AGENTS FOR TREATING DISEASE

Field of the invention

The present invention is concerned with agents for the treatment of disease, and specifically treatment via the activation of CD4+CD25+ regulatory T cells through the T-cell surface receptor CD4. The invention involves screening methods for identifying such agents, agents capable of the activation of CD4+CD25+ regulatory T cells and their use in the treatment of disease, in particular autoimmune diseases, as well as in methods performed in vitro.

Background art

T-cells belong to the lymphocytes and are responsible for a number of key functions in the immune system. In mammals, T-cells (thymocytes) differentiate in the thymus gland from hematopoietic progenitor cells formed in bone marrow. Part of the differentiation process is the expression of characteristic surface receptors, mainly the glycoproteins CD4 and CD8. T-cells expressing CD4, so-called CD4+ T-cells, bind MHC class II complexes (Reinerz and Schlossman, Cell 19, 821-827 (1980); Reinerz et al., PNAS USA 77, 1588-1592 (1980)), while CD8+ T-cells bind MHC class I complexes (Fitch, Microbiol. Rev. 50, 50-69 (1986)). T-cells are released into blood and lymph.

CD4 positive cells can differentiate into T helper subpopulations (Th1 and Th2), but also into regulatory T-cells. Regulatory T-cells can be further divided into subclasses, the thymus derived (nTreg) inducible ones (iTregs) being the most evaluated.

Although there are other Treg subpopulations, such as for example Tr1 or Th3, the present invention refers to CD4 positive thymus derived Tregs (nTregs) and inducible Tregs, both expressing the transcription factor Foxp3. As a major difference Foxp3 is stably and permanently expressed in nTregs confirming the irreversible Treg phenotype, whereas inducible Tregs display inducible or transient Foxp3 expression, which is reversible.

Tregs secrete immunomodulatory cytokines such as IL-10, TGF beta or IL-35 and exert suppressive activity on effector T-cells via several mechanisms, for example via suppression of the production of

proinflammatory cytokines, direct cell-cell contact and modulating the activation state or function on antigen presenting cells (APC) (Shevach et al., Immunity (2009) 30; 636-645). A main characteristic of CD4 positive CD25 Treg cells is their anergic phenotype, meaning that they do not proliferate upon TCR stimulation, which can be restored by the addition of exogenous IL-2.

A prominent role for Tregs comprises maintaining homeostasis concerning immune responses and self tolerance. Treg dysfunction is correlated with autoimmune diseases.

Commonly, regulatory T-cells can be isolated via the surface receptor glycoproteins CD4, CD25, and characterized by intracellular staining of FOXP3. A further surface protein represents CD127 (IL-7 R), which is downregulated in Treg cells, and can be used for further purification of Tregs. Additionally, expression of CD39 (endonucleotidase) (Borselino et al., Blood (2007) 110, 1225-1232) or GARP (glycoprotein A repetitions predominant (GARP, or LRRC32) (Wang et al., PNAS (2009) 106, 32. 13439-13444).

Human CD4 is encoded on chromosome 12 and belongs to the immunoglobulin (Ig) superfamily. Its natural function as a T-cell surface receptor is related to T-cell activation by binding of MHC class II complexes. In addition, CD4 can bind the HIV-1 gp120 protein, the P4HB/CDI protein, and human herpes virus HHV-7 capsid proteins. Interactions with the HIV-1 gp120 and Vpu proteins also have been reported. CD4 has 458 amino acids. The peptide sequence is shown in Figure 1.

The UniProt entry P01730 provides the domain structure of CD4 as shown below in Table 1, and in Figure 6. The first 25 amino acids are a signal peptide, which is cleaved off in the biologically active form. Positions 26 through 396 constitute the extracellular domain, which is followed by the transmembrane region, positions 397 through 418. Asn_{296} and Asn_{325} are known glycosylation sites (König et al., J. Biol. Chem. 263, 9502-9507 (1988); Carr et al., J. Biol. Chem. 264, 21286-21295 (1989)).

The last part, positions 419 through 458, is the cytoplasmic domain. Here is the binding site for the Tyrosine protein kinase LCK ($p56^{lck}$) (Rudd et al., PNAS USA 85, 5190-5194 (1988); Veillette et al., Cell 55, 301 (1988)), which is part of the signaling pathway activated by ligands binding to CD4.

Table 1 Table showing the domain structure of CD4 (according to UniProt P01730)

Feature	Positions	Length	Description
Signal peptide	1 - 25	25	
Chain	26 - 458	433	T-cell surface glycoprotein CD4
Topological domain	26 - 396	371	Extracellular
Transmembrane region	397 - 418	22	Potential
Topological domain	419 - 458	40	Cytoplasmic (potential)
Domain	26 - 125	100	Ig-like V-type
Domain	126 - 203	78	Ig-like C2-type 1
Domain	204 - 317	78	Ig-like C2-type 2
Domain	318 - 374	78	Ig-like C2-type 3
Region	427 - 455	29	HIV-1 Vpu-susceptibility domain
Glycosylation site	296	1	NeuAc(a2-3)Gal(b1-4)GlcNAc(b1-2)Man(a1-3)[Gal(b1-4)GlcNAc(b1-2)Man(a1-6)]Man(b1-4)GlcNAc(b1-4)GlcNAc
Glycosylation site	325	1	NeuAc(a2-3)Gal(b1-4)GlcNAc(b1-2)Man(a1-3)[Gal(b1-4)GlcNAc(b1-2)Man(a1-6)]Man(b1-4)GlcNAc(b1-4)GlcNAc
Disulfide bond	41 ↔ 109		
Disulfide bond	155 ↔ 184		
Disulfide bond	328 ↔ 370		
Lipidation site	419	1	S-palmitoyl cysteine
Lipidation site	422	1	S-palmitoyl cysteine

The extracellular part comprises 4 immunoglobulin-like domains. The first one, the N-terminal domain, comprising positions 26 through 125 is an Ig-like V-type domain. Based on the homology to antibodies, it has three homologues of antigen-complementary-determining regions, CDR1, CDR2, and CDR3 (Ashkenazi et al., PNAS USA 87, 7150-7154 (1990)) (see Figure 6). The CDR1 and CDR2 spans are involved in the binding of class II MHC molecules (Moebius et al., PNAS USA 89, 12008-120012 (1992)), the gp120 HIV-1 envelope protein (Moebius et al., J. Exp. Med. 176, 507-517 (1992)) and anti-CD4 antibodies (Lanza et al., PNAS USA 90, 11683-11687 (1993)). Phe_{68} of CDR2 plays a key role for recognition and binding of class II MHC molecules and the gp120 HIV-1 envelope protein (Sharma et al., Biochemistry 44, 16192-16202 (2005)). All known ligands of CD4 bind to the N-terminal Ig-like V-type domain.

The mechanism of how regulatory T cells work is not fully clear. $CD4^+CD25^+$ Tregs inhibit polyclonal and antigen-specific T cell activation. The suppression can be mediated e.g. by a cell contact-dependent mechanism that requires activation of $CD4^+CD25^+$ Tregs via the TCR but Tregs do not show a proliferative response upon TCR activation or stimulation with mitogenic antibodies (anergic) (Shevach, Nature Rev. Immunol 2 : 389 (2002). Once stimulated, they are competent to

suppress in an antigen-independent manner the response of CD4+ T cells and CD8+ T cells as well as inhibit B-cell activation and clonal expansion.

The ability of CD4+CD25+ regulatory T cells to have a controlling influence on immune system activity has meant that they have been recognized as a potential target for treating diseases, such as autoimmune diseases, where it is desirable to exert a control on the immune system.

Autoimmunity is the failure of an organism to recognise its own constituent parts (down to sub-molecular levels) as "self", which results in an immune response against its own cells and tissues. Any disease that results from such an aberrant immune response is termed an autoimmune disease. Autoimmune diseases include multiple sclerosis (MS), rheumatoid arthritis (RA), psoriasis, psoriatic arthritis, colitis ulcerosa, Crohn's disease, Type I Diabetes Mellitus (T1D), myasthenia gravis (MG), autoimmune polyglandular syndrome type II (APS-II), Hashimoto's thyroiditis (HT), systemic lupus erythematosus (SLE), Sjörgens Syndrome and autoimmune lymphoproliferative syndrome (ALS).

Autoimmune disease occurs when T cells recognise and react to 'self' molecules, that is, molecules produced by the cells of the host. Activation of 'autoreactive' T cells by presentation of autoantigens processed by antigen presenting cells (APC) leads to their clonal expansion and migration to the specific tissues, where they induce inflammation and tissue destruction.

Suppression of these T effector cell function by using immunosuppressive drugs is a principal therapeutic strategy that has been used successfully to treat autoimmune diseases. However these drugs induce general immune suppression due to their poor selectivity, resulting in inhibition of not only the harmful functions of the immune system, but also useful ones. As a consequence, several risks like infection, cancer and drug toxicity may occur.

It is generally agreed that $CD4^+$ T cells play a major part in initiating and maintaining autoimmunity. Accordingly, it has been proposed to use mAbs against $CD4^+$ T cells surface molecules, and in particular anti-CD4 mAbs, as immunosuppressive agents. Although numerous clinical studies confirmed the potential interest of this approach, they also raised several issues to be addressed in order to make anti-CD4 mAbs more suitable for use in routine clinical practice.

Several different mechanisms of action for CD4 mAbs have been proposed including: (1) antagonism of CD4-MHC II interactions resulting in inhibition of T cell activation, (2) CD4 receptor modulation as determined by a decrease in cell surface expression of CD4, (3) partial signaling through the CD4 receptor in the absence of T cell receptor cross-linking which can suppress subsequent T cell activation and trigger CD4 T cell apoptotic death, (4) Fc-mediated complement-dependent cytotoxicity (CDC) or antibody-dependent cellular cytotoxicity (ADCC) leading to CD4 T cell depletion, and (5) stimulation of regulatory T cells.

Several anti-CD4 antibodies targeting T cells have been in clinical development (Schulze-Koops et al., J Rheumatol. 25(11): 2065-76 (1998); Mason et al., J Rheumatol. 29(2): 220-9 (2002); Choy et al., Rheumatology 39(10): 1139-46 (2000); Herzyk et al., Infect Immun. 69(2): 1032-43 (2001); Kon et al., Eur Respir J. 18(1): 45-52 (2001); Mourad et al., Transplantation 65(5): 632-41 (1998); Skov et al., Arch Dermatol. 139(11): 1433-9 (2003); Jabado et al., J Immunol. 158(1): 94-103 (1997)) mainly aiming at CD4 cell depletion with only a few CD4 antibodies having been attributed to the other mechanisms like TRX-1, TNX-355, IDEC-151, OKTcdr4A.

The approach of using agents aimed at the activation of regulatory T cells for the therapy of autoimmune diseases has proven to be extremely difficult. Activation of Tregs via the TCR using the agonistic anti-CD3 antibody OKT-3 (Abramowicz et al, N Engl. J Med. 1992 Sep 3;327(10):736) or via the co-stimulatory molecule CD28 using the superagonistic anti-CD28 antibody TGN 1412 lead to complete depletion of regulatory T cell population as well as other conventional T cells and the systemic induction and release of excessive amounts of pro-inflammatory cytokines including IFN-γ, TNF-α, IL-1 and IL-2, resulting in a clinically apparent cytokine release syndrome (CRS) in humans (Suntharalingam et al, N Engl. J Med. 2006 Sep 7;355(10):1018-28).

However, recently humanized anti-CD4 antibodies have been described in WO2004/083247 which are capable of activating CD4+CD25+ regulatory T cells. The antibodies described in WO2004/083247 are humanized versions of the mouse antibody, mB-F5, a murine IgG1 anti-human CD4 described by Racadot et al. (Clin. Exp. Rheum., 10, 365-374 (1992)). The epitope of mB-F5

was reported by Racadot et al., as spanning the Ig-like C2 type 1 and type 2 domains of human CD4 from amino acid 162 to amino acid 232 as shown in Figure 6.

Subsequent clinical trials reported in WO2009/112502, WO2009/121690, WO2009/124815 and in WO2010/034590, using one of these antibodies, designated BT061 (a humanized monoclonal IgG1), has resulted in the successful treatment of patients suffering from psoriasis and rheumatoid arthritis, providing proof that these antibodies are capable of treating autoimmune diseases safely and with good efficacy.

The promising clinical results achieved has increased the interest in providing further therapeutic agents having similar properties. It is therefore the aim of the present invention to provide screening methods for identifying such agents, and to provide further therapeutic agents.

Accordingly the present invention provides a method for screening for a molecule capable of binding to CD4 comprising:

(a) providing one or more candidate molecules;

(b) determining whether the one or more candidate molecules is capable of binding to one or more of the following regions of human CD4: amino acids 148 to 154, amino acids 164 to 168 and amino acids 185 to 192; and

(c) selecting a molecule determined in step (b) to be capable of binding to CD4.

The present inventors have unexpectedly found that the humanized antibody BT061 binds to a domain of CD4 which was previously unrecognized as a ligand binding site. This finding is particularly surprising given what was known in the art as the epitope for the murine antibody, mB-F5, from which BT061 was derived. The present inventors have also established the residues of BT061 that are involved in binding the CD4 molecule and have surprisingly found that not all of the CDRs of BT061 are involved in CD4 binding.

The identification of the binding region, and details of the mechanism of binding, has enabled the development of further screening methods, and of antibodies and antibody fragments capable of activating CD4+CD25+ regulatory T cells.

Accordingly, the present invention also provides a method for screening for an antibody or antibody fragment capable of binding with CD4 comprising:

(a) providing an antibody or antibody fragment comprising CDR1 and CDR2 of BT061 light chain and CDR1 and CDR3 of BT061 heavy chain optionally with amino acid substitutions in the sequences of the CDRs provided:

(i) the light chain CDR1 comprises: Ser32; Gly33; and Tyr 34;

(ii) the light chain CDR2 comprises: Leu54; and Ile57;

(iii) the heavy chain CDR1 comprises Asp31, Glu31, Thr31, Cys31, Pro31, Met31 or Tyr31; and

(iv) the heavy chain CDR3 comprises Tyr103, Phe103 or His103; Arg104; Tyr105; Asp106; and Trp110, Phe110, His 110 or Tyr110,

(b) determining whether the antibody or antibody fragment is capable of binding to CD4, and

(c) selecting the antibody or antibody fragment determined in step (b) to be capable of binding to CD4,

wherein the antibody or antibody fragment does not comprise CDR1, CDR2 and CDR3 of BT061 heavy chain and CDR1, CDR2 and CDR3 of BT061 light chain.

Still further the present invention provides an antibody or antibody fragment capable of activating CD4+CD25+ regulatory T cells comprising an antibody or antibody fragment capable of activating CD4+CD25+ regulatory T cells comprising CDR1 and CDR2 of BT061 light chain and CDR1 and CDR3 of BT061 heavy chain optionally with amino acid substitutions in the sequences of the CDRs provided:

(i) the light chain CDR1 comprises: Ser32; Gly33; and Tyr 34;

(ii) the light chain CDR2 comprises: Leu54; and Ile57;

(iii) the heavy chain CDR1 comprises Asp31, Glu31, Thr31, Cys31, Pro31, Met31 or Tyr31; and

(iv) the heavy chain CDR3 comprises Tyr103, Phe103 or His103; Arg104; Tyr105; Asp106; and Trp110, Phe110, His 110 or Tyr110,

and wherein the antibody or antibody fragment does not comprise CDR1, CDR2 and CDR3 of BT061 heavy chain and CDR1, CDR2 and CDR3 of BT061 light chain.

The invention will be illustrated by way of example only, with reference to the following Figures, in which:

Figure 1 shows the peptide sequence (SEQ ID No: 1) and disulphide bridges of human CD4 (UniProt ID P01730).

Figure 2A shows the peptide sequence (SEQ ID No: 2) of the light chain of the humanized antibody BT-061. The residues of the CDRs are shown with boxes (CDR1: SEQ ID No: 4, CDR2: SEQ ID No: 5 and CDR3: SEQ ID No: 6). Residues surrounded by dashed frames are not represented by the crystal structure.

Figure 2B shows the peptide sequence (SEQ ID No: 3) of the heavy chain of the humanized antibody BT-061.The residues of the CDRs are shown with boxes (CDR 1: SEQ ID No: 7, CDR2: SEQ ID No: 8 and CDR 3: SEQ ID No: 9). Residues surrounded by dashed frames are not represented by the crystal structure.

Figure 3 provides a representation of the asymmetric unit of CD4-BT061 crystal structure.

Figure 4 provides a representation of the CD4-BT061 crystal structure superimposed with a crystal structure of a CD4 complex with a class II MHC molecule (PDB code 1JL4).

Figure 5 provides a representation of the CD4-BT061 crystal structure superimposed with a crystal structure of a complex of CD4 with the gp120 HIV-1 protein (PDB code 2NY1). The latter, in addition, is bound to the antibody 17b.

Figure 6 shows the peptide sequence (SEQ ID No: 1) and domain structure of human CD4 (Uniprot ID P01730).

Figure 7 provides a representation of the BT061 binding site on the surface of CD4. All amino acids shown are part of the Ig-like C2-type 1 domain, which follows the N-terminal Ig-like V-type domain.

Figure 8 provides the BT061 amino acid light chain sequence (SEQ ID No: 2). Amino acids involved in binding to CD4 are marked by rounded frames.

Figure 9 provides the BT061 amino acid heavy chain sequence (SEQ ID No: 3). Amino acids involved in binding to CD4 are marked by rounded frames.

Figure 10 provides a representation of the BT061 binding site on surface of CD4. Amino acids forming the binding pocket for Tyr_{105} of the BT061 heavy chain are circled.

Figure 11 provides a representation of the BT061 binding site on surface of CD4. Amino acids forming the binding pocket for Arg_{104} to Asp_{106} of the BT061 heavy chain are circled.

Figure 12 provides a representation of the BT061 binding site on surface of CD4. Amino acids forming the binding pocket for Tyr_{34} of the BT061 light chain are circled.

Detailed description of the invention

Screening methods

The present invention provides methods for screening for one or more molecules capable of binding to CD4, and preferably human CD4. As indicated above, the information provided herein describes the interaction between CD4 and antibody BT061, which is capable of activating CD4+CD25+ regulatory T cells. In particular, BT-061 binds to both T helper and regulatory Tcells and selectively activates regulatory T cells without activation of T helper cells. The knowledge of the structures of BT061 and how these interact with the extracellular region of CD4 provides a means to design and produce agents with similar properties to BT061 in terms of CD4 binding and selective activation of regulatory T cells.

In a first aspect the present invention provides a method for screening for a molecule capable of binding to CD4 comprising: (a) providing one or more candidate molecules; and (b) determining whether the one or more candidate molecules is capable of binding to one or more of the following regions or amino acids of human CD4: amino acids 148 to 154, amino acids 164 to 168 and amino acids amino acids 185, 187, 189, 190 and 192; (c) selecting a molecule determined in step (b) to be capable of binding to CD4. More particularly, the regions of human CD4 are amino acids 148 to 154, amino acids 164 to 168 and amino acids 185 to 192.

In one embodiment steps (a) to (c) can be completed on a computer system and the interaction between CD4 and one or more candidate molecules modeled, based on the information provided herein regarding the interaction between BT061 and human CD4, i.e. the screening is conducted via computer assisted molecule design. In particular, a three dimensional structural model of CD4, and in particular, the extracellular region thereof, is generated in the computer system by interaction of the amino acids sequence for at least part of CD4 and software known to the person skilled in the art, for example Discovery Studio (Accelrys®) or Benchware 3D Explorer (Tripos). These programs further allow the inputting of, or de novo generation of, sequence and/or structural information on one or more candidate molecules. The ability of a candidate molecule to bind to the regions of CD4 identified as being important for BT061 binding (which are discussed further below) can then be examined.

In particular, the method for screening for a molecule capable of binding to CD4 can comprise as steps (a) and (b): (i) entering into a computer system or program an amino acid sequence from CD4 comprising at least amino acids 148 to 154, 164 to 168 and acids 185, 187, 189, 190 and 192; (ii) generating a three-dimensional model of the polypeptide or peptide encoded by the amino acid sequence; (iii) generating or entering the three dimensional structure of one or more candidate molecules; and (iv) simulating the interaction between the amino acid sequences of CD4 and a candidate molecule to determine whether the candidate molecule is capable of binding to CD4 via amino acids 148 to 154, 164 to 168 and acids 185, 187, 189, 190 and 192.

The selection of candidate molecules can further be restricted by considering the features of the CD4-BT061 interaction described below in Example 1. In particular, candidate molecules can be restricted to those that bind to the regions of CD4 without salt bridges and/or those that include one or more components which are accommodated in one or more of the binding pockets on the surface of CD4 involving:

(i) amino acids residues S152, V153, Q154, Q164, G165, T185, V186, L187 and K192 of CD4 (as shown in Figure 10);

(ii) amino acid residues S150, S152, G165 and G166 of CD4 (as shown in Figure 11); and/or

(iii) amino acid residue S150, P151, S152 and K167 (as shown in Figure 12).

The method of this computer implemented embodiment can further comprise a step (d) in which the molecule selected in step (c) is produced. For example, where the selected molecule is a peptide the amino acid sequence of the peptide is taken from the computer and the peptide is manufactured in vitro. Thereafter, the activity of the selected molecule can be assessed in vitro, by contacting the selected molecule with a peptide or polypeptide comprising the relevant regions/amino acids of CD4, or by contacting the selected molecule with a cell expressing CD4. These in vitro steps are described further below in relation to the embodiment of the first aspect in which steps (a) to (c) are conducted in vitro.

In particular, as an alternative to the computer assisted embodiment described above, steps (a) to (c) of the method of screening may be conducted in vitro, and step (b) can comprise contacting one or more candidate molecules with the relevant regions/amino acids of CD4 and determining whether the candidate molecule is able to bind to one or more of these regions. An example of this embodiment comprises a method for screening for one or more molecules capable of binding to CD4 comprising: (a) contacting the one or more molecules with a peptide comprising one or more of the following regions of human CD4: amino acids 148 to 154, amino acids 164 to 168, and amino acids 185 to 192; and (b) detecting whether the one or more molecules binds to the one or more regions of the peptide,
wherein the molecule does not comprise CDR1, CDR2 and CDR3 of BT061 heavy chain and CDR1, CDR2 and CDR3 of BT061 light chain.

The method of the present invention preferably comprises screening a library of molecules. In particular, the library can be a phage display library prepared according to methods known in the art. The library may be a peptide library reflecting a systematic combination of different amino acids/peptides in large number. Usually, a peptide library is synthesized on solid phase, mostly on resin, which can be made as flat surface or beads (solid phase peptide synthesis). This library can be used for protein-protein interactions, drug discovery, purification of proteins and variation in the antibody recognition sequence to generate antibody variants with different affinities.

Further libraries besides the phage display include yeast display, bacterial display, mRNA display, ribosomal and polysomal display. Ribosome display comprises a process which results in translated proteins that are associated with their mRNA progenitor which is used, as a complex, to bind to an

immobilized ligand in a selection step. mRNA display results in translated peptides or proteins that are associated with their mRNA progenitor via a puromycin linkage.

Bacterial display represent a library technology of polypeptides displayed on the surface of bacteria can be screened using flow cytometry or iterative selection procedures (biopanning).

In the yeast display (Abbott) technique, a protein of interest is displayed as a fusion to the Aga2p protein on the surface of yeast. The Aga2p protein is naturally used by yeast to mediate cell-cell contacts during yeast cell mating. As such, display of a protein via Aga2p projects the protein away from the cell surface, minimizing potential interactions with other molecules on the yeast cell wall. The use of magnetic separation and flow cytometry in conjunction with a yeast display library is a highly effective method to isolate high affinity protein ligands against nearly any receptor through directed evolution.

Polysome display comprises very large library of peptides displayed on bacterial polysomes (Mattheakis et al., 1994). MULTIPIN® peptide technology can also be used to generate the libraries (Tribbick et al., J Immunl. Methods (2002) 267: 27-35).

In the in vitro contacting step the selected molecule or a candidate molecule can be contacted with a peptide or polypeptide comprising one or more of the following regions or amino acids (the "relevant regions/amino acids of CD4") of human CD4: amino acids 148 to 154, amino acids 164 to 168 and amino acids 185, 187, 189, 190 and 192, wherein the amino acids are numbered as shown in Figure 6. Preferably the regions of human CD4 are: amino acids 148 to 154, amino acids 164 to 168 and amino acids 185 to 192. More preferably, the peptide or polypeptide comprises all of these regions. Still more preferably the peptide or polypeptide further comprises at least one of the following amino acids of human CD4: Lys26, Arg156, Arg159, Lys161 and Lys192. Most preferably the peptide or polypeptide comprises the Ig-like C2-type 1 domain of human CD4 (*i.e.* amino acids 126 to 205) and optionally also the Ig-like V-type domain. In particular, D1 of CD4 is utilized to stabilize the epitope. Accordingly, where the peptide or polypeptide is to be used in a competitive binding assay, the use of D1 is preferred. However, it is noted that one or two amino acids from these regions may be removed. It is preferred that the peptide is less than 50 amino acids in length and more preferably less than 20 amino acids in length.

