C
ATOM	1339	O	GLU	A	84	29.591	28.977	14.529	1.00	20.62	O
ATOM	1341	N	LYS	A	85	28.390	30.657	13.611	1.00	21.18	N
ATOM	1342	CA	LYS	A	85	27.340	30.618	14.647	1.00	24.19	C
ATOM	1344	CB	LYS	A	85	26.341	31.756	14.474	1.00	27.13	C
ATOM	1347	CG	LYS	A	85	26.844	33.104	14.829	1.00	32.63	C
ATOM	1350	CD	LYS	A	85	26.874	33.304	16.343	1.00	34.44	C
ATOM	1353	CE	LYS	A	85	27.624	34.595	16.705	1.00	35.38	C
ATOM	1356	NZ	LYS	A	85	28.239	34.578	18.068	1.00	36.05	N
ATOM	1360	C	LYS	A	85	26.569	29.320	14.578	1.00	19.56	C
ATOM	1361	O	LYS	A	85	26.286	28.673	15.597	1.00	24.12	O
ATOM	1363	N	VAL	A	86	26.172	28.951	13.367	1.00	18.80	N
ATOM	1364	CA	VAL	A	86	25.474	27.697	13.170	1.00	18.98	C
ATOM	1366	CB	VAL	A	86	25.085	27.475	11.682	1.00	18.41	C
ATOM	1368	CG1	VAL	A	86	24.622	26.031	11.452	1.00	18.86	C
ATOM	1372	CG2	VAL	A	86	24.002	28.512	11.240	1.00	14.20	C
ATOM	1376	C	VAL	A	86	26.326	26.545	13.707	1.00	20.45	C
ATOM	1377	O	VAL	A	86	25.838	25.709	14.480	1.00	22.31	O
ATOM	1379	N	LEU	A	87	27.596	26.509	13.315	1.00	19.02	N
ATOM	1380	CA	LEU	A	87	28.467	25.409	13.680	1.00	15.00	C
ATOM	1382	CB	LEU	A	87	29.790	25.465	12.915	1.00	18.70	C
ATOM	1385	CG	LEU	A	87	29.768	25.264	11.394	1.00	17.93	C
ATOM	1387	CD1	LEU	A	87	31.232	25.370	10.829	1.00	19.11	C
ATOM	1391	CD2	LEU	A	87	29.090	23.960	10.998	1.00	19.96	C
ATOM	1395	C	LEU	A	87	28.748	25.341	15.208	1.00	20.33	C
ATOM	1396	O	LEU	A	87	28.748	24.272	15.766	1.00	19.95	O
ATOM	1398	N	ILE	A	88	28.949	26.477	15.872	1.00	20.92	N
ATOM	1399	CA	ILE	A	88	29.167	26.491	17.330	1.00	24.40	C
ATOM	1401	CB	ILE	A	88	29.668	27.880	17.768	1.00	28.04	C
ATOM	1403	CG1	ILE	A	88	31.142	28.031	17.359	1.00	28.19	C
ATOM	1406	CD1	ILE	A	88	31.649	29.491	17.460	1.00	36.29	C
ATOM	1410	CG2	ILE	A	88	29.525	28.075	19.241	1.00	35.40	C
ATOM	1414	C	ILE	A	88	27.930	26.042	18.109	1.00	25.54	C
ATOM	1415	O	ILE	A	88	28.044	25.454	19.207	1.00	21.33	O
ATOM	1417	N	PHE	A	89	26.754	26.276	17.518	1.00	20.40	N
ATOM	1418	CA	PHE	A	89	25.479	25.866	18.101	1.00	20.74	C
ATOM	1420	CB	PHE	A	89	24.359	26.837	17.740	1.00	20.41	C
ATOM	1423	CG	PHE	A	89	24.277	28.024	18.658	1.00	22.04	C
ATOM	1424	CD1	PHE	A	89	25.162	29.073	18.541	1.00	17.82	C
ATOM	1426	CE1	PHE	A	89	25.084	30.173	19.406	1.00	27.77	C
ATOM	1428	CZ	PHE	A	89	24.086	30.211	20.371	1.00	22.20	C
ATOM	1430	CE2	PHE	A	89	23.191	29.179	20.485	1.00	23.39	C
ATOM	1432	CD2	PHE	A	89	23.274	28.090	19.635	1.00	23.55	C
ATOM	1434	C	PHE	A	89	25.088	24.481	17.692	1.00	22.12	C
ATOM	1435	O	PHE	A	89	23.984	24.046	18.004	1.00	22.71	O
ATOM	1437	N	GLY	A	90	25.996	23.787	17.005	1.00	19.22	N
ATOM	1438	CA	GLY	A	90	25.887	22.374	16.755	1.00	20.02	C
ATOM	1441	C	GLY	A	90	25.122	21.973	15.507	1.00	19.37	C
ATOM	1442	O	GLY	A	90	24.775	20.808	15.335	1.00	16.98	O

ATOM	1444	N	GLY	A	91	24.866	22.915	14.618	1.00	19.06	N
ATOM	1445	CA	GLY	A	91	24.172	22.600	13.378	1.00	19.08	C
ATOM	1448	C	GLY	A	91	25.102	22.189	12.225	1.00	19.30	C
ATOM	1449	O	GLY	A	91	26.308	22.321	12.304	1.00	22.95	O
ATOM	1451	N	ASP	A	92	24.497	21.688	11.159	1.00	20.09	N
ATOM	1452	CA	ASP	A	92	25.191	21.184	9.991	1.00	17.91	C
ATOM	1454	CB	ASP	A	92	24.821	19.710	9.820	1.00	18.91	C
ATOM	1457	CG	ASP	A	92	25.548	19.006	8.652	1.00	24.29	C
ATOM	1458	OD1	ASP	A	92	25.082	17.907	8.268	1.00	20.03	O
ATOM	1459	OD2	ASP	A	92	26.600	19.475	8.193	1.00	18.79	O
ATOM	1460	C	ASP	A	92	24.680	22.043	8.837	1.00	18.83	C
ATOM	1461	O	ASP	A	92	23.489	22.027	8.561	1.00	25.23	O
ATOM	1463	N	ILE	A	93	25.548	22.857	8.225	1.00	20.73	N
ATOM	1464	CA	ILE	A	93	25.152	23.611	7.015	1.00	17.01	C
ATOM	1466	CB	ILE	A	93	26.126	24.751	6.641	1.00	18.31	C
ATOM	1468	CG1	ILE	A	93	26.146	25.870	7.717	1.00	26.47	C
ATOM	1471	CD1	ILE	A	93	27.063	25.645	8.822	1.00	33.01	C
ATOM	1475	CG2	ILE	A	93	25.666	25.395	5.296	1.00	16.06	C
ATOM	1479	C	ILE	A	93	25.014	22.618	5.865	1.00	16.39	C
ATOM	1480	O	ILE	A	93	26.000	22.003	5.445	1.00	20.29	O
ATOM	1482	N	LEU	A	94	23.803	22.472	5.367	1.00	18.20	N
ATOM	1483	CA	LEU	A	94	23.474	21.503	4.333	1.00	15.96	C
ATOM	1485	CB	LEU	A	94	21.968	21.232	4.301	1.00	20.99	C
ATOM	1488	CG	LEU	A	94	21.405	20.361	5.407	1.00	22.61	C
ATOM	1490	CD1	LEU	A	94	20.004	19.892	5.051	1.00	17.51	C
ATOM	1494	CD2	LEU	A	94	22.338	19.133	5.668	1.00	18.30	C
ATOM	1498	C	LEU	A	94	23.896	21.969	2.962	1.00	22.87	C
ATOM	1499	O	LEU	A	94	24.478	21.204	2.220	1.00	20.61	O
ATOM	1501	N	LYS	A	95	23.572	23.218	2.637	1.00	19.52	N
ATOM	1502	CA	LYS	A	95	23.747	23.783	1.302	1.00	22.07	C
ATOM	1504	CB	LYS	A	95	22.541	23.427	0.424	1.00	21.98	C
ATOM	1507	CG	LYS	A	95	22.426	21.989	0.016	1.00	26.36	C
ATOM	1510	CD	LYS	A	95	21.488	21.806	-1.173	1.00	24.49	C
ATOM	1513	CE	LYS	A	95	21.465	20.353	-1.539	1.00	23.63	C
ATOM	1516	NZ	LYS	A	95	20.410	20.054	-2.506	1.00	20.40	N
ATOM	1520	C	LYS	A	95	23.776	25.297	1.359	1.00	19.74	C
ATOM	1521	O	LYS	A	95	23.155	25.880	2.227	1.00	21.78	O
ATOM	1523	N	PHE	A	96	24.505	25.913	0.428	1.00	20.70	N
ATOM	1524	CA	PHE	A	96	24.503	27.350	0.188	1.00	19.46	C
ATOM	1526	CB	PHE	A	96	25.909	27.931	0.082	1.00	20.04	C
ATOM	1529	CG	PHE	A	96	26.744	27.845	1.339	1.00	15.49	C
ATOM	1530	CD1	PHE	A	96	27.396	26.660	1.664	1.00	21.29	C
ATOM	1532	CE1	PHE	A	96	28.178	26.563	2.773	1.00	17.47	C
ATOM	1534	CZ	PHE	A	96	28.330	27.646	3.613	1.00	19.04	C
ATOM	1536	CE2	PHE	A	96	27.685	28.848	3.320	1.00	16.69	C
ATOM	1538	CD2	PHE	A	96	26.905	28.935	2.167	1.00	19.93	C
ATOM	1540	C	PHE	A	96	23.814	27.552	-1.178	1.00	21.15	C
ATOM	1541	O	PHE	A	96	24.022	26.771	-2.148	1.00	20.12	O
ATOM	1543	N	ALA	A	97	23.017	28.610	-1.265	1.00	21.22	N
ATOM	1544	CA	ALA	A	97	22.481	29.096	-2.544	1.00	24.44	C
ATOM	1546	CB	ALA	A	97	20.945	28.867	-2.651	1.00	24.09	C
ATOM	1550	C	ALA	A	97	22.806	30.570	-2.550	1.00	29.45	C
ATOM	1551	O	ALA	A	97	23.185	31.125	-1.514	1.00	24.60	O
ATOM	1553	N	GLY	A	98	22.627	31.208	-3.698	1.00	28.89	N
ATOM	1554	CA	GLY	A	98	22.950	32.609	-3.828	1.00	31.44	C
ATOM	1557	C	GLY	A	98	22.104	33.528	-2.969	1.00	31.59	C
ATOM	1558	O	GLY	A	98	22.573	34.630	-2.633	1.00	35.65	O
ATOM	1560	N	ASP	A	99	20.900	33.069	-2.592	1.00	29.13	N
ATOM	1561	CA	AASP	A	99	19.986	33.899	-1.783	0.50	31.94	C
ATOM	1562	CA	BASP	A	99	19.902	33.837	-1.816	0.50	30.97	C
ATOM	1565	CB	AASP	A	99	18.662	34.100	-2.528	0.50	32.61	C
ATOM	1566	CB	BASP	A	99	18.533	33.696	-2.483	0.50	28.80	C
ATOM	1571	CG	AASP	A	99	18.805	35.025	-3.740	0.50	34.19	C
ATOM	1572	CG	BASP	A	99	17.929	32.314	-2.293	0.50	31.75	C
ATOM	1573	OD1	AASP	A	99	19.848	35.710	-3.880	0.50	39.84	O
ATOM	1574	OD1	BASP	A	99	18.592	31.321	-2.667	0.50	31.37	O
ATOM	1575	OD2	AASP	A	99	17.864	35.070	-4.553	0.50	39.35	O

ATOM	1576	OD2	BASP	A	99	16.793	32.220	-1.769	0.50	31.81	O
ATOM	1577	C	ASP	A	99	19.724	33.383	-0.357	1.00	29.89	C
ATOM	1578	O	ASP	A	99	19.077	34.070	0.439	1.00	25.46	O
ATOM	1580	N	ALA	A	100	20.239	32.204	-0.025	1.00	26.53	N
ATOM	1581	CA	ALA	A	100	20.074	31.634	1.314	1.00	22.30	C
ATOM	1583	CB	ALA	A	100	18.683	31.073	1.454	1.00	28.64	C
ATOM	1587	C	ALA	A	100	21.058	30.519	1.647	1.00	25.64	C
ATOM	1588	O	ALA	A	100	21.708	29.939	0.771	1.00	29.00	O
ATOM	1590	N	LEU	A	101	21.081	30.142	2.919	1.00	19.75	N
ATOM	1591	CA	LEU	A	101	21.672	28.875	3.281	1.00	19.85	C
ATOM	1593	CB	LEU	A	101	23.086	29.093	3.850	1.00	24.83	C
ATOM	1596	CG	LEU	A	101	23.452	29.394	5.288	1.00	33.08	C
ATOM	1598	CD1	LEU	A	101	24.499	30.531	5.349	1.00	27.11	C
ATOM	1602	CD2	LEU	A	101	22.222	29.709	6.067	1.00	35.71	C
ATOM	1606	C	LEU	A	101	20.728	28.098	4.181	1.00	21.09	C
ATOM	1607	O	LEU	A	101	19.854	28.666	4.821	1.00	19.02	O
ATOM	1609	N	LEU	A	102	20.897	26.786	4.201	1.00	17.56	N
ATOM	1610	CA	LEU	A	102	19.986	25.903	4.886	1.00	17.19	C
ATOM	1612	CB	LEU	A	102	19.273	24.987	3.860	1.00	20.32	C
ATOM	1615	CG	LEU	A	102	18.285	23.966	4.435	1.00	19.40	C
ATOM	1617	CD1	LEU	A	102	17.015	24.696	4.919	1.00	24.47	C
ATOM	1621	CD2	LEU	A	102	17.949	22.838	3.446	1.00	18.95	C
ATOM	1625	C	LEU	A	102	20.806	25.078	5.836	1.00	18.46	C
ATOM	1626	O	LEU	A	102	21.784	24.459	5.427	1.00	18.11	O
ATOM	1628	N	ALA	A	103	20.413	25.069	7.105	1.00	18.13	N
ATOM	1629	CA	ALA	A	103	21.102	24.252	8.134	1.00	17.12	C
ATOM	1631	CB	ALA	A	103	21.817	25.161	9.157	1.00	16.85	C
ATOM	1635	C	ALA	A	103	20.147	23.284	8.821	1.00	20.84	C
ATOM	1636	O	ALA	A	103	18.931	23.532	8.887	1.00	16.67	O
ATOM	1638	N	LEU	A	104	20.718	22.178	9.294	1.00	20.92	N
ATOM	1639	CA	LEU	A	104	20.019	21.070	9.920	1.00	22.54	C
ATOM	1641	CB	LEU	A	104	20.179	19.818	9.060	1.00	21.63	C
ATOM	1644	CG	LEU	A	104	19.746	18.455	9.636	1.00	19.51	C
ATOM	1646	CD1	LEU	A	104	18.224	18.433	9.933	1.00	20.47	C
ATOM	1650	CD2	LEU	A	104	20.133	17.322	8.641	1.00	16.29	C
ATOM	1654	C	LEU	A	104	20.600	20.708	11.289	1.00	25.67	C
ATOM	1655	O	LEU	A	104	21.817	20.562	11.427	1.00	26.55	O
ATOM	1657	N	TRP	A	105	19.715	20.545	12.275	1.00	24.25	N
ATOM	1658	CA	TRP	A	105	20.005	19.851	13.526	1.00	20.63	C
ATOM	1660	CB	TRP	A	105	19.614	20.677	14.730	1.00	24.08	C
ATOM	1663	CG	TRP	A	105	20.531	21.848	15.085	1.00	22.23	C
ATOM	1664	CD1	TRP	A	105	21.362	21.922	16.144	1.00	20.78	C
ATOM	1666	NE1	TRP	A	105	22.004	23.133	16.174	1.00	24.00	N
ATOM	1668	CE2	TRP	A	105	21.581	23.885	15.111	1.00	19.78	C
ATOM	1669	CD2	TRP	A	105	20.643	23.107	14.398	1.00	24.91	C
ATOM	1670	CE3	TRP	A	105	20.056	23.642	13.238	1.00	23.44	C
ATOM	1672	CZ3	TRP	A	105	20.414	24.912	12.855	1.00	21.37	C
ATOM	1674	CH2	TRP	A	105	21.362	25.659	13.581	1.00	18.19	C
ATOM	1676	CZ2	TRP	A	105	21.949	25.152	14.719	1.00	17.75	C
ATOM	1678	C	TRP	A	105	19.202	18.535	13.534	1.00	24.05	C
ATOM	1679	O	TRP	A	105	17.981	18.521	13.758	1.00	20.93	O
ATOM	1681	N	ARG	A	106	19.896	17.439	13.235	1.00	23.77	N
ATOM	1682	CA	ARG	A	106	19.278	16.122	13.111	1.00	24.44	C
ATOM	1684	CB	ARG	A	106	20.115	15.252	12.183	1.00	23.53	C
ATOM	1687	CG	ARG	A	106	19.624	13.843	12.015	1.00	24.13	C
ATOM	1690	CD	ARG	A	106	20.541	13.023	11.179	1.00	25.09	C
ATOM	1693	NE	ARG	A	106	20.060	11.660	11.048	1.00	26.45	N
ATOM	1695	CZ	ARG	A	106	20.428	10.817	10.080	1.00	30.09	C
ATOM	1696	NH1	ARG	A	106	21.290	11.185	9.142	1.00	29.13	N
ATOM	1699	NH2	ARG	A	106	19.911	9.590	10.051	1.00	32.57	N
ATOM	1702	C	ARG	A	106	19.256	15.530	14.537	1.00	30.62	C
ATOM	1703	O	ARG	A	106	20.285	15.474	15.200	1.00	27.07	O
ATOM	1705	N	VAL	A	107	18.084	15.138	15.014	1.00	32.67	N
ATOM	1706	CA	VAL	A	107	17.965	14.592	16.356	1.00	36.09	C
ATOM	1708	CB	VAL	A	107	17.849	15.749	17.382	1.00	35.63	C
ATOM	1710	CG1	VAL	A	107	16.473	16.358	17.353	1.00	38.74	C
ATOM	1714	CG2	VAL	A	107	18.185	15.282	18.759	1.00	45.89	C

ATOM	1718	C	VAL	A	107	16.770	13.649	16.453	1.00 36.41	C
ATOM	1719	O	VAL	A	107	15.888	13.661	15.600	1.00 34.22	O
ATOM	1721	N	GLU	A	108	16.747	12.816	17.496	1.00 42.34	N
ATOM	1722	CA	GLU	A	108	15.610	11.913	17.725	1.00 40.22	C
ATOM	1724	CB	GLU	A	108	15.907	10.940	18.856	1.00 47.20	C
ATOM	1727	CG	GLU	A	108	17.173	10.089	18.674	1.00 52.18	C
ATOM	1730	CD	GLU	A	108	16.986	8.892	17.762	1.00 53.58	C
ATOM	1731	OE1	GLU	A	108	15.838	8.478	17.513	1.00 57.39	O
ATOM	1732	OE2	GLU	A	108	18.011	8.358	17.298	1.00 63.89	O
ATOM	1733	C	GLU	A	108	14.416	12.757	18.107	1.00 37.63	C
ATOM	1734	O	GLU	A	108	14.587	13.850	18.639	1.00 34.42	O
ATOM	1736	N	ARG	A	109	13.211	12.253	17.861	1.00 37.20	N
ATOM	1737	CA	ARG	A	109	11.972	13.027	18.101	1.00 39.38	C
ATOM	1739	CB	ARG	A	109	10.732	12.193	17.765	1.00 42.73	C
ATOM	1742	CG	ARG	A	109	10.528	12.031	16.288	1.00 51.61	C
ATOM	1745	CD	ARG	A	109	9.331	11.155	15.975	1.00 57.99	C
ATOM	1748	NE	ARG	A	109	9.468	10.525	14.661	1.00 62.35	N
ATOM	1750	CZ	ARG	A	109	9.915	9.288	14.440	1.00 65.38	C
ATOM	1751	NH1	ARG	A	109	10.286	8.488	15.443	1.00 65.34	N
ATOM	1754	NH2	ARG	A	109	9.987	8.846	13.188	1.00 66.12	N
ATOM	1757	C	ARG	A	109	11.829	13.570	19.507	1.00 34.77	C
ATOM	1758	O	ARG	A	109	11.365	14.686	19.683	1.00 36.15	O
ATOM	1760	N	LYS	A	110	12.226	12.786	20.507	1.00 36.79	N
ATOM	1761	CA	LYS	A	110	12.140	13.199	21.921	1.00 34.81	C
ATOM	1763	CB	LYS	A	110	12.538	12.048	22.845	1.00 39.09	C
ATOM	1766	CG	LYS	A	110	11.505	10.928	22.919	1.00 48.84	C
ATOM	1769	CD	LYS	A	110	12.138	9.676	23.534	1.00 54.99	C
ATOM	1772	CE	LYS	A	110	11.102	8.691	24.055	1.00 59.08	C
ATOM	1775	NZ	LYS	A	110	11.778	7.647	24.883	1.00 62.01	N
ATOM	1779	C	LYS	A	110	13.012	14.385	22.257	1.00 34.00	C
ATOM	1780	O	LYS	A	110	12.798	15.065	23.270	1.00 29.14	O
ATOM	1782	N	GLN	A	111	14.016	14.658	21.431	1.00 31.97	N
ATOM	1783	CA	GLN	A	111	14.875	15.797	21.722	1.00 29.70	C
ATOM	1785	CB	GLN	A	111	16.352	15.366	21.682	1.00 37.03	C
ATOM	1788	CG	GLN	A	111	16.756	14.557	22.948	1.00 43.85	C
ATOM	1791	CD	GLN	A	111	16.479	15.301	24.288	1.00 49.03	C
ATOM	1792	OE1	GLN	A	111	16.903	16.449	24.488	1.00 59.65	O
ATOM	1793	NE2	GLN	A	111	15.778	14.633	25.205	1.00 52.74	N
ATOM	1796	C	GLN	A	111	14.590	17.021	20.855	1.00 27.00	C
ATOM	1797	O	GLN	A	111	15.272	18.027	20.974	1.00 29.16	O
ATOM	1799	N	LEU	A	112	13.587	16.941	19.985	1.00 27.94	N
ATOM	1800	CA	LEU	A	112	13.232	18.082	19.124	1.00 27.80	C
ATOM	1802	CB	LEU	A	112	12.018	17.741	18.258	1.00 29.13	C
ATOM	1805	CG	LEU	A	112	12.286	16.882	17.032	1.00 29.27	C
ATOM	1807	CD1	LEU	A	112	10.982	16.562	16.319	1.00 30.74	C
ATOM	1811	CD2	LEU	A	112	13.244	17.615	16.087	1.00 31.13	C
ATOM	1815	C	LEU	A	112	12.902	19.313	19.932	1.00 29.65	C
ATOM	1816	O	LEU	A	112	13.306	20.431	19.598	1.00 29.92	O
ATOM	1818	N	LYS	A	113	12.133	19.116	21.003	1.00 32.64	N
ATOM	1819	CA	LYS	A	113	11.665	20.225	21.797	1.00 31.59	C
ATOM	1821	CB	LYS	A	113	10.822	19.702	22.971	1.00 32.53	C
ATOM	1824	CG	LYS	A	113	10.130	20.783	23.804	1.00 39.88	C
ATOM	1827	CD	LYS	A	113	9.467	20.164	25.053	1.00 45.18	C
ATOM	1830	CE	LYS	A	113	8.899	21.225	25.967	1.00 51.75	C
ATOM	1833	NZ	LYS	A	113	8.292	20.685	27.230	1.00 54.57	N
ATOM	1837	C	LYS	A	113	12.854	21.067	22.266	1.00 27.95	C
ATOM	1838	O	LYS	A	113	12.902	22.261	22.051	1.00 31.14	O
ATOM	1840	N	ASN	A	114	13.817	20.446	22.910	1.00 25.27	N
ATOM	1841	CA	ASN	A	114	14.952	21.188	23.449	1.00 23.06	C
ATOM	1843	CB	ASN	A	114	15.712	20.319	24.448	1.00 27.98	C
ATOM	1846	CG	ASN	A	114	14.959	20.184	25.749	1.00 29.77	C
ATOM	1847	OD1	ASN	A	114	14.082	21.016	26.058	1.00 35.66	O
ATOM	1848	ND2	ASN	A	114	15.287	19.163	26.519	1.00 30.72	N
ATOM	1851	C	ASN	A	114	15.898	21.741	22.397	1.00 22.77	C
ATOM	1852	O	ASN	A	114	16.475	22.790	22.593	1.00 23.80	O
ATOM	1854	N	ILE	A	115	16.003	21.057	21.270	1.00 24.44	N
ATOM	1855	CA	ILE	A	115	16.865	21.504	20.184	1.00 24.10	C

ATOM	1857	CB	ILE	A	115	17.185	20.342	19.191	1.00	27.12	C
ATOM	1859	CG1	ILE	A	115	18.177	19.407	19.857	1.00	31.27	C
ATOM	1862	CD1	ILE	A	115	19.595	20.087	20.093	1.00	33.58	C
ATOM	1866	CG2	ILE	A	115	17.771	20.880	17.871	1.00	32.62	C
ATOM	1870	C	ILE	A	115	16.291	22.691	19.465	1.00	24.32	C
ATOM	1871	O	ILE	A	115	17.042	23.551	19.029	1.00	22.83	O
ATOM	1873	N	ILE	A	116	14.960	22.775	19.366	1.00	21.76	N
ATOM	1874	CA	ILE	A	116	14.331	23.982	18.848	1.00	19.09	C
ATOM	1876	CB	ILE	A	116	12.775	23.838	18.793	1.00	20.83	C
ATOM	1878	CG1	ILE	A	116	12.368	22.852	17.693	1.00	22.58	C
ATOM	1881	CD1	ILE	A	116	10.984	22.190	17.874	1.00	20.36	C
ATOM	1885	CG2	ILE	A	116	12.138	25.201	18.580	1.00	13.18	C
ATOM	1889	C	ILE	A	116	14.734	25.215	19.658	1.00	18.07	C
ATOM	1890	O	ILE	A	116	15.042	26.305	19.118	1.00	24.46	O
ATOM	1892	N	THR	A	117	14.807	25.071	20.962	1.00	26.08	N
ATOM	1893	CA	THR	A	117	15.260	26.183	21.798	1.00	22.11	C
ATOM	1895	CB	THR	A	117	15.243	25.814	23.307	1.00	26.96	C
ATOM	1897	OG1	THR	A	117	13.905	25.549	23.727	1.00	30.59	O
ATOM	1899	CG2	THR	A	117	15.833	26.927	24.126	1.00	22.79	C
ATOM	1903	C	THR	A	117	16.697	26.609	21.479	1.00	25.73	C
ATOM	1904	O	THR	A	117	17.018	27.794	21.436	1.00	21.98	O
ATOM	1906	N	VAL	A	118	17.576	25.637	21.285	1.00	25.21	N
ATOM	1907	CA	VAL	A	118	18.956	25.933	20.895	1.00	23.01	C
ATOM	1909	CB	VAL	A	118	19.776	24.635	20.756	1.00	25.17	C
ATOM	1911	CG1	VAL	A	118	21.125	24.893	19.987	1.00	24.59	C
ATOM	1915	CG2	VAL	A	118	20.005	24.011	22.140	1.00	24.59	C
ATOM	1919	C	VAL	A	118	18.978	26.689	19.547	1.00	21.73	C
ATOM	1920	O	VAL	A	118	19.728	27.638	19.370	1.00	20.92	O
ATOM	1922	N	VAL	A	119	18.156	26.242	18.605	1.00	21.68	N
ATOM	1923	CA	VAL	A	119	18.146	26.819	17.270	1.00	19.74	C
ATOM	1925	CB	VAL	A	119	17.387	25.914	16.284	1.00	18.96	C
ATOM	1927	CG1	VAL	A	119	17.287	26.564	14.891	1.00	21.53	C
ATOM	1931	CG2	VAL	A	119	18.112	24.539	16.184	1.00	20.99	C
ATOM	1935	C	VAL	A	119	17.596	28.255	17.298	1.00	25.94	C
ATOM	1936	O	VAL	A	119	18.060	29.132	16.566	1.00	24.10	O
ATOM	1938	N	ILE	A	120	16.613	28.507	18.159	1.00	25.65	N
ATOM	1939	CA	ILE	A	120	16.090	29.873	18.331	1.00	22.31	C
ATOM	1941	CB	ILE	A	120	14.809	29.886	19.231	1.00	22.62	C
ATOM	1943	CG1	ILE	A	120	13.644	29.248	18.473	1.00	26.53	C
ATOM	1946	CD1	ILE	A	120	12.397	28.807	19.357	1.00	22.28	C
ATOM	1950	CG2	ILE	A	120	14.510	31.335	19.749	1.00	23.75	C
ATOM	1954	C	ILE	A	120	17.162	30.791	18.897	1.00	18.35	C
ATOM	1955	O	ILE	A	120	17.381	31.880	18.390	1.00	22.53	O
ATOM	1957	N	LYS	A	121	17.877	30.346	19.917	1.00	22.63	N
ATOM	1958	CA	LYS	A	121	18.993	31.142	20.450	1.00	25.25	C
ATOM	1960	CB	LYS	A	121	19.638	30.467	21.663	1.00	27.69	C
ATOM	1963	CG	LYS	A	121	20.747	31.291	22.352	1.00	32.47	C
ATOM	1966	CD	LYS	A	121	20.163	32.380	23.210	1.00	38.92	C
ATOM	1969	CE	LYS	A	121	21.209	33.339	23.790	1.00	44.58	C
ATOM	1972	NZ	LYS	A	121	22.177	32.656	24.664	1.00	50.73	N
ATOM	1976	C	LYS	A	121	20.054	31.381	19.371	1.00	25.36	C
ATOM	1977	O	LYS	A	121	20.582	32.474	19.268	1.00	21.71	O
ATOM	1979	N	CYS	A	122	20.395	30.338	18.618	1.00	20.76	N
ATOM	1980	CA	CYS	A	122	21.321	30.491	17.495	1.00	17.07	C
ATOM	1982	CB	CYS	A	122	21.479	29.163	16.736	1.00	16.71	C
ATOM	1985	SG	CYS	A	122	22.704	29.277	15.408	1.00	22.56	S
ATOM	1987	C	CYS	A	122	20.859	31.582	16.532	1.00	19.61	C
ATOM	1988	O	CYS	A	122	21.651	32.491	16.165	1.00	21.62	O
ATOM	1990	N	SER	A	123	19.589	31.504	16.133	1.00	21.55	N
ATOM	1991	CA	SER	A	123	18.989	32.492	15.236	1.00	20.37	C
ATOM	1993	CB	SER	A	123	17.511	32.197	15.017	1.00	26.12	C
ATOM	1996	OG	SER	A	123	17.322	30.892	14.548	1.00	20.28	O
ATOM	1998	C	SER	A	123	19.087	33.910	15.762	1.00	22.26	C
ATOM	1999	O	SER	A	123	19.452	34.852	15.047	1.00	23.81	O
ATOM	2001	N	LEU	A	124	18.765	34.100	17.023	1.00	26.09	N
ATOM	2002	CA	LEU	A	124	18.846	35.442	17.600	1.00	24.68	C
ATOM	2004	CB	LEU	A	124	18.234	35.450	19.025	1.00	29.14	C

ATOM	2007	CG	LEU	A	124	16.726	35.218	19.077	1.00	26.96	C
ATOM	2009	CD1	LEU	A	124	16.261	35.010	20.525	1.00	30.46	C
ATOM	2013	CD2	LEU	A	124	15.989	36.386	18.442	1.00	28.70	C
ATOM	2017	C	LEU	A	124	20.289	35.949	17.633	1.00	26.87	C
ATOM	2018	O	LEU	A	124	20.534	37.133	17.455	1.00	24.48	O
ATOM	2020	N	GLU	A	125	21.263	35.062	17.881	1.00	30.38	N
ATOM	2021	CA	GLU	A	125	22.667	35.470	17.866	1.00	26.90	C
ATOM	2023	CB	GLU	A	125	23.560	34.399	18.498	1.00	31.38	C
ATOM	2026	CG	GLU	A	125	23.345	34.292	20.026	1.00	36.66	C
ATOM	2029	CD	GLU	A	125	24.570	33.834	20.812	1.00	43.74	C
ATOM	2030	OE1	GLU	A	125	25.677	33.713	20.237	1.00	49.40	O
ATOM	2031	OE2	GLU	A	125	24.420	33.592	22.042	1.00	51.93	O
ATOM	2032	C	GLU	A	125	23.134	35.856	16.451	1.00	23.00	C
ATOM	2033	O	GLU	A	125	23.970	36.746	16.283	1.00	21.37	O
ATOM	2035	N	ILE	A	126	22.586	35.210	15.437	1.00	25.06	N
ATOM	2036	CA	ILE	A	126	22.889	35.563	14.019	1.00	22.93	C
ATOM	2038	CB	ILE	A	126	22.273	34.521	13.054	1.00	19.78	C
ATOM	2040	CG1	ILE	A	126	23.018	33.179	13.195	1.00	16.18	C
ATOM	2043	CD1	ILE	A	126	22.306	32.017	12.546	1.00	19.16	C
ATOM	2047	CG2	ILE	A	126	22.268	35.041	11.606	1.00	15.76	C
ATOM	2051	C	ILE	A	126	22.378	36.965	13.698	1.00	25.36	C
ATOM	2052	O	ILE	A	126	23.109	37.816	13.178	1.00	23.38	O
ATOM	2054	N	HIS	A	127	21.114	37.222	14.027	1.00	25.95	N
ATOM	2055	CA	HIS	A	127	20.581	38.583	13.900	1.00	25.38	C
ATOM	2057	CB	HIS	A	127	19.144	38.652	14.407	1.00	23.75	C
ATOM	2060	CG	HIS	A	127	18.152	38.002	13.500	1.00	18.61	C
ATOM	2061	ND1	HIS	A	127	18.065	38.303	12.158	1.00	25.89	N
ATOM	2063	CE1	HIS	A	127	17.096	37.591	11.608	1.00	21.42	C
ATOM	2065	NE2	HIS	A	127	16.569	36.819	12.538	1.00	22.55	N
ATOM	2067	CD2	HIS	A	127	17.222	37.044	13.729	1.00	22.32	C
ATOM	2069	C	HIS	A	127	21.486	39.574	14.649	1.00	26.85	C
ATOM	2070	O	HIS	A	127	21.722	40.679	14.191	1.00	31.52	O
ATOM	2072	N	GLY	A	128	21.993	39.163	15.800	1.00	26.10	N
ATOM	2073	CA	GLY	A	128	22.924	39.960	16.586	1.00	29.59	C
ATOM	2076	C	GLY	A	128	24.215	40.379	15.887	1.00	32.03	C
ATOM	2077	O	GLY	A	128	24.830	41.382	16.254	1.00	26.96	O
ATOM	2079	N	LEU	A	129	24.632	39.627	14.874	1.00	31.19	N
ATOM	2080	CA	LEU	A	129	25.795	40.014	14.092	1.00	30.41	C
ATOM	2082	CB	LEU	A	129	26.197	38.876	13.152	1.00	29.68	C
ATOM	2085	CG	LEU	A	129	26.570	37.543	13.810	1.00	28.09	C
ATOM	2087	CD1	LEU	A	129	26.538	36.457	12.796	1.00	24.23	C
ATOM	2091	CD2	LEU	A	129	27.933	37.650	14.473	1.00	33.37	C
ATOM	2095	C	LEU	A	129	25.527	41.285	13.273	1.00	30.02	C
ATOM	2096	O	LEU	A	129	26.449	42.007	12.953	1.00	28.42	O
ATOM	2098	N	PHE	A	130	24.270	41.534	12.921	1.00	28.68	N
ATOM	2099	CA	PHE	A	130	23.924	42.579	11.944	1.00	32.13	C
ATOM	2101	CB	PHE	A	130	23.090	41.971	10.811	1.00	28.02	C
ATOM	2104	CG	PHE	A	130	23.788	40.789	10.137	1.00	29.77	C
ATOM	2105	CD1	PHE	A	130	23.341	39.501	10.327	1.00	27.15	C
ATOM	2107	CE1	PHE	A	130	24.003	38.416	9.744	1.00	30.87	C
ATOM	2109	CZ	PHE	A	130	25.144	38.627	8.978	1.00	28.83	C
ATOM	2111	CE2	PHE	A	130	25.607	39.926	8.793	1.00	28.91	C
ATOM	2113	CD2	PHE	A	130	24.932	40.990	9.379	1.00	27.42	C
ATOM	2115	C	PHE	A	130	23.230	43.793	12.559	1.00	40.13	C
ATOM	2116	O	PHE	A	130	22.677	44.608	11.837	1.00	35.88	O
ATOM	2118	N	GLU	A	131	23.321	43.935	13.882	1.00	49.86	N
ATOM	2119	CA	GLU	A	131	22.600	44.990	14.627	1.00	59.44	C
ATOM	2121	CB	GLU	A	131	22.785	44.807	16.136	1.00	59.66	C
ATOM	2124	CG	GLU	A	131	21.753	43.869	16.734	1.00	61.31	C
ATOM	2127	CD	GLU	A	131	22.061	43.453	18.179	1.00	64.55	C
ATOM	2128	OE1	GLU	A	131	23.136	43.813	18.724	1.00	61.78	O
ATOM	2129	OE2	GLU	A	131	21.210	42.743	18.762	1.00	64.61	O
ATOM	2130	C	GLU	A	131	22.927	46.433	14.240	1.00	65.33	C
ATOM	2131	O	GLU	A	131	22.105	47.320	14.455	1.00	68.46	O
ATOM	2133	N	THR	A	132	24.107	46.671	13.676	1.00	74.54	N
ATOM	2134	CA	THR	A	132	24.445	47.987	13.116	1.00	81.51	C
ATOM	2136	CB	THR	A	132	25.089	48.912	14.176	1.00	82.36	C

ATOM	2138	OG1	THR	A	132	26.147	48.213	14.845	1.00 84.50	O
ATOM	2140	CG2	THR	A	132	24.061	49.388	15.202	1.00 84.74	C
ATOM	2144	C	THR	A	132	25.419	47.846	11.952	1.00 86.69	C
ATOM	2145	O	THR	A	132	26.624	48.056	12.136	1.00 87.61	O
ATOM	2147	N	GLN	A	133	24.907	47.494	10.766	1.00 92.46	N
ATOM	2148	CA	GLN	A	133	25.772	47.171	9.610	1.00 96.60	C
ATOM	2150	CB	GLN	A	133	26.169	45.684	9.639	1.00 96.48	C
ATOM	2153	CG	GLN	A	133	27.045	45.320	10.841	1.00 97.49	C
ATOM	2156	CD	GLN	A	133	27.889	44.091	10.622	1.00 98.29	C
ATOM	2157	OE1	GLN	A	133	29.112	44.183	10.511	1.00101.05	O
ATOM	2158	NE2	GLN	A	133	27.250	42.932	10.562	1.00100.04	N
ATOM	2161	C	GLN	A	133	25.200	47.535	8.225	1.00 99.43	C
ATOM	2162	O	GLN	A	133	24.077	47.159	7.886	1.00100.55	O
ATOM	2164	N	GLU	A	134	25.996	48.270	7.444	1.00102.58	N
ATOM	2165	CA	GLU	A	134	25.701	48.577	6.035	1.00105.20	C
ATOM	2167	CB	GLU	A	134	24.615	49.663	5.918	1.00106.18	C
ATOM	2170	CG	GLU	A	134	25.061	51.127	6.164	1.00107.78	C
ATOM	2173	CD	GLU	A	134	25.352	51.467	7.627	1.00108.59	C
ATOM	2174	OE1	GLU	A	134	26.106	52.438	7.864	1.00107.11	O
ATOM	2175	OE2	GLU	A	134	24.829	50.784	8.536	1.00109.90	O
ATOM	2176	C	GLU	A	134	26.999	49.000	5.319	1.00106.63	C
ATOM	2177	O	GLU	A	134	28.080	48.904	5.909	1.00107.14	O
ATOM	2179	N	TRP	A	135	26.899	49.430	4.056	1.00108.07	N
ATOM	2180	CA	TRP	A	135	28.025	50.086	3.352	1.00109.01	C
ATOM	2182	CB	TRP	A	135	28.648	49.178	2.263	1.00109.25	C
ATOM	2185	CG	TRP	A	135	29.256	47.895	2.778	1.00109.06	C
ATOM	2186	CD1	TRP	A	135	28.935	46.623	2.390	1.00108.60	C
ATOM	2188	NE1	TRP	A	135	29.692	45.710	3.084	1.00108.46	N
ATOM	2190	CE2	TRP	A	135	30.528	46.381	3.940	1.00109.10	C
ATOM	2191	CD2	TRP	A	135	30.285	47.763	3.772	1.00109.01	C
ATOM	2192	CE3	TRP	A	135	31.021	48.679	4.541	1.00108.62	C
ATOM	2194	CZ3	TRP	A	135	31.969	48.190	5.442	1.00108.76	C
ATOM	2196	CH2	TRP	A	135	32.191	46.807	5.583	1.00107.91	C
ATOM	2198	CZ2	TRP	A	135	31.479	45.888	4.851	1.00108.90	C
ATOM	2200	C	TRP	A	135	27.550	51.434	2.777	1.00109.53	C
ATOM	2201	O	TRP	A	135	26.888	52.198	3.485	1.00109.84	O
ATOM	2203	N	GLU	A	136	27.907	51.733	1.524	1.00110.13	N
ATOM	2204	CA	GLU	A	136	27.424	52.924	0.798	1.00110.35	C
ATOM	2206	CB	GLU	A	136	27.485	52.673	-0.719	1.00110.14	C
ATOM	2209	CG	GLU	A	136	26.997	51.278	-1.146	1.00109.52	C
ATOM	2212	CD	GLU	A	136	26.294	51.263	-2.492	1.00109.35	C
ATOM	2213	OE1	GLU	A	136	26.632	52.090	-3.370	1.00109.41	O
ATOM	2214	OE2	GLU	A	136	25.396	50.412	-2.669	1.00108.38	O
ATOM	2215	C	GLU	A	136	25.999	53.371	1.177	1.00110.16	C
ATOM	2216	O	GLU	A	136	25.014	52.765	0.738	1.00110.41	O
ATOM	2218	N	GLU	A	137	25.905	54.431	1.986	1.00108.61	N
ATOM	2219	CA	GLU	A	137	24.617	55.014	2.411	1.00107.48	C
ATOM	2221	CB	GLU	A	137	23.967	55.800	1.249	1.00107.36	C
ATOM	2224	CG	GLU	A	137	22.598	56.436	1.561	1.00107.05	C
ATOM	2227	CD	GLU	A	137	22.657	57.470	2.681	1.00107.39	C
ATOM	2228	OE1	GLU	A	137	23.504	58.390	2.609	1.00107.34	O
ATOM	2229	OE2	GLU	A	137	21.849	57.370	3.630	1.00104.79	O
ATOM	2230	C	GLU	A	137	23.655	53.963	2.997	1.00105.57	C
ATOM	2231	O	GLU	A	137	23.611	53.759	4.216	1.00106.22	O
ATOM	2233	N	GLY	A	138	22.897	53.301	2.123	1.00102.32	N
ATOM	2234	CA	GLY	A	138	21.961	52.266	2.529	1.00 98.87	C
ATOM	2237	C	GLY	A	138	22.560	50.901	2.261	1.00 95.76	C
ATOM	2238	O	GLY	A	138	23.631	50.581	2.783	1.00 95.89	O
ATOM	2240	N	LEU	A	139	21.885	50.124	1.409	1.00 90.83	N
ATOM	2241	CA	LEU	A	139	22.138	48.683	1.228	1.00 85.93	C
ATOM	2243	CB	LEU	A	139	23.489	48.415	0.548	1.00 86.09	C
ATOM	2246	CG	LEU	A	139	23.721	47.005	-0.017	1.00 85.22	C
ATOM	2248	CD1	LEU	A	139	24.317	46.059	1.025	1.00 84.78	C
ATOM	2252	CD2	LEU	A	139	22.434	46.432	-0.603	1.00 86.25	C
ATOM	2256	C	LEU	A	139	22.027	47.955	2.573	1.00 80.26	C
ATOM	2257	O	LEU	A	139	22.731	48.288	3.542	1.00 81.42	O
ATOM	2259	N	ASP	A	140	21.155	46.952	2.633	1.00 70.34	N

ATOM	2260	CA	ASP	A	140	20.663	46.499	3.933	1.00	62.42	C
ATOM	2262	CB	ASP	A	140	19.371	45.684	3.771	1.00	58.31	C
ATOM	2265	CG	ASP	A	140	18.459	45.817	4.971	1.00	53.88	C
ATOM	2266	OD1	ASP	A	140	17.228	45.861	4.801	1.00	47.19	O
ATOM	2267	OD2	ASP	A	140	18.987	45.889	6.096	1.00	46.62	O
ATOM	2268	C	ASP	A	140	21.727	45.795	4.822	1.00	58.32	C
ATOM	2269	O	ASP	A	140	22.240	46.411	5.768	1.00	63.26	O
ATOM	2271	N	ILE	A	141	22.076	44.551	4.500	1.00	47.36	N
ATOM	2272	CA	ILE	A	141	22.997	43.705	5.311	1.00	41.17	C
ATOM	2274	CB	ILE	A	141	24.390	44.295	5.571	1.00	41.67	C
ATOM	2276	CG1	ILE	A	141	24.951	44.993	4.332	1.00	42.35	C
ATOM	2279	CD1	ILE	A	141	26.437	45.393	4.522	1.00	44.58	C
ATOM	2283	CG2	ILE	A	141	25.345	43.174	5.976	1.00	39.69	C
ATOM	2287	C	ILE	A	141	22.368	43.272	6.640	1.00	37.94	C
ATOM	2288	O	ILE	A	141	22.898	43.510	7.733	1.00	28.71	O
ATOM	2290	N	ARG	A	142	21.229	42.615	6.492	1.00	27.46	N
ATOM	2291	CA	ARG	A	142	20.521	41.953	7.571	1.00	32.24	C
ATOM	2293	CB	ARG	A	142	19.416	42.848	8.120	1.00	32.14	C
ATOM	2296	CG	ARG	A	142	19.957	44.084	8.807	1.00	36.12	C
ATOM	2299	CD	ARG	A	142	18.851	44.858	9.481	1.00	38.91	C
ATOM	2302	NE	ARG	A	142	17.981	45.470	8.483	1.00	42.67	N
ATOM	2304	CZ	ARG	A	142	16.903	46.195	8.770	1.00	49.42	C
ATOM	2305	NH1	ARG	A	142	16.529	46.386	10.035	1.00	50.01	N
ATOM	2308	NH2	ARG	A	142	16.174	46.697	7.776	1.00	49.20	N
ATOM	2311	C	ARG	A	142	19.931	40.697	6.974	1.00	27.68	C
ATOM	2312	O	ARG	A	142	19.949	40.526	5.737	1.00	29.61	O
ATOM	2314	N	VAL	A	143	19.417	39.817	7.832	1.00	26.60	N
ATOM	2315	CA	VAL	A	143	18.892	38.550	7.363	1.00	23.65	C
ATOM	2317	CB	VAL	A	143	19.836	37.342	7.747	1.00	28.89	C
ATOM	2319	CG1	VAL	A	143	21.230	37.519	7.051	1.00	26.58	C
ATOM	2323	CG2	VAL	A	143	19.994	37.153	9.278	1.00	19.67	C
ATOM	2327	C	VAL	A	143	17.485	38.336	7.877	1.00	26.99	C
ATOM	2328	O	VAL	A	143	17.013	39.054	8.760	1.00	30.65	O
ATOM	2330	N	LYS	A	144	16.818	37.372	7.280	1.00	23.60	N
ATOM	2331	CA	LYS	A	144	15.540	36.840	7.756	1.00	28.39	C
ATOM	2333	CB	LYS	A	144	14.458	36.982	6.684	1.00	28.67	C
ATOM	2336	CG	LYS	A	144	14.283	38.398	6.159	1.00	31.87	C
ATOM	2339	CD	LYS	A	144	13.354	38.471	4.915	1.00	35.92	C
ATOM	2342	CE	LYS	A	144	13.304	39.915	4.388	1.00	37.15	C
ATOM	2345	NZ	LYS	A	144	12.705	40.047	3.020	1.00	41.46	N
ATOM	2349	C	LYS	A	144	15.748	35.352	8.010	1.00	23.01	C
ATOM	2350	O	LYS	A	144	16.401	34.656	7.192	1.00	24.88	O
ATOM	2352	N	ILE	A	145	15.185	34.851	9.104	1.00	24.54	N
ATOM	2353	CA	ILE	A	145	15.341	33.431	9.452	1.00	21.99	C
ATOM	2355	CB	ILE	A	145	16.190	33.250	10.734	1.00	24.10	C
ATOM	2357	CG1	ILE	A	145	17.616	33.788	10.475	1.00	23.73	C
ATOM	2360	CD1	ILE	A	145	18.606	33.849	11.695	1.00	15.76	C
ATOM	2364	CG2	ILE	A	145	16.161	31.776	11.156	1.00	21.70	C
ATOM	2368	C	ILE	A	145	13.980	32.724	9.559	1.00	24.67	C
ATOM	2369	O	ILE	A	145	13.063	33.231	10.213	1.00	29.08	O
ATOM	2371	N	GLY	A	146	13.843	31.605	8.845	1.00	24.86	N
ATOM	2372	CA	GLY	A	146	12.702	30.711	8.953	1.00	25.48	C
ATOM	2375	C	GLY	A	146	13.199	29.455	9.636	1.00	30.16	C
ATOM	2376	O	GLY	A	146	14.262	28.926	9.250	1.00	23.48	O
ATOM	2378	N	LEU	A	147	12.441	28.976	10.639	1.00	25.32	N
ATOM	2379	CA	LEU	A	147	12.666	27.668	11.271	1.00	25.89	C
ATOM	2381	CB	LEU	A	147	12.953	27.833	12.782	1.00	23.94	C
ATOM	2384	CG	LEU	A	147	14.072	28.772	13.202	1.00	26.77	C
ATOM	2386	CD1	LEU	A	147	14.186	28.815	14.767	1.00	20.70	C
ATOM	2390	CD2	LEU	A	147	15.423	28.366	12.529	1.00	23.42	C
ATOM	2394	C	LEU	A	147	11.519	26.664	11.055	1.00	25.31	C
ATOM	2395	O	LEU	A	147	10.329	27.011	10.959	1.00	28.12	O
ATOM	2397	N	ALA	A	148	11.886	25.399	10.988	1.00	24.91	N
ATOM	2398	CA	ALA	A	148	10.918	24.301	10.818	1.00	23.99	C
ATOM	2400	CB	ALA	A	148	10.720	23.978	9.371	1.00	25.54	C
ATOM	2404	C	ALA	A	148	11.433	23.093	11.544	1.00	28.16	C
ATOM	2405	O	ALA	A	148	12.629	23.018	11.840	1.00	27.02	O

ATOM	2407	N	ALA A 149	10.542	22.152	11.850	1.00	22.76		N
ATOM	2408	CA	ALA A 149	10.932	20.950	12.595	1.00	22.37		C
ATOM	2410	CB	ALA A 149	10.954	21.215	14.101	1.00	19.69		C
ATOM	2414	C	ALA A 149	9.983	19.833	12.250	1.00	25.83		C
ATOM	2415	O	ALA A 149	8.798	20.087	11.971	1.00	30.15		O
ATOM	2417	N	GLY A 150	10.503	18.604	12.211	1.00	28.37		N
ATOM	2418	CA	GLY A 150	9.662	17.430	11.990	1.00	32.36		C
ATOM	2421	C	GLY A 150	10.353	16.378	11.155	1.00	29.82		C
ATOM	2422	O	GLY A 150	11.567	16.276	11.174	1.00	27.44		O
ATOM	2424	N	HIS A 151	9.572	15.615	10.399	1.00	26.96		N
ATOM	2425	CA	HIS A 151	10.118	14.540	9.597	1.00	28.98		C
ATOM	2427	CB	HIS A 151	9.018	13.593	9.107	1.00	34.02		C
ATOM	2430	CG	HIS A 151	8.175	13.009	10.197	1.00	40.00		C
ATOM	2431	ND1	HIS A 151	8.707	12.454	11.346	1.00	43.38		N
ATOM	2433	CE1	HIS A 151	7.717	12.021	12.114	1.00	49.50		C
ATOM	2435	NE2	HIS A 151	6.570	12.266	11.503	1.00	48.40		N
ATOM	2437	CD2	HIS A 151	6.828	12.876	10.300	1.00	45.88		C
ATOM	2439	C	HIS A 151	10.845	15.106	8.365	1.00	28.07		C
ATOM	2440	O	HIS A 151	10.348	16.045	7.729	1.00	29.40		O
ATOM	2442	N	ILE A 152	11.995	14.510	8.040	1.00	25.93		N
ATOM	2443	CA	ILE A 152	12.806	14.893	6.879	1.00	24.60		C
ATOM	2445	CB	ILE A 152	14.058	15.754	7.290	1.00	28.82		C
ATOM	2447	CG1	ILE A 152	13.653	16.950	8.166	1.00	28.48		C
ATOM	2450	CD1	ILE A 152	14.779	17.568	8.961	1.00	29.37		C
ATOM	2454	CG2	ILE A 152	14.784	16.271	6.028	1.00	24.79		C
ATOM	2458	C	ILE A 152	13.288	13.630	6.181	1.00	28.23		C
ATOM	2459	O	ILE A 152	13.773	12.707	6.844	1.00	23.50		O
ATOM	2461	N	SER A 153	13.110	13.567	4.859	1.00	27.44		N
ATOM	2462	CA	SER A 153	13.724	12.515	4.030	1.00	29.37		C
ATOM	2464	CB	SER A 153	12.737	11.927	3.012	1.00	31.97		C
ATOM	2467	OG	SER A 153	11.498	11.602	3.607	1.00	39.58		O
ATOM	2469	C	SER A 153	14.896	13.092	3.242	1.00	28.84		C
ATOM	2470	O	SER A 153	14.893	14.249	2.871	1.00	29.56		O
ATOM	2472	N	MET A 154	15.882	12.252	2.985	1.00	27.65		N
ATOM	2473	CA	MET A 154	17.043	12.578	2.191	1.00	28.24		C
ATOM	2475	CB	MET A 154	18.303	12.342	3.008	1.00	28.52		C
ATOM	2478	CG	MET A 154	19.616	12.552	2.220	1.00	38.45		C
ATOM	2481	SD	MET A 154	21.061	11.835	3.053	1.00	47.14		S
ATOM	2482	CE	MET A 154	22.242	12.961	2.385	1.00	46.68		C
ATOM	2486	C	MET A 154	17.087	11.640	1.006	1.00	26.19		C
ATOM	2487	O	MET A 154	16.912	10.426	1.158	1.00	30.00		O
ATOM	2489	N	LEU A 155	17.369	12.203	-0.156	1.00	22.58		N
ATOM	2490	CA	LEU A 155	17.549	11.460	-1.366	1.00	24.49		C
ATOM	2492	CB	LEU A 155	16.555	11.928	-2.425	1.00	25.52		C
ATOM	2495	CG	LEU A 155	16.743	11.274	-3.816	1.00	28.19		C
ATOM	2497	CD1	LEU A 155	16.366	9.770	-3.781	1.00	25.89		C
ATOM	2501	CD2	LEU A 155	15.967	12.007	-4.925	1.00	28.69		C
ATOM	2505	C	LEU A 155	18.963	11.712	-1.889	1.00	25.42		C
ATOM	2506	O	LEU A 155	19.369	12.865	-2.036	1.00	20.62		O
ATOM	2508	N	VAL A 156	19.671	10.638	-2.228	1.00	20.64		N
ATOM	2509	CA	VAL A 156	20.962	10.729	-2.883	1.00	22.97		C
ATOM	2511	CB	VAL A 156	22.085	10.034	-2.078	1.00	24.79		C
ATOM	2513	CG1	VAL A 156	23.448	10.026	-2.873	1.00	32.18		C
ATOM	2517	CG2	VAL A 156	22.294	10.721	-0.748	1.00	23.11		C
ATOM	2521	C	VAL A 156	20.807	10.058	-4.237	1.00	24.72		C
ATOM	2522	O	VAL A 156	20.332	8.932	-4.331	1.00	24.64		O
ATOM	2524	N	PHE A 157	21.172	10.766	-5.290	1.00	22.71		N
ATOM	2525	CA	PHE A 157	21.075	10.218	-6.657	1.00	23.65		C
ATOM	2527	CB	PHE A 157	19.818	10.731	-7.385	1.00	22.78		C
ATOM	2530	CG	PHE A 157	19.772	12.222	-7.538	1.00	21.97		C
ATOM	2531	CD1	PHE A 157	20.231	12.824	-8.696	1.00	23.47		C
ATOM	2533	CE1	PHE A 157	20.198	14.206	-8.848	1.00	24.18		C
ATOM	2535	CZ	PHE A 157	19.724	14.997	-7.832	1.00	26.48		C
ATOM	2537	CE2	PHE A 157	19.233	14.391	-6.661	1.00	25.63		C
ATOM	2539	CD2	PHE A 157	19.267	13.020	-6.525	1.00	24.68		C
ATOM	2541	C	PHE A 157	22.365	10.538	-7.406	1.00	23.81		C
ATOM	2542	O	PHE A 157	23.170	11.378	-6.965	1.00	22.78		O

ATOM	2544	N	GLY	A	158	22.583	9.844	-8.519	1.00 19.21	N
ATOM	2545	CA	GLY	A	158	23.750	10.074	-9.321	1.00 22.32	C
ATOM	2548	C	GLY	A	158	24.184	8.854	-10.080	1.00 23.43	C
ATOM	2549	O	GLY	A	158	23.485	7.849	-10.136	1.00 23.11	O
ATOM	2551	N	ASP	A	159	25.385	8.916	-10.619	1.00 23.40	N
ATOM	2552	CA	ASP	A	159	25.859	7.811	-11.412	1.00 23.57	C
ATOM	2554	CB	ASP	A	159	25.952	8.223	-12.881	1.00 24.95	C
ATOM	2557	CG	ASP	A	159	26.958	9.317	-13.125	1.00 25.49	C
ATOM	2558	OD1	ASP	A	159	27.793	9.616	-12.242	1.00 26.06	O
ATOM	2559	OD2	ASP	A	159	26.882	9.899	-14.208	1.00 23.30	O
ATOM	2560	C	ASP	A	159	27.157	7.319	-10.828	1.00 28.54	C
ATOM	2561	O	ASP	A	159	27.381	7.474	-9.628	1.00 25.94	O
ATOM	2563	N	GLU	A	160	27.989	6.688	-11.649	1.00 27.54	N
ATOM	2564	CA	GLU	A	160	29.221	6.122	-11.172	1.00 30.64	C
ATOM	2566	CB	GLU	A	160	29.788	5.160	-12.211	1.00 36.72	C
ATOM	2569	CG	GLU	A	160	28.938	3.910	-12.404	1.00 44.57	C
ATOM	2572	CD	GLU	A	160	29.233	2.855	-11.360	1.00 54.59	C
ATOM	2573	OE1	GLU	A	160	30.323	2.933	-10.738	1.00 61.76	O
ATOM	2574	OE2	GLU	A	160	28.385	1.938	-11.167	1.00 65.73	O
ATOM	2575	C	GLU	A	160	30.277	7.175	-10.815	1.00 25.66	C
ATOM	2576	O	GLU	A	160	31.167	6.886	-10.035	1.00 28.71	O
ATOM	2578	N	THR	A	161	30.185	8.377	-11.373	1.00 23.04	N
ATOM	2579	CA	THR	A	161	31.194	9.410	-11.099	1.00 24.39	C
ATOM	2581	CB	THR	A	161	31.854	9.874	-12.418	1.00 24.18	C
ATOM	2583	OG1	THR	A	161	30.893	10.553	-13.198	1.00 37.58	O
ATOM	2585	CG2	THR	A	161	32.305	8.710	-13.182	1.00 25.26	C
ATOM	2589	C	THR	A	161	30.711	10.646	-10.317	1.00 23.31	C
ATOM	2590	O	THR	A	161	31.546	11.335	-9.714	1.00 24.33	O
ATOM	2592	N	HIS	A	162	29.404	10.900	-10.320	1.00 22.95	N
ATOM	2593	CA	HIS	A	162	28.793	12.095	-9.693	1.00 21.05	C
ATOM	2595	CB	HIS	A	162	28.270	13.050	-10.780	1.00 25.40	C
ATOM	2598	CG	HIS	A	162	29.318	13.457	-11.775	1.00 34.31	C
ATOM	2599	ND1	HIS	A	162	30.527	14.005	-11.400	1.00 35.95	N
ATOM	2601	CE1	HIS	A	162	31.257	14.230	-12.472	1.00 38.95	C
ATOM	2603	NE2	HIS	A	162	30.572	13.844	-13.528	1.00 36.98	N
ATOM	2605	CD2	HIS	A	162	29.358	13.355	-13.118	1.00 35.18	C
ATOM	2607	C	HIS	A	162	27.651	11.720	-8.749	1.00 19.08	C
ATOM	2608	O	HIS	A	162	26.940	10.739	-8.960	1.00 20.41	O
ATOM	2610	N	SER	A	163	27.530	12.474	-7.655	1.00 20.00	N
ATOM	2611	CA	SER	A	163	26.463	12.290	-6.696	1.00 19.85	C
ATOM	2613	CB	SER	A	163	26.967	11.629	-5.434	1.00 22.58	C
ATOM	2616	OG	SER	A	163	27.472	10.354	-5.696	1.00 21.61	O
ATOM	2618	C	SER	A	163	25.861	13.631	-6.318	1.00 19.13	C
ATOM	2619	O	SER	A	163	26.569	14.631	-6.262	1.00 18.03	O
ATOM	2621	N	HIS	A	164	24.554	13.636	-6.033	1.00 17.71	N
ATOM	2622	CA	HIS	A	164	23.876	14.818	-5.543	1.00 19.05	C
ATOM	2624	CB	HIS	A	164	23.047	15.443	-6.667	1.00 24.67	C
ATOM	2627	CG	HIS	A	164	23.867	15.864	-7.849	1.00 23.07	C
ATOM	2628	ND1	HIS	A	164	24.392	17.129	-7.973	1.00 25.06	N
ATOM	2630	CE1	HIS	A	164	25.065	17.215	-9.105	1.00 26.10	C
ATOM	2632	NE2	HIS	A	164	25.011	16.040	-9.712	1.00 22.09	N
ATOM	2634	CD2	HIS	A	164	24.252	15.184	-8.954	1.00 26.92	C
ATOM	2636	C	HIS	A	164	22.943	14.378	-4.458	1.00 21.35	C
ATOM	2637	O	HIS	A	164	22.519	13.233	-4.468	1.00 22.86	O
ATOM	2639	N	PHE	A	165	22.653	15.250	-3.503	1.00 19.57	N
ATOM	2640	CA	PHE	A	165	21.597	14.962	-2.519	1.00 20.12	C
ATOM	2642	CB	PHE	A	165	22.170	14.633	-1.155	1.00 18.34	C
ATOM	2645	CG	PHE	A	165	22.529	15.850	-0.342	1.00 18.82	C
ATOM	2646	CD1	PHE	A	165	21.639	16.368	0.585	1.00 26.86	C
ATOM	2648	CE1	PHE	A	165	21.949	17.506	1.314	1.00 25.00	C
ATOM	2650	CZ	PHE	A	165	23.155	18.132	1.130	1.00 21.50	C
ATOM	2652	CE2	PHE	A	165	24.049	17.656	0.200	1.00 23.28	C
ATOM	2654	CD2	PHE	A	165	23.728	16.494	-0.536	1.00 19.42	C
ATOM	2656	C	PHE	A	165	20.574	16.103	-2.406	1.00 21.42	C
ATOM	2657	O	PHE	A	165	20.832	17.241	-2.822	1.00 21.38	O
ATOM	2659	N	LEU	A	166	19.404	15.748	-1.867	1.00 21.50	N
ATOM	2660	CA	LEU	A	166	18.290	16.642	-1.636	1.00 25.82	C

ATOM	2662	CB	LEU	A	166	17.150	16.402	-2.629	1.00	31.03	C
ATOM	2665	CG	LEU	A	166	17.414	16.399	-4.117	1.00	33.96	C
ATOM	2667	CD1	LEU	A	166	16.156	16.041	-4.884	1.00	30.05	C
ATOM	2671	CD2	LEU	A	166	17.938	17.764	-4.503	1.00	39.70	C
ATOM	2675	C	LEU	A	166	17.703	16.280	-0.293	1.00	23.36	C
ATOM	2676	O	LEU	A	166	17.789	15.126	0.144	1.00	23.76	O
ATOM	2678	N	VAL	A	167	17.068	17.247	0.342	1.00	23.71	N
ATOM	2679	CA	VAL	A	167	16.198	16.940	1.478	1.00	21.73	C
ATOM	2681	CB	VAL	A	167	16.596	17.628	2.796	1.00	21.87	C
ATOM	2683	CG1	VAL	A	167	17.767	16.871	3.488	1.00	20.63	C
ATOM	2687	CG2	VAL	A	167	16.890	19.102	2.613	1.00	15.85	C
ATOM	2691	C	VAL	A	167	14.777	17.282	1.070	1.00	24.72	C
ATOM	2692	O	VAL	A	167	14.556	18.216	0.278	1.00	23.10	O
ATOM	2694	N	ILE	A	168	13.820	16.540	1.630	1.00	27.58	N
ATOM	2695	CA	ILE	A	168	12.443	16.533	1.150	1.00	28.62	C
ATOM	2697	CB	ILE	A	168	12.148	15.265	0.297	1.00	30.41	C
ATOM	2699	CG1	ILE	A	168	13.123	15.129	-0.866	1.00	36.64	C
ATOM	2702	CD1	ILE	A	168	12.858	13.884	-1.734	1.00	45.20	C
ATOM	2706	CG2	ILE	A	168	10.700	15.276	-0.197	1.00	33.45	C
ATOM	2710	C	ILE	A	168	11.473	16.461	2.324	1.00	28.90	C
ATOM	2711	O	ILE	A	168	11.753	15.802	3.311	1.00	27.72	O
ATOM	2713	N	GLY	A	169	10.328	17.120	2.176	1.00	29.78	N
ATOM	2714	CA	GLY	A	169	9.171	16.915	3.051	1.00	30.84	C
ATOM	2717	C	GLY	A	169	8.627	18.219	3.532	1.00	29.21	C
ATOM	2718	O	GLY	A	169	9.105	19.265	3.121	1.00	32.60	O
ATOM	2720	N	GLN	A	170	7.643	18.176	4.437	1.00	32.34	N
ATOM	2721	CA	GLN	A	170	6.928	19.397	4.841	1.00	34.47	C
ATOM	2723	CB	GLN	A	170	5.709	19.060	5.723	1.00	37.34	C
ATOM	2726	CG	GLN	A	170	4.706	20.208	5.871	1.00	42.24	C
ATOM	2729	CD	GLN	A	170	4.008	20.555	4.561	1.00	47.14	C
ATOM	2730	OE1	GLN	A	170	3.526	19.672	3.855	1.00	52.13	O
ATOM	2731	NE2	GLN	A	170	3.973	21.845	4.222	1.00	50.98	N
ATOM	2734	C	GLN	A	170	7.836	20.365	5.582	1.00	30.28	C
ATOM	2735	O	GLN	A	170	7.721	21.594	5.440	1.00	28.54	O
ATOM	2737	N	ALA	A	171	8.731	19.818	6.395	1.00	29.93	N
ATOM	2738	CA	ALA	A	171	9.683	20.666	7.128	1.00	31.30	C
ATOM	2740	CB	ALA	A	171	10.600	19.813	7.991	1.00	28.56	C
ATOM	2744	C	ALA	A	171	10.499	21.521	6.148	1.00	25.70	C
ATOM	2745	O	ALA	A	171	10.642	22.720	6.345	1.00	26.67	O
ATOM	2747	N	VAL	A	172	10.996	20.883	5.084	1.00	24.79	N
ATOM	2748	CA	VAL	A	172	11.794	21.544	4.073	1.00	24.09	C
ATOM	2750	CB	VAL	A	172	12.380	20.528	3.045	1.00	25.33	C
ATOM	2752	CG1	VAL	A	172	13.100	21.252	1.885	1.00	25.99	C
ATOM	2756	CG2	VAL	A	172	13.368	19.572	3.742	1.00	24.83	C
ATOM	2760	C	VAL	A	172	10.977	22.647	3.387	1.00	26.66	C
ATOM	2761	O	VAL	A	172	11.488	23.737	3.131	1.00	27.88	O
ATOM	2763	N	ASP	A	173	9.708	22.368	3.117	1.00	29.07	N
ATOM	2764	CA	ASP	A	173	8.839	23.351	2.444	1.00	29.35	C
ATOM	2766	CB	ASP	A	173	7.549	22.688	1.962	1.00	31.16	C
ATOM	2769	CG	ASP	A	173	7.802	21.549	0.975	1.00	31.51	C
ATOM	2770	OD1	ASP	A	173	8.945	21.417	0.475	1.00	35.80	O
ATOM	2771	OD2	ASP	A	173	6.874	20.771	0.699	1.00	40.20	O
ATOM	2772	C	ASP	A	173	8.528	24.464	3.410	1.00	32.07	C
ATOM	2773	O	ASP	A	173	8.679	25.629	3.090	1.00	36.22	O
ATOM	2775	N	ASP	A	174	8.141	24.099	4.632	1.00	36.45	N
ATOM	2776	CA	ASP	A	174	7.780	25.099	5.639	1.00	33.06	C
ATOM	2778	CB	ASP	A	174	7.359	24.424	6.937	1.00	37.05	C
ATOM	2781	CG	ASP	A	174	6.011	23.741	6.828	1.00	40.53	C
ATOM	2782	OD1	ASP	A	174	5.287	23.996	5.820	1.00	39.83	O
ATOM	2783	OD2	ASP	A	174	5.696	22.954	7.744	1.00	42.46	O
ATOM	2784	C	ASP	A	174	8.859	26.093	5.955	1.00	32.45	C
ATOM	2785	O	ASP	A	174	8.564	27.249	6.218	1.00	31.21	O
ATOM	2787	N	VAL	A	175	10.123	25.663	5.947	1.00	29.85	N
ATOM	2788	CA	VAL	A	175	11.198	26.539	6.351	1.00	27.13	C
ATOM	2790	CB	VAL	A	175	12.525	25.736	6.542	1.00	29.40	C
ATOM	2792	CG1	VAL	A	175	13.232	25.409	5.177	1.00	23.51	C
ATOM	2796	CG2	VAL	A	175	13.409	26.445	7.490	1.00	25.39	C

ATOM	2800	C	VAL	A	175	11.316	27.712	5.375	1.00	33.08	C
ATOM	2801	O	VAL	A	175	11.688	28.825	5.747	1.00	35.45	O
ATOM	2803	N	ARG	A	176	10.953	27.421	4.136	1.00	38.64	N
ATOM	2804	CA	ARG	A	176	10.955	28.340	3.005	1.00	45.84	C
ATOM	2806	CB	ARG	A	176	10.915	27.465	1.732	1.00	47.00	C
ATOM	2809	CG	ARG	A	176	11.138	28.116	0.392	1.00	51.40	C
ATOM	2812	CD	ARG	A	176	12.591	28.213	0.000	1.00	47.12	C
ATOM	2815	NE	ARG	A	176	13.291	26.966	-0.356	1.00	44.17	N
ATOM	2817	CZ	ARG	A	176	13.497	26.524	-1.599	1.00	40.14	C
ATOM	2818	NH1	ARG	A	176	12.998	27.168	-2.646	1.00	34.92	N
ATOM	2821	NH2	ARG	A	176	14.199	25.410	-1.798	1.00	38.17	N
ATOM	2824	C	ARG	A	176	9.718	29.235	3.153	1.00	49.98	C
ATOM	2825	O	ARG	A	176	9.827	30.478	3.201	1.00	44.47	O
ATOM	2827	N	LEU	A	177	8.549	28.587	3.277	1.00	54.31	N
ATOM	2828	CA	LEU	A	177	7.270	29.263	3.579	1.00	56.66	C
ATOM	2830	CB	LEU	A	177	6.168	28.227	3.847	1.00	57.30	C
ATOM	2833	CG	LEU	A	177	5.728	27.253	2.754	1.00	58.81	C
ATOM	2835	CD1	LEU	A	177	4.739	26.206	3.332	1.00	53.20	C
ATOM	2839	CD2	LEU	A	177	5.110	28.022	1.582	1.00	59.22	C
ATOM	2843	C	LEU	A	177	7.361	30.188	4.799	1.00	56.25	C
ATOM	2844	O	LEU	A	177	6.825	31.285	4.802	1.00	57.71	O
ATOM	2846	N	ALA	A	178	8.018	29.712	5.846	1.00	58.29	N
ATOM	2847	CA	ALA	A	178	8.244	30.499	7.046	1.00	59.54	C
ATOM	2849	CB	ALA	A	178	8.945	29.645	8.113	1.00	58.60	C
ATOM	2853	C	ALA	A	178	9.060	31.761	6.733	1.00	62.48	C
ATOM	2854	O	ALA	A	178	8.793	32.832	7.280	1.00	64.50	O
ATOM	2856	N	GLN	A	179	10.034	31.635	5.837	1.00	64.07	N
ATOM	2857	CA	GLN	A	179	10.954	32.733	5.534	1.00	67.29	C
ATOM	2859	CB	GLN	A	179	12.157	32.234	4.709	1.00	70.33	C
ATOM	2862	CG	GLN	A	179	12.948	33.353	3.983	1.00	73.49	C
ATOM	2865	CD	GLN	A	179	12.334	33.764	2.641	1.00	75.50	C
ATOM	2866	OE1	GLN	A	179	12.032	34.945	2.418	1.00	75.69	O
ATOM	2867	NE2	GLN	A	179	12.141	32.789	1.746	1.00	76.42	N
ATOM	2870	C	GLN	A	179	10.308	33.923	4.828	1.00	66.32	C
ATOM	2871	O	GLN	A	179	10.654	35.062	5.141	1.00	60.24	O
ATOM	2873	N	ASN	A	180	9.411	33.677	3.863	1.00	69.85	N
ATOM	2874	CA	ASN	A	180	8.822	34.798	3.081	1.00	73.04	C
ATOM	2876	CB	ASN	A	180	8.372	34.378	1.663	1.00	76.05	C
ATOM	2879	CG	ASN	A	180	7.424	33.187	1.655	1.00	81.59	C
ATOM	2880	OD1	ASN	A	180	6.563	33.043	2.530	1.00	87.30	O
ATOM	2881	ND2	ASN	A	180	7.564	32.336	0.643	1.00	84.29	N
ATOM	2884	C	ASN	A	180	7.726	35.585	3.819	1.00	70.53	C
ATOM	2885	O	ASN	A	180	7.289	36.640	3.350	1.00	70.70	O
ATOM	2887	N	MET	A	181	7.323	35.087	4.988	1.00	67.22	N
ATOM	2888	CA	MET	A	181	6.422	35.810	5.884	1.00	64.93	C
ATOM	2890	CB	MET	A	181	5.766	34.830	6.858	1.00	64.05	C
ATOM	2893	CG	MET	A	181	4.898	33.787	6.215	1.00	65.73	C
ATOM	2896	SD	MET	A	181	4.232	32.655	7.457	1.00	68.39	S
ATOM	2897	CE	MET	A	181	4.213	31.124	6.519	1.00	65.96	C
ATOM	2901	C	MET	A	181	7.128	36.868	6.736	1.00	62.62	C
ATOM	2902	O	MET	A	181	6.491	37.509	7.575	1.00	66.52	O
ATOM	2904	N	ALA	A	182	8.433	37.046	6.542	1.00	57.02	N
ATOM	2905	CA	ALA	A	182	9.275	37.690	7.538	1.00	49.86	C
ATOM	2907	CB	ALA	A	182	10.370	36.717	7.969	1.00	49.13	C
ATOM	2911	C	ALA	A	182	9.896	38.993	7.047	1.00	45.12	C
ATOM	2912	O	ALA	A	182	10.133	39.181	5.866	1.00	47.30	O
ATOM	2914	N	GLN	A	183	10.153	39.885	7.985	1.00	41.79	N
ATOM	2915	CA	GLN	A	183	10.912	41.095	7.749	1.00	44.77	C
ATOM	2917	CB	GLN	A	183	10.337	42.276	8.555	1.00	46.29	C
ATOM	2920	CG	GLN	A	183	8.803	42.308	8.713	1.00	53.57	C
ATOM	2923	CD	GLN	A	183	8.068	42.854	7.507	1.00	56.10	C
ATOM	2924	OE1	GLN	A	183	8.394	43.926	7.008	1.00	62.92	O
ATOM	2925	NE2	GLN	A	183	7.038	42.137	7.061	1.00	58.29	N
ATOM	2928	C	GLN	A	183	12.348	40.856	8.223	1.00	41.37	C
ATOM	2929	O	GLN	A	183	12.642	39.888	8.925	1.00	39.59	O
ATOM	2931	N	MET	A	184	13.230	41.769	7.871	1.00	38.28	N
ATOM	2932	CA	MET	A	184	14.558	41.743	8.401	1.00	39.66	C

ATOM	2934	CB	MET	A	184	15.323	42.987	7.966	1.00	41.49	C
ATOM	2937	CG	MET	A	184	15.634	43.005	6.495	1.00	43.62	C
ATOM	2940	SD	MET	A	184	16.605	41.581	5.924	1.00	44.22	S
ATOM	2941	CE	MET	A	184	17.129	42.252	4.333	1.00	46.17	C
ATOM	2945	C	MET	A	184	14.519	41.658	9.917	1.00	39.83	C
ATOM	2946	O	MET	A	184	13.684	42.292	10.558	1.00	36.95	O
ATOM	2948	N	ASN	A	185	15.421	40.852	10.465	1.00	30.49	N
ATOM	2949	CA	ASN	A	185	15.528	40.596	11.906	1.00	35.27	C
ATOM	2951	CB	ASN	A	185	15.588	41.903	12.731	1.00	36.31	C
ATOM	2954	CG	ASN	A	185	16.792	42.797	12.363	1.00	43.43	C
ATOM	2955	OD1	ASN	A	185	17.741	42.370	11.699	1.00	49.61	O
ATOM	2956	ND2	ASN	A	185	16.749	44.044	12.811	1.00	52.17	N
ATOM	2959	C	ASN	A	185	14.473	39.639	12.476	1.00	31.36	C
ATOM	2960	O	ASN	A	185	14.503	39.336	13.664	1.00	31.67	O
ATOM	2962	N	ASP	A	186	13.570	39.130	11.652	1.00	27.62	N
ATOM	2963	CA	ASP	A	186	12.575	38.165	12.143	1.00	31.40	C
ATOM	2965	CB	ASP	A	186	11.318	38.125	11.248	1.00	35.87	C
ATOM	2968	CG	ASP	A	186	10.446	39.387	11.372	1.00	36.27	C
ATOM	2969	OD1	ASP	A	186	10.726	40.268	12.203	1.00	36.10	O
ATOM	2970	OD2	ASP	A	186	9.471	39.478	10.611	1.00	39.96	O
ATOM	2971	C	ASP	A	186	13.115	36.736	12.258	1.00	34.81	C
ATOM	2972	O	ASP	A	186	14.047	36.333	11.536	1.00	31.00	O
ATOM	2974	N	VAL	A	187	12.511	35.997	13.193	1.00	30.73	N
ATOM	2975	CA	VAL	A	187	12.574	34.547	13.269	1.00	29.72	C
ATOM	2977	CB	VAL	A	187	13.310	34.069	14.584	1.00	28.14	C
ATOM	2979	CG1	VAL	A	187	13.490	32.545	14.625	1.00	23.23	C
ATOM	2983	CG2	VAL	A	187	14.672	34.799	14.763	1.00	25.50	C
ATOM	2987	C	VAL	A	187	11.118	34.028	13.219	1.00	30.69	C
ATOM	2988	O	VAL	A	187	10.309	34.333	14.094	1.00	28.43	O
ATOM	2990	N	ILE	A	188	10.785	33.273	12.176	1.00	27.98	N
ATOM	2991	CA	ILE	A	188	9.469	32.680	12.015	1.00	30.15	C
ATOM	2993	CB	ILE	A	188	8.935	32.872	10.561	1.00	30.12	C
ATOM	2995	CG1	ILE	A	188	8.983	34.353	10.156	1.00	33.54	C
ATOM	2998	CD1	ILE	A	188	8.537	35.323	11.252	1.00	29.68	C
ATOM	3002	CG2	ILE	A	188	7.537	32.347	10.420	1.00	28.73	C
ATOM	3006	C	ILE	A	188	9.579	31.198	12.303	1.00	31.74	C
ATOM	3007	O	ILE	A	188	10.536	30.559	11.869	1.00	28.68	O
ATOM	3009	N	LEU	A	189	8.607	30.649	13.037	1.00	28.47	N
ATOM	3010	CA	LEU	A	189	8.516	29.203	13.260	1.00	27.96	C
ATOM	3012	CB	LEU	A	189	8.197	28.908	14.721	1.00	27.65	C
ATOM	3015	CG	LEU	A	189	9.006	29.607	15.797	1.00	32.04	C
ATOM	3017	CD1	LEU	A	189	8.591	29.031	17.147	1.00	26.99	C
ATOM	3021	CD2	LEU	A	189	10.521	29.458	15.583	1.00	27.65	C
ATOM	3025	C	LEU	A	189	7.415	28.618	12.408	1.00	26.88	C
ATOM	3026	O	LEU	A	189	6.320	29.169	12.359	1.00	32.39	O
ATOM	3028	N	SER	A	190	7.667	27.490	11.762	1.00	27.13	N
ATOM	3029	CA	SER	A	190	6.612	26.813	11.057	1.00	29.79	C
ATOM	3031	CB	SER	A	190	7.114	25.555	10.375	1.00	27.64	C
ATOM	3034	OG	SER	A	190	7.493	24.591	11.337	1.00	33.57	O
ATOM	3036	C	SER	A	190	5.510	26.442	12.059	1.00	28.72	C
ATOM	3037	O	SER	A	190	5.743	26.416	13.278	1.00	29.15	O
ATOM	3039	N	PRO	A	191	4.316	26.139	11.550	1.00	30.11	N
ATOM	3040	CA	PRO	A	191	3.257	25.624	12.448	1.00	31.06	C
ATOM	3042	CB	PRO	A	191	2.118	25.279	11.469	1.00	30.22	C
ATOM	3045	CG	PRO	A	191	2.274	26.284	10.387	1.00	30.88	C
ATOM	3048	CD	PRO	A	191	3.816	26.314	10.173	1.00	30.33	C
ATOM	3051	C	PRO	A	191	3.702	24.407	13.278	1.00	30.52	C
ATOM	3052	O	PRO	A	191	3.529	24.405	14.484	1.00	30.55	O
ATOM	3053	N	ASN	A	192	4.304	23.395	12.651	1.00	33.68	N
ATOM	3054	CA	ASN	A	192	4.744	22.204	13.397	1.00	30.99	C
ATOM	3056	CB	ASN	A	192	5.228	21.116	12.446	1.00	34.38	C
ATOM	3059	CG	ASN	A	192	5.317	19.772	13.108	1.00	37.72	C
ATOM	3060	OD1	ASN	A	192	6.270	18.999	12.885	1.00	41.74	O
ATOM	3061	ND2	ASN	A	192	4.313	19.457	13.925	1.00	35.37	N
ATOM	3064	C	ASN	A	192	5.846	22.491	14.414	1.00	26.83	C
ATOM	3065	O	ASN	A	192	5.839	21.960	15.516	1.00	28.84	O
ATOM	3067	N	CYS	A	193	6.777	23.351	14.046	1.00	24.34	N

ATOM	3068	CA	CYS	A	193	7.835	23.794	14.951	1.00	24.25	C
ATOM	3070	CB	CYS	A	193	8.751	24.754	14.208	1.00	23.28	C
ATOM	3073	SG	CYS	A	193	10.161	25.316	15.192	1.00	26.75	S
ATOM	3075	C	CYS	A	193	7.284	24.446	16.230	1.00	27.59	C
ATOM	3076	O	CYS	A	193	7.716	24.133	17.348	1.00	27.04	O
ATOM	3078	N	TRP	A	194	6.330	25.364	16.059	1.00	29.96	N
ATOM	3079	CA	TRP	A	194	5.593	25.985	17.193	1.00	31.78	C
ATOM	3081	CB	TRP	A	194	4.670	27.087	16.627	1.00	33.09	C
ATOM	3084	CG	TRP	A	194	3.678	27.672	17.572	1.00	36.29	C
ATOM	3085	CD1	TRP	A	194	2.337	27.766	17.374	1.00	36.38	C
ATOM	3087	NE1	TRP	A	194	1.742	28.360	18.451	1.00	34.63	N
ATOM	3089	CE2	TRP	A	194	2.694	28.675	19.376	1.00	36.16	C
ATOM	3090	CD2	TRP	A	194	3.937	28.263	18.852	1.00	36.66	C
ATOM	3091	CE3	TRP	A	194	5.088	28.455	19.620	1.00	38.73	C
ATOM	3093	CZ3	TRP	A	194	4.964	29.065	20.870	1.00	39.81	C
ATOM	3095	CH2	TRP	A	194	3.705	29.471	21.356	1.00	38.45	C
ATOM	3097	CZ2	TRP	A	194	2.566	29.275	20.627	1.00	37.12	C
ATOM	3099	C	TRP	A	194	4.827	24.933	18.033	1.00	29.66	C
ATOM	3100	O	TRP	A	194	4.861	24.936	19.269	1.00	28.08	O
ATOM	3102	N	GLN	A	195	4.158	24.021	17.352	1.00	31.54	N
ATOM	3103	CA	GLN	A	195	3.523	22.874	17.995	1.00	38.56	C
ATOM	3105	CB	GLN	A	195	2.878	21.979	16.929	1.00	42.25	C
ATOM	3108	CG	GLN	A	195	1.770	21.100	17.428	1.00	52.44	C
ATOM	3111	CD	GLN	A	195	0.601	21.898	17.949	1.00	58.46	C
ATOM	3112	OE1	GLN	A	195	0.276	21.844	19.141	1.00	64.54	O
ATOM	3113	NE2	GLN	A	195	-0.024	22.673	17.066	1.00	64.82	N
ATOM	3116	C	GLN	A	195	4.495	22.046	18.848	1.00	37.45	C
ATOM	3117	O	GLN	A	195	4.136	21.599	19.940	1.00	35.84	O
ATOM	3119	N	LEU	A	196	5.726	21.863	18.352	1.00	33.16	N
ATOM	3120	CA	LEU	A	196	6.716	20.967	18.971	1.00	30.21	C
ATOM	3122	CB	LEU	A	196	7.612	20.368	17.884	1.00	26.56	C
ATOM	3125	CG	LEU	A	196	7.058	19.239	16.986	1.00	32.82	C
ATOM	3127	CD1	LEU	A	196	8.080	18.844	15.900	1.00	29.09	C
ATOM	3131	CD2	LEU	A	196	6.658	18.022	17.786	1.00	32.02	C
ATOM	3135	C	LEU	A	196	7.612	21.644	20.012	1.00	30.51	C
ATOM	3136	O	LEU	A	196	8.317	20.962	20.780	1.00	28.82	O
ATOM	3138	N	CYS	A	197	7.597	22.972	20.045	1.00	29.52	N
ATOM	3139	CA	CYS	A	197	8.595	23.722	20.791	1.00	27.89	C
ATOM	3141	CB	CYS	A	197	8.795	25.109	20.182	1.00	29.96	C
ATOM	3144	SG	CYS	A	197	7.569	26.392	20.550	1.00	32.25	S
ATOM	3146	C	CYS	A	197	8.265	23.860	22.274	1.00	30.82	C
ATOM	3147	O	CYS	A	197	7.172	23.508	22.710	1.00	29.60	O
ATOM	3149	N	ASP	A	198	9.227	24.380	23.028	1.00	29.79	N
ATOM	3150	CA	ASP	A	198	9.058	24.637	24.466	1.00	32.61	C
ATOM	3152	CB	ASP	A	198	10.385	24.507	25.191	1.00	31.61	C
ATOM	3155	CG	ASP	A	198	10.265	24.679	26.694	1.00	35.35	C
ATOM	3156	OD1	ASP	A	198	11.269	24.382	27.378	1.00	31.35	O
ATOM	3157	OD2	ASP	A	198	9.210	25.136	27.190	1.00	36.78	O
ATOM	3158	C	ASP	A	198	8.480	26.029	24.630	1.00	30.82	C
ATOM	3159	O	ASP	A	198	9.196	27.024	24.675	1.00	31.62	O
ATOM	3161	N	ARG	A	199	7.164	26.087	24.721	1.00	35.56	N
ATOM	3162	CA	ARG	A	199	6.430	27.370	24.731	1.00	37.70	C
ATOM	3164	CB	ARG	A	199	4.949	27.087	24.558	1.00	38.83	C
ATOM	3167	CG	ARG	A	199	4.685	26.389	23.254	1.00	36.83	C
ATOM	3170	CD	ARG	A	199	3.229	26.213	22.999	1.00	40.73	C
ATOM	3173	NE	ARG	A	199	3.030	25.829	21.612	1.00	41.19	N
ATOM	3175	CZ	ARG	A	199	1.848	25.659	21.041	1.00	43.53	C
ATOM	3176	NH1	ARG	A	199	0.728	25.820	21.735	1.00	46.87	N
ATOM	3179	NH2	ARG	A	199	1.783	25.332	19.767	1.00	38.19	N
ATOM	3182	C	ARG	A	199	6.634	28.238	25.968	1.00	39.71	C
ATOM	3183	O	ARG	A	199	6.354	29.444	25.955	1.00	43.35	O
ATOM	3185	N	SER	A	200	7.128	27.629	27.035	1.00	37.61	N
ATOM	3186	CA	SER	A	200	7.474	28.349	28.251	1.00	39.29	C
ATOM	3188	CB	SER	A	200	7.765	27.334	29.377	1.00	41.48	C
ATOM	3191	OG	SER	A	200	8.998	26.650	29.172	1.00	44.13	O
ATOM	3193	C	SER	A	200	8.689	29.247	28.057	1.00	38.92	C
ATOM	3194	O	SER	A	200	8.907	30.179	28.818	1.00	46.27	O

ATOM	3196	N	MET A 201	9.490	28.936	27.056	1.00	38.83	N
ATOM	3197	CA	MET A 201	10.729	29.642	26.776	1.00	39.77	C
ATOM	3199	CB	MET A 201	11.665	28.725	25.964	1.00	39.51	C
ATOM	3202	CG	MET A 201	12.187	27.527	26.694	1.00	44.60	C
ATOM	3205	SD	MET A 201	13.410	27.878	27.957	1.00	42.69	S
ATOM	3206	CE	MET A 201	14.300	29.279	27.297	1.00	47.44	C
ATOM	3210	C	MET A 201	10.527	30.891	25.944	1.00	36.55	C
ATOM	3211	O	MET A 201	11.382	31.777	25.957	1.00	37.61	O
ATOM	3213	N	ILE A 202	9.459	30.930	25.149	1.00	38.00	N
ATOM	3214	CA	ILE A 202	9.340	31.975	24.139	1.00	44.15	C
ATOM	3216	CB	ILE A 202	9.737	31.472	22.720	1.00	46.06	C
ATOM	3218	CG1	ILE A 202	8.810	30.369	22.211	1.00	40.62	C
ATOM	3221	CD1	ILE A 202	8.761	30.344	20.737	1.00	37.09	C
ATOM	3225	CG2	ILE A 202	11.192	30.979	22.703	1.00	47.33	C
ATOM	3229	C	ILE A 202	7.987	32.657	24.034	1.00	46.01	C
ATOM	3230	O	ILE A 202	6.933	32.023	24.145	1.00	52.43	O
ATOM	3232	N	GLU A 203	8.054	33.960	23.797	1.00	48.22	N
ATOM	3233	CA	GLU A 203	6.893	34.785	23.518	1.00	47.92	C
ATOM	3235	CB	GLU A 203	7.016	36.131	24.238	1.00	54.33	C
ATOM	3238	CG	GLU A 203	6.087	36.278	25.448	1.00	62.74	C
ATOM	3241	CD	GLU A 203	4.609	36.317	25.047	1.00	68.85	C
ATOM	3242	OE1	GLU A 203	4.315	36.742	23.903	1.00	72.51	O
ATOM	3243	OE2	GLU A 203	3.744	35.918	25.870	1.00	72.58	O
ATOM	3244	C	GLU A 203	6.823	34.996	22.016	1.00	44.22	C
ATOM	3245	O	GLU A 203	7.743	35.569	21.436	1.00	40.31	O
ATOM	3247	N	ILE A 204	5.752	34.502	21.399	1.00	39.61	N
ATOM	3248	CA	ILE A 204	5.530	34.653	19.960	1.00	43.02	C
ATOM	3250	CB	ILE A 204	5.209	33.287	19.246	1.00	42.68	C
ATOM	3252	CG1	ILE A 204	3.886	32.671	19.716	1.00	43.57	C
ATOM	3255	CD1	ILE A 204	2.621	33.305	19.104	1.00	44.50	C
ATOM	3259	CG2	ILE A 204	6.351	32.321	19.435	1.00	40.47	C
ATOM	3263	C	ILE A 204	4.426	35.666	19.648	1.00	45.51	C
ATOM	3264	O	ILE A 204	3.801	36.235	20.556	1.00	43.32	O
ATOM	3266	N	GLU A 205	4.208	35.900	18.357	1.00	45.73	N
ATOM	3267	CA	GLU A 205	3.020	36.615	17.909	1.00	45.78	C
ATOM	3269	CB	GLU A 205	3.289	38.113	17.810	1.00	46.50	C
ATOM	3272	CG	GLU A 205	4.045	38.559	16.587	1.00	51.01	C
ATOM	3275	CD	GLU A 205	4.206	40.074	16.513	1.00	51.55	C
ATOM	3276	OE1	GLU A 205	3.944	40.638	15.436	1.00	57.78	O
ATOM	3277	OE2	GLU A 205	4.599	40.699	17.515	1.00	57.14	O
ATOM	3278	C	GLU A 205	2.511	36.051	16.596	1.00	45.81	C
ATOM	3279	O	GLU A 205	3.302	35.598	15.745	1.00	40.74	O
ATOM	3281	N	SER A 206	1.182	36.090	16.439	1.00	44.98	N
ATOM	3282	CA	SER A 206	0.496	35.564	15.269	1.00	45.14	C
ATOM	3284	CB	SER A 206	-1.030	35.795	15.350	1.00	47.09	C
ATOM	3287	OG	SER A 206	-1.422	36.294	16.619	1.00	53.16	O
ATOM	3289	C	SER A 206	0.997	36.245	14.014	1.00	44.65	C
ATOM	3290	O	SER A 206	1.477	37.380	14.055	1.00	40.11	O
ATOM	3292	N	VAL A 207	0.872	35.532	12.906	1.00	48.28	N
ATOM	3293	CA	VAL A 207	1.134	36.079	11.590	1.00	52.88	C
ATOM	3295	CB	VAL A 207	2.232	35.267	10.854	1.00	52.49	C
ATOM	3297	CG1	VAL A 207	2.349	35.693	9.397	1.00	54.31	C
ATOM	3301	CG2	VAL A 207	3.578	35.416	11.568	1.00	50.29	C
ATOM	3305	C	VAL A 207	-0.196	36.037	10.813	1.00	56.49	C
ATOM	3306	O	VAL A 207	-0.772	34.953	10.622	1.00	55.75	O
ATOM	3308	N	PRO A 208	-0.701	37.219	10.390	1.00	61.92	N
ATOM	3309	CA	PRO A 208	-1.934	37.361	9.601	1.00	64.54	C
ATOM	3311	CB	PRO A 208	-1.771	38.739	8.961	1.00	63.80	C
ATOM	3314	CG	PRO A 208	-1.035	39.519	9.986	1.00	64.16	C
ATOM	3317	CD	PRO A 208	-0.105	38.538	10.685	1.00	62.78	C
ATOM	3320	C	PRO A 208	-2.121	36.303	8.511	1.00	67.05	C
ATOM	3321	O	PRO A 208	-1.202	36.038	7.741	1.00	66.14	O
ATOM	3322	N	ASP A 209	-3.306	35.695	8.479	1.00	71.77	N
ATOM	3323	CA	ASP A 209	-3.666	34.701	7.462	1.00	73.55	C
ATOM	3325	CB	ASP A 209	-3.782	35.379	6.089	1.00	75.08	C
ATOM	3328	CG	ASP A 209	-4.589	36.671	6.144	1.00	77.00	C
ATOM	3329	OD1	ASP A 209	-4.264	37.606	5.380	1.00	78.93	O