The peptides may be natural peptides, for example those made by enzymatic cleavage of CD4 or directly by host cell expression, or they may be synthetic peptides. The peptides may also be modified, for example via PEGylation, phosphorylation, amydation, acetylation, labeling with Biotin, or fluorescent dyes such as FITC, or labeling with isotopes. Further modifications might use techniques like the "Multiple antigen peptide application". With such a technology one can produce high-titer anti-peptide antibodies and synthetic peptide vaccines. This system utilizes the α- and ε-amino groups of lysine to form a backbone to which multiple peptide chains can be attached. Depending on the number of lysine tiers, different numbers of peptide branches can be synthesized. This eliminates the need to conjugate the antigen to a protein carrier (Briand et al., J Immunol Methods (1992). 156; 2: pp 255-265).

As indicated above, the methods of the present invention are preferably performed with peptides sequences from human CD4. However, they can equally be performed with homologous regions of CD4 proteins of other mammals, or other molecules containing the Ig-like C2-type 1 domain.

The step of contacting the one or more molecules, selected molecule or candidate molecule with a peptide and the step of detecting whether the one or more molecules binds to the one or more regions of the peptide, can be conducted according to methods known in the art. In particular, in one embodiment of the invention the peptide is a linear peptide which is spotted or fixed onto a membrane. During the contacting step, the molecules which are able to bind to the CD4 peptide sequence become trapped.

In an alternative embodiment peptides are created which can mimic the conformation of the wild-type human CD4 epitope. This can be done by structure-based molecular design methods known in the art.

The following display methods are mentioned which can be used for screening:

To screen for linear epitopes an epitope mapping technique can be used. Amino acid sequence representing parts of the target epitope (e.g. 10 – 15 amino acids), which overlap by one amino acid, are spotted onto a membrane (e.g. cellulose). Subsequently it is possible to screen for proteins, or

peptides recognizing the spotted amino acid sequence. Several rounds of selection can be done with different stringency conditions to select high affinity binders.

To screen for discontinuous epitopes techniques such as phage display have been developed. Contemporary standard libraries of linear or cyclic peptides have a diversity of approximately 10^9 independent clones, meaning libraries with up to seven randomized positions can theoretically guarantee comprehensive coverage of the potential sequence repertoire. In vitro translation systems result in peptide libraries with a higher diversity since coupling of the peptide with its mRNA is achieved in a cell-free system involving small particles of RNA/peptide/ribosome or only mRNA/peptide complexes. Further libraries include polysomal or ribosomal display (Mattheakis et al., PNAS 1994; 91(19):9022-6) or the PROfusion technology (Roberts and Szostak, PNAS (1997) 94(23):12297-302). The latter technology comprises a covalent fusion between an mRNA and the peptide or protein that it encodes can be generated by in vitro translation of synthetic mRNAs that carry puromycin, a peptidyl acceptor antibiotic, at their 3' end.

Minicell display (Patent No. US 7,125,679) is also possible, which includes the preparation of peptides for screening that are expressed on the outer surface containing oligonucleotide library. Similarly. Flitrix (Invitrogen Corp.) random peptide library which uses the bacterial flagellar protein FliC and thioredoxin can also be used.

Further, as well as the above mentioned display methods, mass spectrometry or Solid Phase Epitope Recovery (SPHERE) (Genzyme) can also be utilized (Lawendowski et al., J Immunol., (2002) 169: 2414-2421).

In one embodiment detection of binding comprises performing X-ray crystallography or NMR. In particular, molecules can be selected which bind to the peptide without a salt bridge, using methods of X-ray crystallography which are known in the art.

Alternatively, or in addition, the method of the first aspect can comprise contacting the selected molecule or candidate molecule with a cell expressing CD4, and in particular a CD4+CD25+ regulatory T cell. This can be done in particular to determine the ability of the selected molecule or candidate molecule to modulate the activity of, and in particular activate CD4+ CD25+ regulatory T

cells (preferably selectively activate T regs cells without activation of T helper cells), or to determine the ability of the selected molecule or candidate molecule to reduce, or down modulate, CD4 receptor expression, in particular on specific lymphocyte populations in an in vitro culture of PBMC (peripheral blood mononuclear cells). In these embodiments it is preferred that the selected molecule or the candidate molecule are antibodies or antibody fragments, and in particular those of the IgG1 type, as discussed further below.

For the modulation assay, Treg can, in general, be isolated using commercially available isolation kits (magnetic beads isolation) sorting for CD25, CD27, CD62L and/or CD127 and additional intracellular staining for FoxP3. Tregs are negative for CD127, positive for CD25 and Foxp3. CD39, a cell surface associated ectonucleotidase, can be also used to purify Treg with strong suppressor functions (Mandapathil et al., J Immunol. Methods (2009). 346 (1-2), 55-63). Commercially available kits may use a combination of negative selection of CD4+ followed by positive isolation of CD25 positive resulting in a CD4 CD25 positive cell population. These cells can be further processed. CD25 and the transcription factor Foxp3 are expression markers associated with suppressive function of Tregs. Although intracellular staining with Foxp3 confirms the regulatory phenotype, due to the intracellular staining the cells are not viable for further therapeutic use. Foxp3 is commonly used as an intracellular marker of activated Tregs/functionally active Tregs.

Further, due to the fact that BT061, and the molecule being screened for, binds to an epitope which is distinct from that bound by other commercially available antibodies, one can purify Tregs with commercially available isolation kits (magnetic bead isolation) and additionally another CD4 antibody (e.g.SK-3 OKT4), which are non-competing for the BT061 binding site on CD4 and subsequently assay for activation of Tregs with the candidate molecule or selected molecule.

The ability of the candidate molecule to activate Tregs can be assayed by examining the Treg suppressive activity, after contact with the candidate molecule, by co-culturing Tregs with CD4 positive CD25 negative effector T-cells. Activated Tregs are able to inhibit proliferation of CD4+ CD25- effector T-cells, which can be labeled with CFSE (assessment of cell expansion via CFSE dilution assay). Alternatively the proliferation of effector cells can be determined by [3H] Thymidine incorporation.

More particularly, suppressive capacity can be assayed by for example a mixed lymphocyte reaction (MLR). Cell division of effector T-cell can be inhibited by the suppressive action of Tregs. For this naive autologous CD4+ CD25- T responder cells are stimulated with irradiated allogenic stimulator PBMCs. Tregs or conventional T cells are titrated into the culture and proliferation can be assessed by Thymidine incorporation.

Activation of Treg can also be assayed through determination of cyclic AMP production (as described in WO 2008/092905).

Cytokines affected by activated Tregs in a co-culture can also be measured to determine the activity of these cells towards effector cells. For example, Tregs exert their suppressive activity also via IL-2 consumption which results in proliferation inhibition of T effector cells. IL-4 or IFN gamma can be also determined in the co-culture assay and are reduced in case of activated Tregs. Furthermore surface activation markers on T effector cells, such as CD25, are reduced when Treg cells are activated and exert suppressive activity.

Additionally, determination of cell death (via factors such as Bim) in effector cells (which can be also CD4 positive) induced by activated Tregs in co-culture represents a further method to examine whether Tregs are activated (Pandiyan et al., Nature Immunol. (2007) 8 1353-1362).

Since Tregs represent only a small proportion in the blood (2-10%), several expansion strategies are known. For example following TCR stimulation with an anti-CD3 and costimulation with anti-CD28 and rapamycin can be used to increase the number of T-cells . Rapamycin promotes the selective survival of Tregs, but not Teffector cells.

Several polyclonal expansion protocols are available e.g. Following positive selection for CD4/CD25 Treg cells can be expanded polyclonally in vitro by using anti-CD3 and anti-CD28 antibody (for stimulation) in combination with IL-2 and/or IL-15 able to increase Treg numbers while preserving suppressive capacity (Earle et al., Clin. Immunol. (2005) 115: 3–9).

In relation to modulation of CD4 expression, it is noted that by adding anti-CD4 antibodies, the expression of CD4 receptors on cell surfaces can be reduced. This feature can be used as basis for a

potency assay to determine the degree of CD4 binding. In particular, in this assay the step of contacting can comprise (i) incubating the candidate or selected molecule with peripheral blood mononuclear cells (PBMC) from human donor blood at 37°C; (ii) staining the incubated cells with an anti-CD4 labeled antibody which does not compete with BT061 for CD4 binding; and (iii) detecting the quantity of staining, to determine the occupation of CD4 receptors , and therefore the quantity of CD4 molecules present on the cell surfaces.

More specifically, this assay involves isolating PBMC (i.e. lymphocytes and monocytes) from human donor blood, which are then incubated with various concentrations of the candidate or selected molecule (preferably an antibody or antibody fragment) at 37°C. After incubation for 3 hours, the cells are stained by adding fluorochrome-labelled antibodies, such as phycoerythrin anti-CD4, which bind to a different epitope on CD4 to that bound by BT061. These staining antibodies label CD4 receptors on specific lymphocyte populations. As the BT061 epitope and the fluorochrome-labelled CD4 antibody used recognise different epitopes on the CD4 molecule and do not compete, this technique enables the quantity of CD4 receptors on the cell surface to be determined, independently of binding of CD4 by the candidate or selected molecule. The measurement is performed in a flow cytometer in which the antibody-labelled cells pass through a laser beam and are stimulated. When stimulated by the laser beam, the stained cells fluoresce in proportion to the bound antibody, and the light emitted is captured by the flow cytometer and then evaluated using the software known in the art, e.g. FlowJo software (Tree Star, Inc). Using the software (such as Parallel Line Assay software, Stegmann Systems) it is then possible to calculate a relative activity (potency) for the sample in relation to the standard run in parallel.

In a further embodiment of this aspect of the invention the contacting step can comprise contacting the CD4 peptide or polypeptide (preferably comprising D1 and D2 of CD4) or cell expressing CD4, and the candidate/selected molecule with a competitor antibody or antibody fragment having the heavy and light chain variable domains of BT061 to determine if the candidate/selected molecule is able to block binding of the competitor antibody or antibody fragment to CD4.

The one or more candidate molecules in the first aspect may be a peptide or a non-peptide. In particular, the one or more molecules may be a mimotope, a peptidomimetic, a small molecule, a recognition protein based on a natural or engineered lipocalin, an oligonucleotide, an siRNA, a

DARPin, a fibronectin, an affibody, a Kunitz-type inhibitor, a peptide aptamer, a ribozyme, a toxin, a camelid, an antibody, an antibody fragment or an antibody-derived molecule.

Mimotopes are peptides mimicking protein, carbohydrates or lipid epitopes and can be generated by phage display technology. When selected by antibodies, they represent exclusively B-cell epitopes and are devoid of antigen/allergen-specific T-cell epitopes. Coupled to carriers or presented in a multiple antigenic peptide form mimotopes achieve immunogenicity and induce epitope-specific antibody responses upon vaccination.

A peptidomimetic is a small protein-like chain designed to mimic a peptide. They typically arise from modification of an existing peptide in order to alter the molecule's properties. For example, they may arise from modifications to change the molecule's stability or biological activity. These modifications involve changes to the peptide that will not occur naturally (such as altered backbones and the incorporation of non-natural amino acids).

An example of peptidomimetics were those designed and synthesized with the purpose of binding to target proteins in order to induce cancer cells into a form of programmed cell death called apoptosis. Essentially these work by mimicking key interactions that activate apoptotic pathway in the cell.

A foldamer is a discrete chain molecule or oligomer that adopts a secondary structure stabilized by non-covalent interactions (Gellman, Acc. Chem. Res (1998) 31 (4): 173–180; Hill et al., Chem. Rev. (2001) 101 (12): 3893–4012). They are artificial molecules that mimic the ability of proteins, nucleic acids, and polysaccharides to fold into well-defined conformations, such as helices and β-sheets. Foldamers have been demonstrated to display a number of interesting supramolecular properties including molecular self-assembly, molecular recognition, and host-guest chemistry. They are studied as models of biological molecules and have been shown to display antimicrobial activity. They also have great potential application to the development of new functional materials.

A small molecule is a low molecular weight organic compound which is by definition not a polymer. The upper molecular weight limit for a small molecule is approximately 800 Daltons which allows for the possibility to rapidly diffuse across cell membranes so that they can reach intracellular sites of action. A small molecule exerts high affinity to a biopolymer such as protein, nucleic acid, or polysaccharide and in addition alters the activity or function of the biopolymer.

DARPins (Designed Ankyrin Repeat Proteins) are artificial proteins which are also able to recognize an antigen or antigenic structures. They are structurally derived from Ankyrin Proteins, are about 14 kDa (166 amino acid) and consist of three repeat motifs. They display a comparable affinity to antigens as antibodies. (Stumpp et al., Drug Discov. Today (2008) 13, Nr. 15-16, S. 695–701).

The Affibody® molecules are small and robust high affinity protein molecules that can be engineered to bind specifically to a large number of target proteins.

The term "camelid" refers to antibodies produced by camelids and comprising a heavy chain homodimer, and derivatives of these molecules (Muyldermans et al., Veterinary Immunology and Immunopathology, 128; 1-3; pp.178-183 (2009)).

It is preferred that the candidate molecule is an antibody or an antibody fragment. The phrase "an antibody, an antibody fragment or an antibody-derived molecule" covers monoclonal antibodies, polyclonal antibodies, multi-specific antibodies and antibody fragments. The term "antibody fragment" includes, in particular, fragments comprising Fab, Fab', $F(ab)'_2$, Fv and scFv fragments and dia-or tribodies. Preferably these are based on humanized or human antibodies. More preferably the antibody comprises a constant region/domain, i.e. an Fc portion. Where the antibody comprises a human constant region, this constant region can be selected among constant domains from any class of immunoglobulins, including IgM, IgG, IgD, IgA and IgE, and any isotype including IgG1, IgG2, IgG3 and IgG4. Preferred constant regions are selected among constant domains of IgG, in particular IgG1.

The Fc portions of different Ig subclasses are bound by cellular FcR that are specific for individual subclasses. Three different FcR classes are known that bind IgG isotypes with discrete affinities, CD16, CD32 and CD64. Diverse patterns of FcγR are expressed by various different immune cells such as monocytes, B cells, natural killer (NK) cells and others. The present inventors have found in vitro that the ability of the constant region of the antibody BT061 to bind Fc receptors (FcR) is critical for the ability of the antibody to cause CD4 down modulation in T cells. In particular, in vitro studies indicate that of the Fcγ receptors, Fcγ1 receptor, which is mainly expressed on

monocytes, is primarily involved; the presence of monocytes in a culture of PBMC is necessary and sufficient to confer CD4 down modulation in BT061-treated T cells.

Accordingly, in an embodiment of the invention the candidate molecule is capable of binding to an Fc receptor, preferably FcγRI (i.e. CD64) and most preferably comprises the Fc portion of an IgG1 antibody. In addition, or alternatively, the candidate molecule is capable of binding to monocytes via an Fc receptor.

In this aspect of the present invention the molecule being screened is not an antibody or antibody fragment which comprises CDR1, CDR2 and CDR3 of BT061 heavy chain and CDR1, CDR2 and CDR3 of BT061 light chain. These CDR sequences are shown in Figures 2A and 2B. In a preferred embodiment the molecule being screened is not the murine B-F5 molecule described by Racadot et al. (Clin. Exp. Rheum., 10, 365-374 (1992)).

In a preferred embodiment of the first aspect of the invention where the one or more candidate molecules are antibodies or antibody fragments, the antibodies or antibody fragments comprise CDR1 and CDR2 of BT061 light chain and CDR1 and CDR3 of BT061 heavy chain optionally with amino acid substitutions in the sequences of the CDRs provided:

(i) the light chain CDR1 comprises: Ser32; Gly33; and Tyr 34;

(ii) the light chain CDR2 comprises: Leu54; and Ile57;

(iii) the heavy chain CDR1 comprises Asp31, Glu31, Thr31, Cys31, Pro31, Met31 or Tyr31; and

(iv) the heavy chain CDR3 comprises Tyr103, Phe103 or His103; Arg104; Tyr105; Asp106; and Trp110, Phe110, His 110 or Tyr110.

Alternatively, the candidate molecule is an antibody or antibody fragment comprising V domains having at least 70%, at least 80%, at least 85%, more preferably at least 90% sequence identity with the V domains of BT061 (i.e. SEQ ID No: 2 and SEQ ID No: 3) and comprising the sequence motif SGYSY (SEQ ID No: 10) in CDR1 of the light chain V domain, the sequence motif LASILE (SEQ ID No: 11) in CDR2 of the light chain V domain and the sequence motif SYY/F/HRYD (SEQ ID No: 13) in CDR3 of the heavy chain V domain.

In this method the one or more molecules screened are a set of candidate molecules defined by their similarity to the antibody BT061 and those residues within BT061 which the present inventors have identified as being important in the interaction between the BT061 antibody and the CD4. In particular, this method is preferably one which identifies molecules having approximately equivalent or better binding affinity/specificity and Treg activation activity compared to BT061.

The peptide sequences of the light chain and heavy chain of the humanized antibody BT061 are shown in Figures 2A and 2B, respectively. The CDRs of the light and heavy chain are marked on these Figures. Herein the amino acid residues within these CDRs are identified by residue type and number, in which the number represents the position of the amino acid within the variable region of the light or heavy chain BT061 antibody as represented in Figures 2A and 2B. The use of residue type and number has been done for the purpose of clearly identifying the amino acid residue of the BT061 CDR which is being referred to. However, it will be appreciated that the number of the residue is not intended to limit the residue to being in that position in the candidate antibody or fragment being screened in the method. For example, in an antibody of this embodiment Ser32 may be at position 31 within a light chain CDR1 if a non-essential amino acid residue has been deleted from the section 1 to 30 of the light chain.

In a preferred embodiment the amino acid substitutions in the sequence of CDR1 and CDR2 of BT061 light chain and CDR1 and CDR3 of the BT061 heavy chain are selected from those set out in Table 4 and Table 5 below. More preferably the antibody or antibody fragment comprises a light chain comprising Tyr53 or Phe53 and a heavy chain comprising Ser28 (as shown in Table 7 in Example 1). Alternatively, or in addition, the antibody or antibody fragment comprises a light chain containing Asp64, and/or the antibody or antibody fragment comprises a heavy chain having at least one of Asp31 and Glu56 (as shown in Table 8, in Example 1). The antibody or antibody fragment may further comprise the CDR3 of BT061 light chain and/or the CDR2 of BT061 heavy chain optionally with amino acid substitutions in the sequences of these CDRs wherein the substitutions are selected from those set out in Table 4 and Table 5.

Candidate antibody or antibody fragments for use in the screening methods can be generated by mutating the known sequence of BT061. In particular, where these mutations are within the CDRs

they can be targeted mutations to ensure that the amino acids recited above are retained, or the desired substitutions are made.

Where step (a) of the screening method is performed in vitro, targeted mutagenesis can be used to cause amino acid exchange in the defined positions within the CDRs. Through knowing the corresponding DNA sequence of the amino acids one can create a library of specific mutants containing a range of desired amino acid substitutions. Where steps (a) to (c) of the screening method are to be performed in a computer system, the three dimensional structure of the candidate antibodies or antibody fragments can be generated by inputting the amino acid sequence in a manner similar to that indicated above in relation to CD4.

Table 4 Table showing sequence variations of the BT061 light chain CDRs

	Position	BT061 sequence	Isosteric Variations					
CDR1	24	Arg 24	Lys	Gln	Asn			
	25	Ala 25	Gly					
	26	Ser 26	Thr					
	27	Lys 27	Arg	Glu				
	28	Ser 28	Gly	Pro				
	29	Val 29	Ala	Ile				
	30	Ser 30						
	31	Thr 31	Ser	Asn	Gln	Asp		
	32	Ser 32						
	33	Gly 33						
	34	Tyr 34						
	35	Ser 35						
	36	Tyr 36						
	37	Ile 37	Val	Leu				
	38	Tyr 38						

	Position	BT061 sequence	Isosteric Variations					
CDR2	54	Leu 54						
	55	Ala 55						
	56	Ser 56						
	57	Ile 57						
	58	Leu 58						
	59	Glu 59						
	60	Ser 60	Asn	Gln	Thr	Glu	Asp	

Table 4 continued Table showing sequence variations of the BT061 light chain CDRs

	Position	BT061 sequence	Isosteric Variations					
CDR3	93	Gln 93						
	94	His 94						
	95	Ser 95						
	96	Arg 96	Lys					
	97	Glu 97	Asp	Arg				
	98	Leu 98	Gly	Ile				
	99	Pro 99						
	100	Trp 100						
	101	Thr 101	Ser					

Table 5 Table showing sequence variations of the BT061 heavy chain CDRs.

	Position	BT061 sequence	Isosteric Variations					
CDR1	31	Asp 31	Glu	Thr	Cys	Pro	Met	Tyr
	32	Cys 32	Ser	Ala	Gly	Val		
	33	Arg 33	Lys	Ser	Thr	Glu		
	34	Met 34	Ile	Leu	Ala	Val		
	35	Tyr 35						

	Position	BT061 sequence	Isosteric Variations				
CDR2	51	Ile 51	Ala	Val	Gly		
	52	Ser 52	Asp	Gly	Ala	Thr	
	53	Val 53	Ser	Gly	Thr	Ile	
	54	Lys 54	Arg	Tyr			
	55	Ser 55	Asn	Gln	Thr	Glu	
	56	Glu 56	Asp	Arg			
	57	Asn 57	Asp	Tyr	Gln	Glu	
	58	Tyr 58	His	Lys			
	59	Gly 59	Ser				
	60	Ala 60	Ser	Thr			
	61	Asn 61	Gln	Asp			
	62	Tyr 62	Phe	His			
	63	Ala 63	Gly	Ser			
	64	Glu 64	Asp	Gln	Asn	Arg	
	65	Ser 65	Gly	Ala	Asn		
	66	Val 66	Ile	Ala	Ser	Gly	
	67	Arg 67	Lys	Gln	Tyr	His	Glu
	68	Gly 68					

Table 5 continued Table showing sequence variations of the BT061 heavy chain CDRs.

	Position	BT061 sequence	Isosteric Variations				
CDR3	101	Ser 101					
	102	Tyr 102					
	103	Tyr 103	Phe	His			
	104	Arg 104					
	105	Tyr 105					
	106	Asp 106					
	107	Val 107	Ile	Pro	Asp	Thr	Glu
	108	Gly 108	Ala				
	109	Ala 109	Ser				
	110	Trp 110	Phe	His	Tyr		
	111	Phe 111					
	112	Ala 112	Ser				
	113	Tyr 113	Phe	His	Asn		

Isosteric variations are those which do not cause steric effects, i.e. they do not change the conformation of the antibody in any way.

In a second aspect the present invention provides a method for screening for a candidate molecule, which is an antibody or antibody fragment, that is capable of binding with CD4 comprising: (a) providing an antibody or antibody fragment comprising CDR1 and CDR2 of BT061 light chain and CDR1 and CDR3 of BT061 heavy chain optionally with amino acid substitutions in the sequences of the CDRs provided:

(i) the light chain CDR1 comprises: Ser32; Gly33; and Tyr 34;

(ii) the light chain CDR2 comprises: Leu54; and Ile57;

(iii) the heavy chain CDR1 comprises Asp31, Glu31, Thr31, Cys31, Pro31, Met31 or Tyr31; and

(iv) the heavy chain CDR3 comprises Tyr103, Phe103 or His103; Arg104; Tyr105; Asp106; and Trp110, Phe110, His 110 or Tyr110,

(b) determining whether the antibody or antibody fragment is capable of binding to CD4, and (c) selecting the antibody or antibody fragment determined in step (b) to be capable of binding to CD4, wherein the antibody or antibody fragment does not comprise CDR1, CDR2 and CDR3 of BT061 heavy chain and CDR1, CDR2 and CDR3 of BT061 light chain.

In one embodiment, steps (a) to (c) of the screening method according to the second aspect of the present invention can be performed in a computer system in a manner similar to that described above in relation to the first aspect of the invention. In particular, a number of BT061 variants can be generated in silico based on information provided herein on the residues important for the interaction of BT061 with its CD4 epitope, and the interaction of these variants with CD4 simulated.

In this embodiment the method can further comprise a step in which the candidate antibody or antibody fragment is contacted with a cell expressing CD4.