ATOM	3330	OD2	ASP	A	209	-5.534	36.754	6.967	1.00 77.80	O
ATOM	3331	C	ASP	A	209	-2.670	33.538	7.415	1.00 73.71	C
ATOM	3332	O	ASP	A	209	-2.513	32.874	6.382	1.00 74.47	O
ATOM	3334	N	GLN	A	210	-2.012	33.293	8.547	1.00 72.40	N
ATOM	3335	CA	GLN	A	210	-0.954	32.307	8.633	1.00 69.49	C
ATOM	3337	CB	GLN	A	210	0.401	32.985	8.422	1.00 69.61	C
ATOM	3340	CG	GLN	A	210	0.771	33.191	6.960	1.00 69.59	C
ATOM	3343	CD	GLN	A	210	0.944	31.878	6.204	1.00 72.09	C
ATOM	3344	OE1	GLN	A	210	0.925	31.858	4.973	1.00 72.37	O
ATOM	3345	NE2	GLN	A	210	1.108	30.774	6.939	1.00 73.40	N
ATOM	3348	C	GLN	A	210	-0.986	31.614	9.983	1.00 67.38	C
ATOM	3349	O	GLN	A	210	-1.289	32.246	10.999	1.00 67.38	O
ATOM	3351	N	ARG	A	211	-0.678	30.315	9.980	1.00 64.21	N
ATOM	3352	CA	ARG	A	211	-0.542	29.530	11.216	1.00 61.45	C
ATOM	3354	CB	ARG	A	211	-0.915	28.064	10.985	1.00 63.84	C
ATOM	3357	CG	ARG	A	211	-2.390	27.801	10.679	1.00 69.01	C
ATOM	3360	CD	ARG	A	211	-2.749	26.342	10.998	1.00 73.04	C
ATOM	3363	NE	ARG	A	211	-1.814	25.405	10.368	1.00 77.42	N
ATOM	3365	CZ	ARG	A	211	-1.595	24.147	10.758	1.00 79.38	C
ATOM	3366	NH1	ARG	A	211	-2.238	23.623	11.798	1.00 79.35	N
ATOM	3369	NH2	ARG	A	211	-0.713	23.404	10.093	1.00 80.09	N
ATOM	3372	C	ARG	A	211	0.881	29.592	11.780	1.00 55.08	C
ATOM	3373	O	ARG	A	211	1.094	29.286	12.959	1.00 53.80	O
ATOM	3375	N	ALA	A	212	1.848	29.961	10.936	1.00 47.22	N
ATOM	3376	CA	ALA	A	212	3.243	30.144	11.371	1.00 45.81	C
ATOM	3378	CB	ALA	A	212	4.152	30.424	10.185	1.00 39.22	C
ATOM	3382	C	ALA	A	212	3.286	31.296	12.344	1.00 46.16	C
ATOM	3383	O	ALA	A	212	2.460	32.211	12.255	1.00 51.95	O
ATOM	3385	N	VAL	A	213	4.231	31.265	13.276	1.00 41.37	N
ATOM	3386	CA	VAL	A	213	4.355	32.346	14.251	1.00 36.22	C
ATOM	3388	CB	VAL	A	213	4.050	31.859	15.691	1.00 39.59	C
ATOM	3390	CG1	VAL	A	213	2.601	31.341	15.794	1.00 37.00	C
ATOM	3394	CG2	VAL	A	213	5.043	30.789	16.156	1.00 39.17	C
ATOM	3398	C	VAL	A	213	5.717	33.044	14.188	1.00 37.46	C
ATOM	3399	O	VAL	A	213	6.703	32.511	13.650	1.00 33.41	O
ATOM	3401	N	LYS	A	214	5.748	34.261	14.717	1.00 32.87	N
ATOM	3402	CA	LYS	A	214	6.968	35.051	14.804	1.00 35.11	C
ATOM	3404	CB	LYS	A	214	6.672	36.484	14.354	1.00 32.68	C
ATOM	3407	CG	LYS	A	214	7.777	37.475	14.537	1.00 38.59	C
ATOM	3410	CD	LYS	A	214	7.289	38.891	14.185	1.00 43.45	C
ATOM	3413	CE	LYS	A	214	8.326	39.963	14.484	1.00 45.81	C
ATOM	3416	NZ	LYS	A	214	8.650	40.132	15.931	1.00 52.12	N
ATOM	3420	C	LYS	A	214	7.410	34.991	16.257	1.00 35.43	C
ATOM	3421	O	LYS	A	214	6.563	35.034	17.143	1.00 32.11	O
ATOM	3423	N	VAL	A	215	8.717	34.860	16.492	1.00 31.06	N
ATOM	3424	CA	VAL	A	215	9.291	34.852	17.846	1.00 30.95	C
ATOM	3426	CB	VAL	A	215	10.632	34.069	17.905	1.00 29.62	C
ATOM	3428	CG1	VAL	A	215	11.247	34.143	19.297	1.00 29.40	C
ATOM	3432	CG2	VAL	A	215	10.410	32.630	17.498	1.00 28.53	C
ATOM	3436	C	VAL	A	215	9.559	36.270	18.261	1.00 35.89	C
ATOM	3437	O	VAL	A	215	10.305	36.973	17.585	1.00 31.33	O
ATOM	3439	N	ASN	A	216	8.944	36.712	19.356	1.00 36.40	N
ATOM	3440	CA	ASN	A	216	9.187	38.060	19.847	1.00 40.64	C
ATOM	3442	CB	ASN	A	216	7.938	38.675	20.516	1.00 42.87	C
ATOM	3445	CG	ASN	A	216	6.923	39.195	19.494	1.00 45.85	C
ATOM	3446	OD1	ASN	A	216	7.232	39.336	18.312	1.00 50.54	O
ATOM	3447	ND2	ASN	A	216	5.713	39.485	19.949	1.00 49.81	N
ATOM	3450	C	ASN	A	216	10.360	38.028	20.784	1.00 41.81	C
ATOM	3451	O	ASN	A	216	11.294	38.803	20.626	1.00 40.16	O
ATOM	3453	N	PHE	A	217	10.322	37.111	21.749	1.00 43.07	N
ATOM	3454	CA	PHE	A	217	11.369	37.032	22.757	1.00 45.06	C
ATOM	3456	CB	PHE	A	217	11.000	37.851	24.013	1.00 47.87	C
ATOM	3459	CG	PHE	A	217	10.590	39.269	23.712	1.00 53.55	C
ATOM	3460	CD1	PHE	A	217	11.550	40.244	23.445	1.00 56.87	C
ATOM	3462	CE1	PHE	A	217	11.171	41.566	23.135	1.00 57.21	C
ATOM	3464	CZ	PHE	A	217	9.832	41.908	23.093	1.00 57.51	C
ATOM	3466	CE2	PHE	A	217	8.857	40.932	23.348	1.00 58.56	C

ATOM	3468	CD2	PHE	A	217	9.243	39.621	23.650	1.00	55.94	C
ATOM	3470	C	PHE	A	217	11.598	35.589	23.154	1.00	40.73	C
ATOM	3471	O	PHE	A	217	10.705	34.747	23.045	1.00	36.30	O
ATOM	3473	N	LEU	A	218	12.823	35.324	23.581	1.00	43.18	N
ATOM	3474	CA	LEU	A	218	13.195	34.086	24.253	1.00	43.32	C
ATOM	3476	CB	LEU	A	218	14.517	33.533	23.696	1.00	43.74	C
ATOM	3479	CG	LEU	A	218	15.020	32.205	24.254	1.00	41.72	C
ATOM	3481	CD1	LEU	A	218	14.143	31.065	23.758	1.00	38.76	C
ATOM	3485	CD2	LEU	A	218	16.482	31.997	23.878	1.00	43.12	C
ATOM	3489	C	LEU	A	218	13.378	34.495	25.703	1.00	46.06	C
ATOM	3490	O	LEU	A	218	14.335	35.203	26.045	1.00	44.89	O
ATOM	3492	N	LYS	A	219	12.442	34.065	26.534	1.00	47.26	N
ATOM	3493	CA	LYS	A	219	12.383	34.454	27.932	1.00	51.12	C
ATOM	3495	CB	LYS	A	219	11.088	35.224	28.197	1.00	54.26	C
ATOM	3498	CG	LYS	A	219	10.827	35.604	29.660	1.00	60.33	C
ATOM	3501	CD	LYS	A	219	11.314	37.008	29.970	1.00	65.25	C
ATOM	3504	CE	LYS	A	219	10.724	37.530	31.272	1.00	65.86	C
ATOM	3507	NZ	LYS	A	219	11.136	38.940	31.501	1.00	67.92	N
ATOM	3511	C	LYS	A	219	12.433	33.165	28.756	1.00	50.43	C
ATOM	3512	O	LYS	A	219	11.396	32.540	29.003	1.00	50.49	O
ATOM	3514	N	PRO	A	220	13.638	32.777	29.184	1.00	48.51	N
ATOM	3515	CA	PRO	A	220	13.852	31.520	29.892	1.00	52.44	C
ATOM	3517	CB	PRO	A	220	15.358	31.316	29.742	1.00	53.83	C
ATOM	3520	CG	PRO	A	220	15.903	32.741	29.819	1.00	53.66	C
ATOM	3523	CD	PRO	A	220	14.891	33.546	29.043	1.00	49.91	C
ATOM	3526	C	PRO	A	220	13.501	31.617	31.388	1.00	51.39	C
ATOM	3527	O	PRO	A	220	13.682	32.680	31.981	1.00	47.30	O
ATOM	3528	N	PRO	A	221	13.052	30.498	32.006	1.00	50.48	N
ATOM	3529	CA	PRO	A	221	12.655	30.534	33.417	1.00	46.11	C
ATOM	3531	CB	PRO	A	221	12.258	29.080	33.721	1.00	48.96	C
ATOM	3534	CG	PRO	A	221	11.993	28.452	32.396	1.00	52.71	C
ATOM	3537	CD	PRO	A	221	12.890	29.152	31.427	1.00	50.85	C
ATOM	3540	C	PRO	A	221	13.771	30.964	34.359	1.00	44.56	C
ATOM	3541	O	PRO	A	221	14.956	30.865	34.008	1.00	37.87	O
ATOM	3542	N	PRO	A	222	13.395	31.424	35.566	1.00	43.83	N
ATOM	3543	CA	PRO	A	222	14.281	31.870	36.610	1.00	44.77	C
ATOM	3545	CB	PRO	A	222	13.429	31.684	37.862	1.00	44.44	C
ATOM	3548	CG	PRO	A	222	12.142	32.148	37.405	1.00	43.23	C
ATOM	3551	CD	PRO	A	222	11.995	31.585	36.005	1.00	45.31	C
ATOM	3554	C	PRO	A	222	15.598	31.149	36.738	1.00	45.66	C
ATOM	3555	O	PRO	A	222	16.626	31.812	36.713	1.00	58.01	O
ATOM	3556	N	ASN	A	223	15.606	29.835	36.885	1.00	43.71	N
ATOM	3557	CA	ASN	A	223	16.879	29.148	37.119	1.00	45.83	C
ATOM	3559	CB	ASN	A	223	16.682	27.985	38.114	1.00	50.76	C
ATOM	3562	CG	ASN	A	223	16.556	28.453	39.594	1.00	58.93	C
ATOM	3563	OD1	ASN	A	223	16.727	29.638	39.927	1.00	63.96	O
ATOM	3564	ND2	ASN	A	223	16.256	27.499	40.481	1.00	61.78	N
ATOM	3567	C	ASN	A	223	17.587	28.649	35.825	1.00	43.88	C
ATOM	3568	O	ASN	A	223	18.562	27.911	35.904	1.00	41.41	O
ATOM	3570	N	PHE	A	224	17.108	29.049	34.644	1.00	42.11	N
ATOM	3571	CA	PHE	A	224	17.643	28.524	33.382	1.00	39.78	C
ATOM	3573	CB	PHE	A	224	16.742	28.940	32.217	1.00	41.25	C
ATOM	3576	CG	PHE	A	224	17.160	28.374	30.873	1.00	41.53	C
ATOM	3577	CD1	PHE	A	224	16.895	27.054	30.545	1.00	38.32	C
ATOM	3579	CE1	PHE	A	224	17.251	26.539	29.304	1.00	44.52	C
ATOM	3581	CZ	PHE	A	224	17.901	27.341	28.379	1.00	40.61	C
ATOM	3583	CE2	PHE	A	224	18.175	28.657	28.687	1.00	44.90	C
ATOM	3585	CD2	PHE	A	224	17.798	29.177	29.931	1.00	45.09	C
ATOM	3587	C	PHE	A	224	19.053	29.043	33.150	1.00	39.69	C
ATOM	3588	O	PHE	A	224	19.330	30.214	33.404	1.00	40.98	O
ATOM	3590	N	ASN	A	225	19.960	28.175	32.710	1.00	36.24	N
ATOM	3591	CA	ASN	A	225	21.310	28.630	32.313	1.00	38.15	C
ATOM	3593	CB	ASN	A	225	22.362	28.214	33.342	1.00	39.11	C
ATOM	3596	CG	ASN	A	225	23.733	28.769	33.024	1.00	43.41	C
ATOM	3597	OD1	ASN	A	225	24.223	29.668	33.708	1.00	50.89	O
ATOM	3598	ND2	ASN	A	225	24.352	28.258	31.972	1.00	39.09	N
ATOM	3601	C	ASN	A	225	21.647	28.070	30.932	1.00	32.66	C

ATOM	3602	O	ASN A 225	21.807	26.869	30.785	1.00	30.49		O
ATOM	3604	N	PHE A 226	21.748	28.935	29.922	1.00	32.26		N
ATOM	3605	CA	PHE A 226	21.770	28.436	28.554	1.00	30.37		C
ATOM	3607	CB	PHE A 226	21.772	29.541	27.500	1.00	30.75		C
ATOM	3610	CG	PHE A 226	21.695	28.979	26.109	1.00	27.83		C
ATOM	3611	CD1	PHE A 226	20.491	28.488	25.628	1.00	26.54		C
ATOM	3613	CE1	PHE A 226	20.427	27.864	24.352	1.00	27.53		C
ATOM	3615	CZ	PHE A 226	21.571	27.752	23.586	1.00	25.59		C
ATOM	3617	CE2	PHE A 226	22.793	28.232	24.074	1.00	25.56		C
ATOM	3619	CD2	PHE A 226	22.849	28.808	25.343	1.00	30.06		C
ATOM	3621	C	PHE A 226	22.950	27.514	28.299	1.00	27.65		C
ATOM	3622	O	PHE A 226	22.812	26.469	27.657	1.00	26.64		O
ATOM	3624	N	ASP A 227	24.103	27.930	28.790	1.00	32.05		N
ATOM	3625	CA	ASP A 227	25.342	27.179	28.633	1.00	33.09		C
ATOM	3627	CB	ASP A 227	26.513	27.945	29.263	1.00	36.33		C
ATOM	3630	CG	ASP A 227	26.843	29.267	28.524	1.00	41.06		C
ATOM	3631	OD1	ASP A 227	27.476	30.138	29.149	1.00	50.34		O
ATOM	3632	OD2	ASP A 227	26.495	29.449	27.330	1.00	49.29		O
ATOM	3633	C	ASP A 227	25.227	25.787	29.220	1.00	31.09		C
ATOM	3634	O	ASP A 227	25.686	24.828	28.622	1.00	29.55		O
ATOM	3636	N	GLU A 228	24.616	25.657	30.395	1.00	31.17		N
ATOM	3637	CA	GLU A 228	24.375	24.342	30.963	1.00	31.39		C
ATOM	3639	CB	GLU A 228	23.927	24.463	32.426	1.00	36.84		C
ATOM	3642	CG	GLU A 228	25.062	24.858	33.366	1.00	42.58		C
ATOM	3645	CD	GLU A 228	24.569	25.390	34.723	1.00	47.16		C
ATOM	3646	OE1	GLU A 228	25.337	26.145	35.358	1.00	51.94		O
ATOM	3647	OE2	GLU A 228	23.420	25.069	35.132	1.00	50.01		O
ATOM	3648	C	GLU A 228	23.345	23.552	30.173	1.00	29.96		C
ATOM	3649	O	GLU A 228	23.511	22.357	29.972	1.00	29.01		O
ATOM	3651	N	PHE A 229	22.292	24.234	29.718	1.00	24.28		N
ATOM	3652	CA	PHE A 229	21.291	23.667	28.842	1.00	26.33		C
ATOM	3654	CB	PHE A 229	20.237	24.745	28.474	1.00	23.83		C
ATOM	3657	CG	PHE A 229	19.167	24.249	27.518	1.00	24.73		C
ATOM	3658	CD1	PHE A 229	18.229	23.333	27.931	1.00	32.47		C
ATOM	3660	CE1	PHE A 229	17.233	22.884	27.061	1.00	30.97		C
ATOM	3662	CZ	PHE A 229	17.187	23.389	25.763	1.00	32.62		C
ATOM	3664	CE2	PHE A 229	18.130	24.324	25.358	1.00	24.04		C
ATOM	3666	CD2	PHE A 229	19.085	24.747	26.226	1.00	26.35		C
ATOM	3668	C	PHE A 229	21.923	23.144	27.558	1.00	24.76		C
ATOM	3669	O	PHE A 229	21.664	22.010	27.134	1.00	24.73		O
ATOM	3671	N	PHE A 230	22.733	23.992	26.944	1.00	24.91		N
ATOM	3672	CA	PHE A 230	23.428	23.618	25.708	1.00	22.35		C
ATOM	3674	CB	PHE A 230	24.264	24.782	25.172	1.00	21.15		C
ATOM	3677	CG	PHE A 230	24.923	24.476	23.837	1.00	21.87		C
ATOM	3678	CD1	PHE A 230	26.222	24.019	23.787	1.00	22.02		C
ATOM	3680	CE1	PHE A 230	26.802	23.692	22.591	1.00	23.85		C
ATOM	3682	CZ	PHE A 230	26.095	23.804	21.427	1.00	21.50		C
ATOM	3684	CE2	PHE A 230	24.794	24.245	21.446	1.00	27.74		C
ATOM	3686	CD2	PHE A 230	24.215	24.590	22.649	1.00	23.18		C
ATOM	3688	C	PHE A 230	24.280	22.383	25.919	1.00	23.28		C
ATOM	3689	O	PHE A 230	24.183	21.412	25.163	1.00	26.47		O
ATOM	3691	N	THR A 231	25.069	22.372	26.984	1.00	26.09		N
ATOM	3692	CA	THR A 231	25.900	21.210	27.253	1.00	22.63		C
ATOM	3694	CB	THR A 231	26.690	21.388	28.534	1.00	30.15		C
ATOM	3696	OG1	THR A 231	27.600	22.479	28.359	1.00	28.26		O
ATOM	3698	CG2	THR A 231	27.456	20.087	28.870	1.00	28.81		C
ATOM	3702	C	THR A 231	25.111	19.906	27.308	1.00	28.46		C
ATOM	3703	O	THR A 231	25.564	18.882	26.774	1.00	28.99		O
ATOM	3705	N	LYS A 232	23.957	19.913	27.967	1.00	28.22		N
ATOM	3706	CA	LYS A 232	23.115	18.716	28.012	1.00	32.59		C
ATOM	3708	CB	LYS A 232	21.887	18.918	28.916	1.00	36.58		C
ATOM	3711	CG	LYS A 232	22.186	18.852	30.414	1.00	42.77		C
ATOM	3714	CD	LYS A 232	20.996	19.415	31.235	1.00	47.43		C
ATOM	3717	CE	LYS A 232	21.446	19.999	32.580	1.00	51.41		C
ATOM	3720	NZ	LYS A 232	20.710	21.253	32.903	1.00	55.62		N
ATOM	3724	C	LYS A 232	22.640	18.343	26.624	1.00	29.32		C
ATOM	3725	O	LYS A 232	22.566	17.163	26.287	1.00	27.10		O

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ATOM   3727  N   CYS A 233      22.298  19.363  25.828  1.00 27.45           N
ATOM   3728  CA  CYS A 233      21.874  19.141  24.450  1.00 29.41           C
ATOM   3730  CB  CYS A 233      21.392  20.456  23.825  1.00 29.01           C
ATOM   3733  SG  CYS A 233      19.785  20.908  24.465  1.00 26.78           S
ATOM   3735  C   CYS A 233      22.951  18.468  23.604  1.00 24.68           C
ATOM   3736  O   CYS A 233      22.651  17.618  22.765  1.00 24.75           O
ATOM   3738  N   THR A 234      24.212  18.775  23.870  1.00 26.06           N
ATOM   3739  CA  THR A 234      25.297  18.147  23.105  1.00 26.53           C
ATOM   3741  CB  THR A 234      26.650  18.791  23.400  1.00 25.12           C
ATOM   3743  OG1 THR A 234      26.988  18.620  24.773  1.00 32.36           O
ATOM   3745  CG2 THR A 234      26.624  20.285  23.047  1.00 26.70           C
ATOM   3749  C   THR A 234      25.398  16.626  23.248  1.00 29.86           C
ATOM   3750  O   THR A 234      26.030  15.965  22.403  1.00 25.50           O
ATOM   3752  N   THR A 235      24.763  16.068  24.284  1.00 28.75           N
ATOM   3753  CA  THR A 235      24.669  14.603  24.472  1.00 29.57           C
ATOM   3755  CB  THR A 235      23.701  14.247  25.593  1.00 30.64           C
ATOM   3757  OG1 THR A 235      24.320  14.584  26.820  1.00 30.55           O
ATOM   3759  CG2 THR A 235      23.279  12.707  25.566  1.00 31.88           C
ATOM   3763  C   THR A 235      24.120  13.929  23.274  1.00 30.78           C
ATOM   3764  O   THR A 235      24.519  12.819  22.957  1.00 35.59           O
ATOM   3766  N   PHE A 236      23.208  14.626  22.609  1.00 28.73           N
ATOM   3767  CA  PHE A 236      22.522  14.118  21.448  1.00 29.15           C
ATOM   3769  CB  PHE A 236      21.073  14.562  21.540  1.00 31.87           C
ATOM   3772  CG  PHE A 236      20.446  14.171  22.839  1.00 36.24           C
ATOM   3773  CD1 PHE A 236      20.201  15.116  23.827  1.00 33.78           C
ATOM   3775  CE1 PHE A 236      19.652  14.737  25.037  1.00 35.61           C
ATOM   3777  CZ  PHE A 236      19.378  13.384  25.278  1.00 38.57           C
ATOM   3779  CE2 PHE A 236      19.660  12.430  24.313  1.00 39.50           C
ATOM   3781  CD2 PHE A 236      20.196  12.827  23.106  1.00 36.02           C
ATOM   3783  C   PHE A 236      23.140  14.535  20.121  1.00 30.14           C
ATOM   3784  O   PHE A 236      22.598  14.204  19.081  1.00 32.35           O
ATOM   3786  N   MET A 237      24.264  15.253  20.160  1.00 29.29           N
ATOM   3787  CA  MET A 237      24.951  15.693  18.939  1.00 24.59           C
ATOM   3789  CB  MET A 237      25.357  17.148  19.045  1.00 22.45           C
ATOM   3792  CG  MET A 237      24.229  18.146  19.155  1.00 22.64           C
ATOM   3795  SD  MET A 237      24.819  19.783  19.651  1.00 30.27           S
ATOM   3796  CE  MET A 237      23.276  20.657  20.024  1.00 27.30           C
ATOM   3800  C   MET A 237      26.187  14.826  18.679  1.00 21.90           C
ATOM   3801  O   MET A 237      27.236  15.019  19.273  1.00 22.75           O
ATOM   3803  N   HIS A 238      26.021  13.885  17.760  1.00 23.43           N
ATOM   3804  CA  HIS A 238      26.992  12.852  17.418  1.00 25.69           C
ATOM   3806  CB  HIS A 238      26.466  12.039  16.215  1.00 26.67           C
ATOM   3809  CG  HIS A 238      27.166  10.732  15.975  1.00 22.08           C
ATOM   3810  ND1 HIS A 238      28.414  10.426  16.487  1.00 28.84           N
ATOM   3812  CE1 HIS A 238      28.773   9.220  16.075  1.00 21.84           C
ATOM   3814  NE2 HIS A 238      27.793   8.721  15.344  1.00 29.78           N
ATOM   3816  CD2 HIS A 238      26.798   9.664  15.231  1.00 24.06           C
ATOM   3818  C   HIS A 238      28.372  13.417  17.111  1.00 27.83           C
ATOM   3819  O   HIS A 238      29.366  12.852  17.559  1.00 28.50           O
ATOM   3821  N   TYR A 239      28.439  14.528  16.370  1.00 23.38           N
ATOM   3822  CA  TYR A 239      29.712  15.016  15.808  1.00 24.28           C
ATOM   3824  CB  TYR A 239      29.672  15.004  14.250  1.00 23.89           C
ATOM   3827  CG  TYR A 239      29.226  13.679  13.681  1.00 23.61           C
ATOM   3828  CD1 TYR A 239      27.976  13.529  13.069  1.00 27.33           C
ATOM   3830  CE1 TYR A 239      27.565  12.313  12.582  1.00 30.20           C
ATOM   3832  CZ  TYR A 239      28.399  11.216  12.697  1.00 31.77           C
ATOM   3833  OH  TYR A 239      28.028   9.966  12.223  1.00 34.92           O
ATOM   3835  CE2 TYR A 239      29.616  11.341  13.308  1.00 32.65           C
ATOM   3837  CD2 TYR A 239      30.023  12.568  13.801  1.00 26.01           C
ATOM   3839  C   TYR A 239      30.114  16.381  16.345  1.00 19.98           C
ATOM   3840  O   TYR A 239      30.994  17.034  15.787  1.00 24.99           O
ATOM   3842  N   TYR A 240      29.530  16.800  17.476  1.00 24.38           N
ATOM   3843  CA  TYR A 240      29.957  18.035  18.104  1.00 18.42           C
ATOM   3845  CB  TYR A 240      29.046  18.433  19.280  1.00 19.76           C
ATOM   3848  CG  TYR A 240      29.199  19.882  19.664  1.00 20.07           C
ATOM   3849  CD1 TYR A 240      28.754  20.885  18.806  1.00 22.00           C
ATOM   3851  CE1 TYR A 240      28.911  22.206  19.101  1.00 20.05           C
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ATOM	3853	CZ	TYR A 240	29.540	22.566	20.285	1.00	28.06		C
ATOM	3854	OH	TYR A 240	29.681	23.890	20.575	1.00	21.30		O
ATOM	3856	CE2	TYR A 240	29.976	21.597	21.179	1.00	22.90		C
ATOM	3858	CD2	TYR A 240	29.804	20.257	20.860	1.00	24.77		C
ATOM	3860	C	TYR A 240	31.429	17.960	18.559	1.00	23.90		C
ATOM	3861	O	TYR A 240	31.775	17.090	19.341	1.00	26.55		O
ATOM	3863	N	PRO A 241	32.313	18.860	18.054	1.00	22.20		N
ATOM	3864	CA	PRO A 241	33.723	18.813	18.432	1.00	24.29		C
ATOM	3866	CB	PRO A 241	34.292	20.035	17.743	1.00	24.96		C
ATOM	3869	CG	PRO A 241	33.470	20.137	16.526	1.00	24.34		C
ATOM	3872	CD	PRO A 241	32.098	19.948	17.089	1.00	25.68		C
ATOM	3875	C	PRO A 241	33.939	18.904	19.938	1.00	23.25		C
ATOM	3876	O	PRO A 241	33.418	19.792	20.562	1.00	20.92		O
ATOM	3877	N	SER A 242	34.706	17.978	20.501	1.00	25.33		N
ATOM	3878	CA	SER A 242	34.786	17.860	21.949	1.00	25.00		C
ATOM	3880	CB	SER A 242	33.701	16.884	22.395	1.00	26.66		C
ATOM	3883	OG	SER A 242	32.403	17.358	22.099	1.00	27.20		O
ATOM	3885	C	SER A 242	36.134	17.354	22.414	1.00	28.12		C
ATOM	3886	O	SER A 242	36.893	16.793	21.649	1.00	24.98		O
ATOM	3888	N	GLY A 243	36.405	17.514	23.701	1.00	27.99		N
ATOM	3889	CA	GLY A 243	37.614	16.966	24.270	1.00	30.50		C
ATOM	3892	C	GLY A 243	38.835	17.614	23.674	1.00	28.37		C
ATOM	3893	O	GLY A 243	38.903	18.827	23.568	1.00	29.31		O
ATOM	3895	N	GLU A 244	39.793	16.815	23.242	1.00	28.82		N
ATOM	3896	CA	GLU A 244	40.977	17.405	22.656	1.00	34.68		C
ATOM	3898	CB	GLU A 244	42.175	16.427	22.576	1.00	40.89		C
ATOM	3901	CG	GLU A 244	42.032	15.107	21.849	1.00	48.00		C
ATOM	3904	CD	GLU A 244	43.210	14.119	22.131	1.00	54.10		C
ATOM	3905	OE1	GLU A 244	43.401	13.183	21.310	1.00	58.67		O
ATOM	3906	OE2	GLU A 244	43.930	14.254	23.162	1.00	52.42		O
ATOM	3907	C	GLU A 244	40.662	18.142	21.338	1.00	30.22		C
ATOM	3908	O	GLU A 244	41.474	18.915	20.876	1.00	30.62		O
ATOM	3910	N	HIS A 245	39.465	17.935	20.781	1.00	24.05		N
ATOM	3911	CA	HIS A 245	39.036	18.643	19.565	1.00	24.77		C
ATOM	3913	CB	HIS A 245	38.587	17.637	18.518	1.00	23.81		C
ATOM	3916	CG	HIS A 245	39.718	16.795	18.002	1.00	26.82		C
ATOM	3917	ND1	HIS A 245	39.726	15.422	18.095	1.00	32.84		N
ATOM	3919	CE1	HIS A 245	40.859	14.959	17.594	1.00	37.91		C
ATOM	3921	NE2	HIS A 245	41.582	15.984	17.171	1.00	33.57		N
ATOM	3923	CD2	HIS A 245	40.895	17.143	17.427	1.00	31.21		C
ATOM	3925	C	HIS A 245	37.969	19.727	19.765	1.00	25.94		C
ATOM	3926	O	HIS A 245	37.407	20.214	18.799	1.00	25.17		O
ATOM	3928	N	LYS A 246	37.743	20.135	21.007	1.00	28.71		N
ATOM	3929	CA	LYS A 246	36.780	21.191	21.316	1.00	28.55		C
ATOM	3931	CB	LYS A 246	36.626	21.317	22.827	1.00	31.33		C
ATOM	3934	CG	LYS A 246	37.827	21.989	23.517	1.00	35.60		C
ATOM	3937	CD	LYS A 246	37.746	22.014	25.055	1.00	40.85		C
ATOM	3940	CE	LYS A 246	36.608	22.901	25.578	1.00	48.80		C
ATOM	3943	NZ	LYS A 246	36.696	24.354	25.166	1.00	53.81		N
ATOM	3947	C	LYS A 246	37.195	22.568	20.731	1.00	33.80		C
ATOM	3948	O	LYS A 246	36.395	23.486	20.673	1.00	30.33		O
ATOM	3950	N	ASN A 247	38.449	22.719	20.319	1.00	31.80		N
ATOM	3951	CA	ASN A 247	38.879	23.962	19.656	1.00	36.71		C
ATOM	3953	CB	ASN A 247	40.414	24.116	19.776	1.00	40.33		C
ATOM	3956	CG	ASN A 247	41.178	22.865	19.290	1.00	44.63		C
ATOM	3957	OD1	ASN A 247	40.804	21.725	19.608	1.00	45.22		O
ATOM	3958	ND2	ASN A 247	42.260	23.084	18.534	1.00	49.91		N
ATOM	3961	C	ASN A 247	38.488	24.069	18.167	1.00	37.67		C
ATOM	3962	O	ASN A 247	38.743	25.104	17.535	1.00	37.93		O
ATOM	3964	N	LEU A 248	37.886	23.018	17.603	1.00	32.86		N
ATOM	3965	CA	LEU A 248	37.643	22.955	16.146	1.00	32.90		C
ATOM	3967	CB	LEU A 248	38.029	21.588	15.569	1.00	29.03		C
ATOM	3970	CG	LEU A 248	39.513	21.208	15.660	1.00	34.37		C
ATOM	3972	CD1	LEU A 248	39.698	19.764	15.156	1.00	32.41		C
ATOM	3976	CD2	LEU A 248	40.449	22.147	14.908	1.00	33.64		C
ATOM	3980	C	LEU A 248	36.203	23.257	15.802	1.00	28.15		C
ATOM	3981	O	LEU A 248	35.289	22.997	16.597	1.00	26.82		O

ATOM	3983	N	LEU	A	249	35.991	23.788	14.601	1.00 23.41	N
ATOM	3984	CA	LEU	A	249	34.622	24.162	14.195	1.00 21.34	C
ATOM	3986	CB	LEU	A	249	34.637	25.316	13.176	1.00 23.86	C
ATOM	3989	CG	LEU	A	249	34.775	26.726	13.736	1.00 22.57	C
ATOM	3991	CD1	LEU	A	249	34.987	27.675	12.574	1.00 21.86	C
ATOM	3995	CD2	LEU	A	249	33.567	27.155	14.610	1.00 23.44	C
ATOM	3999	C	LEU	A	249	33.854	22.975	13.661	1.00 19.42	C
ATOM	4000	O	LEU	A	249	32.631	22.924	13.790	1.00 20.12	O
ATOM	4002	N	ARG	A	250	34.583	22.019	13.078	1.00 17.46	N
ATOM	4003	CA	ARG	A	250	34.039	20.794	12.525	1.00 17.26	C
ATOM	4005	CB	ARG	A	250	33.945	20.854	10.991	1.00 17.79	C
ATOM	4008	CG	ARG	A	250	33.011	21.913	10.454	1.00 20.82	C
ATOM	4011	CD	ARG	A	250	32.796	21.809	8.930	1.00 19.82	C
ATOM	4014	NE	ARG	A	250	31.989	20.666	8.566	1.00 15.76	N
ATOM	4016	CZ	ARG	A	250	31.896	20.173	7.345	1.00 16.97	C
ATOM	4017	NH1	ARG	A	250	32.580	20.704	6.337	1.00 18.44	N
ATOM	4020	NH2	ARG	A	250	31.115	19.148	7.121	1.00 16.60	N
ATOM	4023	C	ARG	A	250	34.950	19.613	12.848	1.00 19.81	C
ATOM	4024	O	ARG	A	250	36.183	19.704	12.704	1.00 19.76	O
ATOM	4026	N	LEU	A	251	34.328	18.498	13.216	1.00 21.72	N
ATOM	4027	CA	LEU	A	251	35.036	17.219	13.322	1.00 22.19	C
ATOM	4029	CB	LEU	A	251	34.095	16.102	13.721	1.00 21.25	C
ATOM	4032	CG	LEU	A	251	34.720	14.784	14.199	1.00 28.49	C
ATOM	4034	CD1	LEU	A	251	35.580	15.062	15.417	1.00 25.54	C
ATOM	4038	CD2	LEU	A	251	33.610	13.751	14.527	1.00 28.27	C
ATOM	4042	C	LEU	A	251	35.667	16.830	11.997	1.00 20.03	C
ATOM	4043	O	LEU	A	251	36.684	16.154	11.989	1.00 19.66	O
ATOM	4045	N	ALA	A	252	35.021	17.206	10.887	1.00 19.09	N
ATOM	4046	CA	ALA	A	252	35.541	16.919	9.532	1.00 19.36	C
ATOM	4048	CB	ALA	A	252	34.540	17.453	8.427	1.00 23.37	C
ATOM	4052	C	ALA	A	252	36.929	17.455	9.306	1.00 22.48	C
ATOM	4053	O	ALA	A	252	37.672	16.951	8.446	1.00 21.64	O
ATOM	4055	N	CME	A	253	37.330	18.454	10.094	1.00 21.49	N
ATOM	4056	CA	CME	A	253	38.685	18.954	10.007	1.00 21.71	C
ATOM	4057	CB	CME	A	253	38.872	20.202	10.865	1.00 26.14	C
ATOM	4058	SG	CME	A	253	37.857	21.618	10.389	1.00 29.16	S
ATOM	4059	SD	CME	A	253	38.212	21.718	8.385	1.00 39.16	S
ATOM	4060	CE	CME	A	253	36.590	21.037	7.860	1.00 40.42	C
ATOM	4061	CZ	CME	A	253	36.688	20.496	6.462	1.00 37.28	C
ATOM	4062	OH	CME	A	253	37.391	21.430	5.665	1.00 39.57	O
ATOM	4063	C	CME	A	253	39.729	17.896	10.439	1.00 23.89	C
ATOM	4064	O	CME	A	253	40.912	18.030	10.142	1.00 27.82	O
ATOM	4074	N	THR	A	254	39.278	16.869	11.157	1.00 23.77	N
ATOM	4075	CA	THR	A	254	40.143	15.814	11.656	1.00 26.05	C
ATOM	4077	CB	THR	A	254	39.734	15.366	13.117	1.00 23.61	C
ATOM	4079	OG1	THR	A	254	38.499	14.643	13.086	1.00 24.73	O
ATOM	4081	CG2	THR	A	254	39.632	16.517	14.054	1.00 28.09	C
ATOM	4085	C	THR	A	254	40.116	14.559	10.784	1.00 22.40	C
ATOM	4086	O	THR	A	254	40.725	13.556	11.142	1.00 19.76	O
ATOM	4088	N	LEU	A	255	39.410	14.577	9.652	1.00 18.96	N
ATOM	4089	CA	LEU	A	255	39.410	13.419	8.752	1.00 19.18	C
ATOM	4091	CB	LEU	A	255	38.587	13.695	7.502	1.00 24.28	C
ATOM	4094	CG	LEU	A	255	37.072	13.655	7.603	1.00 26.62	C
ATOM	4096	CD1	LEU	A	255	36.502	14.064	6.240	1.00 27.63	C
ATOM	4100	CD2	LEU	A	255	36.544	12.271	8.032	1.00 21.07	C
ATOM	4104	C	LEU	A	255	40.810	13.027	8.309	1.00 19.31	C
ATOM	4105	O	LEU	A	255	41.597	13.879	7.925	1.00 22.06	O
ATOM	4107	N	LYS	A	256	41.115	11.730	8.331	1.00 21.06	N
ATOM	4108	CA	LYS	A	256	42.409	11.256	7.844	1.00 21.13	C
ATOM	4110	CB	LYS	A	256	43.075	10.321	8.866	1.00 28.16	C
ATOM	4113	CG	LYS	A	256	43.337	10.968	10.257	1.00 30.54	C
ATOM	4116	CD	LYS	A	256	44.219	12.264	10.158	1.00 34.89	C
ATOM	4119	CE	LYS	A	256	44.179	13.113	11.451	1.00 40.81	C
ATOM	4122	NZ	LYS	A	256	44.559	14.557	11.251	1.00 40.28	N
ATOM	4126	C	LYS	A	256	42.243	10.585	6.470	1.00 18.50	C
ATOM	4127	O	LYS	A	256	41.161	10.114	6.129	1.00 22.62	O
ATOM	4129	N	PRO	A	257	43.316	10.602	5.652	1.00 20.18	N

ATOM	4130	CA	PRO	A	257	43.301	9.934	4.350	1.00 21.48	C
ATOM	4132	CB	PRO	A	257	44.797	9.871	3.973	1.00 22.07	C
ATOM	4135	CG	PRO	A	257	45.330	11.143	4.577	1.00 22.38	C
ATOM	4138	CD	PRO	A	257	44.627	11.232	5.917	1.00 21.09	C
ATOM	4141	C	PRO	A	257	42.681	8.546	4.419	1.00 22.38	C
ATOM	4142	O	PRO	A	257	42.936	7.774	5.371	1.00 18.65	O
ATOM	4143	N	ASP	A	258	41.846	8.265	3.432	1.00 20.81	N
ATOM	4144	CA	ASP	A	258	41.093	7.031	3.330	1.00 24.46	C
ATOM	4146	CB	ASP	A	258	39.923	7.041	4.348	1.00 24.43	C
ATOM	4149	CG	ASP	A	258	38.947	5.867	4.180	1.00 28.99	C
ATOM	4150	OD1	ASP	A	258	38.882	5.273	3.102	1.00 25.55	O
ATOM	4151	OD2	ASP	A	258	38.173	5.603	5.120	1.00 33.16	O
ATOM	4152	C	ASP	A	258	40.598	6.999	1.902	1.00 22.54	C
ATOM	4153	O	ASP	A	258	39.617	7.656	1.588	1.00 24.38	O
ATOM	4155	N	PRO	A	259	41.300	6.264	1.019	1.00 18.97	N
ATOM	4156	CA	PRO	A	259	40.964	6.249	-0.399	1.00 20.73	C
ATOM	4158	CB	PRO	A	259	41.940	5.189	-0.995	1.00 24.21	C
ATOM	4161	CG	PRO	A	259	43.097	5.203	-0.071	1.00 24.40	C
ATOM	4164	CD	PRO	A	259	42.526	5.483	1.297	1.00 21.64	C
ATOM	4167	C	PRO	A	259	39.508	5.947	-0.732	1.00 22.19	C
ATOM	4168	O	PRO	A	259	38.960	6.605	-1.593	1.00 21.30	O
ATOM	4169	N	GLU	A	260	38.888	4.976	-0.043	1.00 19.68	N
ATOM	4170	CA	GLU	A	260	37.497	4.575	-0.303	1.00 21.65	C
ATOM	4172	CB	GLU	A	260	37.159	3.316	0.518	1.00 23.58	C
ATOM	4175	CG	GLU	A	260	35.684	2.955	0.568	1.00 35.73	C
ATOM	4178	CD	GLU	A	260	35.394	1.707	1.438	1.00 45.05	C
ATOM	4179	OE1	GLU	A	260	34.232	1.550	1.869	1.00 53.58	O
ATOM	4180	OE2	GLU	A	260	36.324	0.898	1.700	1.00 52.10	O
ATOM	4181	C	GLU	A	260	36.521	5.729	0.027	1.00 22.59	C
ATOM	4182	O	GLU	A	260	35.567	6.001	-0.717	1.00 19.36	O
ATOM	4184	N	LEU	A	261	36.788	6.430	1.122	1.00 21.42	N
ATOM	4185	CA	LEU	A	261	35.926	7.528	1.535	1.00 20.77	C
ATOM	4187	CB	LEU	A	261	36.259	7.969	2.954	1.00 21.44	C
ATOM	4190	CG	LEU	A	261	35.429	9.139	3.500	1.00 22.45	C
ATOM	4192	CD1	LEU	A	261	33.895	8.923	3.410	1.00 17.93	C
ATOM	4196	CD2	LEU	A	261	35.867	9.418	4.949	1.00 22.32	C
ATOM	4200	C	LEU	A	261	36.116	8.696	0.579	1.00 18.95	C
ATOM	4201	O	LEU	A	261	35.170	9.291	0.126	1.00 20.66	O
ATOM	4203	N	GLU	A	262	37.353	9.014	0.254	1.00 19.00	N
ATOM	4204	CA	GLU	A	262	37.611	10.140	-0.621	1.00 19.04	C
ATOM	4206	CB	GLU	A	262	39.098	10.442	-0.741	1.00 18.94	C
ATOM	4209	CG	GLU	A	262	39.410	11.624	-1.634	1.00 17.60	C
ATOM	4212	CD	GLU	A	262	40.885	12.094	-1.564	1.00 20.54	C
ATOM	4213	OE1	GLU	A	262	41.418	12.503	-2.615	1.00 20.70	O
ATOM	4214	OE2	GLU	A	262	41.487	12.076	-0.474	1.00 17.42	O
ATOM	4215	C	GLU	A	262	36.996	9.952	-1.989	1.00 18.71	C
ATOM	4216	O	GLU	A	262	36.533	10.932	-2.591	1.00 17.96	O
ATOM	4218	N	MET	A	263	37.031	8.721	-2.493	1.00 19.29	N
ATOM	4219	CA	MET	A	263	36.408	8.385	-3.784	1.00 17.82	C
ATOM	4221	CB	MET	A	263	36.649	6.913	-4.162	1.00 19.06	C
ATOM	4224	CG	MET	A	263	37.755	6.654	-5.163	1.00 28.44	C
ATOM	4227	SD	MET	A	263	37.929	4.878	-5.563	1.00 35.21	S
ATOM	4228	CE	MET	A	263	36.331	4.263	-5.111	1.00 30.40	C
ATOM	4232	C	MET	A	263	34.907	8.664	-3.765	1.00 23.36	C
ATOM	4233	O	MET	A	263	34.328	9.204	-4.722	1.00 20.62	O
ATOM	4235	N	SER	A	264	34.298	8.304	-2.652	1.00 21.09	N
ATOM	4236	CA	SER	A	264	32.918	8.591	-2.388	1.00 20.59	C
ATOM	4238	CB	SER	A	264	32.485	7.806	-1.136	1.00 23.98	C
ATOM	4241	OG	SER	A	264	31.162	8.082	-0.828	1.00 36.79	O
ATOM	4243	C	SER	A	264	32.589	10.082	-2.266	1.00 22.88	C
ATOM	4244	O	SER	A	264	31.673	10.540	-2.926	1.00 18.85	O
ATOM	4246	N	LEU	A	265	33.362	10.839	-1.480	1.00 20.55	N
ATOM	4247	CA	LEU	A	265	33.173	12.277	-1.309	1.00 20.20	C
ATOM	4249	CB	LEU	A	265	34.029	12.785	-0.133	1.00 17.52	C
ATOM	4252	CG	LEU	A	265	33.704	12.162	1.229	1.00 19.05	C
ATOM	4254	CD1	LEU	A	265	34.524	12.799	2.341	1.00 24.35	C
ATOM	4258	CD2	LEU	A	265	32.231	12.295	1.499	1.00 20.72	C

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ATOM   4262  C    LEU A 265      33.442  13.131  -2.554  1.00 16.75           C
ATOM   4263  O    LEU A 265      32.738  14.109  -2.798  1.00 18.28           O
ATOM   4265  N    GLN A 266      34.429  12.762  -3.348  1.00 14.76           N
ATOM   4266  CA   GLN A 266      34.776  13.577  -4.502  1.00 19.29           C
ATOM   4268  CB   GLN A 266      36.065  13.108  -5.139  1.00 19.96           C
ATOM   4271  CG   GLN A 266      35.914  11.942  -6.091  1.00 22.74           C
ATOM   4274  CD   GLN A 266      37.010  11.963  -7.109  1.00 26.95           C
ATOM   4275  OE1  GLN A 266      36.804  12.331  -8.272  1.00 29.77           O
ATOM   4276  NE2  GLN A 266      38.196  11.653  -6.665  1.00 18.49           N
ATOM   4279  C    GLN A 266      33.681  13.682  -5.552  1.00 16.94           C
ATOM   4280  O    GLN A 266      33.623  14.655  -6.282  1.00 19.17           O
ATOM   4282  N    LYS A 267      32.788  12.695  -5.596  1.00 17.99           N
ATOM   4283  CA   LYS A 267      31.738  12.650  -6.581  1.00 15.56           C
ATOM   4285  CB   LYS A 267      31.013  11.301  -6.557  1.00 18.55           C
ATOM   4288  CG   LYS A 267      31.885  10.074  -6.824  1.00 21.91           C
ATOM   4291  CD   LYS A 267      31.011   8.803  -6.891  1.00 23.28           C
ATOM   4294  CE   LYS A 267      31.834   7.536  -7.196  1.00 29.39           C
ATOM   4297  NZ   LYS A 267      32.993   7.424  -6.325  1.00 38.38           N
ATOM   4301  C    LYS A 267      30.722  13.756  -6.387  1.00 18.70           C
ATOM   4302  O    LYS A 267      29.969  14.057  -7.309  1.00 15.61           O
ATOM   4304  N    TYR A 268      30.694  14.364  -5.208  1.00 19.22           N
ATOM   4305  CA   TYR A 268      29.740  15.453  -4.939  1.00 19.44           C
ATOM   4307  CB   TYR A 268      29.396  15.506  -3.445  1.00 17.80           C
ATOM   4310  CG   TYR A 268      28.627  14.336  -2.934  1.00 17.99           C
ATOM   4311  CD1  TYR A 268      29.277  13.175  -2.516  1.00 19.52           C
ATOM   4313  CE1  TYR A 268      28.569  12.089  -2.010  1.00 18.69           C
ATOM   4315  CZ   TYR A 268      27.173  12.147  -1.945  1.00 17.83           C
ATOM   4316  OH   TYR A 268      26.431  11.077  -1.446  1.00 22.90           O
ATOM   4318  CE2  TYR A 268      26.512  13.285  -2.340  1.00 18.33           C
ATOM   4320  CD2  TYR A 268      27.240  14.375  -2.867  1.00 18.30           C
ATOM   4322  C    TYR A 268      30.282  16.818  -5.350  1.00 21.91           C
ATOM   4323  O    TYR A 268      29.561  17.794  -5.334  1.00 24.10           O
ATOM   4325  N    VAL A 269      31.553  16.867  -5.721  1.00 23.55           N
ATOM   4326  CA   VAL A 269      32.287  18.091  -5.997  1.00 23.87           C
ATOM   4328  CB   VAL A 269      33.515  18.148  -5.038  1.00 25.63           C
ATOM   4330  CG1  VAL A 269      34.319  19.377  -5.277  1.00 30.20           C
ATOM   4334  CG2  VAL A 269      33.015  18.120  -3.561  1.00 23.83           C
ATOM   4338  C    VAL A 269      32.744  18.204  -7.480  1.00 24.25           C
ATOM   4339  O    VAL A 269      33.190  17.219  -8.111  1.00 25.56           O
ATOM   4341  N    MET A 270      32.644  19.421  -7.996  1.00 22.53           N
ATOM   4342  CA AMET A 270      32.975  19.726  -9.387  0.50 24.50           C
ATOM   4343  CA BMET A 270      32.971  19.735  -9.384  0.50 23.65           C
ATOM   4346  CB AMET A 270      32.597  21.181  -9.700  0.50 30.00           C
ATOM   4347  CB BMET A 270      32.587  21.200  -9.671  0.50 27.63           C
ATOM   4352  CG AMET A 270      31.093  21.444  -9.753  0.50 35.25           C
ATOM   4353  CG BMET A 270      32.082  21.445 -11.075  0.50 33.03           C
ATOM   4358  SD AMET A 270      30.630  23.189  -9.600  0.50 45.01           S
ATOM   4359  SD BMET A 270      31.738  23.177 -11.423  0.50 33.24           S
ATOM   4360  CE AMET A 270      32.075  23.965 -10.363  0.50 37.62           C
ATOM   4361  CE BMET A 270      30.050  23.286 -10.792  0.50 39.48           C
ATOM   4368  C    MET A 270      34.467  19.510  -9.650  1.00 23.35           C
ATOM   4369  O    MET A 270      35.310  19.771  -8.800  1.00 21.30           O
ATOM   4371  N    GLU A 271      34.805  19.027 -10.833  1.00 23.45           N
ATOM   4372  CA   GLU A 271      36.202  18.715 -11.135  1.00 26.08           C
ATOM   4374  CB   GLU A 271      36.341  17.999 -12.494  1.00 31.96           C
ATOM   4377  CG   GLU A 271      36.968  18.783 -13.649  1.00 42.65           C
ATOM   4380  CD   GLU A 271      37.177  17.910 -14.901  1.00 52.83           C
ATOM   4381  OE1  GLU A 271      38.309  17.896 -15.446  1.00 58.45           O
ATOM   4382  OE2  GLU A 271      36.214  17.223 -15.329  1.00 60.50           O
ATOM   4383  C    GLU A 271      37.133  19.939 -11.043  1.00 22.87           C
ATOM   4384  O    GLU A 271      38.298  19.809 -10.688  1.00 22.47           O
ATOM   4386  N    SER A 272      36.631  21.116 -11.396  1.00 22.30           N
ATOM   4387  CA   SER A 272      37.465  22.342 -11.339  1.00 24.32           C
ATOM   4389  CB   SER A 272      36.732  23.485 -12.003  1.00 25.84           C
ATOM   4392  OG   SER A 272      35.485  23.605 -11.379  1.00 33.27           O
ATOM   4394  C    SER A 272      37.826  22.702  -9.907  1.00 22.92           C
ATOM   4395  O    SER A 272      38.909  23.237  -9.651  1.00 21.22           O
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ATOM	4397	N	ILE	A	273	36.932	22.385	-8.968	1.00	20.91	N
ATOM	4398	CA	ILE	A	273	37.225	22.536	-7.544	1.00	19.58	C
ATOM	4400	CB	ILE	A	273	35.954	22.378	-6.668	1.00	20.51	C
ATOM	4402	CG1	ILE	A	273	34.888	23.429	-7.014	1.00	22.41	C
ATOM	4405	CD1	ILE	A	273	35.242	24.798	-6.597	1.00	31.29	C
ATOM	4409	CG2	ILE	A	273	36.346	22.464	-5.186	1.00	20.59	C
ATOM	4413	C	ILE	A	273	38.242	21.519	-7.074	1.00	16.73	C
ATOM	4414	O	ILE	A	273	39.197	21.845	-6.342	1.00	21.86	O
ATOM	4416	N	LEU	A	274	38.038	20.265	-7.454	1.00	20.56	N
ATOM	4417	CA	LEU	A	274	39.029	19.215	-7.139	1.00	18.49	C
ATOM	4419	CB	LEU	A	274	38.590	17.870	-7.726	1.00	20.02	C
ATOM	4422	CG	LEU	A	274	37.295	17.239	-7.177	1.00	17.92	C
ATOM	4424	CD1	LEU	A	274	36.920	15.937	-7.932	1.00	15.85	C
ATOM	4428	CD2	LEU	A	274	37.353	16.940	-5.663	1.00	20.81	C
ATOM	4432	C	LEU	A	274	40.410	19.620	-7.654	1.00	20.29	C
ATOM	4433	O	LEU	A	274	41.429	19.445	-6.971	1.00	18.27	O
ATOM	4435	N	LYS	A	275	40.431	20.264	-8.815	1.00	18.93	N
ATOM	4436	CA	LYS	A	275	41.678	20.705	-9.379	1.00	19.81	C
ATOM	4438	CB	LYS	A	275	41.513	21.250	-10.801	1.00	22.08	C
ATOM	4441	CG	LYS	A	275	42.819	21.247	-11.576	1.00	30.67	C
ATOM	4444	CD	LYS	A	275	42.659	21.710	-13.046	1.00	29.48	C
ATOM	4447	CE	LYS	A	275	44.001	21.705	-13.764	1.00	34.97	C
ATOM	4450	NZ	LYS	A	275	43.975	22.485	-15.022	1.00	38.62	N
ATOM	4454	C	LYS	A	275	42.355	21.735	-8.499	1.00	18.42	C
ATOM	4455	O	LYS	A	275	43.566	21.701	-8.381	1.00	17.59	O
ATOM	4457	N	GLN	A	276	41.588	22.676	-7.938	1.00	20.27	N
ATOM	4458	CA	GLN	A	276	42.146	23.673	-7.045	1.00	21.47	C
ATOM	4460	CB	GLN	A	276	41.086	24.753	-6.768	1.00	26.12	C
ATOM	4463	CG	GLN	A	276	41.476	25.744	-5.724	1.00	29.76	C
ATOM	4466	CD	GLN	A	276	40.310	26.603	-5.295	1.00	33.76	C
ATOM	4467	OE1	GLN	A	276	40.014	26.708	-4.095	1.00	38.18	O
ATOM	4468	NE2	GLN	A	276	39.623	27.194	-6.266	1.00	23.51	N
ATOM	4471	C	GLN	A	276	42.606	22.982	-5.765	1.00	21.27	C
ATOM	4472	O	GLN	A	276	43.715	23.238	-5.259	1.00	15.55	O
ATOM	4474	N	ILE	A	277	41.769	22.069	-5.255	1.00	21.28	N
ATOM	4475	CA	ILE	A	277	42.119	21.277	-4.060	1.00	18.93	C
ATOM	4477	CB	ILE	A	277	40.995	20.314	-3.703	1.00	15.88	C
ATOM	4479	CG1	ILE	A	277	39.876	21.127	-3.042	1.00	16.64	C
ATOM	4482	CD1	ILE	A	277	38.605	20.387	-2.808	1.00	19.15	C
ATOM	4486	CG2	ILE	A	277	41.498	19.200	-2.813	1.00	17.38	C
ATOM	4490	C	ILE	A	277	43.456	20.537	-4.179	1.00	15.97	C
ATOM	4491	O	ILE	A	277	44.231	20.466	-3.221	1.00	20.18	O
ATOM	4493	N	ASP	A	278	43.732	20.016	-5.356	1.00	16.52	N
ATOM	4494	CA	ASP	A	278	44.966	19.265	-5.640	1.00	21.05	C
ATOM	4496	CB	ASP	A	278	44.690	18.312	-6.822	1.00	19.78	C
ATOM	4499	CG	ASP	A	278	43.775	17.156	-6.436	1.00	20.86	C
ATOM	4500	OD1	ASP	A	278	43.796	16.750	-5.261	1.00	19.41	O
ATOM	4501	OD2	ASP	A	278	43.063	16.618	-7.315	1.00	20.13	O
ATOM	4502	C	ASP	A	278	46.174	20.158	-5.974	1.00	22.15	C
ATOM	4503	O	ASP	A	278	47.233	19.666	-6.426	1.00	22.91	O
ATOM	4505	N	ASN	A	279	45.995	21.469	-5.811	1.00	18.53	N
ATOM	4506	CA	ASN	A	279	47.058	22.464	-6.095	1.00	21.46	C
ATOM	4508	CB	ASN	A	279	48.202	22.324	-5.090	1.00	19.43	C
ATOM	4511	CG	ASN	A	279	47.744	22.507	-3.648	1.00	28.47	C
ATOM	4512	OD1	ASN	A	279	48.081	21.710	-2.765	1.00	33.08	O
ATOM	4513	ND2	ASN	A	279	47.002	23.573	-3.396	1.00	18.99	N
ATOM	4516	C	ASN	A	279	47.564	22.414	-7.526	1.00	18.97	C
ATOM	4517	O	ASN	A	279	48.745	22.620	-7.785	1.00	23.46	O
ATOM	4519	N	LYS	A	280	46.650	22.157	-8.453	1.00	19.04	N
ATOM	4520	CA	LYS	A	280	46.952	22.145	-9.880	1.00	22.58	C
ATOM	4522	CB	LYS	A	280	46.536	20.811	-10.524	1.00	22.19	C
ATOM	4525	CG	LYS	A	280	47.423	19.598	-10.057	1.00	24.97	C
ATOM	4528	CD	LYS	A	280	47.055	18.249	-10.700	1.00	30.10	C
ATOM	4531	CE	LYS	A	280	48.190	17.170	-10.448	1.00	32.83	C
ATOM	4534	NZ	LYS	A	280	48.351	16.716	-9.008	1.00	31.00	N
ATOM	4538	C	LYS	A	280	46.293	23.322	-10.573	1.00	21.99	C
ATOM	4539	O	LYS	A	280	46.344	23.451	-11.766	1.00	20.88	O

ATOM	4541	N	GLN	A	281	45.681	24.201	-9.796	1.00	22.28	N
ATOM	4542	CA	GLN	A	281	45.076	25.374	-10.327	1.00	20.90	C
ATOM	4544	CB	GLN	A	281	43.633	25.031	-10.715	1.00	27.87	C
ATOM	4547	CG	GLN	A	281	42.734	26.118	-11.221	1.00	32.95	C
ATOM	4550	CD	GLN	A	281	41.333	25.509	-11.539	1.00	40.16	C
ATOM	4551	OE1	GLN	A	281	40.381	25.548	-10.717	1.00	33.43	O
ATOM	4552	NE2	GLN	A	281	41.244	24.877	-12.688	1.00	33.65	N
ATOM	4555	C	GLN	A	281	45.146	26.421	-9.252	1.00	22.92	C
ATOM	4556	O	GLN	A	281	45.037	26.099	-8.080	1.00	19.27	O
ATOM	4558	N	LEU	A	282	45.346	27.674	-9.651	1.00	21.92	N
ATOM	4559	CA	LEU	A	282	45.467	28.766	-8.687	1.00	25.43	C
ATOM	4561	CB	LEU	A	282	45.844	30.038	-9.412	1.00	26.13	C
ATOM	4564	CG	LEU	A	282	47.291	30.075	-9.924	1.00	32.54	C
ATOM	4566	CD1	LEU	A	282	47.489	31.221	-10.944	1.00	30.28	C
ATOM	4570	CD2	LEU	A	282	48.211	30.247	-8.731	1.00	28.91	C
ATOM	4574	C	LEU	A	282	44.176	28.971	-7.919	1.00	27.94	C
ATOM	4575	O	LEU	A	282	43.073	28.861	-8.488	1.00	26.17	O
ATOM	4577	N	GLN	A	283	44.320	29.303	-6.641	1.00	31.67	N
ATOM	4578	CA	GLN	A	283	43.200	29.274	-5.686	1.00	37.67	C
ATOM	4580	CB	GLN	A	283	43.691	29.372	-4.221	1.00	42.01	C
ATOM	4583	CG	GLN	A	283	44.704	28.262	-3.768	1.00	47.56	C
ATOM	4586	CD	GLN	A	283	44.132	26.813	-3.741	1.00	52.94	C
ATOM	4587	OE1	GLN	A	283	43.130	26.524	-3.061	1.00	58.70	O
ATOM	4588	NE2	GLN	A	283	44.800	25.899	-4.462	1.00	50.24	N
ATOM	4591	C	GLN	A	283	42.185	30.364	-5.975	1.00	37.20	C
ATOM	4592	O	GLN	A	283	41.111	30.376	-5.380	1.00	38.14	O
ATOM	4594	N	GLY	A	284	42.523	31.271	-6.890	1.00	34.11	N
ATOM	4595	CA	GLY	A	284	41.689	32.415	-7.199	1.00	33.75	C
ATOM	4598	C	GLY	A	284	41.054	32.363	-8.553	1.00	33.65	C
ATOM	4599	O	GLY	A	284	40.224	33.212	-8.867	1.00	31.65	O
ATOM	4601	N	TYR	A	285	41.425	31.348	-9.340	1.00	31.98	N
ATOM	4602	CA	TYR	A	285	40.894	31.094	-10.694	1.00	30.68	C
ATOM	4604	CB	TYR	A	285	41.496	29.759	-11.196	1.00	30.32	C
ATOM	4607	CG	TYR	A	285	41.086	29.321	-12.579	1.00	35.58	C
ATOM	4608	CD1	TYR	A	285	41.770	29.766	-13.708	1.00	42.44	C
ATOM	4610	CE1	TYR	A	285	41.393	29.347	-14.982	1.00	46.30	C
ATOM	4612	CZ	TYR	A	285	40.345	28.457	-15.111	1.00	46.48	C
ATOM	4613	OH	TYR	A	285	39.945	28.009	-16.338	1.00	49.89	O
ATOM	4615	CE2	TYR	A	285	39.680	27.996	-14.002	1.00	42.73	C
ATOM	4617	CD2	TYR	A	285	40.048	28.425	-12.756	1.00	41.12	C
ATOM	4619	C	TYR	A	285	39.361	30.999	-10.804	1.00	30.76	C
ATOM	4620	O	TYR	A	285	38.782	31.329	-11.847	1.00	23.05	O
ATOM	4622	N	LEU	A	286	38.714	30.497	-9.754	1.00	22.54	N
ATOM	4623	CA	LEU	A	286	37.278	30.276	-9.796	1.00	26.21	C
ATOM	4625	CB	LEU	A	286	36.904	28.995	-9.025	1.00	24.94	C
ATOM	4628	CG	LEU	A	286	37.343	27.665	-9.668	1.00	21.32	C
ATOM	4630	CD1	LEU	A	286	36.868	26.484	-8.811	1.00	20.68	C
ATOM	4634	CD2	LEU	A	286	36.816	27.522	-11.071	1.00	24.66	C
ATOM	4638	C	LEU	A	286	36.412	31.453	-9.333	1.00	23.20	C
ATOM	4639	O	LEU	A	286	35.188	31.381	-9.461	1.00	25.83	O
ATOM	4641	N	SER	A	287	37.010	32.514	-8.790	1.00	26.05	N
ATOM	4642	CA	SER	A	287	36.251	33.720	-8.459	1.00	24.91	C
ATOM	4644	CB	SER	A	287	36.907	34.521	-7.356	1.00	26.27	C
ATOM	4647	OG	SER	A	287	37.030	33.733	-6.202	1.00	31.48	O
ATOM	4649	C	SER	A	287	36.186	34.592	-9.701	1.00	24.95	C
ATOM	4650	O	SER	A	287	37.204	35.126	-10.137	1.00	22.04	O
ATOM	4652	N	GLU	A	288	35.016	34.734	-10.291	1.00	22.20	N
ATOM	4653	CA	GLU	A	288	34.932	35.572	-11.483	1.00	22.70	C
ATOM	4655	CB	GLU	A	288	35.523	34.837	-12.678	1.00	31.76	C
ATOM	4658	CG	GLU	A	288	35.139	33.420	-12.775	1.00	40.04	C
ATOM	4661	CD	GLU	A	288	35.687	32.755	-14.045	1.00	49.87	C
ATOM	4662	OE1	GLU	A	288	35.717	31.495	-14.074	1.00	51.20	O
ATOM	4663	OE2	GLU	A	288	36.080	33.490	-14.997	1.00	53.71	O
ATOM	4664	C	GLU	A	288	33.522	36.061	-11.790	1.00	23.47	C
ATOM	4665	O	GLU	A	288	32.545	35.463	-11.376	1.00	23.44	O
ATOM	4667	N	LEU	A	289	33.466	37.187	-12.478	1.00	21.44	N
ATOM	4668	CA	LEU	A	289	32.252	37.721	-13.066	1.00	26.67	C

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ATOM   4670  CB  LEU A 289      32.156  39.232 -12.868  1.00 29.54           C
ATOM   4673  CG  LEU A 289      31.787  39.631 -11.445  1.00 28.32           C
ATOM   4675  CD1 LEU A 289      31.971  41.125 -11.234  1.00 34.51           C
ATOM   4679  CD2 LEU A 289      30.339  39.249 -11.129  1.00 33.80           C
ATOM   4683  C   LEU A 289      32.392  37.344 -14.522  1.00 30.21           C
ATOM   4684  O   LEU A 289      33.348  37.724 -15.201  1.00 30.30           O
ATOM   4686  N   ARG A 290      31.472  36.499 -14.960  1.00 32.08           N
ATOM   4687  CA  ARG A 290      31.671  35.710 -16.144  1.00 35.21           C
ATOM   4689  CB  ARG A 290      32.150  34.335 -15.710  1.00 39.09           C
ATOM   4692  CG  ARG A 290      32.620  33.447 -16.803  1.00 42.39           C
ATOM   4695  CD  ARG A 290      32.905  32.091 -16.249  1.00 48.85           C
ATOM   4698  NE  ARG A 290      33.347  31.188 -17.308  1.00 52.73           N
ATOM   4700  CZ  ARG A 290      34.522  31.251 -17.928  1.00 48.85           C
ATOM   4701  NH1 ARG A 290      35.435  32.161 -17.604  1.00 51.85           N
ATOM   4704  NH2 ARG A 290      34.785  30.374 -18.879  1.00 54.49           N
ATOM   4707  C   ARG A 290      30.330  35.573 -16.857  1.00 32.88           C
ATOM   4708  O   ARG A 290      29.304  35.283 -16.206  1.00 27.43           O
ATOM   4710  N   PRO A 291      30.331  35.759 -18.190  1.00 32.76           N
ATOM   4711  CA  PRO A 291      29.109  35.533 -18.965  1.00 30.23           C
ATOM   4713  CB  PRO A 291      29.435  36.076 -20.366  1.00 29.62           C
ATOM   4716  CG  PRO A 291      30.917  36.128 -20.456  1.00 35.91           C
ATOM   4719  CD  PRO A 291      31.475  36.147 -19.046  1.00 36.43           C
ATOM   4722  C   PRO A 291      28.855  34.065 -19.029  1.00 24.59           C
ATOM   4723  O   PRO A 291      29.733  33.303 -19.425  1.00 25.30           O
ATOM   4724  N   VAL A 292      27.676  33.674 -18.583  1.00 26.64           N
ATOM   4725  CA  VAL A 292      27.223  32.278 -18.664  1.00 27.31           C
ATOM   4727  CB  VAL A 292      27.275  31.588 -17.272  1.00 28.44           C
ATOM   4729  CG1 VAL A 292      28.693  31.630 -16.703  1.00 23.38           C
ATOM   4733  CG2 VAL A 292      26.317  32.220 -16.305  1.00 29.34           C
ATOM   4737  C   VAL A 292      25.795  32.193 -19.194  1.00 24.98           C
ATOM   4738  O   VAL A 292      25.106  33.218 -19.333  1.00 22.35           O
ATOM   4740  N   THR A 293      25.344  30.964 -19.451  1.00 21.76           N
ATOM   4741  CA  THR A 293      23.920  30.687 -19.706  1.00 26.18           C
ATOM   4743  CB  THR A 293      23.703  30.062 -21.120  1.00 24.29           C
ATOM   4745  OG1 THR A 293      24.216  30.941 -22.107  1.00 28.11           O
ATOM   4747  CG2 THR A 293      22.224  29.853 -21.437  1.00 24.17           C
ATOM   4751  C   THR A 293      23.405  29.774 -18.606  1.00 21.55           C
ATOM   4752  O   THR A 293      23.966  28.700 -18.361  1.00 25.68           O
ATOM   4754  N   ILE A 294      22.370  30.220 -17.907  1.00 22.39           N
ATOM   4755  CA  ILE A 294      21.717  29.422 -16.869  1.00 19.03           C
ATOM   4757  CB  ILE A 294      21.093  30.314 -15.754  1.00 21.45           C
ATOM   4759  CG1 ILE A 294      22.140  31.273 -15.165  1.00 21.69           C
ATOM   4762  CD1 ILE A 294      23.378  30.565 -14.611  1.00 16.16           C
ATOM   4766  CG2 ILE A 294      20.434  29.450 -14.660  1.00 19.64           C
ATOM   4770  C   ILE A 294      20.583  28.625 -17.517  1.00 23.92           C
ATOM   4771  O   ILE A 294      19.762  29.189 -18.297  1.00 23.54           O
ATOM   4773  N   VAL A 295      20.554  27.319 -17.248  1.00 20.36           N
ATOM   4774  CA  VAL A 295      19.413  26.496 -17.610  1.00 20.42           C
ATOM   4776  CB  VAL A 295      19.785  25.388 -18.581  1.00 21.43           C
ATOM   4778  CG1 VAL A 295      18.542  24.540 -18.946  1.00 23.12           C
ATOM   4782  CG2 VAL A 295      20.409  25.979 -19.837  1.00 24.67           C
ATOM   4786  C   VAL A 295      18.845  25.933 -16.315  1.00 23.37           C
ATOM   4787  O   VAL A 295      19.480  25.093 -15.645  1.00 25.05           O
ATOM   4789  N   PHE A 296      17.687  26.455 -15.929  1.00 15.19           N
ATOM   4790  CA  PHE A 296      17.059  26.105 -14.680  1.00 19.90           C
ATOM   4792  CB  PHE A 296      16.612  27.357 -13.924  1.00 20.60           C
ATOM   4795  CG  PHE A 296      16.981  27.344 -12.444  1.00 17.82           C
ATOM   4796  CD1 PHE A 296      16.789  26.210 -11.661  1.00 19.41           C
ATOM   4798  CE1 PHE A 296      17.130  26.194 -10.326  1.00 19.46           C
ATOM   4800  CZ  PHE A 296      17.645  27.343  -9.767  1.00 20.49           C
ATOM   4802  CE2 PHE A 296      17.820  28.485 -10.537  1.00 20.56           C
ATOM   4804  CD2 PHE A 296      17.518  28.481 -11.848  1.00 22.71           C
ATOM   4806  C   PHE A 296      15.883  25.175 -14.972  1.00 22.36           C
ATOM   4807  O   PHE A 296      14.873  25.580 -15.544  1.00 24.18           O
ATOM   4809  N   VAL A 297      16.046  23.905 -14.625  1.00 21.93           N
ATOM   4810  CA  VAL A 297      15.064  22.863 -14.935  1.00 19.69           C
ATOM   4812  CB  VAL A 297      15.802  21.579 -15.354  1.00 26.72           C
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ATOM   4814  CG1 VAL A 297      14.830  20.367 -15.533  1.00 23.06           C
ATOM   4818  CG2 VAL A 297      16.657  21.855 -16.606  1.00 22.46           C
ATOM   4822  C   VAL A 297      14.243  22.541 -13.698  1.00 26.13           C
ATOM   4823  O   VAL A 297      14.815  22.238 -12.651  1.00 27.53           O
ATOM   4825  N   ASN A 298      12.918  22.595 -13.808  1.00 19.52           N
ATOM   4826  CA  ASN A 298      12.000  22.200 -12.712  1.00 20.65           C
ATOM   4828  CB  ASN A 298      11.091  23.355 -12.325  1.00 23.29           C
ATOM   4831  CG  ASN A 298      10.350  23.111 -11.028  1.00 29.73           C
ATOM   4832  OD1 ASN A 298      10.947  22.816  -9.984  1.00 25.11           O
ATOM   4833  ND2 ASN A 298       9.037  23.254 -11.082  1.00 25.58           N
ATOM   4836  C   ASN A 298      11.137  20.996 -13.080  1.00 24.09           C
ATOM   4837  O   ASN A 298      10.498  20.966 -14.145  1.00 24.01           O
ATOM   4839  N   LEU A 299      11.141  19.992 -12.206  1.00 23.72           N
ATOM   4840  CA  LEU A 299      10.358  18.795 -12.374  1.00 24.85           C
ATOM   4842  CB  LEU A 299      11.233  17.573 -12.308  1.00 21.91           C
ATOM   4845  CG  LEU A 299      12.493  17.547 -13.200  1.00 27.90           C
ATOM   4847  CD1 LEU A 299      13.333  16.328 -12.837  1.00 22.02           C
ATOM   4851  CD2 LEU A 299      12.130  17.566 -14.710  1.00 25.44           C
ATOM   4855  C   LEU A 299       9.339  18.765 -11.235  1.00 27.03           C
ATOM   4856  O   LEU A 299       9.713  18.751 -10.044  1.00 24.66           O
ATOM   4858  N   MET A 300       8.068  18.809 -11.596  1.00 29.08           N
ATOM   4859  CA  MET A 300       6.986  18.807 -10.597  1.00 31.97           C
ATOM   4861  CB  MET A 300       5.926  19.839 -10.957  1.00 33.50           C
ATOM   4864  CG  MET A 300       6.356  21.256 -10.654  1.00 45.79           C
ATOM   4867  SD  MET A 300       6.380  21.573  -8.860  1.00 57.61           S
ATOM   4868  CE  MET A 300       7.306  23.104  -8.754  1.00 47.65           C
ATOM   4872  C   MET A 300       6.351  17.438 -10.490  1.00 29.89           C
ATOM   4873  O   MET A 300       6.080  16.810 -11.493  1.00 26.59           O
ATOM   4875  N   PHE A 301       6.103  17.004  -9.261  1.00 29.07           N
ATOM   4876  CA  PHE A 301       5.468  15.717  -8.965  1.00 34.27           C
ATOM   4878  CB  PHE A 301       6.366  14.877  -8.040  1.00 33.16           C
ATOM   4881  CG  PHE A 301       7.733  14.650  -8.590  1.00 29.72           C
ATOM   4882  CD1 PHE A 301       8.721  15.590  -8.419  1.00 32.22           C
ATOM   4884  CE1 PHE A 301       9.978  15.401  -8.965  1.00 28.71           C
ATOM   4886  CZ  PHE A 301      10.234  14.290  -9.708  1.00 29.25           C
ATOM   4888  CE2 PHE A 301       9.249  13.348  -9.894  1.00 34.37           C
ATOM   4890  CD2 PHE A 301       8.005  13.538  -9.348  1.00 27.65           C
ATOM   4892  C   PHE A 301       4.117  15.948  -8.286  1.00 39.78           C
ATOM   4893  O   PHE A 301       3.873  17.006  -7.705  1.00 37.05           O
ATOM   4895  N   GLU A 302       3.250  14.948  -8.358  1.00 49.07           N
ATOM   4896  CA  GLU A 302       1.921  15.050  -7.757  1.00 58.32           C
ATOM   4898  CB  GLU A 302       1.008  13.912  -8.260  1.00 59.96           C
ATOM   4901  CG  GLU A 302      -0.462  14.314  -8.499  1.00 67.26           C
ATOM   4904  CD  GLU A 302      -1.112  13.565  -9.682  1.00 70.43           C
ATOM   4905  OE1 GLU A 302      -1.158  12.311  -9.656  1.00 74.42           O
ATOM   4906  OE2 GLU A 302      -1.587  14.233 -10.633  1.00 71.94           O
ATOM   4907  C   GLU A 302       2.070  15.033  -6.234  1.00 63.58           C
ATOM   4908  O   GLU A 302       1.502  15.883  -5.543  1.00 61.62           O
ATOM   4910  N   ASP A 303       2.874  14.093  -5.729  1.00 71.89           N
ATOM   4911  CA  ASP A 303       3.099  13.934  -4.282  1.00 78.97           C
ATOM   4913  CB  ASP A 303       3.010  12.453  -3.873  1.00 79.30           C
ATOM   4916  CG  ASP A 303       1.621  12.064  -3.390  1.00 79.78           C
ATOM   4917  OD1 ASP A 303       0.793  12.972  -3.141  1.00 78.64           O
ATOM   4918  OD2 ASP A 303       1.362  10.848  -3.252  1.00 80.54           O
ATOM   4919  C   ASP A 303       4.412  14.554  -3.773  1.00 83.41           C
ATOM   4920  O   ASP A 303       5.515  14.090  -4.075  1.00 84.78           O
ATOM   4922  N   GLN A 304       4.249  15.589  -2.956  1.00 88.61           N
ATOM   4923  CA  GLN A 304       5.344  16.443  -2.510  1.00 91.28           C
ATOM   4925  CB  GLN A 304       4.762  17.756  -1.940  1.00 93.22           C
ATOM   4928  CG  GLN A 304       3.779  17.610  -0.763  1.00 93.92           C
ATOM   4931  CD  GLN A 304       3.477  18.935  -0.070  1.00 95.69           C
ATOM   4932  OE1 GLN A 304       3.154  18.962   1.122  1.00 95.76           O
ATOM   4933  NE2 GLN A 304       3.586  20.041  -0.811  1.00 93.65           N
ATOM   4936  C   GLN A 304       6.300  15.791  -1.497  1.00 92.04           C
ATOM   4937  O   GLN A 304       7.508  16.046  -1.532  1.00 90.51           O
ATOM   4939  N   ASP A 305       5.758  14.960  -0.605  1.00 92.89           N
ATOM   4940  CA  ASP A 305       6.528  14.379   0.510  1.00 92.47           C
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ATOM	4942	CB	ASP A 305	5.680	14.358	1.794	1.00	92.15	C
ATOM	4945	CG	ASP A 305	5.173	15.743	2.197	1.00	92.71	C
ATOM	4946	OD1	ASP A 305	5.774	16.761	1.779	1.00	91.22	O
ATOM	4947	OD2	ASP A 305	4.167	15.810	2.941	1.00	92.43	O
ATOM	4948	C	ASP A 305	7.037	12.962	0.221	1.00	91.15	C
ATOM	4949	O	ASP A 305	8.113	12.584	0.696	1.00	92.63	O
ATOM	4951	N	LYS A 306	6.259	12.185	-0.540	1.00	88.15	N
ATOM	4952	CA	LYS A 306	6.579	10.779	-0.821	1.00	83.31	C
ATOM	4954	CB	LYS A 306	5.449	10.111	-1.609	1.00	83.86	C
ATOM	4957	CG	LYS A 306	4.171	9.900	-0.817	1.00	85.43	C
ATOM	4960	CD	LYS A 306	3.299	8.861	-1.506	1.00	86.53	C
ATOM	4963	CE	LYS A 306	1.876	8.813	-0.962	1.00	86.39	C
ATOM	4966	NZ	LYS A 306	0.953	8.199	-1.968	1.00	84.47	N
ATOM	4970	C	LYS A 306	7.888	10.624	-1.590	1.00	80.37	C
ATOM	4971	O	LYS A 306	7.884	10.439	-2.815	1.00	77.61	O
ATOM	4973	N	ALA A 307	9.000	10.688	-0.854	1.00	75.19	N
ATOM	4974	CA	ALA A 307	10.336	10.508	-1.423	1.00	72.25	C
ATOM	4976	CB	ALA A 307	11.400	10.680	-0.340	1.00	71.96	C
ATOM	4980	C	ALA A 307	10.482	9.143	-2.096	1.00	69.65	C
ATOM	4981	O	ALA A 307	11.241	8.987	-3.058	1.00	67.92	O
ATOM	4983	N	GLU A 308	9.732	8.169	-1.585	1.00	66.19	N
ATOM	4984	CA	GLU A 308	9.787	6.787	-2.040	1.00	63.21	C
ATOM	4986	CB	GLU A 308	8.761	5.916	-1.282	1.00	66.99	C
ATOM	4989	CG	GLU A 308	8.705	6.125	0.248	1.00	69.00	C
ATOM	4992	CD	GLU A 308	7.855	7.325	0.682	1.00	72.59	C
ATOM	4993	OE1	GLU A 308	6.900	7.697	-0.042	1.00	78.60	O
ATOM	4994	OE2	GLU A 308	8.147	7.904	1.752	1.00	74.09	O
ATOM	4995	C	GLU A 308	9.507	6.699	-3.525	1.00	57.91	C
ATOM	4996	O	GLU A 308	10.223	6.030	-4.260	1.00	52.92	O
ATOM	4998	N	GLU A 309	8.466	7.396	-3.958	1.00	55.26	N
ATOM	4999	CA	GLU A 309	8.014	7.337	-5.349	1.00	57.64	C
ATOM	5001	CB	GLU A 309	6.506	7.588	-5.403	1.00	63.37	C
ATOM	5004	CG	GLU A 309	5.697	6.621	-4.534	1.00	67.97	C
ATOM	5007	CD	GLU A 309	4.204	6.782	-4.722	1.00	74.60	C
ATOM	5008	OE1	GLU A 309	3.748	6.772	-5.890	1.00	77.97	O
ATOM	5009	OE2	GLU A 309	3.485	6.909	-3.703	1.00	78.70	O
ATOM	5010	C	GLU A 309	8.726	8.313	-6.299	1.00	52.53	C
ATOM	5011	O	GLU A 309	8.824	8.045	-7.496	1.00	55.63	O
ATOM	5013	N	ILE A 310	9.227	9.434	-5.786	1.00	44.16	N
ATOM	5014	CA	ILE A 310	9.867	10.430	-6.657	1.00	42.17	C
ATOM	5016	CB	ILE A 310	9.692	11.871	-6.130	1.00	41.99	C
ATOM	5018	CG1	ILE A 310	10.600	12.142	-4.946	1.00	42.82	C
ATOM	5021	CD1	ILE A 310	10.292	13.452	-4.259	1.00	44.33	C
ATOM	5025	CG2	ILE A 310	8.232	12.127	-5.758	1.00	44.57	C
ATOM	5029	C	ILE A 310	11.347	10.141	-6.934	1.00	36.76	C
ATOM	5030	O	ILE A 310	11.875	10.528	-7.980	1.00	33.54	O
ATOM	5032	N	GLY A 311	12.016	9.472	-6.005	1.00	33.40	N
ATOM	5033	CA	GLY A 311	13.448	9.220	-6.131	1.00	32.40	C
ATOM	5036	C	GLY A 311	13.814	8.488	-7.402	1.00	34.59	C
ATOM	5037	O	GLY A 311	14.776	8.847	-8.066	1.00	27.09	O
ATOM	5039	N	PRO A 312	13.057	7.430	-7.755	1.00	35.64	N
ATOM	5040	CA	PRO A 312	13.360	6.770	-9.027	1.00	34.22	C
ATOM	5042	CB	PRO A 312	12.393	5.583	-9.049	1.00	37.88	C
ATOM	5045	CG	PRO A 312	12.070	5.356	-7.577	1.00	36.94	C
ATOM	5048	CD	PRO A 312	11.994	6.736	-7.017	1.00	36.35	C
ATOM	5051	C	PRO A 312	13.163	7.673	-10.225	1.00	29.85	C
ATOM	5052	O	PRO A 312	13.881	7.559	-11.222	1.00	31.07	O
ATOM	5053	N	ALA A 313	12.211	8.582	-10.108	1.00	28.07	N
ATOM	5054	CA	ALA A 313	11.919	9.547	-11.146	1.00	28.13	C
ATOM	5056	CB	ALA A 313	10.650	10.275	-10.794	1.00	26.24	C
ATOM	5060	C	ALA A 313	13.068	10.558	-11.321	1.00	26.06	C
ATOM	5061	O	ALA A 313	13.500	10.840	-12.431	1.00	26.65	O
ATOM	5063	N	ILE A 314	13.504	11.128	-10.209	1.00	27.26	N
ATOM	5064	CA	ILE A 314	14.607	12.093	-10.185	1.00	25.78	C
ATOM	5066	CB	ILE A 314	14.776	12.690	-8.749	1.00	25.61	C
ATOM	5068	CG1	ILE A 314	13.546	13.532	-8.375	1.00	23.80	C
ATOM	5071	CD1	ILE A 314	13.543	14.126	-6.977	1.00	25.45	C

ATOM	5075	CG2	ILE	A	314	16.039	13.547	-8.623	1.00	22.57	C
ATOM	5079	C	ILE	A	314	15.874	11.414	-10.703	1.00	23.99	C
ATOM	5080	O	ILE	A	314	16.587	11.972	-11.538	1.00	23.15	O
ATOM	5082	N	GLN	A	315	16.152	10.198	-10.232	1.00	23.85	N
ATOM	5083	CA	GLN	A	315	17.306	9.443	-10.716	1.00	23.23	C
ATOM	5085	CB	GLN	A	315	17.410	8.095	-9.970	1.00	28.20	C
ATOM	5088	CG	GLN	A	315	18.428	7.113	-10.515	1.00	27.11	C
ATOM	5091	CD	GLN	A	315	19.872	7.560	-10.345	1.00	25.78	C
ATOM	5092	OE1	GLN	A	315	20.745	7.179	-11.113	1.00	33.65	O
ATOM	5093	NE2	GLN	A	315	20.128	8.316	-9.326	1.00	20.88	N
ATOM	5096	C	GLN	A	315	17.232	9.257	-12.238	1.00	25.22	C
ATOM	5097	O	GLN	A	315	18.202	9.531	-12.944	1.00	24.48	O
ATOM	5099	N	ASP	A	316	16.071	8.855	-12.758	1.00	25.71	N
ATOM	5100	CA	ASP	A	316	15.933	8.674	-14.205	1.00	32.79	C
ATOM	5102	CB	ASP	A	316	14.554	8.137	-14.590	1.00	35.65	C
ATOM	5105	CG	ASP	A	316	14.382	6.677	-14.239	1.00	43.87	C
ATOM	5106	OD1	ASP	A	316	13.217	6.221	-14.227	1.00	52.43	O
ATOM	5107	OD2	ASP	A	316	15.391	5.984	-13.957	1.00	48.21	O
ATOM	5108	C	ASP	A	316	16.212	9.953	-14.971	1.00	28.67	C
ATOM	5109	O	ASP	A	316	16.987	9.927	-15.934	1.00	27.35	O
ATOM	5111	N	ALA	A	317	15.596	11.055	-14.524	1.00	25.14	N
ATOM	5112	CA	ALA	A	317	15.834	12.395	-15.091	1.00	24.66	C
ATOM	5114	CB	ALA	A	317	14.985	13.447	-14.354	1.00	22.31	C
ATOM	5118	C	ALA	A	317	17.295	12.809	-15.021	1.00	28.36	C
ATOM	5119	O	ALA	A	317	17.857	13.313	-16.008	1.00	22.53	O
ATOM	5121	N	TYR	A	318	17.904	12.616	-13.845	1.00	26.88	N
ATOM	5122	CA	TYR	A	318	19.307	12.954	-13.680	1.00	26.22	C
ATOM	5124	CB	TYR	A	318	19.847	12.611	-12.280	1.00	22.85	C
ATOM	5127	CG	TYR	A	318	21.362	12.661	-12.294	1.00	23.56	C
ATOM	5128	CD1	TYR	A	318	22.029	13.870	-12.220	1.00	25.11	C
ATOM	5130	CE1	TYR	A	318	23.407	13.927	-12.265	1.00	27.72	C
ATOM	5132	CZ	TYR	A	318	24.141	12.764	-12.440	1.00	24.80	C
ATOM	5133	OH	TYR	A	318	25.513	12.843	-12.507	1.00	36.63	O
ATOM	5135	CE2	TYR	A	318	23.502	11.548	-12.557	1.00	31.49	C
ATOM	5137	CD2	TYR	A	318	22.111	11.505	-12.485	1.00	31.05	C
ATOM	5139	C	TYR	A	318	20.157	12.261	-14.737	1.00	25.07	C
ATOM	5140	O	TYR	A	318	21.009	12.896	-15.371	1.00	24.42	O
ATOM	5142	N	MET	A	319	19.916	10.963	-14.941	1.00	24.41	N
ATOM	5143	CA	MET	A	319	20.755	10.184	-15.857	1.00	25.79	C
ATOM	5145	CB	MET	A	319	20.382	8.709	-15.846	1.00	27.13	C
ATOM	5148	CG	MET	A	319	20.662	7.980	-14.539	1.00	31.83	C
ATOM	5151	SD	MET	A	319	22.392	7.932	-14.089	1.00	29.69	S
ATOM	5152	CE	MET	A	319	23.023	6.854	-15.379	1.00	32.24	C
ATOM	5156	C	MET	A	319	20.717	10.736	-17.281	1.00	22.30	C
ATOM	5157	O	MET	A	319	21.745	10.786	-17.940	1.00	27.18	O
ATOM	5159	N	HIS	A	320	19.553	11.194	-17.729	1.00	23.73	N
ATOM	5160	CA	HIS	A	320	19.445	11.877	-19.017	1.00	25.62	C
ATOM	5162	CB	HIS	A	320	18.009	11.970	-19.508	1.00	27.11	C
ATOM	5165	CG	HIS	A	320	17.905	12.451	-20.921	1.00	30.27	C
ATOM	5166	ND1	HIS	A	320	18.212	11.649	-22.001	1.00	34.22	N
ATOM	5168	CE1	HIS	A	320	18.037	12.336	-23.120	1.00	32.13	C
ATOM	5170	NE2	HIS	A	320	17.630	13.553	-22.804	1.00	30.86	N
ATOM	5172	CD2	HIS	A	320	17.548	13.654	-21.435	1.00	32.64	C
ATOM	5174	C	HIS	A	320	20.037	13.266	-19.001	1.00	25.32	C
ATOM	5175	O	HIS	A	320	20.793	13.640	-19.888	1.00	24.84	O
ATOM	5177	N	ILE	A	321	19.697	14.034	-17.980	1.00	25.12	N
ATOM	5178	CA	ILE	A	321	20.244	15.389	-17.845	1.00	25.59	C
ATOM	5180	CB	ILE	A	321	19.739	16.074	-16.561	1.00	25.98	C
ATOM	5182	CG1	ILE	A	321	18.252	16.403	-16.718	1.00	22.47	C
ATOM	5185	CD1	ILE	A	321	17.550	16.793	-15.453	1.00	22.92	C
ATOM	5189	CG2	ILE	A	321	20.512	17.414	-16.292	1.00	25.98	C
ATOM	5193	C	ILE	A	321	21.769	15.368	-17.901	1.00	22.12	C
ATOM	5194	O	ILE	A	321	22.369	16.131	-18.642	1.00	24.98	O
ATOM	5196	N	THR	A	322	22.403	14.485	-17.141	1.00	21.11	N
ATOM	5197	CA	THR	A	322	23.860	14.460	-17.137	1.00	24.73	C
ATOM	5199	CB	THR	A	322	24.437	13.600	-15.989	1.00	22.39	C
ATOM	5201	OG1	THR	A	322	25.833	13.862	-15.877	1.00	31.14	O

ATOM	5203	CG2	THR	A	322	24.251	12.113	-16.233	1.00 25.40	C
ATOM	5207	C	THR	A	322	24.468	14.076	-18.513	1.00 25.25	C
ATOM	5208	O	THR	A	322	25.505	14.632	-18.903	1.00 25.39	O
ATOM	5210	N	SER	A	323	23.801	13.198	-19.262	1.00 26.14	N
ATOM	5211	CA	SER	A	323	24.287	12.833	-20.587	1.00 28.10	C
ATOM	5213	CB	SER	A	323	23.571	11.595	-21.168	1.00 30.34	C
ATOM	5216	OG	SER	A	323	22.237	11.890	-21.560	1.00 39.84	O
ATOM	5218	C	SER	A	323	24.216	14.003	-21.573	1.00 28.22	C
ATOM	5219	O	SER	A	323	25.143	14.184	-22.362	1.00 27.36	O
ATOM	5221	N	VAL	A	324	23.127	14.783	-21.517	1.00 27.06	N
ATOM	5222	CA	VAL	A	324	22.942	15.939	-22.385	1.00 27.74	C
ATOM	5224	CB	VAL	A	324	21.504	16.516	-22.266	1.00 32.19	C
ATOM	5226	CG1	VAL	A	324	21.330	17.695	-23.201	1.00 30.85	C
ATOM	5230	CG2	VAL	A	324	20.485	15.456	-22.613	1.00 31.42	C
ATOM	5234	C	VAL	A	324	23.964	17.041	-22.047	1.00 28.38	C
ATOM	5235	O	VAL	A	324	24.617	17.621	-22.931	1.00 25.62	O
ATOM	5237	N	LEU	A	325	24.118	17.322	-20.754	1.00 25.03	N
ATOM	5238	CA	LEU	A	325	25.078	18.341	-20.328	1.00 24.72	C
ATOM	5240	CB	LEU	A	325	24.977	18.580	-18.817	1.00 21.55	C
ATOM	5243	CG	LEU	A	325	23.665	19.180	-18.285	1.00 22.87	C
ATOM	5245	CD1	LEU	A	325	23.814	19.348	-16.794	1.00 24.42	C
ATOM	5249	CD2	LEU	A	325	23.265	20.514	-18.924	1.00 28.42	C
ATOM	5253	C	LEU	A	325	26.530	18.015	-20.715	1.00 25.40	C
ATOM	5254	O	LEU	A	325	27.299	18.918	-21.057	1.00 24.99	O
ATOM	5256	N	LYS	A	326	26.918	16.738	-20.608	1.00 28.42	N
ATOM	5257	CA	LYS	A	326	28.278	16.281	-20.970	1.00 32.49	C
ATOM	5259	CB	LYS	A	326	28.359	14.737	-20.839	1.00 32.58	C
ATOM	5262	CG	LYS	A	326	29.703	14.077	-21.253	1.00 42.33	C
ATOM	5265	CD	LYS	A	326	29.682	12.543	-20.982	1.00 41.72	C
ATOM	5268	CE	LYS	A	326	30.786	11.769	-21.683	1.00 42.81	C
ATOM	5271	NZ	LYS	A	326	30.465	10.302	-21.737	1.00 41.96	N
ATOM	5275	C	LYS	A	326	28.588	16.672	-22.406	1.00 32.14	C
ATOM	5276	O	LYS	A	326	29.677	17.116	-22.738	1.00 31.34	O
ATOM	5278	N	ILE	A	327	27.610	16.474	-23.263	1.00 36.50	N
ATOM	5279	CA	ILE	A	327	27.781	16.759	-24.677	1.00 43.94	C
ATOM	5281	CB	ILE	A	327	26.508	16.323	-25.465	1.00 44.15	C
ATOM	5283	CG1	ILE	A	327	26.441	14.796	-25.485	1.00 38.81	C
ATOM	5286	CD1	ILE	A	327	25.046	14.242	-25.686	1.00 43.74	C
ATOM	5290	CG2	ILE	A	327	26.512	16.860	-26.907	1.00 50.09	C
ATOM	5294	C	ILE	A	327	28.201	18.231	-24.909	1.00 49.66	C
ATOM	5295	O	ILE	A	327	28.985	18.504	-25.817	1.00 46.91	O
ATOM	5297	N	PHE	A	328	27.755	19.163	-24.055	1.00 55.18	N
ATOM	5298	CA	PHE	A	328	28.177	20.573	-24.195	1.00 57.43	C
ATOM	5300	CB	PHE	A	328	26.995	21.409	-24.656	1.00 57.94	C
ATOM	5303	CG	PHE	A	328	26.533	21.037	-26.034	1.00 64.65	C
ATOM	5304	CD1	PHE	A	328	25.340	20.352	-26.223	1.00 65.95	C
ATOM	5306	CE1	PHE	A	328	24.922	19.985	-27.495	1.00 65.75	C
ATOM	5308	CZ	PHE	A	328	25.719	20.276	-28.602	1.00 67.82	C
ATOM	5310	CE2	PHE	A	328	26.932	20.939	-28.429	1.00 68.07	C
ATOM	5312	CD2	PHE	A	328	27.338	21.309	-27.144	1.00 66.61	C
ATOM	5314	C	PHE	A	328	28.887	21.210	-23.009	1.00 55.27	C
ATOM	5315	O	PHE	A	328	28.892	22.419	-22.864	1.00 59.26	O
ATOM	5317	N	GLN	A	329	29.554	20.403	-22.203	1.00 54.77	N
ATOM	5318	CA	GLN	A	329	30.281	20.909	-21.043	1.00 55.29	C
ATOM	5320	CB	GLN	A	329	31.547	21.694	-21.455	1.00 59.76	C
ATOM	5323	CG	GLN	A	329	32.654	20.860	-22.143	1.00 62.86	C
ATOM	5326	CD	GLN	A	329	32.554	20.860	-23.666	1.00 67.66	C
ATOM	5327	OE1	GLN	A	329	31.474	21.049	-24.246	1.00 70.23	O
ATOM	5328	NE2	GLN	A	329	33.690	20.648	-24.323	1.00 71.06	N
ATOM	5331	C	GLN	A	329	29.402	21.759	-20.104	1.00 51.89	C
ATOM	5332	O	GLN	A	329	29.921	22.637	-19.400	1.00 52.80	O
ATOM	5334	N	GLY	A	330	28.091	21.486	-20.083	1.00 43.58	N
ATOM	5335	CA	GLY	A	330	27.216	22.005	-19.037	1.00 36.87	C
ATOM	5338	C	GLY	A	330	27.494	21.313	-17.709	1.00 33.49	C
ATOM	5339	O	GLY	A	330	28.022	20.213	-17.670	1.00 33.10	O
ATOM	5341	N	GLN	A	331	27.117	21.964	-16.616	1.00 29.40	N
ATOM	5342	CA	GLN	A	331	27.384	21.491	-15.269	1.00 31.73	C