In an alternative embodiment to that performed in a computer system, steps (a) to (c) of the screening method according to the second aspect of the invention can be performed in vitro and step (b) can comprise contacting the candidate antibody or antibody fragment with a cell expressing CD4. Preferably the ability to bind CD4 is determined based on the ability of the candidate to activate CD4+CD25+ regulatory T cells.

In particular, this aspect of the present invention can be a method for screening for an antibody or antibody fragment capable of activating CD4+CD25+regulatory T cells which comprises:

(a) contacting one or more antibody or antibody fragments with CD4+CD25+ regulatory T cells;

(b) assessing the ability of the antibody or antibody fragment to activate said CD4+CD25+ regulatory T cells; and

(c) identifying an antibody or antibody fragment which activates the CD4+CD25+ regulatory T cells,

wherein the antibody or antibody fragment comprise CDR1 and CDR2 of BT061 light chain and CDR1 and CDR3 of BT061 heavy chain optionally with amino acid substitutions in the sequences of the CDRs provided:

(i) the light chain CDR1 comprises: Ser32; Gly33; and Tyr 34;

(ii) the light chain CDR2 comprises: Leu54; and Ile57;

(iii) the heavy chain CDR1 comprises Asp31, Glu31, Thr31, Cys31, Pro31, Met31 or Tyr31; and

(iv) the heavy chain CDR3 comprises Tyr103, Phe103 or His103; Arg104; Tyr105; Asp106; and Trp110, Phe110, His 110 or Tyr110,

and wherein the antibody or antibody fragment does not comprise CDR1, CDR2 and CDR3 of BT061 heavy chain and CDR1, CDR2 and CDR3 of BT061 light chain.

It is noted that the description of the embodiments and preferred features provided above in relation to the screening method according to the first aspect of the present invention also apply to the screening method according to the second aspect of the present invention.

These aspects of the invention may both further comprise production of the selected molecule, and in particular the selected antibody or antibody fragment, in order for their further use or downstream analysis.

Accordingly, the invention further provides a method for producing a therapeutic composition and therapeutic compositions obtainable by the method. In particular, the method comprises:

(a) selecting a molecule determined as being capable of activating CD4+CD25+ regulatory T cells using the method according the screening methods described above: and

(b) producing a therapeutic composition comprising the molecule.

In particular, the therapeutic composition can be manufactured by combining the molecule with one or more pharmaceutically acceptable carriers or diluents.

Antibodies and antibody fragments

The work of the present inventors has allowed the identification of the features of BT061 which are important for their interaction with, and activation of, CD4+ CD25+ regulatory T cells. This has led to the identification of specific mutants/variants of the BT061 antibody which will be capable of activating CD4+CD25+ regulatory T cells.

Accordingly, in a third aspect the present invention provides an antibody or antibody fragment capable of activating CD4+CD25+ regulatory T cells comprising CDR1 and CDR2 of BT061 light chain and CDR1 and CDR3 of BT061 heavy chain optionally with amino acid substitutions in the sequences of the CDRs provided:

(i) the light chain CDR1 comprises: Ser32; Gly33; and Tyr 34;

(ii) the light chain CDR2 comprises: Leu54; and Ile57;

(iii) the heavy chain CDR1 comprises Asp31, Glu31, Thr31, Cys31, Pro31, Met31 or Tyr31; and

(iv) the heavy chain CDR3 comprises Tyr103, Phe103 or His103; Arg104; Tyr105; Asp106; and Trp110, Phe110, His 110 or Tyr110,

and wherein the antibody or antibody fragment does not comprise CDR1, CDR2 and CDR3 of BT061 heavy chain and CDR1, CDR2 and CDR3 of BT061 light chain.

Alternatively, the third aspect provides an antibody or antibody fragment capable of activating CD4+CD25+ regulatory T cells comprising CDR1 and CDR2 of BT061 light chain and CDR1 and CDR3 of BT061 heavy chain optionally with amino acid substitutions in the sequences of the CDRs provided:

(i) the light chain CDR1 comprises: Ser32 or Pro32; Gly33 or Ala33; and Tyr 34;

(ii) the light chain CDR2 comprises: Leu54, Ile54 or Thr54; and Ile57, Leu57; Val57 or Thr57;

(iii) the heavy chain CDR1 comprises Asp31, Glu31, Thr31, Cys31, Pro31, Met31 or Tyr31; and

(iv) the heavy chain CDR3 comprises Tyr103, Phe103 or His103; Arg104; Tyr105; Asp106; and Trp110, Phe110, His 110 or Tyr110,

and wherein the antibody or antibody fragment does not comprise CDR1, CDR2 and CDR3 of BT061 heavy chain and CDR1, CDR2 and CDR3 of BT061 light chain.

As discussed above, the peptide sequences of the light chain and heavy chain of the humanized antibody BT061 are shown in Figures 2A and 2B, respectively. The CDRs of the light and heavy chain are marked on these Figures. As discussed above, the amino acid residues within these CDRs are identified by residue type and number, in which the number represents the position of the amino acid within the variable region of the light or heavy chain BT061 antibody as represented in Figures 2A and 2B. The use of residue type and number has been done for the purpose of clearly identifying the amino acid residue of the BT061 CDR which is being referred to. However, it will be appreciated that the number of the residue is not intended to limit the residue to being in that position in the antibody, or fragment, of the invention. For example, in an antibody of the invention Ser32 may be at position 31 within a light chain CDR1 if a non-essential amino acid residue has been deleted from the section 1 to 30 of the light chain.

In a preferred embodiment the amino acid substitutions in the sequence of CDR1 and CDR2 of BT061 light chain and CDR1 and CDR3 of the BT061 heavy chain are selected from those set out in Table 4 and Table 5 above. More preferably the antibody or antibody fragment comprises a light chain comprising Tyr53 or Phe53 and a heavy chain comprising Ser28. Alternatively, or in addition, the antibody or antibody fragment comprises a light chain containing Asp64, and/or the antibody or antibody fragment comprises a heavy chain having at least one of amino acids indicated in Table 8 of Example 1 to be important for interaction. In particular, the heavy chain comprises Asp31 and/or Glu56. The antibody or antibody fragment may further comprise the CDR3 of BT061 light chain and/or the CDR2 of BT061 heavy chain optionally with amino acid substitutions in the sequences of these CDRs wherein the substitutions are selected from those set out in Table 4 and Table 5.

In particular, recognition and binding of the CD4 epitope by the BT061 antibody is based on a particular constitution and conformation of the three complementarity determining areas CDR1, CDR2, and CDR3. Even though only CDR1 and CDR2 of the light chain and CDR1 and CDR3 of the heavy chain are in direct contact with CD4, all six CDRs are very densely packed and mutually support each other's conformation. As a consequence, many positions in the CDRs do not tolerate any amino acid substitution without significant loss of affinity and potency of BT061. In some positions, however, substitutions do not destabilize the structure.

Examples of such conservative substitutions are given in Tables 4 and 5. In these tables the sequence variations have been selected such that the overall interaction network is preserved. The syntax of attractive as well as repulsive interactions is maintained. Directed polar interactions can be inverted, e.g. donor-acceptor pair of hydrogen bridges, the ionic partners of salt bridges, or loci of the partners of dipole-quadrupole interactions can be switched.

In further embodiments the antibody or antibody fragment comprises the sequence (SEQ ID No: 14):

```
        10         20         30         40         50         60
DIVMTQSPDS LAVSLGERAT INCXXXXXXS XSGYSYXYWY QQKPGQPPKL LIYLASILEX
        70         80         90        100        110        120
GVPDRFSGSG SGTDFTLTIS SLQAEDVAVY YCQHSXXXPW XFGQGTKVEI KRTVAAPSVF
```

```
       130        140        150        160        170        180
IFPPSDEQLK SGTASVVCLL NNFYPREAKV QWKVDNALQS GNSQESVTEQ DSKDSTYSLS
       190        200        210      218
STLTLSKADY EKHKVYACEV THQGLSSPVT KSFNRGEC
```

wherein the amino acids at positions 24 to 29, 31, 37, 60, 96 to 98 and 101 marked as "X" are selected from those shown at the corresponding positions in Table 4,
and further comprising the sequence (SEQ ID No: 15):

```
        10         20         30         40         50         60
EEQLVESGGG LVKPGGSLRL SCAASGFSFS XXXXYWLRQA PGKGLEWIGV XXXXXXXXXX
        70         80         90        100        110        120
XXXXXXXGRF TISRDDSKNT VYLQMNSLKT EDTAVYYCSA SYXRYDXXXX FXXWGQGTLV
       130        140        150        160        170        180
TVSSASTKGP SVFPLAPSSK STSGGTAALG CLVKDYFPEP VTVSWNSGAL TSGVHTFPAV
       190        200        210        220        230        240
LQSSGLYSLS SVVTVPSSSL GTQTYICNVN HKPSNTKVDK KVEPKSCDKT HTCPPCPAPE
       250        260        270        280        290        300
LLGGPSVFLF PPKPKDTLMI SRTPEVTCVV VDVSHEDPEV KFNWYVDGVE VHNAKTKPRE
       310        320        330        340        350        360
EQYNSTYRVV SVLTVLHQDW LNGKEYKCKV SNKALPAPIE KTISKAKGQP REPQVYTLPP
       370        380        390        400        410        420
SRDELTKNQV SLTCLVKGFY PSDIAVEWES NGQPENNYKT TPPVLDSDGS FFLYSKLTVD
       430        440        450  454
KSRWQQGNVF SCSVMHEALH NHYTQKSLSL SPGK
```

wherein the amino acids at positions 31 to 34, 51 to 67, 103, 107 to 110, 111 and 112 marked as "X" are selected from those shown at the corresponding positions in Table 5.

In particular, specific amino acid motifs within CDR1 and CDR2 of the light chain and within CDR3 of the heavy chain of BT061 are important for CD4 binding. Accordingly, the antibody or antibody fragment may comprise SGYSY (SEQ ID No: 10) from CDR1 of BT061 light chain and/or the sequence LASILE (SEQ ID No: 11) from CDR2 of BT061 light chain and/or the sequence YYRYD (SEQ ID No: 12) from CDR3 of BT061 heavy chain.

Further, the antibody or antibody fragment capable of activating CD4+CD25+ regulatory T cells may have V domains that are at least 80% identical, more preferably at least 90% identical to the V domains of the antibody BT061, the V domains comprising:

(i) the sequence motif SGYSY (SEQ ID No: 10) in CDR1 of the light chain V domain;

(ii) the sequence motif LASILE (SEQ ID No: 11) in CDR2 of the light chain V domain; and

(iii) the sequence motif SYXRYD where X is Y, F or H (SEQ ID No: 13) in CDR3 of the heavy chain V domain,

with the proviso that the antibody or antibody fragment does not comprise V domains that are 100% identical to the V domains of the antibody BT061.

In specific embodiments of the third aspect of the present invention the antibody or antibody fragment comprises the CDR sequence of BT061 light chain and the CDR sequences of BT061 heavy chain with a single amino acid substitution wherein the substitution is:

(i) A63G in the heavy chain;

(ii) R33K in the heavy chain; or

(iii) L98I in the light chain.

or the antibody or antibody fragment comprising the CDR sequences of BT061 light chain and the CDR sequences of BT061 heavy chain and a double amino acid substitution wherein the substitutions are:

(i) R33K and A63G in the heavy chain; or

(ii) L98I in the light chain and R33K in the heavy chain.

In these specific embodiments of the invention the antibody or antibody fragment may further comprising the remaining variable domain sequences of BT061 heavy and light chains.

The antibodies or fragments thereof of the present invention can, in particular, be manufactured by mutagenesis of the polynucleotide sequence known to encode the variable domains of the murine B-F5 antibody and the BT061 antibody (as described in WO2004/083247).

It is noted that the definitions and preferred embodiments for antibody and antibody fragments described above in relation to the first and second aspects of the present invention also apply to the third aspect of the invention. In particular, the antibodies and fragments are preferably IgG1 antibodies, and/or preferably comprise an Fc portion such that the antibody or antibody fragment is capable of binding to an Fc receptor, preferably FcγRI (i.e. CD64). Most preferably the antibody or antibody fragment comprises the Fc portion of an IgG1 antibody. In addition, or alternatively, the antibody or antibody fragment is capable of binding to monocytes via an Fc receptor.

Further, the present invention provides an isolated peptide comprising less than 50 amino acids of human CD4 protein and including one or more of the following regions of human CD4: amino acids 148 to 154, amino acids 164 to 168, and amino acids 185 to 192. Preferably, the isolated peptide comprises two of these regions, more preferably three. In addition or alternatively the isolated peptide comprises less than 30 amino acids, and most preferably the isolated peptide comprises less than 20 amino acids.

Further, the present invention provides a mimotope peptide of the isolated peptide described above.

The present invention also includes nucleic acids encoding the antibody or antibody fragment described herein. The nucleic acid can be RNA or DNA but is preferably DNA, and most preferably encodes the V domain of the H chain or of the L chain of the antibodies or fragments. The polynucleotide may be fused with a polynucleotide coding for the constant region of a human H or L chain, for the purpose of expressing the complete H and L chains.

The invention also makes use of expression cassettes, wherein a polynucleotide as described above is linked to appropriate control sequences to allow the regulation of its transcription and translation in a chosen host cell. Further embodiments are recombinant vectors comprising a polynucleotide or an expression cassette as described above.

The polynucleotide as described above can be linked within an expression vector to appropriate control sequences allowing the regulation of its transcription and translation in a chosen host cell. These recombinant DNA constructs can be obtained and introduced into host cells by the well known techniques of recombinant DNA and genetic engineering.

Useful host cells can be prokaryotic or eukaryotic cells. Among suitable eukaryotic cells are plant cells, cells of yeast such as *Saccharomyces*, cells of insects such as *Drosophila*, or *Spodoptera*, and mammalian cells such as HeLa, CHO, 3T3, C127, BHK, COS, *etc*. The antibodies or fragments described herein can be obtained by culturing a host cell containing an expression vector comprising a nucleic acid sequence encoding said antibody under conditions suitable for the expression thereof and recovering said antibody from the host cell culture.

According to the present invention the host cell can also be a hybridoma obtained by fusing a cell producing an antibody of the present invention with a myeloma cell.

The antibody or antibody fragment has medical and non-medical uses as described further below.

In view of the medical use, the antibody or antibody fragment described herein can be formulated in a pharmaceutical composition. In particular, a pharmaceutical composition of the present invention comprises the antibody or antibody fragment and a pharmaceutically-acceptable carrier or diluent.

Still further, the antibody or antibody fragment can further comprise a label. Techniques of antibody labeling are well known in the art. Accordingly, by way of example only, the antibody can be labeled with a fluorescent label, such as GFP or a fluorescent dye (e.g. FITC, high performance dyLight), a radioactive isotope, biotin, HRP, *etc*

Uses of antibodies and epitopes

The present invention further provides methods of treatment using the antibody or antibody fragment of the present invention. Since the antibody or antibody fragment is capable of selectively activating CD4+CD25+ regulatory T cells it has particular use in therapy. The present invention provides a method of treating a subject suffering from or preventing a subject suffering from an autoimmune disease or transplant rejection comprising administering to said subject an antibody or antibody fragment according to the present invention. Similarly, the present invention also provides an antibody or antibody fragment as described herein for use in medicine, and specifically for use in the treatment of autoimmune disease or transplant rejection. Accordingly, the present invention

provides the use of an antibody or antibody fragment as described herein for the manufacture of a medicament for use in treating an autoimmune disease or transplant rejection. Suitable medical uses and methods of treatment are those as described for BT061 in WO2009/112502, WO2009/121690, WO2009/124815 and WO2010/034590, whose disclosures are incorporated herein by reference.

In a preferred embodiment the autoimmune disease is selected from psoriasis, rheumatoid arthritis, multiple sclerosis, type-1 diabetes, inflammatory bowel disease, Crohn's disease, autoimmune thyreoditis, autoimmune myasthenia gravis, systemic lupus erythematosus, ulcerative colitis, atopic dermatitis, myocarditis and transplant-related diseases such as graft-versus host or host-versus graft reactions, or general organ tolerance issues. The treatment of psoriasis and rheumatoid arthritis is particularly preferred.

The present invention further provides a method of treating a subject suffering from or preventing a subject suffering from an autoimmune disease or transplant rejection comprising removing a sample comprising CD4+ CD25+ regulatory T cells from the subject, contacting the sample with an antibody or antibody fragment as described herein to activate CD4+ CD25+ regulatory T cells and administering the activated cells to the subject. Such a method may additionally include an in vitro step of increasing the number of Treg cells. This can be done using the expansion strategies described herein (Peters et al., 2008).

Similarly, the present invention provides activated CD4+CD25+ regulatory T cells, which have been activated in vitro using the antibody or antibody fragment of the present invention. These activated T regulatory cells can be for use in medicine, and in particular for use in the treatment of autoimmune disease or transplant rejection. Similarly, the present invention provides use of CD4+CD25+ regulatory T cells activated using the antibody or antibody fragment of the present invention for the manufacture of a medicament for use in the treatment of autoimmune disease or transplant rejection.

Patients with an autoimmune disease such as rheumatoid arthritis display Tregs which have a lower suppressive capacity, which might be due to pro-inflammatory cytokines, such as TNF alpha. The present invention includes a method for screening, isolating or/and activating Tregs from patients suffering from an autoimmune disease and may display (but not necessarily) a disabled population

of Tregs. The specific binding mode of the antibody and fragments thereof of the present invention enables the antibody not only to bind to CD4 but more importantly to activate Tregs. Isolation of Tregs may occur using BT061 or the antibody or antibody fragment of the present invention. In case that an activation step will follow, CD4 selection has to occur by a CD4 antibody which does not compete with BT061 for binding to CD4. Alternatively an expansion strategy can be included before the activation step.

In the present invention Tregs might be isolated using BT061 and/or the antibody or antibody fragment of the present invention and transferred back to the patient in "Treg cell based immmunotherapy". Alternatively, Tregs might be stimulated directly by administering into a patient either intravenously or subcutaneously.

Treg based immunotherapy is of great public interest to induce tolerance in autoimmune diseases or transplants. Several approaches exist to generate inducible Tregs (Tregs) in vitro such as the use of retinoic acid inducing FoxP3 expression or co-culturing with bone marrow derived DCs in addition to stimulation with anti-CD3 and anti-CD28 antibodies. For example, PCT Application No. PCT/US2009/054631 refers to a method of purification of FoxP3 Tregs for the treatment of autoimmune diseases ("Treg based immunotherapy") using LAP and CD121b.

Therapeutic applications require large amounts of Tregs and these cells should retain their regulatory phenotype. This is at present only achieved by selecting natural Tregs. Inducible Tregs generated by vitro methods have the disadvantage that they might revert their phenotype into effector cells, causing an unpredictable risk for the patients.

However, BT061 has been demonstrated to activate Tregs in a mixed lymphocyte reaction (WO 2009112502 A1). This is due to the specific unexpected binding mode to CD4 described herein.

***In vitro* uses**

The antibody and antibody fragments and isolated peptides of the present invention also have a number of *in vitro* uses. In particular, the antibody or antibody fragment described herein can be

used for activating CD4+ CD25+ regulatory T cells *in vitro*, or for identifying CD4+ CD25+ regulatory T cells *in vitro*.

More specifically, the antibody or antibody fragment of the present invention can be used in a method for screening for the presence of CD4+ CD25+ T regulatory cells in a sample. Such a method can comprise the step of contacting a labeled antibody or antibody fragment with the sample, washing the sample to remove unbound antibody and detecting the presence of the label in the sample.

In particular, in such a method of screening the CD4+ CD25+ T regulatory cells are activated CD4+ CD25+ T regulatory cells. The sample is preferably a blood sample taken from a subject suffering from an autoimmune disease.

The present invention also describes a kit for isolating CD4+ CD25+ regulatory T cells comprising magnetic beads coated with the antibody or antibody fragment described herein. The kit may further comprise a second anti-CD25 antibody and/or anti-CD4+ antibody. Additional antibodies to carry out further selection steps, e.g. positive selection for CD39, a negative selection step for CD127, depletion of CD19 positive cells, can also be included. LAP (latency associated peptide), GARP or CD121b (Il-1 receptor type 2) can be used further for characterization of Treg phenotype.

Following Treg isolation, cells isolated with the antibody or antibody fragment of the present invention can be also cryopreserved (Peters et al., PLoS One (2008) 3; 9: e 3161).

Still further, the present invention provides an *in vitro* method for the activation of CD4+ CD25+ regulatory T cells comprising contacting the cells with the antibody or antibody fragments described herein. Methods for assessing the suppressive capacity of activated Tregs comprise (beside the above mentioned MLR), MLR assays determining the activation state of effector T-cells via cytokine release or expressing of activation markers on T effector cells (such as the proliferation and cytokine assay described in WO 2009112592 A1, which is incorporated herein by reference). Such methods may additionally comprise a first step of isolating the CD4+CD25+ regulatory T cells. If such a step is completed with an antibody this antibody should be a non-competing CD4 antibody (e.g. OKT4 or SK3). This allows the cells to be activated in the main step with the antibody or

fragment thereof of the present invention, which binds to a distinct epitope on CD4. In another scenario cells might be isolated using other surface expression markers of Tregs, which are distinct from CD4 such as CD25 or CD39, or by negative selection via CD127.

The antibody of the present invention has been described earlier as being capable of stimulating Tregs, which can be confirmed by co-culture with T effector cells. Tregs are able to suppress the proliferation of CD8 positive T cells by inhibiting the production of Il-2 and IFN gamma by alloreactive CD8 positive T-cells. In addition it has been demonstrated (WO 2009112592) that pre activated CD4+ CD25+ Tregs render suppressed CD8+ cells unable to express CD25 upon re-stimulation.

The invention will now be described further in relation to the following specific embodiments.

Examples

EXAMPLE 1 Crystal Structure of CD4 Complexed with BT061

A crystal structure of human CD4 complexed with the BT061 Fab fragment was obtained by x-ray diffraction.

Crystallization procedure of BT061 (Fab):CD4
Recombinant human CD4 has been produced using conventional methods: Different constructs of CD4 were cloned by standard procedures into vectors for heterologous expression in insect cells followed by purification via NiNTA. The Fab fragment of BT061 was cleaved from the intact antibody using the protease papain and purified by protein A. Subsequently the Fab fragment was further purified by size exclusion chromatography.

The CD4-Fab complex was formed by mixing the purified proteins, with a molar excess of CD4 and further purification by size exclusion chromatography.

Crystals of the CD4:BT061 complex were prepared by the method of co-crystallisation, meaning that the purified complex was used in crystallisation trials employing both, a standard screen with

approximately 1200 different conditions, as well as crystallisation conditions identified using literature data. Conditions initially obtained have been optimised using standard strategies, systematically varying parameters critically influencing crystallisation, such as temperature, protein concentration, drop ratio, and others. These conditions were also refined by systematically varying pH or precipitant concentrations.

Crystals were flash-frozen and measured at a temperature of 100 K.

The X-ray Diffraction data of the CD4:BT061 complex were collected at the SWISS LIGHT SOURCE (SLS, Villigen, Switzerland) using cryogenic conditions. The structure was solved and refined to a final resolution of 2.9 A.

The crystals belong to space group P21 with two complexes in the asymmetric unit. Data were processed using the programmes XDS and XSCALE. Data collection statistics are summarised in Table 6 below.

Table 6 Statistics of data collection and processing

Complex	**CD4:BT061**
X-ray source	PX (SLS[1])
Wavelength [Å]	1.0000
Detector	PILATUS 6M
Temperature [K]	100
Space group	P 2_1
Cell: a; b; c [Å]	110.18; 78.94; 132.85
α; β; γ [°]	90.0; 94.8; 90.0
Resolution [Å] [2]	2.88 (3.15-2.99)
Unique reflections [2]	50962 (6585)
Multiplicity [2]	2.9 (2.8)
Completeness [%] [2]	98.2 (98.3)
R_{sym} [%] [2, 3]	8.4 (44.3)
R_{meas} [%] [2, 4]	10.3 (54.7)
I / σ I [2]	- (-)
mean(I)/sigma [2,5]	11.60 (2.72)

[1] SWISS LIGHT SOURCE (SLS, Villigen, Switzerland)
[2] Numbers in brackets correspond to the resolution bin with R_{sym} = 44.3 %.

The phase information necessary to determine and analyse the structure was obtained by molecular replacement. Published models of CD4 and a Fab fragment were used as a search model.

Subsequent model building and refinement was performed according to standard protocols with the software packages CCP4 and COOT. The asymmetric unit (as shown Figure 3) consists of two such complexes with an overall RMS resolution of 2.9Å.