ATOM	5344	CB	GLN	A	331	28.521	22.306	-14.625	1.00	33.52	C
ATOM	5347	CG	GLN	A	331	29.891	22.135	-15.292	1.00	42.83	C
ATOM	5350	CD	GLN	A	331	30.719	21.028	-14.667	1.00	48.22	C
ATOM	5351	OE1	GLN	A	331	31.924	20.942	-14.898	1.00	58.07	O
ATOM	5352	NE2	GLN	A	331	30.079	20.177	-13.867	1.00	49.42	N
ATOM	5355	C	GLN	A	331	26.120	21.723	-14.435	1.00	26.75	C
ATOM	5356	O	GLN	A	331	25.477	22.761	-14.537	1.00	24.30	O
ATOM	5358	N	ILE	A	332	25.787	20.762	-13.602	1.00	25.97	N
ATOM	5359	CA	ILE	A	332	24.782	20.956	-12.594	1.00	22.48	C
ATOM	5361	CB	ILE	A	332	24.176	19.617	-12.113	1.00	23.12	C
ATOM	5363	CG1	ILE	A	332	23.469	18.879	-13.242	1.00	24.16	C
ATOM	5366	CD1	ILE	A	332	23.082	17.437	-12.917	1.00	20.65	C
ATOM	5370	CG2	ILE	A	332	23.182	19.866	-10.982	1.00	22.78	C
ATOM	5374	C	ILE	A	332	25.469	21.635	-11.428	1.00	26.56	C
ATOM	5375	O	ILE	A	332	26.316	21.034	-10.804	1.00	30.32	O
ATOM	5377	N	ASN	A	333	25.144	22.891	-11.149	1.00	25.11	N
ATOM	5378	CA	ASN	A	333	25.766	23.602	-10.017	1.00	23.66	C
ATOM	5380	CB	ASN	A	333	25.792	25.121	-10.270	1.00	21.79	C
ATOM	5383	CG	ASN	A	333	26.306	25.938	-9.050	1.00	28.04	C
ATOM	5384	OD1	ASN	A	333	27.466	25.813	-8.597	1.00	30.97	O
ATOM	5385	ND2	ASN	A	333	25.430	26.749	-8.510	1.00	19.51	N
ATOM	5388	C	ASN	A	333	25.073	23.299	-8.676	1.00	26.63	C
ATOM	5389	O	ASN	A	333	25.735	23.220	-7.668	1.00	27.63	O
ATOM	5391	N	LYS	A	334	23.742	23.203	-8.682	1.00	22.57	N
ATOM	5392	CA	LYS	A	334	22.947	22.872	-7.497	1.00	28.75	C
ATOM	5394	CB	LYS	A	334	22.458	24.112	-6.744	1.00	28.41	C
ATOM	5397	CG	LYS	A	334	23.483	25.149	-6.385	1.00	32.60	C
ATOM	5400	CD	LYS	A	334	24.242	24.879	-5.142	1.00	30.59	C
ATOM	5403	CE	LYS	A	334	25.178	26.077	-4.862	1.00	34.83	C
ATOM	5406	NZ	LYS	A	334	26.109	25.847	-3.723	1.00	32.86	N
ATOM	5410	C	LYS	A	334	21.688	22.149	-7.912	1.00	23.45	C
ATOM	5411	O	LYS	A	334	21.223	22.301	-9.046	1.00	20.73	O
ATOM	5413	N	VAL	A	335	21.133	21.396	-6.973	1.00	20.36	N
ATOM	5414	CA	VAL	A	335	19.805	20.811	-7.098	1.00	21.99	C
ATOM	5416	CB	VAL	A	335	19.828	19.290	-7.364	1.00	25.74	C
ATOM	5418	CG1	VAL	A	335	18.403	18.762	-7.627	1.00	27.81	C
ATOM	5422	CG2	VAL	A	335	20.736	18.952	-8.538	1.00	29.09	C
ATOM	5426	C	VAL	A	335	19.107	21.108	-5.774	1.00	26.07	C
ATOM	5427	O	VAL	A	335	19.744	21.129	-4.732	1.00	26.12	O
ATOM	5429	N	PHE	A	336	17.818	21.431	-5.855	1.00	27.10	N
ATOM	5430	CA	PHE	A	336	17.023	21.890	-4.728	1.00	28.86	C
ATOM	5432	CB	PHE	A	336	16.784	23.405	-4.771	1.00	29.46	C
ATOM	5435	CG	PHE	A	336	18.020	24.237	-4.746	1.00	25.96	C
ATOM	5436	CD1	PHE	A	336	18.398	24.983	-5.882	1.00	29.65	C
ATOM	5438	CE1	PHE	A	336	19.489	25.796	-5.847	1.00	29.41	C
ATOM	5440	CZ	PHE	A	336	20.266	25.904	-4.670	1.00	29.17	C
ATOM	5442	CE2	PHE	A	336	19.899	25.192	-3.544	1.00	34.47	C
ATOM	5444	CD2	PHE	A	336	18.771	24.352	-3.591	1.00	29.64	C
ATOM	5446	C	PHE	A	336	15.670	21.246	-4.862	1.00	32.32	C
ATOM	5447	O	PHE	A	336	15.114	21.194	-5.976	1.00	31.68	O
ATOM	5449	N	MET	A	337	15.128	20.786	-3.735	1.00	29.52	N
ATOM	5450	CA	MET	A	337	13.748	20.307	-3.663	1.00	30.13	C
ATOM	5452	CB	MET	A	337	13.690	18.912	-3.074	1.00	31.17	C
ATOM	5455	CG	MET	A	337	12.286	18.327	-3.039	1.00	33.47	C
ATOM	5458	SD	MET	A	337	12.009	17.342	-4.495	1.00	37.40	S
ATOM	5459	CE	MET	A	337	10.241	17.056	-4.328	1.00	42.36	C
ATOM	5463	C	MET	A	337	12.870	21.230	-2.805	1.00	32.44	C
ATOM	5464	O	MET	A	337	13.261	21.635	-1.706	1.00	29.77	O
ATOM	5466	N	PHE	A	338	11.670	21.513	-3.305	1.00	31.61	N
ATOM	5467	CA	PHE	A	338	10.749	22.398	-2.645	1.00	34.42	C
ATOM	5469	CB	PHE	A	338	11.160	23.854	-2.854	1.00	40.36	C
ATOM	5472	CG	PHE	A	338	10.128	24.834	-2.368	1.00	41.57	C
ATOM	5473	CD1	PHE	A	338	9.865	24.961	-1.004	1.00	40.12	C
ATOM	5475	CE1	PHE	A	338	8.889	25.843	-0.547	1.00	42.45	C
ATOM	5477	CZ	PHE	A	338	8.160	26.618	-1.454	1.00	42.68	C
ATOM	5479	CE2	PHE	A	338	8.408	26.497	-2.824	1.00	42.11	C
ATOM	5481	CD2	PHE	A	338	9.387	25.600	-3.274	1.00	43.15	C

ATOM	5483	C	PHE	A	338	9.326	22.201	-3.164	1.00 39.65	C
ATOM	5484	O	PHE	A	338	9.070	22.261	-4.375	1.00 31.32	O
ATOM	5486	N	ASP	A	339	8.398	21.986	-2.233	1.00 39.50	N
ATOM	5487	CA	ASP	A	339	6.976	21.931	-2.555	1.00 42.03	C
ATOM	5489	CB	ASP	A	339	6.441	23.349	-2.785	1.00 43.52	C
ATOM	5492	CG	ASP	A	339	4.929	23.383	-2.981	1.00 46.43	C
ATOM	5493	OD1	ASP	A	339	4.461	24.263	-3.737	1.00 52.69	O
ATOM	5494	OD2	ASP	A	339	4.222	22.522	-2.406	1.00 44.70	O
ATOM	5495	C	ASP	A	339	6.689	21.086	-3.787	1.00 39.94	C
ATOM	5496	O	ASP	A	339	6.084	21.574	-4.746	1.00 37.76	O
ATOM	5498	N	LYS	A	340	7.140	19.835	-3.762	1.00 41.46	N
ATOM	5499	CA	LYS	A	340	6.870	18.863	-4.834	1.00 42.91	C
ATOM	5501	CB	LYS	A	340	5.355	18.745	-5.105	1.00 48.54	C
ATOM	5504	CG	LYS	A	340	4.798	19.692	-6.209	1.00 58.81	C
ATOM	5507	CD	LYS	A	340	3.471	20.370	-5.807	1.00 63.17	C
ATOM	5510	CE	LYS	A	340	3.113	21.511	-6.755	1.00 66.10	C
ATOM	5513	NZ	LYS	A	340	4.142	22.601	-6.779	1.00 68.07	N
ATOM	5517	C	LYS	A	340	7.591	19.153	-6.151	1.00 40.88	C
ATOM	5518	O	LYS	A	340	7.260	18.529	-7.164	1.00 42.33	O
ATOM	5520	N	GLY	A	341	8.551	20.085	-6.144	1.00 34.34	N
ATOM	5521	CA	GLY	A	341	9.345	20.416	-7.328	1.00 31.70	C
ATOM	5524	C	GLY	A	341	10.851	20.216	-7.103	1.00 26.96	C
ATOM	5525	O	GLY	A	341	11.454	20.803	-6.199	1.00 26.65	O
ATOM	5527	N	CYS	A	342	11.446	19.369	-7.919	1.00 22.84	N
ATOM	5528	CA	CYS	A	342	12.914	19.225	-7.960	1.00 21.61	C
ATOM	5530	CB	CYS	A	342	13.292	17.767	-8.151	1.00 21.63	C
ATOM	5533	SG	CYS	A	342	15.082	17.479	-8.134	1.00 28.04	S
ATOM	5535	C	CYS	A	342	13.556	20.072	-9.073	1.00 23.06	C
ATOM	5536	O	CYS	A	342	13.296	19.857	-10.264	1.00 27.77	O
ATOM	5538	N	SER	A	343	14.445	20.989	-8.692	1.00 20.32	N
ATOM	5539	CA	SER	A	343	14.994	21.985	-9.646	1.00 25.74	C
ATOM	5541	CB	SER	A	343	14.805	23.403	-9.086	1.00 24.12	C
ATOM	5544	OG	SER	A	343	13.478	23.828	-9.228	1.00 40.63	O
ATOM	5546	C	SER	A	343	16.480	21.768	-9.820	1.00 25.19	C
ATOM	5547	O	SER	A	343	17.164	21.590	-8.813	1.00 22.29	O
ATOM	5549	N	PHE	A	344	16.975	21.815	-11.061	1.00 21.85	N
ATOM	5550	CA	PHE	A	344	18.406	21.608	-11.373	1.00 25.28	C
ATOM	5552	CB	PHE	A	344	18.629	20.547	-12.461	1.00 23.19	C
ATOM	5555	CG	PHE	A	344	18.259	19.152	-12.075	1.00 18.74	C
ATOM	5556	CD1	PHE	A	344	16.942	18.759	-12.048	1.00 22.57	C
ATOM	5558	CE1	PHE	A	344	16.581	17.435	-11.703	1.00 21.55	C
ATOM	5560	CZ	PHE	A	344	17.551	16.494	-11.437	1.00 26.72	C
ATOM	5562	CE2	PHE	A	344	18.909	16.870	-11.477	1.00 29.02	C
ATOM	5564	CD2	PHE	A	344	19.248	18.201	-11.807	1.00 27.02	C
ATOM	5566	C	PHE	A	344	18.948	22.913	-11.924	1.00 21.23	C
ATOM	5567	O	PHE	A	344	18.444	23.402	-12.939	1.00 18.51	O
ATOM	5569	N	LEU	A	345	19.938	23.491	-11.254	1.00 22.11	N
ATOM	5570	CA	LEU	A	345	20.505	24.775	-11.673	1.00 21.73	C
ATOM	5572	CB	LEU	A	345	20.920	25.612	-10.458	1.00 21.68	C
ATOM	5575	CG	LEU	A	345	21.286	27.092	-10.630	1.00 25.47	C
ATOM	5577	CD1	LEU	A	345	21.658	27.744	-9.246	1.00 26.16	C
ATOM	5581	CD2	LEU	A	345	22.392	27.312	-11.691	1.00 26.69	C
ATOM	5585	C	LEU	A	345	21.700	24.438	-12.535	1.00 21.66	C
ATOM	5586	O	LEU	A	345	22.779	24.121	-12.003	1.00 19.82	O
ATOM	5588	N	CYS	A	346	21.504	24.429	-13.857	1.00 19.98	N
ATOM	5589	CA	CYS	A	346	22.582	24.062	-14.805	1.00 19.24	C
ATOM	5591	CB	CYS	A	346	22.059	23.135	-15.903	1.00 17.25	C
ATOM	5594	SG	CYS	A	346	21.064	21.757	-15.283	1.00 23.44	S
ATOM	5596	C	CYS	A	346	23.236	25.299	-15.416	1.00 22.25	C
ATOM	5597	O	CYS	A	346	22.581	26.342	-15.591	1.00 20.67	O
ATOM	5599	N	VAL	A	347	24.532	25.202	-15.711	1.00 20.36	N
ATOM	5600	CA	VAL	A	347	25.302	26.367	-16.151	1.00 20.17	C
ATOM	5602	CB	VAL	A	347	26.170	26.936	-15.000	1.00 22.79	C
ATOM	5604	CG1	VAL	A	347	27.057	28.145	-15.482	1.00 24.17	C
ATOM	5608	CG2	VAL	A	347	25.300	27.287	-13.765	1.00 18.16	C
ATOM	5612	C	VAL	A	347	26.210	25.940	-17.299	1.00 22.90	C
ATOM	5613	O	VAL	A	347	26.906	24.929	-17.230	1.00 21.29	O

ATOM	5615	N	PHE	A	348	26.168	26.722	-18.354	1.00 26.11	N
ATOM	5616	CA	PHE	A	348	26.978	26.541	-19.534	1.00 26.93	C
ATOM	5618	CB	PHE	A	348	26.087	26.580	-20.770	1.00 27.42	C
ATOM	5621	CG	PHE	A	348	25.257	25.359	-20.943	1.00 31.60	C
ATOM	5622	CD1	PHE	A	348	24.053	25.216	-20.270	1.00 29.75	C
ATOM	5624	CE1	PHE	A	348	23.286	24.090	-20.433	1.00 32.89	C
ATOM	5626	CZ	PHE	A	348	23.725	23.067	-21.270	1.00 33.78	C
ATOM	5628	CE2	PHE	A	348	24.931	23.186	-21.915	1.00 29.37	C
ATOM	5630	CD2	PHE	A	348	25.693	24.330	-21.753	1.00 29.64	C
ATOM	5632	C	PHE	A	348	27.922	27.744	-19.537	1.00 29.61	C
ATOM	5633	O	PHE	A	348	27.489	28.870	-19.285	1.00 27.68	O
ATOM	5635	N	GLY	A	349	29.201	27.488	-19.774	1.00 34.56	N
ATOM	5636	CA	GLY	A	349	30.224	28.531	-19.799	1.00 40.06	C
ATOM	5639	C	GLY	A	349	30.929	28.772	-18.475	1.00 44.68	C
ATOM	5640	O	GLY	A	349	31.397	29.869	-18.233	1.00 42.92	O
ATOM	5642	N	PHE	A	350	31.005	27.765	-17.606	1.00 48.37	N
ATOM	5643	CA	PHE	A	350	31.834	27.869	-16.406	1.00 52.52	C
ATOM	5645	CB	PHE	A	350	31.642	26.638	-15.504	1.00 50.34	C
ATOM	5648	CG	PHE	A	350	30.641	26.815	-14.372	1.00 43.51	C
ATOM	5649	CD1	PHE	A	350	29.948	25.708	-13.897	1.00 37.83	C
ATOM	5651	CE1	PHE	A	350	29.046	25.817	-12.836	1.00 40.18	C
ATOM	5653	CZ	PHE	A	350	28.834	27.053	-12.256	1.00 39.87	C
ATOM	5655	CE2	PHE	A	350	29.533	28.176	-12.739	1.00 38.22	C
ATOM	5657	CD2	PHE	A	350	30.415	28.051	-13.772	1.00 31.32	C
ATOM	5659	C	PHE	A	350	33.327	27.964	-16.838	1.00 59.50	C
ATOM	5660	O	PHE	A	350	33.650	27.725	-18.001	1.00 56.15	O
ATOM	5662	N	PRO	A	351	34.239	28.336	-15.919	1.00 68.18	N
ATOM	5663	CA	PRO	A	351	35.680	28.293	-16.260	1.00 73.82	C
ATOM	5665	CB	PRO	A	351	36.365	28.226	-14.893	1.00 74.12	C
ATOM	5668	CG	PRO	A	351	35.316	28.634	-13.877	1.00 73.25	C
ATOM	5671	CD	PRO	A	351	34.006	28.861	-14.566	1.00 70.03	C
ATOM	5674	C	PRO	A	351	36.070	27.080	-17.128	1.00 79.16	C
ATOM	5675	O	PRO	A	351	36.051	25.942	-16.650	1.00 80.44	O
ATOM	5676	N	GLY	A	352	36.410	27.335	-18.392	1.00 85.44	N
ATOM	5677	CA	GLY	A	352	36.544	26.277	-19.405	1.00 89.91	C
ATOM	5680	C	GLY	A	352	36.430	26.790	-20.841	1.00 94.88	C
ATOM	5681	O	GLY	A	352	37.069	26.248	-21.749	1.00 97.24	O
ATOM	5683	N	GLU	A	353	35.597	27.816	-21.046	1.00 98.88	N
ATOM	5684	CA	GLU	A	353	35.509	28.594	-22.308	1.00100.89	C
ATOM	5686	CB	GLU	A	353	36.903	28.989	-22.849	1.00101.06	C
ATOM	5689	CG	GLU	A	353	37.982	29.365	-21.818	1.00101.38	C
ATOM	5692	CD	GLU	A	353	37.545	30.415	-20.818	1.00100.45	C
ATOM	5693	OE1	GLU	A	353	36.905	31.409	-21.222	1.00100.45	O
ATOM	5694	OE2	GLU	A	353	37.863	30.250	-19.622	1.00 98.77	O
ATOM	5695	C	GLU	A	353	34.705	27.941	-23.455	1.00102.19	C
ATOM	5696	O	GLU	A	353	33.681	28.479	-23.886	1.00100.21	O
ATOM	5698	N	LYS	A	354	35.182	26.778	-23.907	1.00104.52	N
ATOM	5699	CA	LYS	A	354	34.892	26.191	-25.242	1.00105.58	C
ATOM	5701	CB	LYS	A	354	35.253	24.688	-25.252	1.00106.21	C
ATOM	5704	CG	LYS	A	354	36.747	24.392	-25.468	1.00106.68	C
ATOM	5707	CD	LYS	A	354	37.174	24.621	-26.925	1.00107.09	C
ATOM	5710	CE	LYS	A	354	38.676	24.436	-27.121	1.00106.97	C
ATOM	5713	NZ	LYS	A	354	39.148	23.088	-26.694	1.00105.94	N
ATOM	5717	C	LYS	A	354	33.497	26.395	-25.880	1.00105.23	C
ATOM	5718	O	LYS	A	354	32.485	26.557	-25.188	1.00104.52	O
ATOM	5720	N	VAL	A	355	33.490	26.333	-27.218	1.00104.16	N
ATOM	5721	CA	VAL	A	355	32.314	26.565	-28.076	1.00102.02	C
ATOM	5723	CB	VAL	A	355	31.427	25.279	-28.273	1.00103.66	C
ATOM	5725	CG1	VAL	A	355	32.054	24.332	-29.301	1.00103.64	C
ATOM	5729	CG2	VAL	A	355	31.158	24.558	-26.942	1.00103.88	C
ATOM	5733	C	VAL	A	355	31.448	27.734	-27.607	1.00 98.48	C
ATOM	5734	O	VAL	A	355	30.479	27.534	-26.868	1.00 98.30	O
ATOM	5736	N	PRO	A	356	31.791	28.966	-28.038	1.00 93.63	N
ATOM	5737	CA	PRO	A	356	30.913	30.104	-27.726	1.00 89.26	C
ATOM	5739	CB	PRO	A	356	31.773	31.341	-28.068	1.00 91.13	C
ATOM	5742	CG	PRO	A	356	33.157	30.823	-28.391	1.00 93.08	C
ATOM	5745	CD	PRO	A	356	32.986	29.384	-28.792	1.00 94.11	C

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ATOM   5748  C   PRO A 356      29.579  30.104 -28.500  1.00 82.56           C
ATOM   5749  O   PRO A 356      28.897  31.135 -28.530  1.00 83.88           O
ATOM   5750  N   ASP A 357      29.215  28.965 -29.109  1.00 71.50           N
ATOM   5751  CA  ASP A 357      27.838  28.703 -29.552  1.00 61.61           C
ATOM   5753  CB  ASP A 357      27.830  27.588 -30.597  1.00 64.38           C
ATOM   5756  CG  ASP A 357      27.185  28.013 -31.885  1.00 65.99           C
ATOM   5757  OD1 ASP A 357      26.006  28.445 -31.860  1.00 68.64           O
ATOM   5758  OD2 ASP A 357      27.870  27.917 -32.922  1.00 64.21           O
ATOM   5759  C   ASP A 357      26.972  28.303 -28.343  1.00 52.39           C
ATOM   5760  O   ASP A 357      25.965  27.610 -28.466  1.00 43.59           O
ATOM   5762  N   GLU A 358      27.403  28.752 -27.170  1.00 43.39           N
ATOM   5763  CA  GLU A 358      26.768  28.451 -25.899  1.00 43.65           C
ATOM   5765  CB  GLU A 358      27.353  29.381 -24.831  1.00 43.30           C
ATOM   5768  CG  GLU A 358      26.748  29.375 -23.423  1.00 39.08           C
ATOM   5771  CD  GLU A 358      27.569  30.284 -22.495  1.00 46.47           C
ATOM   5772  OE1 GLU A 358      27.031  31.329 -22.025  1.00 40.89           O
ATOM   5773  OE2 GLU A 358      28.783  29.976 -22.288  1.00 41.71           O
ATOM   5774  C   GLU A 358      25.248  28.561 -25.974  1.00 41.25           C
ATOM   5775  O   GLU A 358      24.565  27.681 -25.468  1.00 35.37           O
ATOM   5777  N   LEU A 359      24.723  29.611 -26.622  1.00 36.27           N
ATOM   5778  CA  LEU A 359      23.284  29.911 -26.541  1.00 36.14           C
ATOM   5780  CB  LEU A 359      22.966  31.336 -27.026  1.00 31.55           C
ATOM   5783  CG  LEU A 359      23.614  32.506 -26.268  1.00 32.47           C
ATOM   5785  CD1 LEU A 359      23.262  33.843 -26.927  1.00 29.30           C
ATOM   5789  CD2 LEU A 359      23.223  32.519 -24.818  1.00 31.07           C
ATOM   5793  C   LEU A 359      22.459  28.902 -27.327  1.00 37.74           C
ATOM   5794  O   LEU A 359      21.447  28.401 -26.836  1.00 34.73           O
ATOM   5796  N   THR A 360      22.877  28.613 -28.553  1.00 37.63           N
ATOM   5797  CA  THR A 360      22.194  27.623 -29.354  1.00 41.35           C
ATOM   5799  CB  THR A 360      22.873  27.459 -30.729  1.00 44.43           C
ATOM   5801  OG1 THR A 360      23.160  28.753 -31.279  1.00 51.29           O
ATOM   5803  CG2 THR A 360      21.986  26.677 -31.683  1.00 41.15           C
ATOM   5807  C   THR A 360      22.215  26.272 -28.639  1.00 40.85           C
ATOM   5808  O   THR A 360      21.223  25.558 -28.590  1.00 40.14           O
ATOM   5810  N   HIS A 361      23.359  25.941 -28.067  1.00 40.44           N
ATOM   5811  CA  HIS A 361      23.519  24.674 -27.409  1.00 39.21           C
ATOM   5813  CB  HIS A 361      24.996  24.400 -27.109  1.00 44.83           C
ATOM   5816  CG  HIS A 361      25.820  24.165 -28.340  1.00 43.51           C
ATOM   5817  ND1 HIS A 361      25.275  23.693 -29.514  1.00 46.60           N
ATOM   5819  CE1 HIS A 361      26.227  23.585 -30.426  1.00 49.92           C
ATOM   5821  NE2 HIS A 361      27.372  23.961 -29.879  1.00 48.36           N
ATOM   5823  CD2 HIS A 361      27.145  24.322 -28.572  1.00 46.10           C
ATOM   5825  C   HIS A 361      22.711  24.593 -26.138  1.00 38.83           C
ATOM   5826  O   HIS A 361      22.209  23.523 -25.830  1.00 31.00           O
ATOM   5828  N   ALA A 362      22.596  25.709 -25.402  1.00 33.05           N
ATOM   5829  CA  ALA A 362      21.770  25.737 -24.201  1.00 31.39           C
ATOM   5831  CB  ALA A 362      21.932  27.064 -23.471  1.00 26.34           C
ATOM   5835  C   ALA A 362      20.286  25.472 -24.549  1.00 26.77           C
ATOM   5836  O   ALA A 362      19.603  24.777 -23.820  1.00 27.08           O
ATOM   5838  N   LEU A 363      19.811  26.028 -25.664  1.00 26.78           N
ATOM   5839  CA  LEU A 363      18.418  25.879 -26.079  1.00 25.40           C
ATOM   5841  CB  LEU A 363      18.054  26.868 -27.181  1.00 25.33           C
ATOM   5844  CG  LEU A 363      17.969  28.362 -26.805  1.00 21.60           C
ATOM   5846  CD1 LEU A 363      17.797  29.210 -28.093  1.00 22.97           C
ATOM   5850  CD2 LEU A 363      16.835  28.672 -25.844  1.00 21.61           C
ATOM   5854  C   LEU A 363      18.103  24.467 -26.527  1.00 26.55           C
ATOM   5855  O   LEU A 363      17.096  23.905 -26.129  1.00 24.06           O
ATOM   5857  N   GLU A 364      18.972  23.895 -27.354  1.00 25.36           N
ATOM   5858  CA  GLU A 364      18.799  22.503 -27.798  1.00 31.45           C
ATOM   5860  CB  GLU A 364      19.777  22.193 -28.931  1.00 35.46           C
ATOM   5863  CG  GLU A 364      19.339  22.834 -30.234  1.00 39.26           C
ATOM   5866  CD  GLU A 364      20.412  22.795 -31.313  1.00 47.82           C
ATOM   5867  OE1 GLU A 364      21.578  22.475 -30.999  1.00 45.31           O
ATOM   5868  OE2 GLU A 364      20.074  23.093 -32.481  1.00 49.67           O
ATOM   5869  C   GLU A 364      18.950  21.522 -26.652  1.00 25.69           C
ATOM   5870  O   GLU A 364      18.262  20.501 -26.607  1.00 26.75           O
ATOM   5872  N   CYS A 365      19.829  21.838 -25.710  1.00 26.43           N
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ATOM   5873  CA  CYS A 365      19.972  21.000 -24.533  1.00 29.08           C
ATOM   5875  CB  CYS A 365      21.216  21.376 -23.737  1.00 32.19           C
ATOM   5878  SG  CYS A 365      22.689  20.743 -24.577  1.00 48.60           S
ATOM   5880  C   CYS A 365      18.708  21.047 -23.683  1.00 26.26           C
ATOM   5881  O   CYS A 365      18.236  20.006 -23.248  1.00 25.78           O
ATOM   5883  N   ALA A 366      18.162  22.253 -23.470  1.00 24.60           N
ATOM   5884  CA  ALA A 366      16.919  22.452 -22.734  1.00 22.00           C
ATOM   5886  CB  ALA A 366      16.533  23.928 -22.757  1.00 24.25           C
ATOM   5890  C   ALA A 366      15.780  21.649 -23.349  1.00 23.67           C
ATOM   5891  O   ALA A 366      14.989  21.042 -22.654  1.00 22.79           O
ATOM   5893  N   MET A 367      15.654  21.720 -24.675  1.00 23.49           N
ATOM   5894  CA  MET A 367      14.563  21.006 -25.351  1.00 22.33           C
ATOM   5896  CB  MET A 367      14.472  21.446 -26.820  1.00 27.48           C
ATOM   5899  CG  MET A 367      13.244  20.916 -27.581  1.00 28.75           C
ATOM   5902  SD  MET A 367      11.692  21.378 -26.781  1.00 37.09           S
ATOM   5903  CE  MET A 367      11.528  23.057 -27.309  1.00 34.46           C
ATOM   5907  C   MET A 367      14.760  19.502 -25.225  1.00 22.36           C
ATOM   5908  O   MET A 367      13.802  18.742 -25.029  1.00 28.21           O
ATOM   5910  N   ASP A 368      16.003  19.051 -25.309  1.00 24.14           N
ATOM   5911  CA  ASP A 368      16.267  17.626 -25.195  1.00 23.74           C
ATOM   5913  CB  ASP A 368      17.748  17.366 -25.503  1.00 26.77           C
ATOM   5916  CG  ASP A 368      18.119  15.888 -25.461  1.00 31.74           C
ATOM   5917  OD1 ASP A 368      19.141  15.524 -26.072  1.00 37.89           O
ATOM   5918  OD2 ASP A 368      17.409  15.095 -24.805  1.00 43.49           O
ATOM   5919  C   ASP A 368      15.856  17.139 -23.790  1.00 25.97           C
ATOM   5920  O   ASP A 368      15.124  16.149 -23.619  1.00 24.29           O
ATOM   5922  N   ILE A 369      16.307  17.857 -22.773  1.00 25.99           N
ATOM   5923  CA  ILE A 369      15.928  17.556 -21.403  1.00 24.25           C
ATOM   5925  CB  ILE A 369      16.615  18.536 -20.413  1.00 22.15           C
ATOM   5927  CG1 ILE A 369      18.115  18.220 -20.303  1.00 26.42           C
ATOM   5930  CD1 ILE A 369      18.957  19.398 -19.745  1.00 27.40           C
ATOM   5934  CG2 ILE A 369      15.957  18.447 -19.012  1.00 16.33           C
ATOM   5938  C   ILE A 369      14.405  17.612 -21.247  1.00 21.47           C
ATOM   5939  O   ILE A 369      13.792  16.729 -20.622  1.00 22.03           O
ATOM   5941  N   PHE A 370      13.789  18.649 -21.811  1.00 22.97           N
ATOM   5942  CA  PHE A 370      12.337  18.808 -21.716  1.00 20.02           C
ATOM   5944  CB  PHE A 370      11.870  20.061 -22.433  1.00 23.95           C
ATOM   5947  CG  PHE A 370      10.376  20.261 -22.373  1.00 21.76           C
ATOM   5948  CD1 PHE A 370       9.799  21.006 -21.366  1.00 25.80           C
ATOM   5950  CE1 PHE A 370       8.425  21.173 -21.305  1.00 25.86           C
ATOM   5952  CZ  PHE A 370       7.612  20.581 -22.221  1.00 27.38           C
ATOM   5954  CE2 PHE A 370       8.158  19.809 -23.237  1.00 32.57           C
ATOM   5956  CD2 PHE A 370       9.541  19.652 -23.312  1.00 28.54           C
ATOM   5958  C   PHE A 370      11.593  17.589 -22.291  1.00 28.74           C
ATOM   5959  O   PHE A 370      10.665  17.064 -21.666  1.00 25.15           O
ATOM   5961  N   ASP A 371      11.993  17.159 -23.482  1.00 30.63           N
ATOM   5962  CA  ASP A 371      11.330  16.032 -24.151  1.00 32.08           C
ATOM   5964  CB  ASP A 371      11.858  15.844 -25.574  1.00 34.46           C
ATOM   5967  CG  ASP A 371      11.407  16.945 -26.515  1.00 36.66           C
ATOM   5968  OD1 ASP A 371      12.092  17.131 -27.535  1.00 42.54           O
ATOM   5969  OD2 ASP A 371      10.386  17.625 -26.235  1.00 37.04           O
ATOM   5970  C   ASP A 371      11.485  14.744 -23.376  1.00 29.92           C
ATOM   5971  O   ASP A 371      10.524  14.020 -23.190  1.00 34.59           O
ATOM   5973  N   PHE A 372      12.682  14.459 -22.903  1.00 29.85           N
ATOM   5974  CA  PHE A 372      12.907  13.225 -22.173  1.00 27.19           C
ATOM   5976  CB  PHE A 372      14.391  13.003 -21.929  1.00 31.08           C
ATOM   5979  CG  PHE A 372      14.693  11.712 -21.218  1.00 35.43           C
ATOM   5980  CD1 PHE A 372      14.954  10.551 -21.946  1.00 36.37           C
ATOM   5982  CE1 PHE A 372      15.219   9.351 -21.287  1.00 35.52           C
ATOM   5984  CZ  PHE A 372      15.223   9.304 -19.896  1.00 34.76           C
ATOM   5986  CE2 PHE A 372      14.956  10.449 -19.161  1.00 37.74           C
ATOM   5988  CD2 PHE A 372      14.695  11.645 -19.821  1.00 34.57           C
ATOM   5990  C   PHE A 372      12.166  13.217 -20.836  1.00 29.65           C
ATOM   5991  O   PHE A 372      11.425  12.276 -20.540  1.00 29.37           O
ATOM   5993  N   CYS A 373      12.367  14.239 -20.023  1.00 26.90           N
ATOM   5994  CA  CYS A 373      11.761  14.263 -18.687  1.00 28.97           C
ATOM   5996  CB  CYS A 373      12.276  15.444 -17.867  1.00 25.44           C
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ATOM	5999	SG	CYS	A	373	14.017	15.312	-17.600	1.00 29.13	S
ATOM	6001	C	CYS	A	373	10.244	14.257	-18.723	1.00 29.62	C
ATOM	6002	O	CYS	A	373	9.604	13.741	-17.802	1.00 28.71	O
ATOM	6004	N	SER	A	374	9.662	14.831	-19.774	1.00 29.03	N
ATOM	6005	CA	SER	A	374	8.206	14.847	-19.917	1.00 33.57	C
ATOM	6007	CB	SER	A	374	7.800	15.636	-21.155	1.00 33.97	C
ATOM	6010	OG	SER	A	374	7.996	17.012	-20.938	1.00 37.04	O
ATOM	6012	C	SER	A	374	7.622	13.423	-20.004	1.00 35.67	C
ATOM	6013	O	SER	A	374	6.478	13.195	-19.638	1.00 40.07	O
ATOM	6015	N	GLN	A	375	8.411	12.474	-20.477	1.00 35.65	N
ATOM	6016	CA	GLN	A	375	7.967	11.108	-20.595	1.00 38.26	C
ATOM	6018	CB	GLN	A	375	8.474	10.520	-21.912	1.00 41.69	C
ATOM	6021	CG	GLN	A	375	8.220	11.393	-23.138	1.00 50.65	C
ATOM	6024	CD	GLN	A	375	6.739	11.653	-23.401	1.00 57.10	C
ATOM	6025	OE1	GLN	A	375	5.873	10.880	-22.988	1.00 67.31	O
ATOM	6026	NE2	GLN	A	375	6.445	12.747	-24.102	1.00 64.48	N
ATOM	6029	C	GLN	A	375	8.411	10.230	-19.425	1.00 38.13	C
ATOM	6030	O	GLN	A	375	8.173	9.026	-19.444	1.00 34.70	O
ATOM	6032	N	VAL	A	376	9.045	10.799	-18.401	1.00 38.40	N
ATOM	6033	CA	VAL	A	376	9.381	9.998	-17.220	1.00 36.51	C
ATOM	6035	CB	VAL	A	376	10.530	10.572	-16.385	1.00 36.30	C
ATOM	6037	CG1	VAL	A	376	10.580	9.905	-15.002	1.00 35.83	C
ATOM	6041	CG2	VAL	A	376	11.862	10.379	-17.106	1.00 34.32	C
ATOM	6045	C	VAL	A	376	8.147	9.826	-16.348	1.00 39.07	C
ATOM	6046	O	VAL	A	376	7.442	10.792	-16.024	1.00 32.01	O
ATOM	6048	N	HIS	A	377	7.898	8.573	-15.984	1.00 42.85	N
ATOM	6049	CA	HIS	A	377	6.749	8.200	-15.164	1.00 45.55	C
ATOM	6051	CB	HIS	A	377	6.789	6.691	-14.908	1.00 50.33	C
ATOM	6054	CG	HIS	A	377	5.689	6.191	-14.027	1.00 55.07	C
ATOM	6055	ND1	HIS	A	377	4.355	6.335	-14.345	1.00 59.37	N
ATOM	6057	CE1	HIS	A	377	3.619	5.790	-13.392	1.00 62.00	C
ATOM	6059	NE2	HIS	A	377	4.428	5.293	-12.472	1.00 63.32	N
ATOM	6061	CD2	HIS	A	377	5.728	5.520	-12.851	1.00 58.60	C
ATOM	6063	C	HIS	A	377	6.801	8.940	-13.842	1.00 42.42	C
ATOM	6064	O	HIS	A	377	7.836	8.942	-13.190	1.00 42.84	O
ATOM	6066	N	LYS	A	378	5.688	9.568	-13.474	1.00 36.11	N
ATOM	6067	CA	LYS	A	378	5.535	10.308	-12.226	1.00 37.24	C
ATOM	6069	CB	LYS	A	378	6.329	9.702	-11.056	1.00 41.18	C
ATOM	6072	CG	LYS	A	378	5.953	8.279	-10.678	1.00 47.10	C
ATOM	6075	CD	LYS	A	378	4.475	8.180	-10.335	1.00 53.47	C
ATOM	6078	CE	LYS	A	378	4.159	6.941	-9.503	1.00 58.35	C
ATOM	6081	NZ	LYS	A	378	4.644	7.071	-8.097	1.00 59.01	N
ATOM	6085	C	LYS	A	378	5.874	11.773	-12.359	1.00 34.50	C
ATOM	6086	O	LYS	A	378	5.452	12.585	-11.520	1.00 31.53	O
ATOM	6088	N	ILE	A	379	6.625	12.153	-13.391	1.00 31.68	N
ATOM	6089	CA	ILE	A	379	6.884	13.574	-13.565	1.00 32.11	C
ATOM	6091	CB	ILE	A	379	8.175	13.849	-14.373	1.00 33.80	C
ATOM	6093	CG1	ILE	A	379	9.382	13.328	-13.592	1.00 30.77	C
ATOM	6096	CD1	ILE	A	379	10.741	13.625	-14.276	1.00 24.54	C
ATOM	6100	CG2	ILE	A	379	8.318	15.331	-14.606	1.00 28.31	C
ATOM	6104	C	ILE	A	379	5.655	14.219	-14.203	1.00 30.27	C
ATOM	6105	O	ILE	A	379	5.337	13.962	-15.355	1.00 35.59	O
ATOM	6107	N	GLN	A	380	4.996	15.082	-13.449	1.00 36.69	N
ATOM	6108	CA	GLN	A	380	3.727	15.699	-13.847	1.00 37.76	C
ATOM	6110	CB	GLN	A	380	3.060	16.210	-12.568	1.00 43.28	C
ATOM	6113	CG	GLN	A	380	1.640	16.734	-12.672	1.00 53.06	C
ATOM	6116	CD	GLN	A	380	1.160	17.336	-11.338	1.00 58.35	C
ATOM	6117	OE1	GLN	A	380	1.758	18.294	-10.815	1.00 66.29	O
ATOM	6118	NE2	GLN	A	380	0.082	16.775	-10.785	1.00 62.98	N
ATOM	6121	C	GLN	A	380	3.932	16.851	-14.846	1.00 39.25	C
ATOM	6122	O	GLN	A	380	3.217	16.946	-15.847	1.00 36.74	O
ATOM	6124	N	THR	A	381	4.926	17.706	-14.569	1.00 30.67	N
ATOM	6125	CA	THR	A	381	5.213	18.899	-15.358	1.00 30.25	C
ATOM	6127	CB	THR	A	381	4.492	20.140	-14.761	1.00 33.90	C
ATOM	6129	OG1	THR	A	381	3.071	19.943	-14.828	1.00 38.83	O
ATOM	6131	CG2	THR	A	381	4.863	21.441	-15.504	1.00 33.96	C
ATOM	6135	C	THR	A	381	6.735	19.148	-15.383	1.00 29.03	C

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ATOM   6136  O   THR A 381       7.417  18.938 -14.386  1.00 30.49           O
ATOM   6138  N   VAL A 382       7.243  19.539 -16.545  1.00 29.49           N
ATOM   6139  CA  VAL A 382       8.612  19.995 -16.715  1.00 25.57           C
ATOM   6141  CB  VAL A 382       9.398  19.095 -17.694  1.00 29.53           C
ATOM   6143  CG1 VAL A 382      10.891  19.568 -17.829  1.00 27.43           C
ATOM   6147  CG2 VAL A 382       9.334  17.696 -17.221  1.00 28.09           C
ATOM   6151  C   VAL A 382       8.587  21.426 -17.219  1.00 27.61           C
ATOM   6152  O   VAL A 382       7.821  21.770 -18.128  1.00 28.10           O
ATOM   6154  N   SER A 383       9.416  22.265 -16.604  1.00 24.27           N
ATOM   6155  CA  SER A 383       9.548  23.664 -16.970  1.00 26.69           C
ATOM   6157  CB  SER A 383       8.803  24.530 -15.968  1.00 23.84           C
ATOM   6160  OG  SER A 383       7.555  23.958 -15.620  1.00 24.75           O
ATOM   6162  C   SER A 383      11.039  24.021 -16.963  1.00 28.19           C
ATOM   6163  O   SER A 383      11.779  23.558 -16.084  1.00 24.92           O
ATOM   6165  N   ILE A 384      11.473  24.796 -17.957  1.00 22.48           N
ATOM   6166  CA  ILE A 384      12.864  25.183 -18.073  1.00 21.59           C
ATOM   6168  CB  ILE A 384      13.613  24.319 -19.095  1.00 23.25           C
ATOM   6170  CG1 ILE A 384      13.347  22.840 -18.814  1.00 20.85           C
ATOM   6173  CD1 ILE A 384      14.033  21.876 -19.793  1.00 23.70           C
ATOM   6177  CG2 ILE A 384      15.122  24.670 -19.074  1.00 20.42           C
ATOM   6181  C   ILE A 384      13.001  26.629 -18.453  1.00 23.48           C
ATOM   6182  O   ILE A 384      12.461  27.062 -19.487  1.00 24.61           O
ATOM   6184  N   GLY A 385      13.698  27.386 -17.607  1.00 21.36           N
ATOM   6185  CA  GLY A 385      14.020  28.788 -17.888  1.00 22.19           C
ATOM   6188  C   GLY A 385      15.463  28.901 -18.304  1.00 25.65           C
ATOM   6189  O   GLY A 385      16.352  28.302 -17.670  1.00 22.22           O
ATOM   6191  N   VAL A 386      15.697  29.642 -19.380  1.00 21.88           N
ATOM   6192  CA  VAL A 386      17.050  29.834 -19.939  1.00 23.70           C
ATOM   6194  CB  VAL A 386      17.212  29.206 -21.346  1.00 26.22           C
ATOM   6196  CG1 VAL A 386      18.653  29.340 -21.846  1.00 19.96           C
ATOM   6200  CG2 VAL A 386      16.752  27.736 -21.339  1.00 18.08           C
ATOM   6204  C   VAL A 386      17.330  31.336 -20.012  1.00 25.36           C
ATOM   6205  O   VAL A 386      16.611  32.058 -20.677  1.00 21.79           O
ATOM   6207  N   ALA A 387      18.381  31.781 -19.328  1.00 19.53           N
ATOM   6208  CA  ALA A 387      18.786  33.200 -19.281  1.00 24.64           C
ATOM   6210  CB  ALA A 387      18.294  33.818 -17.997  1.00 23.37           C
ATOM   6214  C   ALA A 387      20.321  33.265 -19.344  1.00 26.93           C
ATOM   6215  O   ALA A 387      20.986  32.378 -18.801  1.00 21.62           O
ATOM   6217  N   SER A 388      20.858  34.278 -20.028  1.00 24.00           N
ATOM   6218  CA  SER A 388      22.299  34.475 -20.236  1.00 27.05           C
ATOM   6220  CB  SER A 388      22.739  34.224 -21.682  1.00 20.97           C
ATOM   6223  OG  SER A 388      22.316  32.930 -22.132  1.00 40.16           O
ATOM   6225  C   SER A 388      22.716  35.889 -19.851  1.00 27.98           C
ATOM   6226  O   SER A 388      22.064  36.889 -20.197  1.00 26.30           O
ATOM   6228  N   GLY A 389      23.805  35.972 -19.114  1.00 26.49           N
ATOM   6229  CA  GLY A 389      24.301  37.250 -18.655  1.00 29.08           C
ATOM   6232  C   GLY A 389      25.541  37.052 -17.803  1.00 29.11           C
ATOM   6233  O   GLY A 389      26.047  35.923 -17.663  1.00 31.37           O
ATOM   6235  N   ILE A 390      25.998  38.158 -17.224  1.00 26.74           N
ATOM   6236  CA  ILE A 390      27.127  38.168 -16.310  1.00 29.72           C
ATOM   6238  CB  ILE A 390      27.777  39.557 -16.175  1.00 30.79           C
ATOM   6240  CG1 ILE A 390      28.172  40.122 -17.533  1.00 33.42           C
ATOM   6243  CD1 ILE A 390      29.256  39.342 -18.217  1.00 36.05           C
ATOM   6247  CG2 ILE A 390      29.026  39.457 -15.304  1.00 29.82           C
ATOM   6251  C   ILE A 390      26.659  37.723 -14.944  1.00 24.52           C
ATOM   6252  O   ILE A 390      25.739  38.307 -14.337  1.00 26.35           O
ATOM   6254  N   VAL A 391      27.282  36.662 -14.457  1.00 29.48           N
ATOM   6255  CA  VAL A 391      26.937  36.120 -13.155  1.00 24.50           C
ATOM   6257  CB  VAL A 391      26.191  34.771 -13.230  1.00 24.16           C
ATOM   6259  CG1 VAL A 391      24.911  34.914 -14.096  1.00 19.74           C
ATOM   6263  CG2 VAL A 391      27.069  33.705 -13.750  1.00 31.26           C
ATOM   6267  C   VAL A 391      28.231  36.017 -12.366  1.00 22.53           C
ATOM   6268  O   VAL A 391      29.302  35.915 -12.941  1.00 23.80           O
ATOM   6270  N   PHE A 392      28.104  36.105 -11.058  1.00 18.26           N
ATOM   6271  CA  PHE A 392      29.241  35.940 -10.175  1.00 20.53           C
ATOM   6273  CB  PHE A 392      29.026  36.642  -8.842  1.00 21.41           C
ATOM   6276  CG  PHE A 392      29.969  36.151  -7.778  1.00 25.53           C
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ATOM	6277	CD1	PHE	A	392	31.292	36.608	-7.749	1.00	24.63	C
ATOM	6279	CE1	PHE	A	392	32.163	36.149	-6.790	1.00	30.83	C
ATOM	6281	CZ	PHE	A	392	31.735	35.192	-5.855	1.00	29.07	C
ATOM	6283	CE2	PHE	A	392	30.435	34.700	-5.906	1.00	29.90	C
ATOM	6285	CD2	PHE	A	392	29.572	35.159	-6.891	1.00	25.83	C
ATOM	6287	C	PHE	A	392	29.339	34.468	-9.901	1.00	19.86	C
ATOM	6288	O	PHE	A	392	28.324	33.841	-9.602	1.00	18.86	O
ATOM	6290	N	CYS	A	393	30.549	33.925	-10.054	1.00	21.29	N
ATOM	6291	CA	CYS	A	393	30.870	32.549	-9.720	1.00	18.99	C
ATOM	6293	CB	CYS	A	393	31.415	31.839	-10.952	1.00	23.93	C
ATOM	6296	SG	CYS	A	393	30.364	31.963	-12.406	1.00	29.55	S
ATOM	6298	C	CYS	A	393	31.975	32.573	-8.660	1.00	23.77	C
ATOM	6299	O	CYS	A	393	32.935	33.307	-8.806	1.00	26.23	O
ATOM	6301	N	GLY	A	394	31.854	31.776	-7.596	1.00	21.04	N
ATOM	6302	CA	GLY	A	394	32.952	31.633	-6.630	1.00	18.07	C
ATOM	6305	C	GLY	A	394	32.630	30.689	-5.469	1.00	19.77	C
ATOM	6306	O	GLY	A	394	31.497	30.215	-5.315	1.00	20.83	O
ATOM	6308	N	ILE	A	395	33.639	30.420	-4.670	1.00	18.61	N
ATOM	6309	CA	ILE	A	395	33.486	29.613	-3.461	1.00	17.70	C
ATOM	6311	CB	ILE	A	395	34.773	28.831	-3.152	1.00	20.64	C
ATOM	6313	CG1	ILE	A	395	35.007	27.822	-4.279	1.00	23.62	C
ATOM	6316	CD1	ILE	A	395	36.419	27.264	-4.384	1.00	23.38	C
ATOM	6320	CG2	ILE	A	395	34.668	28.111	-1.806	1.00	18.50	C
ATOM	6324	C	ILE	A	395	33.043	30.535	-2.316	1.00	19.63	C
ATOM	6325	O	ILE	A	395	33.788	31.402	-1.858	1.00	20.59	O
ATOM	6327	N	VAL	A	396	31.824	30.282	-1.850	1.00	17.22	N
ATOM	6328	CA	VAL	A	396	31.162	31.085	-0.856	1.00	20.25	C
ATOM	6330	CB	VAL	A	396	29.781	31.583	-1.359	1.00	23.14	C
ATOM	6332	CG1	VAL	A	396	29.084	32.381	-0.268	1.00	25.92	C
ATOM	6336	CG2	VAL	A	396	29.928	32.435	-2.644	1.00	21.00	C
ATOM	6340	C	VAL	A	396	30.997	30.305	0.442	1.00	15.47	C
ATOM	6341	O	VAL	A	396	30.617	29.167	0.427	1.00	19.50	O
ATOM	6343	N	GLY	A	397	31.281	30.963	1.571	1.00	18.88	N
ATOM	6344	CA	GLY	A	397	31.083	30.408	2.901	1.00	19.66	C
ATOM	6347	C	GLY	A	397	32.324	30.599	3.759	1.00	17.54	C
ATOM	6348	O	GLY	A	397	33.075	31.573	3.591	1.00	21.03	O
ATOM	6350	N	HIS	A	398	32.529	29.679	4.683	1.00	18.70	N
ATOM	6351	CA	HIS	A	398	33.670	29.718	5.650	1.00	17.36	C
ATOM	6353	CB	HIS	A	398	33.140	29.200	7.000	1.00	20.29	C
ATOM	6356	CG	HIS	A	398	34.018	29.452	8.175	1.00	18.62	C
ATOM	6357	ND1	HIS	A	398	35.163	28.725	8.413	1.00	17.30	N
ATOM	6359	CE1	HIS	A	398	35.713	29.134	9.545	1.00	19.59	C
ATOM	6361	NE2	HIS	A	398	34.945	30.071	10.069	1.00	19.10	N
ATOM	6363	CD2	HIS	A	398	33.878	30.295	9.228	1.00	14.94	C
ATOM	6365	C	HIS	A	398	34.780	28.792	5.133	1.00	18.46	C
ATOM	6366	O	HIS	A	398	34.500	27.822	4.418	1.00	16.69	O
ATOM	6368	N	THR	A	399	36.030	29.051	5.525	1.00	19.49	N
ATOM	6369	CA	THR	A	399	37.127	28.122	5.269	1.00	18.10	C
ATOM	6371	CB	THR	A	399	38.308	28.432	6.204	1.00	28.41	C
ATOM	6373	OG1	THR	A	399	38.771	29.745	5.945	1.00	28.19	O
ATOM	6375	CG2	THR	A	399	39.452	27.474	5.985	1.00	26.65	C
ATOM	6379	C	THR	A	399	36.756	26.674	5.524	1.00	19.48	C
ATOM	6380	O	THR	A	399	37.101	25.794	4.735	1.00	18.79	O
ATOM	6382	N	VAL	A	400	36.062	26.402	6.622	1.00	20.91	N
ATOM	6383	CA	VAL	A	400	35.770	25.010	7.003	1.00	20.01	C
ATOM	6385	CB	VAL	A	400	35.689	24.810	8.555	1.00	21.24	C
ATOM	6387	CG1	VAL	A	400	36.923	25.375	9.249	1.00	24.43	C
ATOM	6391	CG2	VAL	A	400	34.420	25.447	9.138	1.00	18.85	C
ATOM	6395	C	VAL	A	400	34.474	24.492	6.361	1.00	17.72	C
ATOM	6396	O	VAL	A	400	34.207	23.310	6.423	1.00	18.66	O
ATOM	6398	N	ARG	A	401	33.681	25.377	5.760	1.00	14.79	N
ATOM	6399	CA	ARG	A	401	32.388	24.993	5.184	1.00	16.02	C
ATOM	6401	CB	ARG	A	401	31.307	24.900	6.277	1.00	13.29	C
ATOM	6404	CG	ARG	A	401	29.944	24.291	5.816	1.00	12.10	C
ATOM	6407	CD	ARG	A	401	29.958	22.816	5.385	1.00	14.86	C
ATOM	6410	NE	ARG	A	401	28.736	22.399	4.695	1.00	16.60	N
ATOM	6412	CZ	ARG	A	401	28.557	22.424	3.377	1.00	17.73	C

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ATOM   6413  NH1 ARG A 401      29.543  22.806   2.557  1.00 18.63           N
ATOM   6416  NH2 ARG A 401      27.390  22.076   2.871  1.00 20.69           N
ATOM   6419  C   ARG A 401      31.994  25.999   4.112  1.00 15.96           C
ATOM   6420  O   ARG A 401      31.607  27.128   4.418  1.00 15.47           O
ATOM   6422  N   HIS A 402      32.178  25.606   2.850  1.00 17.45           N
ATOM   6423  CA  HIS A 402      31.942  26.489   1.705  1.00 19.98           C
ATOM   6425  CB  HIS A 402      33.178  27.355   1.368  1.00 19.89           C
ATOM   6428  CG  HIS A 402      34.480  26.600   1.248  1.00 22.34           C
ATOM   6429  ND1 HIS A 402      35.675  27.142   1.662  1.00 21.49           N
ATOM   6431  CE1 HIS A 402      36.651  26.273   1.469  1.00 22.17           C
ATOM   6433  NE2 HIS A 402      36.144  25.202   0.891  1.00 17.74           N
ATOM   6435  CD2 HIS A 402      34.785  25.372   0.762  1.00 20.36           C
ATOM   6437  C   HIS A 402      31.522  25.724   0.494  1.00 16.11           C
ATOM   6438  O   HIS A 402      31.759  24.509   0.391  1.00 17.43           O
ATOM   6440  N   GLU A 403      30.879  26.415  -0.447  1.00 16.25           N
ATOM   6441  CA  GLU A 403      30.479  25.780  -1.702  1.00 14.27           C
ATOM   6443  CB  GLU A 403      29.007  25.354  -1.627  1.00 16.75           C
ATOM   6446  CG  GLU A 403      28.762  24.289  -0.583  1.00 20.12           C
ATOM   6449  CD  GLU A 403      27.326  23.832  -0.514  1.00 22.70           C
ATOM   6450  OE1 GLU A 403      26.447  24.394  -1.191  1.00 20.70           O
ATOM   6451  OE2 GLU A 403      27.099  22.848   0.182  1.00 23.81           O
ATOM   6452  C   GLU A 403      30.644  26.744  -2.871  1.00 17.53           C
ATOM   6453  O   GLU A 403      30.492  27.947  -2.731  1.00 20.32           O
ATOM   6455  N   TYR A 404      30.904  26.188  -4.037  1.00 20.49           N
ATOM   6456  CA  TYR A 404      30.976  26.983  -5.267  1.00 19.36           C
ATOM   6458  CB  TYR A 404      31.613  26.156  -6.335  1.00 21.57           C
ATOM   6461  CG  TYR A 404      31.821  26.857  -7.640  1.00 16.74           C
ATOM   6462  CD1 TYR A 404      32.831  27.805  -7.807  1.00 28.03           C
ATOM   6464  CE1 TYR A 404      33.015  28.449  -9.032  1.00 27.84           C
ATOM   6466  CZ  TYR A 404      32.196  28.111 -10.101  1.00 33.97           C
ATOM   6467  OH  TYR A 404      32.344  28.708 -11.332  1.00 40.52           O
ATOM   6469  CE2 TYR A 404      31.185  27.184  -9.944  1.00 31.79           C
ATOM   6471  CD2 TYR A 404      31.013  26.553  -8.725  1.00 28.40           C
ATOM   6473  C   TYR A 404      29.563  27.351  -5.669  1.00 18.67           C
ATOM   6474  O   TYR A 404      28.697  26.492  -5.795  1.00 20.67           O
ATOM   6476  N   THR A 405      29.327  28.641  -5.820  1.00 19.07           N
ATOM   6477  CA  THR A 405      27.982  29.165  -5.922  1.00 20.15           C
ATOM   6479  CB  THR A 405      27.586  29.828  -4.549  1.00 24.78           C
ATOM   6481  OG1 THR A 405      27.682  28.850  -3.488  1.00 21.95           O
ATOM   6483  CG2 THR A 405      26.172  30.419  -4.594  1.00 19.64           C
ATOM   6487  C   THR A 405      27.940  30.169  -7.101  1.00 19.97           C
ATOM   6488  O   THR A 405      28.939  30.792  -7.422  1.00 22.93           O
ATOM   6490  N   VAL A 406      26.802  30.252  -7.774  1.00 23.07           N
ATOM   6491  CA  VAL A 406      26.580  31.244  -8.823  1.00 26.23           C
ATOM   6493  CB  VAL A 406      26.214  30.608 -10.179  1.00 32.99           C
ATOM   6495  CG1 VAL A 406      27.359  29.723 -10.675  1.00 27.83           C
ATOM   6499  CG2 VAL A 406      24.905  29.817 -10.046  1.00 36.14           C
ATOM   6503  C   VAL A 406      25.491  32.197  -8.356  1.00 24.08           C
ATOM   6504  O   VAL A 406      24.477  31.774  -7.805  1.00 24.23           O
ATOM   6506  N   ILE A 407      25.767  33.490  -8.472  1.00 23.00           N
ATOM   6507  CA  ILE A 407      24.891  34.545  -7.977  1.00 19.55           C
ATOM   6509  CB  ILE A 407      25.478  35.286  -6.752  1.00 21.11           C
ATOM   6511  CG1 ILE A 407      25.867  34.351  -5.604  1.00 27.84           C
ATOM   6514  CD1 ILE A 407      26.476  35.110  -4.412  1.00 27.57           C
ATOM   6518  CG2 ILE A 407      24.468  36.294  -6.221  1.00 21.82           C
ATOM   6522  C   ILE A 407      24.708  35.621  -9.080  1.00 24.48           C
ATOM   6523  O   ILE A 407      25.671  36.049  -9.735  1.00 21.60           O
ATOM   6525  N   GLY A 408      23.474  36.057  -9.284  1.00 24.63           N
ATOM   6526  CA  GLY A 408      23.212  37.146 -10.260  1.00 25.46           C
ATOM   6529  C   GLY A 408      21.762  37.209 -10.697  1.00 24.96           C
ATOM   6530  O   GLY A 408      21.016  36.239 -10.591  1.00 23.44           O
ATOM   6532  N   GLN A 409      21.382  38.374 -11.185  1.00 26.18           N
ATOM   6533  CA  GLN A 409      20.049  38.629 -11.740  1.00 31.60           C
ATOM   6535  CB  GLN A 409      20.082  40.016 -12.411  1.00 37.33           C
ATOM   6538  CG  GLN A 409      18.889  40.887 -12.157  1.00 47.93           C
ATOM   6541  CD  GLN A 409      18.558  41.012 -10.692  1.00 52.87           C
ATOM   6542  OE1 GLN A 409      19.362  41.519  -9.904  1.00 57.91           O
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ATOM   6543  NE2 GLN A 409      17.366  40.535 -10.309  1.00 55.29           N
ATOM   6546  C   GLN A 409      19.598  37.554 -12.743  1.00 25.57           C
ATOM   6547  O   GLN A 409      18.447  37.129 -12.737  1.00 25.67           O
ATOM   6549  N   LYS A 410      20.497  37.077 -13.586  1.00 22.94           N
ATOM   6550  CA  LYS A 410      20.072  36.118 -14.599  1.00 25.44           C
ATOM   6552  CB  LYS A 410      21.061  36.029 -15.733  1.00 26.13           C
ATOM   6555  CG  LYS A 410      21.197  37.316 -16.507  1.00 30.69           C
ATOM   6558  CD  LYS A 410      19.926  37.657 -17.232  1.00 34.04           C
ATOM   6561  CE  LYS A 410      20.131  38.791 -18.242  1.00 33.97           C
ATOM   6564  NZ  LYS A 410      19.130  38.711 -19.324  1.00 29.91           N
ATOM   6568  C   LYS A 410      19.801  34.732 -14.033  1.00 26.58           C
ATOM   6569  O   LYS A 410      19.065  33.976 -14.650  1.00 27.69           O
ATOM   6571  N   VAL A 411      20.371  34.420 -12.857  1.00 22.65           N
ATOM   6572  CA  VAL A 411      20.065  33.197 -12.150  1.00 20.95           C
ATOM   6574  CB  VAL A 411      21.044  32.936 -10.950  1.00 25.43           C
ATOM   6576  CG1 VAL A 411      20.710  31.638 -10.210  1.00 22.85           C
ATOM   6580  CG2 VAL A 411      22.503  32.917 -11.428  1.00 24.34           C
ATOM   6584  C   VAL A 411      18.662  33.301 -11.637  1.00 23.62           C
ATOM   6585  O   VAL A 411      17.860  32.367 -11.799  1.00 21.36           O
ATOM   6587  N   ASN A 412      18.340  34.442 -11.023  1.00 19.65           N
ATOM   6588  CA AASN A 412      17.009  34.643 -10.444  0.50 22.82           C
ATOM   6589  CA BASN A 412      17.011  34.623 -10.450  0.50 22.07           C
ATOM   6592  CB AASN A 412      16.944  35.946  -9.639  0.50 24.39           C
ATOM   6593  CB BASN A 412      16.940  35.894  -9.613  0.50 22.95           C
ATOM   6598  CG AASN A 412      18.038  36.048  -8.582  0.50 28.70           C
ATOM   6599  CG BASN A 412      15.549  36.160  -9.093  0.50 25.59           C
ATOM   6600  OD1AASN A 412      18.398  35.057  -7.941  0.50 35.56           O
ATOM   6601  OD1BASN A 412      14.918  35.278  -8.508  0.50 32.38           O
ATOM   6602  ND2AASN A 412      18.566  37.259  -8.391  0.50 29.93           N
ATOM   6603  ND2BASN A 412      15.052  37.375  -9.315  0.50 28.22           N
ATOM   6608  C   ASN A 412      15.935  34.649 -11.537  1.00 23.16           C
ATOM   6609  O   ASN A 412      14.860  34.093 -11.359  1.00 22.03           O
ATOM   6611  N   LEU A 413      16.256  35.258 -12.668  1.00 23.94           N
ATOM   6612  CA  LEU A 413      15.350  35.324 -13.798  1.00 25.78           C
ATOM   6614  CB  LEU A 413      15.988  36.129 -14.939  1.00 25.79           C
ATOM   6617  CG  LEU A 413      15.124  36.941 -15.926  1.00 35.12           C
ATOM   6619  CD1 LEU A 413      15.805  37.024 -17.298  1.00 25.01           C
ATOM   6623  CD2 LEU A 413      13.669  36.513 -16.043  1.00 30.86           C
ATOM   6627  C   LEU A 413      15.010  33.923 -14.290  1.00 23.75           C
ATOM   6628  O   LEU A 413      13.844  33.554 -14.334  1.00 25.13           O
ATOM   6630  N   ALA A 414      16.031  33.142 -14.680  1.00 24.96           N
ATOM   6631  CA  ALA A 414      15.824  31.744 -15.045  1.00 25.20           C
ATOM   6633  CB  ALA A 414      17.158  31.024 -15.202  1.00 22.99           C
ATOM   6637  C   ALA A 414      14.909  30.997 -14.073  1.00 22.07           C
ATOM   6638  O   ALA A 414      14.004  30.288 -14.506  1.00 23.63           O
ATOM   6640  N   ALA A 415      15.160  31.167 -12.771  1.00 23.43           N
ATOM   6641  CA  ALA A 415      14.393  30.542 -11.691  1.00 23.77           C
ATOM   6643  CB  ALA A 415      15.043  30.892 -10.299  1.00 23.96           C
ATOM   6647  C   ALA A 415      12.920  30.950 -11.668  1.00 25.67           C
ATOM   6648  O   ALA A 415      12.025  30.127 -11.490  1.00 24.19           O
ATOM   6650  N   ARG A 416      12.673  32.233 -11.843  1.00 24.88           N
ATOM   6651  CA  ARG A 416      11.306  32.749 -11.847  1.00 25.71           C
ATOM   6653  CB  ARG A 416      11.316  34.256 -11.693  1.00 27.01           C
ATOM   6656  CG  ARG A 416      11.984  34.751 -10.416  1.00 36.37           C
ATOM   6659  CD  ARG A 416      11.116  34.553  -9.197  1.00 41.57           C
ATOM   6662  NE  ARG A 416      11.870  34.800  -7.958  1.00 52.90           N
ATOM   6664  CZ  ARG A 416      11.433  34.513  -6.728  1.00 58.20           C
ATOM   6665  NH1 ARG A 416      10.221  33.983  -6.532  1.00 63.16           N
ATOM   6668  NH2 ARG A 416      12.210  34.764  -5.676  1.00 61.51           N
ATOM   6671  C   ARG A 416      10.585  32.371 -13.132  1.00 26.50           C
ATOM   6672  O   ARG A 416       9.401  32.086 -13.093  1.00 23.29           O
ATOM   6674  N   MET A 417      11.305  32.335 -14.261  1.00 26.11           N
ATOM   6675  CA  MET A 417      10.712  31.911 -15.531  1.00 22.17           C
ATOM   6677  CB  MET A 417      11.717  32.031 -16.674  1.00 23.22           C
ATOM   6680  CG  MET A 417      12.072  33.435 -17.091  1.00 29.17           C
ATOM   6683  SD  MET A 417      13.584  33.592 -18.109  1.00 31.19           S
ATOM   6684  CE  MET A 417      13.047  32.854 -19.634  1.00 34.52           C
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ATOM	6688	C	MET	A	417	10.179	30.498	-15.470	1.00 23.40	C
ATOM	6689	O	MET	A	417	9.081	30.252	-15.949	1.00 27.70	O
ATOM	6691	N	MET	A	418	10.936	29.549	-14.894	1.00 23.58	N
ATOM	6692	CA	MET	A	418	10.473	28.158	-14.843	1.00 23.50	C
ATOM	6694	CB	MET	A	418	11.602	27.187	-14.431	1.00 23.57	C
ATOM	6697	CG	MET	A	418	11.962	27.223	-12.991	1.00 28.06	C
ATOM	6700	SD	MET	A	418	13.421	26.312	-12.462	1.00 28.28	S
ATOM	6701	CE	MET	A	418	13.272	26.728	-10.725	1.00 28.85	C
ATOM	6705	C	MET	A	418	9.196	28.003	-13.975	1.00 26.08	C
ATOM	6706	O	MET	A	418	8.373	27.112	-14.214	1.00 28.65	O
ATOM	6708	N	MET	A	419	9.009	28.898	-13.012	1.00 30.82	N
ATOM	6709	CA	MET	A	419	7.858	28.821	-12.114	1.00 29.10	C
ATOM	6711	CB	MET	A	419	8.256	29.332	-10.738	1.00 33.79	C
ATOM	6714	CG	MET	A	419	9.420	28.508	-10.120	1.00 32.72	C
ATOM	6717	SD	MET	A	419	9.179	26.721	-10.205	1.00 33.93	S
ATOM	6718	CE	MET	A	419	7.613	26.502	-9.357	1.00 35.79	C
ATOM	6722	C	MET	A	419	6.685	29.605	-12.686	1.00 30.63	C
ATOM	6723	O	MET	A	419	5.557	29.123	-12.668	1.00 31.24	O
ATOM	6725	N	TYR	A	420	6.950	30.797	-13.211	1.00 27.92	N
ATOM	6726	CA	TYR	A	420	5.881	31.619	-13.796	1.00 32.09	C
ATOM	6728	CB	TYR	A	420	6.302	33.081	-13.871	1.00 30.09	C
ATOM	6731	CG	TYR	A	420	6.275	33.782	-12.529	1.00 37.82	C
ATOM	6732	CD1	TYR	A	420	7.286	33.580	-11.580	1.00 39.52	C
ATOM	6734	CE1	TYR	A	420	7.264	34.248	-10.340	1.00 39.95	C
ATOM	6736	CZ	TYR	A	420	6.220	35.125	-10.063	1.00 43.61	C
ATOM	6737	OH	TYR	A	420	6.165	35.814	-8.869	1.00 44.97	O
ATOM	6739	CE2	TYR	A	420	5.214	35.332	-10.990	1.00 43.39	C
ATOM	6741	CD2	TYR	A	420	5.242	34.658	-12.212	1.00 40.70	C
ATOM	6743	C	TYR	A	420	5.403	31.189	-15.168	1.00 31.84	C
ATOM	6744	O	TYR	A	420	4.331	31.636	-15.604	1.00 26.37	O
ATOM	6746	N	TYR	A	421	6.187	30.351	-15.855	1.00 28.60	N
ATOM	6747	CA	TYR	A	421	5.811	29.858	-17.183	1.00 26.78	C
ATOM	6749	CB	TYR	A	421	6.674	30.483	-18.284	1.00 24.07	C
ATOM	6752	CG	TYR	A	421	6.584	31.976	-18.454	1.00 24.85	C
ATOM	6753	CD1	TYR	A	421	7.371	32.840	-17.702	1.00 31.10	C
ATOM	6755	CE1	TYR	A	421	7.292	34.232	-17.881	1.00 26.60	C
ATOM	6757	CZ	TYR	A	421	6.423	34.761	-18.832	1.00 26.75	C
ATOM	6758	OH	TYR	A	421	6.322	36.117	-19.026	1.00 25.59	O
ATOM	6760	CE2	TYR	A	421	5.643	33.934	-19.563	1.00 21.23	C
ATOM	6762	CD2	TYR	A	421	5.727	32.543	-19.389	1.00 26.79	C
ATOM	6764	C	TYR	A	421	5.960	28.347	-17.209	1.00 22.74	C
ATOM	6765	O	TYR	A	421	6.878	27.822	-17.867	1.00 27.98	O
ATOM	6767	N	PRO	A	422	5.087	27.637	-16.473	1.00 24.88	N
ATOM	6768	CA	PRO	A	422	5.232	26.203	-16.319	1.00 27.60	C
ATOM	6770	CB	PRO	A	422	4.191	25.844	-15.237	1.00 27.58	C
ATOM	6773	CG	PRO	A	422	3.135	26.960	-15.343	1.00 27.75	C
ATOM	6776	CD	PRO	A	422	3.953	28.174	-15.690	1.00 25.95	C
ATOM	6779	C	PRO	A	422	4.938	25.446	-17.599	1.00 26.36	C
ATOM	6780	O	PRO	A	422	4.203	25.929	-18.448	1.00 33.54	O
ATOM	6781	N	GLY	A	423	5.507	24.257	-17.722	1.00 22.80	N
ATOM	6782	CA	GLY	A	423	5.180	23.339	-18.809	1.00 25.33	C
ATOM	6785	C	GLY	A	423	5.783	23.643	-20.157	1.00 25.90	C
ATOM	6786	O	GLY	A	423	5.482	22.952	-21.134	1.00 25.39	O
ATOM	6788	N	ILE	A	424	6.678	24.633	-20.214	1.00 25.06	N
ATOM	6789	CA	ILE	A	424	7.345	25.005	-21.454	1.00 25.27	C
ATOM	6791	CB	ILE	A	424	6.624	26.180	-22.143	1.00 25.55	C
ATOM	6793	CG1	ILE	A	424	6.581	27.420	-21.239	1.00 29.01	C
ATOM	6796	CD1	ILE	A	424	6.450	28.753	-22.017	1.00 21.62	C
ATOM	6800	CG2	ILE	A	424	5.182	25.731	-22.583	1.00 27.27	C
ATOM	6804	C	ILE	A	424	8.828	25.340	-21.206	1.00 24.96	C
ATOM	6805	O	ILE	A	424	9.280	25.387	-20.056	1.00 21.76	O
ATOM	6807	N	VAL	A	425	9.552	25.558	-22.291	1.00 22.95	N
ATOM	6808	CA	VAL	A	425	10.937	26.030	-22.252	1.00 22.58	C
ATOM	6810	CB	VAL	A	425	11.817	25.283	-23.246	1.00 23.70	C
ATOM	6812	CG1	VAL	A	425	13.274	25.940	-23.361	1.00 20.62	C
ATOM	6816	CG2	VAL	A	425	11.867	23.793	-22.929	1.00 25.56	C
ATOM	6820	C	VAL	A	425	10.883	27.511	-22.601	1.00 23.45	C

ATOM	6821	O	VAL	A	425	10.321	27.898	-23.646	1.00 25.18	O
ATOM	6823	N	THR	A	426	11.423	28.346	-21.718	1.00 22.15	N
ATOM	6824	CA	THR	A	426	11.483	29.784	-21.941	1.00 22.68	C
ATOM	6826	CB	THR	A	426	10.744	30.554	-20.854	1.00 26.91	C
ATOM	6828	OG1	THR	A	426	11.158	30.071	-19.569	1.00 25.25	O
ATOM	6830	CG2	THR	A	426	9.222	30.379	-20.995	1.00 23.89	C
ATOM	6834	C	THR	A	426	12.917	30.296	-21.963	1.00 27.92	C
ATOM	6835	O	THR	A	426	13.839	29.708	-21.372	1.00 24.12	O
ATOM	6837	N	CYS	A	427	13.086	31.420	-22.631	1.00 19.29	N
ATOM	6838	CA	CYS	A	427	14.382	32.066	-22.691	1.00 26.78	C
ATOM	6840	CB	CYS	A	427	15.221	31.535	-23.869	1.00 26.64	C
ATOM	6843	SG	CYS	A	427	14.785	32.182	-25.515	1.00 27.00	S
ATOM	6845	C	CYS	A	427	14.222	33.575	-22.672	1.00 26.50	C
ATOM	6846	O	CYS	A	427	13.108	34.131	-22.871	1.00 21.13	O
ATOM	6848	N	ASP	A	428	15.328	34.238	-22.359	1.00 23.20	N
ATOM	6849	CA	ASP	A	428	15.357	35.679	-22.262	1.00 25.73	C
ATOM	6851	CB	ASP	A	428	16.276	36.127	-21.094	1.00 24.55	C
ATOM	6854	CG	ASP	A	428	17.728	35.812	-21.317	1.00 24.93	C
ATOM	6855	OD1	ASP	A	428	18.080	35.116	-22.308	1.00 25.81	O
ATOM	6856	OD2	ASP	A	428	18.537	36.245	-20.459	1.00 26.22	O
ATOM	6857	C	ASP	A	428	15.787	36.284	-23.615	1.00 24.61	C
ATOM	6858	O	ASP	A	428	16.079	35.554	-24.569	1.00 23.66	O
ATOM	6860	N	SER	A	429	15.842	37.613	-23.681	1.00 28.29	N
ATOM	6861	CA	SER	A	429	16.233	38.295	-24.924	1.00 29.28	C
ATOM	6863	CB	SER	A	429	15.962	39.790	-24.831	1.00 31.61	C
ATOM	6866	OG	SER	A	429	14.587	40.014	-25.039	1.00 42.00	O
ATOM	6868	C	SER	A	429	17.661	38.041	-25.389	1.00 28.38	C
ATOM	6869	O	SER	A	429	17.900	37.928	-26.599	1.00 26.07	O
ATOM	6871	N	VAL	A	430	18.608	37.982	-24.456	1.00 26.64	N
ATOM	6872	CA	VAL	A	430	20.003	37.692	-24.800	1.00 28.89	C
ATOM	6874	CB	VAL	A	430	20.941	37.661	-23.551	1.00 27.59	C
ATOM	6876	CG1	VAL	A	430	22.359	37.325	-23.992	1.00 28.19	C
ATOM	6880	CG2	VAL	A	430	20.917	39.000	-22.823	1.00 27.45	C
ATOM	6884	C	VAL	A	430	20.099	36.368	-25.511	1.00 26.86	C
ATOM	6885	O	VAL	A	430	20.710	36.251	-26.579	1.00 26.08	O
ATOM	6887	N	THR	A	431	19.472	35.354	-24.931	1.00 25.57	N
ATOM	6888	CA	THR	A	431	19.524	34.023	-25.521	1.00 28.01	C
ATOM	6890	CB	THR	A	431	18.888	33.036	-24.563	1.00 30.59	C
ATOM	6892	OG1	THR	A	431	19.556	33.151	-23.299	1.00 22.99	O
ATOM	6894	CG2	THR	A	431	18.978	31.639	-25.098	1.00 28.94	C
ATOM	6898	C	THR	A	431	18.837	33.973	-26.878	1.00 30.20	C
ATOM	6899	O	THR	A	431	19.357	33.383	-27.844	1.00 26.55	O
ATOM	6901	N	TYR	A	432	17.678	34.621	-26.966	1.00 28.65	N
ATOM	6902	CA	TYR	A	432	16.922	34.648	-28.209	1.00 28.36	C
ATOM	6904	CB	TYR	A	432	15.619	35.428	-28.005	1.00 28.31	C
ATOM	6907	CG	TYR	A	432	14.843	35.703	-29.270	1.00 28.36	C
ATOM	6908	CD1	TYR	A	432	14.065	34.719	-29.847	1.00 29.86	C
ATOM	6910	CE1	TYR	A	432	13.348	34.961	-30.989	1.00 37.93	C
ATOM	6912	CZ	TYR	A	432	13.419	36.198	-31.584	1.00 38.22	C
ATOM	6913	OH	TYR	A	432	12.716	36.419	-32.745	1.00 37.28	O
ATOM	6915	CE2	TYR	A	432	14.195	37.202	-31.022	1.00 32.40	C
ATOM	6917	CD2	TYR	A	432	14.889	36.947	-29.883	1.00 30.48	C
ATOM	6919	C	TYR	A	432	17.755	35.284	-29.331	1.00 30.23	C
ATOM	6920	O	TYR	A	432	17.917	34.702	-30.402	1.00 30.70	O
ATOM	6922	N	ASN	A	433	18.276	36.474	-29.064	1.00 34.51	N
ATOM	6923	CA	ASN	A	433	18.974	37.255	-30.085	1.00 38.92	C
ATOM	6925	CB	ASN	A	433	19.152	38.705	-29.606	1.00 37.27	C
ATOM	6928	CG	ASN	A	433	17.833	39.469	-29.543	1.00 35.94	C
ATOM	6929	OD1	ASN	A	433	17.480	40.023	-28.520	1.00 42.51	O
ATOM	6930	ND2	ASN	A	433	17.108	39.491	-30.642	1.00 36.02	N
ATOM	6933	C	ASN	A	433	20.315	36.642	-30.499	1.00 39.78	C
ATOM	6934	O	ASN	A	433	20.659	36.618	-31.679	1.00 39.95	O
ATOM	6936	N	GLY	A	434	21.050	36.127	-29.524	1.00 39.30	N
ATOM	6937	CA	GLY	A	434	22.349	35.525	-29.759	1.00 40.93	C
ATOM	6940	C	GLY	A	434	22.321	34.100	-30.266	1.00 45.46	C
ATOM	6941	O	GLY	A	434	23.364	33.592	-30.680	1.00 52.83	O
ATOM	6943	N	SER	A	435	21.165	33.431	-30.232	1.00 42.86	N

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ATOM   6944  CA  SER A 435      21.047  32.107 -30.864  1.00 43.22           C
ATOM   6946  CB  SER A 435      19.743  31.408 -30.467  1.00 42.66           C
ATOM   6949  OG  SER A 435      18.624  32.020 -31.109  1.00 36.59           O
ATOM   6951  C   SER A 435      21.074  32.250 -32.386  1.00 46.05           C
ATOM   6952  O   SER A 435      21.524  31.360 -33.111  1.00 44.98           O
ATOM   6954  N   ASN A 436      20.520  33.364 -32.851  1.00 53.02           N
ATOM   6955  CA  ASN A 436      20.302  33.619 -34.272  1.00 60.36           C
ATOM   6957  CB  ASN A 436      21.646  33.888 -34.971  1.00 64.57           C
ATOM   6960  CG  ASN A 436      21.513  34.793 -36.176  1.00 64.37           C
ATOM   6961  OD1 ASN A 436      20.898  35.860 -36.105  1.00 68.51           O
ATOM   6962  ND2 ASN A 436      22.101  34.374 -37.293  1.00 69.43           N
ATOM   6965  C   ASN A 436      19.510  32.518 -35.011  1.00 61.45           C
ATOM   6966  O   ASN A 436      19.354  32.602 -36.240  1.00 63.14           O
ATOM   6968  N   LEU A 437      19.002  31.515 -34.269  1.00 57.86           N
ATOM   6969  CA  LEU A 437      18.082  30.514 -34.808  1.00 53.82           C
ATOM   6971  CB  LEU A 437      17.547  29.573 -33.707  1.00 53.57           C
ATOM   6974  CG  LEU A 437      18.446  28.458 -33.162  1.00 55.33           C
ATOM   6976  CD1 LEU A 437      17.759  27.696 -32.014  1.00 54.09           C
ATOM   6980  CD2 LEU A 437      18.869  27.476 -34.255  1.00 56.06           C
ATOM   6984  C   LEU A 437      16.912  31.239 -35.464  1.00 52.04           C
ATOM   6985  O   LEU A 437      16.688  32.429 -35.196  1.00 51.32           O
ATOM   6987  N   PRO A 438      16.153  30.534 -36.327  1.00 47.35           N
ATOM   6988  CA  PRO A 438      15.030  31.228 -36.986  1.00 45.72           C
ATOM   6990  CB  PRO A 438      14.407  30.140 -37.866  1.00 46.75           C
ATOM   6993  CG  PRO A 438      15.455  29.060 -37.978  1.00 47.36           C
ATOM   6996  CD  PRO A 438      16.260  29.120 -36.728  1.00 46.00           C
ATOM   6999  C   PRO A 438      14.016  31.753 -35.963  1.00 43.55           C
ATOM   7000  O   PRO A 438      13.822  31.114 -34.934  1.00 43.32           O
ATOM   7001  N   ALA A 439      13.403  32.908 -36.224  1.00 40.56           N
ATOM   7002  CA  ALA A 439      12.435  33.492 -35.290  1.00 38.66           C
ATOM   7004  CB  ALA A 439      11.874  34.813 -35.825  1.00 40.59           C
ATOM   7008  C   ALA A 439      11.282  32.549 -35.000  1.00 36.07           C
ATOM   7009  O   ALA A 439      10.762  32.525 -33.883  1.00 33.69           O
ATOM   7011  N   TYR A 440      10.881  31.777 -36.007  1.00 33.48           N
ATOM   7012  CA  TYR A 440       9.668  30.947 -35.906  1.00 32.96           C
ATOM   7014  CB  TYR A 440       9.148  30.558 -37.289  1.00 37.81           C
ATOM   7017  CG  TYR A 440      10.143  29.769 -38.114  1.00 44.17           C
ATOM   7018  CD1 TYR A 440      10.272  28.398 -37.958  1.00 45.61           C
ATOM   7020  CE1 TYR A 440      11.172  27.682 -38.707  1.00 50.96           C
ATOM   7022  CZ  TYR A 440      11.967  28.331 -39.628  1.00 52.73           C
ATOM   7023  OH  TYR A 440      12.875  27.618 -40.376  1.00 57.79           O
ATOM   7025  CE2 TYR A 440      11.862  29.690 -39.803  1.00 54.55           C
ATOM   7027  CD2 TYR A 440      10.962  30.404 -39.042  1.00 50.69           C
ATOM   7029  C   TYR A 440       9.923  29.701 -35.080  1.00 25.82           C
ATOM   7030  O   TYR A 440       9.027  28.882 -34.879  1.00 32.00           O
ATOM   7032  N   PHE A 441      11.146  29.550 -34.600  1.00 28.00           N
ATOM   7033  CA  PHE A 441      11.432  28.555 -33.554  1.00 31.32           C
ATOM   7035  CB  PHE A 441      12.930  28.296 -33.470  1.00 36.53           C
ATOM   7038  CG  PHE A 441      13.447  27.332 -34.489  1.00 41.41           C
ATOM   7039  CD1 PHE A 441      12.947  27.303 -35.776  1.00 44.30           C
ATOM   7041  CE1 PHE A 441      13.453  26.406 -36.709  1.00 44.85           C
ATOM   7043  CZ  PHE A 441      14.469  25.559 -36.366  1.00 45.19           C
ATOM   7045  CE2 PHE A 441      14.994  25.591 -35.088  1.00 47.34           C
ATOM   7047  CD2 PHE A 441      14.480  26.475 -34.156  1.00 46.35           C
ATOM   7049  C   PHE A 441      10.960  29.037 -32.175  1.00 28.81           C
ATOM   7050  O   PHE A 441      10.994  28.279 -31.186  1.00 28.87           O
ATOM   7052  N   PHE A 442      10.549  30.296 -32.098  1.00 25.57           N
ATOM   7053  CA  PHE A 442      10.187  30.898 -30.813  1.00 28.12           C
ATOM   7055  CB  PHE A 442      11.142  32.045 -30.466  1.00 29.84           C
ATOM   7058  CG  PHE A 442      12.577  31.635 -30.419  1.00 28.66           C
ATOM   7059  CD1 PHE A 442      13.325  31.540 -31.599  1.00 29.51           C
ATOM   7061  CE1 PHE A 442      14.625  31.138 -31.565  1.00 27.06           C
ATOM   7063  CZ  PHE A 442      15.226  30.810 -30.348  1.00 32.03           C
ATOM   7065  CE2 PHE A 442      14.498  30.898 -29.183  1.00 29.41           C
ATOM   7067  CD2 PHE A 442      13.181  31.306 -29.220  1.00 30.96           C
ATOM   7069  C   PHE A 442       8.768  31.435 -30.857  1.00 30.20           C
ATOM   7070  O   PHE A 442       8.168  31.564 -31.944  1.00 29.01           O
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ATOM	7072	N	LYS	A	443	8.252	31.739	-29.669	1.00 27.93	N
ATOM	7073	CA	LYS	A	443	7.074	32.559	-29.494	1.00 28.60	C
ATOM	7075	CB	LYS	A	443	5.873	31.737	-29.077	1.00 32.33	C
ATOM	7078	CG	LYS	A	443	4.661	32.639	-28.830	1.00 32.69	C
ATOM	7081	CD	LYS	A	443	3.552	31.900	-28.236	1.00 28.57	C
ATOM	7084	CE	LYS	A	443	2.399	32.842	-27.930	1.00 32.24	C
ATOM	7087	NZ	LYS	A	443	1.297	32.087	-27.303	1.00 20.67	N
ATOM	7091	C	LYS	A	443	7.335	33.622	-28.448	1.00 30.47	C
ATOM	7092	O	LYS	A	443	7.734	33.311	-27.324	1.00 26.25	O
ATOM	7094	N	GLU	A	444	7.125	34.874	-28.831	1.00 28.77	N
ATOM	7095	CA	GLU	A	444	7.192	35.996	-27.909	1.00 28.25	C
ATOM	7097	CB	GLU	A	444	7.041	37.316	-28.649	1.00 30.61	C
ATOM	7100	CG	GLU	A	444	7.290	38.530	-27.768	1.00 28.64	C
ATOM	7103	CD	GLU	A	444	7.165	39.840	-28.501	1.00 36.88	C
ATOM	7104	OE1	GLU	A	444	7.558	40.875	-27.894	1.00 30.75	O
ATOM	7105	OE2	GLU	A	444	6.666	39.825	-29.667	1.00 41.30	O
ATOM	7106	C	GLU	A	444	6.076	35.869	-26.898	1.00 29.51	C
ATOM	7107	O	GLU	A	444	4.911	35.660	-27.279	1.00 26.30	O
ATOM	7109	N	LEU	A	445	6.417	35.990	-25.612	1.00 22.09	N
ATOM	7110	CA	LEU	A	445	5.453	35.706	-24.556	1.00 25.20	C
ATOM	7112	CB	LEU	A	445	6.067	34.800	-23.476	1.00 21.72	C
ATOM	7115	CG	LEU	A	445	6.379	33.349	-23.856	1.00 26.70	C
ATOM	7117	CD1	LEU	A	445	7.115	32.701	-22.733	1.00 25.90	C
ATOM	7121	CD2	LEU	A	445	5.142	32.497	-24.209	1.00 24.85	C
ATOM	7125	C	LEU	A	445	4.845	36.958	-23.902	1.00 25.16	C
ATOM	7126	O	LEU	A	445	5.413	38.047	-23.954	1.00 27.98	O
ATOM	7128	N	PRO	A	446	3.669	36.798	-23.258	1.00 24.36	N
ATOM	7129	CA	PRO	A	446	3.154	37.891	-22.441	1.00 26.15	C
ATOM	7131	CB	PRO	A	446	1.867	37.302	-21.854	1.00 26.78	C
ATOM	7134	CG	PRO	A	446	1.491	36.241	-22.786	1.00 24.80	C
ATOM	7137	CD	PRO	A	446	2.779	35.642	-23.207	1.00 23.62	C
ATOM	7140	C	PRO	A	446	4.114	38.171	-21.294	1.00 31.26	C
ATOM	7141	O	PRO	A	446	4.708	37.224	-20.768	1.00 27.14	O
ATOM	7142	N	LYS	A	447	4.192	39.431	-20.882	1.00 34.62	N
ATOM	7143	CA	LYS	A	447	5.045	39.871	-19.790	1.00 42.41	C
ATOM	7145	CB	LYS	A	447	5.298	41.384	-19.887	1.00 47.90	C
ATOM	7148	CG	LYS	A	447	5.590	41.927	-21.297	1.00 55.87	C
ATOM	7151	CD	LYS	A	447	5.598	43.456	-21.321	1.00 60.49	C
ATOM	7154	CE	LYS	A	447	4.948	43.996	-22.580	1.00 62.62	C
ATOM	7157	NZ	LYS	A	447	3.484	43.659	-22.618	1.00 67.90	N
ATOM	7161	C	LYS	A	447	4.341	39.586	-18.459	1.00 40.17	C
ATOM	7162	O	LYS	A	447	3.256	40.082	-18.233	1.00 41.91	O
ATOM	7164	N	LYS	A	448	4.937	38.787	-17.584	1.00 39.39	N
ATOM	7165	CA	LYS	A	448	4.359	38.545	-16.258	1.00 39.86	C
ATOM	7167	CB	LYS	A	448	4.298	37.043	-15.937	1.00 40.21	C
ATOM	7170	CG	LYS	A	448	3.414	36.248	-16.901	1.00 36.10	C
ATOM	7173	CD	LYS	A	448	3.258	34.784	-16.530	1.00 37.13	C
ATOM	7176	CE	LYS	A	448	2.466	34.037	-17.610	1.00 36.89	C
ATOM	7179	NZ	LYS	A	448	2.364	32.555	-17.418	1.00 36.64	N
ATOM	7183	C	LYS	A	448	5.222	39.285	-15.248	1.00 44.55	C
ATOM	7184	O	LYS	A	448	6.443	39.385	-15.434	1.00 45.77	O
ATOM	7186	N	VAL	A	449	4.593	39.848	-14.215	1.00 44.72	N
ATOM	7187	CA	VAL	A	449	5.339	40.454	-13.116	1.00 45.71	C
ATOM	7189	CB	VAL	A	449	4.504	41.440	-12.283	1.00 46.84	C
ATOM	7191	CG1	VAL	A	449	5.330	41.951	-11.084	1.00 48.45	C
ATOM	7195	CG2	VAL	A	449	4.060	42.601	-13.151	1.00 48.78	C
ATOM	7199	C	VAL	A	449	5.832	39.307	-12.240	1.00 44.23	C
ATOM	7200	O	VAL	A	449	5.034	38.512	-11.730	1.00 46.40	O
ATOM	7202	N	MET	A	450	7.152	39.225	-12.109	1.00 41.96	N
ATOM	7203	CA	MET	A	450	7.812	38.130	-11.426	1.00 43.30	C
ATOM	7205	CB	MET	A	450	8.760	37.434	-12.388	1.00 42.41	C
ATOM	7208	CG	MET	A	450	8.023	36.905	-13.594	1.00 40.55	C
ATOM	7211	SD	MET	A	450	9.003	35.770	-14.555	1.00 37.28	S
ATOM	7212	CE	MET	A	450	10.208	36.897	-15.229	1.00 36.66	C
ATOM	7216	C	MET	A	450	8.558	38.699	-10.240	1.00 45.56	C
ATOM	7217	O	MET	A	450	9.380	39.625	-10.387	1.00 41.83	O
ATOM	7219	N	LYS	A	451	8.241	38.156	-9.067	1.00 50.07	N

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ATOM   7220  CA  LYS A 451       8.728  38.704  -7.805  1.00 55.51           C
ATOM   7222  CB  LYS A 451       8.038  38.024  -6.605  1.00 60.20           C
ATOM   7225  CG  LYS A 451       6.493  38.245  -6.598  1.00 63.50           C
ATOM   7228  CD  LYS A 451       5.867  38.368  -5.188  1.00 66.37           C
ATOM   7231  CE  LYS A 451       5.944  37.057  -4.383  1.00 68.36           C
ATOM   7234  NZ  LYS A 451       5.215  35.904  -4.993  1.00 68.30           N
ATOM   7238  C   LYS A 451      10.239  38.581  -7.745  1.00 55.72           C
ATOM   7239  O   LYS A 451      10.790  37.489  -7.879  1.00 57.06           O
ATOM   7241  N   GLY A 452      10.894  39.730  -7.617  1.00 56.47           N
ATOM   7242  CA  GLY A 452      12.339  39.808  -7.541  1.00 56.93           C
ATOM   7245  C   GLY A 452      13.006  40.233  -8.829  1.00 59.25           C
ATOM   7246  O   GLY A 452      14.216  40.479  -8.839  1.00 62.36           O
ATOM   7248  N   VAL A 453      12.252  40.305  -9.929  1.00 58.77           N
ATOM   7249  CA  VAL A 453      12.846  40.722 -11.210  1.00 59.97           C
ATOM   7251  CB  VAL A 453      12.762  39.620 -12.365  1.00 59.20           C
ATOM   7253  CG1 VAL A 453      12.405  38.241 -11.811  1.00 53.92           C
ATOM   7257  CG2 VAL A 453      11.809  40.021 -13.480  1.00 55.16           C
ATOM   7261  C   VAL A 453      12.212  42.050 -11.622  1.00 63.37           C
ATOM   7262  O   VAL A 453      10.979  42.167 -11.706  1.00 62.19           O
ATOM   7264  N   ALA A 454      13.058  43.059 -11.822  1.00 65.00           N
ATOM   7265  CA  ALA A 454      12.597  44.346 -12.314  1.00 67.65           C
ATOM   7267  CB  ALA A 454      13.241  45.492 -11.557  1.00 66.85           C
ATOM   7271  C   ALA A 454      12.946  44.385 -13.788  1.00 68.46           C
ATOM   7272  O   ALA A 454      14.116  44.485 -14.163  1.00 71.62           O
ATOM   7274  N   ASP A 455      11.911  44.275 -14.611  1.00 70.00           N
ATOM   7275  CA  ASP A 455      12.026  44.214 -16.065  1.00 69.87           C
ATOM   7277  CB  ASP A 455      12.499  45.536 -16.673  1.00 71.27           C
ATOM   7280  CG  ASP A 455      12.365  45.551 -18.194  1.00 73.62           C
ATOM   7281  OD1 ASP A 455      11.511  44.802 -18.731  1.00 73.59           O
ATOM   7282  OD2 ASP A 455      13.116  46.298 -18.853  1.00 76.60           O
ATOM   7283  C   ASP A 455      12.916  43.082 -16.551  1.00 67.07           C
ATOM   7284  O   ASP A 455      14.126  43.243 -16.704  1.00 68.62           O
ATOM   7286  N   SER A 456      12.278  41.949 -16.821  1.00 63.95           N
ATOM   7287  CA  SER A 456      12.923  40.797 -17.429  1.00 60.49           C
ATOM   7289  CB  SER A 456      11.916  39.662 -17.492  1.00 61.10           C
ATOM   7292  OG  SER A 456      10.727  40.117 -18.107  1.00 60.63           O
ATOM   7294  C   SER A 456      13.423  41.088 -18.844  1.00 57.46           C
ATOM   7295  O   SER A 456      14.350  40.420 -19.344  1.00 60.00           O
ATOM   7297  N   GLY A 457      12.822  42.088 -19.484  1.00 50.79           N
ATOM   7298  CA  GLY A 457      12.997  42.313 -20.921  1.00 47.33           C
ATOM   7301  C   GLY A 457      11.992  41.393 -21.590  1.00 42.00           C
ATOM   7302  O   GLY A 457      11.251  40.682 -20.895  1.00 43.99           O
ATOM   7304  N   PRO A 458      11.938  41.398 -22.931  1.00 36.63           N
ATOM   7305  CA  PRO A 458      11.028  40.472 -23.634  1.00 33.02           C
ATOM   7307  CB  PRO A 458      11.169  40.866 -25.113  1.00 34.82           C
ATOM   7310  CG  PRO A 458      12.062  42.053 -25.151  1.00 33.51           C
ATOM   7313  CD  PRO A 458      12.720  42.238 -23.843  1.00 36.16           C
ATOM   7316  C   PRO A 458      11.442  39.014 -23.406  1.00 30.62           C
ATOM   7317  O   PRO A 458      12.629  38.720 -23.457  1.00 29.57           O
ATOM   7318  N   LEU A 459      10.470  38.138 -23.114  1.00 28.16           N
ATOM   7319  CA  LEU A 459      10.701  36.719 -22.901  1.00 27.43           C
ATOM   7321  CB  LEU A 459      10.113  36.273 -21.555  1.00 26.92           C
ATOM   7324  CG  LEU A 459      10.702  36.992 -20.327  1.00 28.56           C
ATOM   7326  CD1 LEU A 459      10.115  36.505 -19.029  1.00 31.67           C
ATOM   7330  CD2 LEU A 459      12.202  36.796 -20.297  1.00 26.96           C
ATOM   7334  C   LEU A 459      10.101  35.883 -24.021  1.00 27.95           C
ATOM   7335  O   LEU A 459       9.106  36.269 -24.645  1.00 24.84           O
ATOM   7337  N   TYR A 460      10.709  34.727 -24.262  1.00 25.05           N
ATOM   7338  CA  TYR A 460      10.305  33.858 -25.353  1.00 24.39           C
ATOM   7340  CB  TYR A 460      11.335  33.890 -26.480  1.00 24.26           C
ATOM   7343  CG  TYR A 460      11.558  35.275 -27.027  1.00 23.85           C
ATOM   7344  CD1 TYR A 460      12.419  36.158 -26.387  1.00 29.17           C
ATOM   7346  CE1 TYR A 460      12.645  37.464 -26.884  1.00 28.42           C
ATOM   7348  CZ  TYR A 460      11.971  37.887 -28.022  1.00 30.42           C
ATOM   7349  OH  TYR A 460      12.177  39.157 -28.500  1.00 29.46           O
ATOM   7351  CE2 TYR A 460      11.087  37.029 -28.672  1.00 27.22           C
ATOM   7353  CD2 TYR A 460      10.887  35.724 -28.185  1.00 24.11           C
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ATOM	7355	C	TYR	A	460	10.112	32.438	-24.903	1.00	25.37	C
ATOM	7356	O	TYR	A	460	10.733	31.968	-23.954	1.00	24.06	O
ATOM	7358	N	GLN	A	461	9.222	31.760	-25.588	1.00	19.91	N
ATOM	7359	CA	GLN	A	461	9.132	30.317	-25.517	1.00	23.64	C
ATOM	7361	CB	GLN	A	461	7.699	29.873	-25.715	1.00	24.17	C
ATOM	7364	CG	GLN	A	461	7.548	28.365	-25.726	1.00	24.05	C
ATOM	7367	CD	GLN	A	461	6.120	27.886	-25.870	1.00	25.78	C
ATOM	7368	OE1	GLN	A	461	5.865	26.682	-25.909	1.00	29.88	O
ATOM	7369	NE2	GLN	A	461	5.194	28.807	-25.978	1.00	24.14	N
ATOM	7372	C	GLN	A	461	9.963	29.760	-26.631	1.00	25.81	C
ATOM	7373	O	GLN	A	461	9.852	30.240	-27.767	1.00	26.50	O
ATOM	7375	N	TYR	A	462	10.819	28.790	-26.329	1.00	21.71	N
ATOM	7376	CA	TYR	A	462	11.482	28.038	-27.366	1.00	26.49	C
ATOM	7378	CB	TYR	A	462	12.814	27.423	-26.871	1.00	31.81	C
ATOM	7381	CG	TYR	A	462	13.594	26.666	-27.948	1.00	32.61	C
ATOM	7382	CD1	TYR	A	462	13.756	27.187	-29.230	1.00	38.89	C
ATOM	7384	CE1	TYR	A	462	14.469	26.478	-30.206	1.00	40.56	C
ATOM	7386	CZ	TYR	A	462	15.022	25.248	-29.891	1.00	37.11	C
ATOM	7387	OH	TYR	A	462	15.726	24.509	-30.817	1.00	37.25	O
ATOM	7389	CE2	TYR	A	462	14.892	24.755	-28.623	1.00	32.53	C
ATOM	7391	CD2	TYR	A	462	14.179	25.449	-27.676	1.00	32.70	C
ATOM	7393	C	TYR	A	462	10.504	26.977	-27.856	1.00	27.06	C
ATOM	7394	O	TYR	A	462	10.306	25.948	-27.234	1.00	30.35	O
ATOM	7396	N	TRP	A	463	9.874	27.250	-28.988	1.00	30.06	N
ATOM	7397	CA	TRP	A	463	8.807	26.400	-29.472	1.00	29.16	C
ATOM	7399	CB	TRP	A	463	7.955	27.169	-30.495	1.00	32.42	C
ATOM	7402	CG	TRP	A	463	6.750	26.449	-30.965	1.00	30.28	C
ATOM	7403	CD1	TRP	A	463	6.695	25.508	-31.961	1.00	36.58	C
ATOM	7405	NE1	TRP	A	463	5.394	25.087	-32.143	1.00	30.70	N
ATOM	7407	CE2	TRP	A	463	4.588	25.746	-31.256	1.00	27.96	C
ATOM	7408	CD2	TRP	A	463	5.405	26.606	-30.492	1.00	26.62	C
ATOM	7409	CE3	TRP	A	463	4.808	27.412	-29.519	1.00	28.17	C
ATOM	7411	CZ3	TRP	A	463	3.448	27.319	-29.335	1.00	28.30	C
ATOM	7413	CH2	TRP	A	463	2.673	26.437	-30.094	1.00	28.80	C
ATOM	7415	CZ2	TRP	A	463	3.222	25.642	-31.052	1.00	30.67	C
ATOM	7417	C	TRP	A	463	9.364	25.111	-30.065	1.00	30.92	C
ATOM	7418	O	TRP	A	463	8.768	24.064	-29.910	1.00	30.07	O
ATOM	7420	N	GLY	A	464	10.521	25.184	-30.717	1.00	33.51	N
ATOM	7421	CA	GLY	A	464	11.103	24.020	-31.368	1.00	34.39	C
ATOM	7424	C	GLY	A	464	11.176	24.166	-32.879	1.00	39.08	C
ATOM	7425	O	GLY	A	464	10.765	25.186	-33.440	1.00	29.68	O
ATOM	7427	N	ARG	A	465	11.704	23.131	-33.530	1.00	40.92	N
ATOM	7428	CA	ARG	A	465	11.984	23.148	-34.976	1.00	45.89	C
ATOM	7430	CB	ARG	A	465	13.026	22.067	-35.312	1.00	47.34	C
ATOM	7433	CG	ARG	A	465	14.420	22.405	-34.850	1.00	55.58	C
ATOM	7436	CD	ARG	A	465	15.257	21.178	-34.515	1.00	60.81	C
ATOM	7439	NE	ARG	A	465	16.684	21.430	-34.735	1.00	66.92	N
ATOM	7441	CZ	ARG	A	465	17.661	20.551	-34.496	1.00	73.29	C
ATOM	7442	NH1	ARG	A	465	17.392	19.339	-34.005	1.00	74.50	N
ATOM	7445	NH2	ARG	A	465	18.925	20.891	-34.745	1.00	76.91	N
ATOM	7448	C	ARG	A	465	10.748	22.952	-35.874	1.00	47.01	C
ATOM	7449	O	ARG	A	465	10.801	23.253	-37.076	1.00	43.06	O
ATOM	7451	N	THR	A	466	9.650	22.439	-35.320	1.00	47.82	N
ATOM	7452	CA	THR	A	466	8.470	22.125	-36.139	1.00	50.04	C
ATOM	7454	CB	THR	A	466	8.306	20.594	-36.344	1.00	49.94	C
ATOM	7456	OG1	THR	A	466	8.049	19.969	-35.078	1.00	51.22	O
ATOM	7458	CG2	THR	A	466	9.551	19.977	-36.996	1.00	49.33	C
ATOM	7462	C	THR	A	466	7.191	22.651	-35.515	1.00	51.92	C
ATOM	7463	O	THR	A	466	7.235	23.281	-34.454	1.00	48.84	O
ATOM	7465	N	GLU	A	467	6.072	22.376	-36.194	1.00	51.55	N
ATOM	7466	CA	GLU	A	467	4.709	22.613	-35.707	1.00	55.78	C
ATOM	7468	CB	GLU	A	467	4.480	22.106	-34.280	1.00	54.18	C
ATOM	7471	CG	GLU	A	467	4.575	20.590	-34.133	1.00	56.09	C
ATOM	7474	CD	GLU	A	467	4.859	20.133	-32.706	1.00	56.33	C
ATOM	7475	OE1	GLU	A	467	5.179	18.944	-32.551	1.00	56.17	O
ATOM	7476	OE2	GLU	A	467	4.781	20.944	-31.742	1.00	62.40	O
ATOM	7477	C	GLU	A	467	4.447	24.077	-35.751	1.00	59.47	C

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ATOM   7478  O   GLU A 467       5.026  24.817 -34.960  1.00 66.61           O
ATOM   7480  N   LYS A 468       3.584  24.513 -36.669  1.00 60.53           N
ATOM   7481  CA  LYS A 468       3.259  25.928 -36.777  1.00 59.95           C
ATOM   7483  CB  LYS A 468       2.515  26.412 -35.520  1.00 60.31           C
ATOM   7486  CG  LYS A 468       1.132  25.772 -35.336  1.00 61.12           C
ATOM   7489  CD  LYS A 468       0.696  25.715 -33.879  1.00 61.38           C
ATOM   7492  CE  LYS A 468      -0.189  24.485 -33.593  1.00 62.96           C
ATOM   7495  NZ  LYS A 468       0.587  23.228 -33.380  1.00 61.88           N
ATOM   7499  C   LYS A 468       4.535  26.730 -36.995  1.00 57.11           C
ATOM   7502  O3  GOL W 550      28.095   9.037  -0.228  1.00 39.03           O
ATOM   7504  C3  GOL W 550      28.390   9.949   0.782  1.00 27.79           C
ATOM   7507  C2  GOL W 550      28.629   9.371   2.146  1.00 31.11           C
ATOM   7509  O2  GOL W 550      30.019   9.309   2.389  1.00 50.26           O
ATOM   7511  C1  GOL W 550      28.143   8.003   2.358  1.00 30.18           C
ATOM   7514  O1  GOL W 550      29.306   7.249   2.458  1.00 50.26           O
ATOM   7516  S1  L01 X   1      17.398  20.069  -1.337  1.00 29.09           S
ATOM   7517  C2  L01 X   1      17.024  21.682  -0.781  1.00 31.96           C
ATOM   7518  N3  L01 X   1      17.897  22.636  -0.534  1.00 28.10           N
ATOM   7519  C4  L01 X   1      17.247  23.756  -0.171  1.00 31.03           C
ATOM   7520  N5  L01 X   1      15.940  23.507  -0.140  1.00 26.72           N
ATOM   7521  N6  L01 X   1      15.775  22.142  -0.523  1.00 29.22           N
ATOM   7522  H7  L01 X   1      14.950  21.651  -0.611  1.00 29.28           H
ATOM   7523  C8  L01 X   1      17.910  25.051   0.171  1.00 27.05           C
ATOM   7524  C9  L01 X   1      19.263  25.226  -0.109  1.00 26.37           C
ATOM   7525  C10 L01 X   1      19.895  26.418   0.197  1.00 26.18           C
ATOM   7526  C11 L01 X   1      19.171  27.450   0.785  1.00 28.08           C
ATOM   7527  C12 L01 X   1      17.828  27.292   1.074  1.00 27.48           C
ATOM   7528  C13 L01 X   1      17.191  26.092   0.782  1.00 33.16           C
ATOM   7529  H14 L01 X   1      18.105  20.356  -2.517  1.00 30.21           H
ATOM   7530  H15 L01 X   1      19.827  24.432  -0.574  1.00 26.51           H
ATOM   7531  H16 L01 X   1      20.942  26.550  -0.028  1.00 26.77           H
ATOM   7532  H17 L01 X   1      19.660  28.376   1.029  1.00 27.38           H
ATOM   7533  H18 L01 X   1      17.296  28.100   1.540  1.00 29.24           H
ATOM   7534  H19 L01 X   1      16.142  25.974   1.000  1.00 29.85           H
ATOM   7535  O   HOH W   2      36.335  31.794   6.617  0.50  7.85           O
ATOM   7538  O   HOH W   3      34.369  19.350  24.954  1.00 25.90           O
ATOM   7541  O   HOH W   4      19.260  39.195   3.745  0.50 12.36           O
ATOM   7544  O   HOH W   5      29.379  40.154  10.427  1.00 36.65           O
ATOM   7547  O   HOH W   6      38.173  47.299  -6.806  1.00 20.49           O
ATOM   7550  O   HOH W   7      32.635   5.738   1.738  0.50 26.41           O
ATOM   7553  O   HOH W   8      15.943  35.544 -34.730  0.50 27.40           O
ATOM   7556  O   HOH W   9      11.586  37.607  15.429  1.00 38.54           O
ATOM   7559  O   HOH W  10      41.977  32.517  -3.211  0.50 33.13           O
ATOM   7562  O   HOH W  11      29.266  17.750  -9.131  0.50 27.07           O
ATOM   7565  O   HOH W  12      31.290  23.264  -4.081  1.00 15.94           O
ATOM   7568  O   HOH W  13      35.302  43.872  -0.710  1.00 17.61           O
ATOM   7571  O   HOH W  14      38.241  24.687  -2.137  1.00 25.91           O
ATOM   7574  O   HOH W  15       8.565  24.938 -25.085  1.00 24.89           O
ATOM   7577  O   HOH W  16      32.163  17.861  11.086  1.00 17.52           O
ATOM   7580  O   HOH W  17      40.658  27.533  -8.522  1.00 31.81           O
ATOM   7583  O   HOH W  18      42.203   9.908   1.248  1.00 20.56           O
ATOM   7586  O   HOH W  19      13.347  17.464  23.979  1.00 32.64           O
ATOM   7589  O   HOH W  20      36.171  25.412  22.704  1.00 32.11           O
ATOM   7592  O   HOH W  21      40.827  24.048  -0.593  0.50 17.54           O
ATOM   7595  O   HOH W  22       4.270  23.137   9.818  1.00 31.04           O
ATOM   7598  O   HOH W  23       8.513  14.185  13.602  0.50 19.29           O
ATOM   7601  O   HOH W  24      28.120  21.883  14.298  1.00 22.05           O
ATOM   7604  O   HOH W  25      24.977  30.440 -29.656  1.00 49.02           O
ATOM   7607  O   HOH W  26      11.673  24.999  22.109  1.00 30.74           O
ATOM   7610  O   HOH W  27      26.761  17.207  -5.513  0.50  7.31           O
ATOM   7613  O   HOH W  28      26.580   8.388  -7.304  1.00 25.72           O
ATOM   7616  O   HOH W  29      38.574  29.709  -6.152  1.00 32.87           O
ATOM   7619  O   HOH W  30      34.192  30.431 -11.464  1.00 37.56           O
ATOM   7622  O   HOH W  31      38.023  23.339   0.658  1.00 17.94           O
ATOM   7625  O   HOH W  32      31.503  18.615  13.585  1.00 17.10           O
ATOM   7628  O   HOH W  33      28.323  21.704   8.376  1.00 19.98           O
ATOM   7631  O   HOH W  34      47.002  29.944  -5.442  1.00 30.16           O
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ATOM   7634  O   HOH W  35      14.836  39.394 -21.643  1.00 30.14           O
ATOM   7637  O   HOH W  36       7.709  22.213   9.815  1.00 24.49           O
ATOM   7640  O   HOH W  37      29.620  25.080 -17.647  1.00 33.52           O
ATOM   7643  O   HOH W  38       4.201  38.674 -30.471  1.00 28.42           O
ATOM   7646  O   HOH W  39      38.508  37.825  -3.011  1.00 19.58           O
ATOM   7649  O   HOH W  40      33.712  37.082   9.412  1.00 30.93           O
ATOM   7652  O   HOH W  41       9.592  28.004 -18.480  1.00 21.50           O
ATOM   7655  O   HOH W  42      40.560  29.577 -18.989  1.00 63.18           O
ATOM   7658  O   HOH W  43      30.816   8.655   5.190  1.00 41.86           O
ATOM   7661  O   HOH W  44      29.865  17.038  23.114  1.00 21.22           O
ATOM   7664  O   HOH W  46      39.959  17.664 -11.171  1.00 27.94           O
ATOM   7667  O   HOH W  47       3.255  28.484 -19.182  1.00 34.60           O
ATOM   7670  O   HOH W  48      30.563  21.184  13.200  1.00 18.77           O
ATOM   7673  O   HOH W  49      38.492  36.755  -0.246  1.00 26.05           O
ATOM   7676  O   HOH W  50      42.536  17.164  -9.826  1.00 30.66           O
ATOM   7679  O   HOH W  51      42.248  13.358  15.196  1.00 41.99           O
ATOM   7682  O   HOH W  52      14.959  14.006 -25.580  1.00 27.16           O
ATOM   7685  O   HOH W  53      22.505  38.147 -27.373  1.00 33.01           O
ATOM   7688  O   HOH W  54      43.014  16.461   9.638  0.50 15.39           O
ATOM   7691  O   HOH W  55      38.171  24.896  13.129  1.00 34.46           O
ATOM   7694  O   HOH W  56      10.256  19.410 -29.142  0.50 32.02           O
ATOM   7697  O   HOH W  57      10.748  40.005 -30.998  1.00 37.76           O
ATOM   7700  O   HOH W  58      27.598  32.569  21.355  0.50 43.40           O
ATOM   7703  O   HOH W  59      38.721  27.456  -1.381  1.00 35.99           O
ATOM   7706  O   HOH W  60      31.216  21.748  -6.336  1.00 30.09           O
ATOM   7709  O   HOH W  61       2.082  41.177 -21.854  1.00 35.42           O
ATOM   7712  O   HOH W  62      32.242  12.096  16.787  0.50 21.65           O
ATOM   7715  O   HOH W  63      36.728  12.624  11.497  1.00 32.18           O
ATOM   7718  O   HOH W  64       8.686  26.031 -35.051  1.00 36.74           O
ATOM   7721  O   HOH W  65      34.028   4.555  -2.200  1.00 31.64           O
ATOM   7724  O   HOH W  66      30.037  34.413  14.231  1.00 27.46           O
ATOM   7727  O   HOH W  67       6.775  15.862  10.919  0.50 19.28           O
ATOM   7730  O   HOH W  68      21.464  32.169  30.261  0.50 25.48           O
ATOM   7733  O   HOH W  69      26.511  16.471  15.131  1.00 36.59           O
ATOM   7736  O   HOH W  70      27.301  33.709 -22.648  1.00 45.58           O
ATOM   7739  O   HOH W  71      13.066   9.850  20.321  1.00 35.83           O
ATOM   7742  O   HOH W  72      20.509  41.247 -20.426  1.00 41.66           O
ATOM   7745  O   HOH W  73       9.376   6.575 -16.622  1.00 43.47           O
ATOM   7748  O   HOH W  74      -1.401  28.965  18.767  0.50 34.48           O
ATOM   7751  O   HOH W  75      29.844  20.530  10.559  1.00 19.72           O
ATOM   7754  O   HOH W  76      45.485  28.121 -12.444  0.50 14.91           O
ATOM   7757  O   HOH W  77      23.463   2.472  -8.508  1.00 54.12           O
ATOM   7760  O   HOH W  78      17.534  39.668 -21.569  1.00 29.40           O
ATOM   7763  O   HOH W  79      23.823   9.061 -18.188  1.00 25.46           O
ATOM   7766  O   HOH W  80      46.719  25.476  -1.412  1.00 52.24           O
ATOM   7769  O   HOH W  81      27.063  17.892  12.746  1.00 32.19           O
ATOM   7772  O   HOH W  82      22.204  39.295  -7.678  0.50 29.64           O
ATOM   7775  O   HOH W  83      36.331  40.603 -11.321  1.00 26.68           O
ATOM   7778  O   HOH W  84      10.567  16.716  21.519  1.00 34.26           O
ATOM   7781  O   HOH W  85      33.177  14.566  19.290  1.00 34.03           O
ATOM   7784  O   HOH W  86      10.178  35.007 -32.829  1.00 41.65           O
ATOM   7787  O   HOH W  87      13.083   9.327  16.479  1.00 53.69           O
ATOM   7790  O   HOH W  88      -0.401  23.853 -30.451  1.00 35.37           O
ATOM   7793  O   HOH W  89       9.423  32.365  30.416  0.50 38.93           O
ATOM   7796  O   HOH W  90      42.641  24.739 -14.891  1.00 45.68           O
ATOM   7799  O   HOH W  91      17.195   3.562  -0.188  1.00 40.47           O
ATOM   7802  O   HOH W  92      22.529  17.928  12.286  1.00 28.31           O
ATOM   7805  O   HOH W  93      25.496  37.771  17.914  1.00 31.53           O
ATOM   7808  O   HOH W  94      13.552  24.155  25.945  1.00 34.95           O
ATOM   7811  O   HOH W  95      46.816  19.615   0.494  1.00 44.34           O
ATOM   7814  O   HOH W  96      29.351   9.373  -3.885  1.00 19.96           O
ATOM   7817  O   HOH W  97      39.059   9.244   7.262  1.00 37.71           O
ATOM   7820  O   HOH W  98       0.257  21.498 -35.881  1.00 32.85           O
ATOM   7823  O   HOH W  99      18.143   8.416 -20.708  0.50 31.17           O
ATOM   7826  O   HOH W 100      36.272  31.239  -5.373  1.00 27.08           O
ATOM   7829  O   HOH W 101       2.213  20.425 -18.572  1.00 41.32           O
ATOM   7832  O   HOH W 102      -0.548  35.823 -19.557  1.00 40.18           O
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ATOM	7835	O	HOH W 103	-0.271	33.076	13.333	1.00	58.12	O
ATOM	7838	O	HOH W 104	23.423	16.496	9.788	1.00	29.18	O
ATOM	7841	O	HOH W 105	15.012	37.440	22.868	1.00	46.51	O
ATOM	7844	O	HOH W 106	21.946	12.051	-24.308	1.00	41.52	O
ATOM	7847	O	HOH W 107	26.056	8.740	-16.709	1.00	27.26	O
ATOM	7850	O	HOH W 108	6.144	10.928	14.814	1.00	69.63	O
ATOM	7853	O	HOH W 109	4.309	31.186	24.313	1.00	34.60	O
ATOM	7856	O	HOH W 110	19.937	4.710	-12.634	1.00	31.49	O
ATOM	7859	O	HOH W 111	25.675	20.715	-0.292	1.00	27.34	O
ATOM	7862	O	HOH W 112	23.180	38.251	-13.861	1.00	33.08	O
ATOM	7865	O	HOH W 113	28.077	6.154	-6.043	1.00	40.34	O
ATOM	7868	O	HOH W 114	45.973	16.395	-3.982	1.00	32.59	O
ATOM	7871	O	HOH W 115	39.246	9.861	9.679	1.00	33.45	O
ATOM	7874	O	HOH W 116	4.355	20.631	-20.819	0.50	24.48	O
ATOM	7877	O	HOH W 117	2.176	32.112	-20.783	0.50	26.24	O
ATOM	7880	O	HOH W 118	32.418	5.517	-4.406	1.00	36.33	O
ATOM	7883	O	HOH W 119	8.941	42.624	-21.132	1.00	57.88	O
ATOM	7886	O	HOH W 120	27.521	10.613	-18.443	1.00	33.44	O
ATOM	7889	O	HOH W 121	18.905	39.345	18.113	1.00	37.07	O
ATOM	7892	O	HOH W 122	10.290	19.407	-0.040	1.00	35.97	O
ATOM	7895	O	HOH W 123	26.759	12.189	-22.943	1.00	36.91	O
ATOM	7898	O	HOH W 124	5.296	23.618	25.674	1.00	51.23	O
ATOM	7901	O	HOH W 125	35.927	38.534	-12.906	1.00	24.70	O
ATOM	7904	O	HOH W 126	33.959	38.416	11.662	1.00	61.25	O
ATOM	7907	O	HOH W 127	5.261	16.176	-31.902	1.00	60.44	O
ATOM	7910	O	HOH W 128	3.619	10.170	-14.733	1.00	54.32	O
ATOM	7913	O	HOH W 129	41.243	42.362	-12.550	1.00	41.03	O
ATOM	7916	O	HOH W 130	12.347	5.586	8.708	1.00	69.74	O
ATOM	7919	O	HOH W 131	27.984	24.008	-6.496	1.00	41.07	O
ATOM	7922	O	HOH W 132	22.272	40.673	-15.350	1.00	39.59	O
ATOM	7925	O	HOH W 133	7.747	25.770	-37.364	1.00	55.03	O
ATOM	7928	O	HOH W 134	39.191	24.454	3.135	1.00	40.42	O
ATOM	7931	O	HOH W 135	14.402	40.406	-28.282	1.00	37.42	O
ATOM	7934	O	HOH W 136	34.793	47.488	-15.790	1.00	59.46	O
ATOM	7937	O	HOH W 137	7.750	39.061	-23.815	1.00	37.90	O
ATOM	7940	O	HOH W 138	9.305	6.984	-12.013	1.00	46.18	O
ATOM	7943	O	HOH W 139	14.613	27.074	35.922	1.00	71.08	O
ATOM	7946	O	HOH W 140	48.275	17.287	-6.443	1.00	28.86	O
ATOM	7949	O	HOH W 141	39.299	23.698	-14.136	1.00	45.61	O
ATOM	7952	O	HOH W 142	22.572	30.927	35.577	1.00	54.69	O
ATOM	7955	O	HOH W 143	21.002	40.682	-26.912	1.00	55.55	O
ATOM	7958	O	HOH W 144	8.429	21.992	-32.406	1.00	41.92	O
ATOM	7961	O	HOH W 145	17.028	19.688	-29.030	1.00	39.19	O
ATOM	7964	O	HOH W 146	10.847	17.571	5.550	1.00	33.58	O
ATOM	7967	O	HOH W 147	35.539	32.295	3.949	1.00	32.06	O
ATOM	7970	O	HOH W 148	19.352	40.561	10.677	1.00	35.22	O
ATOM	7973	O	HOH W 149	36.056	30.047	1.880	1.00	25.08	O
ATOM	7976	O	HOH W 150	7.421	24.765	-12.983	1.00	32.40	O
ATOM	7979	O	HOH W 151	34.347	21.301	-13.454	1.00	34.65	O
ATOM	7982	O	HOH W 152	37.018	53.480	-7.956	1.00	32.98	O
ATOM	7985	O	HOH W 153	39.809	27.359	1.516	1.00	49.62	O
ATOM	7988	O	HOH W 154	11.892	30.286	-8.593	1.00	64.29	O
ATOM	7991	O	HOH W 155	1.326	29.578	-17.997	1.00	46.75	O
ATOM	7994	O	HOH W 156	23.916	4.625	-10.840	0.50	27.06	O
ATOM	7997	O	HOH W 157	30.259	19.981	25.070	1.00	47.43	O
ATOM	8000	O	HOH W 158	26.772	38.282	-22.076	1.00	59.37	O
ATOM	8003	O	HOH W 159	26.304	15.746	-12.186	1.00	32.25	O
ATOM	8006	O	HOH W 160	35.775	8.564	-14.600	1.00	53.50	O
ATOM	8009	O	HOH W 161	25.712	12.114	9.145	1.00	36.79	O
ATOM	8012	O	HOH W 162	28.381	19.330	15.188	1.00	30.83	O
ATOM	8015	O	HOH W 163	33.873	34.291	10.820	1.00	44.68	O
ATOM	8018	O	HOH W 164	2.963	25.300	6.608	1.00	36.32	O
ATOM	8021	O	HOH W 165	16.193	11.648	13.638	1.00	29.41	O
ATOM	8024	O	HOH W 166	23.034	20.918	-4.577	1.00	40.60	O
ATOM	8027	O	HOH W 167	26.817	47.968	-13.158	0.50	31.99	O
ATOM	8030	O	HOH W 168	29.711	6.523	-4.122	1.00	28.68	O
ATOM	8033	O	HOH W 169	24.358	40.426	-17.946	1.00	39.56	O

ATOM	8036	O	HOH W 170	24.576	31.013	30.105	1.00	50.37	O
ATOM	8039	O	HOH W 171	18.383	33.087	37.613	1.00	37.57	O
ATOM	8042	O	HOH W 172	25.056	20.881	31.701	1.00	34.39	O
ATOM	8045	O	HOH W 173	3.087	28.999	-24.635	1.00	33.39	O
ATOM	8048	O	HOH W 174	28.323	48.978	10.721	1.00	60.63	O
ATOM	8051	O	HOH W 175	26.303	17.022	-14.889	1.00	43.47	O
ATOM	8054	O	HOH W 176	8.084	41.560	11.466	0.50	23.97	O
ATOM	8057	O	HOH W 177	17.757	5.533	-14.072	1.00	48.63	O
ATOM	8060	O	HOH W 178	14.594	5.851	9.729	1.00	59.51	O
ATOM	8063	O	HOH W 179	25.695	40.118	-12.314	1.00	45.49	O
ATOM	8066	O	HOH W 180	40.619	24.131	11.489	1.00	49.23	O
ATOM	8069	O	HOH W 181	4.384	16.896	-18.929	1.00	57.43	O
ATOM	8072	O	HOH W 182	37.232	50.616	-14.434	1.00	43.95	O
ATOM	8075	O	HOH W 183	5.527	39.099	23.072	1.00	58.33	O
ATOM	8078	O	HOH W 184	36.989	34.671	0.239	1.00	37.91	O
ATOM	8081	O	HOH W 185	13.879	38.946	20.678	1.00	46.20	O
ATOM	8084	O	HOH W 186	31.550	42.225	-15.386	1.00	43.12	O
ATOM	8087	O	HOH W 187	23.675	10.189	23.294	1.00	36.53	O
ATOM	8090	O	HOH W 188	28.288	6.660	-1.176	1.00	43.87	O
ATOM	8093	O	HOH W 189	16.603	2.411	-5.478	0.50	26.77	O
ATOM	8096	O	HOH W 190	39.863	33.445	-13.339	1.00	39.56	O
ATOM	8099	O	HOH W 191	4.847	14.614	-18.202	1.00	50.81	O
ATOM	8102	O	HOH W 192	38.708	35.246	-4.884	1.00	35.45	O
ATOM	8105	O	HOH W 193	6.468	5.162	-8.404	1.00	60.80	O
ATOM	8108	O	HOH W 194	27.495	18.320	-13.297	0.50	19.61	O
ATOM	8111	O	HOH W 195	38.995	21.115	-14.260	1.00	43.76	O
ATOM	8114	O	HOH W 196	25.957	35.708	-22.280	1.00	51.47	O
ATOM	8117	O	HOH W 197	30.271	7.529	-15.051	1.00	49.98	O
ATOM	8120	O	HOH W 198	12.859	39.932	-32.892	1.00	54.17	O
ATOM	8123	O	HOH W 199	5.379	25.408	-11.619	1.00	45.77	O
ATOM	8126	O	HOH W 200	16.326	11.872	-26.192	1.00	61.33	O
ATOM	8129	O	HOH W 201	8.344	36.489	-32.253	1.00	43.22	O
ATOM	8132	O	HOH W 202	27.091	50.204	-13.984	1.00	57.77	O
ATOM	8135	O	HOH W 203	-4.494	32.015	10.048	1.00	68.31	O
ATOM	8138	O	HOH W 204	3.463	33.342	23.237	1.00	43.56	O
ATOM	8141	O	HOH W 205	37.014	33.809	11.335	1.00	49.53	O
ATOM	8144	O	HOH W 206	23.940	19.362	-6.006	0.50	21.85	O
ATOM	8147	O	HOH W 207	8.392	38.986	-31.660	1.00	35.77	O
ATOM	8150	O	HOH W 208	27.998	12.876	-17.320	1.00	40.17	O
ATOM	8153	O	HOH W 209	-1.812	37.375	-21.328	1.00	44.57	O
ATOM	8156	O	HOH W 210	32.672	20.321	23.244	1.00	29.75	O
ATOM	8159	O	HOH W 211	29.478	21.500	-2.551	0.50	16.26	O
ATOM	8162	O	HOH W 212	33.154	15.016	-9.262	1.00	27.24	O
ATOM	8165	O	HOH W 213	1.154	23.481	-16.355	0.50	31.73	O
ATOM	8168	O	HOH W 214	15.851	21.948	-30.501	1.00	42.10	O
ATOM	8171	O	HOH W 215	36.027	4.099	4.129	1.00	46.49	O
ATOM	8174	O	HOH W 216	15.351	5.224	-11.637	0.50	25.60	O
ATOM	8177	O	HOH W 217	27.266	12.793	27.015	0.50	29.96	O
ATOM	8180	O	HOH W 218	28.479	16.104	-8.378	0.50	23.86	O
ATOM	8183	O	HOH W 219	13.417	39.122	16.837	1.00	59.93	O
ATOM	8186	O	HOH W 220	33.299	24.118	17.997	1.00	44.89	O
ATOM	8189	O	HOH W 221	22.521	41.558	-8.213	1.00	64.37	O
ATOM	8192	O	HOH W 222	23.424	13.287	9.790	0.50	20.80	O
ATOM	8195	O	HOH W 223	33.767	5.035	3.175	0.50	27.70	O
ATOM	8198	O	HOH W 224	6.346	32.731	-33.323	0.50	25.24	O
ATOM	8201	O	HOH W 225	27.652	12.090	-14.910	1.00	37.54	O
ATOM	8204	O	HOH W 226	28.414	19.278	-8.106	0.50	32.08	O
ATOM	8207	O	HOH W 227	32.858	10.359	13.221	1.00	40.12	O
ATOM	8210	O	HOH W 228	4.001	21.747	1.070	0.50	39.50	O
ATOM	8213	O	HOH W 229	41.810	25.125	1.559	1.00	52.30	O
ATOM	8216	O	HOH W 230	31.045	30.872	-31.030	1.00	57.18	O
ATOM	8219	O	HOH W 231	5.898	18.834	-19.483	0.50	25.61	O
ATOM	8222	O	HOH W 232	-1.876	27.587	20.246	0.50	30.83	O
ATOM	8225	O	HOH W 233	41.833	32.055	-0.806	1.00	69.81	O
ATOM	8228	O	HOH W 234	7.553	14.175	15.657	0.50	37.64	O
ATOM	8231	O	HOH W 235	26.145	42.399	-13.825	1.00	59.04	O
ATOM	8234	O	HOH W 236	-1.896	7.319	-2.140	1.00	65.57	O

ATOM	8237	O	HOH W 237	46.825	13.941	10.491	0.50	27.76	O
ATOM	8240	O	HOH W 238	27.987	16.776	-16.996	1.00	55.89	O
ATOM	8243	O	HOH W 239	6.452	22.740	-25.254	1.00	53.30	O
ATOM	8246	O	HOH W 240	11.282	9.360	-20.877	1.00	57.21	O
ATOM	8249	O	HOH W 241	26.249	3.870	-9.282	1.00	58.15	O
ATOM	8252	O	HOH W 242	31.430	23.594	16.264	1.00	32.74	O
ATOM	8255	O	HOH W 243	1.600	13.470	-12.619	1.00	60.46	O
ATOM	8258	O	HOH W 244	45.543	18.919	-1.587	1.00	49.50	O
ATOM	8261	O	HOH W 245	41.597	47.491	-15.241	1.00	53.66	O
ATOM	8264	O	HOH W 246	7.041	33.753	-6.883	1.00	57.77	O
ATOM	8267	O	HOH W 247	38.010	37.178	-12.470	1.00	61.90	O
ATOM	8270	O	HOH W 248	49.530	18.413	-3.114	0.50	27.99	O
ATOM	8273	O	HOH W 249	7.541	18.703	21.918	1.00	53.99	O
ATOM	8276	O	HOH W 250	7.130	15.336	5.301	1.00	49.87	O
ATOM	8279	O	HOH W 251	27.837	47.806	-14.772	0.50	39.85	O
ATOM	8282	O	HOH W 252	14.417	2.595	-6.085	0.50	33.38	O
ATOM	8285	O	HOH W 253	31.494	17.949	-21.242	1.00	49.28	O
ATOM	8288	O	HOH W 254	32.468	40.456	-16.846	1.00	56.44	O
ATOM	8291	O	HOH W 255	19.720	42.639	-18.070	1.00	55.46	O
ATOM	8294	O	HOH W 256	7.662	22.306	-13.544	1.00	44.60	O
ATOM	8297	O	HOH W 258	8.996	43.289	-23.649	1.00	56.27	O
ATOM	8300	O	HOH W 259	48.060	31.791	-14.736	1.00	50.88	O
ATOM	8303	O	HOH W 260	50.259	31.185	-13.281	0.50	35.13	O
ATOM	8306	O	HOH W 261	14.225	10.346	14.254	1.00	47.66	O
ATOM	8309	O	HOH W 262	7.488	16.523	-25.292	1.00	55.86	O
ATOM	8312	O	HOH W 263	43.607	20.913	16.631	1.00	60.42	O
ATOM	8315	O	HOH W 264	23.621	10.751	7.039	1.00	40.21	O
ATOM	8318	O	HOH W 265	48.856	24.256	-0.202	1.00	57.84	O
ATOM	8321	O	HOH W 266	32.374	44.558	-14.952	1.00	60.28	O
ATOM	8324	O	HOH W 267	44.328	18.017	-13.224	1.00	54.55	O
ATOM	8327	O	HOH W 268	1.835	19.791	-3.380	1.00	67.56	O
ATOM	8330	O	HOH W 269	24.574	17.640	-3.835	0.50	15.42	O
ATOM	8333	O	HOH W 270	-2.567	21.199	15.851	1.00	61.98	O
ATOM	8336	O	HOH W 271	48.541	21.686	0.431	1.00	54.85	O
ATOM	8339	O	HOH W 272	49.748	28.740	-12.639	0.33	38.55	O
ATOM	8342	O	HOH W 273	12.880	20.997	-31.699	1.00	44.20	O
ATOM	8345	O	HOH W 274	56.843	8.402	21.920	0.50	38.86	O
ATOM	8348	O	HOH W 275	15.075	18.027	-28.940	1.00	61.29	O
ATOM	8351	O	HOH W 276	9.255	19.543	-27.776	0.50	38.11	O
ATOM	8354	O	HOH W 277	24.627	4.480	-17.643	1.00	46.41	O
ATOM	8357	O	HOH W 278	33.326	18.249	-15.323	1.00	61.70	O
ATOM	8360	O	HOH W 279	25.508	49.523	-11.655	1.00	54.10	O
ATOM	8363	O	HOH W 280	23.518	16.263	15.319	1.00	52.94	O
ATOM	8366	O	HOH W 281	6.825	40.257	10.690	0.50	26.19	O
ATOM	8369	O	HOH W 282	34.489	20.568	27.598	1.00	44.78	O
ATOM	8372	O	HOH W 283	6.444	15.756	12.562	0.50	21.59	O
ATOM	8375	O	HOH W 284	3.507	16.769	14.788	1.00	61.68	O
ATOM	8378	O	HOH W 285	45.624	21.477	13.157	1.00	77.61	O
ATOM	8381	O	HOH W 286	9.372	19.837	-30.444	0.50	36.97	O
ATOM	8384	O	HOH W 287	2.684	45.419	-24.007	1.00	45.92	O
ATOM	8387	O	HOH W 288	42.180	25.071	15.293	1.00	59.16	O
ATOM	8390	O	HOH W 289	41.717	11.962	13.292	1.00	54.15	O
ATOM	8393	O	HOH W 290	41.514	39.894	-11.143	1.00	45.68	O
ATOM	8396	O	HOH W 291	20.461	31.035	30.221	0.50	42.83	O
ATOM	8399	O	HOH W 292	14.142	43.078	-28.547	1.00	45.56	O
ATOM	8402	O	HOH W 293	11.808	33.758	33.354	1.00	57.22	O
ATOM	8405	O	HOH W 294	7.954	26.031	32.733	1.00	44.15	O
ATOM	8408	O	HOH W 295	9.003	30.538	31.326	0.50	43.44	O
ATOM	8411	O	HOH W 296	25.932	19.979	-5.777	0.50	29.83	O
ATOM	8414	O	HOH W 297	-0.592	37.341	18.420	1.00	58.36	O
ATOM	8417	O	HOH W 299	25.936	16.263	27.533	1.00	52.26	O
ATOM	8420	O	HOH W 300	37.359	33.443	2.243	1.00	44.90	O
ATOM	8423	O	HOH W 301	17.644	39.923	-15.457	1.00	39.07	O
ATOM	8426	O	HOH W 302	25.743	25.040	38.114	1.00	64.26	O
ATOM	8429	O	HOH W 303	0.890	21.019	8.342	1.00	59.07	O
ATOM	8432	O	HOH W 304	19.906	41.163	-15.580	1.00	46.92	O
ATOM	8435	O	HOH W 305	19.380	24.447	-36.390	1.00	59.62	O

ATOM	8438	O	HOH W 306	36.275	31.949	-2.027	1.00	34.35	O
ATOM	8441	O	HOH W 307	5.390	20.579	-38.427	1.00	47.01	O
ATOM	8444	O	HOH W 308	14.361	28.782	-42.020	1.00	57.70	O
ATOM	8447	O	HOH W 309	57.722	11.875	21.792	1.00	48.26	O
ATOM	8450	O	HOH W 310	42.518	25.029	12.766	1.00	55.17	O
ATOM	8453	O	HOH W 311	10.390	38.168	-36.084	1.00	65.15	O
ATOM	8456	O	HOH W 312	25.926	16.776	-31.569	0.50	34.61	O
ATOM	8459	O	HOH W 313	17.608	35.788	-33.423	0.50	35.60	O
ATOM	8462	O	HOH W 314	21.093	3.596	-14.559	1.00	59.26	O
ATOM	8465	O	HOH W 315	30.497	32.957	-23.275	1.00	50.77	O
ATOM	8468	O	HOH W 316	30.165	27.775	-23.317	1.00	46.40	O
ATOM	8471	O	HOH W 317	26.689	43.497	15.202	1.00	55.62	O
ATOM	8474	O	HOH W 318	15.999	39.405	15.989	1.00	48.46	O
ATOM	8477	O	HOH W 319	30.252	51.226	-15.008	1.00	39.47	O
ATOM	8480	O	HOH W 320	3.798	27.600	7.128	1.00	53.57	O
ATOM	8483	O	HOH W 321	3.650	12.771	-9.974	1.00	55.72	O
ATOM	8486	O	HOH W 322	27.984	15.373	26.338	1.00	53.95	O
ATOM	8489	O	HOH W 323	24.006	32.648	27.444	1.00	65.25	O
ATOM	8492	O	HOH W 324	18.624	3.388	-10.576	1.00	50.20	O
ATOM	8495	O	HOH W 325	47.370	28.138	-1.279	1.00	61.68	O
ATOM	8498	O	HOH W 326	41.879	49.506	-13.744	1.00	39.30	O
ATOM	8501	O	HOH W 327	3.074	39.059	13.429	1.00	48.77	O
ATOM	8504	O	HOH W 328	18.105	39.343	3.739	0.50	30.84	O
ATOM	8507	O	HOH W 329	18.529	2.086	-5.358	0.50	37.04	O
ATOM	8510	O	HOH W 330	17.311	7.905	-17.808	1.00	36.95	O
ATOM	8513	O	HOH W 332	36.620	32.557	7.875	0.50	18.43	O
ATOM	8516	O	HOH W 333	8.503	18.273	-1.641	0.50	27.21	O
ATOM	8519	O	HOH W 334	42.310	21.600	4.738	1.00	52.06	O
ATOM	8522	O	HOH W 335	25.840	15.931	-30.196	0.50	34.23	O
ATOM	8525	O	HOH W 336	34.557	44.332	-11.917	1.00	30.30	O
ATOM	8528	O	HOH W 337	41.737	24.292	-2.092	0.50	20.12	O
ATOM	8531	O	HOH W 338	46.870	21.022	10.056	0.50	34.32	O
ATOM	8534	O	HOH W 339	0.324	33.526	-20.903	1.00	51.49	O
ATOM	8537	O	HOH W 340	3.453	30.365	-20.854	0.50	31.52	O
ATOM	8540	O	HOH W 341	28.603	20.823	-4.001	0.50	30.56	O
ATOM	8543	O	HOH W 342	26.882	1.882	-8.044	1.00	70.86	O
ATOM	8546	O	HOH W 343	39.403	30.147	3.566	1.00	60.07	O
ATOM	8549	O	HOH W 344	29.749	53.810	4.334	1.00	67.35	O
ATOM	8552	O	HOH W 345	11.764	20.756	27.171	1.00	74.76	O
ATOM	8555	O	HOH W 346	6.452	31.230	30.596	1.00	53.66	O
ATOM	8558	O	HOH W 347	28.279	18.637	-10.598	0.50	34.26	O
ATOM	8561	O	HOH W 348	50.887	16.504	16.932	1.00	67.75	O
ATOM	8564	O	HOH W 349	32.114	12.907	17.835	0.50	29.26	O
ATOM	8567	O	HOH W 350	14.696	36.469	-34.622	0.50	59.11	O
ATOM	8570	O	HOH W 351	9.279	42.248	-9.860	1.00	60.04	O
ATOM	8573	O	HOH W 352	43.796	19.419	-16.713	1.00	67.29	O
ATOM	8576	O	HOH W 353	23.971	31.918	-34.100	1.00	51.05	O
ATOM	8579	O	HOH W 354	17.453	38.815	-33.019	1.00	55.32	O
ATOM	8582	O	HOH W 355	4.173	23.632	1.574	0.50	44.65	O
ATOM	8585	O	HOH W 356	49.787	28.743	-1.070	0.33	56.57	O
ATOM	8588	O	HOH W 357	16.831	36.473	-33.683	0.50	36.75	O
ATOM	8591	O	HOH W 358	8.801	33.948	32.104	0.50	37.93	O
ATOM	8594	O	HOH W 359	8.322	40.252	-20.958	1.00	65.06	O
ATOM	8597	O	HOH W 360	40.713	32.916	-4.019	0.50	30.34	O
ATOM	8600	O	HOH W 361	17.002	5.511	19.654	1.00	60.83	O
ATOM	8603	O	HOH W 362	15.290	3.067	-9.708	0.50	30.16	O
ATOM	8606	O	HOH W 363	17.189	7.441	9.734	1.00	62.87	O
ATOM	8609	O	HOH W 364	8.072	17.540	7.718	1.00	48.74	O
ATOM	8612	O	HOH W 365	26.395	31.635	-28.027	0.50	28.65	O
ATOM	8615	O	HOH W 366	15.514	42.023	-13.211	1.00	68.66	O
ATOM	8618	O	HOH W 367	1.997	31.624	-24.918	1.00	51.22	O
ATOM	8621	O	HOH W 368	25.381	42.740	-17.947	1.00	61.14	O
ATOM	8624	O	HOH W 369	7.489	33.905	-33.412	0.50	21.70	O
ATOM	8627	O	HOH W 370	6.202	27.834	7.662	1.00	45.01	O
ATOM	8630	O	HOH W 371	58.371	16.080	25.264	1.00	50.90	O
ATOM	8633	O	HOH W 372	18.188	18.786	33.216	1.00	55.75	O
ATOM	8636	O	HOH W 374	20.552	29.875	38.003	1.00	94.56	O

ATOM	8639	O	HOH W 375	23.378	2.334	3.437	1.00	48.41	O
ATOM	8642	O	HOH W 376	1.321	15.951	-17.628	1.00	61.20	O
ATOM	8645	O	HOH W 377	19.425	12.899	-26.034	1.00	47.23	O
ATOM	8648	O	HOH W 378	9.280	13.369	3.510	1.00	63.06	O
ATOM	8651	O	HOH W 379	30.036	25.182	-21.236	1.00	43.66	O
ATOM	8654	O	HOH W 380	19.621	9.173	-21.673	0.50	32.41	O
ATOM	8657	O	HOH W 381	23.964	4.222	-13.084	0.50	31.27	O
ATOM	8660	O	HOH W 382	21.016	47.048	11.168	0.50	44.82	O
ATOM	8663	O	HOH W 383	19.353	1.243	-7.540	1.00	45.69	O
ATOM	8666	O	HOH W 384	6.956	19.316	9.604	1.00	43.07	O
ATOM	8669	O	HOH W 385	6.095	35.228	-31.746	0.50	27.79	O
ATOM	8672	O	HOH W 386	18.020	7.973	11.983	1.00	51.91	O
ATOM	8675	O	HOH W 387	7.499	15.047	14.482	0.50	31.91	O
ATOM	8678	O	HOH W 388	4.365	27.898	28.220	1.00	49.37	O
ATOM	8681	O	HOH W 389	16.595	34.699	-33.549	0.50	24.93	O
ATOM	8684	O	HOH W 390	48.458	13.300	9.591	0.50	27.66	O
ATOM	8687	O	HOH W 391	23.117	6.856	-19.057	1.00	43.77	O
ATOM	8690	O	HOH W 392	39.894	30.189	8.831	1.00	56.38	O
ATOM	8693	O	HOH W 393	13.943	24.699	1.488	1.00	33.59	O
ATOM	8696	O	HOH W 394	16.533	29.178	-1.916	1.00	49.25	O
ATOM	8699	O	HOH W 395	21.483	34.915	-7.529	0.50	17.15	O
ATOM	8702	O	HOH W 396	26.831	5.381	8.974	1.00	57.38	O
ATOM	8705	O	HOH W 397	33.173	26.385	-21.312	1.00	51.76	O
ATOM	8708	O	HOH W 398	10.998	10.874	8.207	0.50	29.09	O
ATOM	8711	O	HOH W 399	27.069	23.576	-4.177	1.00	43.53	O
ATOM	8714	O	HOH W 400	14.059	34.937	31.590	0.50	31.41	O
ATOM	8717	O	HOH W 401	4.663	31.376	-9.598	1.00	61.16	O
ATOM	8720	O	HOH W 402	34.595	8.497	9.616	0.50	29.04	O
ATOM	8723	O	HOH W 403	39.246	28.114	9.981	1.00	36.10	O
ATOM	8726	O	HOH W 404	12.918	23.144	-6.176	1.00	32.95	O
ATOM	8729	O	HOH W 405	7.246	18.331	-0.134	0.50	32.27	O
ATOM	8732	O	HOH W 406	40.877	25.779	9.221	1.00	53.78	O
ATOM	8735	O	HOH W 407	15.256	43.689	-19.146	1.00	59.98	O
ATOM	8738	O	HOH W 408	14.004	25.283	-4.896	1.00	37.27	O
ATOM	8741	O	HOH W 409	4.801	20.030	-18.697	0.50	30.90	O
ATOM	8744	O	HOH W 410	11.463	29.532	-3.007	1.00	47.39	O
ATOM	8747	O	HOH W 411	21.560	8.999	-22.456	0.50	34.83	O
ATOM	8750	O	HOH W 412	29.223	41.241	15.676	1.00	58.93	O
ATOM	8753	O	HOH W 414	5.554	11.754	-17.758	1.00	52.99	O
ATOM	8756	O	HOH W 415	35.285	42.631	-13.475	1.00	51.45	O
ATOM	8759	O	HOH W 416	22.449	32.391	31.435	0.50	40.96	O
ATOM	8762	O	HOH W 417	12.064	7.285	-18.384	1.00	58.95	O
ATOM	8765	O	HOH W 418	17.633	31.474	-7.978	1.00	50.34	O
ATOM	8768	O	HOH W 419	9.032	41.361	-13.151	1.00	59.32	O
ATOM	8771	O	HOH W 420	14.852	26.632	-7.068	1.00	46.68	O
ATOM	8774	O	HOH W 421	41.197	29.810	-22.014	1.00	78.39	O
ATOM	8777	O	HOH W 422	43.294	15.189	9.251	0.50	33.05	O
ATOM	8780	O	HOH W 423	10.015	16.021	24.072	1.00	61.73	O
ATOM	8783	O	HOH W 424	19.777	19.286	-37.304	1.00	67.05	O
ATOM	8786	O	HOH W 425	39.655	32.951	-2.289	0.50	33.42	O
ATOM	8789	O	HOH W 426	22.853	40.262	-20.051	1.00	61.44	O
ATOM	8792	O	HOH W 427	24.375	14.348	10.506	0.50	32.95	O
ATOM	8795	O	HOH W 428	38.647	12.847	15.230	1.00	57.53	O
ATOM	8798	O	HOH W 429	7.183	16.282	-30.219	1.00	77.21	O
ATOM	8801	O	HOH W 430	7.582	38.565	-18.524	1.00	53.02	O
ATOM	8804	O	HOH W 431	38.933	26.401	14.798	1.00	63.35	O
ATOM	8807	O	HOH W 432	20.507	5.202	-17.550	1.00	54.76	O
ATOM	8810	O	HOH W 433	4.226	19.521	-23.093	1.00	57.38	O
ATOM	8813	O	HOH W 434	28.856	31.515	-31.178	1.00	65.09	O
ATOM	8816	O	HOH W 435	6.491	16.850	10.169	0.50	28.29	O
ATOM	8819	O	HOH W 436	-0.938	10.151	-4.470	1.00	67.09	O
ATOM	8822	O	HOH W 437	12.115	43.913	5.976	1.00	52.27	O
ATOM	8825	O	HOH W 438	37.021	30.180	-0.348	1.00	54.90	O
ATOM	8828	O	HOH W 439	32.206	22.621	-17.176	1.00	60.62	O
ATOM	8831	O	HOH W 440	39.276	23.339	5.379	1.00	52.63	O
ATOM	8834	O	HOH W 441	16.380	38.693	-11.605	1.00	44.81	O
ATOM	8837	O	HOH W 442	17.103	41.988	-2.414	1.00	65.10	O

ATOM	8840	O	HOH W 444	1.985	30.647	-19.939	0.50	42.98	O
ATOM	8843	O	HOH W 445	1.869	22.768	-17.431	0.50	43.82	O
ATOM	8846	O	HOH W 446	26.360	32.245	-32.159	1.00	64.64	O
ATOM	8849	O	HOH W 447	6.553	42.565	11.785	0.50	31.61	O
ATOM	8852	O	HOH W 449	26.299	32.173	-29.756	0.50	31.84	O
ATOM	8855	O	HOH W 450	16.222	4.632	-10.331	0.50	24.79	O
ATOM	8858	O	HOH W 451	19.110	6.932	-19.090	1.00	55.79	O
ATOM	8861	O	HOH W 452	39.345	38.559	-13.948	1.00	60.69	O
ATOM	8864	O	HOH W 453	21.521	48.669	10.305	0.50	42.96	O
ATOM	8867	O	HOH W 454	5.686	16.703	13.640	0.50	30.50	O
ATOM	8870	O	HOH W 455	43.254	22.009	6.929	1.00	62.51	O
ATOM	8873	O	HOH W 456	21.407	16.178	32.694	1.00	59.76	O
ATOM	8876	O	HOH W 457	8.675	32.964	27.916	1.00	65.65	O
ATOM	8879	O	HOH W 458	37.800	29.793	13.716	1.00	56.57	O
ATOM	8882	O	HOH W 459	13.547	38.105	1.119	1.00	51.90	O
ATOM	8885	O	HOH W 460	41.840	6.820	8.070	1.00	56.54	O
ATOM	8888	O	HOH W 461	18.855	32.370	27.111	1.00	48.14	O
ATOM	8891	O	HOH W 462	11.963	17.934	26.464	1.00	53.48	O
ATOM	8894	O	HOH W 463	5.870	9.869	8.438	1.00	63.83	O
ATOM	8897	O	HOH W 465	4.495	20.794	-28.595	1.00	65.07	O
ATOM	8900	O	HOH W 466	18.197	5.759	-16.435	1.00	60.53	O
ATOM	8903	O	HOH W 467	1.643	38.777	21.189	1.00	56.38	O
ATOM	8906	O	HOH W 468	47.808	21.207	9.453	0.50	46.36	O
ATOM	8909	O	HOH W 469	21.930	32.303	-6.868	1.00	52.69	O
ATOM	8912	O	HOH W 470	9.241	4.523	-11.459	1.00	59.45	O
ATOM	8915	O	HOH W 471	19.012	16.517	32.929	1.00	66.42	O
ATOM	8918	O	HOH W 472	23.587	51.681	-0.856	1.00	75.29	O
ATOM	8921	O	HOH W 473	14.885	2.612	-7.800	0.50	30.49	O
ATOM	8924	O	HOH W 474	3.798	24.046	-27.855	1.00	49.77	O
ATOM	8927	O	HOH W 475	18.360	42.719	-7.914	1.00	59.07	O
ATOM	8930	O	HOH W 476	7.208	31.118	-7.639	1.00	53.32	O
ATOM	8933	O	HOH W 477	19.090	29.671	-6.933	1.00	47.34	O
ATOM	8936	O	HOH W 478	1.954	34.161	-4.534	1.00	70.63	O
ATOM	8939	O	HOH W 480	40.677	18.371	-13.666	1.00	48.33	O
ATOM	8942	O	HOH W 481	31.602	36.604	13.963	1.00	48.79	O
ATOM	8945	O	HOH W 482	45.090	22.952	8.359	1.00	60.88	O
ATOM	8948	O	HOH W 483	7.550	41.347	-25.594	1.00	35.89	O
ATOM	8951	O	HOH W 484	21.347	36.454	-6.986	0.50	33.38	O
ATOM	8954	O	HOH W 485	12.352	3.052	-18.249	1.00	61.23	O
ATOM	8957	O	HOH W 486	13.568	36.741	32.619	0.50	39.30	O
ATOM	8960	O	HOH W 487	34.165	12.679	-9.557	1.00	26.72	O
ATOM	8963	O	HOH W 488	33.535	9.345	7.915	0.50	36.91	O
ATOM	8966	O	HOH W 489	43.242	30.624	-17.448	1.00	70.41	O
ATOM	8969	O	HOH W 490	25.396	-0.040	-7.013	1.00	54.75	O
ATOM	8972	O	HOH W 491	16.316	41.319	0.412	1.00	65.26	O
ATOM	8975	O	HOH W 492	4.094	19.303	-20.164	0.50	28.83	O
ATOM	8978	O	HOH W 493	27.125	19.682	-3.499	0.50	46.28	O
ATOM	8981	O	HOH W 494	35.208	12.880	-11.824	1.00	30.03	O
ATOM	8984	O	HOH W 495	26.479	18.898	-2.052	0.50	30.95	O
ATOM	8987	O	HOH W 496	10.122	11.654	6.408	0.50	36.02	O
ATOM	8990	O	HOH W 497	9.783	32.713	31.876	0.50	34.60	O
ATOM	8993	O	HOH W 499	19.856	42.572	13.086	1.00	45.23	O
ATOM	8996	O	HOH W 500	40.899	27.193	15.153	0.50	39.84	O
ATOM	8999	O	HOH W 501	40.697	24.319	7.231	1.00	62.77	O
ATOM	9002	O	HOH W 502	16.432	39.595	2.772	0.50	48.50	O
ATOM	9005	O	HOH W 503	45.469	22.454	10.851	0.50	43.74	O
ATOM	9008	O	HOH W 504	6.234	23.367	-28.299	1.00	67.87	O
ATOM	9011	O	HOH W 505	20.939	10.660	-23.793	0.50	29.49	O
ATOM	9014	O	HOH W 506	44.444	18.764	21.136	1.00	58.60	O
ATOM	9017	O	HOH W 507	27.446	40.749	17.415	1.00	61.16	O
ATOM	9020	O	HOH W 508	7.766	20.589	-26.847	0.50	40.59	O
ATOM	9023	O	HOH W 509	18.481	14.570	35.455	1.00	60.56	O
ATOM	9026	O	HOH W 510	47.099	13.153	13.295	1.00	75.78	O
ATOM	9029	O	HOH W 511	23.610	34.100	31.580	0.50	41.16	O
ATOM	9032	O	HOH W 512	25.549	0.531	3.368	1.00	69.23	O
ATOM	9035	O	HOH W 513	17.379	19.665	29.611	1.00	54.20	O
ATOM	9038	O	HOH W 514	31.449	50.426	-2.361	1.00	66.09	O

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ATOM   9041  O   HOH W 515      17.382   4.067   4.154  1.00 67.56           O
ATOM   9044  O   HOH W 516      29.253  32.641  28.438  1.00 61.08           O
ATOM   9047  O   HOH W 517      13.044  43.405   3.454  1.00 49.83           O
ATOM   9050  O   HOH W 518      22.627  44.790  22.232  1.00 66.50           O
ATOM   9053  O   HOH W 519      14.672   3.988 -16.980  1.00 66.22           O
ATOM   9056  O   HOH W 520       6.064  25.203  -5.889  1.00 53.69           O
ATOM   9059  O   HOH W 521       2.320  29.343   3.860  1.00 57.47           O
ATOM   9062  O   HOH W 522      13.142  10.465 -25.055  1.00 56.12           O
ATOM   9065  O   HOH W 523      44.874  28.186 -16.477  1.00 58.89           O
ATOM   9068  O   HOH W 524      38.703  33.659  -4.218  0.50 25.16           O
ATOM   9071  O   HOH W 525      41.198  12.697  20.117  1.00 57.16           O
ATOM   9074  O   HOH W 526       9.681  31.465  -8.291  1.00 56.16           O
ATOM   9077  O   HOH W 527       1.738  21.604  -0.567  1.00 60.03           O
ATOM   9080  O   HOH W 528       8.276  13.214  21.482  1.00 64.90           O
ATOM   9083  O   HOH W 529      19.397  41.739  17.012  1.00 72.09           O
ATOM   9086  O   HOH W 530      31.522  38.687  13.426  0.50 36.26           O
ATOM   9089  O   HOH W 531      14.779  19.817  29.460  1.00 63.71           O
ATOM   9092  O   HOH W 532      11.398   6.273 -16.578  0.50 35.84           O
ATOM   9095  O   HOH W 533      26.544  18.596  16.238  0.50 30.52           O
ATOM   9098  O   HOH W 534      13.840  36.994  -6.784  1.00 61.21           O
ATOM   9101  O   HOH W 535      -3.775  37.503  17.051  1.00 67.76           O
ATOM   9104  O   HOH W 536      24.689  18.854  13.360  1.00 46.92           O
ATOM   9107  O   HOH W 537       4.433  27.163 -11.519  0.50 29.48           O
ATOM   9110  O   HOH W 538      15.151   5.574 -20.010  1.00 61.43           O
ATOM   9113  O   HOH W 540      21.004  49.661  16.058  1.00 79.68           O
ATOM   9116  O   HOH W 541      29.379  16.688 -15.062  0.50 31.73           O
ATOM   9119  O   HOH W 542      21.914  29.531  -6.204  1.00 34.62           O
ATOM   9122  O   HOH W 543      24.433  28.375  -6.781  1.00 33.11           O
ATOM   9125  O   HOH W 544       8.986  30.891  -0.426  1.00 49.25           O
ATOM   9128  O   HOH W 545       8.414  24.116  -6.410  1.00 38.03           O
ATOM   9131  O   HOH W 546      10.532  23.944  -7.549  1.00 43.23           O
ATOM   9134  O   HOH W 547      34.327  25.909 -13.468  1.00 46.61           O
ATOM   9137  O   HOH W 548      31.309  31.934 -20.746  1.00 59.39           O
ATOM   9140  O   HOH W 549      16.815  28.849  -3.769  1.00 49.16           O
ATOM   9143  O   HOH W 551      28.377   3.398  -2.682  1.00 58.20           O
ATOM   9146  O   HOH W 552      34.501  15.428 -12.352  1.00 44.17           O
ATOM   9149  O   HOH W 553      33.438  17.162 -12.681  1.00 40.79           O
ATOM   9152  O   HOH W 554      39.234  15.142 -11.798  1.00 33.24           O
ATOM   9155  O   HOH W 555      38.121  13.080 -10.709  1.00 30.81           O
ATOM   9158  O   HOH W 556      30.164  19.109 -18.827  1.00 38.45           O
ATOM   9161  O   HOH W 557      24.829  22.536  -3.109  1.00 43.99           O
CONECT 7516 7517 7529
CONECT 7517 7516 7521 7518 7518
CONECT 7518 7517 7517 7519
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CONECT 7528 7523 7523 7527 7534
CONECT 7529 7516
CONECT 7530 7524
CONECT 7531 7525
CONECT 7532 7526
CONECT 7533 7527
CONECT 7534 7528
END
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Table 5

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CRYST1   99.291   99.291   97.753  90.00  90.00 120.00 P 63
SCALE1      0.010071  0.005815  0.000000        0.00000
SCALE2      0.000000  0.011629  0.000000        0.00000
SCALE3      0.000000  0.000000  0.010230        0.00000
ATOM      1  N   MET A   1      62.955  12.934  22.467  1.00 43.20           N
ATOM      2  CA  MET A   1      62.401  12.691  21.086  1.00 40.67           C
ATOM      4  CB  MET A   1      61.804  11.280  20.970  1.00 42.15           C
ATOM      7  CG  MET A   1      61.455  10.854  19.547  1.00 41.48           C
ATOM     10  SD  MET A   1      61.658   9.067  19.207  1.00 41.75           S
ATOM     11  CE  MET A   1      60.495   8.390  20.395  1.00 36.10           C
ATOM     15  C   MET A   1      61.338  13.725  20.779  1.00 40.10           C
ATOM     16  O   MET A   1      60.391  13.914  21.571  1.00 36.63           O
ATOM     20  N   ASN A   2      61.482  14.406  19.646  1.00 35.30           N
ATOM     21  CA  ASN A   2      60.599  15.531  19.356  1.00 37.47           C
ATOM     23  CB  ASN A   2      61.149  16.384  18.219  1.00 37.26           C
ATOM     26  CG  ASN A   2      62.497  16.985  18.563  1.00 38.73           C
ATOM     27  OD1 ASN A   2      62.880  17.064  19.755  1.00 36.14           O
ATOM     28  ND2 ASN A   2      63.246  17.360  17.542  1.00 28.73           N
ATOM     31  C   ASN A   2      59.205  15.070  19.046  1.00 42.82           C
ATOM     32  O   ASN A   2      59.006  13.922  18.681  1.00 38.85           O
ATOM     34  N   THR A   3      58.237  15.964  19.255  1.00 48.25           N
ATOM     35  CA  THR A   3      56.840  15.693  18.931  1.00 53.41           C
ATOM     37  CB  THR A   3      56.003  15.455  20.212  1.00 54.27           C
ATOM     39  OG1 THR A   3      56.146  16.573  21.091  1.00 56.16           O
ATOM     41  CG2 THR A   3      56.453  14.199  20.935  1.00 55.27           C
ATOM     45  C   THR A   3      56.258  16.877  18.146  1.00 55.64           C
ATOM     46  O   THR A   3      55.424  17.611  18.677  1.00 51.18           O
ATOM     48  N   PRO A   4      56.701  17.065  16.876  1.00 60.20           N
ATOM     49  CA  PRO A   4      56.169  18.144  16.028  1.00 62.63           C
ATOM     51  CB  PRO A   4      56.821  17.872  14.663  1.00 61.66           C
ATOM     54  CG  PRO A   4      58.069  17.167  14.990  1.00 62.33           C
ATOM     57  CD  PRO A   4      57.716  16.277  16.150  1.00 59.88           C
ATOM     60  C   PRO A   4      54.647  18.097  15.918  1.00 64.59           C
ATOM     61  O   PRO A   4      54.079  17.011  15.813  1.00 60.92           O
ATOM     62  N   LYS A   5      54.005  19.266  15.949  1.00 70.90           N
ATOM     63  CA  LYS A   5      52.537  19.338  16.025  1.00 76.62           C
ATOM     65  CB  LYS A   5      52.072  20.362  17.093  1.00 78.59           C
ATOM     68  CG  LYS A   5      52.660  21.777  16.992  1.00 82.00           C
ATOM     71  CD  LYS A   5      51.770  22.821  17.709  1.00 84.14           C
ATOM     74  CE  LYS A   5      51.877  22.778  19.239  1.00 84.91           C
ATOM     77  NZ  LYS A   5      52.526  23.995  19.820  1.00 84.57           N
ATOM     81  C   LYS A   5      51.879  19.595  14.660  1.00 78.54           C
ATOM     82  O   LYS A   5      52.570  19.716  13.639  1.00 75.79           O
ATOM     84  N   GLU A   6      50.540  19.627  14.674  1.00 82.58           N
ATOM     85  CA  GLU A   6      49.673  19.842  13.492  1.00 84.62           C
ATOM     87  CB  GLU A   6      49.887  21.239  12.872  1.00 86.16           C
ATOM     90  CG  GLU A   6      48.842  22.288  13.300  1.00 87.24           C
ATOM     93  CD  GLU A   6      47.565  22.254  12.451  1.00 88.58           C
ATOM     94  OE1 GLU A   6      47.342  23.221  11.690  1.00 88.71           O
ATOM     95  OE2 GLU A   6      46.790  21.271  12.537  1.00 87.25           O
ATOM     96  C   GLU A   6      49.754  18.742  12.414  1.00 83.30           C
ATOM     97  O   GLU A   6      50.705  18.685  11.627  1.00 82.95           O
ATOM     99  N   GLU A   7      48.735  17.880  12.392  1.00 81.70           N
ATOM    100  CA  GLU A   7      48.526  16.951  11.276  1.00 79.56           C
ATOM    102  CB  GLU A   7      47.282  16.060  11.499  1.00 80.02           C
ATOM    105  CG  GLU A   7      45.965  16.824  11.750  1.00 80.27           C
ATOM    108  CD  GLU A   7      44.755  15.916  12.058  1.00 81.69           C
ATOM    109  OE1 GLU A   7      44.322  15.141  11.171  1.00 79.89           O
ATOM    110  OE2 GLU A   7      44.205  16.015  13.184  1.00 79.05           O
ATOM    111  C   GLU A   7      48.395  17.750   9.971  1.00 77.97           C
ATOM    112  O   GLU A   7      47.831  18.857   9.967  1.00 74.23           O
ATOM    114  N   PHE A   8      48.960  17.208   8.886  1.00 74.47           N
ATOM    115  CA  PHE A   8      48.723  17.737   7.538  1.00 70.27           C
ATOM    117  CB  PHE A   8      49.648  17.094   6.495  1.00 70.85           C
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ATOM	120	CG	PHE	A	8	49.488	17.659	5.090	1.00	72.23	C
ATOM	121	CD1	PHE	A	8	49.050	16.852	4.046	1.00	72.75	C
ATOM	123	CE1	PHE	A	8	48.913	17.348	2.752	1.00	70.62	C
ATOM	125	CZ	PHE	A	8	49.207	18.662	2.487	1.00	71.82	C
ATOM	127	CE2	PHE	A	8	49.647	19.489	3.514	1.00	72.52	C
ATOM	129	CD2	PHE	A	8	49.789	18.985	4.810	1.00	72.32	C
ATOM	131	C	PHE	A	8	47.273	17.434	7.206	1.00	64.54	C
ATOM	132	O	PHE	A	8	46.774	16.351	7.523	1.00	57.38	O
ATOM	134	N	GLN	A	9	46.594	18.415	6.620	1.00	58.13	N
ATOM	135	CA	GLN	A	9	45.201	18.242	6.251	1.00	57.24	C
ATOM	137	CB	GLN	A	9	44.292	18.779	7.374	1.00	60.14	C
ATOM	140	CG	GLN	A	9	44.558	18.211	8.793	1.00	59.92	C
ATOM	143	CD	GLN	A	9	43.524	18.671	9.844	1.00	64.25	C
ATOM	144	OE1	GLN	A	9	43.182	17.923	10.768	1.00	67.39	O
ATOM	145	NE2	GLN	A	9	43.030	19.897	9.704	1.00	63.44	N
ATOM	148	C	GLN	A	9	44.833	18.898	4.915	1.00	49.65	C
ATOM	149	O	GLN	A	9	43.652	19.112	4.654	1.00	53.61	O
ATOM	151	N	ASP	A	10	45.804	19.216	4.054	1.00	41.66	N
ATOM	152	CA	ASP	A	10	45.447	19.850	2.767	1.00	39.29	C
ATOM	154	CB	ASP	A	10	46.349	21.055	2.449	1.00	40.97	C
ATOM	157	CG	ASP	A	10	45.760	21.949	1.353	1.00	42.31	C
ATOM	158	OD1	ASP	A	10	44.510	22.103	1.268	1.00	41.82	O
ATOM	159	OD2	ASP	A	10	46.549	22.482	0.565	1.00	48.24	O
ATOM	160	C	ASP	A	10	45.449	18.850	1.608	1.00	34.40	C
ATOM	161	O	ASP	A	10	45.826	19.169	0.474	1.00	35.53	O
ATOM	163	N	TRP	A	11	45.002	17.641	1.898	1.00	26.42	N
ATOM	164	CA	TRP	A	11	44.925	16.614	0.889	1.00	26.82	C
ATOM	166	CB	TRP	A	11	44.580	15.317	1.537	1.00	24.52	C
ATOM	169	CG	TRP	A	11	45.555	14.857	2.509	1.00	21.34	C
ATOM	170	CD1	TRP	A	11	45.393	14.787	3.847	1.00	20.71	C
ATOM	172	NE1	TRP	A	11	46.523	14.271	4.423	1.00	26.32	N
ATOM	174	CE2	TRP	A	11	47.436	14.001	3.438	1.00	22.23	C
ATOM	175	CD2	TRP	A	11	46.860	14.378	2.224	1.00	17.11	C
ATOM	176	CE3	TRP	A	11	47.596	14.223	1.048	1.00	23.03	C
ATOM	178	CZ3	TRP	A	11	48.886	13.702	1.132	1.00	25.54	C
ATOM	180	CH2	TRP	A	11	49.431	13.348	2.361	1.00	25.98	C
ATOM	182	CZ2	TRP	A	11	48.724	13.491	3.526	1.00	20.85	C
ATOM	184	C	TRP	A	11	43.842	16.918	-0.138	1.00	21.46	C
ATOM	185	O	TRP	A	11	42.830	17.513	0.187	1.00	23.58	O
ATOM	187	N	PRO	A	12	44.057	16.499	-1.382	1.00	21.64	N
ATOM	188	CA	PRO	A	12	43.021	16.626	-2.358	1.00	19.81	C
ATOM	190	CB	PRO	A	12	43.543	15.795	-3.536	1.00	20.82	C
ATOM	193	CG	PRO	A	12	44.985	15.774	-3.388	1.00	19.09	C
ATOM	196	CD	PRO	A	12	45.292	15.910	-1.948	1.00	20.22	C
ATOM	199	C	PRO	A	12	41.643	16.115	-1.896	1.00	17.25	C
ATOM	200	O	PRO	A	12	40.653	16.664	-2.306	1.00	20.11	O
ATOM	201	N	ILE	A	13	41.563	15.052	-1.107	1.00	19.20	N
ATOM	202	CA	ILE	A	13	40.258	14.575	-0.656	1.00	17.82	C
ATOM	204	CB	ILE	A	13	40.336	13.160	0.022	1.00	18.35	C
ATOM	206	CG1	ILE	A	13	38.954	12.479	0.052	1.00	18.02	C
ATOM	209	CD1	ILE	A	13	38.993	10.972	0.550	1.00	18.33	C
ATOM	213	CG2	ILE	A	13	41.032	13.179	1.393	1.00	15.37	C
ATOM	217	C	ILE	A	13	39.540	15.616	0.218	1.00	11.77	C
ATOM	218	O	ILE	A	13	38.327	15.745	0.171	1.00	16.75	O
ATOM	220	N	VAL	A	14	40.310	16.343	1.004	1.00	17.72	N
ATOM	221	CA	VAL	A	14	39.787	17.368	1.880	1.00	15.85	C
ATOM	223	CB	VAL	A	14	40.848	17.863	2.881	1.00	18.15	C
ATOM	225	CG1	VAL	A	14	40.344	19.133	3.571	1.00	16.80	C
ATOM	229	CG2	VAL	A	14	41.223	16.746	3.894	1.00	21.39	C
ATOM	233	C	VAL	A	14	39.298	18.539	1.036	1.00	16.41	C
ATOM	234	O	VAL	A	14	38.216	19.075	1.269	1.00	15.25	O
ATOM	236	N	ARG	A	15	40.110	18.961	0.080	1.00	13.92	N
ATOM	237	CA	ARG	A	15	39.686	20.020	-0.841	1.00	20.21	C
ATOM	239	CB	ARG	A	15	40.775	20.383	-1.844	1.00	17.26	C
ATOM	242	CG	ARG	A	15	42.047	20.951	-1.221	1.00	19.81	C
ATOM	245	CD	ARG	A	15	43.140	21.003	-2.294	1.00	26.03	C
ATOM	248	NE	ARG	A	15	44.220	21.881	-1.882	1.00	40.09	N

ATOM	250	CZ	ARG A	15	45.055	22.527	-2.702	1.00	47.17	C
ATOM	251	NH1	ARG A	15	46.000	23.325	-2.189	1.00	43.95	N
ATOM	254	NH2	ARG A	15	44.945	22.404	-4.019	1.00	45.05	N
ATOM	257	C	ARG A	15	38.419	19.668	-1.594	1.00	14.81	C
ATOM	258	O	ARG A	15	37.573	20.521	-1.810	1.00	17.61	O
ATOM	260	N	ILE A	16	38.294	18.423	-2.021	1.00	17.13	N
ATOM	261	CA	ILE A	16	37.059	17.974	-2.644	1.00	14.77	C
ATOM	263	CB	ILE A	16	37.207	16.532	-3.197	1.00	19.02	C
ATOM	265	CG1	ILE A	16	38.143	16.550	-4.422	1.00	20.53	C
ATOM	268	CD1	ILE A	16	38.644	15.165	-4.958	1.00	12.56	C
ATOM	272	CG2	ILE A	16	35.851	15.933	-3.559	1.00	15.84	C
ATOM	276	C	ILE A	16	35.894	18.090	-1.672	1.00	17.32	C
ATOM	277	O	ILE A	16	34.810	18.540	-2.028	1.00	18.84	O
ATOM	279	N	ALA A	17	36.124	17.681	-0.431	1.00	19.58	N
ATOM	280	CA	ALA A	17	35.068	17.623	0.570	1.00	17.32	C
ATOM	282	CB	ALA A	17	35.540	16.900	1.817	1.00	13.68	C
ATOM	286	C	ALA A	17	34.541	18.997	0.931	1.00	18.35	C
ATOM	287	O	ALA A	17	33.407	19.088	1.356	1.00	17.25	O
ATOM	289	N	ALA A	18	35.331	20.058	0.742	1.00	17.53	N
ATOM	290	CA	ALA A	18	34.811	21.413	0.887	1.00	17.74	C
ATOM	292	CB	ALA A	18	35.921	22.501	0.665	1.00	18.34	C
ATOM	296	C	ALA A	18	33.617	21.684	-0.015	1.00	17.18	C
ATOM	297	O	ALA A	18	32.776	22.510	0.314	1.00	17.73	O
ATOM	299	N	HIS A	19	33.554	21.026	-1.160	1.00	16.37	N
ATOM	300	CA	HIS A	19	32.510	21.280	-2.160	1.00	18.35	C
ATOM	302	CB	HIS A	19	33.011	20.958	-3.583	1.00	17.93	C
ATOM	305	CG	HIS A	19	34.019	21.936	-4.079	1.00	17.94	C
ATOM	306	ND1	HIS A	19	33.686	22.986	-4.909	1.00	24.39	N
ATOM	308	CE1	HIS A	19	34.757	23.739	-5.112	1.00	18.77	C
ATOM	310	NE2	HIS A	19	35.768	23.209	-4.451	1.00	17.47	N
ATOM	312	CD2	HIS A	19	35.327	22.089	-3.781	1.00	17.50	C
ATOM	314	C	HIS A	19	31.244	20.486	-1.917	1.00	20.22	C
ATOM	315	O	HIS A	19	30.257	20.653	-2.658	1.00	19.46	O
ATOM	317	N	LEU A	20	31.276	19.662	-0.879	1.00	17.88	N
ATOM	318	CA	LEU A	20	30.172	18.759	-0.519	1.00	14.09	C
ATOM	320	CB	LEU A	20	30.612	17.334	-0.834	1.00	16.17	C
ATOM	323	CG	LEU A	20	30.962	17.042	-2.290	1.00	16.63	C
ATOM	325	CD1	LEU A	20	31.627	15.637	-2.389	1.00	17.29	C
ATOM	329	CD2	LEU A	20	29.699	17.139	-3.159	1.00	18.26	C
ATOM	333	C	LEU A	20	29.679	18.841	0.925	1.00	17.42	C
ATOM	334	O	LEU A	20	30.442	19.151	1.844	1.00	17.86	O
ATOM	336	N	PRO A	21	28.370	18.559	1.144	1.00	17.09	N
ATOM	337	CA	PRO A	21	27.887	18.486	2.494	1.00	18.60	C
ATOM	339	CB	PRO A	21	26.336	18.492	2.327	1.00	20.08	C
ATOM	342	CG	PRO A	21	26.081	17.926	1.011	1.00	18.04	C
ATOM	345	CD	PRO A	21	27.311	18.273	0.154	1.00	18.12	C
ATOM	348	C	PRO A	21	28.320	17.192	3.181	1.00	15.88	C
ATOM	349	O	PRO A	21	28.655	16.216	2.540	1.00	18.33	O
ATOM	350	N	ASP A	22	28.229	17.181	4.490	1.00	17.21	N
ATOM	351	CA	ASP A	22	28.422	15.968	5.273	1.00	17.41	C
ATOM	353	CB	ASP A	22	28.284	16.292	6.763	1.00	18.40	C
ATOM	356	CG	ASP A	22	29.319	17.267	7.235	1.00	21.09	C
ATOM	357	OD1	ASP A	22	30.348	17.374	6.547	1.00	17.41	O
ATOM	358	OD2	ASP A	22	29.124	17.899	8.299	1.00	17.16	O
ATOM	359	C	ASP A	22	27.432	14.852	4.911	1.00	20.35	C
ATOM	360	O	ASP A	22	27.747	13.660	5.038	1.00	18.39	O
ATOM	362	N	LEU A	23	26.225	15.255	4.518	1.00	21.55	N
ATOM	363	CA	LEU A	23	25.229	14.354	3.937	1.00	17.98	C
ATOM	365	CB	LEU A	23	24.068	15.192	3.357	1.00	16.51	C
ATOM	368	CG	LEU A	23	22.844	14.394	2.929	1.00	21.52	C
ATOM	370	CD1	LEU A	23	22.115	13.853	4.187	1.00	22.96	C
ATOM	374	CD2	LEU A	23	21.893	15.218	2.045	1.00	20.67	C
ATOM	378	C	LEU A	23	25.818	13.470	2.848	1.00	23.29	C
ATOM	379	O	LEU A	23	25.448	12.305	2.723	1.00	21.33	O
ATOM	381	N	ILE A	24	26.763	14.019	2.068	1.00	19.61	N
ATOM	382	CA	ILE A	24	27.395	13.254	1.039	1.00	17.55	C
ATOM	384	CB	ILE A	24	27.536	14.062	-0.268	1.00	17.44	C

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ATOM    386  CG1 ILE A  24      26.147  14.446  -0.810  1.00 17.38           C
ATOM    389  CD1 ILE A  24      25.177  13.248  -1.149  1.00 21.14           C
ATOM    393  CG2 ILE A  24      28.391  13.304  -1.349  1.00 18.39           C
ATOM    397  C   ILE A  24      28.723  12.711   1.519  1.00 21.78           C
ATOM    398  O   ILE A  24      28.981  11.526   1.346  1.00 19.75           O
ATOM    400  N   VAL A  25      29.564  13.553   2.122  1.00 16.66           N
ATOM    401  CA  VAL A  25      30.891  13.125   2.529  1.00 18.67           C
ATOM    403  CB  VAL A  25      31.651  14.279   3.229  1.00 18.11           C
ATOM    405  CG1 VAL A  25      32.957  13.743   3.854  1.00 17.46           C
ATOM    409  CG2 VAL A  25      31.892  15.399   2.199  1.00 15.19           C
ATOM    413  C   VAL A  25      30.928  11.855   3.426  1.00 18.50           C
ATOM    414  O   VAL A  25      31.785  10.973   3.231  1.00 19.01           O
ATOM    416  N   TYR A  26      29.993  11.804   4.378  1.00 24.08           N
ATOM    417  CA  TYR A  26      29.891  10.747   5.342  1.00 23.08           C
ATOM    419  CB  TYR A  26      29.777  11.347   6.749  1.00 26.02           C
ATOM    422  CG  TYR A  26      31.038  12.060   7.153  1.00 18.77           C
ATOM    423  CD1 TYR A  26      31.064  13.418   7.300  1.00 25.36           C
ATOM    425  CE1 TYR A  26      32.231  14.093   7.633  1.00 25.11           C
ATOM    427  CZ  TYR A  26      33.402  13.389   7.826  1.00 27.70           C
ATOM    428  OH  TYR A  26      34.562  14.078   8.158  1.00 28.20           O
ATOM    430  CE2 TYR A  26      33.400  12.011   7.696  1.00 25.58           C
ATOM    432  CD2 TYR A  26      32.212  11.358   7.351  1.00 21.52           C
ATOM    434  C   TYR A  26      28.709   9.832   5.047  1.00 29.98           C
ATOM    435  O   TYR A  26      28.312   9.077   5.916  1.00 31.16           O
ATOM    437  N   GLY A  27      28.194   9.858   3.811  1.00 26.06           N
ATOM    438  CA  GLY A  27      26.984   9.148   3.458  1.00 32.53           C
ATOM    441  C   GLY A  27      27.016   7.633   3.314  1.00 37.98           C
ATOM    442  O   GLY A  27      26.023   6.943   3.653  1.00 40.43           O
ATOM    444  N   HIS A  28      28.111   7.094   2.808  1.00 37.31           N
ATOM    445  CA  HIS A  28      28.149   5.650   2.458  1.00 47.60           C
ATOM    447  CB  HIS A  28      28.607   4.830   3.692  1.00 51.18           C
ATOM    450  CG  HIS A  28      27.671   4.891   4.872  1.00 55.65           C
ATOM    451  ND1 HIS A  28      26.787   3.875   5.179  1.00 59.19           N
ATOM    453  CE1 HIS A  28      26.111   4.193   6.271  1.00 59.95           C
ATOM    455  NE2 HIS A  28      26.527   5.376   6.690  1.00 57.94           N
ATOM    457  CD2 HIS A  28      27.508   5.830   5.840  1.00 57.16           C
ATOM    459  C   HIS A  28      26.851   5.030   1.837  1.00 48.37           C
ATOM    460  O   HIS A  28      26.145   4.286   2.509  1.00 52.89           O
ATOM    462  N   PHE A  29      26.568   5.295   0.550  1.00 49.05           N
ATOM    463  CA  PHE A  29      25.341   4.791  -0.120  1.00 45.49           C
ATOM    465  CB  PHE A  29      24.664   5.841  -1.027  1.00 45.89           C
ATOM    468  CG  PHE A  29      24.703   7.231  -0.513  1.00 41.19           C
ATOM    469  CD1 PHE A  29      24.339   7.530   0.779  1.00 38.82           C
ATOM    471  CE1 PHE A  29      24.377   8.826   1.245  1.00 39.15           C
ATOM    473  CZ  PHE A  29      24.766   9.834   0.421  1.00 35.42           C
ATOM    475  CE2 PHE A  29      25.117   9.555  -0.882  1.00 35.38           C
ATOM    477  CD2 PHE A  29      25.082   8.259  -1.348  1.00 42.29           C
ATOM    479  C   PHE A  29      25.572   3.600  -1.038  1.00 48.81           C
ATOM    480  O   PHE A  29      26.660   3.411  -1.581  1.00 48.39           O
ATOM    482  N   SER A  30      24.493   2.848  -1.262  1.00 53.12           N
ATOM    483  CA  SER A  30      24.481   1.739  -2.213  1.00 57.65           C
ATOM    485  CB  SER A  30      23.089   1.101  -2.275  1.00 60.35           C
ATOM    488  OG  SER A  30      22.860   0.255  -1.159  1.00 67.40           O
ATOM    490  C   SER A  30      24.861   2.244  -3.589  1.00 57.83           C
ATOM    491  O   SER A  30      24.689   3.435  -3.885  1.00 61.42           O
ATOM    493  N   PRO A  31      25.366   1.346  -4.446  1.00 58.72           N
ATOM    494  CA  PRO A  31      25.874   1.785  -5.749  1.00 57.43           C
ATOM    496  CB  PRO A  31      26.623   0.550  -6.256  1.00 59.08           C
ATOM    499  CG  PRO A  31      25.897  -0.598  -5.644  1.00 61.09           C
ATOM    502  CD  PRO A  31      25.495  -0.115  -4.269  1.00 60.61           C
ATOM    505  C   PRO A  31      24.775   2.196  -6.736  1.00 56.02           C
ATOM    506  O   PRO A  31      25.020   3.019  -7.609  1.00 57.77           O
ATOM    507  N   GLU A  32      23.573   1.645  -6.585  1.00 53.97           N
ATOM    508  CA  GLU A  32      22.515   1.880  -7.550  1.00 53.49           C
ATOM    510  CB  GLU A  32      21.260   1.031  -7.242  1.00 56.83           C
ATOM    513  CG  GLU A  32      20.391   1.464  -6.038  1.00 59.54           C
ATOM    516  CD  GLU A  32      20.693   0.699  -4.757  1.00 61.87           C
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ATOM	517	OE1	GLU	A	32	20.287	1.172	-3.668	1.00	54.55	O
ATOM	518	OE2	GLU	A	32	21.333	-0.376	-4.843	1.00	68.14	O
ATOM	519	C	GLU	A	32	22.139	3.362	-7.717	1.00	49.40	C
ATOM	520	O	GLU	A	32	22.170	4.138	-6.776	1.00	47.23	O
ATOM	522	N	ARG	A	33	21.812	3.721	-8.951	1.00	42.90	N
ATOM	523	CA	ARG	A	33	21.231	5.004	-9.275	1.00	41.71	C
ATOM	525	CB	ARG	A	33	22.172	5.799	-10.201	1.00	36.36	C
ATOM	528	CG	ARG	A	33	23.550	6.097	-9.575	1.00	37.25	C
ATOM	531	CD	ARG	A	33	23.466	7.142	-8.462	1.00	37.09	C
ATOM	534	NE	ARG	A	33	24.693	7.281	-7.673	1.00	39.27	N
ATOM	536	CZ	ARG	A	33	24.948	6.600	-6.552	1.00	40.35	C
ATOM	537	NH1	ARG	A	33	24.083	5.715	-6.088	1.00	40.39	N
ATOM	540	NH2	ARG	A	33	26.076	6.795	-5.888	1.00	42.51	N
ATOM	543	C	ARG	A	33	19.871	4.721	-9.926	1.00	40.52	C
ATOM	544	O	ARG	A	33	19.808	3.984	-10.910	1.00	42.47	O
ATOM	546	N	PRO	A	34	18.781	5.317	-9.399	1.00	37.32	N
ATOM	547	CA	PRO	A	34	18.736	6.274	-8.302	1.00	34.79	C
ATOM	549	CB	PRO	A	34	17.323	6.848	-8.404	1.00	38.88	C
ATOM	552	CG	PRO	A	34	16.508	5.711	-8.929	1.00	35.86	C
ATOM	555	CD	PRO	A	34	17.428	5.014	-9.905	1.00	38.54	C
ATOM	558	C	PRO	A	34	18.888	5.572	-6.971	1.00	38.02	C
ATOM	559	O	PRO	A	34	18.600	4.378	-6.878	1.00	33.13	O
ATOM	560	N	PHE	A	35	19.337	6.318	-5.965	1.00	36.90	N
ATOM	561	CA	PHE	A	35	19.323	5.887	-4.573	1.00	36.69	C
ATOM	563	CB	PHE	A	35	20.741	5.838	-4.020	1.00	37.04	C
ATOM	566	CG	PHE	A	35	20.807	5.689	-2.511	1.00	38.39	C
ATOM	567	CD1	PHE	A	35	20.594	4.450	-1.911	1.00	41.09	C
ATOM	569	CE1	PHE	A	35	20.659	4.307	-0.525	1.00	45.20	C
ATOM	571	CZ	PHE	A	35	20.927	5.419	0.276	1.00	42.65	C
ATOM	573	CE2	PHE	A	35	21.144	6.663	-0.317	1.00	39.13	C
ATOM	575	CD2	PHE	A	35	21.083	6.791	-1.701	1.00	38.45	C
ATOM	577	C	PHE	A	35	18.490	6.877	-3.754	1.00	37.32	C
ATOM	578	O	PHE	A	35	18.627	8.088	-3.909	1.00	34.06	O
ATOM	580	N	MET	A	36	17.625	6.364	-2.892	1.00	36.47	N
ATOM	581	CA	MET	A	36	16.740	7.213	-2.098	1.00	39.21	C
ATOM	583	CB	MET	A	36	15.278	7.036	-2.527	1.00	44.36	C
ATOM	586	CG	MET	A	36	14.977	7.525	-3.965	1.00	49.32	C
ATOM	589	SD	MET	A	36	14.644	6.260	-5.256	1.00	63.24	S
ATOM	590	CE	MET	A	36	15.860	4.980	-4.921	1.00	64.02	C
ATOM	594	C	MET	A	36	16.924	6.867	-0.638	1.00	37.71	C
ATOM	595	O	MET	A	36	17.035	5.706	-0.300	1.00	41.29	O
ATOM	597	N	ASP	A	37	17.001	7.884	0.212	1.00	39.40	N
ATOM	598	CA	ASP	A	37	17.083	7.723	1.669	1.00	38.73	C
ATOM	600	CB	ASP	A	37	18.502	8.051	2.139	1.00	43.92	C
ATOM	603	CG	ASP	A	37	18.802	7.573	3.561	1.00	48.73	C
ATOM	604	OD1	ASP	A	37	18.081	6.700	4.095	1.00	50.35	O
ATOM	605	OD2	ASP	A	37	19.780	8.093	4.139	1.00	51.22	O
ATOM	606	C	ASP	A	37	16.066	8.659	2.306	1.00	36.76	C
ATOM	607	O	ASP	A	37	15.552	9.561	1.649	1.00	34.63	O
ATOM	609	N	TYR	A	38	15.747	8.438	3.577	1.00	37.38	N
ATOM	610	CA	TYR	A	38	14.643	9.136	4.233	1.00	37.03	C
ATOM	612	CB	TYR	A	38	13.380	8.246	4.235	1.00	40.37	C
ATOM	615	CG	TYR	A	38	13.027	7.718	2.847	1.00	43.45	C
ATOM	616	CD1	TYR	A	38	13.504	6.477	2.402	1.00	42.39	C
ATOM	618	CE1	TYR	A	38	13.207	6.006	1.127	1.00	43.43	C
ATOM	620	CZ	TYR	A	38	12.414	6.770	0.279	1.00	47.46	C
ATOM	621	OH	TYR	A	38	12.106	6.304	-0.978	1.00	49.99	O
ATOM	623	CE2	TYR	A	38	11.931	8.009	0.696	1.00	48.23	C
ATOM	625	CD2	TYR	A	38	12.247	8.476	1.968	1.00	45.02	C
ATOM	627	C	TYR	A	38	15.051	9.506	5.649	1.00	35.31	C
ATOM	628	O	TYR	A	38	15.745	8.759	6.303	1.00	33.68	O
ATOM	630	N	PHE	A	39	14.656	10.685	6.103	1.00	30.23	N
ATOM	631	CA	PHE	A	39	15.007	11.114	7.436	1.00	28.66	C
ATOM	633	CB	PHE	A	39	16.521	11.400	7.597	1.00	29.89	C
ATOM	636	CG	PHE	A	39	17.099	12.297	6.541	1.00	26.44	C
ATOM	637	CD1	PHE	A	39	17.029	13.683	6.658	1.00	23.71	C
ATOM	639	CE1	PHE	A	39	17.569	14.496	5.683	1.00	20.74	C