In the crystal structure the signal peptides are absent from the CD4 molecule and the peptide chains only comprise the Ig-like V-type domain, the Ig-like C2-type 1 domain, and part of the Ig-like C2-type 2 domain. The exact chains in the crystal structure reach from amino acid residue 26 through to residue 258, as shown in Figure 1 in which the amino acids not represented by the crystal structure are marked inside a dashed frame. Accordingly, the CD4 molecules only have the first two disulphide brides, one between Cys_{41} and Cys_{109}, and another one between Cys_{155} and Cys_{184}.

The light chains of the two BT061 units in the crystal structure reach from position 1 through to position 215 in one unit, and from 1 through only 182 in the other unit, as shown in Figure 2A. There are two disulphide bridges in the BT061 light chains, Cys_{23} – Cys_{92} and Cys_{138} – Cys_{198}.

The heavy chains of the two BT061 units in the crystal structure reach from position 2 through 219 in one unit, as shown in Figure 2B, and from position 2 through 220 in the other unit. Also in the heavy chains there are two disulphide bridges, one between Cys_{22} and Cys_{98}, and another one between Cys_{151} and Cys_{207}.

Analysis of the crystal structure shows that in contrast to other known ligands of CD4, binding of BT061 involves the Ig-like C2-type 1 domain, only. This constitutes an entirely new binding mode, documented by the crystal structure given in the Appendix.

As shown in Figure 3 BT061 does not bind to the N-terminal domain of CD4, there is the possibility of concurrent binding of BT061 and a class II MHC molecule, or a gp120 HIV-1 envelope protein (as shown in Figures 4 and 5).

Detailed analysis of the crystal structure reveals the interacting amino acids of both, CD4 and BT061. Selection was based on a distance criterion. Taking into account the resolution of the crystal structure, all CD4 amino acids having non-hydrogen atoms within a sphere of radius d = 4.5Å around any non-hydrogen atom of an BT061 amino acid have been selected as interacting partners. Radius d has been selected as the typical distance of a non-bonded interaction, 3Å, extended by half the crystal structure resolution of 2.9Å (d= 3Å + ½ × 2.9Å = 4.45Å).

Hence, the crystal structure shows that the binding site on the surface of CD4 consists of a cluster of 7 consecutive amino acids (Gly_{148} through Gln_{154}), a cluster of 6 consecutive amino acids (Gln_{164} through Thr_{168}), plus Thr_{185}, Leu_{187}, Asn_{189}, Gln_{190}, and Lys_{192}, as shown in Figure 7.

Table 7 below shows the matrix of interacting partners of CD4 and BT061. There are only few pure 1:1 interactions; most of the listed amino acids of both, CD4 and BT061 interact with more than one partner. The interactions are mainly hydrogen bonds, complemented by van-der-Waals contacts and polar interactions.

In the top row of Table 7 the amino acids of CD4 that interact with amino acids of BT061 are shown. On the left margin the amino acids of BT061 interacting with CD4 are given. Each "x" corresponds to at least one interaction. Since there are only few 1:1 interaction pairings, pattern extended in rows or columns are found. Ser_{150} and Pro_{151} of CD4 interact with both, the light and the heavy chain of BT061. Val_{186}, which is an important part of the binding pocket for Tyr_{105} of the BT061 heavy chain is not listed here, because there are no direct interactions with amino acids of BT061. All the interactions identified are either hydrogen bonds, polar interactions, van-der-Waals contacts, or combinations of these types of interaction. Identification of the interacting amino acids is based on the crystal structure given in the appendix. A distance criterion was applied, taking into account all amino acids which have at least one non-hydrogen atom closer than d=4.5Å to a non-hydrogen atom of the other molecular partner. Roughly speaking, d corresponds to the typical distance for a non-covalent interaction of 3Å augmented by half the overall resolution of the crystal structure (2.9Å).

BT061		CD4	Gly 148	Ser 149	Ser 150	Pro 151	Ser 152	Val 153	Gln 154	Gln 164	Gly 165	Gly 166	Lys 167	Thr 168	Thr 185	Leu 187	Asn 189	Gln 190	Lys 192
	Light chain	Ser 32										x	x	x					
		Gly 33											x						
		Tyr 34			x	x													
		Tyr 53			x														
		Leu 54			x														
		Ile 57	x	x															
	Heavy chain	Ser 28																x	
		Asp 31																x	
		Tyr 102															x	x	
		Tyr 103								x						x			
		Arg 104			x	x	x									x			
		Tyr 105					x	x	x	x					x	x			x
		Asp 106					x				x								
		Trp 110			x														

Table 7 Table showing the interacting amino acids of CD4 and BT061.

Figure 7 shows the CD4 amino acids of the BT061 binding site as a schematic representation of their relative orientation. Besides the amino acids fulfilling directly the above mentioned distance criterion, a number of amino acids are available for additional interactions with BT061 upon moderate changes of conformation of both, BT061 and CD4. Those amino acids, Arg_{156}, Gln_{188}, Asn_{189}, Gln_{190}, and Lys_{192} are likely to be involved in the mechanism of signal transduction of CD4.

BT061 binds with both, the light and the heavy chain to CD4. The respective amino acids of the light chain are shown in Figure 8. The amino acids of heavy chain involved in binding to CD4 are shown in Figure 9.

Tyr_{105} of the BT061 heavy chain plays a very important role for the interaction with CD4. Its side chain perfectly fits into a pocket on the surface of CD4 (Figure 10).

Even though salt bridges are typical elements of interaction between antibodies no salt bridges between CD4 and BT061 exist in the crystal structure. Interestingly, BT061 shows a number of intramolecular salt bridges. One of them, formed between Arg_{104} and Asp_{106}, confers polar interactions with a pocket on the surface of CD4 (Figure 11). The formation of the intramolecular salt bridges can be influenced by substances with buffer activity, which in turn can induce conformational changes of BT061 and the complex with CD4, thus contributing to signal transduction of CD4.

The other very important residue for the interaction with CD4 is Tyr_{34} of the BT061 light chain. Much like Tyr_{105} of the heavy chain, Tyr_{34} accommodates in a pocket on the surface of CD4 (Figure 12).

Comparing the crystal structure of the complex of CD4 with BT061 with crystal structures of the CD4 complexes with a class II MHC molecule, and with the gp120 HIV-1 envelope protein it can immediately be seen that BT061 is bound to an entirely different part of the CD4 surface. With respect to the other ligands of CD4, BT061 binds on the opposite side of the extracellular part of CD4 (Figures 4 and 5) and does not interfere with the binding sites of other ligands.

The CD4 amino acids Lys_{26}, Arg_{156}, Lys_{161}, and Lys_{192} are available for additional interactions with charge complementary amino acids of BT061 as indicated in Table 8 shown below.

		CD4	Lys 26	Arg 156	Arg 159	Lys 161	Lys 192
BT061	Light chain	Asp 64	x				
	Heavy chain	Asp 31		x			x
		Glu 56		x		x	

Table 8. Additional Interactions between CD4 and BT061

In the top row of Table 8 the amino acids of CD4 that can form salt bridges with amino acids of BT061 are shown. On the left margin the possible salt bridge partner amino acids of BT061 are given. Each "x" corresponds to a possible salt bridge. The pairs indicated do not match the distance criterion of d=4.5Å mentioned above. However, a series of moderate conformational changes in both, CD4 and BT061 can result in the formation of the indicated salt bridges. For BT061, a shift of the sequence stretches Ser_{56} to Gly_{68} of light chain, and Ser_{25} to Cys_{32}, as well as Ser_{52} to Gly_{59} of the heavy chain allows forming the salt bridges with Asp_{31} and Glu_{56} of CD4.

EXAMPLE 2 Creating and testing mutants of BT061

BT061 variable domain mutants were manufactured by introduction of specific mutations into the nucleotide sequences encoding the variable domains of BT061 and expression of the mutated amino acid sequence and therefore antibody or antibody fragments, using standard techniques for DNA manipulation and antibody production.

The following BT061 variants were made:

(1) six variants having one mutation each in all 6 CDRs : the mutations in CDR1, CDR2 and CDR3 of the light chain are G33A, A55G and L98I, respectively; the mutations in CDR1, CDR2 and CDR3 of the heavy chain are R33K, A63G, and S101T, respectively;

(2) one variant having two mutations in one variable domain: R33K and A63G in the heavy chain variable domain; and

(3) three variants having parallel mutation of both heavy and light chain (e.g. combinations of heavy and light chain variants from part (1): light chain L98I with heavy chain R33K; light chain A55G with heavy chain R33K; and light chain G33A with heavy chain R33K.

The ability of the BT061 variants to activate CD4+CD25+ regulatory T cells was determined by in vitro assay. A negative control of an antibody which does not bind to CD4 was used. The BT061 variant having a mutation in the heavy chain CDR3 (Y105W) was also created as a negative control;

based on the results obtained in example 1, it was predicted that this amino acid was critical to BT061 binding. As positive controls, an antibody produced from the the master light and heavy chain sequence was used, as well as a sample from BT061 produced for clinical trials.

In vitro assay:

The induction of suppressive capacity of CD4+ CD25+ regulatory T cells (Tregs) from healthy donors by variants of the antibody BT061 was assessed in allogeneic mixed lymphocytes reactions (indirect co-culture).

CD4+ CD25+ regulatory T cells were freshly isolated from a first donor (donor A). PBMCs were obtained from EDTA-blood by density gradient centrifugation. Tregs, responder T cells (Tresp) and APCs were immunomagnetically separated from PBMCs as previously described (Haas et al., J Immunol. 2007 Jul 15; 179(2):1322-30). Tregs were pre-incubated with or without plate-bound antibody for 2 days. The number and phenotype of Tregs was determined by six colour flow cytometry as previously described (Haas et al., 2007). Pre-incubated Tregs were transferred to responder T cells (second donor B) in the presence of T-cell depleted and irradiated PBMCs (first donor A). After stimulation, [^{3}H] thymidine was added and proliferation of responder T cells was measured after five days.

Results:

The results of the in vitro assay are shown below in Table 9. The percentage inhibition of responder T cell inhibition was measured three times for each variant and an average was taken.

Variant	% Inh1	% Inh2	% Inh3	Avg.	Std.dev.
LC master HC master	27,7%	25,4%	25,9%	**26,3%**	1,0%
BT61 Lot 52690	26,7%	24,1%	27,8%	**26,2%**	1,6%
LC master HC A63G	33,1%	25,5%	19,5%	**26,0%**	5,6%
LC master HC R33K-A63G	15,7%	21,5%	21,9%	**19,7%**	2,8%
LC L98I HC R33K	9,2%	24,3%	24,6%	**19,4%**	7,2%
LC master HC R33K	19,8%	18,8%	15,0%	**17,9%**	2,1%
HC master LC L98I	12,2%	8,4%	18,2%	**12,9%**	4,0%
LC A55G HC R33K	12,1%	6,4%	19,3%	**12,6%**	5,3%
LC G33A HC R33K	6,5%	7,9%	9,0%	**7,8%**	1,0%
Negative control	3,0%	7,0%	5,2%	**5,1%**	1,6%
LC master HC Y105W	5,3%	2,0%	7,0%	**4,8%**	2,0%
LC master HC S101T	3,1%	-3,6%	0,0%	**-0,2%**	2,7%

Table 9. Results from in vitro assay with BT061 variants

As predicted the knockout mutant of LC master HC Y105W did not bind CD4 and was unable to activate regulatory T cells. Further the results indicate that single positions within the heavy chain can be mutated at least according to the substitutions set out in Table 5 (single variants HC R33K, A63G and double variants HC R33K and A63G retained activity). Further, as predicted by the crystal structure work, the residues surrounding Tyr34 in the light chain which make up a loop also appear to be crucial for binding.

APPENDIX

```
HEADER    BIOTEST AG                                              09 APR 2009
TITLE     FAB FRAGMENT OF BT061 IN COMPLEX WITH CD4
COMPND    MOL_ID: 1;
COMPND   2 MOLECULE: FAB FRAGMENT;
COMPND   3 CHAIN: A;
COMPND   4 FRAGMENT: CD4
SOURCE    MOL_ID: 1;
SOURCE   2 SYNTHETIC: YES;
SOURCE   3 ORGANISM_SCIENTIFIC: HOMO SAPIENS
SOURCE   4 ORGANISM_COMMON: HUMAN
KEYWDS    FAB FRAGMENT, CD4
EXPDTA    X-RAY DIFFRACTION
REMARK   2
REMARK   2 RESOLUTION: 2.9 ANGSTROMS.
REMARK   3
REMARK   3 REFINEMENT.
REMARK   3   PROGRAM     : REFMAC 5.2.0005
REMARK   3   AUTHORS     : MURSHUDOV,VAGIN,DODSON
REMARK   3
REMARK   3    REFINEMENT TARGET : MAXIMUM LIKELIHOOD
REMARK   3
REMARK   3  DATA USED IN REFINEMENT.
REMARK   3   RESOLUTION RANGE HIGH (ANGSTROMS) :   2.88
REMARK   3   RESOLUTION RANGE LOW  (ANGSTROMS) :  49.27
REMARK   3   DATA CUTOFF            (SIGMA(F)) : NONE
REMARK   3   COMPLETENESS FOR RANGE        (%) : 100.00
REMARK   3   NUMBER OF REFLECTIONS             :   49941
REMARK   3
REMARK   3  FIT TO DATA USED IN REFINEMENT.
REMARK   3   CROSS-VALIDATION METHOD          : THROUGHOUT
REMARK   3   FREE R VALUE TEST SET SELECTION  : RANDOM
REMARK   3   R VALUE     (WORKING + TEST SET) : 0.23152
REMARK   3   R VALUE            (WORKING SET) :  0.23041
REMARK   3   FREE R VALUE                     :  0.28740
REMARK   3   FREE R VALUE TEST SET SIZE   (%) :  2.0
REMARK   3   FREE R VALUE TEST SET COUNT      :  1020
REMARK   3
REMARK   3  FIT IN THE HIGHEST RESOLUTION BIN.
REMARK   3   TOTAL NUMBER OF BINS USED           :      20
REMARK   3   BIN RESOLUTION RANGE HIGH           :   2.880
REMARK   3   BIN RESOLUTION RANGE LOW            :   2.955
REMARK   3   REFLECTION IN BIN     (WORKING SET) :    3636
REMARK   3   BIN COMPLETENESS (WORKING+TEST) (%) :  100.00
REMARK   3   BIN R VALUE           (WORKING SET) :   0.376
REMARK   3   BIN FREE R VALUE SET COUNT          :      75
REMARK   3   BIN FREE R VALUE                    :   0.371
REMARK   3
REMARK   3  NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK   3   ALL ATOMS                :    10284
REMARK   3
REMARK   3  B VALUES.
REMARK   3   FROM WILSON PLOT           (A**2) : NULL
REMARK   3   MEAN B VALUE      (OVERALL, A**2) :  52.022
REMARK   3   OVERALL ANISOTROPIC B VALUE.
REMARK   3    B11 (A**2) :    -1.61
REMARK   3    B22 (A**2) :     3.33
REMARK   3    B33 (A**2) :    -1.44
REMARK   3    B12 (A**2) :     0.00
REMARK   3    B13 (A**2) :     1.69
REMARK   3    B23 (A**2) :     0.00
```

```
REMARK   3
REMARK   3  ESTIMATED OVERALL COORDINATE ERROR.
REMARK   3   ESU BASED ON R VALUE                            (A):   0.722
REMARK   3   ESU BASED ON FREE R VALUE                       (A):   0.378
REMARK   3   ESU BASED ON MAXIMUM LIKELIHOOD                 (A):   0.295
REMARK   3   ESU FOR B VALUES BASED ON MAXIMUM LIKELIHOOD (A**2):  33.905
REMARK   3
REMARK   3 CORRELATION COEFFICIENTS.
REMARK   3   CORRELATION COEFFICIENT FO-FC      :   0.912
REMARK   3   CORRELATION COEFFICIENT FO-FC FREE :   0.876
REMARK   3
REMARK   3  RMS DEVIATIONS FROM IDEAL VALUES         COUNT    RMS    WEIGHT
REMARK   3   BOND LENGTHS REFINED ATOMS        (A): 10456 ; 0.009 ; 0.022
REMARK   3   BOND LENGTHS OTHERS               (A):  9324 ; 0.001 ; 0.020
REMARK   3   BOND ANGLES REFINED ATOMS   (DEGREES): 14158 ; 1.228 ; 1.961
REMARK   3   BOND ANGLES OTHERS          (DEGREES): 21862 ; 0.727 ; 3.000
REMARK   3   TORSION ANGLES, PERIOD 1    (DEGREES):  1306 ; 7.017 ; 5.000
REMARK   3   TORSION ANGLES, PERIOD 2    (DEGREES):   424 ;35.372 ;24.858
REMARK   3   TORSION ANGLES, PERIOD 3    (DEGREES):  1818 ;18.316 ;15.000
REMARK   3   TORSION ANGLES, PERIOD 4    (DEGREES):    41 ;16.414 ;15.000
REMARK   3   CHIRAL-CENTER RESTRAINTS       (A**3):  1602 ; 0.069 ; 0.200
REMARK   3   GENERAL PLANES REFINED ATOMS      (A): 11455 ; 0.003 ; 0.020
REMARK   3   GENERAL PLANES OTHERS             (A):  1996 ; 0.001 ; 0.020
REMARK   3   NON-BONDED CONTACTS REFINED ATOMS (A):  1858 ; 0.192 ; 0.200
REMARK   3   NON-BONDED CONTACTS OTHERS        (A):  9611 ; 0.173 ; 0.200
REMARK   3   NON-BONDED TORSION REFINED ATOMS  (A):  4911 ; 0.180 ; 0.200
REMARK   3   NON-BONDED TORSION OTHERS         (A):  6795 ; 0.083 ; 0.200
REMARK   3   H-BOND (X...Y) REFINED ATOMS      (A):   238 ; 0.216 ; 0.200
REMARK   3   H-BOND (X...Y) OTHERS             (A):     2 ; 0.093 ; 0.200
REMARK   3   SYMMETRY VDW REFINED ATOMS        (A):    14 ; 0.169 ; 0.200
REMARK   3   SYMMETRY VDW OTHERS               (A):    58 ; 0.166 ; 0.200
REMARK   3   SYMMETRY H-BOND REFINED ATOMS     (A):     4 ; 0.117 ; 0.200
REMARK   3
REMARK   3  ISOTROPIC THERMAL FACTOR RESTRAINTS.     COUNT   RMS    WEIGHT
REMARK   3   MAIN-CHAIN BOND REFINED ATOMS  (A**2):  8442 ; 1.414 ; 2.000
REMARK   3   MAIN-CHAIN BOND OTHER ATOMS    (A**2):  2703 ; 0.279 ; 2.000
REMARK   3   MAIN-CHAIN ANGLE REFINED ATOMS (A**2): 10593 ; 1.907 ; 3.000
REMARK   3   SIDE-CHAIN BOND REFINED ATOMS  (A**2):  4611 ; 2.821 ; 4.000
REMARK   3   SIDE-CHAIN ANGLE REFINED ATOMS (A**2):  3565 ; 4.196 ; 6.000
REMARK   3
REMARK   3  NCS RESTRAINTS STATISTICS
REMARK   3   NUMBER OF DIFFERENT NCS GROUPS :   4
REMARK   3
REMARK   3  NCS GROUP NUMBER                 :   1
REMARK   3     CHAIN NAMES                   : L A
REMARK   3     NUMBER OF COMPONENTS NCS GROUP :    1
REMARK   3       COMPONENT C  SSSEQI  TO  C   SSSEQI   CODE
REMARK   3           1     L      1       L     118      4
REMARK   3           1     A      1       A     118      4
REMARK   3                   GROUP CHAIN        COUNT   RMS     WEIGHT
REMARK   3   MEDIUM POSITIONAL  1    L    (A):   1730 ;  0.35 ;  0.50
REMARK   3   MEDIUM THERMAL     1    L (A**2):   1730 ;  0.41 ;  2.00
REMARK   3
REMARK   3  NCS GROUP NUMBER                 :   2
REMARK   3     CHAIN NAMES                   : L A
REMARK   3     NUMBER OF COMPONENTS NCS GROUP :    1
REMARK   3       COMPONENT C  SSSEQI  TO  C   SSSEQI   CODE
REMARK   3           1     L    119       L     222      4
REMARK   3           1     A    119       A     222      4
REMARK   3                   GROUP CHAIN        COUNT   RMS     WEIGHT
REMARK   3   MEDIUM POSITIONAL  2    L    (A):    478 ;  0.40 ;  0.50
REMARK   3   MEDIUM THERMAL     2    L (A**2):    478 ;  0.30 ;  2.00
REMARK   3
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REMARK   3  NCS GROUP NUMBER                 :   3
REMARK   3     CHAIN NAMES                     : H B
REMARK   3     NUMBER OF COMPONENTS NCS GROUP :    1
REMARK   3       COMPONENT C  SSSEQI  TO  C   SSSEQI    CODE
REMARK   3           1     H      1       H     114       4
REMARK   3           1     B      1       B     114       4
REMARK   3                   GROUP CHAIN         COUNT   RMS      WEIGHT
REMARK   3   MEDIUM POSITIONAL  3    H    (A):   1679 ;  0.41 ;  0.50
REMARK   3   MEDIUM THERMAL     3    H (A**2):   1679 ;  0.46 ;  2.00
REMARK   3
REMARK   3  NCS GROUP NUMBER                 :   4
REMARK   3     CHAIN NAMES                     : H B
REMARK   3     NUMBER OF COMPONENTS NCS GROUP :    1
REMARK   3       COMPONENT C  SSSEQI  TO  C   SSSEQI    CODE
REMARK   3           1     H    115       H     222       4
REMARK   3           1     B    115       B     222       4
REMARK   3                   GROUP CHAIN         COUNT   RMS      WEIGHT
REMARK   3   MEDIUM POSITIONAL  4    H    (A):   1062 ;  0.33 ;  0.50
REMARK   3   MEDIUM THERMAL     4    H (A**2):   1062 ;  0.33 ;  2.00
REMARK   3
REMARK   3
REMARK   3  TLS DETAILS
REMARK   3   NUMBER OF TLS GROUPS  :    6
REMARK   3   ATOM RECORD CONTAINS RESIDUAL B FACTORS ONLY
REMARK   3
REMARK   3   TLS GROUP :      1
REMARK   3    NUMBER OF COMPONENTS GROUP :    1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   L     1        L   118
REMARK   3    ORIGIN FOR THE GROUP (A):
REMARK   3    T TENSOR
REMARK   3      T11:   2.0000 T22:   0.0000
REMARK   3      T33:   0.0000 T12:   0.0000
REMARK   3      T13:   0.0000 T23:   0.0000
REMARK   3    L TENSOR
REMARK   3      L11:   0.0000 L22: 119.0000
REMARK   3      L33:   0.0000 L12: 222.0000
REMARK   3      L13:   0.0000 L23:   0.0000
REMARK   3    S TENSOR
REMARK   3      S11:   0.0000 S12:   0.0000 S13:   0.0000
REMARK   3      S21:   0.0000 S22:   0.0000 S23:   0.0000
REMARK   3      S31:   0.0000 S32:   0.0000 S33:   0.0000
REMARK   3
REMARK   3   TLS GROUP :      2
REMARK   3    NUMBER OF COMPONENTS GROUP :    1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   H     1        H   118
REMARK   3    ORIGIN FOR THE GROUP (A):
REMARK   3    T TENSOR
REMARK   3      T11:   4.0000 T22:   0.0000
REMARK   3      T33:   0.0000 T12:   0.0000
REMARK   3      T13:   0.0000 T23:   0.0000
REMARK   3    L TENSOR
REMARK   3      L11:   0.0000 L22: 119.0000
REMARK   3      L33:   0.0000 L12: 222.0000
REMARK   3      L13:   0.0000 L23:   0.0000
REMARK   3    S TENSOR
REMARK   3      S11:   0.0000 S12:   0.0000 S13:   0.0000
REMARK   3      S21:   0.0000 S22:   0.0000 S23:   0.0000
REMARK   3      S31:   0.0000 S32:   0.0000 S33:   0.0000
REMARK   3
REMARK   3   TLS GROUP :      3
REMARK   3    NUMBER OF COMPONENTS GROUP :    1
```

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REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   A     1        A   114
REMARK   3    ORIGIN FOR THE GROUP (A):
REMARK   3    T TENSOR
REMARK   3      T11:   6.0000 T22:   0.0000
REMARK   3      T33:   0.0000 T12:   0.0000
REMARK   3      T13:   0.0000 T23:   0.0000
REMARK   3    L TENSOR
REMARK   3      L11:   0.0000 L22: 115.0000
REMARK   3      L33:   0.0000 L12: 222.0000
REMARK   3      L13:   0.0000 L23:   0.0000
REMARK   3    S TENSOR
REMARK   3      S11:   0.0000 S12:   0.0000 S13:   0.0000
REMARK   3      S21:   0.0000 S22:   0.0000 S23:   0.0000
REMARK   3      S31:   0.0000 S32:   0.0000 S33:   0.0000
REMARK   3
REMARK   3   TLS GROUP :     4
REMARK   3    NUMBER OF COMPONENTS GROUP :    1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   B     1        B   114
REMARK   3    ORIGIN FOR THE GROUP (A):
REMARK   3    T TENSOR
REMARK   3      T11:   8.0000 T22:   0.0000
REMARK   3      T33:   0.0000 T12:   0.0000
REMARK   3      T13:   0.0000 T23:   0.0000
REMARK   3    L TENSOR
REMARK   3      L11:   0.0000 L22: 115.0000
REMARK   3      L33:   0.0000 L12: 222.0000
REMARK   3      L13:   0.0000 L23:   0.0000
REMARK   3    S TENSOR
REMARK   3      S11:   0.0000 S12:   0.0000 S13:   0.0000
REMARK   3      S21:   0.0000 S22:   0.0000 S23:   0.0000
REMARK   3      S31:   0.0000 S32:   0.0000 S33:   0.0000
REMARK   3
REMARK   3   TLS GROUP :     5
REMARK   3    NUMBER OF COMPONENTS GROUP :    1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   C     1        C   180
REMARK   3    ORIGIN FOR THE GROUP (A):
REMARK   3    T TENSOR
REMARK   3      T11:  10.0000 T22:   0.0000
REMARK   3      T33:   0.0000 T12:   0.0000
REMARK   3      T13:   0.0000 T23:   0.0000
REMARK   3    L TENSOR
REMARK   3      L11:   0.0000 L22:   1.0000
REMARK   3      L33:   0.0000 L12: 180.0000
REMARK   3      L13:   0.0000 L23:   0.0000
REMARK   3    S TENSOR
REMARK   3      S11:   0.0000 S12:   0.0000 S13:   0.0000
REMARK   3      S21:   0.0000 S22:   0.0000 S23:   0.0000
REMARK   3      S31:   0.0000 S32:   0.0000 S33:   0.0000
REMARK   3
REMARK   3   TLS GROUP :     6
REMARK   3    NUMBER OF COMPONENTS GROUP :    1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   C   181        C   380
REMARK   3    ORIGIN FOR THE GROUP (A):
REMARK   3    T TENSOR
REMARK   3      T11:  12.0000 T22:   0.0000
REMARK   3      T33:   0.0000 T12:   0.0000
REMARK   3      T13:   0.0000 T23:   0.0000
REMARK   3    L TENSOR
REMARK   3      L11:   0.0000 L22: 181.0000
```

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REMARK   3      L33:   0.0000 L12: 380.0000
REMARK   3      L13:   0.0000 L23:   0.0000
REMARK   3    S TENSOR
REMARK   3      S11:   0.0000 S12:   0.0000 S13:   0.0000
REMARK   3      S21:   0.0000 S22:   0.0000 S23:   0.0000
REMARK   3      S31:   0.0000 S32:   0.0000 S33:   0.0000
REMARK   3
REMARK   3   ATOM RECORD CONTAINS RESIDUAL B FACTORS ONLY
REMARK   3
REMARK   3   TLS GROUP :     1
REMARK   3    NUMBER OF COMPONENTS GROUP :    1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   L     1        L   118
REMARK   3    ORIGIN FOR THE GROUP (A):  34.0774   4.1630  34.7010
REMARK   3    T TENSOR
REMARK   3      T11:  -0.0925 T22:  -0.0085
REMARK   3      T33:  -0.0772 T12:   0.0721
REMARK   3      T13:   0.1030 T23:   0.1518
REMARK   3    L TENSOR
REMARK   3      L11:   2.1122 L22:   0.7711
REMARK   3      L33:   4.9967 L12:  -0.5661
REMARK   3      L13:   0.1050 L23:  -0.3455
REMARK   3    S TENSOR
REMARK   3      S11:  -0.0080 S12:   0.5079 S13:   0.2345
REMARK   3      S21:  -0.4260 S22:  -0.2376 S23:  -0.3549
REMARK   3      S31:   0.3135 S32:   0.8283 S33:   0.2455
REMARK   3
REMARK   3   TLS GROUP :     2
REMARK   3    NUMBER OF COMPONENTS GROUP :    1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   L   119        L   222
REMARK   3    ORIGIN FOR THE GROUP (A):  21.6146  -3.8126   1.1893
REMARK   3    T TENSOR
REMARK   3      T11:   0.4726 T22:   0.2750
REMARK   3      T33:  -0.0808 T12:  -0.0116
REMARK   3      T13:   0.1752 T23:  -0.0339
REMARK   3    L TENSOR
REMARK   3      L11:   6.9206 L22:   1.9549
REMARK   3      L33:   9.3382 L12:  -1.0476
REMARK   3      L13:   4.6283 L23:   0.1643
REMARK   3    S TENSOR
REMARK   3      S11:  -0.3330 S12:   1.0733 S13:  -0.2008
REMARK   3      S21:  -0.5473 S22:  -0.0661 S23:   0.0016
REMARK   3      S31:   0.3697 S32:   0.4209 S33:   0.3991
REMARK   3
REMARK   3   TLS GROUP :     3
REMARK   3    NUMBER OF COMPONENTS GROUP :    1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   H     1        H   118
REMARK   3    ORIGIN FOR THE GROUP (A):  12.9034   6.8440  41.4571
REMARK   3    T TENSOR
REMARK   3      T11:  -0.1425 T22:  -0.2315
REMARK   3      T33:  -0.1588 T12:   0.0165
REMARK   3      T13:   0.0200 T23:  -0.0215
REMARK   3    L TENSOR
REMARK   3      L11:   2.6891 L22:   1.4103
REMARK   3      L33:   2.8991 L12:  -0.9097
REMARK   3      L13:   0.3158 L23:   0.1940
REMARK   3    S TENSOR
REMARK   3      S11:  -0.0860 S12:   0.1826 S13:  -0.0201
REMARK   3      S21:  -0.0986 S22:  -0.1525 S23:   0.3016
REMARK   3      S31:   0.2526 S32:  -0.1665 S33:   0.2385
REMARK   3
```

```
REMARK   3   TLS GROUP :      4
REMARK   3    NUMBER OF COMPONENTS GROUP :     1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   H   119        H   222
REMARK   3    ORIGIN FOR THE GROUP (A):  10.0696  -4.9768  15.4814
REMARK   3    T TENSOR
REMARK   3      T11:   0.3487 T22:   0.1930
REMARK   3      T33:  -0.0301 T12:  -0.0884
REMARK   3      T13:   0.0902 T23:   0.0141
REMARK   3    L TENSOR
REMARK   3      L11:   4.9078 L22:   0.9490
REMARK   3      L33:   2.3693 L12:   0.1356
REMARK   3      L13:  -1.4071 L23:   0.9275
REMARK   3    S TENSOR
REMARK   3      S11:  -0.5914 S12:  -0.3320 S13:  -0.7844
REMARK   3      S21:  -0.5500 S22:   0.2083 S23:   0.0456
REMARK   3      S31:   0.8546 S32:  -0.5341 S33:   0.3830
REMARK   3
REMARK   3   TLS GROUP :      5
REMARK   3    NUMBER OF COMPONENTS GROUP :     1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   A     1        A   114
REMARK   3    ORIGIN FOR THE GROUP (A): -15.4841  -4.3916  40.7560
REMARK   3    T TENSOR
REMARK   3      T11:   0.0309 T22:  -0.0078
REMARK   3      T33:  -0.0631 T12:  -0.1474
REMARK   3      T13:  -0.0713 T23:   0.0966
REMARK   3    L TENSOR
REMARK   3      L11:   2.9713 L22:   2.0240
REMARK   3      L33:   4.0886 L12:   1.7325
REMARK   3      L13:   0.6998 L23:  -0.4779
REMARK   3    S TENSOR
REMARK   3      S11:  -0.5589 S12:   0.9646 S13:   0.4929
REMARK   3      S21:  -0.3574 S22:   0.2963 S23:   0.1246
REMARK   3      S31:  -0.6789 S32:   0.3641 S33:   0.2626
REMARK   3
REMARK   3   TLS GROUP :      6
REMARK   3    NUMBER OF COMPONENTS GROUP :     1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   A   115        A   222
REMARK   3    ORIGIN FOR THE GROUP (A): -18.4640  -5.6643  13.2181
REMARK   3    T TENSOR
REMARK   3      T11:   0.3721 T22:   0.5165
REMARK   3      T33:   0.1442 T12:  -0.1750
REMARK   3      T13:  -0.1099 T23:   0.3085
REMARK   3    L TENSOR
REMARK   3      L11:   7.9687 L22:   9.9652
REMARK   3      L33:   6.7758 L12:   8.8789
REMARK   3      L13:   3.4153 L23:   4.4245
REMARK   3    S TENSOR
REMARK   3      S11:  -0.5121 S12:  -0.1151 S13:   0.2897
REMARK   3      S21:  -0.6527 S22:   0.0754 S23:   0.2830
REMARK   3      S31:  -0.1875 S32:   0.5151 S33:   0.4367
REMARK   3
REMARK   3   TLS GROUP :      7
REMARK   3    NUMBER OF COMPONENTS GROUP :     1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   B     1        B   114
REMARK   3    ORIGIN FOR THE GROUP (A): -26.6676 -23.2278  44.1916
REMARK   3    T TENSOR
REMARK   3      T11:  -0.1839 T22:  -0.0790
REMARK   3      T33:  -0.0886 T12:  -0.0213
REMARK   3      T13:   0.0625 T23:  -0.1009
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REMARK   3    L TENSOR
REMARK   3      L11:    3.0455 L22:    1.4373
REMARK   3      L33:    2.6154 L12:    0.5832
REMARK   3      L13:    1.1863 L23:    0.0809
REMARK   3    S TENSOR
REMARK   3      S11:   -0.1089 S12:    0.5431 S13:   -0.7596
REMARK   3      S21:   -0.1800 S22:    0.1339 S23:   -0.1796
REMARK   3      S31:    0.1077 S32:    0.0582 S33:   -0.0250
REMARK   3
REMARK   3   TLS GROUP :     8
REMARK   3    NUMBER OF COMPONENTS GROUP :    1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   B   115        B   222
REMARK   3    ORIGIN FOR THE GROUP (A): -25.1927 -22.6544  15.6984
REMARK   3    T TENSOR
REMARK   3      T11:    0.1708 T22:    0.8383
REMARK   3      T33:   -0.1174 T12:   -0.1954
REMARK   3      T13:    0.0466 T23:   -0.1825
REMARK   3    L TENSOR
REMARK   3      L11:    0.6073 L22:    3.3530
REMARK   3      L33:    3.8016 L12:    1.4235
REMARK   3      L13:    0.2857 L23:    0.4225
REMARK   3    S TENSOR
REMARK   3      S11:   -0.4259 S12:    0.6847 S13:    0.0804
REMARK   3      S21:   -0.7985 S22:    0.3366 S23:   -0.0886
REMARK   3      S31:    0.2684 S32:    0.4004 S33:    0.0893
REMARK   3
REMARK   3   TLS GROUP :     9
REMARK   3    NUMBER OF COMPONENTS GROUP :    1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   C     1        C   180
REMARK   3    ORIGIN FOR THE GROUP (A):  35.7158  -7.3606  65.7332
REMARK   3    T TENSOR
REMARK   3      T11:   -0.1452 T22:   -0.0687
REMARK   3      T33:   -0.0721 T12:    0.0065
REMARK   3      T13:   -0.0658 T23:    0.0456
REMARK   3    L TENSOR
REMARK   3      L11:    1.1034 L22:    4.2466
REMARK   3      L33:    1.1325 L12:   -0.2671
REMARK   3      L13:   -0.3798 L23:    1.1165
REMARK   3    S TENSOR
REMARK   3      S11:    0.0853 S12:   -0.1113 S13:   -0.1585
REMARK   3      S21:    0.0004 S22:   -0.0963 S23:   -0.2630
REMARK   3      S31:    0.0304 S32:    0.1813 S33:    0.0109
REMARK   3
REMARK   3   TLS GROUP :    10
REMARK   3    NUMBER OF COMPONENTS GROUP :    1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   D     1        D   180
REMARK   3    ORIGIN FOR THE GROUP (A):   1.4791 -18.6629  63.8831
REMARK   3    T TENSOR
REMARK   3      T11:   -0.0882 T22:   -0.2158
REMARK   3      T33:   -0.0033 T12:   -0.0591
REMARK   3      T13:   -0.0712 T23:    0.0506
REMARK   3    L TENSOR
REMARK   3      L11:    4.1627 L22:    0.6887
REMARK   3      L33:    1.6928 L12:   -0.5821
REMARK   3      L13:   -1.3565 L23:   -0.0674
REMARK   3    S TENSOR
REMARK   3      S11:    0.0942 S12:    0.0481 S13:   -0.1530
REMARK   3      S21:    0.0632 S22:   -0.0674 S23:   -0.1425
REMARK   3      S31:   -0.0044 S32:    0.1570 S33:   -0.0268
REMARK   3
```