ATOM	641	CZ	PHE	A	39	18.187	13.935	4.573	1.00	22.81	C
ATOM	643	CE2	PHE	A	39	18.268	12.561	4.439	1.00	28.29	C
ATOM	645	CD2	PHE	A	39	17.716	11.747	5.424	1.00	27.15	C
ATOM	647	C	PHE	A	39	14.211	12.318	7.797	1.00	27.48	C
ATOM	648	O	PHE	A	39	13.320	12.729	7.069	1.00	29.47	O
ATOM	650	N	ASP	A	40	14.540	12.873	8.946	1.00	27.28	N
ATOM	651	CA	ASP	A	40	13.873	14.023	9.455	1.00	28.99	C
ATOM	653	CB	ASP	A	40	13.082	13.647	10.719	1.00	32.53	C
ATOM	656	CG	ASP	A	40	11.783	12.892	10.388	1.00	32.91	C
ATOM	657	OD1	ASP	A	40	10.724	13.522	10.440	1.00	43.52	O
ATOM	658	OD2	ASP	A	40	11.841	11.703	10.011	1.00	41.11	O
ATOM	659	C	ASP	A	40	14.938	15.043	9.747	1.00	27.93	C
ATOM	660	O	ASP	A	40	16.078	14.701	10.029	1.00	23.35	O
ATOM	662	N	GLY	A	41	14.571	16.303	9.631	1.00	24.10	N
ATOM	663	CA	GLY	A	41	15.495	17.341	9.980	1.00	26.34	C
ATOM	666	C	GLY	A	41	14.830	18.680	9.964	1.00	26.15	C
ATOM	667	O	GLY	A	41	13.619	18.805	9.719	1.00	25.52	O
ATOM	669	N	VAL	A	42	15.639	19.685	10.245	1.00	26.60	N
ATOM	670	CA	VAL	A	42	15.265	21.071	10.094	1.00	22.67	C
ATOM	672	CB	VAL	A	42	15.562	21.845	11.379	1.00	25.03	C
ATOM	674	CG1	VAL	A	42	15.125	23.282	11.234	1.00	23.95	C
ATOM	678	CG2	VAL	A	42	14.883	21.176	12.571	1.00	28.90	C
ATOM	682	C	VAL	A	42	16.098	21.691	8.978	1.00	27.82	C
ATOM	683	O	VAL	A	42	17.332	21.490	8.898	1.00	22.26	O
ATOM	685	N	LEU	A	43	15.430	22.487	8.155	1.00	26.61	N
ATOM	686	CA	LEU	A	43	16.033	23.121	7.011	1.00	23.62	C
ATOM	688	CB	LEU	A	43	15.262	22.746	5.751	1.00	23.56	C
ATOM	691	CG	LEU	A	43	15.399	21.304	5.266	1.00	23.23	C
ATOM	693	CD1	LEU	A	43	14.372	20.992	4.237	1.00	21.94	C
ATOM	697	CD2	LEU	A	43	16.812	21.090	4.689	1.00	22.59	C
ATOM	701	C	LEU	A	43	16.013	24.618	7.236	1.00	27.06	C
ATOM	702	O	LEU	A	43	15.060	25.154	7.796	1.00	26.73	O
ATOM	704	N	MET	A	44	17.094	25.272	6.826	1.00	24.53	N
ATOM	705	CA	MET	A	44	17.244	26.705	6.857	1.00	22.61	C
ATOM	707	CB	MET	A	44	18.359	27.110	7.786	1.00	26.49	C
ATOM	710	CG	MET	A	44	18.721	28.579	7.676	1.00	29.00	C
ATOM	713	SD	MET	A	44	20.247	29.044	8.472	1.00	30.24	S
ATOM	714	CE	MET	A	44	19.769	28.993	10.198	1.00	25.04	C
ATOM	718	C	MET	A	44	17.589	27.108	5.454	1.00	26.82	C
ATOM	719	O	MET	A	44	18.551	26.572	4.876	1.00	23.02	O
ATOM	721	N	PHE	A	45	16.780	27.997	4.891	1.00	23.68	N
ATOM	722	CA	PHE	A	45	17.022	28.544	3.553	1.00	23.36	C
ATOM	724	CB	PHE	A	45	15.858	28.231	2.650	1.00	29.61	C
ATOM	727	CG	PHE	A	45	15.997	28.715	1.230	1.00	35.17	C
ATOM	728	CD1	PHE	A	45	17.195	29.211	0.714	1.00	42.04	C
ATOM	730	CE1	PHE	A	45	17.279	29.654	-0.606	1.00	43.78	C
ATOM	732	CZ	PHE	A	45	16.160	29.585	-1.423	1.00	40.42	C
ATOM	734	CE2	PHE	A	45	14.987	29.072	-0.932	1.00	42.22	C
ATOM	736	CD2	PHE	A	45	14.909	28.630	0.391	1.00	36.19	C
ATOM	738	C	PHE	A	45	17.235	30.007	3.764	1.00	23.34	C
ATOM	739	O	PHE	A	45	16.326	30.707	4.189	1.00	25.79	O
ATOM	741	N	VAL	A	46	18.482	30.433	3.536	1.00	25.60	N
ATOM	742	CA	VAL	A	46	18.987	31.783	3.785	1.00	30.60	C
ATOM	744	CB	VAL	A	46	20.337	31.762	4.514	1.00	30.96	C
ATOM	746	CG1	VAL	A	46	20.674	33.147	4.999	1.00	31.41	C
ATOM	750	CG2	VAL	A	46	20.337	30.768	5.643	1.00	30.26	C
ATOM	754	C	VAL	A	46	19.300	32.476	2.465	1.00	34.73	C
ATOM	755	O	VAL	A	46	19.938	31.886	1.610	1.00	30.92	O
ATOM	757	N	ASP	A	47	18.883	33.731	2.326	1.00	38.89	N
ATOM	758	CA	ASP	A	47	19.072	34.504	1.094	1.00	43.78	C
ATOM	760	CB	ASP	A	47	17.722	34.642	0.405	1.00	45.57	C
ATOM	763	CG	ASP	A	47	17.823	35.139	-1.028	1.00	50.84	C
ATOM	764	OD1	ASP	A	47	16.784	35.115	-1.713	1.00	53.72	O
ATOM	765	OD2	ASP	A	47	18.913	35.539	-1.481	1.00	56.36	O
ATOM	766	C	ASP	A	47	19.633	35.886	1.440	1.00	47.64	C
ATOM	767	O	ASP	A	47	19.195	36.499	2.411	1.00	43.17	O
ATOM	769	N	ILE	A	48	20.629	36.359	0.692	1.00	53.76	N

ATOM	770	CA	ILE	A	48	21.050	37.755	0.822	1.00	61.12	C
ATOM	772	CB	ILE	A	48	22.537	37.998	0.428	1.00	62.46	C
ATOM	774	CG1	ILE	A	48	23.485	37.670	1.582	1.00	61.76	C
ATOM	777	CD1	ILE	A	48	23.130	36.439	2.341	1.00	64.48	C
ATOM	781	CG2	ILE	A	48	22.761	39.461	0.091	1.00	61.58	C
ATOM	785	C	ILE	A	48	20.112	38.590	-0.055	1.00	67.02	C
ATOM	786	O	ILE	A	48	19.295	39.364	0.451	1.00	68.00	O
ATOM	788	N	SER	A	49	20.221	38.400	-1.366	1.00	74.45	N
ATOM	789	CA	SER	A	49	19.398	39.102	-2.375	1.00	81.42	C
ATOM	791	CB	SER	A	49	17.898	38.790	-2.212	1.00	80.55	C
ATOM	794	OG	SER	A	49	17.551	37.646	-2.978	1.00	79.05	O
ATOM	796	C	SER	A	49	19.662	40.621	-2.489	1.00	87.08	C
ATOM	797	O	SER	A	49	19.255	41.247	-3.483	1.00	89.59	O
ATOM	799	N	GLY	A	50	20.333	41.206	-1.491	1.00	91.79	N
ATOM	800	CA	GLY	A	50	20.968	42.512	-1.650	1.00	95.52	C
ATOM	803	C	GLY	A	50	22.138	42.409	-2.621	1.00	99.46	C
ATOM	804	O	GLY	A	50	22.426	43.353	-3.368	1.00	100.38	O
ATOM	806	N	PHE	A	51	22.789	41.243	-2.627	1.00	103.84	N
ATOM	807	CA	PHE	A	51	23.993	40.987	-3.437	1.00	106.72	C
ATOM	809	CB	PHE	A	51	24.967	40.091	-2.664	1.00	108.40	C
ATOM	812	CG	PHE	A	51	25.898	40.854	-1.758	1.00	110.58	C
ATOM	813	CD1	PHE	A	51	27.230	40.485	-1.654	1.00	111.75	C
ATOM	815	CE1	PHE	A	51	28.092	41.187	-0.837	1.00	112.34	C
ATOM	817	CZ	PHE	A	51	27.635	42.279	-0.124	1.00	112.13	C
ATOM	819	CE2	PHE	A	51	26.316	42.669	-0.226	1.00	111.75	C
ATOM	821	CD2	PHE	A	51	25.453	41.964	-1.038	1.00	111.45	C
ATOM	823	C	PHE	A	51	23.687	40.381	-4.803	1.00	106.89	C
ATOM	824	O	PHE	A	51	24.545	40.374	-5.691	1.00	106.81	O
ATOM	826	N	THR	A	52	22.468	39.869	-4.961	1.00	106.54	N
ATOM	827	CA	THR	A	52	21.943	39.524	-6.275	1.00	106.28	C
ATOM	829	CB	THR	A	52	20.715	38.581	-6.176	1.00	107.49	C
ATOM	831	OG1	THR	A	52	20.647	37.748	-7.341	1.00	108.13	O
ATOM	833	CG2	THR	A	52	19.408	39.381	-6.032	1.00	107.87	C
ATOM	837	C	THR	A	52	21.554	40.806	-7.022	1.00	104.44	C
ATOM	838	O	THR	A	52	21.426	40.802	-8.244	1.00	104.88	O
ATOM	840	N	ALA	A	53	21.350	41.892	-6.279	1.00	102.04	N
ATOM	841	CA	ALA	A	53	21.079	43.196	-6.877	1.00	100.99	C
ATOM	843	CB	ALA	A	53	20.597	44.182	-5.815	1.00	100.92	C
ATOM	847	C	ALA	A	53	22.312	43.751	-7.592	1.00	99.03	C
ATOM	848	O	ALA	A	53	22.214	44.235	-8.719	1.00	95.81	O
ATOM	850	N	MET	A	54	23.471	43.660	-6.939	1.00	98.33	N
ATOM	851	CA	MET	A	54	24.717	44.227	-7.474	1.00	95.87	C
ATOM	853	CB	MET	A	54	25.861	44.049	-6.477	1.00	96.93	C
ATOM	856	CG	MET	A	54	25.693	44.838	-5.202	1.00	98.21	C
ATOM	859	SD	MET	A	54	27.119	44.685	-4.111	1.00	102.17	S
ATOM	860	CE	MET	A	54	27.123	42.924	-3.799	1.00	100.01	C
ATOM	864	C	MET	A	54	25.125	43.611	-8.811	1.00	91.87	C
ATOM	865	O	MET	A	54	25.085	44.287	-9.837	1.00	91.83	O
ATOM	867	N	THR	A	55	25.484	42.327	-8.786	1.00	85.88	N
ATOM	868	CA	THR	A	55	26.048	41.597	-9.939	1.00	81.69	C
ATOM	870	CB	THR	A	55	25.247	40.291	-10.235	1.00	81.15	C
ATOM	872	OG1	THR	A	55	25.175	39.486	-9.051	1.00	81.19	O
ATOM	874	CG2	THR	A	55	25.917	39.480	-11.330	1.00	78.11	C
ATOM	878	C	THR	A	55	26.209	42.394	-11.247	1.00	78.62	C
ATOM	879	O	THR	A	55	27.298	42.435	-11.818	1.00	77.40	O
ATOM	881	N	GLU	A	56	25.131	43.008	-11.727	1.00	75.50	N
ATOM	882	CA	GLU	A	56	25.164	43.713	-13.018	1.00	73.86	C
ATOM	884	CB	GLU	A	56	23.731	43.966	-13.546	1.00	74.37	C
ATOM	887	CG	GLU	A	56	22.771	42.734	-13.509	1.00	72.92	C
ATOM	890	CD	GLU	A	56	23.230	41.577	-14.396	1.00	73.71	C
ATOM	891	OE1	GLU	A	56	23.343	40.420	-13.896	1.00	62.85	O
ATOM	892	OE2	GLU	A	56	23.481	41.833	-15.602	1.00	74.80	O
ATOM	893	C	GLU	A	56	26.000	45.021	-12.948	1.00	71.76	C
ATOM	894	O	GLU	A	56	26.635	45.412	-13.934	1.00	71.04	O
ATOM	896	N	LYS	A	57	26.018	45.671	-11.783	1.00	67.07	N
ATOM	897	CA	LYS	A	57	26.882	46.839	-11.555	1.00	66.98	C
ATOM	899	CB	LYS	A	57	26.532	47.544	-10.234	1.00	68.40	C

ATOM	902	CG	LYS	A	57	27.185	46.933	-8.993	1.00 71.29	C
ATOM	905	CD	LYS	A	57	26.849	47.716	-7.738	1.00 73.49	C
ATOM	908	CE	LYS	A	57	27.851	47.434	-6.622	1.00 75.73	C
ATOM	911	NZ	LYS	A	57	27.686	48.346	-5.443	1.00 75.29	N
ATOM	915	C	LYS	A	57	28.380	46.477	-11.548	1.00 64.32	C
ATOM	916	O	LYS	A	57	29.234	47.302	-11.924	1.00 63.56	O
ATOM	918	N	PHE	A	58	28.706	45.260	-11.108	1.00 57.02	N
ATOM	919	CA	PHE	A	58	30.097	44.800	-11.144	1.00 52.90	C
ATOM	921	CB	PHE	A	58	30.311	43.558	-10.263	1.00 50.31	C
ATOM	924	CG	PHE	A	58	30.423	43.864	-8.790	1.00 49.61	C
ATOM	925	CD1	PHE	A	58	29.418	43.489	-7.909	1.00 49.64	C
ATOM	927	CE1	PHE	A	58	29.520	43.767	-6.529	1.00 51.17	C
ATOM	929	CZ	PHE	A	58	30.638	44.429	-6.018	1.00 46.69	C
ATOM	931	CE2	PHE	A	58	31.648	44.816	-6.887	1.00 45.99	C
ATOM	933	CD2	PHE	A	58	31.540	44.528	-8.274	1.00 49.41	C
ATOM	935	C	PHE	A	58	30.558	44.546	-12.585	1.00 51.54	C
ATOM	936	O	PHE	A	58	31.759	44.454	-12.843	1.00 48.36	O
ATOM	938	N	SER	A	59	29.615	44.436	-13.521	1.00 54.48	N
ATOM	939	CA	SER	A	59	29.960	44.384	-14.954	1.00 59.90	C
ATOM	941	CB	SER	A	59	28.807	43.814	-15.787	1.00 62.71	C
ATOM	944	OG	SER	A	59	28.635	42.422	-15.557	1.00 64.48	O
ATOM	946	C	SER	A	59	30.376	45.756	-15.517	1.00 61.91	C
ATOM	947	O	SER	A	59	31.015	45.824	-16.582	1.00 62.33	O
ATOM	949	N	SER	A	60	30.041	46.830	-14.791	1.00 59.80	N
ATOM	950	CA	SER	A	60	30.356	48.196	-15.217	1.00 56.48	C
ATOM	952	CB	SER	A	60	29.544	49.203	-14.401	1.00 55.93	C
ATOM	955	OG	SER	A	60	30.148	49.476	-13.155	1.00 54.91	O
ATOM	957	C	SER	A	60	31.859	48.575	-15.183	1.00 56.68	C
ATOM	958	O	SER	A	60	32.691	47.960	-14.473	1.00 56.49	O
ATOM	960	N	ALA	A	61	32.178	49.619	-15.949	1.00 50.34	N
ATOM	961	CA	ALA	A	61	33.550	50.077	-16.142	1.00 49.64	C
ATOM	963	CB	ALA	A	61	33.593	51.187	-17.242	1.00 48.90	C
ATOM	967	C	ALA	A	61	34.203	50.597	-14.860	1.00 44.23	C
ATOM	968	O	ALA	A	61	35.409	50.792	-14.830	1.00 43.02	O
ATOM	970	N	MET	A	62	33.399	50.885	-13.839	1.00 43.34	N
ATOM	971	CA	MET	A	62	33.904	51.272	-12.527	1.00 47.14	C
ATOM	973	CB	MET	A	62	32.756	51.376	-11.532	1.00 50.42	C
ATOM	976	CG	MET	A	62	31.989	52.668	-11.636	1.00 59.61	C
ATOM	979	SD	MET	A	62	30.681	52.754	-10.396	1.00 70.19	S
ATOM	980	CE	MET	A	62	31.563	52.349	-8.882	1.00 67.51	C
ATOM	984	C	MET	A	62	34.926	50.273	-11.995	1.00 43.03	C
ATOM	985	O	MET	A	62	35.993	50.651	-11.494	1.00 39.30	O
ATOM	987	N	TYR	A	63	34.607	48.996	-12.149	1.00 38.24	N
ATOM	988	CA	TYR	A	63	35.423	47.933	-11.550	1.00 42.97	C
ATOM	990	CB	TYR	A	63	34.540	46.716	-11.224	1.00 43.65	C
ATOM	993	CG	TYR	A	63	33.646	47.074	-10.054	1.00 50.14	C
ATOM	994	CD1	TYR	A	63	32.334	47.517	-10.259	1.00 52.65	C
ATOM	996	CE1	TYR	A	63	31.529	47.913	-9.185	1.00 54.45	C
ATOM	998	CZ	TYR	A	63	32.055	47.900	-7.903	1.00 56.25	C
ATOM	999	OH	TYR	A	63	31.272	48.277	-6.830	1.00 64.37	O
ATOM	1001	CE2	TYR	A	63	33.377	47.504	-7.686	1.00 54.15	C
ATOM	1003	CD2	TYR	A	63	34.159	47.108	-8.754	1.00 49.27	C
ATOM	1005	C	TYR	A	63	36.642	47.615	-12.404	1.00 40.17	C
ATOM	1006	O	TYR	A	63	37.458	46.713	-12.081	1.00 36.74	O
ATOM	1008	N	MET	A	64	36.777	48.417	-13.465	1.00 40.24	N
ATOM	1009	CA	MET	A	64	37.866	48.322	-14.404	1.00 38.08	C
ATOM	1011	CB	MET	A	64	39.181	48.778	-13.734	1.00 40.37	C
ATOM	1014	CG	MET	A	64	39.125	50.314	-13.473	1.00 36.83	C
ATOM	1017	SD	MET	A	64	40.137	51.168	-12.203	1.00 38.39	S
ATOM	1018	CE	MET	A	64	39.277	50.865	-10.652	1.00 35.56	C
ATOM	1022	C	MET	A	64	37.759	46.887	-14.923	1.00 40.10	C
ATOM	1023	O	MET	A	64	36.664	46.482	-15.371	1.00 42.95	O
ATOM	1025	N	ASP	A	65	38.795	46.080	-14.890	1.00 37.98	N
ATOM	1026	CA	ASP	A	65	38.564	44.719	-15.423	1.00 40.75	C
ATOM	1028	CB	ASP	A	65	39.617	44.368	-16.475	1.00 46.11	C
ATOM	1031	CG	ASP	A	65	39.211	44.806	-17.883	1.00 54.34	C
ATOM	1032	OD1	ASP	A	65	39.598	44.095	-18.853	1.00 62.35	O

ATOM	1033	OD2	ASP	A	65	38.517	45.841	-18.030	1.00	49.91	O
ATOM	1034	C	ASP	A	65	38.513	43.675	-14.301	1.00	35.06	C
ATOM	1035	O	ASP	A	65	38.764	42.497	-14.553	1.00	35.27	O
ATOM	1037	N	ARG	A	66	38.174	44.114	-13.082	1.00	24.08	N
ATOM	1038	CA	ARG	A	66	38.240	43.242	-11.893	1.00	23.02	C
ATOM	1040	CB	ARG	A	66	39.266	43.808	-10.901	1.00	22.36	C
ATOM	1043	CG	ARG	A	66	40.687	43.722	-11.456	1.00	22.81	C
ATOM	1046	CD	ARG	A	66	41.703	44.083	-10.429	1.00	23.78	C
ATOM	1049	NE	ARG	A	66	41.738	43.122	-9.342	1.00	21.09	N
ATOM	1051	CZ	ARG	A	66	41.225	43.312	-8.143	1.00	16.34	C
ATOM	1052	NH1	ARG	A	66	40.632	44.459	-7.792	1.00	21.93	N
ATOM	1055	NH2	ARG	A	66	41.286	42.321	-7.281	1.00	19.86	N
ATOM	1058	C	ARG	A	66	36.882	43.039	-11.239	1.00	17.51	C
ATOM	1059	O	ARG	A	66	36.760	42.711	-10.059	1.00	16.18	O
ATOM	1061	N	GLY	A	67	35.838	43.218	-12.025	1.00	22.40	N
ATOM	1062	CA	GLY	A	67	34.497	43.083	-11.527	1.00	23.18	C
ATOM	1065	C	GLY	A	67	34.232	41.737	-10.873	1.00	20.02	C
ATOM	1066	O	GLY	A	67	33.674	41.679	-9.784	1.00	20.47	O
ATOM	1068	N	ALA	A	68	34.593	40.666	-11.562	1.00	21.01	N
ATOM	1069	CA	ALA	A	68	34.328	39.323	-11.075	1.00	19.93	C
ATOM	1071	CB	ALA	A	68	34.727	38.326	-12.104	1.00	17.14	C
ATOM	1075	C	ALA	A	68	35.094	39.072	-9.783	1.00	19.84	C
ATOM	1076	O	ALA	A	68	34.569	38.504	-8.844	1.00	18.52	O
ATOM	1078	N	GLU	A	69	36.363	39.476	-9.775	1.00	17.22	N
ATOM	1079	CA	GLU	A	69	37.219	39.356	-8.600	1.00	17.36	C
ATOM	1081	CB	GLU	A	69	38.615	39.826	-8.950	1.00	20.34	C
ATOM	1084	CG	GLU	A	69	39.298	38.924	-9.944	1.00	16.31	C
ATOM	1087	CD	GLU	A	69	38.957	39.166	-11.389	1.00	22.99	C
ATOM	1088	OE1	GLU	A	69	38.151	40.070	-11.718	1.00	26.56	O
ATOM	1089	OE2	GLU	A	69	39.507	38.416	-12.221	1.00	26.96	O
ATOM	1090	C	GLU	A	69	36.687	40.087	-7.396	1.00	16.67	C
ATOM	1091	O	GLU	A	69	36.611	39.542	-6.304	1.00	17.50	O
ATOM	1093	N	GLN	A	70	36.247	41.317	-7.605	1.00	17.83	N
ATOM	1094	CA	GLN	A	70	35.655	42.101	-6.544	1.00	20.00	C
ATOM	1096	CB	GLN	A	70	35.423	43.516	-7.066	1.00	25.15	C
ATOM	1099	CG	GLN	A	70	36.699	44.304	-7.213	1.00	23.73	C
ATOM	1102	CD	GLN	A	70	36.772	45.507	-6.285	1.00	29.35	C
ATOM	1103	OE1	GLN	A	70	37.250	46.582	-6.679	1.00	30.52	O
ATOM	1104	NE2	GLN	A	70	36.309	45.336	-5.063	1.00	24.16	N
ATOM	1107	C	GLN	A	70	34.328	41.542	-6.046	1.00	23.82	C
ATOM	1108	O	GLN	A	70	34.054	41.549	-4.835	1.00	21.12	O
ATOM	1110	N	LEU	A	71	33.494	41.087	-6.983	1.00	22.48	N
ATOM	1111	CA	LEU	A	71	32.211	40.443	-6.660	1.00	20.51	C
ATOM	1113	CB	LEU	A	71	31.437	40.054	-7.938	1.00	22.87	C
ATOM	1116	CG	LEU	A	71	30.028	39.475	-7.719	1.00	27.53	C
ATOM	1118	CD1	LEU	A	71	29.200	40.420	-6.789	1.00	32.79	C
ATOM	1122	CD2	LEU	A	71	29.260	39.214	-9.028	1.00	24.39	C
ATOM	1126	C	LEU	A	71	32.387	39.215	-5.771	1.00	14.06	C
ATOM	1127	O	LEU	A	71	31.747	39.091	-4.725	1.00	17.74	O
ATOM	1129	N	VAL	A	72	33.244	38.297	-6.190	1.00	14.18	N
ATOM	1130	CA	VAL	A	72	33.438	37.080	-5.420	1.00	18.78	C
ATOM	1132	CB	VAL	A	72	34.238	36.006	-6.157	1.00	22.34	C
ATOM	1134	CG1	VAL	A	72	35.677	36.356	-6.258	1.00	19.35	C
ATOM	1138	CG2	VAL	A	72	34.082	34.650	-5.396	1.00	23.95	C
ATOM	1142	C	VAL	A	72	34.030	37.383	-4.072	1.00	18.32	C
ATOM	1143	O	VAL	A	72	33.639	36.778	-3.071	1.00	18.85	O
ATOM	1145	N	GLU	A	73	34.897	38.403	-4.005	1.00	20.14	N
ATOM	1146	CA	GLU	A	73	35.470	38.804	-2.722	1.00	19.02	C
ATOM	1148	CB	GLU	A	73	36.576	39.852	-2.933	1.00	18.17	C
ATOM	1151	CG	GLU	A	73	37.187	40.366	-1.659	1.00	16.94	C
ATOM	1154	CD	GLU	A	73	38.314	41.364	-1.889	1.00	16.14	C
ATOM	1155	OE1	GLU	A	73	39.095	41.589	-0.947	1.00	15.58	O
ATOM	1156	OE2	GLU	A	73	38.390	41.924	-3.000	1.00	18.77	O
ATOM	1157	C	GLU	A	73	34.453	39.300	-1.715	1.00	19.97	C
ATOM	1158	O	GLU	A	73	34.437	38.858	-0.542	1.00	18.42	O
ATOM	1160	N	ILE	A	74	33.611	40.235	-2.133	1.00	17.73	N
ATOM	1161	CA	ILE	A	74	32.620	40.793	-1.221	1.00	18.28	C

ATOM	1163	CB	ILE	A	74	32.053	42.144	-1.760	1.00	20.20	C
ATOM	1165	CG1	ILE	A	74	31.392	42.949	-0.638	1.00	25.16	C
ATOM	1168	CD1	ILE	A	74	32.207	43.077	0.634	1.00	21.09	C
ATOM	1172	CG2	ILE	A	74	31.105	41.929	-2.964	1.00	24.00	C
ATOM	1176	C	ILE	A	74	31.515	39.788	-0.873	1.00	20.75	C
ATOM	1177	O	ILE	A	74	31.100	39.682	0.274	1.00	20.20	O
ATOM	1179	N	LEU	A	75	31.107	38.993	-1.849	1.00	20.41	N
ATOM	1180	CA	LEU	A	75	30.109	37.966	-1.612	1.00	23.60	C
ATOM	1182	CB	LEU	A	75	29.720	37.291	-2.918	1.00	21.44	C
ATOM	1185	CG	LEU	A	75	28.697	36.163	-2.839	1.00	33.02	C
ATOM	1187	CD1	LEU	A	75	27.401	36.618	-2.074	1.00	36.24	C
ATOM	1191	CD2	LEU	A	75	28.377	35.669	-4.257	1.00	33.29	C
ATOM	1195	C	LEU	A	75	30.634	36.962	-0.614	1.00	20.40	C
ATOM	1196	O	LEU	A	75	29.978	36.692	0.386	1.00	25.49	O
ATOM	1198	N	ASN	A	76	31.837	36.451	-0.850	1.00	20.38	N
ATOM	1199	CA	ASN	A	76	32.412	35.466	0.067	1.00	18.97	C
ATOM	1201	CB	ASN	A	76	33.648	34.775	-0.532	1.00	21.81	C
ATOM	1204	CG	ASN	A	76	33.298	33.811	-1.635	1.00	23.29	C
ATOM	1205	OD1	ASN	A	76	34.163	33.350	-2.396	1.00	26.68	O
ATOM	1206	ND2	ASN	A	76	32.033	33.515	-1.753	1.00	14.50	N
ATOM	1209	C	ASN	A	76	32.722	36.006	1.449	1.00	18.91	C
ATOM	1210	O	ASN	A	76	32.699	35.246	2.417	1.00	16.61	O
ATOM	1212	N	TYR	A	77	32.949	37.311	1.561	1.00	21.43	N
ATOM	1213	CA	TYR	A	77	33.186	37.926	2.856	1.00	22.26	C
ATOM	1215	CB	TYR	A	77	33.511	39.426	2.689	1.00	25.07	C
ATOM	1218	CG	TYR	A	77	33.673	40.164	3.989	1.00	24.32	C
ATOM	1219	CD1	TYR	A	77	34.549	39.717	4.949	1.00	26.51	C
ATOM	1221	CE1	TYR	A	77	34.697	40.388	6.151	1.00	31.07	C
ATOM	1223	CZ	TYR	A	77	33.966	41.526	6.390	1.00	28.90	C
ATOM	1224	OH	TYR	A	77	34.102	42.178	7.580	1.00	30.83	O
ATOM	1226	CE2	TYR	A	77	33.095	41.986	5.452	1.00	26.59	C
ATOM	1228	CD2	TYR	A	77	32.945	41.303	4.256	1.00	25.59	C
ATOM	1230	C	TYR	A	77	31.942	37.765	3.717	1.00	21.82	C
ATOM	1231	O	TYR	A	77	32.002	37.378	4.890	1.00	23.02	O
ATOM	1233	N	HIS	A	78	30.814	38.081	3.105	1.00	20.05	N
ATOM	1234	CA	HIS	A	78	29.523	37.981	3.756	1.00	19.97	C
ATOM	1236	CB	HIS	A	78	28.522	38.874	3.034	1.00	21.40	C
ATOM	1239	CG	HIS	A	78	28.786	40.313	3.290	1.00	24.55	C
ATOM	1240	ND1	HIS	A	78	29.117	41.208	2.293	1.00	25.98	N
ATOM	1242	CE1	HIS	A	78	29.332	42.389	2.834	1.00	21.86	C
ATOM	1244	NE2	HIS	A	78	29.230	42.277	4.147	1.00	32.49	N
ATOM	1246	CD2	HIS	A	78	28.906	40.984	4.458	1.00	29.24	C
ATOM	1248	C	HIS	A	78	28.999	36.581	3.892	1.00	18.14	C
ATOM	1249	O	HIS	A	78	28.571	36.191	4.979	1.00	20.44	O
ATOM	1251	N	ILE	A	79	29.062	35.809	2.817	1.00	15.13	N
ATOM	1252	CA	ILE	A	79	28.586	34.435	2.862	1.00	16.48	C
ATOM	1254	CB	ILE	A	79	28.613	33.804	1.472	1.00	23.14	C
ATOM	1256	CG1	ILE	A	79	27.570	34.458	0.586	1.00	28.54	C
ATOM	1259	CD1	ILE	A	79	27.543	33.829	-0.771	1.00	35.11	C
ATOM	1263	CG2	ILE	A	79	28.366	32.284	1.536	1.00	29.37	C
ATOM	1267	C	ILE	A	79	29.400	33.575	3.845	1.00	17.70	C
ATOM	1268	O	ILE	A	79	28.860	32.741	4.553	1.00	20.10	O
ATOM	1270	N	SER	A	80	30.705	33.787	3.885	1.00	18.48	N
ATOM	1271	CA	SER	A	80	31.581	33.089	4.832	1.00	21.50	C
ATOM	1273	CB	SER	A	80	33.011	33.619	4.733	1.00	16.31	C
ATOM	1276	OG	SER	A	80	33.633	32.970	3.673	1.00	30.42	O
ATOM	1278	C	SER	A	80	31.143	33.231	6.271	1.00	20.29	C
ATOM	1279	O	SER	A	80	31.230	32.278	7.041	1.00	21.61	O
ATOM	1281	N	ALA	A	81	30.707	34.425	6.636	1.00	20.62	N
ATOM	1282	CA	ALA	A	81	30.185	34.683	7.980	1.00	23.51	C
ATOM	1284	CB	ALA	A	81	29.896	36.232	8.179	1.00	20.83	C
ATOM	1288	C	ALA	A	81	28.935	33.864	8.244	1.00	19.83	C
ATOM	1289	O	ALA	A	81	28.744	33.307	9.333	1.00	21.67	O
ATOM	1291	N	ILE	A	82	28.060	33.797	7.249	1.00	20.06	N
ATOM	1292	CA	ILE	A	82	26.831	33.040	7.412	1.00	18.08	C
ATOM	1294	CB	ILE	A	82	25.906	33.235	6.251	1.00	18.84	C
ATOM	1296	CG1	ILE	A	82	25.473	34.691	6.127	1.00	18.75	C

ATOM	1299	CD1	ILE	A	82	24.706	34.927	4.822	1.00	17.33	C
ATOM	1303	CG2	ILE	A	82	24.644	32.351	6.391	1.00	17.67	C
ATOM	1307	C	ILE	A	82	27.173	31.537	7.560	1.00	21.42	C
ATOM	1308	O	ILE	A	82	26.642	30.826	8.434	1.00	21.36	O
ATOM	1310	N	VAL	A	83	28.084	31.077	6.714	1.00	20.91	N
ATOM	1311	CA	VAL	A	83	28.581	29.715	6.781	1.00	20.42	C
ATOM	1313	CB	VAL	A	83	29.562	29.409	5.629	1.00	23.64	C
ATOM	1315	CG1	VAL	A	83	30.162	27.978	5.773	1.00	20.77	C
ATOM	1319	CG2	VAL	A	83	28.804	29.568	4.304	1.00	20.28	C
ATOM	1323	C	VAL	A	83	29.165	29.362	8.153	1.00	20.38	C
ATOM	1324	O	VAL	A	83	28.774	28.346	8.716	1.00	19.14	O
ATOM	1326	N	GLU	A	84	30.044	30.184	8.723	1.00	19.70	N
ATOM	1327	CA	GLU	A	84	30.624	29.826	10.006	1.00	26.32	C
ATOM	1329	CB	GLU	A	84	31.698	30.808	10.502	1.00	26.33	C
ATOM	1332	CG	GLU	A	84	32.932	30.778	9.715	1.00	35.97	C
ATOM	1335	CD	GLU	A	84	34.137	31.372	10.438	1.00	40.51	C
ATOM	1336	OE1	GLU	A	84	34.029	31.730	11.649	1.00	37.65	O
ATOM	1337	OE2	GLU	A	84	35.197	31.466	9.765	1.00	39.61	O
ATOM	1338	C	GLU	A	84	29.545	29.728	11.063	1.00	25.46	C
ATOM	1339	O	GLU	A	84	29.611	28.832	11.924	1.00	25.39	O
ATOM	1341	N	LYS	A	85	28.559	30.626	11.007	1.00	21.78	N
ATOM	1342	CA	LYS	A	85	27.422	30.548	11.965	1.00	25.39	C
ATOM	1344	CB	LYS	A	85	26.397	31.633	11.720	1.00	26.40	C
ATOM	1347	CG	LYS	A	85	26.821	32.957	12.221	1.00	32.93	C
ATOM	1350	CD	LYS	A	85	26.528	33.118	13.704	1.00	37.21	C
ATOM	1353	CE	LYS	A	85	27.244	34.326	14.280	1.00	37.28	C
ATOM	1356	NZ	LYS	A	85	27.370	34.201	15.770	1.00	41.86	N
ATOM	1360	C	LYS	A	85	26.696	29.223	11.903	1.00	23.25	C
ATOM	1361	O	LYS	A	85	26.473	28.586	12.920	1.00	22.73	O
ATOM	1363	N	VAL	A	86	26.299	28.835	10.697	1.00	21.34	N
ATOM	1364	CA	VAL	A	86	25.589	27.596	10.481	1.00	19.79	C
ATOM	1366	CB	VAL	A	86	25.271	27.407	8.984	1.00	22.48	C
ATOM	1368	CG1	VAL	A	86	24.857	25.964	8.665	1.00	19.93	C
ATOM	1372	CG2	VAL	A	86	24.208	28.447	8.547	1.00	23.19	C
ATOM	1376	C	VAL	A	86	26.401	26.419	10.988	1.00	19.80	C
ATOM	1377	O	VAL	A	86	25.885	25.566	11.679	1.00	20.71	O
ATOM	1379	N	LEU	A	87	27.682	26.387	10.654	1.00	15.75	N
ATOM	1380	CA	LEU	A	87	28.527	25.252	11.018	1.00	19.94	C
ATOM	1382	CB	LEU	A	87	29.878	25.374	10.337	1.00	16.55	C
ATOM	1385	CG	LEU	A	87	29.849	25.286	8.831	1.00	18.41	C
ATOM	1387	CD1	LEU	A	87	31.308	25.460	8.286	1.00	13.36	C
ATOM	1391	CD2	LEU	A	87	29.255	23.935	8.451	1.00	14.28	C
ATOM	1395	C	LEU	A	87	28.751	25.165	12.516	1.00	17.64	C
ATOM	1396	O	LEU	A	87	28.707	24.068	13.096	1.00	20.46	O
ATOM	1398	N	ILE	A	88	28.988	26.312	13.134	1.00	19.91	N
ATOM	1399	CA	ILE	A	88	29.157	26.372	14.598	1.00	21.43	C
ATOM	1401	CB	ILE	A	88	29.619	27.746	15.018	1.00	26.53	C
ATOM	1403	CG1	ILE	A	88	31.096	27.938	14.644	1.00	26.96	C
ATOM	1406	CD1	ILE	A	88	31.521	29.429	14.638	1.00	32.92	C
ATOM	1410	CG2	ILE	A	88	29.466	27.937	16.538	1.00	36.91	C
ATOM	1414	C	ILE	A	88	27.878	25.973	15.368	1.00	18.11	C
ATOM	1415	O	ILE	A	88	27.952	25.384	16.454	1.00	22.11	O
ATOM	1417	N	PHE	A	89	26.717	26.312	14.812	1.00	18.25	N
ATOM	1418	CA	PHE	A	89	25.440	25.880	15.371	1.00	21.97	C
ATOM	1420	CB	PHE	A	89	24.307	26.854	14.991	1.00	21.99	C
ATOM	1423	CG	PHE	A	89	24.243	28.059	15.874	1.00	24.56	C
ATOM	1424	CD1	PHE	A	89	25.225	29.027	15.806	1.00	21.57	C
ATOM	1426	CE1	PHE	A	89	25.172	30.125	16.618	1.00	23.89	C
ATOM	1428	CZ	PHE	A	89	24.141	30.249	17.560	1.00	26.18	C
ATOM	1430	CE2	PHE	A	89	23.183	29.289	17.665	1.00	22.75	C
ATOM	1432	CD2	PHE	A	89	23.237	28.183	16.839	1.00	26.53	C
ATOM	1434	C	PHE	A	89	25.098	24.457	14.965	1.00	23.03	C
ATOM	1435	O	PHE	A	89	24.015	23.975	15.294	1.00	22.50	O
ATOM	1437	N	GLY	A	90	26.005	23.799	14.226	1.00	21.50	N
ATOM	1438	CA	GLY	A	90	25.917	22.365	13.976	1.00	20.37	C
ATOM	1441	C	GLY	A	90	25.184	21.953	12.729	1.00	20.18	C
ATOM	1442	O	GLY	A	90	24.822	20.790	12.571	1.00	20.51	O

ATOM	1444	N	GLY	A	91	24.948	22.899	11.827	1.00 20.91	N
ATOM	1445	CA	GLY	A	91	24.234	22.597	10.607	1.00 18.15	C
ATOM	1448	C	GLY	A	91	25.197	22.073	9.541	1.00 18.44	C
ATOM	1449	O	GLY	A	91	26.424	22.212	9.652	1.00 21.11	O
ATOM	1451	N	ASP	A	92	24.613	21.474	8.518	1.00 18.99	N
ATOM	1452	CA	ASP	A	92	25.292	20.975	7.340	1.00 21.31	C
ATOM	1454	CB	ASP	A	92	24.876	19.518	7.085	1.00 19.07	C
ATOM	1457	CG	ASP	A	92	25.734	18.812	6.003	1.00 19.97	C
ATOM	1458	OD1	ASP	A	92	25.336	17.719	5.580	1.00 15.27	O
ATOM	1459	OD2	ASP	A	92	26.815	19.317	5.600	1.00 17.65	O
ATOM	1460	C	ASP	A	92	24.829	21.819	6.171	1.00 23.23	C
ATOM	1461	O	ASP	A	92	23.625	21.828	5.851	1.00 19.90	O
ATOM	1463	N	ILE	A	93	25.748	22.536	5.524	1.00 18.90	N
ATOM	1464	CA	ILE	A	93	25.338	23.320	4.352	1.00 18.82	C
ATOM	1466	CB	ILE	A	93	26.298	24.488	4.028	1.00 21.70	C
ATOM	1468	CG1	ILE	A	93	26.158	25.571	5.115	1.00 28.19	C
ATOM	1471	CD1	ILE	A	93	27.432	26.016	5.695	1.00 32.34	C
ATOM	1475	CG2	ILE	A	93	25.948	25.057	2.637	1.00 17.07	C
ATOM	1479	C	ILE	A	93	25.236	22.368	3.203	1.00 18.05	C
ATOM	1480	O	ILE	A	93	26.238	21.799	2.806	1.00 18.43	O
ATOM	1482	N	LEU	A	94	24.027	22.195	2.666	1.00 16.64	N
ATOM	1483	CA	LEU	A	94	23.789	21.242	1.590	1.00 21.21	C
ATOM	1485	CB	LEU	A	94	22.298	20.870	1.473	1.00 19.24	C
ATOM	1488	CG	LEU	A	94	21.705	20.217	2.720	1.00 22.11	C
ATOM	1490	CD1	LEU	A	94	20.272	19.783	2.451	1.00 19.82	C
ATOM	1494	CD2	LEU	A	94	22.580	19.101	3.131	1.00 19.95	C
ATOM	1498	C	LEU	A	94	24.218	21.771	0.249	1.00 22.46	C
ATOM	1499	O	LEU	A	94	24.841	21.054	-0.524	1.00 21.77	O
ATOM	1501	N	LYS	A	95	23.879	23.027	-0.004	1.00 24.89	N
ATOM	1502	CA	LYS	A	95	23.985	23.601	-1.333	1.00 28.94	C
ATOM	1504	CB	LYS	A	95	22.741	23.242	-2.153	1.00 33.63	C
ATOM	1507	CG	LYS	A	95	23.021	22.730	-3.533	1.00 39.10	C
ATOM	1510	CD	LYS	A	95	23.653	21.350	-3.471	1.00 43.14	C
ATOM	1513	CE	LYS	A	95	25.108	21.370	-3.823	1.00 42.30	C
ATOM	1516	NZ	LYS	A	95	25.904	20.294	-3.112	1.00 51.32	N
ATOM	1520	C	LYS	A	95	24.008	25.095	-1.235	1.00 26.57	C
ATOM	1521	O	LYS	A	95	23.374	25.652	-0.343	1.00 21.25	O
ATOM	1523	N	PHE	A	96	24.749	25.721	-2.146	1.00 23.09	N
ATOM	1524	CA	PHE	A	96	24.663	27.141	-2.414	1.00 22.70	C
ATOM	1526	CB	PHE	A	96	26.045	27.808	-2.542	1.00 17.47	C
ATOM	1529	CG	PHE	A	96	26.874	27.745	-1.300	1.00 15.81	C
ATOM	1530	CD1	PHE	A	96	27.663	26.637	-1.041	1.00 19.33	C
ATOM	1532	CE1	PHE	A	96	28.423	26.563	0.095	1.00 16.34	C
ATOM	1534	CZ	PHE	A	96	28.419	27.603	0.967	1.00 18.52	C
ATOM	1536	CE2	PHE	A	96	27.626	28.729	0.724	1.00 20.13	C
ATOM	1538	CD2	PHE	A	96	26.869	28.786	-0.387	1.00 16.22	C
ATOM	1540	C	PHE	A	96	23.894	27.293	-3.721	1.00 26.53	C
ATOM	1541	O	PHE	A	96	23.937	26.425	-4.591	1.00 31.23	O
ATOM	1543	N	ALA	A	97	23.139	28.371	-3.818	1.00 31.42	N
ATOM	1544	CA	ALA	A	97	22.470	28.759	-5.064	1.00 38.13	C
ATOM	1546	CB	ALA	A	97	20.984	28.445	-5.027	1.00 42.97	C
ATOM	1550	C	ALA	A	97	22.714	30.248	-5.076	1.00 41.53	C
ATOM	1551	O	ALA	A	97	22.102	30.978	-4.283	1.00 40.46	O
ATOM	1553	N	GLY	A	98	23.657	30.660	-5.923	1.00 39.85	N
ATOM	1554	CA	GLY	A	98	24.267	31.985	-5.877	1.00 42.40	C
ATOM	1557	C	GLY	A	98	24.526	32.532	-4.476	1.00 46.72	C
ATOM	1558	O	GLY	A	98	25.201	31.899	-3.640	1.00 46.32	O
ATOM	1560	N	ASP	A	99	23.929	33.699	-4.232	1.00 46.61	N
ATOM	1561	CA	ASP	A	99	23.942	34.419	-2.961	1.00 49.33	C
ATOM	1563	CB	ASP	A	99	23.476	35.860	-3.249	1.00 54.61	C
ATOM	1566	CG	ASP	A	99	21.944	35.974	-3.261	1.00 60.07	C
ATOM	1567	OD1	ASP	A	99	21.292	35.266	-4.062	1.00 66.82	O
ATOM	1568	OD2	ASP	A	99	21.386	36.725	-2.428	1.00 64.32	O
ATOM	1569	C	ASP	A	99	22.973	33.845	-1.903	1.00 44.26	C
ATOM	1570	O	ASP	A	99	22.494	34.594	-1.048	1.00 43.63	O
ATOM	1572	N	ALA	A	100	22.635	32.560	-2.002	1.00 43.22	N
ATOM	1573	CA	ALA	A	100	21.682	31.890	-1.102	1.00 38.00	C

ATOM	1575	CB	ALA	A	100	20.354	31.698	-1.793	1.00 31.10	C
ATOM	1579	C	ALA	A	100	22.252	30.524	-0.712	1.00 35.53	C
ATOM	1580	O	ALA	A	100	23.102	29.990	-1.404	1.00 37.71	O
ATOM	1582	N	LEU	A	101	21.774	29.954	0.385	1.00 31.32	N
ATOM	1583	CA	LEU	A	101	22.139	28.590	0.731	1.00 29.51	C
ATOM	1585	CB	LEU	A	101	23.526	28.502	1.408	1.00 26.94	C
ATOM	1588	CG	LEU	A	101	23.969	28.757	2.866	1.00 33.40	C
ATOM	1590	CD1	LEU	A	101	24.514	30.147	3.046	1.00 35.70	C
ATOM	1594	CD2	LEU	A	101	22.974	28.391	3.970	1.00 27.25	C
ATOM	1598	C	LEU	A	101	21.068	27.887	1.531	1.00 25.86	C
ATOM	1599	O	LEU	A	101	20.219	28.517	2.160	1.00 25.64	O
ATOM	1601	N	LEU	A	102	21.117	26.571	1.440	1.00 21.73	N
ATOM	1602	CA	LEU	A	102	20.232	25.684	2.129	1.00 22.31	C
ATOM	1604	CB	LEU	A	102	19.597	24.737	1.109	1.00 20.21	C
ATOM	1607	CG	LEU	A	102	18.619	23.738	1.750	1.00 23.33	C
ATOM	1609	CD1	LEU	A	102	17.384	24.474	2.326	1.00 21.52	C
ATOM	1613	CD2	LEU	A	102	18.227	22.692	0.771	1.00 21.49	C
ATOM	1617	C	LEU	A	102	21.069	24.870	3.107	1.00 23.09	C
ATOM	1618	O	LEU	A	102	22.073	24.248	2.711	1.00 17.02	O
ATOM	1620	N	ALA	A	103	20.639	24.838	4.364	1.00 21.09	N
ATOM	1621	CA	ALA	A	103	21.350	24.100	5.431	1.00 23.11	C
ATOM	1623	CB	ALA	A	103	21.972	25.078	6.478	1.00 16.36	C
ATOM	1627	C	ALA	A	103	20.378	23.152	6.090	1.00 23.07	C
ATOM	1628	O	ALA	A	103	19.158	23.419	6.122	1.00 20.85	O
ATOM	1630	N	LEU	A	104	20.939	22.053	6.577	1.00 20.97	N
ATOM	1631	CA	LEU	A	104	20.245	20.894	7.148	1.00 23.86	C
ATOM	1633	CB	LEU	A	104	20.454	19.664	6.254	1.00 23.12	C
ATOM	1636	CG	LEU	A	104	19.986	18.328	6.836	1.00 20.03	C
ATOM	1638	CD1	LEU	A	104	18.435	18.314	7.109	1.00 22.74	C
ATOM	1642	CD2	LEU	A	104	20.405	17.225	5.873	1.00 13.73	C
ATOM	1646	C	LEU	A	104	20.804	20.539	8.517	1.00 24.15	C
ATOM	1647	O	LEU	A	104	22.032	20.469	8.714	1.00 24.29	O
ATOM	1649	N	TRP	A	105	19.906	20.334	9.466	1.00 24.00	N
ATOM	1650	CA	TRP	A	105	20.229	19.706	10.753	1.00 20.45	C
ATOM	1652	CB	TRP	A	105	19.780	20.572	11.915	1.00 24.04	C
ATOM	1655	CG	TRP	A	105	20.645	21.719	12.291	1.00 20.75	C
ATOM	1656	CD1	TRP	A	105	21.429	21.779	13.371	1.00 22.10	C
ATOM	1658	NE1	TRP	A	105	22.025	22.997	13.466	1.00 20.69	N
ATOM	1660	CE2	TRP	A	105	21.650	23.772	12.412	1.00 18.27	C
ATOM	1661	CD2	TRP	A	105	20.762	23.002	11.640	1.00 17.79	C
ATOM	1662	CE3	TRP	A	105	20.211	23.563	10.486	1.00 18.63	C
ATOM	1664	CZ3	TRP	A	105	20.577	24.836	10.137	1.00 15.54	C
ATOM	1666	CH2	TRP	A	105	21.464	25.594	10.930	1.00 17.44	C
ATOM	1668	CZ2	TRP	A	105	22.030	25.065	12.067	1.00 19.46	C
ATOM	1670	C	TRP	A	105	19.421	18.439	10.761	1.00 21.79	C
ATOM	1671	O	TRP	A	105	18.186	18.466	10.973	1.00 22.75	O
ATOM	1673	N	ARG	A	106	20.084	17.339	10.444	1.00 22.08	N
ATOM	1674	CA	ARG	A	106	19.433	16.068	10.359	1.00 22.88	C
ATOM	1676	CB	ARG	A	106	20.172	15.160	9.420	1.00 27.55	C
ATOM	1679	CG	ARG	A	106	19.675	13.739	9.411	1.00 29.07	C
ATOM	1682	CD	ARG	A	106	20.466	12.980	8.427	1.00 27.32	C
ATOM	1685	NE	ARG	A	106	20.094	11.582	8.334	1.00 33.27	N
ATOM	1687	CZ	ARG	A	106	20.560	10.771	7.395	1.00 31.83	C
ATOM	1688	NH1	ARG	A	106	21.421	11.228	6.488	1.00 31.42	N
ATOM	1691	NH2	ARG	A	106	20.160	9.508	7.360	1.00 35.96	N
ATOM	1694	C	ARG	A	106	19.381	15.502	11.779	1.00 30.18	C
ATOM	1695	O	ARG	A	106	20.392	15.430	12.472	1.00 27.37	O
ATOM	1697	N	VAL	A	107	18.188	15.097	12.197	1.00 29.09	N
ATOM	1698	CA	VAL	A	107	17.996	14.647	13.556	1.00 33.51	C
ATOM	1700	CB	VAL	A	107	17.793	15.872	14.472	1.00 31.39	C
ATOM	1702	CG1	VAL	A	107	16.331	16.324	14.456	1.00 35.68	C
ATOM	1706	CG2	VAL	A	107	18.296	15.588	15.835	1.00 36.43	C
ATOM	1710	C	VAL	A	107	16.839	13.660	13.638	1.00 32.21	C
ATOM	1711	O	VAL	A	107	15.960	13.626	12.765	1.00 31.14	O
ATOM	1713	N	GLU	A	108	16.869	12.812	14.667	1.00 38.78	N
ATOM	1714	CA	GLU	A	108	15.765	11.859	14.916	1.00 37.27	C
ATOM	1716	CB	GLU	A	108	16.162	10.871	15.988	1.00 42.52	C

ATOM	1719	CG	GLU	A	108	17.275	9.938	15.576	1.00 47.65	C
ATOM	1722	CD	GLU	A	108	16.818	8.765	14.714	1.00 53.66	C
ATOM	1723	OE1	GLU	A	108	15.769	8.150	15.015	1.00 56.48	O
ATOM	1724	OE2	GLU	A	108	17.541	8.434	13.744	1.00 61.35	O
ATOM	1725	C	GLU	A	108	14.569	12.651	15.384	1.00 36.72	C
ATOM	1726	O	GLU	A	108	14.744	13.679	16.021	1.00 31.47	O
ATOM	1728	N	ARG	A	109	13.363	12.183	15.060	1.00 39.93	N
ATOM	1729	CA	ARG	A	109	12.120	12.933	15.329	1.00 42.17	C
ATOM	1731	CB	ARG	A	109	10.898	12.049	15.096	1.00 47.81	C
ATOM	1734	CG	ARG	A	109	10.515	11.927	13.645	1.00 57.02	C
ATOM	1737	CD	ARG	A	109	9.930	10.552	13.322	1.00 65.60	C
ATOM	1740	NE	ARG	A	109	9.725	10.384	11.880	1.00 71.93	N
ATOM	1742	CZ	ARG	A	109	9.624	9.214	11.246	1.00 76.76	C
ATOM	1743	NH1	ARG	A	109	9.710	8.054	11.909	1.00 78.98	N
ATOM	1746	NH2	ARG	A	109	9.439	9.203	9.928	1.00 77.45	N
ATOM	1749	C	ARG	A	109	12.030	13.527	16.715	1.00 40.29	C
ATOM	1750	O	ARG	A	109	11.642	14.689	16.865	1.00 38.96	O
ATOM	1752	N	LYS	A	110	12.406	12.739	17.725	1.00 39.54	N
ATOM	1753	CA	LYS	A	110	12.344	13.174	19.122	1.00 39.38	C
ATOM	1755	CB	LYS	A	110	12.961	12.125	20.053	1.00 43.53	C
ATOM	1758	CG	LYS	A	110	12.118	10.891	20.294	1.00 52.33	C
ATOM	1761	CD	LYS	A	110	12.944	9.814	21.035	1.00 58.42	C
ATOM	1764	CE	LYS	A	110	12.103	8.582	21.417	1.00 62.13	C
ATOM	1767	NZ	LYS	A	110	12.946	7.466	21.967	1.00 62.83	N
ATOM	1771	C	LYS	A	110	13.065	14.489	19.344	1.00 38.26	C
ATOM	1772	O	LYS	A	110	12.725	15.267	20.234	1.00 37.32	O
ATOM	1774	N	GLN	A	111	14.082	14.758	18.544	1.00 34.31	N
ATOM	1775	CA	GLN	A	111	14.914	15.904	18.855	1.00 32.41	C
ATOM	1777	CB	GLN	A	111	16.390	15.489	18.767	1.00 36.73	C
ATOM	1780	CG	GLN	A	111	16.814	14.608	19.934	1.00 41.25	C
ATOM	1783	CD	GLN	A	111	16.733	15.343	21.278	1.00 47.10	C
ATOM	1784	OE1	GLN	A	111	17.227	16.472	21.414	1.00 53.39	O
ATOM	1785	NE2	GLN	A	111	16.109	14.706	22.271	1.00 46.78	N
ATOM	1788	C	GLN	A	111	14.587	17.129	18.017	1.00 28.33	C
ATOM	1789	O	GLN	A	111	15.245	18.153	18.157	1.00 30.60	O
ATOM	1791	N	LEU	A	112	13.557	17.049	17.177	1.00 28.52	N
ATOM	1792	CA	LEU	A	112	13.273	18.138	16.217	1.00 28.91	C
ATOM	1794	CB	LEU	A	112	12.115	17.800	15.255	1.00 31.59	C
ATOM	1797	CG	LEU	A	112	12.427	16.844	14.114	1.00 37.44	C
ATOM	1799	CD1	LEU	A	112	11.157	16.415	13.420	1.00 37.62	C
ATOM	1803	CD2	LEU	A	112	13.392	17.494	13.122	1.00 35.96	C
ATOM	1807	C	LEU	A	112	12.956	19.394	16.948	1.00 26.84	C
ATOM	1808	O	LEU	A	112	13.375	20.482	16.550	1.00 29.07	O
ATOM	1810	N	LYS	A	113	12.260	19.251	18.075	1.00 30.84	N
ATOM	1811	CA	LYS	A	113	11.793	20.397	18.800	1.00 29.06	C
ATOM	1813	CB	LYS	A	113	10.859	19.969	19.946	1.00 35.15	C
ATOM	1816	CG	LYS	A	113	10.332	21.128	20.789	1.00 39.78	C
ATOM	1819	CD	LYS	A	113	9.258	20.690	21.808	1.00 45.07	C
ATOM	1822	CE	LYS	A	113	9.884	20.054	23.045	1.00 51.60	C
ATOM	1825	NZ	LYS	A	113	8.872	19.869	24.160	1.00 56.07	N
ATOM	1829	C	LYS	A	113	12.956	21.222	19.334	1.00 30.01	C
ATOM	1830	O	LYS	A	113	13.002	22.430	19.140	1.00 33.89	O
ATOM	1832	N	ASN	A	114	13.876	20.576	20.026	1.00 28.82	N
ATOM	1833	CA	ASN	A	114	15.058	21.255	20.559	1.00 30.81	C
ATOM	1835	CB	ASN	A	114	15.822	20.310	21.487	1.00 34.83	C
ATOM	1838	CG	ASN	A	114	15.078	20.061	22.804	1.00 38.75	C
ATOM	1839	OD1	ASN	A	114	14.236	20.869	23.223	1.00 32.18	O
ATOM	1840	ND2	ASN	A	114	15.370	18.942	23.434	1.00 29.76	N
ATOM	1843	C	ASN	A	114	16.006	21.772	19.466	1.00 26.84	C
ATOM	1844	O	ASN	A	114	16.602	22.820	19.617	1.00 26.91	O
ATOM	1846	N	ILE	A	115	16.108	21.036	18.375	1.00 27.30	N
ATOM	1847	CA	ILE	A	115	16.936	21.455	17.227	1.00 29.40	C
ATOM	1849	CB	ILE	A	115	17.120	20.283	16.229	1.00 30.43	C
ATOM	1851	CG1	ILE	A	115	18.060	19.247	16.847	1.00 31.12	C
ATOM	1854	CD1	ILE	A	115	19.463	19.844	17.250	1.00 31.35	C
ATOM	1858	CG2	ILE	A	115	17.690	20.769	14.868	1.00 31.02	C
ATOM	1862	C	ILE	A	115	16.374	22.695	16.544	1.00 27.64	C

ATOM	1863	O	ILE	A	115	17.115	23.625	16.257	1.00 29.97	O
ATOM	1865	N	ILE	A	116	15.054	22.725	16.347	1.00 29.76	N
ATOM	1866	CA	ILE	A	116	14.377	23.925	15.879	1.00 26.52	C
ATOM	1868	CB	ILE	A	116	12.832	23.752	15.875	1.00 27.91	C
ATOM	1870	CG1	ILE	A	116	12.379	22.807	14.769	1.00 30.15	C
ATOM	1873	CD1	ILE	A	116	10.940	22.334	14.918	1.00 26.58	C
ATOM	1877	CG2	ILE	A	116	12.162	25.060	15.662	1.00 19.15	C
ATOM	1881	C	ILE	A	116	14.771	25.140	16.717	1.00 22.47	C
ATOM	1882	O	ILE	A	116	15.033	26.229	16.199	1.00 23.72	O
ATOM	1884	N	THR	A	117	14.861	24.983	18.021	1.00 25.36	N
ATOM	1885	CA	THR	A	117	15.290	26.125	18.848	1.00 28.28	C
ATOM	1887	CB	THR	A	117	15.155	25.824	20.372	1.00 31.42	C
ATOM	1889	OG1	THR	A	117	13.766	25.830	20.719	1.00 36.04	O
ATOM	1891	CG2	THR	A	117	15.913	26.851	21.213	1.00 27.55	C
ATOM	1895	C	THR	A	117	16.715	26.547	18.539	1.00 26.27	C
ATOM	1896	O	THR	A	117	17.016	27.748	18.465	1.00 28.32	O
ATOM	1898	N	VAL	A	118	17.606	25.566	18.398	1.00 28.11	N
ATOM	1899	CA	VAL	A	118	19.005	25.847	17.987	1.00 29.52	C
ATOM	1901	CB	VAL	A	118	19.881	24.536	17.867	1.00 27.01	C
ATOM	1903	CG1	VAL	A	118	21.248	24.842	17.263	1.00 26.26	C
ATOM	1907	CG2	VAL	A	118	20.042	23.856	19.246	1.00 22.18	C
ATOM	1911	C	VAL	A	118	18.994	26.584	16.650	1.00 21.95	C
ATOM	1912	O	VAL	A	118	19.658	27.589	16.478	1.00 25.40	O
ATOM	1914	N	VAL	A	119	18.196	26.102	15.706	1.00 25.90	N
ATOM	1915	CA	VAL	A	119	18.209	26.704	14.360	1.00 22.24	C
ATOM	1917	CB	VAL	A	119	17.476	25.847	13.353	1.00 19.99	C
ATOM	1919	CG1	VAL	A	119	17.502	26.524	11.938	1.00 17.47	C
ATOM	1923	CG2	VAL	A	119	18.104	24.486	13.280	1.00 17.94	C
ATOM	1927	C	VAL	A	119	17.632	28.131	14.396	1.00 27.57	C
ATOM	1928	O	VAL	A	119	18.087	29.018	13.692	1.00 25.01	O
ATOM	1930	N	ILE	A	120	16.638	28.355	15.256	1.00 30.55	N
ATOM	1931	CA	ILE	A	120	16.078	29.696	15.418	1.00 26.13	C
ATOM	1933	CB	ILE	A	120	14.758	29.649	16.265	1.00 29.54	C
ATOM	1935	CG1	ILE	A	120	13.693	28.913	15.436	1.00 27.23	C
ATOM	1938	CD1	ILE	A	120	12.353	28.584	16.174	1.00 31.98	C
ATOM	1942	CG2	ILE	A	120	14.280	31.056	16.619	1.00 28.39	C
ATOM	1946	C	ILE	A	120	17.108	30.653	15.981	1.00 25.36	C
ATOM	1947	O	ILE	A	120	17.284	31.790	15.471	1.00 26.47	O
ATOM	1949	N	LYS	A	121	17.844	30.204	16.989	1.00 23.82	N
ATOM	1950	CA	LYS	A	121	18.888	31.036	17.545	1.00 29.01	C
ATOM	1952	CB	LYS	A	121	19.569	30.364	18.741	1.00 30.19	C
ATOM	1955	CG	LYS	A	121	20.602	31.237	19.452	1.00 35.71	C
ATOM	1958	CD	LYS	A	121	19.953	32.399	20.165	1.00 41.48	C
ATOM	1961	CE	LYS	A	121	20.959	33.153	21.038	1.00 45.69	C
ATOM	1964	NZ	LYS	A	121	21.347	32.324	22.201	1.00 49.45	N
ATOM	1968	C	LYS	A	121	19.931	31.354	16.479	1.00 28.05	C
ATOM	1969	O	LYS	A	121	20.387	32.472	16.371	1.00 25.47	O
ATOM	1971	N	CYS	A	122	20.333	30.336	15.731	1.00 29.02	N
ATOM	1972	CA	CYS	A	122	21.297	30.504	14.648	1.00 24.84	C
ATOM	1974	CB	CYS	A	122	21.452	29.184	13.900	1.00 23.31	C
ATOM	1977	SG	CYS	A	122	22.740	29.288	12.610	1.00 23.58	S
ATOM	1979	C	CYS	A	122	20.824	31.597	13.690	1.00 22.71	C
ATOM	1980	O	CYS	A	122	21.553	32.498	13.414	1.00 25.67	O
ATOM	1982	N	SER	A	123	19.578	31.488	13.231	1.00 26.34	N
ATOM	1983	CA	SER	A	123	18.952	32.449	12.343	1.00 26.90	C
ATOM	1985	CB	SER	A	123	17.498	32.055	12.135	1.00 27.17	C
ATOM	1988	OG	SER	A	123	17.403	30.768	11.573	1.00 27.19	O
ATOM	1990	C	SER	A	123	19.030	33.889	12.869	1.00 31.17	C
ATOM	1991	O	SER	A	123	19.428	34.814	12.160	1.00 31.11	O
ATOM	1993	N	LEU	A	124	18.679	34.069	14.133	1.00 32.31	N
ATOM	1994	CA	LEU	A	124	18.692	35.381	14.730	1.00 32.98	C
ATOM	1996	CB	LEU	A	124	18.021	35.352	16.125	1.00 35.38	C
ATOM	1999	CG	LEU	A	124	16.544	34.928	16.165	1.00 35.83	C
ATOM	2001	CD1	LEU	A	124	16.048	34.723	17.609	1.00 35.91	C
ATOM	2005	CD2	LEU	A	124	15.688	35.950	15.415	1.00 39.37	C
ATOM	2009	C	LEU	A	124	20.134	35.885	14.810	1.00 32.29	C
ATOM	2010	O	LEU	A	124	20.380	37.059	14.608	1.00 30.74	O

ATOM	2012	N	GLU A 125	21.098	35.019	15.104	1.00	29.84	N
ATOM	2013	CA	GLU A 125	22.495	35.473	15.082	1.00	28.30	C
ATOM	2015	CB	GLU A 125	23.422	34.451	15.740	1.00	34.92	C
ATOM	2018	CG	GLU A 125	23.090	34.218	17.201	1.00	36.38	C
ATOM	2021	CD	GLU A 125	24.283	33.769	18.016	1.00	40.43	C
ATOM	2022	OE1	GLU A 125	25.424	33.870	17.521	1.00	43.43	O
ATOM	2023	OE2	GLU A 125	24.077	33.327	19.173	1.00	44.49	O
ATOM	2024	C	GLU A 125	22.988	35.850	13.660	1.00	27.52	C
ATOM	2025	O	GLU A 125	23.802	36.753	13.503	1.00	27.29	O
ATOM	2027	N	ILE A 126	22.514	35.145	12.639	1.00	27.91	N
ATOM	2028	CA	ILE A 126	22.821	35.490	11.235	1.00	26.02	C
ATOM	2030	CB	ILE A 126	22.260	34.433	10.242	1.00	21.79	C
ATOM	2032	CG1	ILE A 126	23.030	33.107	10.388	1.00	23.37	C
ATOM	2035	CD1	ILE A 126	22.352	31.950	9.633	1.00	18.12	C
ATOM	2039	CG2	ILE A 126	22.329	34.897	8.793	1.00	23.36	C
ATOM	2043	C	ILE A 126	22.252	36.863	10.904	1.00	30.47	C
ATOM	2044	O	ILE A 126	22.962	37.717	10.373	1.00	27.94	O
ATOM	2046	N	HIS A 127	20.979	37.083	11.217	1.00	31.24	N
ATOM	2047	CA	HIS A 127	20.395	38.420	11.036	1.00	35.27	C
ATOM	2049	CB	HIS A 127	18.930	38.466	11.488	1.00	40.01	C
ATOM	2052	CG	HIS A 127	17.979	37.838	10.513	1.00	37.89	C
ATOM	2053	ND1	HIS A 127	17.894	38.225	9.192	1.00	43.66	N
ATOM	2055	CE1	HIS A 127	16.956	37.519	8.585	1.00	42.07	C
ATOM	2057	NE2	HIS A 127	16.432	36.683	9.462	1.00	39.56	N
ATOM	2059	CD2	HIS A 127	17.064	36.854	10.672	1.00	45.16	C
ATOM	2061	C	HIS A 127	21.223	39.461	11.764	1.00	36.45	C
ATOM	2062	O	HIS A 127	21.498	40.518	11.212	1.00	38.50	O
ATOM	2064	N	GLY A 128	21.666	39.131	12.976	1.00	39.45	N
ATOM	2065	CA	GLY A 128	22.498	40.010	13.785	1.00	40.55	C
ATOM	2068	C	GLY A 128	23.803	40.422	13.120	1.00	45.06	C
ATOM	2069	O	GLY A 128	24.410	41.436	13.483	1.00	42.39	O
ATOM	2071	N	LEU A 129	24.258	39.622	12.160	1.00	46.22	N
ATOM	2072	CA	LEU A 129	25.468	39.941	11.418	1.00	43.75	C
ATOM	2074	CB	LEU A 129	25.927	38.737	10.580	1.00	41.80	C
ATOM	2077	CG	LEU A 129	26.295	37.434	11.304	1.00	40.87	C
ATOM	2079	CD1	LEU A 129	26.674	36.341	10.323	1.00	37.77	C
ATOM	2083	CD2	LEU A 129	27.430	37.671	12.285	1.00	44.48	C
ATOM	2087	C	LEU A 129	25.208	41.122	10.503	1.00	43.76	C
ATOM	2088	O	LEU A 129	26.094	41.921	10.260	1.00	45.85	O
ATOM	2090	N	PHE A 130	23.988	41.221	9.993	1.00	46.28	N
ATOM	2091	CA	PHE A 130	23.671	42.187	8.945	1.00	50.78	C
ATOM	2093	CB	PHE A 130	23.007	41.449	7.781	1.00	47.88	C
ATOM	2096	CG	PHE A 130	23.922	40.472	7.124	1.00	48.53	C
ATOM	2097	CD1	PHE A 130	23.964	39.152	7.541	1.00	44.83	C
ATOM	2099	CE1	PHE A 130	24.841	38.254	6.954	1.00	47.23	C
ATOM	2101	CZ	PHE A 130	25.704	38.680	5.936	1.00	48.64	C
ATOM	2103	CE2	PHE A 130	25.683	39.997	5.529	1.00	48.58	C
ATOM	2105	CD2	PHE A 130	24.796	40.889	6.123	1.00	48.43	C
ATOM	2107	C	PHE A 130	22.813	43.352	9.440	1.00	56.82	C
ATOM	2108	O	PHE A 130	22.145	44.007	8.643	1.00	56.35	O
ATOM	2110	N	GLU A 131	22.878	43.629	10.747	1.00	64.34	N
ATOM	2111	CA	GLU A 131	21.986	44.610	11.394	1.00	71.99	C
ATOM	2113	CB	GLU A 131	22.005	44.444	12.916	1.00	72.73	C
ATOM	2116	CG	GLU A 131	20.945	43.483	13.433	1.00	74.00	C
ATOM	2119	CD	GLU A 131	21.068	43.207	14.927	1.00	75.40	C
ATOM	2120	OE1	GLU A 131	22.015	43.711	15.577	1.00	75.45	O
ATOM	2121	OE2	GLU A 131	20.212	42.466	15.449	1.00	77.57	O
ATOM	2122	C	GLU A 131	22.269	46.072	11.041	1.00	76.04	C
ATOM	2123	O	GLU A 131	21.355	46.892	11.044	1.00	77.31	O
ATOM	2125	N	THR A 132	23.526	46.405	10.771	1.00	82.05	N
ATOM	2126	CA	THR A 132	23.874	47.736	10.274	1.00	86.80	C
ATOM	2128	CB	THR A 132	24.288	48.699	11.420	1.00	87.60	C
ATOM	2130	OG1	THR A 132	25.362	48.120	12.176	1.00	88.45	O
ATOM	2132	CG2	THR A 132	23.102	49.000	12.346	1.00	87.00	C
ATOM	2136	C	THR A 132	24.998	47.606	9.253	1.00	90.05	C
ATOM	2137	O	THR A 132	26.085	48.169	9.420	1.00	90.10	O
ATOM	2139	N	GLN A 133	24.726	46.826	8.210	1.00	94.36	N

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ATOM   2140  CA  GLN A 133      25.657  46.642   7.100  1.00 97.79           C
ATOM   2142  CB  GLN A 133      26.008  45.160   6.923  1.00 95.85           C
ATOM   2145  CG  GLN A 133      26.917  44.608   8.022  1.00 93.46           C
ATOM   2148  CD  GLN A 133      28.144  43.906   7.473  1.00 91.65           C
ATOM   2149  OE1 GLN A 133      28.889  44.474   6.674  1.00 89.41           O
ATOM   2150  NE2 GLN A 133      28.367  42.671   7.906  1.00 91.85           N
ATOM   2153  C   GLN A 133      25.011  47.193   5.840  1.00102.49           C
ATOM   2154  O   GLN A 133      23.804  47.075   5.678  1.00104.45           O
ATOM   2156  N   GLU A 134      25.812  47.789   4.954  1.00108.06           N
ATOM   2157  CA  GLU A 134      25.286  48.543   3.801  1.00111.98           C
ATOM   2159  CB  GLU A 134      24.379  49.689   4.317  1.00112.48           C
ATOM   2162  CG  GLU A 134      24.184  50.936   3.436  1.00112.42           C
ATOM   2165  CD  GLU A 134      25.189  52.050   3.726  1.00111.87           C
ATOM   2166  OE1 GLU A 134      24.904  53.213   3.361  1.00112.36           O
ATOM   2167  OE2 GLU A 134      26.251  51.775   4.323  1.00110.04           O
ATOM   2168  C   GLU A 134      26.436  49.056   2.925  1.00114.66           C
ATOM   2169  O   GLU A 134      27.582  49.095   3.376  1.00116.63           O
ATOM   2171  N   TRP A 135      26.133  49.405   1.672  1.00117.26           N
ATOM   2172  CA  TRP A 135      27.099  50.053   0.774  1.00118.17           C
ATOM   2174  CB  TRP A 135      27.317  49.204  -0.481  1.00119.23           C
ATOM   2177  CG  TRP A 135      27.854  47.858  -0.219  1.00121.09           C
ATOM   2178  CD1 TRP A 135      27.333  46.676  -0.649  1.00121.66           C
ATOM   2180  NE1 TRP A 135      28.113  45.636  -0.216  1.00122.58           N
ATOM   2182  CE2 TRP A 135      29.161  46.134   0.514  1.00122.27           C
ATOM   2183  CD2 TRP A 135      29.033  47.535   0.531  1.00122.10           C
ATOM   2184  CE3 TRP A 135      29.992  48.294   1.221  1.00122.35           C
ATOM   2186  CZ3 TRP A 135      31.035  47.631   1.865  1.00121.85           C
ATOM   2188  CH2 TRP A 135      31.131  46.234   1.829  1.00122.14           C
ATOM   2190  CZ2 TRP A 135      30.205  45.472   1.161  1.00122.23           C
ATOM   2192  C   TRP A 135      26.638  51.433   0.327  1.00117.75           C
ATOM   2193  O   TRP A 135      25.589  51.915   0.745  1.00117.81           O
ATOM   2195  N   GLU A 136      27.460  52.065  -0.509  1.00117.44           N
ATOM   2196  CA  GLU A 136      27.056  53.192  -1.356  1.00117.02           C
ATOM   2198  CB  GLU A 136      27.295  52.821  -2.836  1.00115.88           C
ATOM   2201  CG  GLU A 136      26.920  51.368  -3.189  1.00113.44           C
ATOM   2204  CD  GLU A 136      26.709  51.137  -4.674  1.00111.24           C
ATOM   2205  OE1 GLU A 136      27.323  51.845  -5.495  1.00111.03           O
ATOM   2206  OE2 GLU A 136      25.925  50.234  -5.027  1.00108.57           O
ATOM   2207  C   GLU A 136      25.601  53.645  -1.150  1.00117.16           C
ATOM   2208  O   GLU A 136      24.732  53.360  -1.980  1.00117.70           O
ATOM   2210  N   GLU A 137      25.350  54.337  -0.036  1.00117.24           N
ATOM   2211  CA  GLU A 137      24.020  54.889   0.291  1.00116.94           C
ATOM   2213  CB  GLU A 137      23.671  56.041  -0.678  1.00116.76           C
ATOM   2216  CG  GLU A 137      22.230  56.577  -0.622  1.00115.85           C
ATOM   2219  CD  GLU A 137      21.843  57.125   0.739  1.00114.91           C
ATOM   2220  OE1 GLU A 137      22.728  57.630   1.459  1.00114.99           O
ATOM   2221  OE2 GLU A 137      20.644  57.057   1.082  1.00112.40           O
ATOM   2222  C   GLU A 137      22.921  53.805   0.334  1.00116.52           C
ATOM   2223  O   GLU A 137      22.540  53.340   1.414  1.00116.39           O
ATOM   2225  N   GLY A 138      22.430  53.399  -0.835  1.00115.39           N
ATOM   2226  CA  GLY A 138      21.407  52.362  -0.928  1.00113.81           C
ATOM   2229  C   GLY A 138      22.003  50.978  -0.753  1.00112.67           C
ATOM   2230  O   GLY A 138      22.947  50.794   0.019  1.00112.59           O
ATOM   2232  N   LEU A 139      21.447  50.010  -1.480  1.00110.87           N
ATOM   2233  CA  LEU A 139      21.858  48.603  -1.407  1.00108.76           C
ATOM   2235  CB  LEU A 139      23.064  48.338  -2.321  1.00108.95           C
ATOM   2238  CG  LEU A 139      23.028  46.980  -3.040  1.00109.92           C
ATOM   2240  CD1 LEU A 139      23.416  47.114  -4.513  1.00110.13           C
ATOM   2244  CD2 LEU A 139      23.902  45.951  -2.328  1.00110.25           C
ATOM   2248  C   LEU A 139      22.098  48.157   0.050  1.00106.44           C
ATOM   2249  O   LEU A 139      23.213  48.227   0.588  1.00106.18           O
ATOM   2251  N   ASP A 140      21.014  47.692   0.665  1.00102.18           N
ATOM   2252  CA  ASP A 140      20.951  47.442   2.100  1.00 97.57           C
ATOM   2254  CB  ASP A 140      19.535  46.981   2.505  1.00 98.69           C
ATOM   2257  CG  ASP A 140      18.428  47.891   1.970  1.00 99.60           C
ATOM   2258  OD1 ASP A 140      17.279  47.413   1.849  1.00 97.11           O
ATOM   2259  OD2 ASP A 140      18.704  49.076   1.668  1.00100.71           O
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ATOM	2260	C	ASP	A	140	21.954	46.396	2.579	1.00 92.12	C
ATOM	2261	O	ASP	A	140	22.558	46.582	3.625	1.00 92.79	O
ATOM	2263	N	ILE	A	141	22.130	45.319	1.806	1.00 84.51	N
ATOM	2264	CA	ILE	A	141	22.754	44.046	2.272	1.00 78.26	C
ATOM	2266	CB	ILE	A	141	24.321	44.110	2.455	1.00 78.16	C
ATOM	2268	CG1	ILE	A	141	24.913	42.736	2.813	1.00 77.38	C
ATOM	2271	CD1	ILE	A	141	24.382	41.563	2.020	1.00 75.99	C
ATOM	2275	CG2	ILE	A	141	24.734	45.051	3.554	1.00 79.47	C
ATOM	2279	C	ILE	A	141	22.075	43.474	3.529	1.00 72.21	C
ATOM	2280	O	ILE	A	141	22.542	43.675	4.654	1.00 67.31	O
ATOM	2282	N	ARG	A	142	20.963	42.773	3.306	1.00 65.01	N
ATOM	2283	CA	ARG	A	142	20.226	42.073	4.365	1.00 62.96	C
ATOM	2285	CB	ARG	A	142	18.884	42.768	4.661	1.00 65.81	C
ATOM	2288	CG	ARG	A	142	18.804	43.436	6.027	1.00 70.06	C
ATOM	2291	CD	ARG	A	142	19.778	44.591	6.134	1.00 73.29	C
ATOM	2294	NE	ARG	A	142	19.636	45.346	7.380	1.00 75.79	N
ATOM	2296	CZ	ARG	A	142	20.366	46.417	7.690	1.00 78.03	C
ATOM	2297	NH1	ARG	A	142	21.301	46.862	6.861	1.00 79.38	N
ATOM	2300	NH2	ARG	A	142	20.169	47.047	8.836	1.00 79.51	N
ATOM	2303	C	ARG	A	142	19.966	40.627	3.957	1.00 54.87	C
ATOM	2304	O	ARG	A	142	20.206	40.240	2.811	1.00 48.86	O
ATOM	2306	N	VAL	A	143	19.459	39.842	4.901	1.00 47.43	N
ATOM	2307	CA	VAL	A	143	19.121	38.456	4.630	1.00 44.87	C
ATOM	2309	CB	VAL	A	143	20.101	37.462	5.369	1.00 47.62	C
ATOM	2311	CG1	VAL	A	143	21.536	37.999	5.318	1.00 48.52	C
ATOM	2315	CG2	VAL	A	143	19.687	37.231	6.793	1.00 48.14	C
ATOM	2319	C	VAL	A	143	17.666	38.156	4.956	1.00 36.67	C
ATOM	2320	O	VAL	A	143	17.025	38.852	5.747	1.00 36.92	O
ATOM	2322	N	LYS	A	144	17.143	37.146	4.294	1.00 34.16	N
ATOM	2323	CA	LYS	A	144	15.834	36.569	4.607	1.00 39.71	C
ATOM	2325	CB	LYS	A	144	14.868	36.661	3.413	1.00 40.15	C
ATOM	2328	CG	LYS	A	144	14.775	38.019	2.737	1.00 48.11	C
ATOM	2331	CD	LYS	A	144	13.993	37.905	1.429	1.00 54.04	C
ATOM	2334	CE	LYS	A	144	13.679	39.271	0.825	1.00 60.03	C
ATOM	2337	NZ	LYS	A	144	13.201	39.152	-0.598	1.00 64.04	N
ATOM	2341	C	LYS	A	144	16.049	35.089	4.924	1.00 36.41	C
ATOM	2342	O	LYS	A	144	16.791	34.415	4.203	1.00 34.59	O
ATOM	2344	N	ILE	A	145	15.384	34.590	5.968	1.00 34.43	N
ATOM	2345	CA	ILE	A	145	15.503	33.178	6.362	1.00 30.24	C
ATOM	2347	CB	ILE	A	145	16.263	33.015	7.728	1.00 28.76	C
ATOM	2349	CG1	ILE	A	145	17.684	33.570	7.605	1.00 27.19	C
ATOM	2352	CD1	ILE	A	145	18.552	33.645	8.916	1.00 24.94	C
ATOM	2356	CG2	ILE	A	145	16.242	31.536	8.174	1.00 25.71	C
ATOM	2360	C	ILE	A	145	14.136	32.502	6.437	1.00 29.55	C
ATOM	2361	O	ILE	A	145	13.227	32.990	7.123	1.00 35.34	O
ATOM	2363	N	GLY	A	146	13.984	31.391	5.718	1.00 26.10	N
ATOM	2364	CA	GLY	A	146	12.876	30.485	5.916	1.00 26.89	C
ATOM	2367	C	GLY	A	146	13.380	29.236	6.620	1.00 30.37	C
ATOM	2368	O	GLY	A	146	14.471	28.718	6.279	1.00 23.41	O
ATOM	2370	N	LEU	A	147	12.605	28.747	7.594	1.00 29.74	N
ATOM	2371	CA	LEU	A	147	12.915	27.491	8.300	1.00 28.21	C
ATOM	2373	CB	LEU	A	147	13.166	27.692	9.801	1.00 25.07	C
ATOM	2376	CG	LEU	A	147	14.219	28.675	10.273	1.00 29.69	C
ATOM	2378	CD1	LEU	A	147	14.314	28.640	11.800	1.00 19.55	C
ATOM	2382	CD2	LEU	A	147	15.579	28.365	9.637	1.00 27.51	C
ATOM	2386	C	LEU	A	147	11.778	26.529	8.112	1.00 32.04	C
ATOM	2387	O	LEU	A	147	10.616	26.922	8.065	1.00 34.61	O
ATOM	2389	N	ALA	A	148	12.116	25.260	8.004	1.00 32.42	N
ATOM	2390	CA	ALA	A	148	11.128	24.225	7.843	1.00 26.89	C
ATOM	2392	CB	ALA	A	148	10.920	23.917	6.393	1.00 27.58	C
ATOM	2396	C	ALA	A	148	11.639	23.017	8.618	1.00 31.46	C
ATOM	2397	O	ALA	A	148	12.828	22.921	8.925	1.00 30.92	O
ATOM	2399	N	ALA	A	149	10.728	22.130	8.981	1.00 30.47	N
ATOM	2400	CA	ALA	A	149	11.042	20.934	9.762	1.00 31.63	C
ATOM	2402	CB	ALA	A	149	10.907	21.204	11.248	1.00 25.62	C
ATOM	2406	C	ALA	A	149	10.117	19.813	9.328	1.00 31.62	C
ATOM	2407	O	ALA	A	149	8.985	20.069	8.915	1.00 32.49	O

ATOM	2409	N	GLY A 150	10.612	18.580	9.372	1.00	32.47	N
ATOM	2410	CA	GLY A 150	9.778	17.418	9.074	1.00	31.29	C
ATOM	2413	C	GLY A 150	10.540	16.350	8.323	1.00	33.44	C
ATOM	2414	O	GLY A 150	11.776	16.275	8.392	1.00	29.56	O
ATOM	2416	N	HIS A 151	9.790	15.540	7.584	1.00	29.56	N
ATOM	2417	CA	HIS A 151	10.330	14.430	6.836	1.00	34.24	C
ATOM	2419	CB	HIS A 151	9.214	13.473	6.423	1.00	39.13	C
ATOM	2422	CG	HIS A 151	8.364	13.019	7.567	1.00	47.34	C
ATOM	2423	ND1	HIS A 151	8.894	12.661	8.789	1.00	48.37	N
ATOM	2425	CE1	HIS A 151	7.910	12.322	9.606	1.00	54.68	C
ATOM	2427	NE2	HIS A 151	6.766	12.447	8.957	1.00	55.26	N
ATOM	2429	CD2	HIS A 151	7.021	12.884	7.681	1.00	51.63	C
ATOM	2431	C	HIS A 151	11.066	14.928	5.586	1.00	31.12	C
ATOM	2432	O	HIS A 151	10.580	15.806	4.889	1.00	32.52	O
ATOM	2434	N	ILE A 152	12.228	14.349	5.321	1.00	30.68	N
ATOM	2435	CA	ILE A 152	13.044	14.701	4.152	1.00	26.25	C
ATOM	2437	CB	ILE A 152	14.251	15.589	4.552	1.00	25.68	C
ATOM	2439	CG1	ILE A 152	13.748	16.881	5.185	1.00	22.19	C
ATOM	2442	CD1	ILE A 152	14.724	17.541	6.170	1.00	24.99	C
ATOM	2446	CG2	ILE A 152	15.111	15.954	3.326	1.00	25.67	C
ATOM	2450	C	ILE A 152	13.473	13.440	3.458	1.00	30.12	C
ATOM	2451	O	ILE A 152	13.810	12.437	4.088	1.00	27.00	O
ATOM	2453	N	SER A 153	13.400	13.471	2.137	1.00	30.77	N
ATOM	2454	CA	SER A 153	13.916	12.384	1.336	1.00	31.80	C
ATOM	2456	CB	SER A 153	12.891	11.926	0.290	1.00	31.01	C
ATOM	2459	OG	SER A 153	11.612	11.733	0.862	1.00	39.29	O
ATOM	2461	C	SER A 153	15.112	12.943	0.602	1.00	29.56	C
ATOM	2462	O	SER A 153	15.132	14.108	0.237	1.00	27.44	O
ATOM	2464	N	MET A 154	16.095	12.095	0.393	1.00	30.93	N
ATOM	2465	CA	MET A 154	17.277	12.427	-0.354	1.00	33.03	C
ATOM	2467	CB	MET A 154	18.514	12.151	0.488	1.00	34.36	C
ATOM	2470	CG	MET A 154	19.817	12.547	-0.154	1.00	41.40	C
ATOM	2473	SD	MET A 154	21.186	11.596	0.509	1.00	44.98	S
ATOM	2474	CE	MET A 154	22.500	12.585	-0.144	1.00	47.47	C
ATOM	2478	C	MET A 154	17.262	11.514	-1.559	1.00	32.33	C
ATOM	2479	O	MET A 154	17.047	10.303	-1.438	1.00	32.78	O
ATOM	2481	N	LEU A 155	17.495	12.101	-2.722	1.00	27.54	N
ATOM	2482	CA	LEU A 155	17.668	11.346	-3.936	1.00	30.41	C
ATOM	2484	CB	LEU A 155	16.680	11.835	-4.993	1.00	28.94	C
ATOM	2487	CG	LEU A 155	16.824	11.116	-6.343	1.00	34.93	C
ATOM	2489	CD1	LEU A 155	16.403	9.645	-6.254	1.00	32.47	C
ATOM	2493	CD2	LEU A 155	16.010	11.826	-7.385	1.00	35.27	C
ATOM	2497	C	LEU A 155	19.102	11.534	-4.415	1.00	28.04	C
ATOM	2498	O	LEU A 155	19.596	12.659	-4.499	1.00	32.27	O
ATOM	2500	N	VAL A 156	19.762	10.432	-4.731	1.00	31.02	N
ATOM	2501	CA	VAL A 156	21.064	10.472	-5.338	1.00	27.95	C
ATOM	2503	CB	VAL A 156	22.121	9.783	-4.446	1.00	32.60	C
ATOM	2505	CG1	VAL A 156	23.453	9.582	-5.203	1.00	34.28	C
ATOM	2509	CG2	VAL A 156	22.337	10.622	-3.184	1.00	33.17	C
ATOM	2513	C	VAL A 156	20.914	9.845	-6.724	1.00	28.53	C
ATOM	2514	O	VAL A 156	20.365	8.782	-6.863	1.00	26.86	O
ATOM	2516	N	PHE A 157	21.375	10.548	-7.750	1.00	27.23	N
ATOM	2517	CA	PHE A 157	21.293	10.061	-9.133	1.00	29.09	C
ATOM	2519	CB	PHE A 157	20.009	10.547	-9.812	1.00	27.36	C
ATOM	2522	CG	PHE A 157	19.884	12.030	-9.858	1.00	26.28	C
ATOM	2523	CD1	PHE A 157	20.273	12.726	-10.983	1.00	27.79	C
ATOM	2525	CE1	PHE A 157	20.177	14.112	-11.027	1.00	29.24	C
ATOM	2527	CZ	PHE A 157	19.653	14.795	-9.943	1.00	27.46	C
ATOM	2529	CE2	PHE A 157	19.273	14.098	-8.800	1.00	28.64	C
ATOM	2531	CD2	PHE A 157	19.392	12.723	-8.773	1.00	31.00	C
ATOM	2533	C	PHE A 157	22.541	10.454	-9.922	1.00	26.53	C
ATOM	2534	O	PHE A 157	23.366	11.256	-9.458	1.00	22.51	O
ATOM	2536	N	GLY A 158	22.708	9.844	-11.089	1.00	25.06	N
ATOM	2537	CA	GLY A 158	23.898	10.050	-11.878	1.00	22.25	C
ATOM	2540	C	GLY A 158	24.277	8.850	-12.695	1.00	24.65	C
ATOM	2541	O	GLY A 158	23.505	7.888	-12.823	1.00	28.46	O
ATOM	2543	N	ASP A 159	25.488	8.885	-13.225	1.00	26.23	N

ATOM	2544	CA	ASP	A	159	25.993	7.788	-14.021	1.00	29.99	C
ATOM	2546	CB	ASP	A	159	26.051	8.176	-15.503	1.00	28.99	C
ATOM	2549	CG	ASP	A	159	26.902	9.391	-15.767	1.00	29.52	C
ATOM	2550	OD1	ASP	A	159	27.808	9.713	-14.970	1.00	25.24	O
ATOM	2551	OD2	ASP	A	159	26.689	10.026	-16.813	1.00	30.34	O
ATOM	2552	C	ASP	A	159	27.327	7.356	-13.449	1.00	34.02	C
ATOM	2553	O	ASP	A	159	27.561	7.530	-12.243	1.00	30.50	O
ATOM	2555	N	GLU	A	160	28.179	6.764	-14.281	1.00	30.91	N
ATOM	2556	CA	GLU	A	160	29.390	6.173	-13.777	1.00	35.93	C
ATOM	2558	CB	GLU	A	160	29.926	5.107	-14.729	1.00	40.77	C
ATOM	2561	CG	GLU	A	160	29.208	3.764	-14.572	1.00	48.44	C
ATOM	2564	CD	GLU	A	160	29.528	3.082	-13.242	1.00	57.25	C
ATOM	2565	OE1	GLU	A	160	30.733	2.908	-12.916	1.00	62.60	O
ATOM	2566	OE2	GLU	A	160	28.568	2.716	-12.520	1.00	64.54	O
ATOM	2567	C	GLU	A	160	30.446	7.221	-13.470	1.00	34.62	C
ATOM	2568	O	GLU	A	160	31.387	6.934	-12.754	1.00	32.41	O
ATOM	2570	N	THR	A	161	30.266	8.437	-13.986	1.00	32.36	N
ATOM	2571	CA	THR	A	161	31.231	9.493	-13.795	1.00	31.35	C
ATOM	2573	CB	THR	A	161	31.854	9.860	-15.140	1.00	29.10	C
ATOM	2575	OG1	THR	A	161	30.827	10.215	-16.050	1.00	39.23	O
ATOM	2577	CG2	THR	A	161	32.540	8.667	-15.714	1.00	37.28	C
ATOM	2581	C	THR	A	161	30.684	10.725	-13.052	1.00	28.63	C
ATOM	2582	O	THR	A	161	31.464	11.503	-12.558	1.00	24.01	O
ATOM	2584	N	HIS	A	162	29.367	10.896	-12.965	1.00	26.17	N
ATOM	2585	CA	HIS	A	162	28.791	12.088	-12.339	1.00	26.27	C
ATOM	2587	CB	HIS	A	162	28.200	13.049	-13.371	1.00	28.58	C
ATOM	2590	CG	HIS	A	162	29.160	13.442	-14.446	1.00	38.20	C
ATOM	2591	ND1	HIS	A	162	30.277	14.217	-14.200	1.00	42.95	N
ATOM	2593	CE1	HIS	A	162	30.942	14.389	-15.326	1.00	43.11	C
ATOM	2595	NE2	HIS	A	162	30.294	13.764	-16.293	1.00	41.72	N
ATOM	2597	CD2	HIS	A	162	29.178	13.163	-15.769	1.00	39.64	C
ATOM	2599	C	HIS	A	162	27.727	11.668	-11.374	1.00	22.73	C
ATOM	2600	O	HIS	A	162	26.992	10.715	-11.618	1.00	23.20	O
ATOM	2602	N	SER	A	163	27.664	12.359	-10.252	1.00	20.59	N
ATOM	2603	CA	SER	A	163	26.583	12.175	-9.294	1.00	21.45	C
ATOM	2605	CB	SER	A	163	27.052	11.450	-8.069	1.00	21.86	C
ATOM	2608	OG	SER	A	163	27.681	10.227	-8.405	1.00	25.07	O
ATOM	2610	C	SER	A	163	25.970	13.496	-8.874	1.00	23.99	C
ATOM	2611	O	SER	A	163	26.608	14.568	-8.933	1.00	18.25	O
ATOM	2613	N	HIS	A	164	24.708	13.410	-8.469	1.00	19.64	N
ATOM	2614	CA	HIS	A	164	23.947	14.568	-8.054	1.00	23.04	C
ATOM	2616	CB	HIS	A	164	23.064	15.045	-9.194	1.00	24.66	C
ATOM	2619	CG	HIS	A	164	23.832	15.601	-10.337	1.00	21.90	C
ATOM	2620	ND1	HIS	A	164	24.278	16.899	-10.358	1.00	23.73	N
ATOM	2622	CE1	HIS	A	164	24.961	17.108	-11.466	1.00	19.68	C
ATOM	2624	NE2	HIS	A	164	24.966	15.988	-12.171	1.00	19.56	N
ATOM	2626	CD2	HIS	A	164	24.281	15.024	-11.475	1.00	22.07	C
ATOM	2628	C	HIS	A	164	23.080	14.107	-6.961	1.00	23.05	C
ATOM	2629	O	HIS	A	164	22.755	12.924	-6.922	1.00	27.51	O
ATOM	2631	N	PHE	A	165	22.733	15.013	-6.057	1.00	22.99	N
ATOM	2632	CA	PHE	A	165	21.730	14.713	-5.048	1.00	24.30	C
ATOM	2634	CB	PHE	A	165	22.346	14.392	-3.697	1.00	25.48	C
ATOM	2637	CG	PHE	A	165	22.785	15.611	-2.939	1.00	24.91	C
ATOM	2638	CD1	PHE	A	165	21.968	16.176	-1.967	1.00	23.78	C
ATOM	2640	CE1	PHE	A	165	22.361	17.284	-1.279	1.00	25.61	C
ATOM	2642	CZ	PHE	A	165	23.556	17.863	-1.556	1.00	20.86	C
ATOM	2644	CE2	PHE	A	165	24.369	17.333	-2.524	1.00	27.67	C
ATOM	2646	CD2	PHE	A	165	23.981	16.196	-3.213	1.00	23.52	C
ATOM	2648	C	PHE	A	165	20.719	15.844	-4.895	1.00	23.66	C
ATOM	2649	O	PHE	A	165	20.931	16.971	-5.314	1.00	23.02	O
ATOM	2651	N	LEU	A	166	19.622	15.492	-4.265	1.00	26.02	N
ATOM	2652	CA	LEU	A	166	18.486	16.353	-4.075	1.00	27.02	C
ATOM	2654	CB	LEU	A	166	17.416	16.035	-5.108	1.00	31.06	C
ATOM	2657	CG	LEU	A	166	17.684	16.525	-6.503	1.00	33.28	C
ATOM	2659	CD1	LEU	A	166	16.530	16.108	-7.404	1.00	33.66	C
ATOM	2663	CD2	LEU	A	166	17.846	18.027	-6.416	1.00	40.48	C
ATOM	2667	C	LEU	A	166	17.868	15.994	-2.768	1.00	25.12	C