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REMARK   3   TLS GROUP :    11
REMARK   3    NUMBER OF COMPONENTS GROUP :    1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   C   181        C   380
REMARK   3    ORIGIN FOR THE GROUP (A):  36.5001  36.1209  86.2248
REMARK   3    T TENSOR
REMARK   3      T11:   0.0149 T22:   0.0474
REMARK   3      T33:   0.0512 T12:  -0.0859
REMARK   3      T13:  -0.0012 T23:   0.0006
REMARK   3    L TENSOR
REMARK   3      L11:   0.4991 L22:   4.2729
REMARK   3      L33:   2.2884 L12:   0.0613
REMARK   3      L13:  -0.0422 L23:   1.6006
REMARK   3    S TENSOR
REMARK   3      S11:   0.0700 S12:  -0.1894 S13:   0.3339
REMARK   3      S21:   0.3199 S22:  -0.1636 S23:   0.0538
REMARK   3      S31:  -0.4706 S32:  -0.0348 S33:   0.0936
REMARK   3
REMARK   3   TLS GROUP :    12
REMARK   3    NUMBER OF COMPONENTS GROUP :    1
REMARK   3    COMPONENTS        C SSSEQI   TO  C SSSEQI
REMARK   3    RESIDUE RANGE :   D   181        D   380
REMARK   3    ORIGIN FOR THE GROUP (A): -22.0680  -7.2511  94.0538
REMARK   3    T TENSOR
REMARK   3      T11:   0.3324 T22:  -0.0300
REMARK   3      T33:   0.1241 T12:  -0.0639
REMARK   3      T13:  -0.0093 T23:  -0.1280
REMARK   3    L TENSOR
REMARK   3      L11:   3.2904 L22:   1.2480
REMARK   3      L33:   5.3741 L12:  -0.6499
REMARK   3      L13:  -3.1202 L23:   1.5523
REMARK   3    S TENSOR
REMARK   3      S11:   0.2251 S12:  -0.5588 S13:   0.4970
REMARK   3      S21:   0.6434 S22:  -0.2477 S23:  -0.0135
REMARK   3      S31:  -0.3232 S32:   0.0394 S33:   0.0226
REMARK   3
REMARK   3
REMARK   3  BULK SOLVENT MODELLING.
REMARK   3   METHOD USED : BABINET MODEL WITH MASK
REMARK   3   PARAMETERS FOR MASK CALCULATION
REMARK   3   VDW PROBE RADIUS    :   1.20
REMARK   3   ION PROBE RADIUS    :   0.80
REMARK   3   SHRINKAGE RADIUS    :   0.80
REMARK   3
REMARK   3  OTHER REFINEMENT REMARKS:
REMARK   3  HYDROGENS HAVE BEEN ADDED IN THE RIDING POSITIONS
REMARK   3
REMARK 200
REMARK 200  EXPERIMENTAL DETAILS
REMARK 200  EXPERIMENT TYPE                : X-RAY DIFFRACTION
REMARK 200  DATE OF DATA COLLECTION        : NULL
REMARK 200  TEMPERATURE           (KELVIN) : 100
REMARK 200  PH                             : NULL
REMARK 200  NUMBER OF CRYSTALS USED        : 1
REMARK 200
REMARK 200  SYNCHROTRON              (Y/N) : Y
REMARK 200  RADIATION SOURCE               : SLS
REMARK 200  BEAMLINE                       : PX
REMARK 200  X-RAY GENERATOR MODEL          : NULL
REMARK 200  MONOCHROMATIC OR LAUE    (M/L) : M
REMARK 200  WAVELENGTH OR RANGE        (A) : 1.0000
REMARK 200  MONOCHROMATOR                  : NULL
REMARK 200  OPTICS                         : NULL
```

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REMARK 200
REMARK 200  DETECTOR TYPE                    : PILATUS 6M
REMARK 200  DETECTOR MANUFACTURER            : DECTRIS
REMARK 200  INTENSITY-INTEGRATION SOFTWARE : XDS
REMARK 200  DATA SCALING SOFTWARE            : XSCALE
REMARK 200
REMARK 200  NUMBER OF UNIQUE REFLECTIONS   : 50962
REMARK 200  RESOLUTION RANGE HIGH      (A) : 2.88
REMARK 200  RESOLUTION RANGE LOW       (A) : 49.27
REMARK 200  REJECTION CRITERIA  (SIGMA(I)) : 0.0
REMARK 200
REMARK 200 OVERALL.
REMARK 200  COMPLETENESS FOR RANGE     (%) : 98.2
REMARK 200  DATA REDUNDANCY                : 2.9
REMARK 200  R MERGE                    (I) : 8.40
REMARK 200  R SYM                      (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR THE DATA SET  : NULL
REMARK 200
REMARK 200 IN THE HIGHEST RESOLUTION SHELL.
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 2.88
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE LOW  (A) : 2.99
REMARK 200  COMPLETENESS FOR SHELL     (%) : 97.2
REMARK 200  DATA REDUNDANCY IN SHELL       : 2.9
REMARK 200  R MERGE FOR SHELL          (I) : 71.00
REMARK 200  R SYM FOR SHELL            (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR SHELL         : NULL
REMARK 200
REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH
REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: OTHER
REMARK 200 SOFTWARE USED: NULL
REMARK 200 STARTING MODEL: NONE
REMARK 200
REMARK 200 REMARK: NONE
REMARK 280
REMARK 280 CRYSTAL
REMARK 280 SOLVENT CONTENT, VS   (%): 80.54
REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS**3/DA): 6.32
REMARK 280
REMARK 280 CRYSTALLIZATION CONDITIONS: NULL
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY
REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 1 21 1
REMARK 290
REMARK 290      SYMOP   SYMMETRY
REMARK 290     NNNMMM   OPERATOR
REMARK 290       1555   X,Y,Z
REMARK 290       2555   -X,Y+1/2,-Z
REMARK 290
REMARK 290     WHERE NNN -> OPERATOR NUMBER
REMARK 290           MMM -> TRANSLATION VECTOR
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS
REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM
REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY
REMARK 290 RELATED MOLECULES.
REMARK 290 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND ANGLES
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
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REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,3(1X,A4,2X),12X,F5.1)
REMARK 500
REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991
REMARK 500
REMARK 500 REMARK: NULL
SSBOND   1 CYS L   23    CYS L   92
SSBOND   2 CYS L  138    CYS L  198
SSBOND   3 CYS H   22    CYS H   98
SSBOND   4 CYS H  151    CYS H  207
SSBOND   5 CYS A   23    CYS A   92
SSBOND   6 CYS B   22    CYS B   98
SSBOND   7 CYS B  151    CYS B  207
SSBOND   8 CYS C   41    CYS C  109
SSBOND   9 CYS C  155    CYS C  184
SSBOND  10 CYS D   41    CYS D  109
SSBOND  11 CYS D  155    CYS D  184
CISPEP   1 SER L    7    PRO L    8                    0.00
CISPEP   2 LEU L   98    PRO L   99                    0.00
CISPEP   3 TYR L  144    PRO L  145                    0.00
LINK             PRO H 137                     LEU H 149                 gap
CISPEP   4 PHE H  157    PRO H  158                    0.00
CISPEP   5 GLU H  159    PRO H  160                    0.00
LINK             VAL H 192                     CYS H 207                 gap
CISPEP   6 SER A    7    PRO A    8                    0.00
CISPEP   7 LEU A   98    PRO A   99                    0.00
LINK             VAL A 119                     VAL A 137                 gap
CISPEP   8 TYR A  144    PRO A  145                    0.00
LINK             ARG A 146                     SER A 160                 gap
LINK             LEU B 135                     GLY B 150                 gap
CISPEP   9 PHE B  157    PRO B  158                    0.00
CISPEP  10 GLU B  159    PRO B  160                    0.00
LINK             VAL B 192                     CYS B 207                 gap
CISPEP  11 ASP C  269    PRO C  270                    0.00
CISPEP  12 LEU C  278    PRO C  279                    0.00
LINK             THR C 320                     VAL C 330                 gap
LINK             LYS C 337                     ARG C 354                 gap
LINK             VAL C 358                     GLN C 369                 gap
LINK             TYR D 212                     GLU D 220                 gap
LINK             LEU D 238                     TRP D 251                 gap
LINK             LYS D 264                     PRO D 270                 gap
CISPEP  13 LEU D  278    PRO D  279                    0.00
LINK             LEU D 282                     ASN D 296                 gap
CRYST1  110.180   78.940  132.850  90.00  94.83  90.00 P 1 21 1
SCALE1      0.009076  0.000000  0.000767        0.00000
SCALE2      0.000000  0.012668  0.000000        0.00000
SCALE3      0.000000  0.000000  0.007554        0.00000
ATOM      1  N   ASP L   1      25.380  23.459  40.132  1.00 63.38           N
ATOM      2  CA  ASP L   1      25.701  22.022  39.898  1.00 63.63           C
ATOM      4  CB  ASP L   1      25.152  21.571  38.537  1.00 65.02           C
ATOM      7  CG  ASP L   1      23.658  21.304  38.570  1.00 68.49           C
ATOM      8  OD1 ASP L   1      23.196  20.423  37.797  1.00 66.99           O
ATOM      9  OD2 ASP L   1      22.958  21.976  39.373  1.00 66.85           O
ATOM     10  C   ASP L   1      27.193  21.736  39.943  1.00 61.99           C
ATOM     11  O   ASP L   1      28.013  22.646  39.993  1.00 62.03           O
ATOM     15  N   ILE L   2      27.518  20.449  39.938  1.00 60.78           N
ATOM     16  CA  ILE L   2      28.867  19.976  39.683  1.00 60.23           C
ATOM     18  CB  ILE L   2      29.363  19.040  40.806  1.00 59.25           C
ATOM     20  CG1 ILE L   2      29.357  19.783  42.139  1.00 60.29           C
ATOM     23  CD1 ILE L   2      30.101  19.074  43.258  1.00 61.36           C
ATOM     27  CG2 ILE L   2      30.776  18.548  40.510  1.00 60.46           C
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ATOM	31	C	ILE	L	2	28.856	19.221	38.356	1.00	59.29	C
ATOM	32	O	ILE	L	2	28.034	18.319	38.159	1.00	59.02	O
ATOM	34	N	VAL	L	3	29.774	19.582	37.458	1.00	57.94	N
ATOM	35	CA	VAL	L	3	29.889	18.928	36.151	1.00	57.13	C
ATOM	37	CB	VAL	L	3	30.134	19.933	35.026	1.00	56.55	C
ATOM	39	CG1	VAL	L	3	30.245	19.203	33.680	1.00	57.32	C
ATOM	43	CG2	VAL	L	3	29.025	20.976	34.993	1.00	56.20	C
ATOM	47	C	VAL	L	3	31.017	17.899	36.101	1.00	56.43	C
ATOM	48	O	VAL	L	3	32.192	18.234	36.238	1.00	55.47	O
ATOM	50	N	MET	L	4	30.627	16.648	35.876	1.00	56.71	N
ATOM	51	CA	MET	L	4	31.553	15.549	35.670	1.00	55.20	C
ATOM	53	CB	MET	L	4	30.915	14.247	36.126	1.00	55.10	C
ATOM	56	CG	MET	L	4	30.512	14.258	37.561	1.00	55.51	C
ATOM	59	SD	MET	L	4	31.956	14.143	38.626	1.00	59.57	S
ATOM	60	CE	MET	L	4	31.566	15.426	39.802	1.00	62.32	C
ATOM	64	C	MET	L	4	31.900	15.446	34.187	1.00	54.82	C
ATOM	65	O	MET	L	4	31.045	15.149	33.351	1.00	54.44	O
ATOM	67	N	THR	L	5	33.162	15.694	33.871	1.00	53.54	N
ATOM	68	CA	THR	L	5	33.659	15.576	32.520	1.00	53.71	C
ATOM	70	CB	THR	L	5	34.503	16.793	32.181	1.00	53.53	C
ATOM	72	OG1	THR	L	5	33.683	17.966	32.261	1.00	54.63	O
ATOM	74	CG2	THR	L	5	35.102	16.677	30.796	1.00	53.09	C
ATOM	78	C	THR	L	5	34.518	14.330	32.433	1.00	54.11	C
ATOM	79	O	THR	L	5	35.487	14.195	33.166	1.00	54.88	O
ATOM	81	N	GLN	L	6	34.150	13.413	31.547	1.00	55.17	N
ATOM	82	CA	GLN	L	6	34.957	12.215	31.300	1.00	54.24	C
ATOM	84	CB	GLN	L	6	34.063	11.008	31.063	1.00	54.16	C
ATOM	87	CG	GLN	L	6	33.285	10.641	32.287	1.00	55.97	C
ATOM	90	CD	GLN	L	6	32.500	9.387	32.109	1.00	53.56	C
ATOM	91	OE1	GLN	L	6	31.370	9.289	32.581	1.00	51.02	O
ATOM	92	NE2	GLN	L	6	33.087	8.409	31.423	1.00	52.33	N
ATOM	95	C	GLN	L	6	35.902	12.380	30.114	1.00	53.83	C
ATOM	96	O	GLN	L	6	35.716	13.242	29.266	1.00	53.74	O
ATOM	98	N	SER	L	7	36.907	11.522	30.052	1.00	53.31	N
ATOM	99	CA	SER	L	7	37.941	11.649	29.050	1.00	52.92	C
ATOM	101	CB	SER	L	7	38.860	12.803	29.451	1.00	51.79	C
ATOM	104	OG	SER	L	7	40.157	12.650	28.914	1.00	55.05	O
ATOM	106	C	SER	L	7	38.716	10.326	28.934	1.00	52.77	C
ATOM	107	O	SER	L	7	39.139	9.776	29.949	1.00	52.30	O
ATOM	109	N	PRO	L	8	38.872	9.788	27.705	1.00	52.09	N
ATOM	110	CA	PRO	L	8	38.334	10.230	26.423	1.00	50.67	C
ATOM	112	CB	PRO	L	8	39.185	9.461	25.419	1.00	50.52	C
ATOM	115	CG	PRO	L	8	39.483	8.200	26.096	1.00	51.62	C
ATOM	118	CD	PRO	L	8	39.694	8.575	27.542	1.00	52.48	C
ATOM	121	C	PRO	L	8	36.879	9.840	26.255	1.00	50.37	C
ATOM	122	O	PRO	L	8	36.318	9.191	27.130	1.00	49.80	O
ATOM	123	N	ASP	L	9	36.289	10.232	25.127	1.00	51.41	N
ATOM	124	CA	ASP	L	9	34.908	9.893	24.800	1.00	51.96	C
ATOM	126	CB	ASP	L	9	34.356	10.828	23.724	1.00	51.80	C
ATOM	129	CG	ASP	L	9	34.053	12.218	24.259	1.00	54.57	C
ATOM	130	OD1	ASP	L	9	33.314	12.333	25.258	1.00	58.63	O
ATOM	131	OD2	ASP	L	9	34.538	13.206	23.676	1.00	58.36	O
ATOM	132	C	ASP	L	9	34.792	8.450	24.339	1.00	52.42	C
ATOM	133	O	ASP	L	9	33.896	7.734	24.768	1.00	53.87	O
ATOM	135	N	SER	L	10	35.692	8.024	23.464	1.00	52.69	N
ATOM	136	CA	SER	L	10	35.696	6.648	22.988	1.00	54.38	C
ATOM	138	CB	SER	L	10	35.133	6.564	21.577	1.00	55.07	C
ATOM	141	OG	SER	L	10	35.899	7.345	20.677	1.00	59.21	O
ATOM	143	C	SER	L	10	37.101	6.078	23.023	1.00	55.27	C
ATOM	144	O	SER	L	10	38.079	6.816	23.066	1.00	55.84	O
ATOM	146	N	LEU	L	11	37.193	4.757	22.991	1.00	56.01	N
ATOM	147	CA	LEU	L	11	38.438	4.086	23.304	1.00	55.98	C
ATOM	149	CB	LEU	L	11	38.651	4.118	24.819	1.00	56.96	C

ATOM	152	CG	LEU	L	11	39.813	3.304	25.387	1.00	57.49	C
ATOM	154	CD1	LEU	L	11	41.134	3.780	24.769	1.00	59.64	C
ATOM	158	CD2	LEU	L	11	39.828	3.382	26.917	1.00	56.04	C
ATOM	162	C	LEU	L	11	38.412	2.646	22.831	1.00	56.18	C
ATOM	163	O	LEU	L	11	37.454	1.920	23.085	1.00	57.30	O
ATOM	165	N	ALA	L	12	39.477	2.241	22.151	1.00	55.92	N
ATOM	166	CA	ALA	L	12	39.660	0.860	21.753	1.00	56.55	C
ATOM	168	CB	ALA	L	12	39.599	0.732	20.243	1.00	57.50	C
ATOM	172	C	ALA	L	12	41.011	0.397	22.252	1.00	57.38	C
ATOM	173	O	ALA	L	12	41.979	1.152	22.203	1.00	59.18	O
ATOM	175	N	VAL	L	13	41.079	-0.840	22.731	1.00	56.85	N
ATOM	176	CA	VAL	L	13	42.357	-1.448	23.090	1.00	56.67	C
ATOM	178	CB	VAL	L	13	42.770	-1.087	24.551	1.00	57.06	C
ATOM	180	CG1	VAL	L	13	42.256	-2.121	25.547	1.00	57.39	C
ATOM	184	CG2	VAL	L	13	44.293	-0.921	24.674	1.00	58.38	C
ATOM	188	C	VAL	L	13	42.254	-2.960	22.872	1.00	56.89	C
ATOM	189	O	VAL	L	13	41.146	-3.501	22.845	1.00	57.82	O
ATOM	191	N	SER	L	14	43.395	-3.631	22.703	1.00	55.08	N
ATOM	192	CA	SER	L	14	43.404	-5.051	22.348	1.00	53.83	C
ATOM	194	CB	SER	L	14	44.764	-5.459	21.799	1.00	54.07	C
ATOM	197	OG	SER	L	14	45.058	-4.758	20.602	1.00	56.13	O
ATOM	199	C	SER	L	14	43.054	-5.914	23.544	1.00	53.30	C
ATOM	200	O	SER	L	14	43.113	-5.448	24.689	1.00	53.10	O
ATOM	202	N	LEU	L	15	42.683	-7.168	23.273	1.00	52.90	N
ATOM	203	CA	LEU	L	15	42.353	-8.125	24.343	1.00	52.23	C
ATOM	205	CB	LEU	L	15	42.037	-9.531	23.800	1.00	51.58	C
ATOM	208	CG	LEU	L	15	40.609	-10.098	23.763	1.00	49.56	C
ATOM	210	CD1	LEU	L	15	40.642	-11.575	24.161	1.00	45.14	C
ATOM	214	CD2	LEU	L	15	39.621	-9.369	24.663	1.00	52.95	C
ATOM	218	C	LEU	L	15	43.503	-8.242	25.325	1.00	51.62	C
ATOM	219	O	LEU	L	15	44.663	-8.288	24.928	1.00	53.26	O
ATOM	221	N	GLY	L	16	43.177	-8.294	26.606	1.00	51.58	N
ATOM	222	CA	GLY	L	16	44.181	-8.502	27.636	1.00	51.94	C
ATOM	225	C	GLY	L	16	45.024	-7.285	27.951	1.00	51.47	C
ATOM	226	O	GLY	L	16	45.996	-7.399	28.686	1.00	51.96	O
ATOM	228	N	GLU	L	17	44.640	-6.120	27.430	1.00	51.42	N
ATOM	229	CA	GLU	L	17	45.424	-4.895	27.593	1.00	52.11	C
ATOM	231	CB	GLU	L	17	45.699	-4.290	26.219	1.00	51.96	C
ATOM	234	CG	GLU	L	17	47.012	-3.531	26.116	1.00	52.88	C
ATOM	237	CD	GLU	L	17	47.389	-3.222	24.675	1.00	54.10	C
ATOM	238	OE1	GLU	L	17	46.480	-2.925	23.865	1.00	54.55	O
ATOM	239	OE2	GLU	L	17	48.596	-3.278	24.350	1.00	55.90	O
ATOM	240	C	GLU	L	17	44.716	-3.874	28.497	1.00	52.53	C
ATOM	241	O	GLU	L	17	43.513	-3.986	28.759	1.00	52.88	O
ATOM	243	N	ARG	L	18	45.464	-2.877	28.969	1.00	52.79	N
ATOM	244	CA	ARG	L	18	44.907	-1.838	29.845	1.00	52.48	C
ATOM	246	CB	ARG	L	18	46.022	-1.030	30.522	1.00	52.23	C
ATOM	249	CG	ARG	L	18	45.527	-0.108	31.648	1.00	55.11	C
ATOM	252	CD	ARG	L	18	46.640	0.740	32.240	1.00	56.70	C
ATOM	255	NE	ARG	L	18	47.354	0.049	33.311	1.00	62.41	N
ATOM	257	CZ	ARG	L	18	48.601	0.324	33.698	1.00	65.36	C
ATOM	258	NH1	ARG	L	18	49.306	1.287	33.102	1.00	64.22	N
ATOM	261	NH2	ARG	L	18	49.155	-0.377	34.686	1.00	63.92	N
ATOM	264	C	ARG	L	18	43.960	-0.877	29.114	1.00	51.24	C
ATOM	265	O	ARG	L	18	44.192	-0.498	27.970	1.00	49.77	O
ATOM	267	N	ALA	L	19	42.884	-0.504	29.802	1.00	51.67	N
ATOM	268	CA	ALA	L	19	41.957	0.526	29.348	1.00	52.18	C
ATOM	270	CB	ALA	L	19	40.611	-0.078	28.990	1.00	52.39	C
ATOM	274	C	ALA	L	19	41.800	1.496	30.492	1.00	51.75	C
ATOM	275	O	ALA	L	19	41.690	1.084	31.640	1.00	53.75	O
ATOM	277	N	THR	L	20	41.793	2.782	30.187	1.00	51.92	N
ATOM	278	CA	THR	L	20	41.799	3.792	31.232	1.00	52.69	C
ATOM	280	CB	THR	L	20	43.236	4.258	31.501	1.00	51.99	C

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ATOM    282  OG1 THR L  20      43.952   3.180  32.108  1.00 52.75           O
ATOM    284  CG2 THR L  20      43.280   5.469  32.422  1.00 51.10           C
ATOM    288  C   THR L  20      40.882   4.957  30.869  1.00 53.68           C
ATOM    289  O   THR L  20      40.926   5.469  29.748  1.00 53.88           O
ATOM    291  N   ILE L  21      40.040   5.349  31.826  1.00 54.16           N
ATOM    292  CA  ILE L  21      39.089   6.430  31.632  1.00 54.15           C
ATOM    294  CB  ILE L  21      37.652   5.930  31.697  1.00 54.03           C
ATOM    296  CG1 ILE L  21      37.488   4.668  30.849  1.00 52.98           C
ATOM    299  CD1 ILE L  21      36.156   4.011  30.996  1.00 53.32           C
ATOM    303  CG2 ILE L  21      36.700   7.048  31.256  1.00 53.86           C
ATOM    307  C   ILE L  21      39.247   7.452  32.727  1.00 54.75           C
ATOM    308  O   ILE L  21      39.315   7.100  33.897  1.00 57.16           O
ATOM    310  N   ASN L  22      39.286   8.719  32.350  1.00 55.21           N
ATOM    311  CA  ASN L  22      39.362   9.788  33.321  1.00 55.96           C
ATOM    313  CB  ASN L  22      40.346  10.856  32.882  1.00 56.21           C
ATOM    316  CG  ASN L  22      41.769  10.434  33.093  1.00 58.98           C
ATOM    317  OD1 ASN L  22      42.676  11.260  33.078  1.00 62.63           O
ATOM    318  ND2 ASN L  22      41.982   9.136  33.295  1.00 60.66           N
ATOM    321  C   ASN L  22      38.021  10.422  33.538  1.00 57.66           C
ATOM    322  O   ASN L  22      37.162  10.415  32.658  1.00 59.39           O
ATOM    324  N   CYS L  23      37.859  10.968  34.735  1.00 58.38           N
ATOM    325  CA  CYS L  23      36.694  11.737  35.085  1.00 56.40           C
ATOM    327  CB  CYS L  23      35.699  10.860  35.814  1.00 57.46           C
ATOM    330  SG  CYS L  23      34.170  11.702  36.051  1.00 64.01           S
ATOM    332  C   CYS L  23      37.131  12.882  35.976  1.00 54.72           C
ATOM    333  O   CYS L  23      37.849  12.667  36.942  1.00 53.36           O
ATOM    335  N   ARG L  24      36.725  14.098  35.632  1.00 55.34           N
ATOM    336  CA  ARG L  24      37.128  15.280  36.382  1.00 55.30           C
ATOM    338  CB  ARG L  24      38.003  16.193  35.535  1.00 54.44           C
ATOM    341  CG  ARG L  24      38.513  17.408  36.314  1.00 58.14           C
ATOM    344  CD  ARG L  24      39.648  18.128  35.612  1.00 62.00           C
ATOM    347  NE  ARG L  24      40.875  17.326  35.557  1.00 67.28           N
ATOM    349  CZ  ARG L  24      42.021  17.732  35.007  1.00 70.82           C
ATOM    350  NH1 ARG L  24      42.126  18.934  34.446  1.00 73.39           N
ATOM    353  NH2 ARG L  24      43.075  16.926  35.013  1.00 72.54           N
ATOM    356  C   ARG L  24      35.893  16.020  36.801  1.00 54.29           C
ATOM    357  O   ARG L  24      34.916  16.024  36.062  1.00 57.57           O
ATOM    359  N   ALA L  25      35.939  16.662  37.965  1.00 52.05           N
ATOM    360  CA  ALA L  25      34.769  17.329  38.539  1.00 50.95           C
ATOM    362  CB  ALA L  25      34.510  16.759  39.909  1.00 51.27           C
ATOM    366  C   ALA L  25      34.982  18.837  38.636  1.00 49.44           C
ATOM    367  O   ALA L  25      36.085  19.255  38.948  1.00 49.36           O
ATOM    369  N   SER L  26      33.929  19.633  38.398  1.00 48.83           N
ATOM    370  CA  SER L  26      33.973  21.115  38.500  1.00 48.35           C
ATOM    372  CB  SER L  26      32.568  21.730  38.505  1.00 47.36           C
ATOM    375  OG  SER L  26      31.646  20.947  37.787  1.00 51.82           O
ATOM    377  C   SER L  26      34.664  21.621  39.759  1.00 48.75           C
ATOM    378  O   SER L  26      35.474  22.555  39.699  1.00 50.06           O
ATOM    380  N   LYS L  27      34.304  21.040  40.902  1.00 48.88           N
ATOM    381  CA  LYS L  27      34.964  21.353  42.163  1.00 50.43           C
ATOM    383  CB  LYS L  27      34.161  22.366  42.978  1.00 52.16           C
ATOM    386  CG  LYS L  27      32.749  21.981  43.368  1.00 54.56           C
ATOM    389  CD  LYS L  27      31.967  23.255  43.735  1.00 54.52           C
ATOM    392  CE  LYS L  27      30.692  22.965  44.503  1.00 57.35           C
ATOM    395  NZ  LYS L  27      29.707  24.077  44.335  1.00 58.07           N
ATOM    399  C   LYS L  27      35.230  20.087  42.940  1.00 49.45           C