ATOM	2668	O	LEU	A	166	17.829	14.816	-2.405	1.00	23.36	O
ATOM	2670	N	VAL	A	167	17.382	17.007	-2.065	1.00	23.93	N
ATOM	2671	CA	VAL	A	167	16.489	16.784	-0.955	1.00	27.07	C
ATOM	2673	CB	VAL	A	167	16.902	17.506	0.338	1.00	25.28	C
ATOM	2675	CG1	VAL	A	167	18.148	16.866	0.877	1.00	32.43	C
ATOM	2679	CG2	VAL	A	167	17.116	18.986	0.112	1.00	25.49	C
ATOM	2683	C	VAL	A	167	15.089	17.211	-1.428	1.00	29.44	C
ATOM	2684	O	VAL	A	167	14.905	18.263	-2.094	1.00	27.92	O
ATOM	2686	N	ILE	A	168	14.135	16.373	-1.059	1.00	28.82	N
ATOM	2687	CA	ILE	A	168	12.786	16.352	-1.608	1.00	29.44	C
ATOM	2689	CB	ILE	A	168	12.536	15.045	-2.427	1.00	35.59	C
ATOM	2691	CG1	ILE	A	168	13.622	14.827	-3.475	1.00	41.29	C
ATOM	2694	CD1	ILE	A	168	13.876	16.030	-4.297	1.00	41.86	C
ATOM	2698	CG2	ILE	A	168	11.147	15.051	-3.100	1.00	38.53	C
ATOM	2702	C	ILE	A	168	11.843	16.266	-0.439	1.00	32.28	C
ATOM	2703	O	ILE	A	168	12.201	15.706	0.606	1.00	25.78	O
ATOM	2705	N	GLY	A	169	10.634	16.789	-0.634	1.00	30.24	N
ATOM	2706	CA	GLY	A	169	9.512	16.536	0.269	1.00	33.40	C
ATOM	2709	C	GLY	A	169	8.862	17.814	0.723	1.00	31.39	C
ATOM	2710	O	GLY	A	169	9.195	18.898	0.243	1.00	34.57	O
ATOM	2712	N	GLN	A	170	7.935	17.708	1.674	1.00	38.25	N
ATOM	2713	CA	GLN	A	170	7.090	18.868	1.999	1.00	34.27	C
ATOM	2715	CB	GLN	A	170	5.802	18.458	2.735	1.00	38.70	C
ATOM	2718	CG	GLN	A	170	4.710	19.574	2.782	1.00	43.96	C
ATOM	2721	CD	GLN	A	170	4.337	20.110	1.381	1.00	47.41	C
ATOM	2722	OE1	GLN	A	170	4.128	19.338	0.445	1.00	52.56	O
ATOM	2723	NE2	GLN	A	170	4.266	21.435	1.244	1.00	48.52	N
ATOM	2726	C	GLN	A	170	7.896	19.882	2.779	1.00	30.98	C
ATOM	2727	O	GLN	A	170	7.713	21.071	2.616	1.00	36.14	O
ATOM	2729	N	ALA	A	171	8.803	19.416	3.625	1.00	30.87	N
ATOM	2730	CA	ALA	A	171	9.650	20.329	4.403	1.00	29.49	C
ATOM	2732	CB	ALA	A	171	10.470	19.541	5.397	1.00	29.03	C
ATOM	2736	C	ALA	A	171	10.564	21.175	3.475	1.00	28.64	C
ATOM	2737	O	ALA	A	171	10.796	22.361	3.711	1.00	33.76	O
ATOM	2739	N	VAL	A	172	11.016	20.577	2.378	1.00	30.20	N
ATOM	2740	CA	VAL	A	172	11.811	21.295	1.384	1.00	26.20	C
ATOM	2742	CB	VAL	A	172	12.435	20.304	0.420	1.00	24.34	C
ATOM	2744	CG1	VAL	A	172	13.212	21.035	-0.707	1.00	27.80	C
ATOM	2748	CG2	VAL	A	172	13.368	19.291	1.211	1.00	21.80	C
ATOM	2752	C	VAL	A	172	10.922	22.334	0.667	1.00	29.43	C
ATOM	2753	O	VAL	A	172	11.247	23.538	0.617	1.00	27.22	O
ATOM	2755	N	ASP	A	173	9.784	21.878	0.152	1.00	33.30	N
ATOM	2756	CA	ASP	A	173	8.801	22.794	-0.460	1.00	34.10	C
ATOM	2758	CB	ASP	A	173	7.503	22.070	-0.829	1.00	34.91	C
ATOM	2761	CG	ASP	A	173	7.715	20.899	-1.758	1.00	39.10	C
ATOM	2762	OD1	ASP	A	173	8.808	20.808	-2.354	1.00	42.82	O
ATOM	2763	OD2	ASP	A	173	6.789	20.052	-1.893	1.00	45.23	O
ATOM	2764	C	ASP	A	173	8.482	23.918	0.509	1.00	32.41	C
ATOM	2765	O	ASP	A	173	8.440	25.072	0.144	1.00	40.29	O
ATOM	2767	N	ASP	A	174	8.268	23.561	1.767	1.00	35.59	N
ATOM	2768	CA	ASP	A	174	7.957	24.528	2.801	1.00	32.25	C
ATOM	2770	CB	ASP	A	174	7.661	23.807	4.117	1.00	34.63	C
ATOM	2773	CG	ASP	A	174	6.274	23.174	4.136	1.00	38.06	C
ATOM	2774	OD1	ASP	A	174	5.488	23.446	3.187	1.00	40.40	O
ATOM	2775	OD2	ASP	A	174	6.005	22.395	5.077	1.00	38.07	O
ATOM	2776	C	ASP	A	174	9.033	25.550	3.059	1.00	31.70	C
ATOM	2777	O	ASP	A	174	8.726	26.695	3.321	1.00	28.90	O
ATOM	2779	N	VAL	A	175	10.301	25.150	3.049	1.00	30.74	N
ATOM	2780	CA	VAL	A	175	11.356	26.111	3.374	1.00	29.60	C
ATOM	2782	CB	VAL	A	175	12.700	25.420	3.727	1.00	26.42	C
ATOM	2784	CG1	VAL	A	175	13.449	24.928	2.488	1.00	28.39	C
ATOM	2788	CG2	VAL	A	175	13.531	26.333	4.566	1.00	28.40	C
ATOM	2792	C	VAL	A	175	11.469	27.129	2.239	1.00	32.66	C
ATOM	2793	O	VAL	A	175	11.846	28.278	2.460	1.00	31.44	O
ATOM	2795	N	ARG	A	176	11.115	26.695	1.035	1.00	37.38	N
ATOM	2796	CA	ARG	A	176	11.085	27.584	-0.128	1.00	41.12	C
ATOM	2798	CB	ARG	A	176	10.907	26.796	-1.427	1.00	42.04	C

ATOM	2801	CG	ARG	A	176	10.776	27.665	-2.695	1.00 51.52	C
ATOM	2804	CD	ARG	A	176	12.102	27.838	-3.437	1.00 60.23	C
ATOM	2807	NE	ARG	A	176	12.258	29.166	-4.046	1.00 68.23	N
ATOM	2809	CZ	ARG	A	176	13.332	29.560	-4.736	1.00 70.74	C
ATOM	2810	NH1	ARG	A	176	14.359	28.726	-4.916	1.00 69.33	N
ATOM	2813	NH2	ARG	A	176	13.383	30.797	-5.243	1.00 69.89	N
ATOM	2816	C	ARG	A	176	9.948	28.580	0.073	1.00 35.65	C
ATOM	2817	O	ARG	A	176	10.170	29.778	0.012	1.00 34.81	O
ATOM	2819	N	LEU	A	177	8.751	28.077	0.361	1.00 36.40	N
ATOM	2820	CA	LEU	A	177	7.586	28.952	0.523	1.00 40.19	C
ATOM	2822	CB	LEU	A	177	6.308	28.124	0.787	1.00 42.92	C
ATOM	2825	CG	LEU	A	177	5.898	27.165	-0.347	1.00 43.93	C
ATOM	2827	CD1	LEU	A	177	4.699	26.285	0.030	1.00 41.25	C
ATOM	2831	CD2	LEU	A	177	5.627	27.923	-1.676	1.00 45.52	C
ATOM	2835	C	LEU	A	177	7.848	29.940	1.643	1.00 36.68	C
ATOM	2836	O	LEU	A	177	7.654	31.137	1.488	1.00 39.26	O
ATOM	2838	N	ALA	A	178	8.342	29.432	2.764	1.00 37.98	N
ATOM	2839	CA	ALA	A	178	8.660	30.258	3.931	1.00 34.49	C
ATOM	2841	CB	ALA	A	178	9.213	29.387	5.053	1.00 31.86	C
ATOM	2845	C	ALA	A	178	9.654	31.344	3.595	1.00 40.58	C
ATOM	2846	O	ALA	A	178	9.524	32.483	4.056	1.00 38.61	O
ATOM	2848	N	GLN	A	179	10.670	30.999	2.806	1.00 43.65	N
ATOM	2849	CA	GLN	A	179	11.697	31.981	2.453	1.00 46.70	C
ATOM	2851	CB	GLN	A	179	12.906	31.293	1.824	1.00 49.59	C
ATOM	2854	CG	GLN	A	179	14.177	32.151	1.803	1.00 52.57	C
ATOM	2857	CD	GLN	A	179	14.214	33.126	0.644	1.00 53.88	C
ATOM	2858	OE1	GLN	A	179	14.730	34.242	0.778	1.00 54.04	O
ATOM	2859	NE2	GLN	A	179	13.660	32.717	-0.499	1.00 51.61	N
ATOM	2862	C	GLN	A	179	11.179	33.099	1.531	1.00 47.60	C
ATOM	2863	O	GLN	A	179	11.531	34.268	1.728	1.00 46.14	O
ATOM	2865	N	ASN	A	180	10.378	32.766	0.523	1.00 48.15	N
ATOM	2866	CA	ASN	A	180	9.837	33.836	-0.336	1.00 52.43	C
ATOM	2868	CB	ASN	A	180	9.676	33.433	-1.819	1.00 54.20	C
ATOM	2871	CG	ASN	A	180	9.081	32.081	-2.006	1.00 54.99	C
ATOM	2872	OD1	ASN	A	180	8.280	31.634	-1.194	1.00 62.41	O
ATOM	2873	ND2	ASN	A	180	9.450	31.416	-3.096	1.00 50.62	N
ATOM	2876	C	ASN	A	180	8.600	34.554	0.238	1.00 51.50	C
ATOM	2877	O	ASN	A	180	8.179	35.566	-0.304	1.00 53.95	O
ATOM	2879	N	MET	A	181	8.066	34.058	1.352	1.00 53.15	N
ATOM	2880	CA	MET	A	181	7.159	34.839	2.206	1.00 55.35	C
ATOM	2882	CB	MET	A	181	6.547	33.978	3.311	1.00 55.55	C
ATOM	2885	CG	MET	A	181	5.355	33.201	2.928	1.00 57.22	C
ATOM	2888	SD	MET	A	181	4.706	32.422	4.407	1.00 59.38	S
ATOM	2889	CE	MET	A	181	4.121	30.889	3.697	1.00 57.04	C
ATOM	2893	C	MET	A	181	7.907	35.934	2.932	1.00 57.14	C
ATOM	2894	O	MET	A	181	7.332	36.972	3.242	1.00 59.34	O
ATOM	2896	N	ALA	A	182	9.173	35.670	3.253	1.00 58.44	N
ATOM	2897	CA	ALA	A	182	9.929	36.498	4.189	1.00 58.82	C
ATOM	2899	CB	ALA	A	182	11.210	35.756	4.661	1.00 56.52	C
ATOM	2903	C	ALA	A	182	10.290	37.864	3.603	1.00 58.42	C
ATOM	2904	O	ALA	A	182	10.521	37.991	2.397	1.00 58.80	O
ATOM	2906	N	GLN	A	183	10.328	38.871	4.470	1.00 55.17	N
ATOM	2907	CA	GLN	A	183	10.869	40.170	4.120	1.00 58.58	C
ATOM	2909	CB	GLN	A	183	10.041	41.314	4.736	1.00 60.57	C
ATOM	2912	CG	GLN	A	183	8.509	41.120	4.720	1.00 64.51	C
ATOM	2915	CD	GLN	A	183	7.740	42.171	3.924	1.00 67.24	C
ATOM	2916	OE1	GLN	A	183	8.283	43.206	3.522	1.00 68.86	O
ATOM	2917	NE2	GLN	A	183	6.454	41.910	3.711	1.00 67.68	N
ATOM	2920	C	GLN	A	183	12.290	40.241	4.662	1.00 57.30	C
ATOM	2921	O	GLN	A	183	12.718	39.389	5.445	1.00 53.52	O
ATOM	2923	N	MET	A	184	13.018	41.269	4.251	1.00 59.00	N
ATOM	2924	CA	MET	A	184	14.294	41.582	4.868	1.00 60.94	C
ATOM	2926	CB	MET	A	184	14.698	43.029	4.587	1.00 65.79	C
ATOM	2929	CG	MET	A	184	15.425	43.256	3.272	1.00 71.11	C
ATOM	2932	SD	MET	A	184	16.160	44.921	3.194	1.00 79.76	S
ATOM	2933	CE	MET	A	184	14.739	45.958	3.609	1.00 76.66	C
ATOM	2937	C	MET	A	184	14.168	41.409	6.368	1.00 59.07	C

ATOM	2938	O	MET	A	184	13.200	41.867	6.975	1.00 56.84	O
ATOM	2940	N	ASN	A	185	15.150	40.728	6.951	1.00 57.41	N
ATOM	2941	CA	ASN	A	185	15.316	40.625	8.394	1.00 55.99	C
ATOM	2943	CB	ASN	A	185	15.158	42.004	9.065	1.00 61.01	C
ATOM	2946	CG	ASN	A	185	16.205	42.259	10.150	1.00 66.90	C
ATOM	2947	OD1	ASN	A	185	16.895	43.288	10.126	1.00 72.76	O
ATOM	2948	ND2	ASN	A	185	16.340	41.319	11.095	1.00 69.42	N
ATOM	2951	C	ASN	A	185	14.397	39.603	9.050	1.00 51.75	C
ATOM	2952	O	ASN	A	185	14.550	39.316	10.233	1.00 52.74	O
ATOM	2954	N	ASP	A	186	13.478	39.016	8.290	1.00 47.10	N
ATOM	2955	CA	ASP	A	186	12.557	38.049	8.859	1.00 46.02	C
ATOM	2957	CB	ASP	A	186	11.271	37.926	8.034	1.00 47.24	C
ATOM	2960	CG	ASP	A	186	10.441	39.193	8.027	1.00 46.94	C
ATOM	2961	OD1	ASP	A	186	10.792	40.183	8.722	1.00 47.58	O
ATOM	2962	OD2	ASP	A	186	9.440	39.173	7.289	1.00 44.34	O
ATOM	2963	C	ASP	A	186	13.153	36.658	8.940	1.00 43.68	C
ATOM	2964	O	ASP	A	186	13.897	36.227	8.058	1.00 41.97	O
ATOM	2966	N	VAL	A	187	12.764	35.964	10.000	1.00 40.24	N
ATOM	2967	CA	VAL	A	187	12.856	34.533	10.084	1.00 39.90	C
ATOM	2969	CB	VAL	A	187	13.541	34.106	11.397	1.00 38.59	C
ATOM	2971	CG1	VAL	A	187	13.817	32.619	11.408	1.00 42.24	C
ATOM	2975	CG2	VAL	A	187	14.822	34.901	11.604	1.00 39.43	C
ATOM	2979	C	VAL	A	187	11.423	34.025	10.035	1.00 37.09	C
ATOM	2980	O	VAL	A	187	10.617	34.344	10.930	1.00 37.21	O
ATOM	2982	N	ILE	A	188	11.101	33.246	8.999	1.00 36.27	N
ATOM	2983	CA	ILE	A	188	9.779	32.620	8.862	1.00 34.51	C
ATOM	2985	CB	ILE	A	188	9.182	32.786	7.441	1.00 35.72	C
ATOM	2987	CG1	ILE	A	188	9.043	34.256	7.049	1.00 40.24	C
ATOM	2990	CD1	ILE	A	188	8.159	35.056	7.989	1.00 42.59	C
ATOM	2994	CG2	ILE	A	188	7.844	32.114	7.358	1.00 34.13	C
ATOM	2998	C	ILE	A	188	9.858	31.124	9.117	1.00 37.40	C
ATOM	2999	O	ILE	A	188	10.813	30.467	8.688	1.00 33.64	O
ATOM	3001	N	LEU	A	189	8.834	30.593	9.787	1.00 34.99	N
ATOM	3002	CA	LEU	A	189	8.726	29.180	10.077	1.00 31.76	C
ATOM	3004	CB	LEU	A	189	8.445	28.956	11.550	1.00 30.56	C
ATOM	3007	CG	LEU	A	189	9.302	29.612	12.624	1.00 33.46	C
ATOM	3009	CD1	LEU	A	189	8.814	29.114	14.008	1.00 29.06	C
ATOM	3013	CD2	LEU	A	189	10.787	29.292	12.401	1.00 31.67	C
ATOM	3017	C	LEU	A	189	7.588	28.597	9.308	1.00 33.44	C
ATOM	3018	O	LEU	A	189	6.470	29.114	9.367	1.00 35.60	O
ATOM	3020	N	SER	A	190	7.842	27.497	8.616	1.00 32.37	N
ATOM	3021	CA	SER	A	190	6.769	26.749	8.009	1.00 33.56	C
ATOM	3023	CB	SER	A	190	7.313	25.475	7.415	1.00 32.95	C
ATOM	3026	OG	SER	A	190	7.667	24.589	8.462	1.00 36.12	O
ATOM	3028	C	SER	A	190	5.684	26.385	9.061	1.00 35.73	C
ATOM	3029	O	SER	A	190	5.976	26.310	10.259	1.00 33.17	O
ATOM	3031	N	PRO	A	191	4.433	26.189	8.611	1.00 37.03	N
ATOM	3032	CA	PRO	A	191	3.414	25.641	9.500	1.00 38.86	C
ATOM	3034	CB	PRO	A	191	2.307	25.194	8.534	1.00 34.85	C
ATOM	3037	CG	PRO	A	191	2.411	26.186	7.383	1.00 38.83	C
ATOM	3040	CD	PRO	A	191	3.885	26.519	7.275	1.00 40.50	C
ATOM	3043	C	PRO	A	191	3.940	24.471	10.332	1.00 35.62	C
ATOM	3044	O	PRO	A	191	3.836	24.509	11.546	1.00 38.24	O
ATOM	3045	N	ASN	A	192	4.526	23.459	9.694	1.00 38.11	N
ATOM	3046	CA	ASN	A	192	4.928	22.252	10.423	1.00 37.79	C
ATOM	3048	CB	ASN	A	192	5.355	21.128	9.484	1.00 39.53	C
ATOM	3051	CG	ASN	A	192	5.377	19.790	10.172	1.00 43.86	C
ATOM	3052	OD1	ASN	A	192	6.315	18.985	10.005	1.00 44.20	O
ATOM	3053	ND2	ASN	A	192	4.349	19.542	10.987	1.00 39.81	N
ATOM	3056	C	ASN	A	192	6.023	22.542	11.434	1.00 37.04	C
ATOM	3057	O	ASN	A	192	6.027	21.984	12.524	1.00 38.75	O
ATOM	3059	N	CYS	A	193	6.919	23.457	11.081	1.00 36.42	N
ATOM	3060	CA	CYS	A	193	7.981	23.887	11.975	1.00 34.98	C
ATOM	3062	CB	CYS	A	193	8.908	24.869	11.253	1.00 32.51	C
ATOM	3065	SG	CYS	A	193	10.369	25.275	12.234	1.00 35.22	S
ATOM	3067	C	CYS	A	193	7.428	24.543	13.237	1.00 32.99	C
ATOM	3068	O	CYS	A	193	7.861	24.251	14.359	1.00 30.19	O

ATOM	3070	N	TRP	A	194	6.514	25.480	13.028	1.00 37.21	N
ATOM	3071	CA	TRP	A	194	5.735	26.098	14.111	1.00 40.43	C
ATOM	3073	CB	TRP	A	194	4.794	27.163	13.515	1.00 43.52	C
ATOM	3076	CG	TRP	A	194	3.816	27.717	14.499	1.00 47.87	C
ATOM	3077	CD1	TRP	A	194	2.454	27.698	14.404	1.00 48.33	C
ATOM	3079	NE1	TRP	A	194	1.896	28.284	15.512	1.00 49.45	N
ATOM	3081	CE2	TRP	A	194	2.896	28.700	16.346	1.00 51.23	C
ATOM	3082	CD2	TRP	A	194	4.124	28.357	15.737	1.00 50.04	C
ATOM	3083	CE3	TRP	A	194	5.319	28.677	16.393	1.00 51.15	C
ATOM	3085	CZ3	TRP	A	194	5.251	29.319	17.627	1.00 49.03	C
ATOM	3087	CH2	TRP	A	194	4.010	29.645	18.205	1.00 52.47	C
ATOM	3089	CZ2	TRP	A	194	2.827	29.338	17.582	1.00 51.30	C
ATOM	3091	C	TRP	A	194	4.961	25.030	14.933	1.00 35.29	C
ATOM	3092	O	TRP	A	194	4.987	25.026	16.155	1.00 40.49	O
ATOM	3094	N	GLN	A	195	4.312	24.107	14.251	1.00 40.62	N
ATOM	3095	CA	GLN	A	195	3.645	22.975	14.906	1.00 45.07	C
ATOM	3097	CB	GLN	A	195	3.029	22.055	13.840	1.00 49.41	C
ATOM	3100	CG	GLN	A	195	1.808	21.285	14.295	1.00 57.73	C
ATOM	3103	CD	GLN	A	195	0.694	22.204	14.783	1.00 66.35	C
ATOM	3104	OE1	GLN	A	195	0.020	21.916	15.784	1.00 72.73	O
ATOM	3105	NE2	GLN	A	195	0.515	23.338	14.094	1.00 69.94	N
ATOM	3108	C	GLN	A	195	4.582	22.153	15.805	1.00 46.99	C
ATOM	3109	O	GLN	A	195	4.164	21.643	16.851	1.00 44.55	O
ATOM	3111	N	LEU	A	196	5.840	22.002	15.374	1.00 44.86	N
ATOM	3112	CA	LEU	A	196	6.801	21.131	16.044	1.00 40.56	C
ATOM	3114	CB	LEU	A	196	7.707	20.451	15.012	1.00 41.10	C
ATOM	3117	CG	LEU	A	196	7.015	19.383	14.160	1.00 42.62	C
ATOM	3119	CD1	LEU	A	196	7.906	18.907	13.024	1.00 37.13	C
ATOM	3123	CD2	LEU	A	196	6.563	18.215	15.027	1.00 40.55	C
ATOM	3127	C	LEU	A	196	7.667	21.873	17.056	1.00 39.18	C
ATOM	3128	O	LEU	A	196	8.337	21.243	17.864	1.00 42.25	O
ATOM	3130	N	CYS	A	197	7.678	23.200	17.020	1.00 38.13	N
ATOM	3131	CA	CYS	A	197	8.641	23.914	17.826	1.00 40.64	C
ATOM	3133	CB	CYS	A	197	8.892	25.315	17.290	1.00 41.88	C
ATOM	3136	SG	CYS	A	197	7.642	26.526	17.682	1.00 40.29	S
ATOM	3138	C	CYS	A	197	8.240	23.965	19.297	1.00 42.24	C
ATOM	3139	O	CYS	A	197	7.155	23.509	19.687	1.00 42.72	O
ATOM	3141	N	ASP	A	198	9.161	24.480	20.103	1.00 42.25	N
ATOM	3142	CA	ASP	A	198	8.936	24.686	21.519	1.00 45.59	C
ATOM	3144	CB	ASP	A	198	10.242	24.532	22.293	1.00 45.71	C
ATOM	3147	CG	ASP	A	198	10.089	24.819	23.771	1.00 48.80	C
ATOM	3148	OD1	ASP	A	198	11.100	24.672	24.501	1.00 48.75	O
ATOM	3149	OD2	ASP	A	198	8.974	25.203	24.202	1.00 48.87	O
ATOM	3150	C	ASP	A	198	8.363	26.084	21.640	1.00 46.12	C
ATOM	3151	O	ASP	A	198	9.091	27.068	21.692	1.00 42.32	O
ATOM	3153	N	ARG	A	199	7.036	26.151	21.661	1.00 49.19	N
ATOM	3154	CA	ARG	A	199	6.307	27.429	21.666	1.00 50.04	C
ATOM	3156	CB	ARG	A	199	4.825	27.175	21.398	1.00 50.75	C
ATOM	3159	CG	ARG	A	199	4.604	26.526	20.052	1.00 50.99	C
ATOM	3162	CD	ARG	A	199	3.167	26.211	19.778	1.00 52.66	C
ATOM	3165	NE	ARG	A	199	2.990	25.916	18.360	1.00 55.19	N
ATOM	3167	CZ	ARG	A	199	1.854	25.515	17.793	1.00 56.84	C
ATOM	3168	NH1	ARG	A	199	0.753	25.339	18.512	1.00 59.19	N
ATOM	3171	NH2	ARG	A	199	1.817	25.298	16.482	1.00 56.07	N
ATOM	3174	C	ARG	A	199	6.468	28.238	22.949	1.00 52.50	C
ATOM	3175	O	ARG	A	199	6.215	29.440	22.957	1.00 55.90	O
ATOM	3177	N	SER	A	200	6.896	27.590	24.029	1.00 55.70	N
ATOM	3178	CA	SER	A	200	7.186	28.301	25.276	1.00 56.27	C
ATOM	3180	CB	SER	A	200	7.458	27.323	26.433	1.00 54.58	C
ATOM	3183	OG	SER	A	200	8.849	27.102	26.613	1.00 55.59	O
ATOM	3185	C	SER	A	200	8.378	29.231	25.079	1.00 56.26	C
ATOM	3186	O	SER	A	200	8.446	30.285	25.691	1.00 59.08	O
ATOM	3188	N	MET	A	201	9.309	28.824	24.223	1.00 55.12	N
ATOM	3189	CA	MET	A	201	10.525	29.584	23.957	1.00 54.41	C
ATOM	3191	CB	MET	A	201	11.579	28.648	23.329	1.00 56.20	C
ATOM	3194	CG	MET	A	201	12.089	27.509	24.203	1.00 57.06	C
ATOM	3197	SD	MET	A	201	13.483	27.923	25.253	1.00 55.55	S

ATOM	3198	CE	MET A 201	14.398	29.059	24.226	1.00	61.49	C
ATOM	3202	C	MET A 201	10.347	30.751	22.981	1.00	50.77	C
ATOM	3203	O	MET A 201	11.126	31.704	23.011	1.00	46.25	O
ATOM	3205	N	ILE A 202	9.386	30.648	22.066	1.00	50.95	N
ATOM	3206	CA	ILE A 202	9.411	31.512	20.883	1.00	53.37	C
ATOM	3208	CB	ILE A 202	9.787	30.739	19.555	1.00	54.95	C
ATOM	3210	CG1	ILE A 202	8.590	30.524	18.642	1.00	54.13	C
ATOM	3213	CD1	ILE A 202	8.980	29.969	17.322	1.00	54.42	C
ATOM	3217	CG2	ILE A 202	10.469	29.378	19.823	1.00	53.22	C
ATOM	3221	C	ILE A 202	8.126	32.301	20.698	1.00	56.39	C
ATOM	3222	O	ILE A 202	7.028	31.725	20.704	1.00	56.13	O
ATOM	3224	N	GLU A 203	8.300	33.618	20.527	1.00	57.78	N
ATOM	3225	CA	GLU A 203	7.215	34.572	20.268	1.00	59.93	C
ATOM	3227	CB	GLU A 203	7.453	35.876	21.042	1.00	64.04	C
ATOM	3230	CG	GLU A 203	6.943	35.867	22.495	1.00	68.74	C
ATOM	3233	CD	GLU A 203	5.419	35.956	22.602	1.00	71.78	C
ATOM	3234	OE1	GLU A 203	4.790	36.670	21.783	1.00	71.90	O
ATOM	3235	OE2	GLU A 203	4.854	35.312	23.519	1.00	73.50	O
ATOM	3236	C	GLU A 203	7.113	34.889	18.774	1.00	57.44	C
ATOM	3237	O	GLU A 203	8.031	35.483	18.195	1.00	51.82	O
ATOM	3239	N	ILE A 204	5.987	34.504	18.178	1.00	54.91	N
ATOM	3240	CA	ILE A 204	5.747	34.663	16.742	1.00	58.74	C
ATOM	3242	CB	ILE A 204	5.416	33.295	16.036	1.00	57.40	C
ATOM	3244	CG1	ILE A 204	4.079	32.720	16.507	1.00	56.77	C
ATOM	3247	CD1	ILE A 204	2.877	33.306	15.792	1.00	59.13	C
ATOM	3251	CG2	ILE A 204	6.542	32.276	16.228	1.00	58.14	C
ATOM	3255	C	ILE A 204	4.599	35.635	16.446	1.00	60.50	C
ATOM	3256	O	ILE A 204	3.807	35.965	17.328	1.00	58.96	O
ATOM	3258	N	GLU A 205	4.506	36.076	15.192	1.00	62.19	N
ATOM	3259	CA	GLU A 205	3.340	36.839	14.729	1.00	63.23	C
ATOM	3261	CB	GLU A 205	3.696	38.313	14.483	1.00	63.44	C
ATOM	3264	CG	GLU A 205	3.739	38.765	13.028	1.00	66.26	C
ATOM	3267	CD	GLU A 205	4.345	40.152	12.853	1.00	68.10	C
ATOM	3268	OE1	GLU A 205	4.073	40.801	11.813	1.00	69.00	O
ATOM	3269	OE2	GLU A 205	5.101	40.591	13.749	1.00	70.95	O
ATOM	3270	C	GLU A 205	2.791	36.172	13.481	1.00	64.63	C
ATOM	3271	O	GLU A 205	3.508	35.424	12.799	1.00	62.80	O
ATOM	3273	N	SER A 206	1.516	36.429	13.198	1.00	65.04	N
ATOM	3274	CA	SER A 206	0.849	35.821	12.053	1.00	65.50	C
ATOM	3276	CB	SER A 206	-0.672	36.021	12.124	1.00	66.44	C
ATOM	3279	OG	SER A 206	-1.309	34.844	12.601	1.00	68.89	O
ATOM	3281	C	SER A 206	1.373	36.361	10.730	1.00	64.54	C
ATOM	3282	O	SER A 206	1.945	37.459	10.666	1.00	62.98	O
ATOM	3284	N	VAL A 207	1.187	35.560	9.683	1.00	64.20	N
ATOM	3285	CA	VAL A 207	1.450	35.981	8.310	1.00	65.31	C
ATOM	3287	CB	VAL A 207	2.553	35.106	7.641	1.00	65.94	C
ATOM	3289	CG1	VAL A 207	2.713	35.439	6.164	1.00	64.76	C
ATOM	3293	CG2	VAL A 207	3.884	35.288	8.371	1.00	65.01	C
ATOM	3297	C	VAL A 207	0.123	35.905	7.541	1.00	66.23	C
ATOM	3298	O	VAL A 207	-0.461	34.815	7.419	1.00	63.20	O
ATOM	3300	N	PRO A 208	-0.382	37.072	7.067	1.00	69.45	N
ATOM	3301	CA	PRO A 208	-1.597	37.188	6.249	1.00	70.59	C
ATOM	3303	CB	PRO A 208	-1.391	38.527	5.531	1.00	70.91	C
ATOM	3306	CG	PRO A 208	-0.659	39.358	6.521	1.00	70.37	C
ATOM	3309	CD	PRO A 208	0.197	38.405	7.342	1.00	69.43	C
ATOM	3312	C	PRO A 208	-1.796	36.069	5.220	1.00	72.05	C
ATOM	3313	O	PRO A 208	-0.907	35.817	4.398	1.00	70.73	O
ATOM	3314	N	ASP A 209	-2.954	35.406	5.283	1.00	73.95	N
ATOM	3315	CA	ASP A 209	-3.339	34.376	4.299	1.00	76.64	C
ATOM	3317	CB	ASP A 209	-3.471	34.997	2.890	1.00	77.89	C
ATOM	3320	CG	ASP A 209	-4.180	36.358	2.905	1.00	80.70	C
ATOM	3321	OD1	ASP A 209	-3.648	37.316	2.293	1.00	83.10	O
ATOM	3322	OD2	ASP A 209	-5.255	36.475	3.544	1.00	80.99	O
ATOM	3323	C	ASP A 209	-2.356	33.194	4.273	1.00	74.73	C
ATOM	3324	O	ASP A 209	-2.282	32.455	3.288	1.00	73.21	O
ATOM	3326	N	GLN A 210	-1.615	33.027	5.369	1.00	73.90	N
ATOM	3327	CA	GLN A 210	-0.571	32.017	5.475	1.00	72.60	C

ATOM	3329	CB	GLN	A	210	0.807	32.654	5.256	1.00	72.19	C
ATOM	3332	CG	GLN	A	210	1.063	33.211	3.861	1.00	70.65	C
ATOM	3335	CD	GLN	A	210	1.089	32.147	2.781	1.00	69.87	C
ATOM	3336	OE1	GLN	A	210	1.171	32.463	1.600	1.00	72.67	O
ATOM	3337	NE2	GLN	A	210	1.016	30.884	3.177	1.00	69.26	N
ATOM	3340	C	GLN	A	210	-0.601	31.383	6.859	1.00	71.00	C
ATOM	3341	O	GLN	A	210	-0.700	32.090	7.865	1.00	69.96	O
ATOM	3343	N	ARG	A	211	-0.509	30.055	6.907	1.00	70.16	N
ATOM	3344	CA	ARG	A	211	-0.364	29.341	8.178	1.00	69.82	C
ATOM	3346	CB	ARG	A	211	-0.798	27.872	8.051	1.00	73.75	C
ATOM	3349	CG	ARG	A	211	-2.309	27.657	7.913	1.00	76.69	C
ATOM	3352	CD	ARG	A	211	-2.714	26.239	8.328	1.00	78.59	C
ATOM	3355	NE	ARG	A	211	-1.913	25.228	7.632	1.00	80.63	N
ATOM	3357	CZ	ARG	A	211	-1.159	24.286	8.207	1.00	81.54	C
ATOM	3358	NH1	ARG	A	211	-1.078	24.157	9.537	1.00	79.12	N
ATOM	3361	NH2	ARG	A	211	-0.478	23.446	7.429	1.00	80.24	N
ATOM	3364	C	ARG	A	211	1.072	29.408	8.703	1.00	65.56	C
ATOM	3365	O	ARG	A	211	1.335	28.995	9.830	1.00	65.11	O
ATOM	3367	N	ALA	A	212	1.995	29.915	7.882	1.00	62.10	N
ATOM	3368	CA	ALA	A	212	3.387	30.127	8.296	1.00	57.38	C
ATOM	3370	CB	ALA	A	212	4.284	30.409	7.083	1.00	55.39	C
ATOM	3374	C	ALA	A	212	3.425	31.285	9.268	1.00	55.07	C
ATOM	3375	O	ALA	A	212	2.496	32.084	9.315	1.00	55.70	O
ATOM	3377	N	VAL	A	213	4.502	31.375	10.036	1.00	51.16	N
ATOM	3378	CA	VAL	A	213	4.610	32.350	11.112	1.00	49.04	C
ATOM	3380	CB	VAL	A	213	4.413	31.661	12.493	1.00	49.82	C
ATOM	3382	CG1	VAL	A	213	3.029	30.980	12.563	1.00	47.36	C
ATOM	3386	CG2	VAL	A	213	5.505	30.628	12.756	1.00	49.31	C
ATOM	3390	C	VAL	A	213	5.948	33.084	11.059	1.00	48.65	C
ATOM	3391	O	VAL	A	213	6.932	32.562	10.528	1.00	43.59	O
ATOM	3393	N	LYS	A	214	5.969	34.306	11.588	1.00	47.26	N
ATOM	3394	CA	LYS	A	214	7.177	35.122	11.646	1.00	48.26	C
ATOM	3396	CB	LYS	A	214	6.867	36.543	11.182	1.00	49.75	C
ATOM	3399	CG	LYS	A	214	8.007	37.560	11.317	1.00	55.06	C
ATOM	3402	CD	LYS	A	214	7.504	38.971	10.947	1.00	59.08	C
ATOM	3405	CE	LYS	A	214	8.611	40.036	10.943	1.00	61.40	C
ATOM	3408	NZ	LYS	A	214	8.509	41.046	12.053	1.00	62.69	N
ATOM	3412	C	LYS	A	214	7.687	35.112	13.087	1.00	51.26	C
ATOM	3413	O	LYS	A	214	6.887	35.202	14.022	1.00	50.90	O
ATOM	3415	N	VAL	A	215	9.010	34.997	13.253	1.00	49.60	N
ATOM	3416	CA	VAL	A	215	9.649	34.974	14.572	1.00	47.32	C
ATOM	3418	CB	VAL	A	215	11.043	34.274	14.534	1.00	45.63	C
ATOM	3420	CG1	VAL	A	215	11.695	34.302	15.900	1.00	43.31	C
ATOM	3424	CG2	VAL	A	215	10.915	32.858	14.047	1.00	39.51	C
ATOM	3428	C	VAL	A	215	9.853	36.396	15.055	1.00	50.15	C
ATOM	3429	O	VAL	A	215	10.535	37.184	14.392	1.00	50.06	O
ATOM	3431	N	ASN	A	216	9.277	36.731	16.210	1.00	52.41	N
ATOM	3432	CA	ASN	A	216	9.480	38.057	16.784	1.00	53.15	C
ATOM	3434	CB	ASN	A	216	8.219	38.576	17.481	1.00	55.37	C
ATOM	3437	CG	ASN	A	216	7.036	38.712	16.531	1.00	55.63	C
ATOM	3438	OD1	ASN	A	216	7.188	39.129	15.385	1.00	61.20	O
ATOM	3439	ND2	ASN	A	216	5.851	38.359	17.009	1.00	61.35	N
ATOM	3442	C	ASN	A	216	10.635	38.003	17.743	1.00	53.59	C
ATOM	3443	O	ASN	A	216	11.605	38.735	17.591	1.00	51.12	O
ATOM	3445	N	PHE	A	217	10.542	37.109	18.723	1.00	56.51	N
ATOM	3446	CA	PHE	A	217	11.583	36.986	19.744	1.00	59.99	C
ATOM	3448	CB	PHE	A	217	11.258	37.858	20.976	1.00	62.45	C
ATOM	3451	CG	PHE	A	217	10.669	39.195	20.633	1.00	66.01	C
ATOM	3452	CD1	PHE	A	217	11.497	40.278	20.331	1.00	70.75	C
ATOM	3454	CE1	PHE	A	217	10.955	41.526	19.986	1.00	72.21	C
ATOM	3456	CZ	PHE	A	217	9.566	41.690	19.940	1.00	73.67	C
ATOM	3458	CE2	PHE	A	217	8.728	40.605	20.241	1.00	71.05	C
ATOM	3460	CD2	PHE	A	217	9.284	39.368	20.580	1.00	69.45	C
ATOM	3462	C	PHE	A	217	11.750	35.537	20.181	1.00	58.89	C
ATOM	3463	O	PHE	A	217	10.824	34.727	20.086	1.00	55.15	O
ATOM	3465	N	LEU	A	218	12.956	35.230	20.633	1.00	60.58	N
ATOM	3466	CA	LEU	A	218	13.249	34.000	21.344	1.00	64.80	C

ATOM	3468	CB	LEU	A	218	14.548	33.380	20.810	1.00 65.81	C
ATOM	3471	CG	LEU	A	218	14.969	32.002	21.315	1.00 65.73	C
ATOM	3473	CD1	LEU	A	218	13.979	30.922	20.885	1.00 64.89	C
ATOM	3477	CD2	LEU	A	218	16.376	31.687	20.818	1.00 66.14	C
ATOM	3481	C	LEU	A	218	13.375	34.415	22.812	1.00 67.28	C
ATOM	3482	O	LEU	A	218	14.394	34.981	23.226	1.00 69.07	O
ATOM	3484	N	LYS	A	219	12.304	34.182	23.568	1.00 69.19	N
ATOM	3485	CA	LYS	A	219	12.220	34.556	24.980	1.00 70.48	C
ATOM	3487	CB	LYS	A	219	10.909	35.311	25.258	1.00 73.27	C
ATOM	3490	CG	LYS	A	219	10.891	36.110	26.567	1.00 76.79	C
ATOM	3493	CD	LYS	A	219	11.394	37.544	26.361	1.00 79.53	C
ATOM	3496	CE	LYS	A	219	11.348	38.366	27.659	1.00 81.48	C
ATOM	3499	NZ	LYS	A	219	11.686	39.814	27.438	1.00 80.48	N
ATOM	3503	C	LYS	A	219	12.278	33.260	25.788	1.00 67.86	C
ATOM	3504	O	LYS	A	219	11.280	32.544	25.900	1.00 67.96	O
ATOM	3506	N	PRO	A	220	13.450	32.948	26.348	1.00 65.13	N
ATOM	3507	CA	PRO	A	220	13.610	31.661	27.000	1.00 63.90	C
ATOM	3509	CB	PRO	A	220	15.107	31.422	26.869	1.00 64.56	C
ATOM	3512	CG	PRO	A	220	15.691	32.817	27.059	1.00 65.27	C
ATOM	3515	CD	PRO	A	220	14.681	33.760	26.436	1.00 65.51	C
ATOM	3518	C	PRO	A	220	13.217	31.732	28.481	1.00 60.65	C
ATOM	3519	O	PRO	A	220	13.219	32.825	29.047	1.00 60.09	O
ATOM	3520	N	PRO	A	221	12.912	30.574	29.107	1.00 57.45	N
ATOM	3521	CA	PRO	A	221	12.632	30.472	30.543	1.00 56.24	C
ATOM	3523	CB	PRO	A	221	12.646	28.961	30.796	1.00 57.57	C
ATOM	3526	CG	PRO	A	221	12.276	28.361	29.514	1.00 59.04	C
ATOM	3529	CD	PRO	A	221	12.798	29.266	28.443	1.00 58.28	C
ATOM	3532	C	PRO	A	221	13.705	31.137	31.412	1.00 55.50	C
ATOM	3533	O	PRO	A	221	14.861	31.194	31.006	1.00 48.77	O
ATOM	3534	N	PRO	A	222	13.319	31.647	32.595	1.00 57.75	N
ATOM	3535	CA	PRO	A	222	14.223	32.255	33.551	1.00 58.60	C
ATOM	3537	CB	PRO	A	222	13.432	32.170	34.854	1.00 58.15	C
ATOM	3540	CG	PRO	A	222	12.047	32.382	34.421	1.00 58.73	C
ATOM	3543	CD	PRO	A	222	11.926	31.738	33.070	1.00 59.40	C
ATOM	3546	C	PRO	A	222	15.576	31.588	33.710	1.00 58.43	C
ATOM	3547	O	PRO	A	222	16.599	32.275	33.656	1.00 63.74	O
ATOM	3548	N	ASN	A	223	15.591	30.272	33.895	1.00 54.56	N
ATOM	3549	CA	ASN	A	223	16.835	29.579	34.195	1.00 57.19	C
ATOM	3551	CB	ASN	A	223	16.603	28.596	35.341	1.00 59.49	C
ATOM	3554	CG	ASN	A	223	16.228	29.308	36.654	1.00 65.07	C
ATOM	3555	OD1	ASN	A	223	15.951	30.519	36.681	1.00 63.19	O
ATOM	3556	ND2	ASN	A	223	16.219	28.549	37.746	1.00 67.32	N
ATOM	3559	C	ASN	A	223	17.463	28.884	32.980	1.00 54.78	C
ATOM	3560	O	ASN	A	223	18.350	28.037	33.129	1.00 55.81	O
ATOM	3562	N	PHE	A	224	17.019	29.262	31.781	1.00 51.20	N
ATOM	3563	CA	PHE	A	224	17.536	28.672	30.543	1.00 51.19	C
ATOM	3565	CB	PHE	A	224	16.636	29.016	29.360	1.00 49.57	C
ATOM	3568	CG	PHE	A	224	17.094	28.426	28.044	1.00 53.24	C
ATOM	3569	CD1	PHE	A	224	16.728	27.133	27.674	1.00 52.43	C
ATOM	3571	CE1	PHE	A	224	17.135	26.601	26.457	1.00 54.52	C
ATOM	3573	CZ	PHE	A	224	17.915	27.360	25.595	1.00 52.14	C
ATOM	3575	CE2	PHE	A	224	18.287	28.641	25.953	1.00 53.71	C
ATOM	3577	CD2	PHE	A	224	17.877	29.171	27.171	1.00 52.61	C
ATOM	3579	C	PHE	A	224	18.948	29.169	30.279	1.00 48.16	C
ATOM	3580	O	PHE	A	224	19.251	30.338	30.519	1.00 48.80	O
ATOM	3582	N	ASN	A	225	19.811	28.263	29.823	1.00 44.75	N
ATOM	3583	CA	ASN	A	225	21.184	28.615	29.430	1.00 44.86	C
ATOM	3585	CB	ASN	A	225	22.202	28.144	30.484	1.00 44.91	C
ATOM	3588	CG	ASN	A	225	23.643	28.583	30.154	1.00 47.05	C
ATOM	3589	OD1	ASN	A	225	24.290	29.285	30.930	1.00 52.64	O
ATOM	3590	ND2	ASN	A	225	24.136	28.170	29.008	1.00 41.91	N
ATOM	3593	C	ASN	A	225	21.478	27.994	28.059	1.00 39.05	C
ATOM	3594	O	ASN	A	225	21.610	26.781	27.947	1.00 36.27	O
ATOM	3596	N	PHE	A	226	21.549	28.828	27.018	1.00 40.91	N
ATOM	3597	CA	PHE	A	226	21.627	28.306	25.643	1.00 37.03	C
ATOM	3599	CB	PHE	A	226	21.580	29.409	24.583	1.00 36.71	C
ATOM	3602	CG	PHE	A	226	21.577	28.863	23.181	1.00 37.84	C

ATOM	3603	CD1	PHE	A	226	20.423	28.309	22.642	1.00	36.55	C
ATOM	3605	CE1	PHE	A	226	20.432	27.757	21.360	1.00	32.78	C
ATOM	3607	CZ	PHE	A	226	21.606	27.751	20.636	1.00	31.69	C
ATOM	3609	CE2	PHE	A	226	22.766	28.270	21.180	1.00	32.57	C
ATOM	3611	CD2	PHE	A	226	22.757	28.811	22.438	1.00	35.44	C
ATOM	3613	C	PHE	A	226	22.869	27.430	25.441	1.00	34.78	C
ATOM	3614	O	PHE	A	226	22.792	26.380	24.830	1.00	36.15	O
ATOM	3616	N	ASP	A	227	24.003	27.863	25.969	1.00	38.94	N
ATOM	3617	CA	ASP	A	227	25.244	27.087	25.848	1.00	40.02	C
ATOM	3619	CB	ASP	A	227	26.422	27.852	26.469	1.00	42.40	C
ATOM	3622	CG	ASP	A	227	26.660	29.203	25.794	1.00	47.00	C
ATOM	3623	OD1	ASP	A	227	26.942	30.199	26.510	1.00	57.73	O
ATOM	3624	OD2	ASP	A	227	26.541	29.284	24.549	1.00	52.69	O
ATOM	3625	C	ASP	A	227	25.122	25.676	26.428	1.00	37.48	C
ATOM	3626	O	ASP	A	227	25.580	24.720	25.813	1.00	30.04	O
ATOM	3628	N	GLU	A	228	24.508	25.528	27.603	1.00	34.84	N
ATOM	3629	CA	GLU	A	228	24.222	24.187	28.132	1.00	33.60	C
ATOM	3631	CB	GLU	A	228	23.785	24.256	29.609	1.00	38.98	C
ATOM	3634	CG	GLU	A	228	24.938	24.537	30.607	1.00	43.82	C
ATOM	3637	CD	GLU	A	228	24.453	25.107	31.951	1.00	50.17	C
ATOM	3638	OE1	GLU	A	228	25.149	26.002	32.483	1.00	56.45	O
ATOM	3639	OE2	GLU	A	228	23.374	24.682	32.454	1.00	49.79	O
ATOM	3640	C	GLU	A	228	23.146	23.474	27.303	1.00	30.14	C
ATOM	3641	O	GLU	A	228	23.235	22.292	27.053	1.00	29.99	O
ATOM	3643	N	PHE	A	229	22.106	24.198	26.903	1.00	28.29	N
ATOM	3644	CA	PHE	A	229	21.097	23.639	26.017	1.00	31.17	C
ATOM	3646	CB	PHE	A	229	20.042	24.696	25.708	1.00	30.04	C
ATOM	3649	CG	PHE	A	229	19.010	24.251	24.726	1.00	32.62	C
ATOM	3650	CD1	PHE	A	229	17.999	23.383	25.105	1.00	37.18	C
ATOM	3652	CE1	PHE	A	229	17.029	22.974	24.201	1.00	34.88	C
ATOM	3654	CZ	PHE	A	229	17.078	23.421	22.891	1.00	32.36	C
ATOM	3656	CE2	PHE	A	229	18.075	24.289	22.501	1.00	33.33	C
ATOM	3658	CD2	PHE	A	229	19.037	24.705	23.422	1.00	35.27	C
ATOM	3660	C	PHE	A	229	21.756	23.128	24.700	1.00	29.98	C
ATOM	3661	O	PHE	A	229	21.490	22.006	24.238	1.00	30.00	O
ATOM	3663	N	PHE	A	230	22.615	23.950	24.122	1.00	27.48	N
ATOM	3664	CA	PHE	A	230	23.281	23.577	22.880	1.00	28.85	C
ATOM	3666	CB	PHE	A	230	24.113	24.742	22.332	1.00	24.99	C
ATOM	3669	CG	PHE	A	230	24.770	24.426	21.008	1.00	29.41	C
ATOM	3670	CD1	PHE	A	230	26.065	23.930	20.969	1.00	29.41	C
ATOM	3672	CE1	PHE	A	230	26.644	23.585	19.791	1.00	30.06	C
ATOM	3674	CZ	PHE	A	230	25.955	23.720	18.625	1.00	25.35	C
ATOM	3676	CE2	PHE	A	230	24.666	24.191	18.628	1.00	27.02	C
ATOM	3678	CD2	PHE	A	230	24.064	24.536	19.812	1.00	27.54	C
ATOM	3680	C	PHE	A	230	24.141	22.325	23.088	1.00	23.72	C
ATOM	3681	O	PHE	A	230	24.086	21.391	22.297	1.00	29.92	O
ATOM	3683	N	THR	A	231	24.898	22.279	24.174	1.00	28.33	N
ATOM	3684	CA	THR	A	231	25.730	21.120	24.439	1.00	26.24	C
ATOM	3686	CB	THR	A	231	26.548	21.283	25.720	1.00	32.86	C
ATOM	3688	OG1	THR	A	231	27.416	22.416	25.601	1.00	27.18	O
ATOM	3690	CG2	THR	A	231	27.378	19.995	26.004	1.00	32.51	C
ATOM	3694	C	THR	A	231	24.894	19.858	24.503	1.00	28.15	C
ATOM	3695	O	THR	A	231	25.278	18.840	23.946	1.00	28.81	O
ATOM	3697	N	LYS	A	232	23.753	19.904	25.183	1.00	32.21	N
ATOM	3698	CA	LYS	A	232	22.867	18.739	25.231	1.00	35.11	C
ATOM	3700	CB	LYS	A	232	21.585	19.018	26.016	1.00	40.28	C
ATOM	3703	CG	LYS	A	232	21.758	19.134	27.534	1.00	49.98	C
ATOM	3706	CD	LYS	A	232	20.376	19.153	28.246	1.00	52.15	C
ATOM	3709	CE	LYS	A	232	20.501	19.490	29.741	1.00	56.77	C
ATOM	3712	NZ	LYS	A	232	19.240	19.147	30.490	1.00	58.20	N
ATOM	3716	C	LYS	A	232	22.493	18.352	23.827	1.00	31.30	C
ATOM	3717	O	LYS	A	232	22.472	17.174	23.492	1.00	28.57	O
ATOM	3719	N	CYS	A	233	22.198	19.365	23.006	1.00	29.16	N
ATOM	3720	CA	CYS	A	233	21.827	19.137	21.610	1.00	29.74	C
ATOM	3722	CB	CYS	A	233	21.348	20.444	20.960	1.00	32.35	C
ATOM	3725	SG	CYS	A	233	19.714	20.969	21.559	1.00	29.31	S
ATOM	3727	C	CYS	A	233	22.949	18.480	20.792	1.00	23.88	C

ATOM	3728	O	CYS	A	233	22.668	17.714	19.884	1.00 27.14	O
ATOM	3730	N	THR	A	234	24.208	18.738	21.139	1.00 23.40	N
ATOM	3731	CA	THR	A	234	25.328	18.171	20.358	1.00 23.95	C
ATOM	3733	CB	THR	A	234	26.668	18.812	20.696	1.00 28.52	C
ATOM	3735	OG1	THR	A	234	26.981	18.629	22.090	1.00 33.88	O
ATOM	3737	CG2	THR	A	234	26.609	20.262	20.362	1.00 22.40	C
ATOM	3741	C	THR	A	234	25.430	16.664	20.469	1.00 29.94	C
ATOM	3742	O	THR	A	234	26.003	15.997	19.588	1.00 25.02	O
ATOM	3744	N	THR	A	235	24.817	16.106	21.508	1.00 28.66	N
ATOM	3745	CA	THR	A	235	24.714	14.648	21.637	1.00 28.50	C
ATOM	3747	CB	THR	A	235	23.858	14.299	22.845	1.00 32.77	C
ATOM	3749	OG1	THR	A	235	24.605	14.629	24.020	1.00 31.27	O
ATOM	3751	CG2	THR	A	235	23.458	12.799	22.820	1.00 37.53	C
ATOM	3755	C	THR	A	235	24.098	13.998	20.417	1.00 30.16	C
ATOM	3756	O	THR	A	235	24.473	12.898	20.038	1.00 31.66	O
ATOM	3758	N	PHE	A	236	23.158	14.696	19.797	1.00 27.22	N
ATOM	3759	CA	PHE	A	236	22.492	14.201	18.626	1.00 27.84	C
ATOM	3761	CB	PHE	A	236	21.027	14.596	18.715	1.00 31.60	C
ATOM	3764	CG	PHE	A	236	20.417	14.185	20.018	1.00 34.60	C
ATOM	3765	CD1	PHE	A	236	20.225	15.102	21.029	1.00 34.80	C
ATOM	3767	CE1	PHE	A	236	19.702	14.701	22.239	1.00 40.98	C
ATOM	3769	CZ	PHE	A	236	19.409	13.363	22.458	1.00 36.76	C
ATOM	3771	CE2	PHE	A	236	19.635	12.444	21.469	1.00 38.28	C
ATOM	3773	CD2	PHE	A	236	20.149	12.851	20.264	1.00 33.47	C
ATOM	3775	C	PHE	A	236	23.127	14.658	17.321	1.00 26.54	C
ATOM	3776	O	PHE	A	236	22.590	14.383	16.273	1.00 34.27	O
ATOM	3778	N	MET	A	237	24.257	15.360	17.392	1.00 27.68	N
ATOM	3779	CA	MET	A	237	24.947	15.833	16.186	1.00 25.70	C
ATOM	3781	CB	MET	A	237	25.381	17.262	16.386	1.00 26.20	C
ATOM	3784	CG	MET	A	237	24.258	18.243	16.408	1.00 24.91	C
ATOM	3787	SD	MET	A	237	24.847	19.859	16.881	1.00 30.54	S
ATOM	3788	CE	MET	A	237	23.287	20.637	17.318	1.00 28.10	C
ATOM	3792	C	MET	A	237	26.156	14.949	15.889	1.00 22.81	C
ATOM	3793	O	MET	A	237	27.202	15.052	16.528	1.00 24.48	O
ATOM	3795	N	HIS	A	238	25.975	14.062	14.927	1.00 23.45	N
ATOM	3796	CA	HIS	A	238	26.920	13.009	14.614	1.00 26.02	C
ATOM	3798	CB	HIS	A	238	26.426	12.256	13.376	1.00 27.16	C
ATOM	3801	CG	HIS	A	238	27.060	10.919	13.156	1.00 23.55	C
ATOM	3802	ND1	HIS	A	238	28.323	10.592	13.598	1.00 31.30	N
ATOM	3804	CE1	HIS	A	238	28.613	9.358	13.214	1.00 26.67	C
ATOM	3806	NE2	HIS	A	238	27.580	8.875	12.541	1.00 27.89	N
ATOM	3808	CD2	HIS	A	238	26.607	9.837	12.477	1.00 23.74	C
ATOM	3810	C	HIS	A	238	28.333	13.523	14.346	1.00 28.76	C
ATOM	3811	O	HIS	A	238	29.298	12.867	14.711	1.00 26.58	O
ATOM	3813	N	TYR	A	239	28.439	14.674	13.685	1.00 23.00	N
ATOM	3814	CA	TYR	A	239	29.701	15.130	13.117	1.00 24.75	C
ATOM	3816	CB	TYR	A	239	29.556	15.195	11.606	1.00 27.06	C
ATOM	3819	CG	TYR	A	239	29.147	13.885	11.018	1.00 25.96	C
ATOM	3820	CD1	TYR	A	239	27.941	13.731	10.330	1.00 28.83	C
ATOM	3822	CE1	TYR	A	239	27.580	12.489	9.781	1.00 26.21	C
ATOM	3824	CZ	TYR	A	239	28.438	11.404	9.958	1.00 32.11	C
ATOM	3825	OH	TYR	A	239	28.171	10.143	9.443	1.00 34.81	O
ATOM	3827	CE2	TYR	A	239	29.631	11.570	10.614	1.00 29.50	C
ATOM	3829	CD2	TYR	A	239	29.963	12.781	11.163	1.00 25.12	C
ATOM	3831	C	TYR	A	239	30.144	16.461	13.663	1.00 24.36	C
ATOM	3832	O	TYR	A	239	31.014	17.070	13.101	1.00 26.53	O
ATOM	3834	N	TYR	A	240	29.562	16.897	14.785	1.00 21.14	N
ATOM	3835	CA	TYR	A	240	29.958	18.132	15.395	1.00 20.91	C
ATOM	3837	CB	TYR	A	240	29.039	18.492	16.563	1.00 26.33	C
ATOM	3840	CG	TYR	A	240	29.191	19.924	16.956	1.00 25.71	C
ATOM	3841	CD1	TYR	A	240	28.760	20.929	16.101	1.00 24.67	C
ATOM	3843	CE1	TYR	A	240	28.920	22.235	16.410	1.00 19.70	C
ATOM	3845	CZ	TYR	A	240	29.495	22.586	17.596	1.00 21.01	C
ATOM	3846	OH	TYR	A	240	29.639	23.925	17.849	1.00 20.64	O
ATOM	3848	CE2	TYR	A	240	29.941	21.613	18.488	1.00 23.14	C
ATOM	3850	CD2	TYR	A	240	29.797	20.286	18.152	1.00 25.45	C
ATOM	3852	C	TYR	A	240	31.405	18.070	15.859	1.00 24.81	C

ATOM	3853	O	TYR A 240	31.769	17.190	16.630	1.00	24.27		O
ATOM	3855	N	PRO A 241	32.258	18.982	15.360	1.00	21.95		N
ATOM	3856	CA	PRO A 241	33.658	18.877	15.718	1.00	22.16		C
ATOM	3858	CB	PRO A 241	34.268	20.091	15.025	1.00	24.26		C
ATOM	3861	CG	PRO A 241	33.432	20.236	13.817	1.00	22.24		C
ATOM	3864	CD	PRO A 241	32.049	20.065	14.386	1.00	23.65		C
ATOM	3867	C	PRO A 241	33.845	18.931	17.224	1.00	21.83		C
ATOM	3868	O	PRO A 241	33.296	19.802	17.876	1.00	19.24		O
ATOM	3869	N	SER A 242	34.571	17.966	17.781	1.00	22.39		N
ATOM	3870	CA	SER A 242	34.663	17.904	19.236	1.00	21.05		C
ATOM	3872	CB	SER A 242	33.547	17.009	19.808	1.00	23.94		C
ATOM	3875	OG	SER A 242	32.249	17.346	19.318	1.00	24.43		O
ATOM	3877	C	SER A 242	36.005	17.391	19.649	1.00	25.96		C
ATOM	3878	O	SER A 242	36.773	16.858	18.828	1.00	24.47		O
ATOM	3880	N	GLY A 243	36.274	17.529	20.942	1.00	30.44		N
ATOM	3881	CA	GLY A 243	37.479	16.977	21.541	1.00	32.91		C
ATOM	3884	C	GLY A 243	38.724	17.618	20.988	1.00	31.13		C
ATOM	3885	O	GLY A 243	38.832	18.845	20.933	1.00	29.92		O
ATOM	3887	N	GLU A 244	39.655	16.793	20.531	1.00	30.76		N
ATOM	3888	CA	GLU A 244	40.849	17.328	19.902	1.00	34.20		C
ATOM	3890	CB	GLU A 244	41.876	16.216	19.662	1.00	40.70		C
ATOM	3893	CG	GLU A 244	41.674	15.373	18.422	1.00	48.82		C
ATOM	3896	CD	GLU A 244	42.357	13.983	18.485	1.00	53.12		C
ATOM	3897	OE1	GLU A 244	41.872	13.069	17.754	1.00	55.12		O
ATOM	3898	OE2	GLU A 244	43.357	13.814	19.247	1.00	53.08		O
ATOM	3899	C	GLU A 244	40.531	18.122	18.612	1.00	31.18		C
ATOM	3900	O	GLU A 244	41.338	18.912	18.158	1.00	29.98		O
ATOM	3902	N	HIS A 245	39.347	17.935	18.047	1.00	27.65		N
ATOM	3903	CA	HIS A 245	38.984	18.634	16.804	1.00	30.32		C
ATOM	3905	CB	HIS A 245	38.555	17.595	15.770	1.00	29.09		C
ATOM	3908	CG	HIS A 245	39.681	16.701	15.360	1.00	27.88		C
ATOM	3909	ND1	HIS A 245	39.632	15.327	15.482	1.00	30.28		N
ATOM	3911	CE1	HIS A 245	40.784	14.812	15.078	1.00	32.37		C
ATOM	3913	NE2	HIS A 245	41.581	15.802	14.707	1.00	28.39		N
ATOM	3915	CD2	HIS A 245	40.923	16.997	14.899	1.00	28.08		C
ATOM	3917	C	HIS A 245	37.953	19.739	17.002	1.00	29.49		C
ATOM	3918	O	HIS A 245	37.360	20.243	16.040	1.00	25.95		O
ATOM	3920	N	LYS A 246	37.808	20.168	18.255	1.00	28.10		N
ATOM	3921	CA	LYS A 246	36.828	21.194	18.609	1.00	31.91		C
ATOM	3923	CB	LYS A 246	36.674	21.302	20.132	1.00	28.10		C
ATOM	3926	CG	LYS A 246	37.711	22.179	20.806	1.00	37.39		C
ATOM	3929	CD	LYS A 246	37.575	22.196	22.345	1.00	44.83		C
ATOM	3932	CE	LYS A 246	36.212	22.754	22.819	1.00	51.54		C
ATOM	3935	NZ	LYS A 246	35.877	24.142	22.330	1.00	57.22		N
ATOM	3939	C	LYS A 246	37.192	22.577	18.036	1.00	29.81		C
ATOM	3940	O	LYS A 246	36.375	23.492	18.065	1.00	23.66		O
ATOM	3942	N	ASN A 247	38.426	22.740	17.566	1.00	29.95		N
ATOM	3943	CA	ASN A 247	38.853	23.989	16.920	1.00	32.44		C
ATOM	3945	CB	ASN A 247	40.369	24.160	17.081	1.00	37.29		C
ATOM	3948	CG	ASN A 247	41.169	22.976	16.475	1.00	41.66		C
ATOM	3949	OD1	ASN A 247	40.819	21.800	16.679	1.00	42.09		O
ATOM	3950	ND2	ASN A 247	42.240	23.291	15.726	1.00	47.70		N
ATOM	3953	C	ASN A 247	38.528	24.046	15.414	1.00	32.48		C
ATOM	3954	O	ASN A 247	38.790	25.060	14.750	1.00	33.24		O
ATOM	3956	N	LEU A 248	37.983	22.967	14.864	1.00	30.59		N
ATOM	3957	CA	LEU A 248	37.682	22.902	13.436	1.00	27.04		C
ATOM	3959	CB	LEU A 248	38.007	21.514	12.879	1.00	31.25		C
ATOM	3962	CG	LEU A 248	39.471	21.078	12.998	1.00	31.32		C
ATOM	3964	CD1	LEU A 248	39.677	19.664	12.445	1.00	30.94		C
ATOM	3968	CD2	LEU A 248	40.371	22.063	12.288	1.00	29.82		C
ATOM	3972	C	LEU A 248	36.224	23.259	13.179	1.00	27.48		C
ATOM	3973	O	LEU A 248	35.330	23.007	13.998	1.00	25.01		O
ATOM	3975	N	LEU A 249	35.980	23.837	12.018	1.00	23.11		N
ATOM	3976	CA	LEU A 249	34.620	24.155	11.609	1.00	23.55		C
ATOM	3978	CB	LEU A 249	34.644	25.237	10.548	1.00	23.01		C
ATOM	3981	CG	LEU A 249	34.891	26.646	11.040	1.00	25.47		C
ATOM	3983	CD1	LEU A 249	35.173	27.503	9.852	1.00	22.31		C

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ATOM   3987  CD2 LEU A 249      33.649  27.108  11.818  1.00 27.96           C
ATOM   3991  C   LEU A 249      33.932  22.920  11.062  1.00 18.03           C
ATOM   3992  O   LEU A 249      32.719  22.840  11.103  1.00 20.47           O
ATOM   3994  N   ARG A 250      34.710  21.994  10.486  1.00 18.65           N
ATOM   3995  CA  ARG A 250      34.160  20.752   9.908  1.00 19.26           C
ATOM   3997  CB  ARG A 250      34.014  20.790   8.366  1.00 16.93           C
ATOM   4000  CG  ARG A 250      33.147  21.841   7.850  1.00 20.85           C
ATOM   4003  CD  ARG A 250      32.884  21.716   6.354  1.00 15.30           C
ATOM   4006  NE  ARG A 250      32.092  20.564   5.985  1.00 13.42           N
ATOM   4008  CZ  ARG A 250      31.994  20.110   4.744  1.00 14.22           C
ATOM   4009  NH1 ARG A 250      32.650  20.691   3.747  1.00 19.85           N
ATOM   4012  NH2 ARG A 250      31.280  19.065   4.500  1.00 17.99           N
ATOM   4015  C   ARG A 250      35.058  19.583  10.200  1.00 21.61           C
ATOM   4016  O   ARG A 250      36.276  19.670  10.027  1.00 20.86           O
ATOM   4018  N   LEU A 251      34.427  18.460  10.547  1.00 24.34           N
ATOM   4019  CA  LEU A 251      35.109  17.189  10.676  1.00 22.67           C
ATOM   4021  CB  LEU A 251      34.152  16.090  11.163  1.00 26.27           C
ATOM   4024  CG  LEU A 251      34.793  14.769  11.594  1.00 30.32           C
ATOM   4026  CD1 LEU A 251      35.768  14.992  12.788  1.00 29.87           C
ATOM   4030  CD2 LEU A 251      33.708  13.691  11.912  1.00 33.21           C
ATOM   4034  C   LEU A 251      35.731  16.808   9.364  1.00 21.56           C
ATOM   4035  O   LEU A 251      36.770  16.170   9.353  1.00 21.95           O
ATOM   4037  N   ALA A 252      35.111  17.236   8.259  1.00 19.56           N
ATOM   4038  CA  ALA A 252      35.596  16.959   6.927  1.00 18.24           C
ATOM   4040  CB  ALA A 252      34.591  17.508   5.846  1.00 19.43           C
ATOM   4044  C   ALA A 252      37.007  17.487   6.692  1.00 19.57           C
ATOM   4045  O   ALA A 252      37.729  16.959   5.872  1.00 20.85           O
ATOM   4047  N   CME A 253      37.417  18.504   7.444  1.00 19.30           N
ATOM   4048  CA  CME A 253      38.799  18.951   7.427  1.00 19.90           C
ATOM   4049  CB  CME A 253      38.970  20.197   8.306  1.00 22.68           C
ATOM   4050  SG  CME A 253      37.925  21.586   7.781  1.00 26.87           S
ATOM   4051  SD  CME A 253      38.128  21.646   5.733  1.00 36.12           S
ATOM   4052  CE  CME A 253      36.544  20.954   5.160  1.00 31.91           C
ATOM   4053  CZ  CME A 253      36.806  20.148   3.914  1.00 30.43           C
ATOM   4054  OH  CME A 253      37.474  21.024   3.010  1.00 37.56           O
ATOM   4055  C   CME A 253      39.834  17.867   7.836  1.00 21.43           C
ATOM   4056  O   CME A 253      41.014  18.019   7.545  1.00 26.76           O
ATOM   4066  N   THR A 254      39.374  16.803   8.506  1.00 21.77           N
ATOM   4067  CA  THR A 254      40.212  15.722   8.995  1.00 24.91           C
ATOM   4069  CB  THR A 254      39.779  15.264  10.435  1.00 19.82           C
ATOM   4071  OG1 THR A 254      38.479  14.635  10.417  1.00 22.66           O
ATOM   4073  CG2 THR A 254      39.786  16.427  11.381  1.00 23.72           C
ATOM   4077  C   THR A 254      40.202  14.473   8.107  1.00 23.14           C
ATOM   4078  O   THR A 254      40.847  13.493   8.454  1.00 20.31           O
ATOM   4080  N   LEU A 255      39.488  14.505   6.982  1.00 20.42           N
ATOM   4081  CA  LEU A 255      39.400  13.350   6.077  1.00 23.30           C
ATOM   4083  CB  LEU A 255      38.586  13.655   4.824  1.00 23.47           C
ATOM   4086  CG  LEU A 255      37.085  13.526   4.754  1.00 30.07           C
ATOM   4088  CD1 LEU A 255      36.740  13.712   3.268  1.00 26.03           C
ATOM   4092  CD2 LEU A 255      36.559  12.169   5.336  1.00 23.95           C
ATOM   4096  C   LEU A 255      40.768  12.923   5.594  1.00 24.90           C
ATOM   4097  O   LEU A 255      41.595  13.743   5.215  1.00 19.48           O
ATOM   4099  N   LYS A 256      40.994  11.622   5.542  1.00 22.56           N
ATOM   4100  CA  LYS A 256      42.298  11.174   5.142  1.00 22.63           C
ATOM   4102  CB  LYS A 256      42.856  10.204   6.189  1.00 30.82           C
ATOM   4105  CG  LYS A 256      43.094  10.879   7.552  1.00 32.57           C
ATOM   4108  CD  LYS A 256      43.921  12.172   7.438  1.00 39.16           C
ATOM   4111  CE  LYS A 256      44.063  12.884   8.786  1.00 42.11           C
ATOM   4114  NZ  LYS A 256      44.672  14.244   8.630  1.00 42.12           N
ATOM   4118  C   LYS A 256      42.156  10.576   3.793  1.00 17.38           C
ATOM   4119  O   LYS A 256      41.080  10.105   3.453  1.00 19.47           O
ATOM   4121  N   PRO A 257      43.254  10.588   3.001  1.00 21.87           N
ATOM   4122  CA  PRO A 257      43.278   9.948   1.705  1.00 22.96           C
ATOM   4124  CB  PRO A 257      44.771   9.955   1.355  1.00 23.80           C
ATOM   4127  CG  PRO A 257      45.251  11.204   1.958  1.00 23.04           C
ATOM   4130  CD  PRO A 257      44.570  11.196   3.301  1.00 26.36           C
ATOM   4133  C   PRO A 257      42.697   8.539   1.763  1.00 22.73           C
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ATOM	4134	O	PRO	A	257	42.917	7.825	2.721	1.00	18.10	O
ATOM	4135	N	ASP	A	258	41.889	8.214	0.772	1.00	23.59	N
ATOM	4136	CA	ASP	A	258	41.090	7.008	0.716	1.00	22.50	C
ATOM	4138	CB	ASP	A	258	39.923	7.094	1.727	1.00	25.82	C
ATOM	4141	CG	ASP	A	258	38.969	5.896	1.662	1.00	24.10	C
ATOM	4142	OD1	ASP	A	258	38.893	5.197	0.633	1.00	27.86	O
ATOM	4143	OD2	ASP	A	258	38.251	5.691	2.650	1.00	33.73	O
ATOM	4144	C	ASP	A	258	40.587	6.991	-0.722	1.00	20.59	C
ATOM	4145	O	ASP	A	258	39.617	7.671	-1.028	1.00	25.58	O
ATOM	4147	N	PRO	A	259	41.276	6.261	-1.615	1.00	22.88	N
ATOM	4148	CA	PRO	A	259	40.949	6.233	-3.045	1.00	26.27	C
ATOM	4150	CB	PRO	A	259	41.831	5.110	-3.597	1.00	28.82	C
ATOM	4153	CG	PRO	A	259	42.967	5.003	-2.630	1.00	28.37	C
ATOM	4156	CD	PRO	A	259	42.475	5.449	-1.304	1.00	24.01	C
ATOM	4159	C	PRO	A	259	39.491	5.968	-3.401	1.00	21.13	C
ATOM	4160	O	PRO	A	259	38.950	6.607	-4.271	1.00	18.56	O
ATOM	4161	N	GLU	A	260	38.883	5.027	-2.716	1.00	21.66	N
ATOM	4162	CA	GLU	A	260	37.522	4.613	-3.001	1.00	25.86	C
ATOM	4164	CB	GLU	A	260	37.240	3.350	-2.204	1.00	28.41	C
ATOM	4167	CG	GLU	A	260	35.955	2.654	-2.515	1.00	43.30	C
ATOM	4170	CD	GLU	A	260	35.702	1.558	-1.493	1.00	51.87	C
ATOM	4171	OE1	GLU	A	260	34.894	1.788	-0.549	1.00	58.84	O
ATOM	4172	OE2	GLU	A	260	36.370	0.504	-1.616	1.00	54.94	O
ATOM	4173	C	GLU	A	260	36.544	5.705	-2.640	1.00	21.37	C
ATOM	4174	O	GLU	A	260	35.651	6.036	-3.428	1.00	25.79	O
ATOM	4176	N	LEU	A	261	36.726	6.281	-1.452	1.00	22.77	N
ATOM	4177	CA	LEU	A	261	35.952	7.435	-1.041	1.00	22.00	C
ATOM	4179	CB	LEU	A	261	36.281	7.850	0.399	1.00	22.50	C
ATOM	4182	CG	LEU	A	261	35.496	9.063	0.968	1.00	24.69	C
ATOM	4184	CD1	LEU	A	261	33.979	8.812	0.909	1.00	18.81	C
ATOM	4188	CD2	LEU	A	261	35.925	9.400	2.398	1.00	20.26	C
ATOM	4192	C	LEU	A	261	36.172	8.620	-1.994	1.00	21.01	C
ATOM	4193	O	LEU	A	261	35.242	9.253	-2.437	1.00	16.09	O
ATOM	4195	N	GLU	A	262	37.411	8.919	-2.330	1.00	22.42	N
ATOM	4196	CA	GLU	A	262	37.653	10.041	-3.220	1.00	17.68	C
ATOM	4198	CB	GLU	A	262	39.153	10.312	-3.341	1.00	14.35	C
ATOM	4201	CG	GLU	A	262	39.423	11.514	-4.205	1.00	18.33	C
ATOM	4204	CD	GLU	A	262	40.843	12.002	-4.090	1.00	17.53	C
ATOM	4205	OE1	GLU	A	262	41.392	12.466	-5.118	1.00	17.91	O
ATOM	4206	OE2	GLU	A	262	41.342	11.981	-2.952	1.00	15.43	O
ATOM	4207	C	GLU	A	262	37.047	9.857	-4.594	1.00	18.52	C
ATOM	4208	O	GLU	A	262	36.518	10.799	-5.184	1.00	16.19	O
ATOM	4210	N	MET	A	263	37.136	8.649	-5.125	1.00	20.69	N
ATOM	4211	CA	MET	A	263	36.492	8.335	-6.413	1.00	22.68	C
ATOM	4213	CB	MET	A	263	36.694	6.857	-6.764	1.00	25.32	C
ATOM	4216	CG	MET	A	263	37.802	6.556	-7.756	1.00	34.28	C
ATOM	4219	SD	MET	A	263	38.006	4.756	-7.993	1.00	44.41	S
ATOM	4220	CE	MET	A	263	36.324	4.241	-8.329	1.00	44.28	C
ATOM	4224	C	MET	A	263	34.986	8.640	-6.393	1.00	22.12	C
ATOM	4225	O	MET	A	263	34.418	9.134	-7.361	1.00	21.89	O
ATOM	4227	N	SER	A	264	34.357	8.304	-5.275	1.00	23.76	N
ATOM	4228	CA	SER	A	264	32.960	8.590	-5.030	1.00	23.61	C
ATOM	4230	CB	SER	A	264	32.550	7.813	-3.790	1.00	23.09	C
ATOM	4233	OG	SER	A	264	31.269	8.146	-3.411	1.00	33.29	O
ATOM	4235	C	SER	A	264	32.612	10.108	-4.894	1.00	22.24	C
ATOM	4236	O	SER	A	264	31.697	10.588	-5.531	1.00	21.33	O
ATOM	4238	N	LEU	A	265	33.377	10.846	-4.105	1.00	19.38	N
ATOM	4239	CA	LEU	A	265	33.147	12.291	-3.922	1.00	19.60	C
ATOM	4241	CB	LEU	A	265	34.005	12.828	-2.746	1.00	16.75	C
ATOM	4244	CG	LEU	A	265	33.802	12.087	-1.424	1.00	19.25	C
ATOM	4246	CD1	LEU	A	265	34.612	12.731	-0.308	1.00	18.60	C
ATOM	4250	CD2	LEU	A	265	32.286	12.010	-1.038	1.00	19.76	C
ATOM	4254	C	LEU	A	265	33.415	13.111	-5.175	1.00	17.63	C
ATOM	4255	O	LEU	A	265	32.678	14.083	-5.460	1.00	21.98	O
ATOM	4257	N	GLN	A	266	34.433	12.735	-5.948	1.00	18.70	N
ATOM	4258	CA	GLN	A	266	34.858	13.588	-7.076	1.00	18.48	C
ATOM	4260	CB	GLN	A	266	36.172	13.097	-7.682	1.00	18.76	C

ATOM	4263	CG	GLN	A	266	36.056	11.849	-8.527	1.00 22.19	C
ATOM	4266	CD	GLN	A	266	37.168	11.736	-9.507	1.00 29.54	C
ATOM	4267	OE1	GLN	A	266	37.009	12.043	-10.704	1.00 43.70	O
ATOM	4268	NE2	GLN	A	266	38.306	11.351	-9.028	1.00 20.14	N
ATOM	4271	C	GLN	A	266	33.778	13.679	-8.156	1.00 15.83	C
ATOM	4272	O	GLN	A	266	33.690	14.660	-8.881	1.00 20.01	O
ATOM	4274	N	LYS	A	267	32.922	12.659	-8.204	1.00 18.19	N
ATOM	4275	CA	LYS	A	267	31.871	12.554	-9.182	1.00 18.20	C
ATOM	4277	CB	LYS	A	267	31.183	11.190	-9.088	1.00 19.23	C
ATOM	4280	CG	LYS	A	267	32.029	10.001	-9.551	1.00 24.94	C
ATOM	4283	CD	LYS	A	267	31.217	8.729	-9.502	1.00 25.17	C
ATOM	4286	CE	LYS	A	267	32.106	7.565	-9.887	1.00 34.37	C
ATOM	4289	NZ	LYS	A	267	33.053	7.251	-8.817	1.00 43.67	N
ATOM	4293	C	LYS	A	267	30.822	13.640	-8.987	1.00 19.66	C
ATOM	4294	O	LYS	A	267	30.049	13.910	-9.907	1.00 17.56	O
ATOM	4296	N	TYR	A	268	30.819	14.271	-7.819	1.00 19.11	N
ATOM	4297	CA	TYR	A	268	29.864	15.342	-7.512	1.00 21.00	C
ATOM	4299	CB	TYR	A	268	29.555	15.378	-6.033	1.00 19.20	C
ATOM	4302	CG	TYR	A	268	28.742	14.232	-5.545	1.00 18.87	C
ATOM	4303	CD1	TYR	A	268	29.350	13.049	-5.166	1.00 22.68	C
ATOM	4305	CE1	TYR	A	268	28.611	11.985	-4.685	1.00 20.73	C
ATOM	4307	CZ	TYR	A	268	27.236	12.096	-4.578	1.00 18.70	C
ATOM	4308	OH	TYR	A	268	26.492	11.037	-4.110	1.00 24.14	O
ATOM	4310	CE2	TYR	A	268	26.594	13.277	-4.922	1.00 20.45	C
ATOM	4312	CD2	TYR	A	268	27.359	14.340	-5.414	1.00 24.10	C
ATOM	4314	C	TYR	A	268	30.359	16.704	-7.923	1.00 20.87	C
ATOM	4315	O	TYR	A	268	29.596	17.656	-7.918	1.00 21.33	O
ATOM	4317	N	VAL	A	269	31.622	16.778	-8.320	1.00 19.89	N
ATOM	4318	CA	VAL	A	269	32.306	18.025	-8.554	1.00 21.51	C
ATOM	4320	CB	VAL	A	269	33.585	18.080	-7.685	1.00 24.14	C
ATOM	4322	CG1	VAL	A	269	34.338	19.357	-7.919	1.00 29.34	C
ATOM	4326	CG2	VAL	A	269	33.248	17.890	-6.159	1.00 23.86	C
ATOM	4330	C	VAL	A	269	32.699	18.106	-10.023	1.00 23.72	C
ATOM	4331	O	VAL	A	269	33.124	17.104	-10.610	1.00 22.21	O
ATOM	4333	N	MET	A	270	32.581	19.298	-10.607	1.00 21.46	N
ATOM	4334	CA	MET	A	270	32.949	19.529	-12.007	1.00 25.69	C
ATOM	4336	CB	MET	A	270	32.623	20.957	-12.424	1.00 29.89	C
ATOM	4339	CG	MET	A	270	31.193	21.354	-12.328	1.00 39.87	C
ATOM	4342	SD	MET	A	270	31.005	23.157	-12.352	1.00 53.85	S
ATOM	4343	CE	MET	A	270	32.009	23.558	-13.788	1.00 44.35	C
ATOM	4347	C	MET	A	270	34.452	19.340	-12.227	1.00 26.93	C
ATOM	4348	O	MET	A	270	35.264	19.647	-11.355	1.00 21.52	O
ATOM	4350	N	GLU	A	271	34.820	18.903	-13.419	1.00 22.99	N
ATOM	4351	CA	GLU	A	271	36.210	18.583	-13.719	1.00 30.09	C
ATOM	4353	CB	GLU	A	271	36.350	17.835	-15.066	1.00 35.69	C
ATOM	4356	CG	GLU	A	271	36.586	18.752	-16.256	1.00 45.03	C
ATOM	4359	CD	GLU	A	271	36.815	18.003	-17.573	1.00 53.90	C
ATOM	4360	OE1	GLU	A	271	35.946	18.112	-18.471	1.00 57.46	O
ATOM	4361	OE2	GLU	A	271	37.861	17.324	-17.714	1.00 56.44	O
ATOM	4362	C	GLU	A	271	37.072	19.850	-13.679	1.00 25.44	C
ATOM	4363	O	GLU	A	271	38.228	19.779	-13.310	1.00 22.95	O
ATOM	4365	N	SER	A	272	36.501	21.007	-14.027	1.00 22.36	N
ATOM	4366	CA	SER	A	272	37.220	22.251	-13.984	1.00 24.99	C
ATOM	4368	CB	SER	A	272	36.389	23.396	-14.596	1.00 28.39	C
ATOM	4371	OG	SER	A	272	35.164	23.554	-13.902	1.00 35.18	O
ATOM	4373	C	SER	A	272	37.616	22.571	-12.554	1.00 26.11	C
ATOM	4374	O	SER	A	272	38.677	23.135	-12.325	1.00 21.16	O
ATOM	4376	N	ILE	A	273	36.779	22.171	-11.592	1.00 20.46	N
ATOM	4377	CA	ILE	A	273	37.090	22.365	-10.177	1.00 16.75	C
ATOM	4379	CB	ILE	A	273	35.831	22.104	-9.298	1.00 22.68	C
ATOM	4381	CG1	ILE	A	273	34.740	23.127	-9.601	1.00 26.37	C
ATOM	4384	CD1	ILE	A	273	35.178	24.529	-9.417	1.00 30.71	C
ATOM	4388	CG2	ILE	A	273	36.156	22.176	-7.820	1.00 20.62	C
ATOM	4392	C	ILE	A	273	38.187	21.417	-9.733	1.00 13.89	C
ATOM	4393	O	ILE	A	273	39.107	21.802	-9.002	1.00 17.34	O
ATOM	4395	N	LEU	A	274	38.038	20.163	-10.119	1.00 15.99	N
ATOM	4396	CA	LEU	A	274	39.031	19.109	-9.822	1.00 18.32	C

ATOM	4398	CB	LEU	A	274	38.577	17.771	-10.424	1.00 17.13	C
ATOM	4401	CG	LEU	A	274	37.301	17.161	-9.809	1.00 17.92	C
ATOM	4403	CD1	LEU	A	274	36.972	15.769	-10.423	1.00 17.53	C
ATOM	4407	CD2	LEU	A	274	37.496	17.049	-8.323	1.00 18.68	C
ATOM	4411	C	LEU	A	274	40.406	19.533	-10.346	1.00 16.74	C
ATOM	4412	O	LEU	A	274	41.438	19.421	-9.632	1.00 16.96	O
ATOM	4414	N	LYS	A	275	40.422	20.094	-11.549	1.00 21.42	N
ATOM	4415	CA	LYS	A	275	41.684	20.640	-12.097	1.00 22.70	C
ATOM	4417	CB	LYS	A	275	41.474	21.224	-13.496	1.00 26.71	C
ATOM	4420	CG	LYS	A	275	42.746	21.124	-14.346	1.00 30.57	C
ATOM	4423	CD	LYS	A	275	42.590	21.832	-15.675	1.00 37.35	C
ATOM	4426	CE	LYS	A	275	43.936	22.039	-16.367	1.00 38.56	C
ATOM	4429	NZ	LYS	A	275	43.777	22.040	-17.847	1.00 40.12	N
ATOM	4433	C	LYS	A	275	42.332	21.668	-11.176	1.00 23.85	C
ATOM	4434	O	LYS	A	275	43.535	21.636	-10.942	1.00 20.31	O
ATOM	4436	N	GLN	A	276	41.529	22.569	-10.623	1.00 22.06	N
ATOM	4437	CA	GLN	A	276	42.053	23.579	-9.725	1.00 24.96	C
ATOM	4439	CB	GLN	A	276	41.027	24.696	-9.504	1.00 26.62	C
ATOM	4442	CG	GLN	A	276	41.428	25.742	-8.491	1.00 34.67	C
ATOM	4445	CD	GLN	A	276	40.292	26.734	-8.194	1.00 34.30	C
ATOM	4446	OE1	GLN	A	276	39.859	26.878	-7.040	1.00 46.40	O
ATOM	4447	NE2	GLN	A	276	39.800	27.392	-9.230	1.00 31.20	N
ATOM	4450	C	GLN	A	276	42.468	22.932	-8.422	1.00 21.22	C
ATOM	4451	O	GLN	A	276	43.513	23.256	-7.898	1.00 23.61	O
ATOM	4453	N	ILE	A	277	41.669	21.991	-7.918	1.00 19.28	N
ATOM	4454	CA	ILE	A	277	42.008	21.248	-6.693	1.00 18.04	C
ATOM	4456	CB	ILE	A	277	40.879	20.272	-6.299	1.00 18.14	C
ATOM	4458	CG1	ILE	A	277	39.780	21.047	-5.573	1.00 19.14	C
ATOM	4461	CD1	ILE	A	277	38.496	20.330	-5.492	1.00 14.37	C
ATOM	4465	CG2	ILE	A	277	41.420	19.067	-5.460	1.00 18.07	C
ATOM	4469	C	ILE	A	277	43.316	20.484	-6.862	1.00 20.86	C
ATOM	4470	O	ILE	A	277	44.125	20.355	-5.921	1.00 23.63	O
ATOM	4472	N	ASP	A	278	43.555	20.015	-8.073	1.00 16.09	N
ATOM	4473	CA	ASP	A	278	44.782	19.252	-8.349	1.00 22.14	C
ATOM	4475	CB	ASP	A	278	44.494	18.288	-9.483	1.00 18.19	C
ATOM	4478	CG	ASP	A	278	43.644	17.091	-9.021	1.00 20.10	C
ATOM	4479	OD1	ASP	A	278	43.731	16.677	-7.829	1.00 15.63	O
ATOM	4480	OD2	ASP	A	278	42.922	16.549	-9.861	1.00 23.69	O
ATOM	4481	C	ASP	A	278	46.003	20.137	-8.663	1.00 23.18	C
ATOM	4482	O	ASP	A	278	47.073	19.648	-9.065	1.00 23.00	O
ATOM	4484	N	ASN	A	279	45.833	21.441	-8.444	1.00 27.71	N
ATOM	4485	CA	ASN	A	279	46.846	22.452	-8.740	1.00 25.93	C
ATOM	4487	CB	ASN	A	279	48.027	22.336	-7.774	1.00 27.31	C
ATOM	4490	CG	ASN	A	279	47.621	22.559	-6.352	1.00 31.49	C
ATOM	4491	OD1	ASN	A	279	48.073	21.853	-5.446	1.00 38.68	O
ATOM	4492	ND2	ASN	A	279	46.768	23.545	-6.137	1.00 27.59	N
ATOM	4495	C	ASN	A	279	47.345	22.349	-10.142	1.00 23.87	C
ATOM	4496	O	ASN	A	279	48.536	22.574	-10.399	1.00 26.78	O
ATOM	4498	N	LYS	A	280	46.438	22.030	-11.054	1.00 24.72	N
ATOM	4499	CA	LYS	A	280	46.750	22.032	-12.479	1.00 28.09	C
ATOM	4501	CB	LYS	A	280	46.403	20.683	-13.106	1.00 28.23	C
ATOM	4504	CG	LYS	A	280	47.395	19.566	-12.656	1.00 33.67	C
ATOM	4507	CD	LYS	A	280	47.128	18.267	-13.390	1.00 39.10	C
ATOM	4510	CE	LYS	A	280	48.222	17.205	-13.115	1.00 40.43	C
ATOM	4513	NZ	LYS	A	280	48.252	16.749	-11.684	1.00 38.44	N
ATOM	4517	C	LYS	A	280	46.074	23.202	-13.199	1.00 25.61	C
ATOM	4518	O	LYS	A	280	46.114	23.298	-14.403	1.00 31.82	O
ATOM	4520	N	GLN	A	281	45.489	24.108	-12.428	1.00 27.09	N
ATOM	4521	CA	GLN	A	281	44.916	25.323	-12.961	1.00 26.14	C
ATOM	4523	CB	GLN	A	281	43.477	25.038	-13.417	1.00 31.15	C
ATOM	4526	CG	GLN	A	281	42.550	26.206	-13.729	1.00 34.97	C
ATOM	4529	CD	GLN	A	281	41.126	25.977	-13.127	1.00 44.52	C
ATOM	4530	OE1	GLN	A	281	40.761	26.612	-12.109	1.00 49.84	O
ATOM	4531	NE2	GLN	A	281	40.344	25.048	-13.727	1.00 30.72	N
ATOM	4534	C	GLN	A	281	45.039	26.390	-11.867	1.00 26.31	C
ATOM	4535	O	GLN	A	281	44.983	26.099	-10.666	1.00 23.35	O
ATOM	4537	N	LEU	A	282	45.256	27.623	-12.296	1.00 27.45	N

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ATOM   4538  CA  LEU A 282      45.396  28.754 -11.390  1.00 30.34           C
ATOM   4540  CB  LEU A 282      45.625  30.017 -12.223  1.00 29.96           C
ATOM   4543  CG  LEU A 282      46.967  30.043 -12.980  1.00 35.82           C
ATOM   4545  CD1 LEU A 282      47.056  31.201 -13.989  1.00 36.46           C
ATOM   4549  CD2 LEU A 282      48.115  30.111 -11.978  1.00 32.87           C
ATOM   4553  C   LEU A 282      44.150  28.894 -10.504  1.00 33.54           C
ATOM   4554  O   LEU A 282      43.045  28.775 -10.998  1.00 31.44           O
ATOM   4556  N   GLN A 283      44.337  29.160  -9.208  1.00 35.43           N
ATOM   4557  CA  GLN A 283      43.230  29.128  -8.221  1.00 40.56           C
ATOM   4559  CB  GLN A 283      43.764  29.198  -6.774  1.00 42.64           C
ATOM   4562  CG  GLN A 283      44.735  28.057  -6.397  1.00 48.46           C
ATOM   4565  CD  GLN A 283      44.075  26.670  -6.395  1.00 50.71           C
ATOM   4566  OE1 GLN A 283      43.005  26.481  -5.808  1.00 53.15           O
ATOM   4567  NE2 GLN A 283      44.712  25.702  -7.056  1.00 50.17           N
ATOM   4570  C   GLN A 283      42.175  30.209  -8.427  1.00 40.78           C
ATOM   4571  O   GLN A 283      41.111  30.164  -7.799  1.00 46.59           O
ATOM   4573  N   GLY A 284      42.467  31.180  -9.289  1.00 40.21           N
ATOM   4574  CA  GLY A 284      41.552  32.281  -9.555  1.00 39.42           C
ATOM   4577  C   GLY A 284      40.969  32.248 -10.939  1.00 38.11           C
ATOM   4578  O   GLY A 284      40.243  33.152 -11.318  1.00 37.16           O
ATOM   4580  N   TYR A 285      41.251  31.173 -11.665  1.00 35.84           N
ATOM   4581  CA  TYR A 285      40.845  31.003 -13.054  1.00 37.06           C
ATOM   4583  CB  TYR A 285      41.490  29.698 -13.560  1.00 39.51           C
ATOM   4586  CG  TYR A 285      41.200  29.370 -15.005  1.00 47.91           C
ATOM   4587  CD1 TYR A 285      41.933  29.963 -16.032  1.00 52.52           C
ATOM   4589  CE1 TYR A 285      41.672  29.656 -17.360  1.00 56.72           C
ATOM   4591  CZ  TYR A 285      40.671  28.746 -17.664  1.00 55.91           C
ATOM   4592  OH  TYR A 285      40.410  28.444 -18.975  1.00 64.21           O
ATOM   4594  CE2 TYR A 285      39.935  28.139 -16.663  1.00 53.88           C
ATOM   4596  CD2 TYR A 285      40.199  28.448 -15.346  1.00 52.43           C
ATOM   4598  C   TYR A 285      39.318  30.944 -13.294  1.00 34.57           C
ATOM   4599  O   TYR A 285      38.815  31.289 -14.373  1.00 28.54           O
ATOM   4601  N   LEU A 286      38.591  30.500 -12.285  1.00 32.80           N
ATOM   4602  CA  LEU A 286      37.163  30.269 -12.410  1.00 36.55           C
ATOM   4604  CB  LEU A 286      36.747  28.988 -11.649  1.00 35.46           C
ATOM   4607  CG  LEU A 286      37.354  27.690 -12.197  1.00 36.66           C
ATOM   4609  CD1 LEU A 286      37.085  26.539 -11.248  1.00 37.54           C
ATOM   4613  CD2 LEU A 286      36.798  27.378 -13.580  1.00 35.90           C
ATOM   4617  C   LEU A 286      36.314  31.428 -11.952  1.00 32.51           C
ATOM   4618  O   LEU A 286      35.095  31.372 -12.119  1.00 36.75           O
ATOM   4620  N   SER A 287      36.927  32.469 -11.386  1.00 30.84           N
ATOM   4621  CA  SER A 287      36.188  33.694 -11.075  1.00 27.53           C
ATOM   4623  CB  SER A 287      36.816  34.457  -9.933  1.00 27.99           C
ATOM   4626  OG  SER A 287      36.689  33.699  -8.771  1.00 34.21           O
ATOM   4628  C   SER A 287      36.191  34.557 -12.295  1.00 26.97           C
ATOM   4629  O   SER A 287      37.243  35.097 -12.686  1.00 25.99           O
ATOM   4631  N   GLU A 288      35.029  34.696 -12.914  1.00 24.83           N
ATOM   4632  CA  GLU A 288      34.965  35.428 -14.183  1.00 25.64           C
ATOM   4634  CB  GLU A 288      35.522  34.559 -15.318  1.00 29.56           C
ATOM   4637  CG  GLU A 288      34.916  33.188 -15.383  1.00 35.09           C
ATOM   4640  CD  GLU A 288      35.516  32.334 -16.516  1.00 41.51           C
ATOM   4641  OE1 GLU A 288      35.362  31.081 -16.478  1.00 39.57           O
ATOM   4642  OE2 GLU A 288      36.145  32.927 -17.429  1.00 44.06           O
ATOM   4643  C   GLU A 288      33.551  35.884 -14.479  1.00 25.89           C
ATOM   4644  O   GLU A 288      32.591  35.323 -13.956  1.00 22.12           O
ATOM   4646  N   LEU A 289      33.452  36.963 -15.244  1.00 24.59           N
ATOM   4647  CA  LEU A 289      32.215  37.391 -15.898  1.00 27.37           C
ATOM   4649  CB  LEU A 289      32.068  38.904 -15.916  1.00 29.23           C
ATOM   4652  CG  LEU A 289      31.964  39.502 -14.529  1.00 28.98           C
ATOM   4654  CD1 LEU A 289      31.950  41.041 -14.561  1.00 37.46           C
ATOM   4658  CD2 LEU A 289      30.751  38.976 -13.784  1.00 29.34           C
ATOM   4662  C   LEU A 289      32.373  36.863 -17.293  1.00 30.78           C
ATOM   4663  O   LEU A 289      33.347  37.166 -17.971  1.00 33.88           O
ATOM   4665  N   ARG A 290      31.449  35.999 -17.679  1.00 32.40           N
ATOM   4666  CA  ARG A 290      31.593  35.185 -18.862  1.00 32.76           C
ATOM   4668  CB  ARG A 290      32.042  33.802 -18.414  1.00 40.26           C
ATOM   4671  CG  ARG A 290      32.364  32.836 -19.478  1.00 43.71           C
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ATOM	4674	CD	ARG	A	290	32.735	31.493	-18.827	1.00 53.28	C
ATOM	4677	NE	ARG	A	290	33.298	30.561	-19.799	1.00 59.79	N
ATOM	4679	CZ	ARG	A	290	34.483	30.697	-20.399	1.00 64.95	C
ATOM	4680	NH1	ARG	A	290	35.303	31.710	-20.114	1.00 66.77	N
ATOM	4683	NH2	ARG	A	290	34.862	29.785	-21.289	1.00 67.53	N
ATOM	4686	C	ARG	A	290	30.243	35.080	-19.543	1.00 29.55	C
ATOM	4687	O	ARG	A	290	29.215	34.923	-18.844	1.00 24.00	O
ATOM	4689	N	PRO	A	291	30.234	35.144	-20.898	1.00 33.31	N
ATOM	4690	CA	PRO	A	291	29.014	34.968	-21.674	1.00 30.79	C
ATOM	4692	CB	PRO	A	291	29.391	35.504	-23.055	1.00 31.03	C
ATOM	4695	CG	PRO	A	291	30.847	35.201	-23.162	1.00 37.16	C
ATOM	4698	CD	PRO	A	291	31.399	35.374	-21.780	1.00 34.87	C
ATOM	4701	C	PRO	A	291	28.686	33.506	-21.737	1.00 28.18	C
ATOM	4702	O	PRO	A	291	29.525	32.687	-22.112	1.00 30.85	O
ATOM	4703	N	VAL	A	292	27.463	33.190	-21.341	1.00 25.19	N
ATOM	4704	CA	VAL	A	292	26.979	31.833	-21.337	1.00 27.83	C
ATOM	4706	CB	VAL	A	292	27.049	31.210	-19.892	1.00 27.11	C
ATOM	4708	CG1	VAL	A	292	28.475	31.334	-19.305	1.00 24.09	C
ATOM	4712	CG2	VAL	A	292	26.026	31.820	-18.955	1.00 24.19	C
ATOM	4716	C	VAL	A	292	25.527	31.829	-21.823	1.00 29.14	C
ATOM	4717	O	VAL	A	292	24.867	32.890	-21.931	1.00 29.43	O
ATOM	4719	N	THR	A	293	25.048	30.628	-22.094	1.00 23.46	N
ATOM	4720	CA	THR	A	293	23.635	30.377	-22.327	1.00 25.78	C
ATOM	4722	CB	THR	A	293	23.348	29.744	-23.682	1.00 27.72	C
ATOM	4724	OG1	THR	A	293	23.822	30.597	-24.716	1.00 32.52	O
ATOM	4726	CG2	THR	A	293	21.799	29.516	-23.852	1.00 28.62	C
ATOM	4730	C	THR	A	293	23.168	29.432	-21.258	1.00 20.73	C
ATOM	4731	O	THR	A	293	23.763	28.375	-21.039	1.00 28.20	O
ATOM	4733	N	ILE	A	294	22.107	29.843	-20.587	1.00 20.67	N
ATOM	4734	CA	ILE	A	294	21.433	29.074	-19.554	1.00 19.66	C
ATOM	4736	CB	ILE	A	294	20.860	30.002	-18.447	1.00 21.58	C
ATOM	4738	CG1	ILE	A	294	21.934	30.963	-17.921	1.00 23.25	C
ATOM	4741	CD1	ILE	A	294	23.178	30.233	-17.236	1.00 22.02	C
ATOM	4745	CG2	ILE	A	294	20.186	29.186	-17.289	1.00 15.52	C
ATOM	4749	C	ILE	A	294	20.288	28.351	-20.225	1.00 22.64	C
ATOM	4750	O	ILE	A	294	19.467	28.981	-20.932	1.00 23.50	O
ATOM	4752	N	VAL	A	295	20.231	27.040	-20.015	1.00 20.24	N
ATOM	4753	CA	VAL	A	295	19.089	26.219	-20.393	1.00 21.26	C
ATOM	4755	CB	VAL	A	295	19.526	25.122	-21.340	1.00 21.07	C
ATOM	4757	CG1	VAL	A	295	18.351	24.182	-21.746	1.00 21.99	C
ATOM	4761	CG2	VAL	A	295	20.168	25.745	-22.585	1.00 24.17	C
ATOM	4765	C	VAL	A	295	18.530	25.666	-19.089	1.00 25.61	C
ATOM	4766	O	VAL	A	295	19.160	24.826	-18.432	1.00 24.73	O
ATOM	4768	N	PHE	A	296	17.389	26.197	-18.676	1.00 20.76	N
ATOM	4769	CA	PHE	A	296	16.825	25.863	-17.394	1.00 22.47	C
ATOM	4771	CB	PHE	A	296	16.451	27.138	-16.650	1.00 22.24	C
ATOM	4774	CG	PHE	A	296	16.823	27.128	-15.166	1.00 22.06	C
ATOM	4775	CD1	PHE	A	296	16.596	26.020	-14.373	1.00 26.08	C
ATOM	4777	CE1	PHE	A	296	16.899	26.033	-13.023	1.00 29.65	C
ATOM	4779	CZ	PHE	A	296	17.424	27.157	-12.471	1.00 30.81	C
ATOM	4781	CE2	PHE	A	296	17.641	28.272	-13.250	1.00 28.53	C
ATOM	4783	CD2	PHE	A	296	17.323	28.255	-14.575	1.00 30.16	C
ATOM	4785	C	PHE	A	296	15.651	24.954	-17.678	1.00 24.34	C
ATOM	4786	O	PHE	A	296	14.682	25.364	-18.333	1.00 22.74	O
ATOM	4788	N	VAL	A	297	15.793	23.697	-17.269	1.00 22.32	N
ATOM	4789	CA	VAL	A	297	14.854	22.626	-17.584	1.00 22.67	C
ATOM	4791	CB	VAL	A	297	15.620	21.350	-18.032	1.00 24.52	C
ATOM	4793	CG1	VAL	A	297	14.643	20.198	-18.401	1.00 19.71	C
ATOM	4797	CG2	VAL	A	297	16.514	21.671	-19.199	1.00 23.38	C
ATOM	4801	C	VAL	A	297	14.009	22.269	-16.357	1.00 27.59	C
ATOM	4802	O	VAL	A	297	14.541	21.946	-15.316	1.00 27.52	O
ATOM	4804	N	ASN	A	298	12.691	22.360	-16.473	1.00 30.02	N
ATOM	4805	CA	ASN	A	298	11.806	22.014	-15.383	1.00 31.22	C
ATOM	4807	CB	ASN	A	298	10.895	23.169	-15.008	1.00 33.84	C
ATOM	4810	CG	ASN	A	298	9.980	22.826	-13.846	1.00 35.59	C
ATOM	4811	OD1	ASN	A	298	10.442	22.552	-12.733	1.00 35.40	O
ATOM	4812	ND2	ASN	A	298	8.681	22.817	-14.104	1.00 37.69	N

ATOM	4815	C	ASN	A	298	10.971	20.832	-15.794	1.00	33.67	C
ATOM	4816	O	ASN	A	298	10.388	20.823	-16.870	1.00	34.04	O
ATOM	4818	N	LEU	A	299	10.951	19.821	-14.936	1.00	32.82	N
ATOM	4819	CA	LEU	A	299	10.165	18.619	-15.169	1.00	33.95	C
ATOM	4821	CB	LEU	A	299	11.054	17.393	-15.038	1.00	32.48	C
ATOM	4824	CG	LEU	A	299	12.274	17.349	-15.976	1.00	33.16	C
ATOM	4826	CD1	LEU	A	299	13.098	16.118	-15.606	1.00	30.91	C
ATOM	4830	CD2	LEU	A	299	11.856	17.373	-17.487	1.00	24.83	C
ATOM	4834	C	LEU	A	299	9.069	18.608	-14.119	1.00	34.51	C
ATOM	4835	O	LEU	A	299	9.362	18.671	-12.932	1.00	33.01	O
ATOM	4837	N	MET	A	300	7.812	18.594	-14.537	1.00	37.66	N
ATOM	4838	CA	MET	A	300	6.729	18.502	-13.560	1.00	45.06	C
ATOM	4840	CB	MET	A	300	5.626	19.510	-13.840	1.00	48.25	C
ATOM	4843	CG	MET	A	300	6.020	20.927	-13.494	1.00	56.30	C
ATOM	4846	SD	MET	A	300	6.191	21.162	-11.714	1.00	70.90	S
ATOM	4847	CE	MET	A	300	6.315	22.950	-11.590	1.00	68.86	C
ATOM	4851	C	MET	A	300	6.179	17.100	-13.516	1.00	42.07	C
ATOM	4852	O	MET	A	300	5.958	16.465	-14.551	1.00	45.45	O
ATOM	4854	N	PHE	A	301	5.982	16.622	-12.302	1.00	45.42	N
ATOM	4855	CA	PHE	A	301	5.426	15.312	-12.070	1.00	53.31	C
ATOM	4857	CB	PHE	A	301	6.312	14.538	-11.088	1.00	52.01	C
ATOM	4860	CG	PHE	A	301	7.735	14.413	-11.536	1.00	50.40	C
ATOM	4861	CD1	PHE	A	301	8.706	15.290	-11.064	1.00	50.77	C
ATOM	4863	CE1	PHE	A	301	10.022	15.181	-11.478	1.00	51.18	C
ATOM	4865	CZ	PHE	A	301	10.377	14.196	-12.388	1.00	49.21	C
ATOM	4867	CE2	PHE	A	301	9.407	13.321	-12.873	1.00	52.47	C
ATOM	4869	CD2	PHE	A	301	8.101	13.435	-12.446	1.00	49.08	C
ATOM	4871	C	PHE	A	301	4.018	15.467	-11.504	1.00	61.80	C
ATOM	4872	O	PHE	A	301	3.671	16.494	-10.909	1.00	61.36	O
ATOM	4874	N	GLU	A	302	3.209	14.435	-11.703	1.00	72.74	N
ATOM	4875	CA	GLU	A	302	1.897	14.344	-11.070	1.00	80.52	C
ATOM	4877	CB	GLU	A	302	1.159	13.127	-11.643	1.00	83.34	C
ATOM	4880	CG	GLU	A	302	-0.269	12.911	-11.153	1.00	85.93	C
ATOM	4883	CD	GLU	A	302	-0.925	11.694	-11.798	1.00	88.34	C
ATOM	4884	OE1	GLU	A	302	-2.002	11.274	-11.321	1.00	90.82	O
ATOM	4885	OE2	GLU	A	302	-0.367	11.152	-12.781	1.00	91.01	O
ATOM	4886	C	GLU	A	302	2.025	14.237	-9.539	1.00	84.89	C
ATOM	4887	O	GLU	A	302	1.127	14.667	-8.814	1.00	84.63	O
ATOM	4889	N	ASP	A	303	3.142	13.666	-9.067	1.00	91.32	N
ATOM	4890	CA	ASP	A	303	3.402	13.440	-7.634	1.00	95.26	C
ATOM	4892	CB	ASP	A	303	3.367	11.930	-7.344	1.00	96.86	C
ATOM	4895	CG	ASP	A	303	2.824	11.613	-5.964	1.00	97.79	C
ATOM	4896	OD1	ASP	A	303	3.574	11.789	-4.982	1.00	99.19	O
ATOM	4897	OD2	ASP	A	303	1.648	11.191	-5.866	1.00	97.17	O
ATOM	4898	C	ASP	A	303	4.751	14.050	-7.199	1.00	97.26	C
ATOM	4899	O	ASP	A	303	5.732	13.968	-7.941	1.00	97.59	O
ATOM	4901	N	GLN	A	304	4.798	14.640	-5.998	1.00	99.65	N
ATOM	4902	CA	GLN	A	304	5.951	15.475	-5.575	1.00	101.53	C
ATOM	4904	CB	GLN	A	304	5.511	16.847	-4.996	1.00	103.19	C
ATOM	4907	CG	GLN	A	304	4.134	16.951	-4.296	1.00	104.53	C
ATOM	4910	CD	GLN	A	304	3.693	18.409	-4.085	1.00	105.38	C
ATOM	4911	OE1	GLN	A	304	2.510	18.738	-4.196	1.00	105.46	O
ATOM	4912	NE2	GLN	A	304	4.652	19.283	-3.797	1.00	106.68	N
ATOM	4915	C	GLN	A	304	6.900	14.828	-4.572	1.00	101.65	C
ATOM	4916	O	GLN	A	304	8.067	14.565	-4.874	1.00	100.70	O
ATOM	4918	N	ASP	A	305	6.382	14.596	-3.373	1.00	101.23	N
ATOM	4919	CA	ASP	A	305	7.198	14.272	-2.209	1.00	100.15	C
ATOM	4921	CB	ASP	A	305	6.464	14.745	-0.947	1.00	100.59	C
ATOM	4924	CG	ASP	A	305	5.963	16.196	-1.064	1.00	100.91	C
ATOM	4925	OD1	ASP	A	305	6.612	17.007	-1.766	1.00	99.94	O
ATOM	4926	OD2	ASP	A	305	4.915	16.521	-0.459	1.00	102.24	O
ATOM	4927	C	ASP	A	305	7.537	12.773	-2.130	1.00	99.44	C
ATOM	4928	O	ASP	A	305	8.365	12.360	-1.306	1.00	99.49	O
ATOM	4930	N	LYS	A	306	6.900	11.972	-2.992	1.00	97.27	N
ATOM	4931	CA	LYS	A	306	7.179	10.536	-3.110	1.00	94.82	C
ATOM	4933	CB	LYS	A	306	5.924	9.776	-3.560	1.00	95.23	C
ATOM	4936	CG	LYS	A	306	4.800	9.798	-2.526	1.00	96.47	C

ATOM	4939	CD	LYS	A	306	3.549	9.088	-3.028	1.00	96.05	C
ATOM	4942	CE	LYS	A	306	2.337	9.405	-2.163	1.00	95.51	C
ATOM	4945	NZ	LYS	A	306	1.067	9.064	-2.862	1.00	94.80	N
ATOM	4949	C	LYS	A	306	8.333	10.278	-4.081	1.00	91.19	C
ATOM	4950	O	LYS	A	306	8.121	10.133	-5.290	1.00	89.52	O
ATOM	4952	N	ALA	A	307	9.546	10.221	-3.528	1.00	87.48	N
ATOM	4953	CA	ALA	A	307	10.772	9.924	-4.281	1.00	86.05	C
ATOM	4955	CB	ALA	A	307	11.987	9.891	-3.329	1.00	85.50	C
ATOM	4959	C	ALA	A	307	10.697	8.610	-5.066	1.00	84.34	C
ATOM	4960	O	ALA	A	307	11.320	8.481	-6.126	1.00	85.60	O
ATOM	4962	N	GLU	A	308	9.931	7.653	-4.537	1.00	80.95	N
ATOM	4963	CA	GLU	A	308	9.810	6.294	-5.089	1.00	77.91	C
ATOM	4965	CB	GLU	A	308	8.681	5.520	-4.381	1.00	79.00	C
ATOM	4968	CG	GLU	A	308	8.894	5.304	-2.870	1.00	80.62	C
ATOM	4971	CD	GLU	A	308	8.592	6.547	-2.028	1.00	81.26	C
ATOM	4972	OE1	GLU	A	308	7.513	7.158	-2.214	1.00	80.61	O
ATOM	4973	OE2	GLU	A	308	9.441	6.916	-1.184	1.00	79.95	O
ATOM	4974	C	GLU	A	308	9.540	6.290	-6.585	1.00	72.89	C
ATOM	4975	O	GLU	A	308	10.150	5.530	-7.333	1.00	69.84	O
ATOM	4977	N	GLU	A	309	8.627	7.152	-7.011	1.00	69.27	N
ATOM	4978	CA	GLU	A	309	8.197	7.193	-8.400	1.00	69.70	C
ATOM	4980	CB	GLU	A	309	6.707	7.533	-8.454	1.00	73.05	C
ATOM	4983	CG	GLU	A	309	5.819	6.442	-7.850	1.00	77.57	C
ATOM	4986	CD	GLU	A	309	4.348	6.804	-7.868	1.00	79.95	C
ATOM	4987	OE1	GLU	A	309	3.738	6.755	-8.963	1.00	81.61	O
ATOM	4988	OE2	GLU	A	309	3.809	7.130	-6.782	1.00	81.09	O
ATOM	4989	C	GLU	A	309	9.006	8.184	-9.245	1.00	65.66	C
ATOM	4990	O	GLU	A	309	9.366	7.891	-10.396	1.00	65.35	O
ATOM	4992	N	ILE	A	310	9.296	9.351	-8.680	1.00	60.19	N
ATOM	4993	CA	ILE	A	310	9.994	10.387	-9.428	1.00	58.56	C
ATOM	4995	CB	ILE	A	310	9.789	11.803	-8.815	1.00	59.85	C
ATOM	4997	CG1	ILE	A	310	10.481	11.950	-7.465	1.00	62.15	C
ATOM	5000	CD1	ILE	A	310	10.255	13.312	-6.826	1.00	62.54	C
ATOM	5004	CG2	ILE	A	310	8.306	12.101	-8.649	1.00	62.02	C
ATOM	5008	C	ILE	A	310	11.482	10.038	-9.596	1.00	54.66	C
ATOM	5009	O	ILE	A	310	12.059	10.291	-10.652	1.00	53.61	O
ATOM	5011	N	GLY	A	311	12.081	9.431	-8.572	1.00	50.18	N
ATOM	5012	CA	GLY	A	311	13.478	8.995	-8.620	1.00	45.46	C
ATOM	5015	C	GLY	A	311	13.902	8.409	-9.955	1.00	43.78	C
ATOM	5016	O	GLY	A	311	14.773	8.974	-10.637	1.00	33.64	O
ATOM	5018	N	PRO	A	312	13.295	7.265	-10.349	1.00	42.83	N
ATOM	5019	CA	PRO	A	312	13.580	6.678	-11.669	1.00	37.99	C
ATOM	5021	CB	PRO	A	312	12.607	5.499	-11.767	1.00	38.76	C
ATOM	5024	CG	PRO	A	312	12.163	5.217	-10.370	1.00	41.18	C
ATOM	5027	CD	PRO	A	312	12.347	6.453	-9.559	1.00	43.75	C
ATOM	5030	C	PRO	A	312	13.358	7.650	-12.833	1.00	35.95	C
ATOM	5031	O	PRO	A	312	14.069	7.590	-13.838	1.00	37.12	O
ATOM	5032	N	ALA	A	313	12.369	8.522	-12.700	1.00	37.07	N
ATOM	5033	CA	ALA	A	313	12.055	9.494	-13.751	1.00	38.51	C
ATOM	5035	CB	ALA	A	313	10.712	10.193	-13.428	1.00	37.78	C
ATOM	5039	C	ALA	A	313	13.185	10.540	-13.899	1.00	32.06	C
ATOM	5040	O	ALA	A	313	13.623	10.879	-14.996	1.00	33.48	O
ATOM	5042	N	ILE	A	314	13.645	11.031	-12.763	1.00	33.53	N
ATOM	5043	CA	ILE	A	314	14.713	12.017	-12.727	1.00	30.27	C
ATOM	5045	CB	ILE	A	314	14.864	12.587	-11.308	1.00	33.43	C
ATOM	5047	CG1	ILE	A	314	13.589	13.370	-10.938	1.00	32.63	C
ATOM	5050	CD1	ILE	A	314	13.466	13.707	-9.482	1.00	33.38	C
ATOM	5054	CG2	ILE	A	314	16.139	13.472	-11.166	1.00	33.05	C
ATOM	5058	C	ILE	A	314	15.989	11.392	-13.284	1.00	27.19	C
ATOM	5059	O	ILE	A	314	16.681	12.000	-14.127	1.00	26.68	O
ATOM	5061	N	GLN	A	315	16.270	10.161	-12.854	1.00	25.48	N
ATOM	5062	CA	GLN	A	315	17.423	9.433	-13.318	1.00	24.52	C
ATOM	5064	CB	GLN	A	315	17.512	8.072	-12.595	1.00	26.80	C
ATOM	5067	CG	GLN	A	315	18.566	7.102	-13.144	1.00	24.50	C
ATOM	5070	CD	GLN	A	315	19.987	7.571	-12.971	1.00	23.65	C
ATOM	5071	OE1	GLN	A	315	20.863	7.237	-13.774	1.00	33.16	O
ATOM	5072	NE2	GLN	A	315	20.242	8.303	-11.903	1.00	17.82	N

ATOM	5075	C	GLN	A	315	17.380	9.289	-14.837	1.00	29.55	C
ATOM	5076	O	GLN	A	315	18.369	9.602	-15.521	1.00	30.71	O
ATOM	5078	N	ASP	A	316	16.242	8.843	-15.378	1.00	32.16	N
ATOM	5079	CA	ASP	A	316	16.111	8.687	-16.835	1.00	32.86	C
ATOM	5081	CB	ASP	A	316	14.769	8.038	-17.201	1.00	40.26	C
ATOM	5084	CG	ASP	A	316	14.680	6.565	-16.768	1.00	48.59	C
ATOM	5085	OD1	ASP	A	316	13.536	6.049	-16.690	1.00	58.08	O
ATOM	5086	OD2	ASP	A	316	15.735	5.922	-16.498	1.00	51.90	O
ATOM	5087	C	ASP	A	316	16.249	10.018	-17.562	1.00	27.42	C
ATOM	5088	O	ASP	A	316	16.959	10.119	-18.569	1.00	29.71	O
ATOM	5090	N	ALA	A	317	15.604	11.056	-17.042	1.00	28.26	N
ATOM	5091	CA	ALA	A	317	15.822	12.416	-17.572	1.00	28.35	C
ATOM	5093	CB	ALA	A	317	15.015	13.457	-16.773	1.00	27.70	C
ATOM	5097	C	ALA	A	317	17.308	12.773	-17.526	1.00	28.90	C
ATOM	5098	O	ALA	A	317	17.868	13.242	-18.520	1.00	29.20	O
ATOM	5100	N	TYR	A	318	17.927	12.547	-16.363	1.00	27.44	N
ATOM	5101	CA	TYR	A	318	19.334	12.874	-16.150	1.00	24.23	C
ATOM	5103	CB	TYR	A	318	19.864	12.469	-14.734	1.00	26.41	C
ATOM	5106	CG	TYR	A	318	21.356	12.485	-14.756	1.00	25.06	C
ATOM	5107	CD1	TYR	A	318	22.056	13.661	-14.573	1.00	31.07	C
ATOM	5109	CE1	TYR	A	318	23.436	13.688	-14.664	1.00	29.68	C
ATOM	5111	CZ	TYR	A	318	24.117	12.539	-15.004	1.00	34.65	C
ATOM	5112	OH	TYR	A	318	25.499	12.513	-15.137	1.00	40.50	O
ATOM	5114	CE2	TYR	A	318	23.429	11.380	-15.220	1.00	33.04	C
ATOM	5116	CD2	TYR	A	318	22.064	11.358	-15.108	1.00	31.79	C
ATOM	5118	C	TYR	A	318	20.178	12.214	-17.219	1.00	26.83	C
ATOM	5119	O	TYR	A	318	21.033	12.869	-17.822	1.00	27.46	O
ATOM	5121	N	MET	A	319	19.935	10.921	-17.470	1.00	27.54	N
ATOM	5122	CA	MET	A	319	20.743	10.176	-18.427	1.00	26.65	C
ATOM	5124	CB	MET	A	319	20.365	8.683	-18.442	1.00	27.49	C
ATOM	5127	CG	MET	A	319	20.717	7.960	-17.147	1.00	30.64	C
ATOM	5130	SD	MET	A	319	22.464	8.052	-16.816	1.00	30.10	S
ATOM	5131	CE	MET	A	319	23.075	6.773	-17.936	1.00	35.47	C
ATOM	5135	C	MET	A	319	20.671	10.779	-19.822	1.00	26.27	C
ATOM	5136	O	MET	A	319	21.695	10.893	-20.513	1.00	30.51	O
ATOM	5138	N	HIS	A	320	19.492	11.195	-20.237	1.00	29.29	N
ATOM	5139	CA	HIS	A	320	19.373	11.810	-21.557	1.00	31.98	C
ATOM	5141	CB	HIS	A	320	17.943	11.902	-22.033	1.00	34.86	C
ATOM	5144	CG	HIS	A	320	17.842	12.370	-23.452	1.00	39.40	C
ATOM	5145	ND1	HIS	A	320	18.235	11.585	-24.515	1.00	36.43	N
ATOM	5147	CE1	HIS	A	320	18.049	12.250	-25.642	1.00	40.15	C
ATOM	5149	NE2	HIS	A	320	17.570	13.446	-25.348	1.00	43.22	N
ATOM	5151	CD2	HIS	A	320	17.439	13.551	-23.983	1.00	41.12	C
ATOM	5153	C	HIS	A	320	19.971	13.206	-21.602	1.00	31.36	C
ATOM	5154	O	HIS	A	320	20.726	13.534	-22.528	1.00	27.34	O
ATOM	5156	N	ILE	A	321	19.611	14.024	-20.616	1.00	30.11	N
ATOM	5157	CA	ILE	A	321	20.126	15.384	-20.530	1.00	29.52	C
ATOM	5159	CB	ILE	A	321	19.625	16.096	-19.255	1.00	30.92	C
ATOM	5161	CG1	ILE	A	321	18.135	16.392	-19.367	1.00	29.46	C
ATOM	5164	CD1	ILE	A	321	17.529	16.938	-18.098	1.00	27.12	C
ATOM	5168	CG2	ILE	A	321	20.367	17.391	-19.019	1.00	25.54	C
ATOM	5172	C	ILE	A	321	21.647	15.378	-20.598	1.00	30.71	C
ATOM	5173	O	ILE	A	321	22.237	16.120	-21.388	1.00	29.08	O
ATOM	5175	N	THR	A	322	22.286	14.515	-19.818	1.00	27.95	N
ATOM	5176	CA	THR	A	322	23.738	14.420	-19.842	1.00	34.96	C
ATOM	5178	CB	THR	A	322	24.307	13.479	-18.697	1.00	36.13	C
ATOM	5180	OG1	THR	A	322	25.691	13.777	-18.505	1.00	43.72	O
ATOM	5182	CG2	THR	A	322	24.183	12.006	-19.015	1.00	39.72	C
ATOM	5186	C	THR	A	322	24.317	14.087	-21.238	1.00	33.90	C
ATOM	5187	O	THR	A	322	25.290	14.725	-21.672	1.00	30.48	O
ATOM	5189	N	SER	A	323	23.702	13.140	-21.953	1.00	35.40	N
ATOM	5190	CA	SER	A	323	24.176	12.752	-23.298	1.00	36.45	C
ATOM	5192	CB	SER	A	323	23.439	11.506	-23.823	1.00	38.79	C
ATOM	5195	OG	SER	A	323	22.138	11.815	-24.272	1.00	39.95	O
ATOM	5197	C	SER	A	323	24.069	13.908	-24.310	1.00	33.80	C
ATOM	5198	O	SER	A	323	25.001	14.156	-25.088	1.00	34.32	O
ATOM	5200	N	VAL	A	324	22.953	14.632	-24.263	1.00	34.56	N

ATOM	5201	CA	VAL	A	324	22.762	15.836	-25.081	1.00 34.95	C
ATOM	5203	CB	VAL	A	324	21.348	16.424	-24.911	1.00 35.65	C
ATOM	5205	CG1	VAL	A	324	21.178	17.632	-25.837	1.00 39.05	C
ATOM	5209	CG2	VAL	A	324	20.295	15.376	-25.209	1.00 32.41	C
ATOM	5213	C	VAL	A	324	23.788	16.917	-24.736	1.00 35.15	C
ATOM	5214	O	VAL	A	324	24.495	17.421	-25.611	1.00 34.57	O
ATOM	5216	N	LEU	A	325	23.877	17.270	-23.456	1.00 33.76	N
ATOM	5217	CA	LEU	A	325	24.814	18.306	-23.031	1.00 33.15	C
ATOM	5219	CB	LEU	A	325	24.717	18.560	-21.518	1.00 31.32	C
ATOM	5222	CG	LEU	A	325	23.378	19.059	-20.961	1.00 31.28	C
ATOM	5224	CD1	LEU	A	325	23.546	19.367	-19.470	1.00 31.75	C
ATOM	5228	CD2	LEU	A	325	22.829	20.265	-21.703	1.00 29.49	C
ATOM	5232	C	LEU	A	325	26.262	17.973	-23.412	1.00 36.29	C
ATOM	5233	O	LEU	A	325	27.039	18.882	-23.715	1.00 33.72	O
ATOM	5235	N	LYS	A	326	26.616	16.682	-23.384	1.00 36.23	N
ATOM	5236	CA	LYS	A	326	28.002	16.224	-23.626	1.00 42.63	C
ATOM	5238	CB	LYS	A	326	28.127	14.702	-23.383	1.00 44.49	C
ATOM	5241	CG	LYS	A	326	29.457	14.044	-23.798	1.00 52.08	C
ATOM	5244	CD	LYS	A	326	29.415	12.505	-23.564	1.00 57.29	C
ATOM	5247	CE	LYS	A	326	30.546	11.736	-24.281	1.00 57.63	C
ATOM	5250	NZ	LYS	A	326	30.249	10.260	-24.403	1.00 55.69	N
ATOM	5254	C	LYS	A	326	28.437	16.574	-25.044	1.00 41.37	C
ATOM	5255	O	LYS	A	326	29.573	16.990	-25.285	1.00 40.21	O
ATOM	5257	N	ILE	A	327	27.513	16.389	-25.969	1.00 42.95	N
ATOM	5258	CA	ILE	A	327	27.731	16.676	-27.368	1.00 49.27	C
ATOM	5260	CB	ILE	A	327	26.398	16.473	-28.145	1.00 52.17	C
ATOM	5262	CG1	ILE	A	327	26.073	14.972	-28.248	1.00 51.36	C
ATOM	5265	CD1	ILE	A	327	24.611	14.693	-28.601	1.00 55.50	C
ATOM	5269	CG2	ILE	A	327	26.462	17.103	-29.535	1.00 55.86	C
ATOM	5273	C	ILE	A	327	28.293	18.102	-27.559	1.00 53.28	C
ATOM	5274	O	ILE	A	327	29.142	18.321	-28.421	1.00 52.06	O
ATOM	5276	N	PHE	A	328	27.848	19.046	-26.721	1.00 56.03	N
ATOM	5277	CA	PHE	A	328	28.267	20.449	-26.807	1.00 56.21	C
ATOM	5279	CB	PHE	A	328	27.053	21.288	-27.160	1.00 56.69	C
ATOM	5282	CG	PHE	A	328	26.391	20.848	-28.422	1.00 62.19	C
ATOM	5283	CD1	PHE	A	328	25.182	20.174	-28.385	1.00 62.91	C
ATOM	5285	CE1	PHE	A	328	24.570	19.753	-29.553	1.00 64.18	C
ATOM	5287	CZ	PHE	A	328	25.186	19.979	-30.779	1.00 65.16	C
ATOM	5289	CE2	PHE	A	328	26.411	20.637	-30.827	1.00 64.44	C
ATOM	5291	CD2	PHE	A	328	27.009	21.063	-29.652	1.00 62.99	C
ATOM	5293	C	PHE	A	328	28.927	21.011	-25.552	1.00 54.97	C
ATOM	5294	O	PHE	A	328	28.898	22.216	-25.329	1.00 58.30	O
ATOM	5296	N	GLN	A	329	29.532	20.150	-24.739	1.00 54.19	N
ATOM	5297	CA	GLN	A	329	30.241	20.582	-23.529	1.00 56.59	C
ATOM	5299	CB	GLN	A	329	31.493	21.410	-23.875	1.00 60.54	C
ATOM	5302	CG	GLN	A	329	32.392	20.847	-24.993	1.00 64.85	C
ATOM	5305	CD	GLN	A	329	33.304	19.725	-24.524	1.00 68.20	C
ATOM	5306	OE1	GLN	A	329	32.887	18.836	-23.781	1.00 69.91	O
ATOM	5307	NE2	GLN	A	329	34.555	19.751	-24.980	1.00 71.46	N
ATOM	5310	C	GLN	A	329	29.343	21.399	-22.586	1.00 55.12	C
ATOM	5311	O	GLN	A	329	29.844	22.227	-21.804	1.00 56.20	O
ATOM	5313	N	GLY	A	330	28.029	21.175	-22.663	1.00 47.07	N
ATOM	5314	CA	GLY	A	330	27.105	21.736	-21.705	1.00 42.27	C
ATOM	5317	C	GLY	A	330	27.316	21.076	-20.357	1.00 38.46	C
ATOM	5318	O	GLY	A	330	27.826	19.965	-20.271	1.00 38.12	O
ATOM	5320	N	GLN	A	331	26.918	21.761	-19.297	1.00 32.46	N
ATOM	5321	CA	GLN	A	331	27.113	21.267	-17.944	1.00 35.08	C
ATOM	5323	CB	GLN	A	331	28.237	22.051	-17.247	1.00 40.81	C
ATOM	5326	CG	GLN	A	331	29.649	21.718	-17.731	1.00 48.00	C
ATOM	5329	CD	GLN	A	331	30.352	20.651	-16.895	1.00 54.71	C
ATOM	5330	OE1	GLN	A	331	31.571	20.499	-16.981	1.00 63.22	O
ATOM	5331	NE2	GLN	A	331	29.593	19.915	-16.082	1.00 54.21	N
ATOM	5334	C	GLN	A	331	25.824	21.454	-17.159	1.00 33.51	C
ATOM	5335	O	GLN	A	331	25.196	22.511	-17.220	1.00 30.79	O
ATOM	5337	N	ILE	A	332	25.431	20.427	-16.428	1.00 29.41	N
ATOM	5338	CA	ILE	A	332	24.463	20.598	-15.356	1.00 30.45	C
ATOM	5340	CB	ILE	A	332	23.903	19.273	-14.854	1.00 31.49	C

ATOM	5342	CG1	ILE	A	332	23.335	18.461	-16.013	1.00	31.96	C
ATOM	5345	CD1	ILE	A	332	22.542	17.232	-15.583	1.00	31.39	C
ATOM	5349	CG2	ILE	A	332	22.833	19.534	-13.812	1.00	37.29	C
ATOM	5353	C	ILE	A	332	25.203	21.264	-14.214	1.00	33.81	C
ATOM	5354	O	ILE	A	332	26.145	20.687	-13.670	1.00	33.25	O
ATOM	5356	N	ASN	A	333	24.788	22.481	-13.876	1.00	28.40	N
ATOM	5357	CA	ASN	A	333	25.333	23.227	-12.748	1.00	36.19	C
ATOM	5359	CB	ASN	A	333	25.128	24.716	-12.983	1.00	38.40	C
ATOM	5362	CG	ASN	A	333	26.372	25.504	-12.755	1.00	44.43	C
ATOM	5363	OD1	ASN	A	333	27.213	25.569	-13.645	1.00	52.14	O
ATOM	5364	ND2	ASN	A	333	26.519	26.108	-11.552	1.00	46.88	N
ATOM	5367	C	ASN	A	333	24.649	22.865	-11.442	1.00	36.05	C
ATOM	5368	O	ASN	A	333	25.279	22.783	-10.397	1.00	38.22	O
ATOM	5370	N	LYS	A	334	23.338	22.714	-11.494	1.00	35.36	N
ATOM	5371	CA	LYS	A	334	22.565	22.439	-10.301	1.00	37.25	C
ATOM	5373	CB	LYS	A	334	22.261	23.706	-9.451	1.00	38.97	C
ATOM	5376	CG	LYS	A	334	23.475	24.628	-8.995	1.00	47.17	C
ATOM	5379	CD	LYS	A	334	24.283	24.233	-7.666	1.00	44.67	C
ATOM	5382	CE	LYS	A	334	25.339	25.351	-7.356	1.00	46.19	C
ATOM	5385	NZ	LYS	A	334	26.415	25.156	-6.260	1.00	39.47	N
ATOM	5389	C	LYS	A	334	21.278	21.781	-10.723	1.00	31.54	C
ATOM	5390	O	LYS	A	334	20.848	21.848	-11.890	1.00	32.11	O
ATOM	5392	N	VAL	A	335	20.695	21.095	-9.762	1.00	30.40	N
ATOM	5393	CA	VAL	A	335	19.426	20.413	-9.910	1.00	30.52	C
ATOM	5395	CB	VAL	A	335	19.587	18.900	-10.104	1.00	28.50	C
ATOM	5397	CG1	VAL	A	335	18.261	18.286	-10.482	1.00	23.27	C
ATOM	5401	CG2	VAL	A	335	20.654	18.564	-11.171	1.00	28.21	C
ATOM	5405	C	VAL	A	335	18.693	20.646	-8.592	1.00	38.27	C
ATOM	5406	O	VAL	A	335	19.312	20.621	-7.546	1.00	38.07	O
ATOM	5408	N	PHE	A	336	17.397	20.913	-8.634	1.00	45.23	N
ATOM	5409	CA	PHE	A	336	16.595	20.953	-7.412	1.00	49.77	C
ATOM	5411	CB	PHE	A	336	16.576	22.331	-6.741	1.00	55.47	C
ATOM	5414	CG	PHE	A	336	16.991	23.457	-7.630	1.00	59.34	C
ATOM	5415	CD1	PHE	A	336	16.092	24.026	-8.519	1.00	63.10	C
ATOM	5417	CE1	PHE	A	336	16.494	25.077	-9.346	1.00	63.26	C
ATOM	5419	CZ	PHE	A	336	17.812	25.561	-9.271	1.00	63.15	C
ATOM	5421	CE2	PHE	A	336	18.704	25.003	-8.377	1.00	60.08	C
ATOM	5423	CD2	PHE	A	336	18.290	23.964	-7.558	1.00	62.26	C
ATOM	5425	C	PHE	A	336	15.190	20.491	-7.695	1.00	51.13	C
ATOM	5426	O	PHE	A	336	14.752	20.496	-8.840	1.00	46.75	O
ATOM	5428	N	MET	A	337	14.519	20.056	-6.630	1.00	50.32	N
ATOM	5429	CA	MET	A	337	13.139	19.600	-6.670	1.00	51.89	C
ATOM	5431	CB	MET	A	337	13.053	18.144	-6.243	1.00	48.65	C
ATOM	5434	CG	MET	A	337	12.806	17.170	-7.332	1.00	52.27	C
ATOM	5437	SD	MET	A	337	11.130	16.555	-7.452	1.00	57.00	S
ATOM	5438	CE	MET	A	337	10.211	18.046	-7.058	1.00	63.18	C
ATOM	5442	C	MET	A	337	12.317	20.460	-5.715	1.00	55.04	C
ATOM	5443	O	MET	A	337	12.711	20.679	-4.571	1.00	51.05	O
ATOM	5445	N	PHE	A	338	11.182	20.938	-6.216	1.00	60.74	N
ATOM	5446	CA	PHE	A	338	10.273	21.820	-5.496	1.00	65.52	C
ATOM	5448	CB	PHE	A	338	10.725	23.286	-5.603	1.00	66.73	C
ATOM	5451	CG	PHE	A	338	11.876	23.654	-4.697	1.00	69.70	C
ATOM	5452	CD1	PHE	A	338	11.742	23.587	-3.317	1.00	69.91	C
ATOM	5454	CE1	PHE	A	338	12.795	23.937	-2.474	1.00	72.30	C
ATOM	5456	CZ	PHE	A	338	13.989	24.379	-3.001	1.00	70.89	C
ATOM	5458	CE2	PHE	A	338	14.140	24.468	-4.378	1.00	72.42	C
ATOM	5460	CD2	PHE	A	338	13.082	24.106	-5.224	1.00	70.80	C
ATOM	5462	C	PHE	A	338	8.884	21.692	-6.134	1.00	68.34	C
ATOM	5463	O	PHE	A	338	8.739	21.872	-7.350	1.00	67.42	O
ATOM	5465	N	ASP	A	339	7.880	21.359	-5.321	1.00	70.80	N
ATOM	5466	CA	ASP	A	339	6.471	21.479	-5.716	1.00	73.24	C
ATOM	5468	CB	ASP	A	339	6.135	22.943	-6.063	1.00	76.29	C
ATOM	5471	CG	ASP	A	339	6.746	23.945	-5.082	1.00	79.47	C
ATOM	5472	OD1	ASP	A	339	6.561	23.767	-3.850	1.00	79.52	O
ATOM	5473	OD2	ASP	A	339	7.403	24.910	-5.550	1.00	80.26	O
ATOM	5474	C	ASP	A	339	6.131	20.587	-6.910	1.00	71.98	C
ATOM	5475	O	ASP	A	339	5.498	21.040	-7.868	1.00	72.54	O

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ATOM   5477  N   LYS A 340       6.573  19.332  -6.862  1.00 69.20           N
ATOM   5478  CA  LYS A 340       6.380  18.385  -7.980  1.00 68.87           C
ATOM   5480  CB  LYS A 340       4.904  18.345  -8.476  1.00 72.70           C
ATOM   5483  CG  LYS A 340       3.931  17.570  -7.581  1.00 76.19           C
ATOM   5486  CD  LYS A 340       2.484  17.517  -8.094  1.00 79.92           C
ATOM   5489  CE  LYS A 340       1.568  16.912  -7.019  1.00 80.94           C
ATOM   5492  NZ  LYS A 340       0.224  16.468  -7.505  1.00 82.28           N
ATOM   5496  C   LYS A 340       7.297  18.664  -9.177  1.00 61.61           C
ATOM   5497  O   LYS A 340       7.202  17.955 -10.184  1.00 60.12           O
ATOM   5499  N   GLY A 341       8.170  19.673  -9.069  1.00 53.41           N
ATOM   5500  CA  GLY A 341       9.012  20.111 -10.193  1.00 49.04           C
ATOM   5503  C   GLY A 341      10.513  19.933 -10.005  1.00 41.61           C
ATOM   5504  O   GLY A 341      11.114  20.547  -9.132  1.00 41.63           O
ATOM   5506  N   CYS A 342      11.131  19.129 -10.856  1.00 38.18           N
ATOM   5507  CA  CYS A 342      12.583  18.986 -10.836  1.00 35.52           C
ATOM   5509  CB  CYS A 342      12.987  17.539 -11.042  1.00 34.63           C
ATOM   5512  SG  CYS A 342      14.715  17.292 -10.726  1.00 38.45           S
ATOM   5514  C   CYS A 342      13.242  19.852 -11.913  1.00 35.41           C
ATOM   5515  O   CYS A 342      12.972  19.686 -13.092  1.00 36.89           O
ATOM   5517  N   SER A 343      14.138  20.744 -11.508  1.00 27.86           N
ATOM   5518  CA  SER A 343      14.752  21.678 -12.428  1.00 31.92           C
ATOM   5520  CB  SER A 343      14.541  23.124 -11.970  1.00 32.05           C
ATOM   5523  OG  SER A 343      13.164  23.368 -11.814  1.00 38.94           O
ATOM   5525  C   SER A 343      16.227  21.380 -12.529  1.00 31.10           C
ATOM   5526  O   SER A 343      16.869  21.029 -11.532  1.00 27.40           O
ATOM   5528  N   PHE A 344      16.742  21.494 -13.745  1.00 28.02           N
ATOM   5529  CA  PHE A 344      18.147  21.346 -14.049  1.00 26.34           C
ATOM   5531  CB  PHE A 344      18.361  20.313 -15.159  1.00 28.91           C
ATOM   5534  CG  PHE A 344      18.050  18.913 -14.764  1.00 28.05           C
ATOM   5535  CD1 PHE A 344      16.737  18.493 -14.607  1.00 29.80           C
ATOM   5537  CE1 PHE A 344      16.447  17.174 -14.237  1.00 31.30           C
ATOM   5539  CZ  PHE A 344      17.484  16.265 -14.056  1.00 30.20           C
ATOM   5541  CE2 PHE A 344      18.794  16.676 -14.222  1.00 33.14           C
ATOM   5543  CD2 PHE A 344      19.074  17.997 -14.584  1.00 30.67           C
ATOM   5545  C   PHE A 344      18.629  22.678 -14.578  1.00 26.03           C
ATOM   5546  O   PHE A 344      18.134  23.153 -15.603  1.00 21.59           O
ATOM   5548  N   LEU A 345      19.613  23.253 -13.905  1.00 21.00           N
ATOM   5549  CA  LEU A 345      20.282  24.461 -14.356  1.00 27.48           C
ATOM   5551  CB  LEU A 345      20.772  25.258 -13.150  1.00 27.77           C
ATOM   5554  CG  LEU A 345      21.263  26.700 -13.308  1.00 30.78           C
ATOM   5556  CD1 LEU A 345      21.634  27.251 -11.918  1.00 30.27           C
ATOM   5560  CD2 LEU A 345      22.403  26.827 -14.273  1.00 32.69           C
ATOM   5564  C   LEU A 345      21.444  24.031 -15.223  1.00 27.44           C
ATOM   5565  O   LEU A 345      22.482  23.615 -14.707  1.00 28.61           O
ATOM   5567  N   CYS A 346      21.268  24.081 -16.544  1.00 24.83           N
ATOM   5568  CA  CYS A 346      22.342  23.701 -17.465  1.00 21.52           C
ATOM   5570  CB  CYS A 346      21.831  22.796 -18.574  1.00 20.25           C
ATOM   5573  SG  CYS A 346      20.789  21.514 -18.013  1.00 27.61           S
ATOM   5575  C   CYS A 346      22.989  24.917 -18.089  1.00 24.70           C
ATOM   5576  O   CYS A 346      22.316  25.911 -18.341  1.00 26.61           O
ATOM   5578  N   VAL A 347      24.301  24.837 -18.321  1.00 24.36           N
ATOM   5579  CA  VAL A 347      25.081  25.980 -18.775  1.00 23.37           C
ATOM   5581  CB  VAL A 347      25.932  26.567 -17.619  1.00 27.54           C
ATOM   5583  CG1 VAL A 347      26.712  27.782 -18.083  1.00 23.35           C
ATOM   5587  CG2 VAL A 347      25.038  26.909 -16.399  1.00 23.47           C
ATOM   5591  C   VAL A 347      25.967  25.582 -19.957  1.00 27.80           C
ATOM   5592  O   VAL A 347      26.668  24.545 -19.932  1.00 24.36           O
ATOM   5594  N   PHE A 348      25.884  26.389 -21.005  1.00 26.32           N
ATOM   5595  CA  PHE A 348      26.752  26.289 -22.169  1.00 30.49           C
ATOM   5597  CB  PHE A 348      25.934  26.275 -23.458  1.00 30.18           C
ATOM   5600  CG  PHE A 348      25.070  25.073 -23.602  1.00 33.99           C
ATOM   5601  CD1 PHE A 348      23.829  25.022 -22.983  1.00 33.69           C
ATOM   5603  CE1 PHE A 348      23.034  23.892 -23.106  1.00 38.64           C
ATOM   5605  CZ  PHE A 348      23.475  22.810 -23.866  1.00 37.11           C
ATOM   5607  CE2 PHE A 348      24.727  22.858 -24.480  1.00 35.32           C
ATOM   5609  CD2 PHE A 348      25.511  23.974 -24.336  1.00 29.63           C
ATOM   5611  C   PHE A 348      27.653  27.512 -22.171  1.00 31.51           C
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ATOM   5612  O   PHE A 348      27.189  28.625 -21.906  1.00 29.88           O
ATOM   5614  N   GLY A 349      28.934  27.285 -22.437  1.00 39.72           N
ATOM   5615  CA  GLY A 349      29.938  28.335 -22.466  1.00 49.47           C
ATOM   5618  C   GLY A 349      30.880  28.338 -21.264  1.00 58.61           C
ATOM   5619  O   GLY A 349      31.474  29.371 -20.962  1.00 59.51           O
ATOM   5621  N   PHE A 350      31.011  27.208 -20.566  1.00 68.02           N
ATOM   5622  CA  PHE A 350      32.116  27.030 -19.609  1.00 77.48           C
ATOM   5624  CB  PHE A 350      31.800  25.959 -18.561  1.00 76.19           C
ATOM   5627  CG  PHE A 350      30.804  26.385 -17.512  1.00 73.92           C
ATOM   5628  CD1 PHE A 350      30.036  25.424 -16.865  1.00 69.10           C
ATOM   5630  CE1 PHE A 350      29.130  25.769 -15.889  1.00 63.10           C
ATOM   5632  CZ  PHE A 350      28.969  27.095 -15.541  1.00 65.93           C
ATOM   5634  CE2 PHE A 350      29.722  28.079 -16.174  1.00 68.57           C
ATOM   5636  CD2 PHE A 350      30.636  27.726 -17.156  1.00 72.19           C
ATOM   5638  C   PHE A 350      33.420  26.656 -20.342  1.00 85.61           C
ATOM   5639  O   PHE A 350      33.374  25.998 -21.395  1.00 88.29           O
ATOM   5641  N   PRO A 351      34.586  27.052 -19.776  1.00 94.06           N
ATOM   5642  CA  PRO A 351      35.897  26.924 -20.462  1.00 98.31           C
ATOM   5644  CB  PRO A 351      36.887  27.516 -19.442  1.00 97.97           C
ATOM   5647  CG  PRO A 351      36.177  27.443 -18.111  1.00 96.80           C
ATOM   5650  CD  PRO A 351      34.729  27.645 -18.428  1.00 94.41           C
ATOM   5653  C   PRO A 351      36.301  25.486 -20.847  1.00102.02           C
ATOM   5654  O   PRO A 351      36.442  24.629 -19.966  1.00103.87           O
ATOM   5655  N   GLY A 352      36.496  25.237 -22.146  1.00105.30           N
ATOM   5656  CA  GLY A 352      36.828  23.889 -22.622  1.00108.10           C
ATOM   5659  C   GLY A 352      37.132  23.709 -24.107  1.00110.46           C
ATOM   5660  O   GLY A 352      38.174  23.142 -24.455  1.00110.37           O
ATOM   5662  N   GLU A 353      36.230  24.173 -24.980  1.00113.29           N
ATOM   5663  CA  GLU A 353      36.321  23.893 -26.429  1.00114.95           C
ATOM   5665  CB  GLU A 353      35.405  22.714 -26.785  1.00115.89           C
ATOM   5668  CG  GLU A 353      35.672  22.069 -28.149  1.00116.18           C
ATOM   5671  CD  GLU A 353      37.048  21.441 -28.251  1.00116.28           C
ATOM   5672  OE1 GLU A 353      37.723  21.654 -29.279  1.00117.15           O
ATOM   5673  OE2 GLU A 353      37.458  20.738 -27.303  1.00116.01           O
ATOM   5674  C   GLU A 353      35.999  25.099 -27.338  1.00115.47           C
ATOM   5675  O   GLU A 353      35.157  25.950 -27.005  1.00115.61           O
ATOM   5677  N   LYS A 354      36.657  25.129 -28.502  1.00115.07           N
ATOM   5678  CA  LYS A 354      36.645  26.292 -29.406  1.00114.52           C
ATOM   5680  CB  LYS A 354      38.023  26.461 -30.085  1.00114.94           C
ATOM   5683  CG  LYS A 354      38.379  25.417 -31.162  1.00115.70           C
ATOM   5686  CD  LYS A 354      39.296  24.308 -30.644  1.00115.71           C
ATOM   5689  CE  LYS A 354      39.550  23.259 -31.725  1.00115.73           C
ATOM   5692  NZ  LYS A 354      40.428  22.146 -31.263  1.00115.25           N
ATOM   5696  C   LYS A 354      35.534  26.260 -30.471  1.00112.47           C
ATOM   5697  O   LYS A 354      34.851  25.245 -30.641  1.00112.49           O
ATOM   5699  N   VAL A 355      35.383  27.390 -31.172  1.00109.51           N
ATOM   5700  CA  VAL A 355      34.433  27.579 -32.296  1.00107.04           C
ATOM   5702  CB  VAL A 355      35.078  27.129 -33.663  1.00107.36           C
ATOM   5704  CG1 VAL A 355      36.227  28.061 -34.048  1.00107.19           C
ATOM   5708  CG2 VAL A 355      35.564  25.679 -33.611  1.00106.86           C
ATOM   5712  C   VAL A 355      33.020  26.956 -32.110  1.00103.52           C
ATOM   5713  O   VAL A 355      32.580  26.153 -32.940  1.00104.11           O
ATOM   5715  N   PRO A 356      32.293  27.352 -31.040  1.00 98.22           N
ATOM   5716  CA  PRO A 356      31.072  26.617 -30.664  1.00 94.24           C
ATOM   5718  CB  PRO A 356      30.764  27.116 -29.237  1.00 95.00           C
ATOM   5721  CG  PRO A 356      31.846  28.084 -28.874  1.00 96.53           C
ATOM   5724  CD  PRO A 356      32.558  28.478 -30.125  1.00 97.85           C
ATOM   5727  C   PRO A 356      29.833  26.771 -31.573  1.00 89.26           C
ATOM   5728  O   PRO A 356      29.210  25.754 -31.891  1.00 87.38           O
ATOM   5729  N   ASP A 357      29.477  28.001 -31.972  1.00 83.05           N
ATOM   5730  CA  ASP A 357      28.188  28.280 -32.667  1.00 77.64           C
ATOM   5732  CB  ASP A 357      28.056  27.413 -33.937  1.00 77.96           C
ATOM   5735  CG  ASP A 357      27.170  28.040 -34.994  1.00 77.47           C
ATOM   5736  OD1 ASP A 357      26.148  28.668 -34.629  1.00 79.13           O
ATOM   5737  OD2 ASP A 357      27.495  27.890 -36.194  1.00 74.84           O
ATOM   5738  C   ASP A 357      27.001  28.061 -31.690  1.00 71.04           C
ATOM   5739  O   ASP A 357      25.961  27.483 -32.031  1.00 69.14           O
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ATOM	5741	N	GLU	A	358	27.185	28.601	-30.490	1.00	62.48	N
ATOM	5742	CA	GLU	A	358	26.521	28.150	-29.266	1.00	59.64	C
ATOM	5744	CB	GLU	A	358	27.139	28.917	-28.069	1.00	60.81	C
ATOM	5747	CG	GLU	A	358	26.433	28.813	-26.695	1.00	60.80	C
ATOM	5750	CD	GLU	A	358	27.187	29.584	-25.604	1.00	65.24	C
ATOM	5751	OE1	GLU	A	358	26.728	30.688	-25.220	1.00	67.19	O
ATOM	5752	OE2	GLU	A	358	28.255	29.103	-25.140	1.00	64.33	O
ATOM	5753	C	GLU	A	358	24.984	28.231	-29.218	1.00	55.11	C
ATOM	5754	O	GLU	A	358	24.353	27.356	-28.609	1.00	50.00	O
ATOM	5756	N	LEU	A	359	24.396	29.265	-29.826	1.00	46.96	N
ATOM	5757	CA	LEU	A	359	22.998	29.619	-29.549	1.00	44.54	C
ATOM	5759	CB	LEU	A	359	22.712	31.075	-29.933	1.00	41.24	C
ATOM	5762	CG	LEU	A	359	23.479	32.105	-29.095	1.00	40.70	C
ATOM	5764	CD1	LEU	A	359	23.329	33.489	-29.686	1.00	33.60	C
ATOM	5768	CD2	LEU	A	359	23.056	32.104	-27.610	1.00	36.81	C
ATOM	5772	C	LEU	A	359	22.039	28.674	-30.259	1.00	43.21	C
ATOM	5773	O	LEU	A	359	21.094	28.170	-29.652	1.00	41.15	O
ATOM	5775	N	THR	A	360	22.297	28.430	-31.537	1.00	41.44	N
ATOM	5776	CA	THR	A	360	21.553	27.439	-32.286	1.00	42.96	C
ATOM	5778	CB	THR	A	360	22.058	27.323	-33.736	1.00	42.64	C
ATOM	5780	OG1	THR	A	360	21.572	28.442	-34.489	1.00	44.46	O
ATOM	5782	CG2	THR	A	360	21.555	26.035	-34.387	1.00	42.71	C
ATOM	5786	C	THR	A	360	21.608	26.081	-31.592	1.00	41.40	C
ATOM	5787	O	THR	A	360	20.591	25.409	-31.472	1.00	43.01	O
ATOM	5789	N	HIS	A	361	22.782	25.694	-31.113	1.00	42.38	N
ATOM	5790	CA	HIS	A	361	22.937	24.406	-30.463	1.00	39.05	C
ATOM	5792	CB	HIS	A	361	24.409	24.050	-30.256	1.00	44.06	C
ATOM	5795	CG	HIS	A	361	25.165	23.871	-31.527	1.00	46.86	C
ATOM	5796	ND1	HIS	A	361	24.640	23.210	-32.617	1.00	54.55	N
ATOM	5798	CE1	HIS	A	361	25.521	23.221	-33.601	1.00	56.03	C
ATOM	5800	NE2	HIS	A	361	26.599	23.864	-33.184	1.00	53.95	N
ATOM	5802	CD2	HIS	A	361	26.399	24.284	-31.892	1.00	48.65	C
ATOM	5804	C	HIS	A	361	22.234	24.357	-29.130	1.00	37.25	C
ATOM	5805	O	HIS	A	361	21.707	23.307	-28.784	1.00	34.00	O
ATOM	5807	N	ALA	A	362	22.256	25.458	-28.366	1.00	30.19	N
ATOM	5808	CA	ALA	A	362	21.535	25.490	-27.092	1.00	34.58	C
ATOM	5810	CB	ALA	A	362	21.804	26.807	-26.319	1.00	31.11	C
ATOM	5814	C	ALA	A	362	20.015	25.276	-27.359	1.00	29.44	C
ATOM	5815	O	ALA	A	362	19.348	24.508	-26.683	1.00	29.43	O
ATOM	5817	N	LEU	A	363	19.488	25.956	-28.362	1.00	32.38	N
ATOM	5818	CA	LEU	A	363	18.091	25.808	-28.714	1.00	29.44	C
ATOM	5820	CB	LEU	A	363	17.690	26.823	-29.785	1.00	32.27	C
ATOM	5823	CG	LEU	A	363	17.684	28.308	-29.428	1.00	33.27	C
ATOM	5825	CD1	LEU	A	363	17.422	29.067	-30.675	1.00	34.57	C
ATOM	5829	CD2	LEU	A	363	16.649	28.714	-28.352	1.00	32.95	C
ATOM	5833	C	LEU	A	363	17.777	24.379	-29.174	1.00	30.59	C
ATOM	5834	O	LEU	A	363	16.742	23.829	-28.786	1.00	31.55	O
ATOM	5836	N	GLU	A	364	18.660	23.776	-29.973	1.00	27.22	N
ATOM	5837	CA	GLU	A	364	18.438	22.395	-30.445	1.00	32.42	C
ATOM	5839	CB	GLU	A	364	19.375	22.034	-31.606	1.00	32.34	C
ATOM	5842	CG	GLU	A	364	19.049	22.768	-32.885	1.00	39.31	C
ATOM	5845	CD	GLU	A	364	20.098	22.618	-33.989	1.00	40.40	C
ATOM	5846	OE1	GLU	A	364	21.271	22.277	-33.712	1.00	45.32	O
ATOM	5847	OE2	GLU	A	364	19.729	22.882	-35.151	1.00	46.72	O
ATOM	5848	C	GLU	A	364	18.591	21.398	-29.305	1.00	31.39	C
ATOM	5849	O	GLU	A	364	17.860	20.404	-29.252	1.00	29.63	O
ATOM	5851	N	CYS	A	365	19.536	21.641	-28.396	1.00	27.20	N
ATOM	5852	CA	CYS	A	365	19.625	20.822	-27.198	1.00	25.94	C
ATOM	5854	CB	CYS	A	365	20.861	21.175	-26.374	1.00	29.66	C
ATOM	5857	SG	CYS	A	365	22.356	20.665	-27.236	1.00	47.30	S
ATOM	5859	C	CYS	A	365	18.375	20.926	-26.367	1.00	24.55	C
ATOM	5860	O	CYS	A	365	17.827	19.897	-25.921	1.00	27.45	O
ATOM	5862	N	ALA	A	366	17.909	22.162	-26.146	1.00	24.24	N
ATOM	5863	CA	ALA	A	366	16.675	22.385	-25.400	1.00	25.22	C
ATOM	5865	CB	ALA	A	366	16.298	23.869	-25.364	1.00	24.05	C
ATOM	5869	C	ALA	A	366	15.534	21.579	-26.024	1.00	27.86	C
ATOM	5870	O	ALA	A	366	14.784	20.920	-25.314	1.00	25.69	O

ATOM	5872	N	MET	A	367	15.396	21.628	-27.349	1.00 26.42	N
ATOM	5873	CA	MET	A	367	14.272	20.930	-28.008	1.00 27.53	C
ATOM	5875	CB	MET	A	367	14.171	21.350	-29.486	1.00 28.83	C
ATOM	5878	CG	MET	A	367	12.926	20.771	-30.206	1.00 29.09	C
ATOM	5881	SD	MET	A	367	11.389	21.309	-29.442	1.00 36.09	S
ATOM	5882	CE	MET	A	367	11.266	22.944	-30.151	1.00 37.14	C
ATOM	5886	C	MET	A	367	14.388	19.410	-27.909	1.00 26.69	C
ATOM	5887	O	MET	A	367	13.403	18.697	-27.677	1.00 30.58	O
ATOM	5889	N	ASP	A	368	15.600	18.915	-28.105	1.00 30.08	N
ATOM	5890	CA	ASP	A	368	15.906	17.503	-27.917	1.00 27.57	C
ATOM	5892	CB	ASP	A	368	17.403	17.313	-28.148	1.00 30.71	C
ATOM	5895	CG	ASP	A	368	17.843	15.856	-28.073	1.00 33.64	C
ATOM	5896	OD1	ASP	A	368	18.834	15.500	-28.739	1.00 41.73	O
ATOM	5897	OD2	ASP	A	368	17.211	15.060	-27.351	1.00 40.77	O
ATOM	5898	C	ASP	A	368	15.485	17.066	-26.499	1.00 29.20	C
ATOM	5899	O	ASP	A	368	14.770	16.064	-26.309	1.00 26.04	O
ATOM	5901	N	ILE	A	369	15.920	17.838	-25.507	1.00 29.71	N
ATOM	5902	CA	ILE	A	369	15.630	17.535	-24.113	1.00 24.98	C
ATOM	5904	CB	ILE	A	369	16.335	18.458	-23.140	1.00 26.81	C
ATOM	5906	CG1	ILE	A	369	17.842	18.150	-23.106	1.00 30.35	C
ATOM	5909	CD1	ILE	A	369	18.681	19.242	-22.412	1.00 32.55	C
ATOM	5913	CG2	ILE	A	369	15.730	18.311	-21.698	1.00 22.55	C
ATOM	5917	C	ILE	A	369	14.142	17.591	-23.906	1.00 28.10	C
ATOM	5918	O	ILE	A	369	13.576	16.702	-23.296	1.00 27.69	O
ATOM	5920	N	PHE	A	370	13.511	18.625	-24.448	1.00 29.09	N
ATOM	5921	CA	PHE	A	370	12.083	18.769	-24.356	1.00 29.56	C
ATOM	5923	CB	PHE	A	370	11.610	19.988	-25.120	1.00 28.92	C
ATOM	5926	CG	PHE	A	370	10.135	20.184	-25.056	1.00 30.15	C
ATOM	5927	CD1	PHE	A	370	9.563	20.885	-24.009	1.00 27.38	C
ATOM	5929	CE1	PHE	A	370	8.204	21.061	-23.950	1.00 31.76	C
ATOM	5931	CZ	PHE	A	370	7.379	20.541	-24.935	1.00 33.54	C
ATOM	5933	CE2	PHE	A	370	7.931	19.831	-25.995	1.00 38.31	C
ATOM	5935	CD2	PHE	A	370	9.301	19.658	-26.054	1.00 36.34	C
ATOM	5937	C	PHE	A	370	11.349	17.540	-24.884	1.00 33.58	C
ATOM	5938	O	PHE	A	370	10.474	17.041	-24.207	1.00 30.31	O
ATOM	5940	N	ASP	A	371	11.718	17.076	-26.080	1.00 34.26	N
ATOM	5941	CA	ASP	A	371	11.040	15.964	-26.730	1.00 35.43	C
ATOM	5943	CB	ASP	A	371	11.509	15.800	-28.176	1.00 34.39	C
ATOM	5946	CG	ASP	A	371	10.992	16.879	-29.093	1.00 35.37	C
ATOM	5947	OD1	ASP	A	371	11.618	17.069	-30.155	1.00 41.65	O
ATOM	5948	OD2	ASP	A	371	9.968	17.532	-28.776	1.00 35.90	O
ATOM	5949	C	ASP	A	371	11.246	14.651	-25.999	1.00 36.03	C
ATOM	5950	O	ASP	A	371	10.305	13.902	-25.807	1.00 34.04	O
ATOM	5952	N	PHE	A	372	12.474	14.361	-25.603	1.00 38.21	N
ATOM	5953	CA	PHE	A	372	12.738	13.113	-24.899	1.00 38.33	C
ATOM	5955	CB	PHE	A	372	14.226	12.886	-24.702	1.00 41.18	C
ATOM	5958	CG	PHE	A	372	14.552	11.594	-23.993	1.00 43.83	C
ATOM	5959	CD1	PHE	A	372	14.882	10.448	-24.720	1.00 44.86	C
ATOM	5961	CE1	PHE	A	372	15.196	9.244	-24.062	1.00 42.08	C
ATOM	5963	CZ	PHE	A	372	15.169	9.183	-22.674	1.00 40.14	C
ATOM	5965	CE2	PHE	A	372	14.844	10.313	-21.933	1.00 42.77	C
ATOM	5967	CD2	PHE	A	372	14.543	11.523	-22.593	1.00 43.26	C
ATOM	5969	C	PHE	A	372	12.030	13.157	-23.567	1.00 37.03	C
ATOM	5970	O	PHE	A	372	11.276	12.256	-23.230	1.00 35.15	O
ATOM	5972	N	CYS	A	373	12.227	14.231	-22.818	1.00 37.92	N
ATOM	5973	CA	CYS	A	373	11.654	14.305	-21.473	1.00 39.95	C
ATOM	5975	CB	CYS	A	373	12.176	15.530	-20.727	1.00 35.67	C
ATOM	5978	SG	CYS	A	373	13.859	15.229	-20.206	1.00 34.91	S
ATOM	5980	C	CYS	A	373	10.123	14.239	-21.444	1.00 42.54	C
ATOM	5981	O	CYS	A	373	9.526	13.693	-20.500	1.00 40.27	O
ATOM	5983	N	SER	A	374	9.499	14.745	-22.494	1.00 40.40	N
ATOM	5984	CA	SER	A	374	8.049	14.738	-22.583	1.00 45.30	C
ATOM	5986	CB	SER	A	374	7.602	15.487	-23.829	1.00 43.84	C
ATOM	5989	OG	SER	A	374	7.816	16.867	-23.625	1.00 43.00	O
ATOM	5991	C	SER	A	374	7.481	13.326	-22.592	1.00 49.76	C
ATOM	5992	O	SER	A	374	6.371	13.108	-22.106	1.00 56.39	O
ATOM	5994	N	GLN	A	375	8.248	12.381	-23.129	1.00 51.19	N

ATOM	5995	CA	GLN	A	375	7.822	10.998	-23.241	1.00	52.76	C
ATOM	5997	CB	GLN	A	375	8.262	10.386	-24.586	1.00	56.36	C
ATOM	6000	CG	GLN	A	375	8.306	11.319	-25.819	1.00	61.08	C
ATOM	6003	CD	GLN	A	375	7.012	12.099	-26.108	1.00	69.77	C
ATOM	6004	OE1	GLN	A	375	5.982	11.930	-25.444	1.00	74.80	O
ATOM	6005	NE2	GLN	A	375	7.075	12.970	-27.118	1.00	71.89	N
ATOM	6008	C	GLN	A	375	8.344	10.138	-22.080	1.00	51.97	C
ATOM	6009	O	GLN	A	375	7.948	8.981	-21.953	1.00	49.82	O
ATOM	6011	N	VAL	A	376	9.222	10.676	-21.233	1.00	49.11	N
ATOM	6012	CA	VAL	A	376	9.600	9.965	-20.010	1.00	48.59	C
ATOM	6014	CB	VAL	A	376	10.756	10.666	-19.250	1.00	49.53	C
ATOM	6016	CG1	VAL	A	376	10.859	10.164	-17.794	1.00	48.94	C
ATOM	6020	CG2	VAL	A	376	12.092	10.460	-19.995	1.00	47.75	C
ATOM	6024	C	VAL	A	376	8.368	9.772	-19.099	1.00	51.55	C
ATOM	6025	O	VAL	A	376	7.552	10.683	-18.925	1.00	48.69	O
ATOM	6027	N	HIS	A	377	8.253	8.564	-18.539	1.00	54.38	N
ATOM	6028	CA	HIS	A	377	7.083	8.141	-17.757	1.00	56.25	C
ATOM	6030	CB	HIS	A	377	7.089	6.612	-17.595	1.00	61.47	C
ATOM	6033	CG	HIS	A	377	5.897	6.066	-16.865	1.00	65.93	C
ATOM	6034	ND1	HIS	A	377	4.623	6.084	-17.396	1.00	71.25	N
ATOM	6036	CE1	HIS	A	377	3.782	5.536	-16.534	1.00	73.20	C
ATOM	6038	NE2	HIS	A	377	4.465	5.158	-15.466	1.00	71.53	N
ATOM	6040	CD2	HIS	A	377	5.792	5.468	-15.652	1.00	68.82	C
ATOM	6042	C	HIS	A	377	7.066	8.807	-16.393	1.00	53.41	C
ATOM	6043	O	HIS	A	377	8.093	8.864	-15.717	1.00	53.26	O
ATOM	6045	N	LYS	A	378	5.900	9.316	-16.008	1.00	48.34	N
ATOM	6046	CA	LYS	A	378	5.703	10.043	-14.753	1.00	50.08	C
ATOM	6048	CB	LYS	A	378	6.569	9.493	-13.594	1.00	53.48	C
ATOM	6051	CG	LYS	A	378	6.409	7.989	-13.284	1.00	58.48	C
ATOM	6054	CD	LYS	A	378	5.371	7.709	-12.183	1.00	61.71	C
ATOM	6057	CE	LYS	A	378	5.251	6.204	-11.867	1.00	64.06	C
ATOM	6060	NZ	LYS	A	378	6.361	5.633	-11.026	1.00	63.05	N
ATOM	6064	C	LYS	A	378	5.933	11.547	-14.915	1.00	46.63	C
ATOM	6065	O	LYS	A	378	5.542	12.338	-14.044	1.00	44.39	O
ATOM	6067	N	ILE	A	379	6.545	11.959	-16.024	1.00	46.29	N
ATOM	6068	CA	ILE	A	379	6.798	13.387	-16.252	1.00	44.41	C
ATOM	6070	CB	ILE	A	379	8.051	13.635	-17.118	1.00	41.95	C
ATOM	6072	CG1	ILE	A	379	9.315	13.149	-16.402	1.00	39.81	C
ATOM	6075	CD1	ILE	A	379	10.617	13.372	-17.208	1.00	40.09	C
ATOM	6079	CG2	ILE	A	379	8.166	15.119	-17.438	1.00	42.99	C
ATOM	6083	C	ILE	A	379	5.584	13.964	-16.955	1.00	41.44	C
ATOM	6084	O	ILE	A	379	5.298	13.599	-18.084	1.00	45.18	O
ATOM	6086	N	GLN	A	380	4.879	14.868	-16.289	1.00	45.12	N
ATOM	6087	CA	GLN	A	380	3.605	15.390	-16.805	1.00	45.83	C
ATOM	6089	CB	GLN	A	380	2.715	15.815	-15.642	1.00	48.59	C
ATOM	6092	CG	GLN	A	380	1.235	15.735	-15.952	1.00	56.24	C
ATOM	6095	CD	GLN	A	380	0.368	16.223	-14.802	1.00	61.83	C
ATOM	6096	OE1	GLN	A	380	0.556	17.336	-14.290	1.00	67.32	O
ATOM	6097	NE2	GLN	A	380	-0.591	15.395	-14.392	1.00	63.57	N
ATOM	6100	C	GLN	A	380	3.814	16.566	-17.753	1.00	44.21	C
ATOM	6101	O	GLN	A	380	3.134	16.677	-18.782	1.00	43.19	O
ATOM	6103	N	THR	A	381	4.764	17.439	-17.404	1.00	45.10	N
ATOM	6104	CA	THR	A	381	5.076	18.639	-18.198	1.00	42.13	C
ATOM	6106	CB	THR	A	381	4.311	19.836	-17.670	1.00	41.25	C
ATOM	6108	OG1	THR	A	381	2.916	19.511	-17.625	1.00	44.80	O
ATOM	6110	CG2	THR	A	381	4.554	21.092	-18.571	1.00	36.47	C
ATOM	6114	C	THR	A	381	6.574	18.997	-18.209	1.00	40.32	C
ATOM	6115	O	THR	A	381	7.230	19.020	-17.151	1.00	40.62	O
ATOM	6117	N	VAL	A	382	7.093	19.299	-19.404	1.00	35.41	N
ATOM	6118	CA	VAL	A	382	8.475	19.751	-19.561	1.00	31.97	C
ATOM	6120	CB	VAL	A	382	9.270	18.927	-20.556	1.00	33.24	C
ATOM	6122	CG1	VAL	A	382	10.736	19.407	-20.612	1.00	27.82	C
ATOM	6126	CG2	VAL	A	382	9.224	17.466	-20.171	1.00	29.39	C
ATOM	6130	C	VAL	A	382	8.421	21.194	-20.026	1.00	34.30	C
ATOM	6131	O	VAL	A	382	7.664	21.532	-20.947	1.00	32.82	O
ATOM	6133	N	SER	A	383	9.186	22.034	-19.333	1.00	29.23	N
ATOM	6134	CA	SER	A	383	9.276	23.464	-19.600	1.00	28.14	C

ATOM	6136	CB	SER A 383	8.568	24.255	-18.523	1.00	25.38	C
ATOM	6139	OG	SER A 383	7.270	23.787	-18.332	1.00	30.03	O
ATOM	6141	C	SER A 383	10.752	23.844	-19.575	1.00	29.75	C
ATOM	6142	O	SER A 383	11.482	23.449	-18.631	1.00	22.45	O
ATOM	6144	N	ILE A 384	11.186	24.618	-20.580	1.00	27.48	N
ATOM	6145	CA	ILE A 384	12.605	25.026	-20.712	1.00	25.44	C
ATOM	6147	CB	ILE A 384	13.357	24.166	-21.764	1.00	24.19	C
ATOM	6149	CG1	ILE A 384	13.083	22.674	-21.539	1.00	21.78	C
ATOM	6152	CD1	ILE A 384	13.845	21.801	-22.501	1.00	23.46	C
ATOM	6156	CG2	ILE A 384	14.859	24.420	-21.709	1.00	19.05	C
ATOM	6160	C	ILE A 384	12.781	26.485	-21.083	1.00	26.14	C
ATOM	6161	O	ILE A 384	12.313	26.929	-22.129	1.00	28.03	O
ATOM	6163	N	GLY A 385	13.473	27.228	-20.233	1.00	23.73	N
ATOM	6164	CA	GLY A 385	13.855	28.612	-20.526	1.00	26.24	C
ATOM	6167	C	GLY A 385	15.317	28.714	-20.910	1.00	27.19	C
ATOM	6168	O	GLY A 385	16.179	28.119	-20.252	1.00	26.00	O
ATOM	6170	N	VAL A 386	15.585	29.443	-21.991	1.00	25.43	N
ATOM	6171	CA	VAL A 386	16.926	29.609	-22.538	1.00	24.70	C
ATOM	6173	CB	VAL A 386	17.057	29.039	-23.980	1.00	26.78	C
ATOM	6175	CG1	VAL A 386	18.536	29.088	-24.493	1.00	23.30	C
ATOM	6179	CG2	VAL A 386	16.486	27.635	-24.060	1.00	24.33	C
ATOM	6183	C	VAL A 386	17.214	31.104	-22.554	1.00	27.41	C
ATOM	6184	O	VAL A 386	16.486	31.882	-23.203	1.00	24.40	O
ATOM	6186	N	ALA A 387	18.258	31.512	-21.830	1.00	24.63	N
ATOM	6187	CA	ALA A 387	18.675	32.911	-21.770	1.00	25.21	C
ATOM	6189	CB	ALA A 387	18.246	33.549	-20.454	1.00	23.09	C
ATOM	6193	C	ALA A 387	20.181	32.940	-21.932	1.00	30.97	C
ATOM	6194	O	ALA A 387	20.857	32.011	-21.515	1.00	27.88	O
ATOM	6196	N	SER A 388	20.687	33.976	-22.593	1.00	27.93	N
ATOM	6197	CA	SER A 388	22.093	34.097	-22.930	1.00	28.83	C
ATOM	6199	CB	SER A 388	22.342	33.859	-24.412	1.00	27.22	C
ATOM	6202	OG	SER A 388	22.012	32.528	-24.784	1.00	33.67	O
ATOM	6204	C	SER A 388	22.580	35.487	-22.575	1.00	27.23	C
ATOM	6205	O	SER A 388	21.943	36.489	-22.893	1.00	28.46	O
ATOM	6207	N	GLY A 389	23.731	35.542	-21.940	1.00	27.19	N
ATOM	6208	CA	GLY A 389	24.257	36.799	-21.438	1.00	29.34	C
ATOM	6211	C	GLY A 389	25.466	36.564	-20.548	1.00	29.12	C
ATOM	6212	O	GLY A 389	25.965	35.445	-20.423	1.00	26.68	O
ATOM	6214	N	ILE A 390	25.922	37.649	-19.949	1.00	30.07	N
ATOM	6215	CA	ILE A 390	27.097	37.644	-19.121	1.00	32.09	C
ATOM	6217	CB	ILE A 390	27.778	39.034	-19.088	1.00	31.66	C
ATOM	6219	CG1	ILE A 390	28.431	39.296	-20.435	1.00	33.03	C
ATOM	6222	CD1	ILE A 390	28.514	40.740	-20.770	1.00	37.72	C
ATOM	6226	CG2	ILE A 390	28.819	39.108	-17.941	1.00	24.98	C
ATOM	6230	C	ILE A 390	26.631	37.255	-17.755	1.00	28.96	C
ATOM	6231	O	ILE A 390	25.687	37.845	-17.208	1.00	27.84	O
ATOM	6233	N	VAL A 391	27.283	36.242	-17.199	1.00	29.44	N
ATOM	6234	CA	VAL A 391	26.969	35.817	-15.841	1.00	24.93	C
ATOM	6236	CB	VAL A 391	26.323	34.423	-15.825	1.00	25.43	C
ATOM	6238	CG1	VAL A 391	25.032	34.394	-16.679	1.00	25.39	C
ATOM	6242	CG2	VAL A 391	27.347	33.336	-16.273	1.00	26.61	C
ATOM	6246	C	VAL A 391	28.273	35.784	-15.035	1.00	18.27	C
ATOM	6247	O	VAL A 391	29.347	35.629	-15.595	1.00	23.88	O
ATOM	6249	N	PHE A 392	28.149	35.893	-13.731	1.00	22.90	N
ATOM	6250	CA	PHE A 392	29.293	35.657	-12.846	1.00	23.59	C
ATOM	6252	CB	PHE A 392	29.108	36.335	-11.493	1.00	28.39	C
ATOM	6255	CG	PHE A 392	30.063	35.840	-10.437	1.00	29.36	C
ATOM	6256	CD1	PHE A 392	31.343	36.395	-10.310	1.00	28.22	C
ATOM	6258	CE1	PHE A 392	32.224	35.921	-9.324	1.00	35.60	C
ATOM	6260	CZ	PHE A 392	31.827	34.845	-8.448	1.00	29.08	C
ATOM	6262	CE2	PHE A 392	30.570	34.287	-8.585	1.00	34.77	C
ATOM	6264	CD2	PHE A 392	29.690	34.782	-9.589	1.00	30.61	C
ATOM	6266	C	PHE A 392	29.420	34.177	-12.621	1.00	25.41	C
ATOM	6267	O	PHE A 392	28.428	33.513	-12.289	1.00	21.51	O
ATOM	6269	N	CYS A 393	30.659	33.695	-12.741	1.00	23.11	N
ATOM	6270	CA	CYS A 393	31.057	32.332	-12.453	1.00	25.42	C
ATOM	6272	CB	CYS A 393	31.695	31.736	-13.683	1.00	30.78	C

ATOM	6275	SG	CYS	A	393	30.601	31.782	-15.086	1.00 34.54	S
ATOM	6277	C	CYS	A	393	32.128	32.382	-11.376	1.00 29.12	C
ATOM	6278	O	CYS	A	393	33.037	33.179	-11.463	1.00 26.21	O
ATOM	6280	N	GLY	A	394	32.012	31.554	-10.351	1.00 25.58	N
ATOM	6281	CA	GLY	A	394	33.015	31.559	-9.285	1.00 25.74	C
ATOM	6284	C	GLY	A	394	32.668	30.583	-8.191	1.00 23.35	C
ATOM	6285	O	GLY	A	394	31.558	30.030	-8.154	1.00 19.72	O
ATOM	6287	N	ILE	A	395	33.623	30.404	-7.291	1.00 18.93	N
ATOM	6288	CA	ILE	A	395	33.461	29.572	-6.120	1.00 19.49	C
ATOM	6290	CB	ILE	A	395	34.754	28.803	-5.771	1.00 19.17	C
ATOM	6292	CG1	ILE	A	395	35.072	27.872	-6.930	1.00 22.42	C
ATOM	6295	CD1	ILE	A	395	36.422	27.155	-6.834	1.00 28.21	C
ATOM	6299	CG2	ILE	A	395	34.586	28.045	-4.445	1.00 19.49	C
ATOM	6303	C	ILE	A	395	33.008	30.438	-4.984	1.00 20.43	C
ATOM	6304	O	ILE	A	395	33.684	31.372	-4.581	1.00 19.62	O
ATOM	6306	N	VAL	A	396	31.827	30.128	-4.483	1.00 17.35	N
ATOM	6307	CA	VAL	A	396	31.218	30.925	-3.446	1.00 20.37	C
ATOM	6309	CB	VAL	A	396	29.804	31.309	-3.864	1.00 22.44	C
ATOM	6311	CG1	VAL	A	396	29.100	32.065	-2.749	1.00 25.47	C
ATOM	6315	CG2	VAL	A	396	29.893	32.197	-5.150	1.00 26.30	C
ATOM	6319	C	VAL	A	396	31.161	30.177	-2.147	1.00 18.83	C
ATOM	6320	O	VAL	A	396	30.867	29.000	-2.114	1.00 18.63	O
ATOM	6322	N	GLY	A	397	31.388	30.884	-1.060	1.00 17.72	N
ATOM	6323	CA	GLY	A	397	31.251	30.295	0.240	1.00 20.52	C
ATOM	6326	C	GLY	A	397	32.455	30.503	1.098	1.00 19.31	C
ATOM	6327	O	GLY	A	397	33.160	31.504	0.979	1.00 23.78	O
ATOM	6329	N	HIS	A	398	32.662	29.549	1.992	1.00 21.38	N
ATOM	6330	CA	HIS	A	398	33.720	29.612	2.985	1.00 15.39	C
ATOM	6332	CB	HIS	A	398	33.132	29.177	4.351	1.00 13.03	C
ATOM	6335	CG	HIS	A	398	34.054	29.378	5.514	1.00 16.09	C
ATOM	6336	ND1	HIS	A	398	35.187	28.615	5.719	1.00 17.78	N
ATOM	6338	CE1	HIS	A	398	35.799	29.023	6.822	1.00 18.94	C
ATOM	6340	NE2	HIS	A	398	35.085	29.996	7.358	1.00 18.63	N
ATOM	6342	CD2	HIS	A	398	33.975	30.218	6.573	1.00 19.25	C
ATOM	6344	C	HIS	A	398	34.894	28.711	2.533	1.00 19.45	C
ATOM	6345	O	HIS	A	398	34.701	27.722	1.850	1.00 18.81	O
ATOM	6347	N	THR	A	399	36.111	29.031	2.947	1.00 16.45	N
ATOM	6348	CA	THR	A	399	37.212	28.102	2.734	1.00 22.51	C
ATOM	6350	CB	THR	A	399	38.385	28.437	3.656	1.00 25.81	C
ATOM	6352	OG1	THR	A	399	38.778	29.777	3.409	1.00 28.15	O
ATOM	6354	CG2	THR	A	399	39.571	27.504	3.441	1.00 27.14	C
ATOM	6358	C	THR	A	399	36.824	26.640	3.020	1.00 20.43	C
ATOM	6359	O	THR	A	399	37.189	25.749	2.273	1.00 23.83	O
ATOM	6361	N	VAL	A	400	36.124	26.377	4.117	1.00 20.07	N
ATOM	6362	CA	VAL	A	400	35.841	24.987	4.485	1.00 19.01	C
ATOM	6364	CB	VAL	A	400	35.742	24.794	6.015	1.00 19.48	C
ATOM	6366	CG1	VAL	A	400	36.993	25.327	6.709	1.00 17.68	C
ATOM	6370	CG2	VAL	A	400	34.460	25.427	6.572	1.00 15.43	C
ATOM	6374	C	VAL	A	400	34.587	24.435	3.768	1.00 16.22	C
ATOM	6375	O	VAL	A	400	34.337	23.227	3.800	1.00 18.11	O
ATOM	6377	N	ARG	A	401	33.816	25.308	3.125	1.00 16.24	N
ATOM	6378	CA	ARG	A	401	32.517	24.909	2.533	1.00 13.88	C
ATOM	6380	CB	ARG	A	401	31.462	24.745	3.620	1.00 15.05	C
ATOM	6383	CG	ARG	A	401	30.139	24.121	3.122	1.00 13.89	C
ATOM	6386	CD	ARG	A	401	30.252	22.637	2.817	1.00 16.53	C
ATOM	6389	NE	ARG	A	401	29.021	22.210	2.151	1.00 15.59	N
ATOM	6391	CZ	ARG	A	401	28.816	22.291	0.848	1.00 15.38	C
ATOM	6392	NH1	ARG	A	401	29.793	22.680	0.045	1.00 17.92	N
ATOM	6395	NH2	ARG	A	401	27.641	21.960	0.342	1.00 18.81	N
ATOM	6398	C	ARG	A	401	32.036	25.885	1.477	1.00 13.54	C
ATOM	6399	O	ARG	A	401	31.610	26.987	1.798	1.00 15.18	O
ATOM	6401	N	HIS	A	402	32.211	25.496	0.214	1.00 14.54	N
ATOM	6402	CA	HIS	A	402	32.053	26.386	-0.922	1.00 15.26	C
ATOM	6404	CB	HIS	A	402	33.306	27.279	-1.183	1.00 16.45	C
ATOM	6407	CG	HIS	A	402	34.616	26.536	-1.276	1.00 20.12	C
ATOM	6408	ND1	HIS	A	402	35.750	26.970	-0.632	1.00 30.99	N
ATOM	6410	CE1	HIS	A	402	36.744	26.137	-0.866	1.00 24.77	C

ATOM	6412	NE2	HIS	A	402	36.313	25.193	-1.673	1.00 17.64	N
ATOM	6414	CD2	HIS	A	402	34.984	25.415	-1.945	1.00 22.87	C
ATOM	6416	C	HIS	A	402	31.773	25.563	-2.134	1.00 16.82	C
ATOM	6417	O	HIS	A	402	32.022	24.355	-2.156	1.00 16.51	O
ATOM	6419	N	GLU	A	403	31.212	26.210	-3.145	1.00 18.04	N
ATOM	6420	CA	GLU	A	403	30.829	25.524	-4.370	1.00 18.51	C
ATOM	6422	CB	GLU	A	403	29.359	25.107	-4.316	1.00 19.93	C
ATOM	6425	CG	GLU	A	403	29.071	24.035	-3.318	1.00 24.65	C
ATOM	6428	CD	GLU	A	403	27.584	23.720	-3.184	1.00 23.27	C
ATOM	6429	OE1	GLU	A	403	26.696	24.361	-3.833	1.00 22.23	O
ATOM	6430	OE2	GLU	A	403	27.316	22.848	-2.358	1.00 26.16	O
ATOM	6431	C	GLU	A	403	30.974	26.457	-5.505	1.00 19.48	C
ATOM	6432	O	GLU	A	403	30.782	27.676	-5.348	1.00 16.51	O
ATOM	6434	N	TYR	A	404	31.227	25.892	-6.676	1.00 21.27	N
ATOM	6435	CA	TYR	A	404	31.142	26.668	-7.885	1.00 21.84	C
ATOM	6437	CB	TYR	A	404	31.567	25.852	-9.050	1.00 21.25	C
ATOM	6440	CG	TYR	A	404	31.621	26.621	-10.345	1.00 20.73	C
ATOM	6441	CD1	TYR	A	404	32.660	27.507	-10.608	1.00 28.14	C
ATOM	6443	CE1	TYR	A	404	32.725	28.205	-11.834	1.00 25.77	C
ATOM	6445	CZ	TYR	A	404	31.745	27.992	-12.778	1.00 31.01	C
ATOM	6446	OH	TYR	A	404	31.788	28.670	-13.966	1.00 40.91	O
ATOM	6448	CE2	TYR	A	404	30.700	27.121	-12.527	1.00 29.56	C
ATOM	6450	CD2	TYR	A	404	30.645	26.434	-11.328	1.00 23.30	C
ATOM	6452	C	TYR	A	404	29.692	27.117	-8.131	1.00 26.54	C
ATOM	6453	O	TYR	A	404	28.767	26.316	-8.004	1.00 23.65	O
ATOM	6455	N	THR	A	405	29.515	28.372	-8.526	1.00 21.76	N
ATOM	6456	CA	THR	A	405	28.180	28.883	-8.837	1.00 26.38	C
ATOM	6458	CB	THR	A	405	27.596	29.685	-7.637	1.00 32.30	C
ATOM	6460	OG1	THR	A	405	27.888	29.011	-6.407	1.00 37.71	O
ATOM	6462	CG2	THR	A	405	26.045	29.887	-7.803	1.00 25.20	C
ATOM	6466	C	THR	A	405	28.201	29.862	-10.015	1.00 22.93	C
ATOM	6467	O	THR	A	405	29.215	30.483	-10.322	1.00 19.26	O
ATOM	6469	N	VAL	A	406	27.051	29.973	-10.665	1.00 26.56	N
ATOM	6470	CA	VAL	A	406	26.765	31.008	-11.652	1.00 26.25	C
ATOM	6472	CB	VAL	A	406	26.324	30.417	-13.022	1.00 31.27	C
ATOM	6474	CG1	VAL	A	406	27.457	29.584	-13.605	1.00 29.63	C
ATOM	6478	CG2	VAL	A	406	25.102	29.556	-12.840	1.00 38.61	C
ATOM	6482	C	VAL	A	406	25.696	31.927	-11.061	1.00 25.01	C
ATOM	6483	O	VAL	A	406	24.757	31.499	-10.370	1.00 26.29	O
ATOM	6485	N	ILE	A	407	25.884	33.212	-11.267	1.00 21.24	N
ATOM	6486	CA	ILE	A	407	25.001	34.224	-10.667	1.00 23.28	C
ATOM	6488	CB	ILE	A	407	25.640	34.945	-9.447	1.00 24.38	C
ATOM	6490	CG1	ILE	A	407	26.005	33.964	-8.340	1.00 27.59	C
ATOM	6493	CD1	ILE	A	407	26.553	34.679	-7.081	1.00 24.73	C
ATOM	6497	CG2	ILE	A	407	24.702	36.056	-8.890	1.00 27.24	C
ATOM	6501	C	ILE	A	407	24.777	35.256	-11.773	1.00 22.26	C
ATOM	6502	O	ILE	A	407	25.719	35.691	-12.436	1.00 23.30	O
ATOM	6504	N	GLY	A	408	23.525	35.612	-12.003	1.00 23.88	N
ATOM	6505	CA	GLY	A	408	23.246	36.625	-13.012	1.00 29.24	C
ATOM	6508	C	GLY	A	408	21.782	36.710	-13.338	1.00 27.28	C
ATOM	6509	O	GLY	A	408	21.034	35.754	-13.192	1.00 22.74	O
ATOM	6511	N	GLN	A	409	21.403	37.876	-13.823	1.00 31.44	N
ATOM	6512	CA	GLN	A	409	20.032	38.150	-14.194	1.00 34.83	C
ATOM	6514	CB	GLN	A	409	19.887	39.615	-14.612	1.00 37.95	C
ATOM	6517	CG	GLN	A	409	18.654	40.283	-13.960	1.00 51.67	C
ATOM	6520	CD	GLN	A	409	18.447	39.925	-12.471	1.00 55.87	C
ATOM	6521	OE1	GLN	A	409	17.465	39.258	-12.110	1.00 60.75	O
ATOM	6522	NE2	GLN	A	409	19.367	40.369	-11.614	1.00 58.47	N
ATOM	6525	C	GLN	A	409	19.535	37.187	-15.274	1.00 28.08	C
ATOM	6526	O	GLN	A	409	18.390	36.801	-15.256	1.00 29.79	O
ATOM	6528	N	LYS	A	410	20.403	36.747	-16.177	1.00 29.78	N
ATOM	6529	CA	LYS	A	410	19.990	35.741	-17.172	1.00 28.44	C
ATOM	6531	CB	LYS	A	410	21.023	35.658	-18.300	1.00 28.83	C
ATOM	6534	CG	LYS	A	410	21.191	36.950	-19.066	1.00 31.34	C
ATOM	6537	CD	LYS	A	410	20.064	37.161	-20.046	1.00 33.13	C
ATOM	6540	CE	LYS	A	410	20.148	38.506	-20.796	1.00 36.93	C
ATOM	6543	NZ	LYS	A	410	19.140	38.504	-21.883	1.00 32.55	N