ATOM    400  O   LYS L  27      34.836  19.017  42.508  1.00 47.81           O
ATOM    402  N   SER L  28      35.939  20.202  44.059  1.00 51.44           N
ATOM    403  CA  SER L  28      36.385  19.020  44.799  1.00 51.83           C
ATOM    405  CB  SER L  28      37.304  19.379  45.964  1.00 52.23           C
ATOM    408  OG  SER L  28      37.520  18.241  46.785  1.00 52.48           O
ATOM    410  C   SER L  28      35.202  18.272  45.347  1.00 53.06           C
ATOM    411  O   SER L  28      34.250  18.877  45.839  1.00 54.62           O
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ATOM	413	N	VAL	L	29	35.293	16.951	45.292	1.00	52.94	N
ATOM	414	CA	VAL	L	29	34.186	16.089	45.637	1.00	53.18	C
ATOM	416	CB	VAL	L	29	33.727	15.308	44.367	1.00	53.28	C
ATOM	418	CG1	VAL	L	29	32.363	14.688	44.550	1.00	56.43	C
ATOM	422	CG2	VAL	L	29	34.735	14.247	43.974	1.00	54.81	C
ATOM	426	C	VAL	L	29	34.616	15.181	46.799	1.00	53.03	C
ATOM	427	O	VAL	L	29	34.156	14.046	46.916	1.00	53.62	O
ATOM	429	N	SER	L	30	35.471	15.719	47.674	1.00	54.25	N
ATOM	430	CA	SER	L	30	36.098	14.962	48.770	1.00	54.15	C
ATOM	432	CB	SER	L	30	37.602	14.803	48.511	1.00	54.60	C
ATOM	435	OG	SER	L	30	37.880	14.092	47.317	1.00	55.08	O
ATOM	437	C	SER	L	30	35.940	15.634	50.142	1.00	54.40	C
ATOM	438	O	SER	L	30	36.454	16.730	50.360	1.00	54.45	O
ATOM	440	N	THR	L	31	35.253	14.962	51.063	1.00	54.06	N
ATOM	441	CA	THR	L	31	35.161	15.389	52.467	1.00	53.25	C
ATOM	443	CB	THR	L	31	33.993	16.393	52.726	1.00	53.03	C
ATOM	445	OG1	THR	L	31	33.060	16.367	51.636	1.00	54.02	O
ATOM	447	CG2	THR	L	31	34.517	17.807	52.899	1.00	54.14	C
ATOM	451	C	THR	L	31	34.986	14.190	53.406	1.00	52.65	C
ATOM	452	O	THR	L	31	34.466	13.141	53.019	1.00	50.65	O
ATOM	454	N	SER	L	32	35.418	14.381	54.648	1.00	53.64	N
ATOM	455	CA	SER	L	32	35.372	13.357	55.704	1.00	54.12	C
ATOM	457	CB	SER	L	32	33.956	13.228	56.262	1.00	52.79	C
ATOM	460	OG	SER	L	32	33.037	13.102	55.212	1.00	55.88	O
ATOM	462	C	SER	L	32	35.954	11.993	55.288	1.00	53.54	C
ATOM	463	O	SER	L	32	35.331	10.943	55.451	1.00	52.41	O
ATOM	465	N	GLY	L	33	37.169	12.032	54.757	1.00	53.81	N
ATOM	466	CA	GLY	L	33	37.924	10.822	54.469	1.00	54.19	C
ATOM	469	C	GLY	L	33	37.477	10.089	53.231	1.00	53.03	C
ATOM	470	O	GLY	L	33	37.937	8.978	52.970	1.00	55.58	O
ATOM	472	N	TYR	L	34	36.597	10.715	52.462	1.00	52.53	N
ATOM	473	CA	TYR	L	34	36.006	10.089	51.286	1.00	53.45	C
ATOM	475	CB	TYR	L	34	34.537	9.740	51.539	1.00	53.20	C
ATOM	478	CG	TYR	L	34	34.264	8.550	52.431	1.00	52.50	C
ATOM	479	CD1	TYR	L	34	34.930	7.355	52.253	1.00	49.83	C
ATOM	481	CE1	TYR	L	34	34.638	6.248	53.039	1.00	53.40	C
ATOM	483	CZ	TYR	L	34	33.669	6.329	54.011	1.00	52.05	C
ATOM	484	OH	TYR	L	34	33.407	5.234	54.783	1.00	52.72	O
ATOM	486	CE2	TYR	L	34	32.968	7.499	54.205	1.00	53.91	C
ATOM	488	CD2	TYR	L	34	33.258	8.601	53.405	1.00	58.63	C
ATOM	490	C	TYR	L	34	36.051	11.021	50.081	1.00	53.06	C
ATOM	491	O	TYR	L	34	36.016	12.249	50.224	1.00	51.85	O
ATOM	493	N	SER	L	35	36.142	10.412	48.902	1.00	52.09	N
ATOM	494	CA	SER	L	35	35.819	11.066	47.653	1.00	51.97	C
ATOM	496	CB	SER	L	35	36.920	10.862	46.622	1.00	50.03	C
ATOM	499	OG	SER	L	35	38.115	11.519	47.001	1.00	49.98	O
ATOM	501	C	SER	L	35	34.529	10.410	47.181	1.00	53.64	C
ATOM	502	O	SER	L	35	34.509	9.202	46.887	1.00	53.53	O
ATOM	504	N	TYR	L	36	33.453	11.196	47.114	1.00	54.08	N
ATOM	505	CA	TYR	L	36	32.147	10.663	46.743	1.00	55.43	C
ATOM	507	CB	TYR	L	36	31.035	11.506	47.366	1.00	56.93	C
ATOM	510	CG	TYR	L	36	31.100	11.479	48.876	1.00	57.15	C
ATOM	511	CD1	TYR	L	36	30.536	10.427	49.583	1.00	55.21	C
ATOM	513	CE1	TYR	L	36	30.599	10.375	50.960	1.00	57.63	C
ATOM	515	CZ	TYR	L	36	31.254	11.369	51.661	1.00	57.30	C
ATOM	516	OH	TYR	L	36	31.303	11.278	53.034	1.00	55.65	O
ATOM	518	CE2	TYR	L	36	31.845	12.429	50.983	1.00	55.89	C
ATOM	520	CD2	TYR	L	36	31.767	12.476	49.593	1.00	55.45	C
ATOM	522	C	TYR	L	36	32.015	10.539	45.227	1.00	56.47	C
ATOM	523	O	TYR	L	36	31.304	11.304	44.580	1.00	58.30	O
ATOM	525	N	ILE	L	37	32.729	9.547	44.692	1.00	56.72	N
ATOM	526	CA	ILE	L	37	32.740	9.187	43.276	1.00	55.37	C
ATOM	528	CB	ILE	L	37	34.157	9.351	42.692	1.00	55.42	C

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ATOM    530  CG1 ILE L  37      34.521  10.838  42.602  1.00 59.90           C
ATOM    533  CD1 ILE L  37      33.833  11.599  41.482  1.00 61.86           C
ATOM    537  CG2 ILE L  37      34.297   8.689  41.324  1.00 54.24           C
ATOM    541  C   ILE L  37      32.309   7.727  43.128  1.00 54.15           C
ATOM    542  O   ILE L  37      32.612   6.887  43.982  1.00 51.17           O
ATOM    544  N   TYR L  38      31.598   7.437  42.042  1.00 54.32           N
ATOM    545  CA  TYR L  38      31.138   6.080  41.746  1.00 55.44           C
ATOM    547  CB  TYR L  38      29.694   5.907  42.252  1.00 55.24           C
ATOM    550  CG  TYR L  38      29.481   6.629  43.574  1.00 54.93           C
ATOM    551  CD1 TYR L  38      29.636   5.971  44.778  1.00 55.24           C
ATOM    553  CE1 TYR L  38      29.487   6.632  45.990  1.00 54.82           C
ATOM    555  CZ  TYR L  38      29.182   7.979  46.006  1.00 57.34           C
ATOM    556  OH  TYR L  38      29.022   8.642  47.205  1.00 55.61           O
ATOM    558  CE2 TYR L  38      29.039   8.665  44.815  1.00 56.07           C
ATOM    560  CD2 TYR L  38      29.197   7.993  43.611  1.00 54.45           C
ATOM    562  C   TYR L  38      31.272   5.838  40.236  1.00 56.25           C
ATOM    563  O   TYR L  38      31.170   6.790  39.454  1.00 57.66           O
ATOM    565  N   TRP L  39      31.551   4.590  39.837  1.00 55.93           N
ATOM    566  CA  TRP L  39      31.650   4.209  38.416  1.00 54.81           C
ATOM    568  CB  TRP L  39      33.042   3.682  38.053  1.00 54.09           C
ATOM    571  CG  TRP L  39      34.154   4.656  38.199  1.00 54.18           C
ATOM    572  CD1 TRP L  39      34.902   4.880  39.319  1.00 55.84           C
ATOM    574  NE1 TRP L  39      35.843   5.846  39.073  1.00 54.26           N
ATOM    576  CE2 TRP L  39      35.723   6.262  37.775  1.00 50.74           C
ATOM    577  CD2 TRP L  39      34.671   5.528  37.192  1.00 52.46           C
ATOM    578  CE3 TRP L  39      34.341   5.769  35.854  1.00 55.28           C
ATOM    580  CZ3 TRP L  39      35.066   6.718  35.147  1.00 55.11           C
ATOM    582  CH2 TRP L  39      36.110   7.429  35.753  1.00 55.77           C
ATOM    584  CZ2 TRP L  39      36.451   7.218  37.066  1.00 54.51           C
ATOM    586  C   TRP L  39      30.644   3.114  38.059  1.00 56.62           C
ATOM    587  O   TRP L  39      30.502   2.111  38.782  1.00 55.41           O
ATOM    589  N   TYR L  40      29.987   3.303  36.913  1.00 56.41           N
ATOM    590  CA  TYR L  40      29.020   2.352  36.396  1.00 54.40           C
ATOM    592  CB  TYR L  40      27.649   3.006  36.294  1.00 53.71           C
ATOM    595  CG  TYR L  40      27.197   3.584  37.609  1.00 54.69           C
ATOM    596  CD1 TYR L  40      26.392   2.846  38.469  1.00 54.76           C
ATOM    598  CE1 TYR L  40      25.988   3.371  39.694  1.00 54.40           C
ATOM    600  CZ  TYR L  40      26.393   4.646  40.068  1.00 51.99           C
ATOM    601  OH  TYR L  40      25.991   5.148  41.287  1.00 51.85           O
ATOM    603  CE2 TYR L  40      27.196   5.394  39.233  1.00 51.58           C
ATOM    605  CD2 TYR L  40      27.597   4.865  38.010  1.00 53.46           C
ATOM    607  C   TYR L  40      29.442   1.827  35.032  1.00 54.01           C
ATOM    608  O   TYR L  40      30.164   2.482  34.284  1.00 52.13           O
ATOM    610  N   GLN L  41      28.990   0.618  34.737  1.00 54.63           N
ATOM    611  CA  GLN L  41      29.155   0.025  33.434  1.00 54.67           C
ATOM    613  CB  GLN L  41      29.875  -1.308  33.557  1.00 55.57           C
ATOM    616  CG  GLN L  41      30.049  -2.048  32.229  1.00 53.36           C
ATOM    619  CD  GLN L  41      30.362  -3.499  32.453  1.00 53.70           C
ATOM    620  OE1 GLN L  41      29.614  -4.195  33.147  1.00 52.72           O
ATOM    621  NE2 GLN L  41      31.475  -3.970  31.888  1.00 51.10           N
ATOM    624  C   GLN L  41      27.777  -0.209  32.858  1.00 54.05           C
ATOM    625  O   GLN L  41      26.922  -0.806  33.517  1.00 51.69           O
ATOM    627  N   GLN L  42      27.572   0.264  31.631  1.00 53.51           N
ATOM    628  CA  GLN L  42      26.314   0.057  30.930  1.00 54.34           C
ATOM    630  CB  GLN L  42      25.576   1.373  30.724  1.00 53.62           C
ATOM    633  CG  GLN L  42      24.115   1.187  30.355  1.00 53.29           C
ATOM    636  CD  GLN L  42      23.380   2.504  30.159  1.00 53.05           C
ATOM    637  OE1 GLN L  42      23.968   3.514  29.770  1.00 50.26           O
ATOM    638  NE2 GLN L  42      22.085   2.494  30.428  1.00 52.99           N
ATOM    641  C   GLN L  42      26.557  -0.621  29.587  1.00 55.48           C
ATOM    642  O   GLN L  42      27.129  -0.025  28.665  1.00 53.27           O
ATOM    644  N   LYS L  43      26.130  -1.883  29.516  1.00 56.31           N
ATOM    645  CA  LYS L  43      26.078  -2.649  28.276  1.00 56.15           C
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ATOM	647	CB	LYS	L	43	26.250	-4.164	28.556	1.00	55.36	C
ATOM	650	CG	LYS	L	43	27.711	-4.598	28.760	1.00	53.71	C
ATOM	653	CD	LYS	L	43	27.913	-5.546	29.935	1.00	55.52	C
ATOM	656	CE	LYS	L	43	27.712	-7.011	29.574	1.00	59.61	C
ATOM	659	NZ	LYS	L	43	28.948	-7.681	29.059	1.00	57.53	N
ATOM	663	C	LYS	L	43	24.734	-2.357	27.589	1.00	56.42	C
ATOM	664	O	LYS	L	43	23.745	-2.067	28.268	1.00	53.62	O
ATOM	666	N	PRO	L	44	24.692	-2.452	26.243	1.00	57.78	N
ATOM	667	CA	PRO	L	44	23.492	-2.110	25.457	1.00	58.18	C
ATOM	669	CB	PRO	L	44	23.914	-2.391	24.006	1.00	58.48	C
ATOM	672	CG	PRO	L	44	25.394	-2.517	24.022	1.00	59.46	C
ATOM	675	CD	PRO	L	44	25.793	-2.941	25.392	1.00	57.45	C
ATOM	678	C	PRO	L	44	22.281	-2.969	25.816	1.00	58.75	C
ATOM	679	O	PRO	L	44	22.401	-4.195	25.904	1.00	59.48	O
ATOM	680	N	GLY	L	45	21.136	-2.323	26.025	1.00	59.04	N
ATOM	681	CA	GLY	L	45	19.893	-3.011	26.401	1.00	58.61	C
ATOM	684	C	GLY	L	45	19.766	-3.393	27.873	1.00	59.15	C
ATOM	685	O	GLY	L	45	18.936	-4.240	28.227	1.00	58.77	O
ATOM	687	N	GLN	L	46	20.570	-2.764	28.734	1.00	59.18	N
ATOM	688	CA	GLN	L	46	20.612	-3.111	30.159	1.00	57.60	C
ATOM	690	CB	GLN	L	46	21.792	-4.048	30.456	1.00	59.08	C
ATOM	693	CG	GLN	L	46	21.709	-5.463	29.846	1.00	59.83	C
ATOM	696	CD	GLN	L	46	22.903	-6.341	30.225	1.00	58.60	C
ATOM	697	OE1	GLN	L	46	23.706	-5.988	31.088	1.00	60.97	O
ATOM	698	NE2	GLN	L	46	23.021	-7.485	29.574	1.00	60.99	N
ATOM	701	C	GLN	L	46	20.764	-1.878	31.037	1.00	56.58	C
ATOM	702	O	GLN	L	46	21.336	-0.865	30.616	1.00	56.23	O
ATOM	704	N	PRO	L	47	20.274	-1.964	32.278	1.00	55.72	N
ATOM	705	CA	PRO	L	47	20.547	-0.897	33.233	1.00	55.56	C
ATOM	707	CB	PRO	L	47	19.786	-1.332	34.485	1.00	54.62	C
ATOM	710	CG	PRO	L	47	19.575	-2.795	34.316	1.00	56.19	C
ATOM	713	CD	PRO	L	47	19.454	-3.036	32.860	1.00	55.23	C
ATOM	716	C	PRO	L	47	22.037	-0.821	33.542	1.00	55.18	C
ATOM	717	O	PRO	L	47	22.740	-1.821	33.402	1.00	53.89	O
ATOM	718	N	PRO	L	48	22.523	0.361	33.952	1.00	55.70	N
ATOM	719	CA	PRO	L	48	23.916	0.464	34.380	1.00	54.77	C
ATOM	721	CB	PRO	L	48	24.098	1.966	34.653	1.00	55.21	C
ATOM	724	CG	PRO	L	48	22.909	2.646	34.076	1.00	54.15	C
ATOM	727	CD	PRO	L	48	21.816	1.653	34.027	1.00	54.85	C
ATOM	730	C	PRO	L	48	24.207	-0.363	35.645	1.00	54.20	C
ATOM	731	O	PRO	L	48	23.395	-0.392	36.571	1.00	54.36	O
ATOM	732	N	LYS	L	49	25.365	-1.014	35.668	1.00	53.47	N
ATOM	733	CA	LYS	L	49	25.785	-1.850	36.787	1.00	52.96	C
ATOM	735	CB	LYS	L	49	26.279	-3.192	36.251	1.00	51.47	C
ATOM	738	CG	LYS	L	49	27.192	-3.954	37.162	1.00	53.42	C
ATOM	741	CD	LYS	L	49	27.500	-5.331	36.599	1.00	55.24	C
ATOM	744	CE	LYS	L	49	28.178	-6.217	37.636	1.00	58.11	C
ATOM	747	NZ	LYS	L	49	28.617	-7.519	37.073	1.00	60.19	N
ATOM	751	C	LYS	L	49	26.876	-1.114	37.555	1.00	52.05	C
ATOM	752	O	LYS	L	49	27.752	-0.520	36.956	1.00	53.68	O
ATOM	754	N	LEU	L	50	26.820	-1.140	38.880	1.00	52.75	N
ATOM	755	CA	LEU	L	50	27.820	-0.452	39.697	1.00	52.69	C
ATOM	757	CB	LEU	L	50	27.339	-0.263	41.136	1.00	50.73	C
ATOM	760	CG	LEU	L	50	28.370	0.307	42.123	1.00	52.58	C
ATOM	762	CD1	LEU	L	50	28.665	1.778	41.846	1.00	53.41	C
ATOM	766	CD2	LEU	L	50	27.902	0.138	43.556	1.00	53.16	C
ATOM	770	C	LEU	L	50	29.090	-1.258	39.725	1.00	54.47	C
ATOM	771	O	LEU	L	50	29.051	-2.478	39.870	1.00	58.94	O
ATOM	773	N	LEU	L	51	30.219	-0.573	39.618	1.00	54.92	N
ATOM	774	CA	LEU	L	51	31.510	-1.224	39.711	1.00	54.54	C
ATOM	776	CB	LEU	L	51	32.375	-0.838	38.516	1.00	55.15	C
ATOM	779	CG	LEU	L	51	31.728	-1.006	37.149	1.00	55.63	C
ATOM	781	CD1	LEU	L	51	32.640	-0.455	36.054	1.00	55.55	C

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ATOM    785  CD2 LEU L  51      31.406  -2.475  36.924  1.00 56.89           C
ATOM    789  C   LEU L  51      32.213  -0.812  40.985  1.00 54.28           C
ATOM    790  O   LEU L  51      32.670  -1.653  41.759  1.00 54.65           O
ATOM    792  N   ILE L  52      32.316   0.496  41.185  1.00 54.53           N
ATOM    793  CA  ILE L  52      33.220   1.047  42.178  1.00 54.82           C
ATOM    795  CB  ILE L  52      34.519   1.569  41.507  1.00 54.75           C
ATOM    797  CG1 ILE L  52      35.289   0.370  40.943  1.00 57.46           C
ATOM    800  CD1 ILE L  52      36.673   0.673  40.438  1.00 58.45           C
ATOM    804  CG2 ILE L  52      35.380   2.374  42.503  1.00 54.63           C
ATOM    808  C   ILE L  52      32.516   2.165  42.896  1.00 54.44           C
ATOM    809  O   ILE L  52      31.845   2.987  42.258  1.00 55.52           O
ATOM    811  N   TYR L  53      32.665   2.198  44.217  1.00 52.02           N
ATOM    812  CA  TYR L  53      32.032   3.238  45.010  1.00 51.95           C
ATOM    814  CB  TYR L  53      30.764   2.719  45.712  1.00 50.42           C
ATOM    817  CG  TYR L  53      30.967   1.600  46.698  1.00 50.94           C
ATOM    818  CD1 TYR L  53      31.235   0.307  46.276  1.00 55.87           C
ATOM    820  CE1 TYR L  53      31.407  -0.733  47.193  1.00 52.11           C
ATOM    822  CZ  TYR L  53      31.304  -0.477  48.536  1.00 49.69           C
ATOM    823  OH  TYR L  53      31.480  -1.495  49.450  1.00 51.98           O
ATOM    825  CE2 TYR L  53      31.030   0.796  48.975  1.00 52.89           C
ATOM    827  CD2 TYR L  53      30.861   1.824  48.060  1.00 55.48           C
ATOM    829  C   TYR L  53      33.005   3.879  45.993  1.00 52.42           C
ATOM    830  O   TYR L  53      33.951   3.247  46.467  1.00 51.02           O
ATOM    832  N   LEU L  54      32.750   5.156  46.271  1.00 53.74           N
ATOM    833  CA  LEU L  54      33.614   5.992  47.098  1.00 52.49           C
ATOM    835  CB  LEU L  54      33.585   5.540  48.567  1.00 53.60           C
ATOM    838  CG  LEU L  54      32.180   5.580  49.210  1.00 55.04           C
ATOM    840  CD1 LEU L  54      32.172   4.913  50.550  1.00 57.98           C
ATOM    844  CD2 LEU L  54      31.673   7.004  49.372  1.00 59.12           C
ATOM    848  C   LEU L  54      34.999   5.963  46.482  1.00 52.10           C
ATOM    849  O   LEU L  54      36.005   5.752  47.154  1.00 53.39           O
ATOM    851  N   ALA L  55      35.011   6.134  45.164  1.00 51.42           N
ATOM    852  CA  ALA L  55      36.227   6.322  44.385  1.00 51.30           C
ATOM    854  CB  ALA L  55      37.083   7.447  44.977  1.00 50.70           C
ATOM    858  C   ALA L  55      37.070   5.065  44.175  1.00 51.24           C
ATOM    859  O   ALA L  55      37.636   4.884  43.082  1.00 51.52           O
ATOM    861  N   SER L  56      37.182   4.209  45.192  1.00 49.46           N
ATOM    862  CA  SER L  56      38.076   3.058  45.070  1.00 48.46           C
ATOM    864  CB  SER L  56      39.380   3.391  45.750  1.00 45.78           C
ATOM    867  OG  SER L  56      39.173   3.416  47.136  1.00 54.02           O
ATOM    869  C   SER L  56      37.590   1.701  45.585  1.00 45.99           C
ATOM    870  O   SER L  56      38.285   0.731  45.387  1.00 43.02           O
ATOM    872  N   ILE L  57      36.424   1.613  46.219  1.00 46.73           N
ATOM    873  CA  ILE L  57      35.975   0.337  46.785  1.00 48.73           C
ATOM    875  CB  ILE L  57      35.035   0.517  48.001  1.00 48.71           C
ATOM    877  CG1 ILE L  57      35.658   1.431  49.061  1.00 46.23           C
ATOM    880  CD1 ILE L  57      34.633   2.004  50.033  1.00 47.63           C
ATOM    884  CG2 ILE L  57      34.711  -0.831  48.638  1.00 46.23           C
ATOM    888  C   ILE L  57      35.263  -0.492  45.719  1.00 50.97           C
ATOM    889  O   ILE L  57      34.290  -0.038  45.117  1.00 54.06           O
ATOM    891  N   LEU L  58      35.757  -1.711  45.504  1.00 52.60           N
ATOM    892  CA  LEU L  58      35.239  -2.614  44.471  1.00 52.11           C
ATOM    894  CB  LEU L  58      36.251  -3.749  44.215  1.00 51.36           C
ATOM    897  CG  LEU L  58      35.855  -4.852  43.215  1.00 53.01           C
ATOM    899  CD1 LEU L  58      35.603  -4.276  41.810  1.00 52.83           C
ATOM    903  CD2 LEU L  58      36.895  -5.968  43.155  1.00 51.72           C
ATOM    907  C   LEU L  58      33.910  -3.224  44.910  1.00 52.58           C
ATOM    908  O   LEU L  58      33.845  -3.879  45.946  1.00 51.89           O
ATOM    910  N   GLU L  59      32.859  -3.019  44.123  1.00 52.83           N
ATOM    911  CA  GLU L  59      31.572  -3.654  44.406  1.00 54.04           C
ATOM    913  CB  GLU L  59      30.503  -3.169  43.416  1.00 53.52           C
ATOM    916  CG  GLU L  59      29.182  -3.929  43.421  1.00 55.28           C
ATOM    919  CD  GLU L  59      28.447  -3.865  44.737  1.00 56.48           C
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ATOM	920	OE1	GLU	L	59	29.054	-4.202	45.765	1.00	62.78	O
ATOM	921	OE2	GLU	L	59	27.251	-3.508	44.747	1.00	51.37	O
ATOM	922	C	GLU	L	59	31.731	-5.182	44.357	1.00	54.60	C
ATOM	923	O	GLU	L	59	32.406	-5.706	43.476	1.00	54.40	O
ATOM	925	N	SER	L	60	31.126	-5.897	45.302	1.00	54.98	N
ATOM	926	CA	SER	L	60	31.310	-7.346	45.343	1.00	56.20	C
ATOM	928	CB	SER	L	60	30.816	-7.948	46.654	1.00	55.93	C
ATOM	931	OG	SER	L	60	29.428	-7.786	46.784	1.00	61.09	O
ATOM	933	C	SER	L	60	30.612	-7.982	44.148	1.00	56.93	C
ATOM	934	O	SER	L	60	29.554	-7.514	43.718	1.00	58.44	O
ATOM	936	N	GLY	L	61	31.242	-9.019	43.599	1.00	55.93	N
ATOM	937	CA	GLY	L	61	30.791	-9.643	42.362	1.00	56.18	C
ATOM	940	C	GLY	L	61	31.531	-9.138	41.137	1.00	57.25	C
ATOM	941	O	GLY	L	61	31.611	-9.831	40.119	1.00	58.16	O
ATOM	943	N	VAL	L	62	32.078	-7.931	41.231	1.00	56.14	N
ATOM	944	CA	VAL	L	62	32.753	-7.324	40.108	1.00	54.63	C
ATOM	946	CB	VAL	L	62	32.793	-5.810	40.256	1.00	55.58	C
ATOM	948	CG1	VAL	L	62	33.562	-5.168	39.093	1.00	55.66	C
ATOM	952	CG2	VAL	L	62	31.363	-5.271	40.332	1.00	55.35	C
ATOM	956	C	VAL	L	62	34.164	-7.854	40.031	1.00	53.37	C
ATOM	957	O	VAL	L	62	34.857	-7.854	41.034	1.00	51.85	O
ATOM	959	N	PRO	L	63	34.592	-8.315	38.838	1.00	55.14	N
ATOM	960	CA	PRO	L	63	35.972	-8.764	38.607	1.00	54.76	C
ATOM	962	CB	PRO	L	63	36.043	-8.909	37.080	1.00	54.50	C
ATOM	965	CG	PRO	L	63	34.656	-9.189	36.661	1.00	53.15	C
ATOM	968	CD	PRO	L	63	33.763	-8.463	37.622	1.00	55.43	C
ATOM	971	C	PRO	L	63	37.023	-7.760	39.082	1.00	54.42	C
ATOM	972	O	PRO	L	63	36.939	-6.572	38.758	1.00	52.19	O
ATOM	973	N	ASP	L	64	38.022	-8.245	39.815	1.00	55.17	N
ATOM	974	CA	ASP	L	64	39.014	-7.358	40.429	1.00	56.09	C
ATOM	976	CB	ASP	L	64	39.777	-8.076	41.563	1.00	56.48	C
ATOM	979	CG	ASP	L	64	40.622	-9.238	41.070	1.00	60.55	C
ATOM	980	OD1	ASP	L	64	40.635	-9.506	39.846	1.00	63.87	O
ATOM	981	OD2	ASP	L	64	41.281	-9.885	41.918	1.00	63.35	O
ATOM	982	C	ASP	L	64	39.989	-6.707	39.429	1.00	55.97	C
ATOM	983	O	ASP	L	64	40.889	-5.976	39.844	1.00	56.53	O
ATOM	985	N	ARG	L	65	39.820	-6.959	38.130	1.00	55.08	N
ATOM	986	CA	ARG	L	65	40.575	-6.212	37.119	1.00	54.31	C
ATOM	988	CB	ARG	L	65	40.439	-6.834	35.728	1.00	52.42	C
ATOM	991	CG	ARG	L	65	39.017	-7.000	35.212	1.00	54.44	C
ATOM	994	CD	ARG	L	65	39.026	-7.328	33.713	1.00	54.08	C
ATOM	997	NE	ARG	L	65	37.712	-7.686	33.170	1.00	54.88	N
ATOM	999	CZ	ARG	L	65	37.099	-8.857	33.364	1.00	54.31	C
ATOM	1000	NH1	ARG	L	65	37.643	-9.801	34.128	1.00	55.55	N
ATOM	1003	NH2	ARG	L	65	35.912	-9.083	32.812	1.00	51.57	N