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ATOM   6547  C   LYS A 410      19.687  34.350 -16.567  1.00 28.72           C
ATOM   6548  O   LYS A 410      18.912  33.573 -17.139  1.00 29.08           O
ATOM   6550  N   VAL A 411      20.275  34.029 -15.413  1.00 25.91           N
ATOM   6551  CA  VAL A 411      19.945  32.784 -14.730  1.00 25.56           C
ATOM   6553  CB  VAL A 411      20.947  32.459 -13.559  1.00 26.06           C
ATOM   6555  CG1 VAL A 411      20.541  31.207 -12.843  1.00 30.54           C
ATOM   6559  CG2 VAL A 411      22.359  32.329 -14.063  1.00 23.58           C
ATOM   6563  C   VAL A 411      18.535  32.922 -14.163  1.00 23.23           C
ATOM   6564  O   VAL A 411      17.716  32.036 -14.308  1.00 24.58           O
ATOM   6566  N   ASN A 412      18.256  34.036 -13.500  1.00 27.10           N
ATOM   6567  CA AASN A 412      16.922  34.294 -12.966  0.50 28.28           C
ATOM   6568  CA BASN A 412      16.917  34.280 -12.976  0.50 27.95           C
ATOM   6571  CB AASN A 412      16.878  35.603 -12.160  0.50 31.25           C
ATOM   6572  CB BASN A 412      16.844  35.570 -12.163  0.50 30.76           C
ATOM   6577  CG AASN A 412      17.947  35.673 -11.061  0.50 34.91           C
ATOM   6578  CG BASN A 412      15.423  35.925 -11.782  0.50 33.03           C
ATOM   6579  OD1AASN A 412      18.593  34.679 -10.720  0.50 36.41           O
ATOM   6580  OD1BASN A 412      14.786  35.223 -10.992  0.50 34.88           O
ATOM   6581  ND2AASN A 412      18.140  36.863 -10.520  0.50 35.39           N
ATOM   6582  ND2BASN A 412      14.903  37.002 -12.369  0.50 37.30           N
ATOM   6587  C   ASN A 412      15.904  34.342 -14.113  1.00 26.63           C
ATOM   6588  O   ASN A 412      14.836  33.746 -14.028  1.00 27.12           O
ATOM   6590  N   LEU A 413      16.251  35.032 -15.189  1.00 27.45           N
ATOM   6591  CA  LEU A 413      15.336  35.096 -16.358  1.00 28.28           C
ATOM   6593  CB  LEU A 413      15.953  35.911 -17.483  1.00 29.57           C
ATOM   6596  CG  LEU A 413      15.096  36.795 -18.400  1.00 35.48           C
ATOM   6598  CD1 LEU A 413      15.776  36.931 -19.804  1.00 23.96           C
ATOM   6602  CD2 LEU A 413      13.677  36.348 -18.502  1.00 29.62           C
ATOM   6606  C   LEU A 413      14.985  33.682 -16.878  1.00 26.54           C
ATOM   6607  O   LEU A 413      13.821  33.345 -16.987  1.00 25.46           O
ATOM   6609  N   ALA A 414      15.995  32.850 -17.163  1.00 26.51           N
ATOM   6610  CA  ALA A 414      15.756  31.479 -17.647  1.00 25.23           C
ATOM   6612  CB  ALA A 414      17.047  30.728 -17.843  1.00 24.68           C
ATOM   6616  C   ALA A 414      14.818  30.718 -16.710  1.00 24.71           C
ATOM   6617  O   ALA A 414      13.893  30.014 -17.157  1.00 25.63           O
ATOM   6619  N   ALA A 415      15.033  30.881 -15.405  1.00 25.31           N
ATOM   6620  CA  ALA A 415      14.195  30.207 -14.394  1.00 28.41           C
ATOM   6622  CB  ALA A 415      14.771  30.437 -12.989  1.00 26.71           C
ATOM   6626  C   ALA A 415      12.725  30.689 -14.438  1.00 27.32           C
ATOM   6627  O   ALA A 415      11.801  29.901 -14.378  1.00 27.28           O
ATOM   6629  N   ARG A 416      12.544  31.995 -14.506  1.00 27.49           N
ATOM   6630  CA  ARG A 416      11.194  32.581 -14.538  1.00 29.33           C
ATOM   6632  CB  ARG A 416      11.261  34.084 -14.421  1.00 27.74           C
ATOM   6635  CG  ARG A 416      11.807  34.593 -13.155  1.00 30.65           C
ATOM   6638  CD  ARG A 416      11.292  33.878 -11.932  1.00 40.68           C
ATOM   6641  NE  ARG A 416      12.066  34.294 -10.763  1.00 48.90           N
ATOM   6643  CZ  ARG A 416      11.886  33.832  -9.530  1.00 52.59           C
ATOM   6644  NH1 ARG A 416      10.939  32.930  -9.264  1.00 51.62           N
ATOM   6647  NH2 ARG A 416      12.658  34.294  -8.553  1.00 54.67           N
ATOM   6650  C   ARG A 416      10.476  32.222 -15.815  1.00 28.42           C
ATOM   6651  O   ARG A 416       9.282  31.973 -15.780  1.00 31.83           O
ATOM   6653  N   MET A 417      11.213  32.163 -16.932  1.00 26.21           N
ATOM   6654  CA  MET A 417      10.640  31.711 -18.202  1.00 27.16           C
ATOM   6656  CB  MET A 417      11.655  31.769 -19.334  1.00 27.00           C
ATOM   6659  CG  MET A 417      11.966  33.166 -19.765  1.00 32.32           C
ATOM   6662  SD  MET A 417      13.484  33.300 -20.714  1.00 30.84           S
ATOM   6663  CE  MET A 417      13.036  32.353 -22.155  1.00 32.24           C
ATOM   6667  C   MET A 417      10.073  30.321 -18.152  1.00 25.48           C
ATOM   6668  O   MET A 417       8.979  30.113 -18.646  1.00 27.31           O
ATOM   6670  N   MET A 418      10.799  29.363 -17.575  1.00 25.60           N
ATOM   6671  CA  MET A 418      10.312  27.998 -17.537  1.00 25.59           C
ATOM   6673  CB  MET A 418      11.422  26.988 -17.189  1.00 31.81           C
ATOM   6676  CG  MET A 418      11.662  26.797 -15.730  1.00 32.64           C
ATOM   6679  SD  MET A 418      13.174  25.932 -15.290  1.00 35.38           S
ATOM   6680  CE  MET A 418      13.118  26.421 -13.588  1.00 35.30           C
ATOM   6684  C   MET A 418       9.093  27.856 -16.599  1.00 30.28           C
ATOM   6685  O   MET A 418       8.230  27.030 -16.850  1.00 30.65           O
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ATOM	6687	N	MET	A	419	9.002	28.675	-15.553	1.00	31.83	N
ATOM	6688	CA	MET	A	419	7.826	28.634	-14.678	1.00	34.91	C
ATOM	6690	CB	MET	A	419	8.154	29.182	-13.287	1.00	33.26	C
ATOM	6693	CG	MET	A	419	9.226	28.353	-12.567	1.00	39.75	C
ATOM	6696	SD	MET	A	419	9.013	26.559	-12.826	1.00	42.13	S
ATOM	6697	CE	MET	A	419	7.333	26.346	-12.222	1.00	46.68	C
ATOM	6701	C	MET	A	419	6.626	29.377	-15.270	1.00	32.75	C
ATOM	6702	O	MET	A	419	5.516	28.890	-15.203	1.00	40.00	O
ATOM	6704	N	TYR	A	420	6.856	30.543	-15.855	1.00	32.67	N
ATOM	6705	CA	TYR	A	420	5.754	31.379	-16.307	1.00	34.81	C
ATOM	6707	CB	TYR	A	420	6.153	32.847	-16.351	1.00	34.21	C
ATOM	6710	CG	TYR	A	420	6.169	33.572	-15.028	1.00	41.22	C
ATOM	6711	CD1	TYR	A	420	7.210	33.385	-14.106	1.00	45.47	C
ATOM	6713	CE1	TYR	A	420	7.249	34.083	-12.901	1.00	45.71	C
ATOM	6715	CZ	TYR	A	420	6.244	34.979	-12.603	1.00	48.84	C
ATOM	6716	OH	TYR	A	420	6.265	35.686	-11.417	1.00	50.34	O
ATOM	6718	CE2	TYR	A	420	5.205	35.184	-13.500	1.00	51.08	C
ATOM	6720	CD2	TYR	A	420	5.178	34.479	-14.712	1.00	45.54	C
ATOM	6722	C	TYR	A	420	5.261	30.996	-17.683	1.00	32.24	C
ATOM	6723	O	TYR	A	420	4.217	31.449	-18.075	1.00	30.96	O
ATOM	6725	N	TYR	A	421	6.052	30.224	-18.426	1.00	30.24	N
ATOM	6726	CA	TYR	A	421	5.692	29.746	-19.751	1.00	29.65	C
ATOM	6728	CB	TYR	A	421	6.602	30.370	-20.809	1.00	24.63	C
ATOM	6731	CG	TYR	A	421	6.473	31.855	-20.965	1.00	31.47	C
ATOM	6732	CD1	TYR	A	421	7.346	32.717	-20.312	1.00	32.57	C
ATOM	6734	CE1	TYR	A	421	7.259	34.096	-20.473	1.00	34.45	C
ATOM	6736	CZ	TYR	A	421	6.294	34.646	-21.332	1.00	36.14	C
ATOM	6737	OH	TYR	A	421	6.233	36.031	-21.474	1.00	30.94	O
ATOM	6739	CE2	TYR	A	421	5.415	33.808	-22.003	1.00	29.53	C
ATOM	6741	CD2	TYR	A	421	5.510	32.412	-21.822	1.00	30.03	C
ATOM	6743	C	TYR	A	421	5.850	28.244	-19.799	1.00	29.49	C
ATOM	6744	O	TYR	A	421	6.787	27.735	-20.420	1.00	29.60	O
ATOM	6746	N	PRO	A	422	4.946	27.521	-19.121	1.00	33.23	N
ATOM	6747	CA	PRO	A	422	5.082	26.085	-18.995	1.00	32.01	C
ATOM	6749	CB	PRO	A	422	4.078	25.740	-17.889	1.00	32.95	C
ATOM	6752	CG	PRO	A	422	3.072	26.804	-17.944	1.00	37.68	C
ATOM	6755	CD	PRO	A	422	3.782	28.040	-18.381	1.00	32.94	C
ATOM	6758	C	PRO	A	422	4.781	25.300	-20.264	1.00	32.75	C
ATOM	6759	O	PRO	A	422	4.008	25.732	-21.111	1.00	32.68	O
ATOM	6760	N	GLY	A	423	5.410	24.142	-20.401	1.00	31.69	N
ATOM	6761	CA	GLY	A	423	5.079	23.213	-21.477	1.00	32.01	C
ATOM	6764	C	GLY	A	423	5.670	23.574	-22.815	1.00	32.17	C
ATOM	6765	O	GLY	A	423	5.348	22.949	-23.836	1.00	31.93	O
ATOM	6767	N	ILE	A	424	6.545	24.578	-22.819	1.00	30.36	N
ATOM	6768	CA	ILE	A	424	7.214	24.984	-24.044	1.00	31.24	C
ATOM	6770	CB	ILE	A	424	6.496	26.169	-24.741	1.00	27.02	C
ATOM	6772	CG1	ILE	A	424	6.493	27.423	-23.875	1.00	28.30	C
ATOM	6775	CD1	ILE	A	424	6.219	28.649	-24.673	1.00	24.23	C
ATOM	6779	CG2	ILE	A	424	5.066	25.740	-25.156	1.00	26.51	C
ATOM	6783	C	ILE	A	424	8.669	25.339	-23.795	1.00	23.51	C
ATOM	6784	O	ILE	A	424	9.086	25.487	-22.653	1.00	22.98	O
ATOM	6786	N	VAL	A	425	9.418	25.413	-24.887	1.00	26.88	N
ATOM	6787	CA	VAL	A	425	10.787	25.888	-24.888	1.00	26.73	C
ATOM	6789	CB	VAL	A	425	11.612	25.175	-25.959	1.00	23.33	C
ATOM	6791	CG1	VAL	A	425	13.045	25.783	-26.058	1.00	25.24	C
ATOM	6795	CG2	VAL	A	425	11.695	23.668	-25.677	1.00	26.78	C
ATOM	6799	C	VAL	A	425	10.698	27.369	-25.211	1.00	30.59	C
ATOM	6800	O	VAL	A	425	10.238	27.744	-26.306	1.00	28.49	O
ATOM	6802	N	THR	A	426	11.131	28.207	-24.268	1.00	30.39	N
ATOM	6803	CA	THR	A	426	11.212	29.650	-24.467	1.00	26.12	C
ATOM	6805	CB	THR	A	426	10.524	30.376	-23.316	1.00	31.61	C
ATOM	6807	OG1	THR	A	426	11.029	29.863	-22.084	1.00	32.47	O
ATOM	6809	CG2	THR	A	426	8.980	30.181	-23.329	1.00	24.41	C
ATOM	6813	C	THR	A	426	12.668	30.140	-24.514	1.00	31.15	C
ATOM	6814	O	THR	A	426	13.589	29.527	-23.933	1.00	25.99	O
ATOM	6816	N	CYS	A	427	12.875	31.261	-25.195	1.00	26.09	N
ATOM	6817	CA	CYS	A	427	14.161	31.920	-25.201	1.00	26.36	C

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ATOM   6819  CB  CYS A 427      15.027  31.423 -26.357  1.00 28.06           C
ATOM   6822  SG  CYS A 427      14.574  32.043 -28.041  1.00 27.92           S
ATOM   6824  C   CYS A 427      14.040  33.455 -25.188  1.00 26.03           C
ATOM   6825  O   CYS A 427      12.970  34.035 -25.432  1.00 23.41           O
ATOM   6827  N   ASP A 428      15.156  34.086 -24.868  1.00 22.66           N
ATOM   6828  CA  ASP A 428      15.260  35.515 -24.763  1.00 24.10           C
ATOM   6830  CB  ASP A 428      16.241  35.915 -23.627  1.00 23.34           C
ATOM   6833  CG  ASP A 428      17.702  35.560 -23.915  1.00 23.18           C
ATOM   6834  OD1 ASP A 428      18.024  34.879 -24.919  1.00 27.20           O
ATOM   6835  OD2 ASP A 428      18.563  35.992 -23.106  1.00 25.97           O
ATOM   6836  C   ASP A 428      15.659  36.122 -26.107  1.00 21.97           C
ATOM   6837  O   ASP A 428      15.933  35.403 -27.084  1.00 22.82           O
ATOM   6839  N   SER A 429      15.710  37.444 -26.145  1.00 26.90           N
ATOM   6840  CA  SER A 429      16.090  38.176 -27.364  1.00 30.67           C
ATOM   6842  CB  SER A 429      15.898  39.673 -27.160  1.00 33.56           C
ATOM   6845  OG  SER A 429      14.518  39.948 -27.061  1.00 42.02           O
ATOM   6847  C   SER A 429      17.498  37.909 -27.829  1.00 29.24           C
ATOM   6848  O   SER A 429      17.755  37.765 -29.040  1.00 29.84           O
ATOM   6850  N   VAL A 430      18.428  37.842 -26.881  1.00 29.31           N
ATOM   6851  CA  VAL A 430      19.802  37.546 -27.235  1.00 25.67           C
ATOM   6853  CB  VAL A 430      20.758  37.461 -25.998  1.00 25.78           C
ATOM   6855  CG1 VAL A 430      22.130  36.863 -26.450  1.00 28.90           C
ATOM   6859  CG2 VAL A 430      20.945  38.834 -25.366  1.00 29.41           C
ATOM   6863  C   VAL A 430      19.852  36.242 -27.975  1.00 27.73           C
ATOM   6864  O   VAL A 430      20.503  36.150 -29.019  1.00 30.26           O
ATOM   6866  N   THR A 431      19.165  35.215 -27.460  1.00 27.79           N
ATOM   6867  CA  THR A 431      19.278  33.880 -28.067  1.00 23.27           C
ATOM   6869  CB  THR A 431      18.697  32.794 -27.138  1.00 27.44           C
ATOM   6871  OG1 THR A 431      19.401  32.817 -25.895  1.00 25.59           O
ATOM   6873  CG2 THR A 431      18.827  31.432 -27.766  1.00 24.36           C
ATOM   6877  C   THR A 431      18.608  33.856 -29.433  1.00 27.25           C
ATOM   6878  O   THR A 431      19.135  33.340 -30.402  1.00 32.04           O
ATOM   6880  N   TYR A 432      17.426  34.433 -29.500  1.00 32.22           N
ATOM   6881  CA  TYR A 432      16.676  34.474 -30.736  1.00 31.91           C
ATOM   6883  CB  TYR A 432      15.379  35.222 -30.462  1.00 30.37           C
ATOM   6886  CG  TYR A 432      14.602  35.562 -31.693  1.00 31.25           C
ATOM   6887  CD1 TYR A 432      13.744  34.633 -32.267  1.00 33.01           C
ATOM   6889  CE1 TYR A 432      12.998  34.955 -33.395  1.00 41.15           C
ATOM   6891  CZ  TYR A 432      13.118  36.226 -33.950  1.00 40.61           C
ATOM   6892  OH  TYR A 432      12.398  36.568 -35.079  1.00 47.07           O
ATOM   6894  CE2 TYR A 432      13.971  37.162 -33.377  1.00 39.69           C
ATOM   6896  CD2 TYR A 432      14.698  36.829 -32.262  1.00 30.95           C
ATOM   6898  C   TYR A 432      17.484  35.147 -31.866  1.00 34.20           C
ATOM   6899  O   TYR A 432      17.787  34.522 -32.894  1.00 32.18           O
ATOM   6901  N   ASN A 433      17.829  36.417 -31.656  1.00 38.89           N
ATOM   6902  CA  ASN A 433      18.566  37.202 -32.652  1.00 41.67           C
ATOM   6904  CB  ASN A 433      18.831  38.617 -32.138  1.00 43.13           C
ATOM   6907  CG  ASN A 433      17.563  39.423 -31.991  1.00 38.62           C
ATOM   6908  OD1 ASN A 433      17.269  39.943 -30.928  1.00 45.00           O
ATOM   6909  ND2 ASN A 433      16.798  39.510 -33.060  1.00 45.00           N
ATOM   6912  C   ASN A 433      19.889  36.569 -33.004  1.00 44.17           C
ATOM   6913  O   ASN A 433      20.282  36.518 -34.167  1.00 43.04           O
ATOM   6915  N   GLY A 434      20.577  36.082 -31.983  1.00 43.24           N
ATOM   6916  CA  GLY A 434      21.903  35.560 -32.167  1.00 41.92           C
ATOM   6919  C   GLY A 434      21.887  34.290 -32.965  1.00 44.02           C
ATOM   6920  O   GLY A 434      22.804  34.071 -33.741  1.00 50.47           O
ATOM   6922  N   SER A 435      20.868  33.444 -32.773  1.00 41.97           N
ATOM   6923  CA  SER A 435      20.770  32.161 -33.495  1.00 43.88           C
ATOM   6925  CB  SER A 435      19.474  31.399 -33.133  1.00 42.69           C
ATOM   6928  OG  SER A 435      18.298  32.150 -33.459  1.00 39.84           O
ATOM   6930  C   SER A 435      20.815  32.387 -35.003  1.00 45.85           C
ATOM   6931  O   SER A 435      21.350  31.565 -35.734  1.00 45.41           O
ATOM   6933  N   ASN A 436      20.243  33.512 -35.439  1.00 51.13           N
ATOM   6934  CA  ASN A 436      20.028  33.835 -36.860  1.00 58.87           C
ATOM   6936  CB  ASN A 436      21.361  34.113 -37.588  1.00 60.36           C
ATOM   6939  CG  ASN A 436      21.763  35.572 -37.511  1.00 63.56           C
ATOM   6940  OD1 ASN A 436      22.606  35.953 -36.701  1.00 69.11           O
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ATOM   6941  ND2 ASN A 436      21.130  36.406 -38.332  1.00 69.59           N
ATOM   6944  C   ASN A 436      19.171  32.815 -37.621  1.00 59.56           C
ATOM   6945  O   ASN A 436      19.058  32.901 -38.850  1.00 57.97           O
ATOM   6947  N   LEU A 437      18.548  31.883 -36.883  1.00 57.99           N
ATOM   6948  CA  LEU A 437      17.706  30.845 -37.472  1.00 55.83           C
ATOM   6950  CB  LEU A 437      17.273  29.807 -36.425  1.00 55.46           C
ATOM   6953  CG  LEU A 437      18.374  28.893 -35.922  1.00 57.20           C
ATOM   6955  CD1 LEU A 437      17.877  27.967 -34.811  1.00 56.28           C
ATOM   6959  CD2 LEU A 437      18.948  28.103 -37.088  1.00 59.05           C
ATOM   6963  C   LEU A 437      16.482  31.506 -38.064  1.00 52.69           C
ATOM   6964  O   LEU A 437      16.143  32.635 -37.685  1.00 55.93           O
ATOM   6966  N   PRO A 438      15.803  30.814 -38.995  1.00 48.47           N
ATOM   6967  CA  PRO A 438      14.675  31.474 -39.635  1.00 48.23           C
ATOM   6969  CB  PRO A 438      14.140  30.410 -40.597  1.00 48.63           C
ATOM   6972  CG  PRO A 438      15.262  29.448 -40.785  1.00 49.60           C
ATOM   6975  CD  PRO A 438      15.996  29.442 -39.488  1.00 48.01           C
ATOM   6978  C   PRO A 438      13.617  31.884 -38.604  1.00 47.06           C
ATOM   6979  O   PRO A 438      13.307  31.119 -37.699  1.00 44.51           O
ATOM   6980  N   ALA A 439      13.073  33.086 -38.733  1.00 46.60           N
ATOM   6981  CA  ALA A 439      12.160  33.583 -37.718  1.00 44.14           C
ATOM   6983  CB  ALA A 439      11.654  34.993 -38.057  1.00 46.67           C
ATOM   6987  C   ALA A 439      10.996  32.629 -37.485  1.00 42.65           C
ATOM   6988  O   ALA A 439      10.476  32.564 -36.381  1.00 38.69           O
ATOM   6990  N   TYR A 440      10.615  31.858 -38.501  1.00 42.36           N
ATOM   6991  CA  TYR A 440       9.473  30.925 -38.356  1.00 40.34           C
ATOM   6993  CB  TYR A 440       8.953  30.497 -39.725  1.00 40.65           C
ATOM   6996  CG  TYR A 440       9.961  29.747 -40.565  1.00 41.46           C
ATOM   6997  CD1 TYR A 440      10.232  28.410 -40.325  1.00 40.23           C
ATOM   6999  CE1 TYR A 440      11.147  27.721 -41.076  1.00 43.90           C
ATOM   7001  CZ  TYR A 440      11.800  28.353 -42.103  1.00 40.70           C
ATOM   7002  OH  TYR A 440      12.708  27.654 -42.846  1.00 43.29           O
ATOM   7004  CE2 TYR A 440      11.556  29.678 -42.374  1.00 46.84           C
ATOM   7006  CD2 TYR A 440      10.640  30.376 -41.597  1.00 47.00           C
ATOM   7008  C   TYR A 440       9.764  29.684 -37.462  1.00 37.36           C
ATOM   7009  O   TYR A 440       8.847  28.922 -37.133  1.00 36.18           O
ATOM   7011  N   PHE A 441      11.030  29.501 -37.062  1.00 34.85           N
ATOM   7012  CA  PHE A 441      11.384  28.548 -35.993  1.00 35.01           C
ATOM   7014  CB  PHE A 441      12.900  28.367 -35.895  1.00 36.35           C
ATOM   7017  CG  PHE A 441      13.471  27.461 -36.933  1.00 40.07           C
ATOM   7018  CD1 PHE A 441      13.100  27.563 -38.266  1.00 39.50           C
ATOM   7020  CE1 PHE A 441      13.648  26.723 -39.214  1.00 45.11           C
ATOM   7022  CZ  PHE A 441      14.569  25.788 -38.852  1.00 42.50           C
ATOM   7024  CE2 PHE A 441      14.961  25.683 -37.539  1.00 43.93           C
ATOM   7026  CD2 PHE A 441      14.418  26.509 -36.584  1.00 43.99           C
ATOM   7028  C   PHE A 441      10.872  28.975 -34.621  1.00 32.67           C
ATOM   7029  O   PHE A 441      10.877  28.182 -33.653  1.00 28.96           O
ATOM   7031  N   PHE A 442      10.418  30.215 -34.535  1.00 30.44           N
ATOM   7032  CA  PHE A 442      10.010  30.799 -33.269  1.00 31.52           C
ATOM   7034  CB  PHE A 442      10.910  31.987 -32.939  1.00 33.47           C
ATOM   7037  CG  PHE A 442      12.354  31.624 -32.857  1.00 30.86           C
ATOM   7038  CD1 PHE A 442      13.167  31.720 -33.976  1.00 29.29           C
ATOM   7040  CE1 PHE A 442      14.493  31.366 -33.916  1.00 34.35           C
ATOM   7042  CZ  PHE A 442      15.024  30.891 -32.731  1.00 35.94           C
ATOM   7044  CE2 PHE A 442      14.218  30.796 -31.602  1.00 34.75           C
ATOM   7046  CD2 PHE A 442      12.892  31.156 -31.672  1.00 31.97           C
ATOM   7048  C   PHE A 442       8.584  31.294 -33.315  1.00 32.65           C
ATOM   7049  O   PHE A 442       8.005  31.497 -34.389  1.00 30.20           O
ATOM   7051  N   LYS A 443       8.030  31.479 -32.132  1.00 32.33           N
ATOM   7052  CA  LYS A 443       6.893  32.348 -31.944  1.00 33.02           C
ATOM   7054  CB  LYS A 443       5.701  31.544 -31.463  1.00 33.03           C
ATOM   7057  CG  LYS A 443       4.556  32.449 -31.208  1.00 36.69           C
ATOM   7060  CD  LYS A 443       3.391  31.790 -30.609  1.00 34.28           C
ATOM   7063  CE  LYS A 443       2.302  32.846 -30.461  1.00 36.05           C
ATOM   7066  NZ  LYS A 443       1.160  32.279 -29.773  1.00 20.15           N
ATOM   7070  C   LYS A 443       7.196  33.438 -30.920  1.00 32.95           C
ATOM   7071  O   LYS A 443       7.517  33.133 -29.779  1.00 26.77           O
ATOM   7073  N   GLU A 444       7.045  34.704 -31.301  1.00 34.28           N
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ATOM	7074	CA	GLU	A	444	7.052	35.808	-30.327	1.00	31.50	C
ATOM	7076	CB	GLU	A	444	6.896	37.114	-31.040	1.00	36.54	C
ATOM	7079	CG	GLU	A	444	6.943	38.334	-30.109	1.00	36.82	C
ATOM	7082	CD	GLU	A	444	7.019	39.602	-30.912	1.00	43.30	C
ATOM	7083	OE1	GLU	A	444	7.516	40.609	-30.348	1.00	40.25	O
ATOM	7084	OE2	GLU	A	444	6.586	39.557	-32.114	1.00	39.18	O
ATOM	7085	C	GLU	A	444	5.911	35.697	-29.324	1.00	31.08	C
ATOM	7086	O	GLU	A	444	4.769	35.542	-29.709	1.00	32.86	O
ATOM	7088	N	LEU	A	445	6.221	35.807	-28.037	1.00	29.57	N
ATOM	7089	CA	LEU	A	445	5.258	35.521	-26.966	1.00	28.53	C
ATOM	7091	CB	LEU	A	445	5.910	34.671	-25.863	1.00	25.88	C
ATOM	7094	CG	LEU	A	445	6.339	33.274	-26.278	1.00	28.14	C
ATOM	7096	CD1	LEU	A	445	7.312	32.696	-25.235	1.00	24.87	C
ATOM	7100	CD2	LEU	A	445	5.108	32.384	-26.456	1.00	25.12	C
ATOM	7104	C	LEU	A	445	4.695	36.796	-26.321	1.00	27.42	C
ATOM	7105	O	LEU	A	445	5.319	37.852	-26.330	1.00	26.56	O
ATOM	7107	N	PRO	A	446	3.513	36.686	-25.726	1.00	25.48	N
ATOM	7108	CA	PRO	A	446	2.991	37.785	-24.932	1.00	31.15	C
ATOM	7110	CB	PRO	A	446	1.678	37.240	-24.388	1.00	28.03	C
ATOM	7113	CG	PRO	A	446	1.395	36.052	-25.113	1.00	29.11	C
ATOM	7116	CD	PRO	A	446	2.623	35.521	-25.717	1.00	30.04	C
ATOM	7119	C	PRO	A	446	3.919	38.098	-23.763	1.00	35.89	C
ATOM	7120	O	PRO	A	446	4.523	37.174	-23.223	1.00	36.18	O
ATOM	7121	N	LYS	A	447	4.034	39.379	-23.404	1.00	42.27	N
ATOM	7122	CA	LYS	A	447	4.849	39.827	-22.273	1.00	46.92	C
ATOM	7124	CB	LYS	A	447	5.060	41.338	-22.324	1.00	50.73	C
ATOM	7127	CG	LYS	A	447	5.849	41.844	-23.517	1.00	55.47	C
ATOM	7130	CD	LYS	A	447	5.822	43.386	-23.608	1.00	59.06	C
ATOM	7133	CE	LYS	A	447	4.763	43.902	-24.586	1.00	61.63	C
ATOM	7136	NZ	LYS	A	447	3.342	43.514	-24.241	1.00	61.99	N
ATOM	7140	C	LYS	A	447	4.149	39.481	-20.956	1.00	47.11	C
ATOM	7141	O	LYS	A	447	2.983	39.831	-20.760	1.00	47.67	O
ATOM	7143	N	LYS	A	448	4.861	38.789	-20.069	1.00	45.82	N
ATOM	7144	CA	LYS	A	448	4.358	38.476	-18.732	1.00	43.19	C
ATOM	7146	CB	LYS	A	448	4.359	36.969	-18.504	1.00	44.76	C
ATOM	7149	CG	LYS	A	448	3.287	36.229	-19.313	1.00	42.40	C
ATOM	7152	CD	LYS	A	448	3.204	34.762	-18.963	1.00	41.59	C
ATOM	7155	CE	LYS	A	448	2.437	33.986	-20.041	1.00	43.91	C
ATOM	7158	NZ	LYS	A	448	2.376	32.494	-19.814	1.00	43.09	N
ATOM	7162	C	LYS	A	448	5.203	39.183	-17.674	1.00	45.62	C
ATOM	7163	O	LYS	A	448	6.409	39.328	-17.828	1.00	41.62	O
ATOM	7165	N	VAL	A	449	4.556	39.644	-16.610	1.00	47.86	N
ATOM	7166	CA	VAL	A	449	5.263	40.251	-15.488	1.00	49.54	C
ATOM	7168	CB	VAL	A	449	4.328	41.137	-14.650	1.00	50.88	C
ATOM	7170	CG1	VAL	A	449	4.996	41.514	-13.308	1.00	54.14	C
ATOM	7174	CG2	VAL	A	449	3.918	42.374	-15.454	1.00	51.00	C
ATOM	7178	C	VAL	A	449	5.821	39.107	-14.647	1.00	48.21	C
ATOM	7179	O	VAL	A	449	5.060	38.341	-14.057	1.00	44.59	O
ATOM	7181	N	MET	A	450	7.148	38.984	-14.623	1.00	48.90	N
ATOM	7182	CA	MET	A	450	7.815	37.872	-13.940	1.00	50.55	C
ATOM	7184	CB	MET	A	450	8.746	37.146	-14.915	1.00	49.95	C
ATOM	7187	CG	MET	A	450	7.993	36.550	-16.093	1.00	48.09	C
ATOM	7190	SD	MET	A	450	8.967	35.481	-17.133	1.00	44.12	S
ATOM	7191	CE	MET	A	450	10.088	36.727	-17.748	1.00	43.25	C
ATOM	7195	C	MET	A	450	8.574	38.384	-12.723	1.00	53.63	C
ATOM	7196	O	MET	A	450	9.352	39.341	-12.822	1.00	51.88	O
ATOM	7198	N	LYS	A	451	8.339	37.747	-11.576	1.00	60.56	N
ATOM	7199	CA	LYS	A	451	8.877	38.232	-10.303	1.00	64.18	C
ATOM	7201	CB	LYS	A	451	8.289	37.450	-9.110	1.00	66.11	C
ATOM	7204	CG	LYS	A	451	6.756	37.677	-8.936	1.00	69.51	C
ATOM	7207	CD	LYS	A	451	6.216	37.374	-7.529	1.00	71.77	C
ATOM	7210	CE	LYS	A	451	6.204	35.875	-7.199	1.00	72.50	C
ATOM	7213	NZ	LYS	A	451	5.163	35.096	-7.929	1.00	73.18	N
ATOM	7217	C	LYS	A	451	10.403	38.192	-10.327	1.00	65.41	C
ATOM	7218	O	LYS	A	451	11.013	37.141	-10.560	1.00	67.96	O
ATOM	7220	N	GLY	A	452	11.006	39.365	-10.155	1.00	65.64	N
ATOM	7221	CA	GLY	A	452	12.453	39.493	-10.136	1.00	66.43	C

ATOM	7224	C	GLY	A	452	13.069	40.062	-11.397	1.00	67.99	C
ATOM	7225	O	GLY	A	452	14.200	40.548	-11.353	1.00	69.82	O
ATOM	7227	N	VAL	A	453	12.347	40.012	-12.521	1.00	68.03	N
ATOM	7228	CA	VAL	A	453	12.924	40.419	-13.822	1.00	69.34	C
ATOM	7230	CB	VAL	A	453	12.765	39.303	-14.949	1.00	68.38	C
ATOM	7232	CG1	VAL	A	453	11.831	38.183	-14.517	1.00	67.59	C
ATOM	7236	CG2	VAL	A	453	12.347	39.894	-16.298	1.00	65.82	C
ATOM	7240	C	VAL	A	453	12.431	41.814	-14.271	1.00	69.45	C
ATOM	7241	O	VAL	A	453	11.225	42.062	-14.382	1.00	65.92	O
ATOM	7243	N	ALA	A	454	13.389	42.713	-14.496	1.00	70.29	N
ATOM	7244	CA	ALA	A	454	13.111	44.095	-14.893	1.00	73.66	C
ATOM	7246	CB	ALA	A	454	14.067	45.061	-14.194	1.00	73.33	C
ATOM	7250	C	ALA	A	454	13.240	44.228	-16.401	1.00	75.36	C
ATOM	7251	O	ALA	A	454	14.344	44.380	-16.937	1.00	77.40	O
ATOM	7253	N	ASP	A	455	12.094	44.198	-17.071	1.00	75.95	N
ATOM	7254	CA	ASP	A	455	12.015	44.135	-18.531	1.00	74.64	C
ATOM	7256	CB	ASP	A	455	12.230	45.498	-19.192	1.00	75.74	C
ATOM	7259	CG	ASP	A	455	11.950	45.458	-20.692	1.00	76.56	C
ATOM	7260	OD1	ASP	A	455	11.413	44.428	-21.170	1.00	71.94	O
ATOM	7261	OD2	ASP	A	455	12.268	46.447	-21.390	1.00	77.29	O
ATOM	7262	C	ASP	A	455	12.951	43.093	-19.145	1.00	70.93	C
ATOM	7263	O	ASP	A	455	14.124	43.352	-19.422	1.00	69.81	O
ATOM	7265	N	SER	A	456	12.375	41.923	-19.382	1.00	66.85	N
ATOM	7266	CA	SER	A	456	13.049	40.807	-20.015	1.00	64.24	C
ATOM	7268	CB	SER	A	456	12.087	39.629	-19.989	1.00	64.22	C
ATOM	7271	OG	SER	A	456	10.786	40.067	-20.336	1.00	62.12	O
ATOM	7273	C	SER	A	456	13.487	41.058	-21.468	1.00	61.50	C
ATOM	7274	O	SER	A	456	14.334	40.324	-22.000	1.00	60.64	O
ATOM	7276	N	GLY	A	457	12.910	42.081	-22.104	1.00	57.18	N
ATOM	7277	CA	GLY	A	457	12.978	42.239	-23.566	1.00	51.89	C
ATOM	7280	C	GLY	A	457	11.980	41.264	-24.179	1.00	46.65	C
ATOM	7281	O	GLY	A	457	11.345	40.496	-23.452	1.00	47.07	O
ATOM	7283	N	PRO	A	458	11.828	41.277	-25.513	1.00	42.11	N
ATOM	7284	CA	PRO	A	458	10.939	40.289	-26.151	1.00	38.49	C
ATOM	7286	CB	PRO	A	458	11.074	40.574	-27.650	1.00	38.41	C
ATOM	7289	CG	PRO	A	458	12.039	41.705	-27.788	1.00	41.35	C
ATOM	7292	CD	PRO	A	458	12.434	42.217	-26.468	1.00	41.62	C
ATOM	7295	C	PRO	A	458	11.363	38.842	-25.844	1.00	33.96	C
ATOM	7296	O	PRO	A	458	12.553	38.525	-25.865	1.00	26.37	O
ATOM	7297	N	LEU	A	459	10.393	37.990	-25.548	1.00	30.45	N
ATOM	7298	CA	LEU	A	459	10.639	36.584	-25.348	1.00	27.71	C
ATOM	7300	CB	LEU	A	459	10.061	36.149	-24.013	1.00	31.25	C
ATOM	7303	CG	LEU	A	459	10.610	36.854	-22.794	1.00	29.86	C
ATOM	7305	CD1	LEU	A	459	9.944	36.221	-21.588	1.00	31.27	C
ATOM	7309	CD2	LEU	A	459	12.148	36.743	-22.746	1.00	29.82	C
ATOM	7313	C	LEU	A	459	9.969	35.799	-26.452	1.00	33.20	C
ATOM	7314	O	LEU	A	459	8.959	36.247	-27.006	1.00	26.29	O
ATOM	7316	N	TYR	A	460	10.511	34.603	-26.724	1.00	29.98	N
ATOM	7317	CA	TYR	A	460	10.109	33.794	-27.859	1.00	26.64	C
ATOM	7319	CB	TYR	A	460	11.191	33.831	-28.920	1.00	27.38	C
ATOM	7322	CG	TYR	A	460	11.402	35.211	-29.456	1.00	30.16	C
ATOM	7323	CD1	TYR	A	460	12.246	36.099	-28.798	1.00	23.96	C
ATOM	7325	CE1	TYR	A	460	12.432	37.392	-29.254	1.00	30.04	C
ATOM	7327	CZ	TYR	A	460	11.767	37.810	-30.412	1.00	29.30	C
ATOM	7328	OH	TYR	A	460	11.985	39.079	-30.872	1.00	31.51	O
ATOM	7330	CE2	TYR	A	460	10.917	36.942	-31.092	1.00	28.45	C
ATOM	7332	CD2	TYR	A	460	10.733	35.652	-30.619	1.00	28.80	C
ATOM	7334	C	TYR	A	460	9.939	32.366	-27.444	1.00	28.65	C
ATOM	7335	O	TYR	A	460	10.613	31.873	-26.540	1.00	26.88	O
ATOM	7337	N	GLN	A	461	9.047	31.692	-28.123	1.00	26.57	N
ATOM	7338	CA	GLN	A	461	8.956	30.274	-28.021	1.00	24.57	C
ATOM	7340	CB	GLN	A	461	7.527	29.811	-28.224	1.00	25.97	C
ATOM	7343	CG	GLN	A	461	7.413	28.286	-28.299	1.00	26.85	C
ATOM	7346	CD	GLN	A	461	5.991	27.794	-28.390	1.00	27.43	C
ATOM	7347	OE1	GLN	A	461	5.748	26.588	-28.343	1.00	35.50	O
ATOM	7348	NE2	GLN	A	461	5.048	28.709	-28.505	1.00	21.55	N
ATOM	7351	C	GLN	A	461	9.793	29.766	-29.133	1.00	28.83	C

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ATOM   7352  O   GLN A 461       9.722  30.330 -30.242  1.00 26.47           O
ATOM   7354  N   TYR A 462      10.605  28.743 -28.844  1.00 24.39           N
ATOM   7355  CA  TYR A 462      11.301  28.016 -29.867  1.00 26.60           C
ATOM   7357  CB  TYR A 462      12.613  27.395 -29.353  1.00 27.73           C
ATOM   7360  CG  TYR A 462      13.370  26.653 -30.431  1.00 31.55           C
ATOM   7361  CD1 TYR A 462      13.688  27.268 -31.625  1.00 31.21           C
ATOM   7363  CE1 TYR A 462      14.381  26.585 -32.626  1.00 38.08           C
ATOM   7365  CZ  TYR A 462      14.751  25.257 -32.435  1.00 32.64           C
ATOM   7366  OH  TYR A 462      15.405  24.566 -33.419  1.00 31.81           O
ATOM   7368  CE2 TYR A 462      14.439  24.624 -31.257  1.00 32.52           C
ATOM   7370  CD2 TYR A 462      13.751  25.318 -30.260  1.00 33.79           C
ATOM   7372  C   TYR A 462      10.362  26.932 -30.382  1.00 29.44           C
ATOM   7373  O   TYR A 462      10.168  25.909 -29.741  1.00 33.16           O
ATOM   7375  N   TRP A 463       9.755  27.177 -31.533  1.00 31.77           N
ATOM   7376  CA  TRP A 463       8.708  26.298 -32.061  1.00 26.92           C
ATOM   7378  CB  TRP A 463       7.911  27.046 -33.136  1.00 31.77           C
ATOM   7381  CG  TRP A 463       6.642  26.355 -33.542  1.00 29.01           C
ATOM   7382  CD1 TRP A 463       6.514  25.356 -34.449  1.00 27.64           C
ATOM   7384  NE1 TRP A 463       5.192  24.989 -34.556  1.00 32.46           N
ATOM   7386  CE2 TRP A 463       4.440  25.756 -33.707  1.00 28.06           C
ATOM   7387  CD2 TRP A 463       5.321  26.631 -33.048  1.00 24.10           C
ATOM   7388  CE3 TRP A 463       4.806  27.533 -32.114  1.00 27.76           C
ATOM   7390  CZ3 TRP A 463       3.455  27.527 -31.859  1.00 31.33           C
ATOM   7392  CH2 TRP A 463       2.591  26.634 -32.523  1.00 32.07           C
ATOM   7394  CZ2 TRP A 463       3.064  25.744 -33.452  1.00 34.17           C
ATOM   7396  C   TRP A 463       9.320  25.040 -32.654  1.00 33.57           C
ATOM   7397  O   TRP A 463       8.726  23.962 -32.594  1.00 34.88           O
ATOM   7399  N   GLY A 464      10.499  25.188 -33.242  1.00 34.85           N
ATOM   7400  CA  GLY A 464      11.208  24.087 -33.845  1.00 38.65           C
ATOM   7403  C   GLY A 464      11.110  24.146 -35.353  1.00 43.33           C
ATOM   7404  O   GLY A 464      10.451  25.028 -35.927  1.00 38.04           O
ATOM   7406  N   ARG A 465      11.726  23.160 -35.991  1.00 46.75           N
ATOM   7407  CA  ARG A 465      11.977  23.187 -37.439  1.00 51.66           C
ATOM   7409  CB  ARG A 465      13.071  22.169 -37.804  1.00 55.11           C
ATOM   7412  CG  ARG A 465      14.311  22.258 -36.914  1.00 61.63           C
ATOM   7415  CD  ARG A 465      15.499  21.507 -37.482  1.00 68.68           C
ATOM   7418  NE  ARG A 465      15.936  22.054 -38.762  1.00 74.28           N
ATOM   7420  CZ  ARG A 465      16.919  21.550 -39.506  1.00 81.35           C
ATOM   7421  NH1 ARG A 465      17.601  20.472 -39.107  1.00 83.13           N
ATOM   7424  NH2 ARG A 465      17.228  22.132 -40.660  1.00 83.55           N
ATOM   7427  C   ARG A 465      10.726  22.923 -38.281  1.00 51.85           C
ATOM   7428  O   ARG A 465      10.710  23.224 -39.483  1.00 49.87           O
ATOM   7430  N   THR A 466       9.693  22.354 -37.665  1.00 49.33           N
ATOM   7431  CA  THR A 466       8.495  21.978 -38.399  1.00 53.30           C
ATOM   7433  CB  THR A 466       8.361  20.439 -38.482  1.00 54.12           C
ATOM   7435  OG1 THR A 466       8.101  19.899 -37.173  1.00 54.69           O
ATOM   7437  CG2 THR A 466       9.630  19.816 -39.068  1.00 54.87           C
ATOM   7441  C   THR A 466       7.210  22.537 -37.787  1.00 53.75           C
ATOM   7442  O   THR A 466       7.183  22.970 -36.632  1.00 50.40           O
ATOM   7444  N   GLU A 467       6.151  22.495 -38.592  1.00 56.13           N
ATOM   7445  CA  GLU A 467       4.760  22.705 -38.157  1.00 58.46           C
ATOM   7447  CB  GLU A 467       4.455  22.153 -36.750  1.00 56.03           C
ATOM   7450  CG  GLU A 467       3.931  20.709 -36.748  1.00 58.77           C
ATOM   7453  CD  GLU A 467       4.874  19.692 -36.095  1.00 58.44           C
ATOM   7454  OE1 GLU A 467       5.399  18.824 -36.823  1.00 64.83           O
ATOM   7455  OE2 GLU A 467       5.078  19.746 -34.862  1.00 53.65           O
ATOM   7456  C   GLU A 467       4.396  24.162 -38.239  1.00 62.20           C
ATOM   7457  O   GLU A 467       5.183  25.027 -37.834  1.00 67.90           O
ATOM   7459  N   LYS A 468       3.212  24.430 -38.792  1.00 59.39           N
ATOM   7460  CA  LYS A 468       2.622  25.760 -38.747  1.00 58.15           C
ATOM   7462  CB  LYS A 468       1.897  25.978 -37.396  1.00 56.48           C
ATOM   7465  CG  LYS A 468       0.647  25.073 -37.191  1.00 52.64           C
ATOM   7468  CD  LYS A 468       0.952  23.738 -36.443  1.00 53.88           C
ATOM   7471  CE  LYS A 468      -0.043  22.559 -36.745  1.00 52.99           C
ATOM   7474  NZ  LYS A 468       0.279  21.606 -37.919  1.00 40.82           N
ATOM   7478  C   LYS A 468       3.695  26.812 -38.998  1.00 55.36           C
ATOM   7481  O3  GOL W   1      28.573   8.045   0.140  1.00 31.95           O
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ATOM	7483	C3	GOL	W	1	28.654	7.544	-1.166	1.00	42.30	C
ATOM	7486	C2	GOL	W	1	28.863	8.879	-1.837	1.00	40.55	C
ATOM	7488	O2	GOL	W	1	28.604	9.704	-0.749	1.00	33.04	O
ATOM	7490	C1	GOL	W	1	27.892	9.169	-2.960	1.00	40.25	C
ATOM	7493	O1	GOL	W	1	28.154	8.523	-4.188	1.00	45.67	O
ATOM	7495	O1	L01	X	1	23.185	17.621	-7.152	1.00	42.69	O
ATOM	7496	C2	L01	X	1	22.874	18.732	-7.590	1.00	47.50	C
ATOM	7497	O3	L01	X	1	23.121	19.000	-8.745	1.00	51.62	O
ATOM	7498	C4	L01	X	1	22.220	19.792	-6.751	1.00	46.16	C
ATOM	7499	O5	L01	X	1	22.209	20.929	-7.185	1.00	51.17	O
ATOM	7500	N6	L01	X	1	21.754	19.439	-5.529	1.00	44.07	N
ATOM	7501	C7	L01	X	1	20.869	20.080	-4.650	1.00	40.68	C
ATOM	7502	C8	L01	X	1	20.734	19.453	-3.411	1.00	45.20	C
ATOM	7503	C9	L01	X	1	19.890	19.942	-2.422	1.00	43.12	C
ATOM	7504	C10	L01	X	1	19.150	21.074	-2.654	1.00	44.88	C
ATOM	7505	C11	L01	X	1	19.287	21.743	-3.871	1.00	54.13	C
ATOM	7506	O12	L01	X	1	18.547	22.889	-4.111	1.00	61.23	O
ATOM	7507	C13	L01	X	1	18.708	24.097	-3.481	1.00	59.59	C
ATOM	7508	C14	L01	X	1	19.926	24.778	-3.508	1.00	62.69	C
ATOM	7509	C15	L01	X	1	20.063	26.001	-2.866	1.00	61.95	C
ATOM	7510	C16	L01	X	1	18.987	26.551	-2.207	1.00	63.08	C
ATOM	7511	C17	L01	X	1	17.774	25.881	-2.179	1.00	61.60	C
ATOM	7512	C18	L01	X	1	17.631	24.665	-2.822	1.00	60.02	C
ATOM	7513	C19	L01	X	1	20.130	21.228	-4.881	1.00	45.71	C
ATOM	7514	H20	L01	X	1	22.138	18.620	-5.186	1.00	43.71	H
ATOM	7515	H21	L01	X	1	21.290	18.551	-3.219	1.00	43.34	H
ATOM	7516	H22	L01	X	1	19.807	19.423	-1.478	1.00	44.19	H
ATOM	7517	H23	L01	X	1	18.505	21.470	-1.882	1.00	46.98	H
ATOM	7518	H24	L01	X	1	20.766	24.353	-4.025	1.00	61.61	H
ATOM	7519	H25	L01	X	1	21.005	26.517	-2.890	1.00	62.48	H
ATOM	7520	H26	L01	X	1	19.089	27.503	-1.707	1.00	62.35	H
ATOM	7521	H27	L01	X	1	16.933	26.317	-1.660	1.00	61.57	H
ATOM	7522	H28	L01	X	1	16.692	24.141	-2.797	1.00	60.34	H
ATOM	7523	H29	L01	X	1	20.213	21.754	-5.817	1.00	46.66	H
ATOM	7524	O	HOH	W	2	25.399	17.519	-6.314	1.00	29.10	O
ATOM	7527	O	HOH	W	3	34.329	19.285	22.298	1.00	23.82	O
ATOM	7530	O	HOH	W	4	16.418	35.391	-36.312	1.00	55.63	O
ATOM	7533	O	HOH	W	5	31.553	23.136	-6.686	1.00	14.91	O
ATOM	7536	O	HOH	W	6	28.168	21.682	11.560	1.00	18.39	O
ATOM	7539	O	HOH	W	7	8.395	24.952	-27.621	1.00	25.74	O
ATOM	7542	O	HOH	W	8	4.311	23.001	6.838	1.00	30.82	O
ATOM	7545	O	HOH	W	9	42.224	9.833	-1.446	1.00	20.94	O
ATOM	7548	O	HOH	W	10	40.869	25.665	6.786	1.00	45.62	O
ATOM	7551	O	HOH	W	11	44.967	28.020	-14.967	1.00	34.54	O
ATOM	7554	O	HOH	W	12	7.984	22.186	7.132	1.00	34.69	O
ATOM	7557	O	HOH	W	13	19.197	25.287	29.908	1.00	52.81	O
ATOM	7560	O	HOH	W	14	29.922	20.342	7.983	1.00	19.52	O
ATOM	7563	O	HOH	W	15	43.081	15.899	6.841	1.00	30.06	O
ATOM	7566	O	HOH	W	16	28.382	21.574	5.668	1.00	19.36	O
ATOM	7569	O	HOH	W	17	31.608	18.548	10.950	1.00	18.56	O
ATOM	7572	O	HOH	W	18	38.291	24.679	-4.829	1.00	25.52	O
ATOM	7575	O	HOH	W	19	32.275	17.787	8.326	1.00	17.54	O
ATOM	7578	O	HOH	W	20	24.375	30.259	27.576	1.00	54.45	O
ATOM	7581	O	HOH	W	21	42.278	21.471	2.470	1.00	53.60	O
ATOM	7584	O	HOH	W	22	30.582	21.195	10.481	1.00	21.34	O
ATOM	7587	O	HOH	W	23	13.185	17.469	21.069	1.00	32.33	O
ATOM	7590	O	HOH	W	24	36.035	25.386	19.988	1.00	37.63	O
ATOM	7593	O	HOH	W	25	48.414	14.854	-2.922	1.00	25.90	O
ATOM	7596	O	HOH	W	26	17.592	39.143	-24.074	1.00	28.16	O
ATOM	7599	O	HOH	W	27	26.631	16.650	12.516	1.00	32.05	O
ATOM	7602	O	HOH	W	28	3.960	38.753	-32.775	1.00	26.18	O
ATOM	7605	O	HOH	W	29	41.612	32.502	-5.989	1.00	49.45	O
ATOM	7608	O	HOH	W	30	46.780	29.863	-8.091	1.00	28.12	O
ATOM	7611	O	HOH	W	31	31.489	21.512	-9.027	1.00	27.23	O
ATOM	7614	O	HOH	W	32	36.096	40.447	-13.974	1.00	29.87	O
ATOM	7617	O	HOH	W	33	35.183	43.695	-3.441	1.00	20.36	O
ATOM	7620	O	HOH	W	34	35.870	38.390	-15.778	1.00	24.48	O

ATOM	7623	O	HOH W	35	22.720	17.703	9.635	1.00	27.17	O
ATOM	7626	O	HOH W	36	47.565	20.797	6.632	1.00	42.93	O
ATOM	7629	O	HOH W	37	38.208	23.152	-1.934	1.00	18.43	O
ATOM	7632	O	HOH W	38	38.348	37.658	-5.751	1.00	21.61	O
ATOM	7635	O	HOH W	39	42.055	24.944	-17.505	1.00	42.52	O
ATOM	7638	O	HOH W	40	9.503	27.783	-21.116	1.00	25.68	O
ATOM	7641	O	HOH W	41	2.254	41.194	-24.326	1.00	30.59	O
ATOM	7644	O	HOH W	42	38.771	29.740	-9.035	1.00	39.42	O
ATOM	7647	O	HOH W	43	41.915	25.191	11.365	1.00	51.80	O
ATOM	7650	O	HOH W	44	36.710	12.593	8.901	1.00	27.11	O
ATOM	7653	O	HOH W	45	29.517	9.186	-6.341	1.00	20.01	O
ATOM	7656	O	HOH W	46	18.450	32.639	23.965	1.00	45.24	O
ATOM	7659	O	HOH W	47	34.173	21.309	-15.824	1.00	33.16	O
ATOM	7662	O	HOH W	48	26.674	8.315	-9.731	1.00	25.54	O
ATOM	7665	O	HOH W	49	7.384	21.728	-16.569	1.00	33.44	O
ATOM	7668	O	HOH W	50	33.218	23.979	15.209	1.00	28.08	O
ATOM	7671	O	HOH W	51	34.528	30.237	-14.126	1.00	38.08	O
ATOM	7674	O	HOH W	52	23.112	37.564	-16.520	1.00	30.68	O
ATOM	7677	O	HOH W	53	28.296	40.509	-13.366	1.00	52.30	O
ATOM	7680	O	HOH W	54	42.338	13.604	12.699	1.00	61.41	O
ATOM	7683	O	HOH W	55	11.194	17.427	2.706	1.00	44.73	O
ATOM	7686	O	HOH W	56	30.159	34.292	11.550	1.00	31.06	O
ATOM	7689	O	HOH W	57	39.064	23.315	2.784	1.00	46.64	O
ATOM	7692	O	HOH W	58	39.675	9.244	-9.309	1.00	30.01	O
ATOM	7695	O	HOH W	59	27.039	17.725	10.020	1.00	30.95	O
ATOM	7698	O	HOH W	60	51.796	29.477	19.630	1.00	62.49	O
ATOM	7701	O	HOH W	61	15.438	21.816	-33.043	1.00	37.99	O
ATOM	7704	O	HOH W	62	25.667	1.039	1.042	1.00	50.57	O
ATOM	7707	O	HOH W	63	29.387	24.719	-20.208	1.00	37.78	O
ATOM	7710	O	HOH W	64	21.146	40.418	-29.110	1.00	51.11	O
ATOM	7713	O	HOH W	65	8.451	25.987	-37.427	1.00	37.89	O
ATOM	7716	O	HOH W	66	32.989	14.640	16.149	1.00	34.38	O
ATOM	7719	O	HOH W	67	10.124	19.935	-33.298	1.00	56.78	O
ATOM	7722	O	HOH W	68	25.612	24.728	35.481	1.00	50.38	O
ATOM	7725	O	HOH W	69	-0.189	27.338	-35.315	1.00	41.53	O
ATOM	7728	O	HOH W	70	42.461	17.100	-12.274	1.00	38.32	O
ATOM	7731	O	HOH W	71	40.739	23.879	-3.607	1.00	41.37	O
ATOM	7734	O	HOH W	72	12.605	20.869	-34.108	1.00	36.27	O
ATOM	7737	O	HOH W	73	10.467	16.844	18.636	1.00	34.39	O
ATOM	7740	O	HOH W	74	30.525	30.347	-33.900	1.00	50.77	O
ATOM	7743	O	HOH W	75	39.260	27.974	7.459	1.00	36.32	O
ATOM	7746	O	HOH W	76	6.844	16.066	7.844	1.00	40.62	O
ATOM	7749	O	HOH W	77	10.182	34.917	-35.051	1.00	41.57	O
ATOM	7752	O	HOH W	78	48.697	28.631	17.859	0.33	42.18	O
ATOM	7755	O	HOH W	79	45.981	16.393	-6.597	1.00	28.88	O
ATOM	7758	O	HOH W	80	3.330	28.244	-21.773	1.00	42.57	O
ATOM	7761	O	HOH W	81	28.396	19.293	12.641	1.00	27.15	O
ATOM	7764	O	HOH W	82	26.601	12.209	-25.663	1.00	44.12	O
ATOM	7767	O	HOH W	83	35.635	32.304	1.153	1.00	34.77	O
ATOM	7770	O	HOH W	84	11.677	37.545	12.299	1.00	39.69	O
ATOM	7773	O	HOH W	85	21.648	11.923	-26.860	1.00	49.65	O
ATOM	7776	O	HOH W	86	29.687	21.300	-5.160	1.00	36.28	O
ATOM	7779	O	HOH W	87	8.589	22.017	-34.843	1.00	44.51	O
ATOM	7782	O	HOH W	88	36.581	50.247	-16.979	1.00	45.69	O
ATOM	7785	O	HOH W	89	10.459	39.818	-33.322	1.00	41.52	O
ATOM	7788	O	HOH W	90	2.013	7.972	-16.149	1.00	52.21	O
ATOM	7791	O	HOH W	91	23.950	13.585	7.479	1.00	37.53	O
ATOM	7794	O	HOH W	92	17.720	24.456	-38.830	1.00	58.08	O
ATOM	7797	O	HOH W	93	14.933	13.965	-28.078	1.00	33.05	O
ATOM	7800	O	HOH W	94	-0.796	27.477	4.673	1.00	56.42	O
ATOM	7803	O	HOH W	95	3.942	9.955	-17.704	1.00	44.55	O
ATOM	7806	O	HOH W	96	5.744	25.139	23.756	1.00	52.36	O
ATOM	7809	O	HOH W	97	48.182	17.251	-8.898	1.00	34.88	O
ATOM	7812	O	HOH W	98	23.533	16.224	7.260	1.00	32.44	O
ATOM	7815	O	HOH W	99	12.633	38.931	-36.091	1.00	38.41	O
ATOM	7818	O	HOH W	100	29.531	24.131	-34.963	1.00	59.91	O
ATOM	7821	O	HOH W	101	32.124	21.644	-20.127	1.00	61.62	O

ATOM	7824	O	HOH W 102	34.050	34.303	8.055	1.00	42.40	O
ATOM	7827	O	HOH W 103	26.348	17.082	-17.685	1.00	37.16	O
ATOM	7830	O	HOH W 104	18.575	8.527	-23.748	1.00	52.88	O
ATOM	7833	O	HOH W 105	0.208	34.254	-28.552	1.00	27.26	O
ATOM	7836	O	HOH W 106	26.035	11.967	6.340	1.00	31.13	O
ATOM	7839	O	HOH W 107	24.077	49.243	-6.935	1.00	57.11	O
ATOM	7842	O	HOH W 108	38.538	27.386	-4.050	1.00	35.92	O
ATOM	7845	O	HOH W 109	18.667	1.080	-9.682	1.00	45.43	O
ATOM	7848	O	HOH W 110	38.116	24.949	10.427	1.00	31.84	O
ATOM	7851	O	HOH W 111	38.716	12.707	12.646	1.00	34.05	O
ATOM	7854	O	HOH W 112	30.026	6.539	-6.916	1.00	31.57	O
ATOM	7857	O	HOH W 113	28.226	10.743	-20.875	1.00	43.32	O
ATOM	7860	O	HOH W 114	5.741	18.679	-22.117	1.00	39.30	O
ATOM	7863	O	HOH W 115	22.541	40.163	-17.762	1.00	38.79	O
ATOM	7866	O	HOH W 116	7.086	25.109	-15.299	1.00	48.64	O
ATOM	7869	O	HOH W 117	23.193	33.787	24.017	1.00	64.08	O
ATOM	7872	O	HOH W 118	52.847	26.933	18.913	1.00	57.69	O
ATOM	7875	O	HOH W 119	25.048	37.803	15.316	1.00	40.65	O
ATOM	7878	O	HOH W 120	33.810	36.973	6.725	1.00	29.06	O
ATOM	7881	O	HOH W 121	36.092	29.926	-0.789	1.00	27.99	O
ATOM	7884	O	HOH W 122	23.793	9.293	-20.703	1.00	33.54	O
ATOM	7887	O	HOH W 123	57.549	11.676	19.184	1.00	38.87	O
ATOM	7890	O	HOH W 124	14.343	40.473	-30.623	1.00	41.93	O
ATOM	7893	O	HOH W 125	31.353	23.450	13.589	1.00	26.83	O
ATOM	7896	O	HOH W 126	7.560	14.948	2.586	1.00	45.56	O
ATOM	7899	O	HOH W 127	1.739	37.975	17.794	1.00	49.12	O
ATOM	7902	O	HOH W 128	39.979	30.171	6.501	1.00	43.72	O
ATOM	7905	O	HOH W 129	2.880	28.941	-27.166	1.00	44.30	O
ATOM	7908	O	HOH W 130	29.310	16.626	-30.706	1.00	45.22	O
ATOM	7911	O	HOH W 131	7.277	25.644	-39.931	1.00	36.03	O
ATOM	7914	O	HOH W 132	27.241	32.669	19.054	1.00	42.26	O
ATOM	7917	O	HOH W 133	47.311	25.585	16.908	1.00	61.91	O
ATOM	7920	O	HOH W 134	9.415	40.848	27.197	1.00	72.17	O
ATOM	7923	O	HOH W 135	15.025	37.267	20.019	1.00	48.33	O
ATOM	7926	O	HOH W 136	39.831	17.362	-13.599	1.00	40.29	O
ATOM	7929	O	HOH W 137	8.000	38.727	-33.980	1.00	33.12	O
ATOM	7932	O	HOH W 138	27.501	18.385	-15.975	1.00	45.02	O
ATOM	7935	O	HOH W 139	26.062	9.027	-19.109	1.00	33.57	O
ATOM	7938	O	HOH W 140	19.969	4.863	-15.268	1.00	33.76	O
ATOM	7941	O	HOH W 141	33.823	45.036	7.344	1.00	48.36	O
ATOM	7944	O	HOH W 142	23.120	39.858	-23.032	1.00	45.84	O
ATOM	7947	O	HOH W 143	10.305	18.832	-2.742	1.00	35.44	O
ATOM	7950	O	HOH W 144	19.912	23.114	-37.679	1.00	57.07	O
ATOM	7953	O	HOH W 145	24.030	10.607	4.479	1.00	28.54	O
ATOM	7956	O	HOH W 146	26.233	15.711	-14.526	1.00	41.07	O
ATOM	7959	O	HOH W 147	24.089	40.127	-19.809	1.00	41.63	O
ATOM	7962	O	HOH W 148	22.451	38.031	-29.860	1.00	54.49	O
ATOM	7965	O	HOH W 149	36.752	34.419	-2.435	1.00	33.54	O
ATOM	7968	O	HOH W 150	7.520	41.221	-27.912	1.00	41.83	O
ATOM	7971	O	HOH W 151	17.104	7.847	-20.343	1.00	35.04	O
ATOM	7974	O	HOH W 152	40.335	26.571	12.505	1.00	58.45	O
ATOM	7977	O	HOH W 153	40.416	24.325	8.950	1.00	52.68	O
ATOM	7980	O	HOH W 154	32.621	20.240	20.534	1.00	26.36	O
ATOM	7983	O	HOH W 155	38.214	0.421	-3.439	1.00	69.87	O
ATOM	7986	O	HOH W 156	49.646	28.664	20.680	0.33	69.94	O
ATOM	7989	O	HOH W 157	40.792	24.151	4.775	1.00	50.90	O
ATOM	7992	O	HOH W 158	33.256	15.067	-11.977	1.00	32.77	O
ATOM	7995	O	HOH W 159	34.257	25.915	-15.770	1.00	45.73	O
ATOM	7998	O	HOH W 160	14.125	40.472	26.377	1.00	69.86	O
ATOM	8001	O	HOH W 161	46.811	25.869	-4.271	1.00	46.93	O
ATOM	8004	O	HOH W 162	13.445	9.756	17.677	1.00	47.01	O
ATOM	8007	O	HOH W 163	25.578	31.439	-32.193	1.00	54.33	O
ATOM	8010	O	HOH W 164	17.294	19.992	26.962	1.00	51.62	O
ATOM	8013	O	HOH W 165	33.029	17.155	-15.227	1.00	44.91	O
ATOM	8016	O	HOH W 166	38.833	15.103	-13.984	1.00	39.10	O
ATOM	8019	O	HOH W 167	26.255	42.336	-16.722	1.00	53.94	O
ATOM	8022	O	HOH W 168	8.792	17.586	-4.190	1.00	45.97	O

ATOM	8025	O	HOH W 169	3.767	27.790	3.785	1.00	39.36		O
ATOM	8028	O	HOH W 170	36.079	4.007	1.339	1.00	40.15		O
ATOM	8031	O	HOH W 171	42.853	24.347	-4.544	1.00	55.02		O
ATOM	8034	O	HOH W 172	34.042	12.702	-12.126	1.00	36.16		O
ATOM	8037	O	HOH W 173	8.356	14.538	12.235	1.00	54.56		O
ATOM	8040	O	HOH W 174	26.439	47.762	-15.208	1.00	66.55		O
ATOM	8043	O	HOH W 175	13.616	24.343	23.047	1.00	37.49		O
ATOM	8046	O	HOH W 176	-6.927	38.198	1.112	1.00	42.61		O
ATOM	8049	O	HOH W 177	34.714	5.183	-10.626	1.00	40.38		O
ATOM	8052	O	HOH W 178	6.999	40.946	8.017	1.00	55.45		O
ATOM	8055	O	HOH W 179	22.926	55.744	-3.785	1.00	52.16		O
ATOM	8058	O	HOH W 180	-2.455	28.855	3.552	1.00	55.67		O
ATOM	8061	O	HOH W 181	20.366	40.971	-22.965	1.00	54.02		O
ATOM	8064	O	HOH W 182	8.372	36.446	-34.744	1.00	47.13		O
ATOM	8067	O	HOH W 183	18.818	40.989	-28.278	1.00	46.31		O
ATOM	8070	O	HOH W 184	8.041	7.892	14.898	1.00	56.78		O
ATOM	8073	O	HOH W 185	45.981	18.641	-4.959	1.00	41.22		O
ATOM	8076	O	HOH W 186	47.276	28.148	-16.009	1.00	52.16		O
ATOM	8079	O	HOH W 187	13.997	10.374	11.422	1.00	45.80		O
ATOM	8082	O	HOH W 188	31.842	31.462	-22.449	1.00	44.78		O
ATOM	8085	O	HOH W 189	7.908	25.313	-2.517	1.00	52.78		O
ATOM	8088	O	HOH W 190	9.778	15.697	20.927	1.00	51.93		O
ATOM	8091	O	HOH W 191	-2.035	37.605	9.569	1.00	55.24		O
ATOM	8094	O	HOH W 192	17.660	24.248	-35.898	1.00	44.21		O
ATOM	8097	O	HOH W 193	32.582	1.687	1.650	1.00	64.51		O
ATOM	8100	O	HOH W 194	8.948	37.321	-37.713	1.00	63.18		O
ATOM	8103	O	HOH W 195	13.891	19.373	26.278	1.00	48.44		O
ATOM	8106	O	HOH W 196	24.140	4.689	-13.245	1.00	50.73		O
ATOM	8109	O	HOH W 197	-1.011	35.511	15.444	1.00	53.56		O
ATOM	8112	O	HOH W 198	47.250	13.824	7.468	1.00	47.19		O
ATOM	8115	O	HOH W 199	27.754	16.507	-19.934	1.00	51.14		O
ATOM	8118	O	HOH W 200	19.871	12.875	-28.408	1.00	53.02		O
ATOM	8121	O	HOH W 201	18.833	3.335	-13.115	1.00	38.35		O
ATOM	8124	O	HOH W 202	49.633	28.649	23.289	0.33	59.13		O
ATOM	8127	O	HOH W 203	-1.207	34.166	-0.102	1.00	55.75		O
ATOM	8130	O	HOH W 204	41.273	39.806	-13.740	1.00	47.14		O
ATOM	8133	O	HOH W 205	4.274	31.153	21.462	1.00	44.21		O
ATOM	8136	O	HOH W 206	58.602	15.873	22.586	1.00	51.26		O
ATOM	8139	O	HOH W 207	27.444	50.769	-16.939	1.00	53.45		O
ATOM	8142	O	HOH W 208	37.920	37.275	-14.354	1.00	46.24		O
ATOM	8145	O	HOH W 209	45.172	23.277	5.702	1.00	43.03		O
ATOM	8148	O	HOH W 210	14.594	2.504	-8.962	1.00	50.08		O
ATOM	8151	O	HOH W 211	19.669	59.525	3.289	1.00	59.82		O
ATOM	8154	O	HOH W 212	31.208	15.323	-26.773	1.00	57.50		O
ATOM	8157	O	HOH W 213	11.069	34.430	30.991	1.00	56.63		O
ATOM	8160	O	HOH W 214	16.180	11.982	-28.654	1.00	52.23		O
ATOM	8163	O	HOH W 215	1.836	28.835	4.936	1.00	46.39		O
ATOM	8166	O	HOH W 216	1.154	25.163	12.301	1.00	45.48		O
ATOM	8169	O	HOH W 217	22.973	38.460	17.162	1.00	53.06		O
ATOM	8172	O	HOH W 218	44.892	24.627	17.779	1.00	48.87		O
ATOM	8175	O	HOH W 219	17.284	2.195	-7.939	1.00	50.71		O
ATOM	8178	O	HOH W 220	18.375	41.808	-25.095	1.00	51.74		O
ATOM	8181	O	HOH W 221	34.174	33.432	-23.383	1.00	44.82		O
ATOM	8184	O	HOH W 222	47.871	22.344	-16.274	1.00	55.95		O
ATOM	8187	O	HOH W 223	6.484	23.051	-30.946	1.00	54.68		O
ATOM	8190	O	HOH W 224	5.114	22.306	-26.490	1.00	43.23		O
ATOM	8193	O	HOH W 225	4.238	37.699	-11.154	1.00	56.13		O
ATOM	8196	O	HOH W 226	28.506	19.986	-6.741	1.00	42.60		O
ATOM	8199	O	HOH W 227	16.767	23.381	28.361	1.00	48.08		O
ATOM	8202	O	HOH W 228	23.669	46.589	-11.420	1.00	61.23		O
ATOM	8205	O	HOH W 229	24.685	20.635	28.950	1.00	38.73		O
ATOM	8208	O	HOH W 230	57.323	11.170	22.129	1.00	49.06		O
ATOM	8211	O	HOH W 231	2.771	23.448	-26.989	1.00	41.10		O
ATOM	8214	O	HOH W 232	19.885	42.211	9.547	1.00	51.02		O
ATOM	8217	O	HOH W 233	8.947	31.332	-11.065	1.00	63.69		O
ATOM	8220	O	HOH W 234	-1.963	19.963	-37.825	1.00	32.01		O
ATOM	8223	O	HOH W 235	10.532	45.214	3.328	1.00	64.47		O

ATOM	8226	O	HOH W 236	51.678	27.978	21.926	1.00	69.77	O
ATOM	8229	O	HOH W 237	47.497	31.570	-17.550	1.00	47.43	O
ATOM	8232	O	HOH W 238	35.109	35.545	-20.599	1.00	57.60	O
ATOM	8235	O	HOH W 239	33.335	23.843	22.433	1.00	56.22	O
ATOM	8238	O	HOH W 240	19.470	22.673	28.937	1.00	58.35	O
ATOM	8241	O	HOH W 241	42.235	20.968	-19.438	1.00	54.45	O
ATOM	8244	O	HOH W 242	55.387	12.111	23.229	1.00	58.49	O
ATOM	8247	O	HOH W 243	4.692	23.486	-2.628	1.00	69.13	O
ATOM	8250	O	HOH W 244	30.050	19.869	22.213	1.00	50.35	O
ATOM	8253	O	HOH W 245	-4.735	24.154	6.587	1.00	64.98	O
ATOM	8256	O	HOH W 246	13.505	9.591	13.995	1.00	66.33	O
ATOM	8259	O	HOH W 247	26.761	19.298	-5.128	1.00	54.00	O
ATOM	8262	O	HOH W 248	25.725	40.121	-15.422	1.00	49.13	O
ATOM	8265	O	HOH W 249	26.047	16.365	25.137	1.00	50.18	O
ATOM	8268	O	HOH W 250	28.924	17.028	-17.715	1.00	48.84	O
ATOM	8271	O	HOH W 251	7.873	18.613	18.605	1.00	53.55	O
ATOM	8274	O	HOH W 252	-1.924	37.307	-23.876	1.00	45.93	O
ATOM	8277	O	HOH W 253	40.682	27.295	15.269	1.00	64.18	O
ATOM	8280	O	HOH W 254	5.496	20.767	-40.416	1.00	56.17	O
ATOM	8283	O	HOH W 255	38.096	14.849	-16.851	1.00	59.09	O
ATOM	8286	O	HOH W 256	7.281	22.731	-28.347	1.00	52.67	O
ATOM	8289	O	HOH W 257	25.580	44.704	11.976	1.00	60.14	O
ATOM	8292	O	HOH W 258	0.878	15.531	-20.209	1.00	54.48	O
ATOM	8295	O	HOH W 259	-0.581	35.596	-22.076	1.00	42.74	O
ATOM	8298	O	HOH W 260	22.183	20.350	-32.634	1.00	51.16	O
ATOM	8301	O	HOH W 261	52.117	21.638	6.812	1.00	58.64	O
ATOM	8304	O	HOH W 262	12.972	3.413	-14.950	1.00	48.04	O
ATOM	8307	O	HOH W 263	5.847	31.796	-0.271	1.00	47.57	O
ATOM	8310	O	HOH W 264	39.177	40.918	-5.587	1.00	53.60	O
ATOM	8313	O	HOH W 265	18.137	5.485	-16.867	1.00	48.62	O
ATOM	8316	O	HOH W 266	16.825	42.551	-2.465	1.00	49.40	O
ATOM	8319	O	HOH W 267	4.007	20.662	-23.213	1.00	50.50	O
ATOM	8322	O	HOH W 268	42.929	49.146	-14.079	1.00	47.38	O
ATOM	8325	O	HOH W 269	49.646	28.664	-15.358	0.33	49.81	O
ATOM	8328	O	HOH W 270	27.289	21.596	29.692	1.00	53.93	O
ATOM	8331	O	HOH W 271	26.893	17.183	-8.111	1.00	24.40	O
ATOM	8334	O	HOH W 272	15.421	20.567	-3.717	1.00	40.40	O
ATOM	8337	O	HOH W 273	8.680	23.419	-9.956	1.00	59.28	O
ATOM	8340	O	HOH W 274	29.269	16.719	-11.736	1.00	54.56	O
ATOM	8343	O	HOH W 275	28.277	18.391	-13.163	1.00	51.25	O
ATOM	8346	O	HOH W 276	24.631	27.766	-9.735	1.00	43.88	O
ATOM	8349	O	HOH W 277	34.295	4.616	-5.142	1.00	26.85	O
ATOM	8352	O	HOH W 278	39.216	9.805	6.940	1.00	33.08	O
ATOM	8355	O	HOH W 279	16.988	27.600	-4.642	1.00	54.15	O
ATOM	8358	O	HOH W 280	21.220	30.436	-37.851	1.00	67.95	O
ATOM	8361	O	HOH W 281	8.083	34.089	-38.576	1.00	42.21	O
ATOM	8364	O	HOH W 282	29.444	18.305	-21.272	1.00	57.28	O
ATOM	8367	O	HOH W 283	37.703	29.289	11.449	1.00	50.00	O
ATOM	8370	O	HOH W 284	0.699	13.790	-5.946	1.00	59.10	O
ATOM	8373	O	HOH W 285	9.484	6.761	-13.265	1.00	65.92	O
ATOM	8376	O	HOH W 286	17.087	3.471	-2.475	1.00	43.15	O
ATOM	8379	O	HOH W 287	6.167	27.180	4.689	1.00	31.28	O
ATOM	8382	O	HOH W 288	38.458	35.114	-7.246	1.00	29.65	O
ATOM	8385	O	HOH W 289	14.257	16.241	24.639	1.00	55.84	O
ATOM	8388	O	HOH W 290	30.043	8.141	-17.585	1.00	47.27	O
ATOM	8391	O	HOH W 291	27.811	24.804	-9.734	1.00	58.85	O
ATOM	8394	O	HOH W 292	29.462	30.742	-29.649	1.00	53.68	O
ATOM	8397	O	HOH W 293	22.785	22.276	-36.206	1.00	62.52	O
ATOM	8400	O	HOH W 294	10.878	43.185	-11.353	1.00	52.65	O
ATOM	8403	O	HOH W 295	9.462	6.303	3.473	1.00	56.36	O
ATOM	8406	O	HOH W 296	19.568	42.465	-20.639	1.00	51.62	O
ATOM	8409	O	HOH W 297	38.875	30.166	-20.257	1.00	66.76	O
ATOM	8412	O	HOH W 298	-1.968	15.749	-12.263	1.00	69.74	O
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ATOM	8418	O	HOH W 300	42.213	6.911	5.261	1.00	49.95	O
ATOM	8421	O	HOH W 301	17.960	19.757	-36.095	1.00	63.16	O
ATOM	8424	O	HOH W 302	20.940	10.039	24.238	1.00	57.98	O

ATOM	8427	O	HOH W 303	15.164	45.344	-20.556	1.00	59.59	O
ATOM	8430	O	HOH W 304	41.498	42.111	-17.952	1.00	61.35	O
ATOM	8433	O	HOH W 305	30.103	27.969	-26.202	1.00	64.15	O
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ATOM	8448	O	HOH W 310	10.152	11.152	4.128	1.00	55.92	O
ATOM	8451	O	HOH W 311	8.217	22.391	24.834	1.00	48.95	O
ATOM	8454	O	HOH W 312	5.786	39.194	19.582	1.00	63.88	O
ATOM	8457	O	HOH W 313	45.128	20.650	-20.841	1.00	55.97	O
ATOM	8460	O	HOH W 314	59.408	13.408	23.926	1.00	62.44	O
ATOM	8463	O	HOH W 315	1.866	36.451	-15.352	1.00	55.72	O
ATOM	8466	O	HOH W 316	46.006	26.541	-0.238	1.00	59.52	O
ATOM	8469	O	HOH W 317	2.228	17.997	-1.302	1.00	65.03	O
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ATOM	8475	O	HOH W 319	15.241	32.923	-43.447	1.00	56.34	O
ATOM	8478	O	HOH W 320	22.607	44.336	-21.548	1.00	53.32	O
ATOM	8481	O	HOH W 321	30.757	18.195	-14.685	1.00	53.82	O
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ATOM	8490	O	HOH W 324	1.937	39.949	-16.558	1.00	49.00	O
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ATOM	8496	O	HOH W 326	28.953	32.811	25.340	1.00	64.23	O
ATOM	8499	O	HOH W 327	10.524	3.949	2.237	1.00	60.71	O
ATOM	8502	O	HOH W 328	30.890	50.263	-5.285	1.00	53.31	O
ATOM	8505	O	HOH W 329	47.481	22.832	-22.418	1.00	54.39	O
ATOM	8508	O	HOH W 330	6.017	22.177	-33.366	1.00	61.08	O
ATOM	8511	O	HOH W 331	23.179	25.522	34.884	1.00	65.74	O
ATOM	8514	O	HOH W 332	28.337	6.359	-8.891	1.00	48.75	O
ATOM	8517	O	HOH W 333	27.603	25.163	-26.774	1.00	46.18	O
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ATOM	8559	O	HOH W 347	36.418	31.881	3.974	1.00	24.31	O
ATOM	8562	O	HOH W 349	32.432	12.485	14.636	1.00	39.03	O
ATOM	8565	O	HOH W 350	29.339	32.204	-25.443	1.00	61.80	O
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ATOM	8577	O	HOH W 354	11.715	24.786	19.148	1.00	32.74	O
ATOM	8580	O	HOH W 355	10.673	30.565	-6.239	1.00	53.40	O
ATOM	8583	O	HOH W 356	7.650	39.001	-26.025	1.00	39.14	O
ATOM	8586	O	HOH W 357	24.258	30.065	-33.989	1.00	54.29	O
ATOM	8589	O	HOH W 358	15.857	4.757	-13.221	1.00	51.15	O
ATOM	8592	O	HOH W 359	39.015	8.946	4.718	1.00	42.58	O
ATOM	8595	O	HOH W 360	32.699	5.637	-6.949	1.00	37.09	O
ATOM	8598	O	HOH W 361	16.877	30.245	-5.049	1.00	59.82	O
ATOM	8601	O	HOH W 362	36.391	31.240	-8.117	1.00	28.80	O
ATOM	8604	O	HOH W 363	33.940	5.049	0.284	1.00	48.89	O
ATOM	8607	O	HOH W 364	37.994	13.064	-13.186	1.00	31.14	O
ATOM	8610	O	HOH W 365	20.896	31.770	27.216	1.00	43.62	O
ATOM	8613	O	HOH W 366	19.968	9.232	14.622	1.00	53.29	O
ATOM	8616	O	HOH W 367	28.106	24.917	-29.115	1.00	68.93	O
ATOM	8619	O	HOH W 368	11.468	11.027	6.331	1.00	66.08	O
ATOM	8622	O	HOH W 369	44.124	11.959	14.412	1.00	54.86	O
ATOM	8625	O	HOH W 370	32.960	40.173	-19.302	1.00	61.16	O

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ATOM   8628  O   HOH W 371      10.726  31.338 -45.452  1.00 47.71           O
ATOM   8631  O   HOH W 372      24.000   2.165 -10.943  1.00 45.65           O
ATOM   8634  O   HOH W 373      33.162  27.719 -25.403  1.00 64.17           O
ATOM   8637  O   HOH W 374       9.172  39.546 -18.434  1.00 60.05           O
ATOM   8640  O   HOH W 375       5.207  19.605   6.229  1.00 64.53           O
ATOM   8643  O   HOH W 376      22.216  50.041   6.592  1.00 57.69           O
ATOM   8646  O   HOH W 377      33.102  30.671 -27.486  1.00 66.63           O
ATOM   8649  O   HOH W 378      19.681  18.973  34.965  1.00 59.17           O
ATOM   8652  O   HOH W 380       0.016  33.242 -23.621  1.00 52.32           O
ATOM   8655  O   HOH W 381      36.136  21.667 -18.126  1.00 51.52           O
ATOM   8658  O   HOH W 382       2.013  20.831 -21.810  1.00 51.85           O
ATOM   8661  O   HOH W 383       9.033  41.024 -16.058  1.00 55.29           O
ATOM   8664  O   HOH W 384      22.003   7.886   5.504  1.00 50.20           O
ATOM   8667  O   HOH W 385      20.834   3.744 -17.417  1.00 55.56           O
ATOM   8670  O   HOH W 386       7.635  38.350 -20.662  1.00 57.59           O
ATOM   8673  O   HOH W 387      32.301   4.231  -2.222  1.00 57.06           O
ATOM   8676  O   HOH W 388       4.588  14.419 -20.920  1.00 54.46           O
ATOM   8679  O   HOH W 389      31.581  16.535 -17.518  1.00 61.40           O
ATOM   8682  O   HOH W 390       3.345  39.231  18.941  1.00 54.36           O
ATOM   8685  O   HOH W 391      28.186  15.975  22.885  1.00 43.57           O
ATOM   8688  O   HOH W 392      19.717  40.868 -18.155  1.00 52.87           O
ATOM   8691  O   HOH W 393      21.912  32.251  -8.839  1.00 63.15           O
ATOM   8694  O   HOH W 394      32.971   4.099  -8.998  1.00 49.75           O
ATOM   8697  O   HOH W 395      15.940  41.395 -15.259  1.00 60.18           O
ATOM   8700  O   HOH W 396      17.465  31.119 -10.137  1.00 46.60           O
ATOM   8703  O   HOH W 397      22.976  29.394  -9.471  1.00 49.43           O
ATOM   8706  O   HOH W 398      20.529  33.481  -5.084  1.00 46.60           O
ATOM   8709  O   HOH W 399      21.046  36.839  -9.413  1.00 57.76           O
ATOM   8712  O   HOH W 400      15.709  30.104  -9.320  1.00 53.15           O
CONECT 7495 7496
CONECT 7496 7495 7497 7497 7498
CONECT 7497 7496 7496
CONECT 7498 7496 7499 7499 7500
CONECT 7499 7498 7498
CONECT 7500 7498 7501 7514
CONECT 7501 7500 7513 7513 7502
CONECT 7502 7501 7503 7503 7515
CONECT 7503 7502 7502 7504 7516
CONECT 7504 7503 7505 7505 7517
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CONECT 7507 7506 7512 7512 7508
CONECT 7508 7507 7509 7509 7518
CONECT 7509 7508 7508 7510 7519
CONECT 7510 7509 7511 7511 7520
CONECT 7511 7510 7510 7512 7521
CONECT 7512 7507 7507 7511 7522
CONECT 7513 7501 7501 7505 7523
CONECT 7514 7500
CONECT 7515 7502
CONECT 7516 7503
CONECT 7517 7504
CONECT 7518 7508
CONECT 7519 7509
CONECT 7520 7510
CONECT 7521 7511
CONECT 7522 7512
CONECT 7523 7513
END
```

Claims:

1. A computer-based method for the analysis of the interaction of a ligand with a solAC structure, which comprises:

providing a solAC structure which is of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof;

providing a ligand to be fitted to said solAC structure or selected coordinates thereof; and

fitting the ligand to said solAC structure.

2. The method of claim 1 wherein said selected coordinates include atoms from one or more of the groups of residues set out in any one of Tables 6, 7, 8, 9, 10 or 11.

3. The method of claim 1 wherein said selected coordinates include atoms from one or more of the amino acids from the groups Met1 to Tyr26 or Lys219 to Gly284.

4. The method of claim 2 or 3 wherein said ligand is fitted to at least one atom from at least 2, preferably at least 5, members of said group.

5. The method of any one of the preceding claims wherein said ligand is fitted to at least 10 atoms, preferably at least 100 atoms.

6. The method of any one of the preceding claims wherein the selected coordinates are of at least 500, preferably at least 1000 atoms.

7. The method of any one of the preceding claims wherein a plurality of molecular fragments are fitted and said fragments are assembled into a single molecule to form a ligand.

8. The method of any one of the preceding claims which further comprises the steps of:

obtaining or synthesising said ligand; and

contacting said ligand with a solAC protein to determine the ability of said ligand to interact with the solAC.

9. The method of any one of claims 1 to 7 which further comprises the steps of:

obtaining or synthesising said ligand;

forming a complex of a solAC protein and said ligand; and

analysing said complex by X-ray crystallography to determine the ability of said ligand to interact with the solAC.

10. The method of any one of claims 1 to 7 which further comprises the steps of:

obtaining or synthesising said ligand; and

determining or predicting how said ligand interacts with said solAC structure; and

modifying the ligand so as to alter the interaction between it and the solAC.

11. The method of any one of the preceding claims wherein the solAC structure is a model constructed from all or a portion of the coordinates of Table 1 Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 0.5 Å, or selected coordinates thereof.

12. The method of claim 11 wherein the model is: (a) a wire-frame model; (b) a chicken-wire model; (c) a ball-and-stick model; (d) a space-filling model; (e) a stick-model; (f) a ribbon model; (g) a snake model; (h) an arrow and cylinder model; (i) an electron density map; (j) a molecular surface model.

13. The method of any one of the preceding claims further comprising the step of:
(a) obtaining or synthesising the ligand; and
(b) contacting the ligand with solAC to determine the ability of the said ligand to interact with solAC.

14. A method of assessing the ability of a ligand to interact with solAC protein which comprises:
obtaining or synthesising said ligand;
forming a crystallized complex of a solAC protein and said ligand, said complex diffracting X-rays for the determination of atomic coordinates of said complex to a resolution of better than 3.5 Å; and
analysing said complex by X-ray crystallography by employing the data of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof, to determine the ability of said ligand to interact with the solAC protein.

15. A method according to claim 14 which comprises:
providing a crystal of the solAC protein;
soaking the crystal with the ligand to form a complex; and
determining the structure of the complex by employing the data of Table 1 Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof.

16. A method according to claim 14 which comprises:
mixing the solAC protein with the ligand;
crystallizing a solAC protein-ligand complex; and
determining the structure of the complex by employing the data of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof.

17. The method of claim 14 which further comprises determining the structure of said ligand.

18. The method of claim 14 or claim 17 which further comprises the steps of:
obtaining or synthesising the ligand; and
modifying the ligand so as to alter the interaction between it and the solAC.

19. A method for determining the structure of a protein, which method comprises;
providing the co-ordinates of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof, and
either (a) positioning said co-ordinates in the crystal unit cell of said protein so as to provide a structure for said protein, or (b) assigning NMR spectra peaks of said protein by manipulating said co-ordinates.

20. A method of predicting three dimensional structures of solAC protein homologues or analogues of unknown structure, the method comprises the steps of:
aligning a representation of an amino acid sequence of a target solAC protein of unknown three-dimensional structure with the amino acid sequence of the solAC of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof, to match homologous regions of the amino acid sequences;
modelling the structure of the matched homologous regions of said target solAC of unknown structure on the corresponding regions of the solAC structure as defined by Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof; and
determining a conformation for said target solAC of unknown structure which substantially preserves the structure of said matched homologous regions.

21. A method of providing data for generating structures and/or performing optimisation of ligands which interact with solAC, solAC homologues or analogues, complexes of solAC with ligands, or complexes of solAC homologues or analogues with ligands, the method comprising:
(i) establishing communication with a remote device containing
(a) computer-readable data comprising atomic coordinate data of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by an rmsd of less than 1.5 Å, or selected coordinates thereof, said data defining the three-dimensional structure of solAC catalytic domain, or selected coordinates thereof;
(b) atomic coordinate data of a target adenylate cyclase homologue or analogue generated by homology modelling of the target based on the data (a);
(c) atomic coordinate data of a protein generated by interpreting X-ray crystallographic data or NMR data by reference to the data of Table 1, Table 2, Table 3, Table 4 or Table 5 and

(d) structure factor data derivable from the atomic coordinate data of (a) or (c); and

(ii) receiving said computer-readable data from said remote device.

22. The method of claim 21 wherein said computer-readable data is solAC atomic coordinate data of Table 1 Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof, and wherein the method further comprises:

providing a ligand to be fitted to the solAC atomic coordinate data of Table 1 Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof; and

fitting the ligand to the solAC structure.

23. The method of any one of the preceding claims wherein said selected coordinates include at least 5%, preferably at least 10%, Cα atoms.

24. The method of claim 23 wherein said rmsd is calculated by reference to said Cα atoms.

25. A computer system, intended to generate structures and/or perform optimisation of ligands which interact with solAC, solAC homologues or analogues, complexes of solAC with ligands, or complexes of solAC homologues or analogues with ligands, the system containing computer-readable data comprising one or more of:

(a) solAC co-ordinate data of Table 1, Table 2, Table 3, Table 4 or Table 5 said data defining the three-dimensional structure of solAC catalytic domain, or selected coordinates thereof;

(b) atomic coordinate data of a target adenylate cyclase protein generated by homology modelling of the target based on the coordinate data of Table 1, Table 2, Table 3, Table 4 or Table 5;

(c) atomic coordinate data of a target adenylate cyclase protein generated by interpreting X-ray crystallographic data or NMR data by reference to the co-ordinate data of Table 1, Table 2, Table 3, Table 4 or Table 5;

(d) structure factor data derivable from the atomic coordinate data of (b) or (c). and

(e) atomic coordinate data of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by an rmsd of less than 1.5 Å, or selected coordinates thereof.

26. A computer system according to claim 25, wherein said selected coordinates include atoms from one or more of the groups of residues set out in any one of Tables 6, 7, 8, 9, 10 or 11.

27. The computer system of claim 26 wherein said selected coordinates are for at least one atom from at least 2, preferably at least 5, members of said group.

28. The computer system of any one of claims 25 to 27 wherein said ligand is fitted to at least 10 atoms, preferably at least 100 atoms.

29. A computer system according to any one of claims 25 to 28 comprising:

(i) a computer-readable data storage medium comprising data storage material encoded with said computer-readable data;

(ii) a working memory for storing instructions for processing said computer-readable data; and

(iii) a central-processing unit coupled to said working memory and to said computer-readable data storage medium for processing said computer-readable data and thereby generating structures and/or performing rational drug design.

30. A computer system according to claim 29 further comprising a display coupled to said central-processing unit for displaying said structures.

31. The use of a computer for producing a three-dimensional representation of a solAC structure or a solAC-ligand complex wherein the solAC structure is of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof, wherein said computer comprises:

(i) a machine-readable data storage medium comprising a data storage material encoded with machine-readable data, wherein said data comprise the structure of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by a root mean square deviation of not more than 1.5 Å, or selected coordinates thereof;

(ii) instructions for processing said machine-readable data into said three-dimensional representation.

32. The use of claim 31 wherein said selected coordinates are atoms of one of more the residues set out in any one of Tables 6, 7, 8, 9, 10 or 11.

33. A method of preparing a composition comprising identifying a ligand according to the method of any one of claims 1 to 18 and admixing the molecule with a carrier.

34. A process for producing a medicament, pharmaceutical composition or drug, the process comprising: (a) identifying a ligand according to the method as defined in any one of claims 1 to 18; and (b) preparing a medicament, pharmaceutical composition or drug containing the ligand.

35. A process according to claim 34 which comprises (a) identifying a ligand according to the method as defined in any one of claims 1 to 18; (b) optimising the structure of the ligand; and (c) preparing a medicament, pharmaceutical composition or drug containing the optimised ligand.

36. A crystal of solAC catalytic domain.

37. A co-crystal of solAC catalytic domain and a ligand.

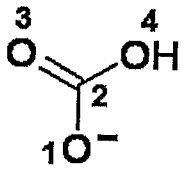
38. A co-crystal of solAC catalytic domain and a ligand having a space group $P6_3$.

39. The co-crystal of claim 32 or 33 having unit cell dimensions $a = b = 99.5$ Å, $c = 97.4$ Å, and $\alpha = \beta = 90.00$, $\gamma = 120.00$, with a unit cell variability of 5% in all dimensions.

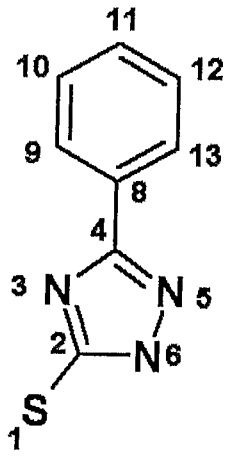
40. A crystal of solAC protein having a resolution of 3.5 Å or better.

41. A crystal of solAc protein having the structure defined by the co-ordinates of Table 1, Table 2, Table 3, Table 4 or Table 5, optionally varied by an rmsd of less than 1.5 Å.

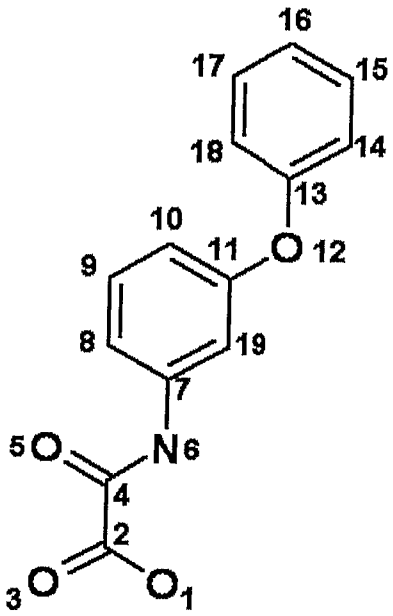
FIGURE 1



1) HCO_3^-



2) Compound 1



3) Compound 2

FIGURE 2