ATOM	1006	C	ARG	L	65	40.142	-4.742	37.114	1.00	54.34	C
ATOM	1007	O	ARG	L	65	40.948	-3.841	36.830	1.00	54.86	O
ATOM	1009	N	PHE	L	66	38.872	-4.514	37.437	1.00	53.05	N
ATOM	1010	CA	PHE	L	66	38.350	-3.163	37.606	1.00	53.28	C
ATOM	1012	CB	PHE	L	66	36.818	-3.168	37.667	1.00	52.13	C
ATOM	1015	CG	PHE	L	66	36.171	-3.510	36.361	1.00	51.63	C
ATOM	1016	CD1	PHE	L	66	36.048	-2.557	35.367	1.00	54.90	C
ATOM	1018	CE1	PHE	L	66	35.467	-2.873	34.132	1.00	54.83	C
ATOM	1020	CZ	PHE	L	66	35.001	-4.155	33.895	1.00	54.18	C
ATOM	1022	CE2	PHE	L	66	35.125	-5.120	34.879	1.00	53.41	C
ATOM	1024	CD2	PHE	L	66	35.713	-4.795	36.107	1.00	55.89	C
ATOM	1026	C	PHE	L	66	38.924	-2.543	38.870	1.00	53.24	C
ATOM	1027	O	PHE	L	66	38.996	-3.196	39.904	1.00	56.75	O
ATOM	1029	N	SER	L	67	39.353	-1.290	38.775	1.00	52.30	N
ATOM	1030	CA	SER	L	67	39.835	-0.552	39.934	1.00	51.60	C
ATOM	1032	CB	SER	L	67	41.269	-0.950	40.274	1.00	50.46	C
ATOM	1035	OG	SER	L	67	42.206	-0.173	39.561	1.00	50.17	O
ATOM	1037	C	SER	L	67	39.770	0.949	39.672	1.00	52.16	C

ATOM	1038	O	SER	L	67	39.894	1.387	38.524	1.00	53.02	O
ATOM	1040	N	GLY	L	68	39.593	1.720	40.747	1.00	50.97	N
ATOM	1041	CA	GLY	L	68	39.509	3.164	40.666	1.00	50.80	C
ATOM	1044	C	GLY	L	68	40.435	3.896	41.620	1.00	50.07	C
ATOM	1045	O	GLY	L	68	40.438	3.624	42.797	1.00	49.95	O
ATOM	1047	N	SER	L	69	41.211	4.840	41.096	1.00	50.99	N
ATOM	1048	CA	SER	L	69	42.014	5.742	41.908	1.00	51.86	C
ATOM	1050	CB	SER	L	69	43.482	5.696	41.460	1.00	53.01	C
ATOM	1053	OG	SER	L	69	43.613	5.878	40.055	1.00	58.20	O
ATOM	1055	C	SER	L	69	41.504	7.178	41.796	1.00	52.61	C
ATOM	1056	O	SER	L	69	40.693	7.507	40.922	1.00	51.85	O
ATOM	1058	N	GLY	L	70	41.990	8.029	42.693	1.00	53.58	N
ATOM	1059	CA	GLY	L	70	41.774	9.462	42.591	1.00	54.01	C
ATOM	1062	C	GLY	L	70	41.381	10.140	43.883	1.00	55.34	C
ATOM	1063	O	GLY	L	70	40.934	9.500	44.832	1.00	56.33	O
ATOM	1065	N	SER	L	71	41.550	11.456	43.910	1.00	55.88	N
ATOM	1066	CA	SER	L	71	41.042	12.264	44.998	1.00	54.92	C
ATOM	1068	CB	SER	L	71	42.030	12.304	46.154	1.00	53.23	C
ATOM	1071	OG	SER	L	71	42.895	13.411	46.004	1.00	55.47	O
ATOM	1073	C	SER	L	71	40.809	13.678	44.516	1.00	55.33	C
ATOM	1074	O	SER	L	71	41.396	14.127	43.526	1.00	51.70	O
ATOM	1076	N	GLY	L	72	39.958	14.376	45.259	1.00	57.11	N
ATOM	1077	CA	GLY	L	72	39.703	15.780	45.026	1.00	56.11	C
ATOM	1080	C	GLY	L	72	38.845	15.924	43.805	1.00	56.31	C
ATOM	1081	O	GLY	L	72	37.622	15.848	43.887	1.00	55.82	O
ATOM	1083	N	THR	L	73	39.506	16.101	42.666	1.00	56.80	N
ATOM	1084	CA	THR	L	73	38.834	16.488	41.434	1.00	55.61	C
ATOM	1086	CB	THR	L	73	39.063	17.975	41.191	1.00	53.26	C
ATOM	1088	OG1	THR	L	73	38.041	18.470	40.323	1.00	56.96	O
ATOM	1090	CG2	THR	L	73	40.459	18.239	40.604	1.00	54.07	C
ATOM	1094	C	THR	L	73	39.220	15.665	40.184	1.00	56.76	C
ATOM	1095	O	THR	L	73	38.537	15.751	39.160	1.00	57.24	O
ATOM	1097	N	ASP	L	74	40.301	14.883	40.268	1.00	57.91	N
ATOM	1098	CA	ASP	L	74	40.699	13.944	39.206	1.00	56.78	C
ATOM	1100	CB	ASP	L	74	42.155	14.184	38.788	1.00	56.63	C
ATOM	1103	CG	ASP	L	74	42.380	15.589	38.276	1.00	62.56	C
ATOM	1104	OD1	ASP	L	74	41.382	16.236	37.885	1.00	67.01	O
ATOM	1105	OD2	ASP	L	74	43.543	16.058	38.276	1.00	69.21	O
ATOM	1106	C	ASP	L	74	40.524	12.506	39.679	1.00	54.43	C
ATOM	1107	O	ASP	L	74	41.003	12.145	40.752	1.00	52.01	O
ATOM	1109	N	PHE	L	75	39.830	11.705	38.871	1.00	53.34	N
ATOM	1110	CA	PHE	L	75	39.566	10.303	39.179	1.00	54.81	C
ATOM	1112	CB	PHE	L	75	38.153	10.143	39.747	1.00	54.75	C
ATOM	1115	CG	PHE	L	75	37.943	10.945	40.993	1.00	55.33	C
ATOM	1116	CD1	PHE	L	75	38.329	10.436	42.229	1.00	53.87	C
ATOM	1118	CE1	PHE	L	75	38.190	11.192	43.379	1.00	55.62	C
ATOM	1120	CZ	PHE	L	75	37.674	12.474	43.299	1.00	58.22	C
ATOM	1122	CE2	PHE	L	75	37.306	13.002	42.061	1.00	56.85	C
ATOM	1124	CD2	PHE	L	75	37.447	12.242	40.923	1.00	54.25	C
ATOM	1126	C	PHE	L	75	39.778	9.442	37.952	1.00	55.41	C
ATOM	1127	O	PHE	L	75	39.706	9.936	36.827	1.00	57.09	O
ATOM	1129	N	THR	L	76	40.075	8.160	38.171	1.00	56.45	N
ATOM	1130	CA	THR	L	76	40.349	7.236	37.071	1.00	56.24	C
ATOM	1132	CB	THR	L	76	41.850	7.129	36.813	1.00	55.71	C
ATOM	1134	OG1	THR	L	76	42.326	8.371	36.292	1.00	58.96	O
ATOM	1136	CG2	THR	L	76	42.149	6.039	35.803	1.00	56.70	C
ATOM	1140	C	THR	L	76	39.811	5.834	37.314	1.00	55.99	C
ATOM	1141	O	THR	L	76	40.001	5.282	38.392	1.00	54.19	O
ATOM	1143	N	LEU	L	77	39.144	5.282	36.296	1.00	56.24	N
ATOM	1144	CA	LEU	L	77	38.793	3.861	36.240	1.00	56.68	C
ATOM	1146	CB	LEU	L	77	37.398	3.643	35.652	1.00	57.76	C
ATOM	1149	CG	LEU	L	77	36.938	2.191	35.464	1.00	56.37	C
ATOM	1151	CD1	LEU	L	77	36.778	1.512	36.825	1.00	57.33	C

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ATOM   1155  CD2 LEU L  77      35.629   2.131  34.679  1.00 55.93           C
ATOM   1159  C   LEU L  77      39.798   3.151  35.354  1.00 57.54           C
ATOM   1160  O   LEU L  77      39.987   3.527  34.190  1.00 57.34           O
ATOM   1162  N   THR L  78      40.421   2.115  35.913  1.00 57.49           N
ATOM   1163  CA  THR L  78      41.395   1.305  35.207  1.00 56.32           C
ATOM   1165  CB  THR L  78      42.728   1.237  35.996  1.00 56.02           C
ATOM   1167  OG1 THR L  78      42.882   2.421  36.795  1.00 56.83           O
ATOM   1169  CG2 THR L  78      43.919   1.090  35.050  1.00 54.58           C
ATOM   1173  C   THR L  78      40.822  -0.099  35.047  1.00 55.35           C
ATOM   1174  O   THR L  78      40.325  -0.686  36.009  1.00 52.97           O
ATOM   1176  N   ILE L  79      40.862  -0.614  33.824  1.00 56.31           N
ATOM   1177  CA  ILE L  79      40.559  -2.019  33.563  1.00 57.74           C
ATOM   1179  CB  ILE L  79      39.515  -2.182  32.437  1.00 57.50           C
ATOM   1181  CG1 ILE L  79      38.312  -1.279  32.681  1.00 58.13           C
ATOM   1184  CD1 ILE L  79      37.322  -1.310  31.537  1.00 59.88           C
ATOM   1188  CG2 ILE L  79      39.043  -3.629  32.344  1.00 58.10           C
ATOM   1192  C   ILE L  79      41.862  -2.732  33.174  1.00 57.37           C
ATOM   1193  O   ILE L  79      42.293  -2.666  32.025  1.00 57.31           O
ATOM   1195  N   SER L  80      42.492  -3.394  34.142  1.00 57.69           N
ATOM   1196  CA  SER L  80      43.743  -4.124  33.900  1.00 58.45           C
ATOM   1198  CB  SER L  80      44.406  -4.469  35.236  1.00 60.09           C
ATOM   1201  OG  SER L  80      43.535  -5.250  36.052  1.00 61.16           O
ATOM   1203  C   SER L  80      43.466  -5.414  33.129  1.00 57.69           C
ATOM   1204  O   SER L  80      42.903  -6.347  33.683  1.00 60.35           O
ATOM   1206  N   SER L  81      43.863  -5.480  31.866  1.00 55.77           N
ATOM   1207  CA  SER L  81      43.448  -6.579  30.983  1.00 56.09           C
ATOM   1209  CB  SER L  81      43.730  -7.954  31.600  1.00 55.99           C
ATOM   1212  OG  SER L  81      43.447  -8.988  30.672  1.00 57.68           O
ATOM   1214  C   SER L  81      41.965  -6.478  30.593  1.00 56.33           C
ATOM   1215  O   SER L  81      41.072  -6.848  31.365  1.00 55.73           O
ATOM   1217  N   LEU L  82      41.717  -5.984  29.381  1.00 55.01           N
ATOM   1218  CA  LEU L  82      40.366  -5.842  28.868  1.00 54.17           C
ATOM   1220  CB  LEU L  82      40.338  -4.758  27.789  1.00 53.78           C
ATOM   1223  CG  LEU L  82      38.957  -4.295  27.329  1.00 53.78           C
ATOM   1225  CD1 LEU L  82      38.201  -3.652  28.482  1.00 56.84           C
ATOM   1229  CD2 LEU L  82      39.076  -3.328  26.174  1.00 52.87           C
ATOM   1233  C   LEU L  82      39.868  -7.170  28.297  1.00 53.85           C
ATOM   1234  O   LEU L  82      40.520  -7.756  27.437  1.00 52.59           O
ATOM   1236  N   GLN L  83      38.725  -7.644  28.790  1.00 53.69           N
ATOM   1237  CA  GLN L  83      38.078  -8.838  28.248  1.00 53.93           C
ATOM   1239  CB  GLN L  83      37.446  -9.687  29.357  1.00 54.98           C
ATOM   1242  CG  GLN L  83      38.363 -10.000  30.530  1.00 53.38           C
ATOM   1245  CD  GLN L  83      39.648 -10.627  30.088  1.00 52.37           C
ATOM   1246  OE1 GLN L  83      39.654 -11.708  29.496  1.00 51.82           O
ATOM   1247  NE2 GLN L  83      40.754  -9.944  30.354  1.00 51.44           N
ATOM   1250  C   GLN L  83      37.002  -8.431  27.261  1.00 53.94           C
ATOM   1251  O   GLN L  83      36.553  -7.283  27.255  1.00 53.65           O
ATOM   1253  N   ALA L  84      36.579  -9.389  26.443  1.00 54.11           N
ATOM   1254  CA  ALA L  84      35.666  -9.110  25.338  1.00 54.22           C
ATOM   1256  CB  ALA L  84      35.546 -10.315  24.420  1.00 53.53           C
ATOM   1260  C   ALA L  84      34.285  -8.669  25.803  1.00 54.33           C
ATOM   1261  O   ALA L  84      33.653  -7.865  25.129  1.00 54.33           O
ATOM   1263  N   GLU L  85      33.811  -9.193  26.934  1.00 55.23           N
ATOM   1264  CA  GLU L  85      32.492  -8.790  27.459  1.00 55.73           C
ATOM   1266  CB  GLU L  85      31.920  -9.806  28.463  1.00 56.15           C
ATOM   1269  CG  GLU L  85      32.596  -9.858  29.826  1.00 57.31           C
ATOM   1272  CD  GLU L  85      33.534 -11.041  29.972  1.00 62.41           C
ATOM   1273  OE1 GLU L  85      34.372 -11.272  29.069  1.00 68.87           O
ATOM   1274  OE2 GLU L  85      33.433 -11.741  30.999  1.00 60.61           O
ATOM   1275  C   GLU L  85      32.502  -7.397  28.085  1.00 55.79           C
ATOM   1276  O   GLU L  85      31.454  -6.760  28.161  1.00 57.71           O
ATOM   1278  N   ASP L  86      33.677  -6.929  28.508  1.00 54.50           N
ATOM   1279  CA  ASP L  86      33.827  -5.597  29.099  1.00 54.34           C
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ATOM   1281  CB  ASP L  86      35.249  -5.401  29.609  1.00 53.96           C
ATOM   1284  CG  ASP L  86      35.595  -6.355  30.708  1.00 56.40           C
ATOM   1285  OD1 ASP L  86      34.724  -6.610  31.562  1.00 64.93           O
ATOM   1286  OD2 ASP L  86      36.733  -6.857  30.728  1.00 58.96           O
ATOM   1287  C   ASP L  86      33.476  -4.445  28.153  1.00 54.52           C
ATOM   1288  O   ASP L  86      33.398  -3.285  28.576  1.00 54.01           O
ATOM   1290  N   VAL L  87      33.273  -4.760  26.877  1.00 54.56           N
ATOM   1291  CA  VAL L  87      32.835  -3.771  25.904  1.00 53.80           C
ATOM   1293  CB  VAL L  87      32.765  -4.375  24.477  1.00 53.26           C
ATOM   1295  CG1 VAL L  87      31.578  -5.327  24.328  1.00 54.94           C
ATOM   1299  CG2 VAL L  87      32.715  -3.280  23.444  1.00 55.38           C
ATOM   1303  C   VAL L  87      31.496  -3.157  26.354  1.00 52.87           C
ATOM   1304  O   VAL L  87      30.475  -3.841  26.512  1.00 50.81           O
ATOM   1306  N   ALA L  88      31.539  -1.853  26.591  1.00 52.72           N
ATOM   1307  CA  ALA L  88      30.429  -1.151  27.203  1.00 52.43           C
ATOM   1309  CB  ALA L  88      30.253  -1.623  28.628  1.00 51.93           C
ATOM   1313  C   ALA L  88      30.665   0.360  27.174  1.00 53.06           C
ATOM   1314  O   ALA L  88      31.712   0.835  26.701  1.00 53.38           O
ATOM   1316  N   VAL L  89      29.670   1.103  27.656  1.00 52.34           N
ATOM   1317  CA  VAL L  89      29.796   2.526  27.901  1.00 51.67           C
ATOM   1319  CB  VAL L  89      28.554   3.296  27.406  1.00 50.95           C
ATOM   1321  CG1 VAL L  89      28.652   4.761  27.771  1.00 52.81           C
ATOM   1325  CG2 VAL L  89      28.397   3.147  25.910  1.00 49.54           C
ATOM   1329  C   VAL L  89      29.939   2.671  29.406  1.00 51.58           C
ATOM   1330  O   VAL L  89      29.047   2.274  30.150  1.00 54.46           O
ATOM   1332  N   TYR L  90      31.062   3.221  29.854  1.00 51.52           N
ATOM   1333  CA  TYR L  90      31.337   3.371  31.287  1.00 52.57           C
ATOM   1335  CB  TYR L  90      32.797   2.993  31.593  1.00 51.47           C
ATOM   1338  CG  TYR L  90      33.051   1.510  31.450  1.00 50.52           C
ATOM   1339  CD1 TYR L  90      33.177   0.923  30.199  1.00 49.13           C
ATOM   1341  CE1 TYR L  90      33.379  -0.434  30.060  1.00 47.35           C
ATOM   1343  CZ  TYR L  90      33.454  -1.223  31.179  1.00 50.51           C
ATOM   1344  OH  TYR L  90      33.656  -2.579  31.067  1.00 51.12           O
ATOM   1346  CE2 TYR L  90      33.326  -0.664  32.436  1.00 51.36           C
ATOM   1348  CD2 TYR L  90      33.123   0.691  32.563  1.00 52.08           C
ATOM   1350  C   TYR L  90      31.017   4.800  31.735  1.00 52.63           C
ATOM   1351  O   TYR L  90      31.328   5.757  31.026  1.00 51.70           O
ATOM   1353  N   TYR L  91      30.395   4.931  32.908  1.00 53.91           N
ATOM   1354  CA  TYR L  91      29.901   6.223  33.403  1.00 55.09           C
ATOM   1356  CB  TYR L  91      28.380   6.213  33.507  1.00 54.71           C
ATOM   1359  CG  TYR L  91      27.641   6.358  32.204  1.00 54.89           C
ATOM   1360  CD1 TYR L  91      27.461   7.605  31.624  1.00 48.90           C
ATOM   1362  CE1 TYR L  91      26.765   7.739  30.446  1.00 49.97           C
ATOM   1364  CZ  TYR L  91      26.234   6.620  29.841  1.00 53.05           C
ATOM   1365  OH  TYR L  91      25.543   6.738  28.664  1.00 53.94           O
ATOM   1367  CE2 TYR L  91      26.399   5.369  30.402  1.00 54.39           C
ATOM   1369  CD2 TYR L  91      27.091   5.245  31.572  1.00 53.31           C
ATOM   1371  C   TYR L  91      30.426   6.628  34.777  1.00 56.54           C
ATOM   1372  O   TYR L  91      30.550   5.811  35.689  1.00 58.18           O
ATOM   1374  N   CYS L  92      30.617   7.932  34.919  1.00 58.34           N
ATOM   1375  CA  CYS L  92      31.134   8.568  36.109  1.00 57.04           C
ATOM   1377  CB  CYS L  92      32.105   9.636  35.634  1.00 59.10           C
ATOM   1380  SG  CYS L  92      33.016  10.328  36.933  1.00 67.16           S
ATOM   1382  C   CYS L  92      30.003   9.246  36.883  1.00 56.04           C
ATOM   1383  O   CYS L  92      29.027   9.666  36.277  1.00 55.74           O
ATOM   1385  N   GLN L  93      30.132   9.382  38.203  1.00 56.50           N
ATOM   1386  CA  GLN L  93      29.059   9.990  39.034  1.00 55.53           C
ATOM   1388  CB  GLN L  93      27.924   8.993  39.245  1.00 55.82           C
ATOM   1391  CG  GLN L  93      26.676   9.548  39.958  1.00 57.20           C
ATOM   1394  CD  GLN L  93      26.391   8.920  41.317  1.00 54.95           C
ATOM   1395  OE1 GLN L  93      26.866   7.832  41.633  1.00 56.37           O
ATOM   1396  NE2 GLN L  93      25.590   9.602  42.118  1.00 51.50           N
ATOM   1399  C   GLN L  93      29.556  10.425  40.392  1.00 54.46           C
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ATOM	1400	O	GLN	L	93	30.358	9.728	41.004	1.00	57.26	O
ATOM	1402	N	HIS	L	94	29.057	11.557	40.873	1.00	52.91	N
ATOM	1403	CA	HIS	L	94	29.462	12.089	42.177	1.00	53.90	C
ATOM	1405	CB	HIS	L	94	30.100	13.471	42.020	1.00	54.57	C
ATOM	1408	CG	HIS	L	94	29.098	14.584	42.006	1.00	54.75	C
ATOM	1409	ND1	HIS	L	94	28.735	15.275	43.141	1.00	54.59	N
ATOM	1411	CE1	HIS	L	94	27.801	16.157	42.835	1.00	59.25	C
ATOM	1413	NE2	HIS	L	94	27.536	16.057	41.545	1.00	57.68	N
ATOM	1415	CD2	HIS	L	94	28.326	15.072	41.006	1.00	57.78	C
ATOM	1417	C	HIS	L	94	28.270	12.245	43.108	1.00	53.25	C
ATOM	1418	O	HIS	L	94	27.114	12.181	42.681	1.00	53.22	O
ATOM	1420	N	SER	L	95	28.553	12.512	44.377	1.00	53.15	N
ATOM	1421	CA	SER	L	95	27.498	12.890	45.310	1.00	53.23	C
ATOM	1423	CB	SER	L	95	26.858	11.636	45.923	1.00	52.60	C
ATOM	1426	OG	SER	L	95	27.766	10.992	46.812	1.00	49.79	O
ATOM	1428	C	SER	L	95	27.990	13.815	46.420	1.00	52.80	C
ATOM	1429	O	SER	L	95	27.553	13.695	47.551	1.00	56.31	O
ATOM	1431	N	ARG	L	96	28.895	14.734	46.125	1.00	52.61	N
ATOM	1432	CA	ARG	L	96	29.294	15.716	47.141	1.00	53.47	C
ATOM	1434	CB	ARG	L	96	30.408	16.624	46.612	1.00	53.66	C
ATOM	1437	CG	ARG	L	96	30.862	17.705	47.579	1.00	52.95	C
ATOM	1440	CD	ARG	L	96	31.613	17.142	48.764	1.00	52.49	C
ATOM	1443	NE	ARG	L	96	31.892	18.199	49.731	1.00	53.39	N
ATOM	1445	CZ	ARG	L	96	31.053	18.604	50.685	1.00	53.34	C
ATOM	1446	NH1	ARG	L	96	29.860	18.041	50.847	1.00	58.89	N
ATOM	1449	NH2	ARG	L	96	31.417	19.579	51.502	1.00	52.87	N
ATOM	1452	C	ARG	L	96	28.091	16.562	47.590	1.00	52.41	C
ATOM	1453	O	ARG	L	96	27.918	16.836	48.768	1.00	51.51	O
ATOM	1455	N	GLU	L	97	27.269	16.966	46.638	1.00	52.07	N
ATOM	1456	CA	GLU	L	97	26.111	17.784	46.920	1.00	53.05	C
ATOM	1458	CB	GLU	L	97	26.489	19.267	46.838	1.00	54.44	C
ATOM	1461	CG	GLU	L	97	27.058	19.715	45.483	1.00	56.59	C
ATOM	1464	CD	GLU	L	97	27.644	21.116	45.533	1.00	58.43	C
ATOM	1465	OE1	GLU	L	97	28.282	21.450	46.554	1.00	66.43	O
ATOM	1466	OE2	GLU	L	97	27.479	21.886	44.553	1.00	65.22	O
ATOM	1467	C	GLU	L	97	25.064	17.454	45.883	1.00	51.91	C
ATOM	1468	O	GLU	L	97	25.316	16.638	44.997	1.00	51.93	O
ATOM	1470	N	LEU	L	98	23.898	18.083	45.986	1.00	50.34	N
ATOM	1471	CA	LEU	L	98	22.882	17.940	44.954	1.00	50.49	C
ATOM	1473	CB	LEU	L	98	21.472	17.987	45.536	1.00	49.48	C
ATOM	1476	CG	LEU	L	98	20.804	16.641	45.764	1.00	51.33	C
ATOM	1478	CD1	LEU	L	98	21.548	15.886	46.827	1.00	56.91	C
ATOM	1482	CD2	LEU	L	98	19.358	16.837	46.171	1.00	52.44	C
ATOM	1486	C	LEU	L	98	23.050	19.041	43.928	1.00	49.66	C
ATOM	1487	O	LEU	L	98	23.513	20.137	44.274	1.00	51.20	O
ATOM	1489	N	PRO	L	99	22.670	18.760	42.661	1.00	48.26	N
ATOM	1490	CA	PRO	L	99	22.170	17.476	42.177	1.00	49.09	C
ATOM	1492	CB	PRO	L	99	21.466	17.835	40.865	1.00	49.32	C
ATOM	1495	CG	PRO	L	99	21.617	19.295	40.678	1.00	46.87	C
ATOM	1498	CD	PRO	L	99	22.699	19.752	41.579	1.00	47.57	C
ATOM	1501	C	PRO	L	99	23.263	16.452	41.889	1.00	49.51	C
ATOM	1502	O	PRO	L	99	24.367	16.799	41.485	1.00	50.96	O
ATOM	1503	N	TRP	L	100	22.925	15.188	42.088	1.00	50.14	N
ATOM	1504	CA	TRP	L	100	23.827	14.090	41.797	1.00	49.90	C
ATOM	1506	CB	TRP	L	100	23.315	12.817	42.465	1.00	49.58	C
ATOM	1509	CG	TRP	L	100	23.201	12.960	43.949	1.00	52.10	C
ATOM	1510	CD1	TRP	L	100	24.033	13.666	44.770	1.00	56.37	C
ATOM	1512	NE1	TRP	L	100	23.630	13.554	46.074	1.00	55.05	N
ATOM	1514	CE2	TRP	L	100	22.519	12.758	46.117	1.00	52.25	C
ATOM	1515	CD2	TRP	L	100	22.223	12.365	44.797	1.00	53.05	C
ATOM	1516	CE3	TRP	L	100	21.127	11.533	44.570	1.00	54.95	C
ATOM	1518	CZ3	TRP	L	100	20.376	11.137	45.641	1.00	55.55	C
ATOM	1520	CH2	TRP	L	100	20.692	11.550	46.944	1.00	54.45	C

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ATOM   1522  CZ2 TRP L 100      21.756  12.362  47.197  1.00 49.52           C
ATOM   1524  C   TRP L 100      23.961  13.919  40.279  1.00 49.78           C
ATOM   1525  O   TRP L 100      23.036  13.459  39.607  1.00 48.93           O
ATOM   1527  N   THR L 101      25.113  14.320  39.748  1.00 49.38           N
ATOM   1528  CA  THR L 101      25.311  14.404  38.303  1.00 48.66           C
ATOM   1530  CB  THR L 101      25.717  15.819  37.855  1.00 46.87           C
ATOM   1532  OG1 THR L 101      26.804  16.309  38.655  1.00 46.30           O
ATOM   1534  CG2 THR L 101      24.540  16.739  38.016  1.00 44.92           C
ATOM   1538  C   THR L 101      26.329  13.400  37.827  1.00 47.78           C
ATOM   1539  O   THR L 101      27.192  12.968  38.579  1.00 47.20           O
ATOM   1541  N   PHE L 102      26.197  13.037  36.561  1.00 47.97           N
ATOM   1542  CA  PHE L 102      26.962  11.966  35.960  1.00 48.82           C
ATOM   1544  CB  PHE L 102      26.021  11.021  35.207  1.00 49.42           C
ATOM   1547  CG  PHE L 102      25.300  10.039  36.076  1.00 46.67           C
ATOM   1548  CD1 PHE L 102      25.742   8.720  36.164  1.00 47.15           C
ATOM   1550  CE1 PHE L 102      25.085   7.800  36.936  1.00 46.15           C
ATOM   1552  CZ  PHE L 102      23.965   8.174  37.638  1.00 50.19           C
ATOM   1554  CE2 PHE L 102      23.498   9.488  37.551  1.00 53.10           C
ATOM   1556  CD2 PHE L 102      24.168  10.407  36.761  1.00 47.98           C
ATOM   1558  C   PHE L 102      27.926  12.571  34.956  1.00 49.48           C
ATOM   1559  O   PHE L 102      27.792  13.739  34.592  1.00 51.35           O
ATOM   1561  N   GLY L 103      28.882  11.774  34.495  1.00 49.86           N
ATOM   1562  CA  GLY L 103      29.714  12.143  33.351  1.00 50.55           C
ATOM   1565  C   GLY L 103      28.962  11.813  32.080  1.00 51.42           C
ATOM   1566  O   GLY L 103      27.832  11.324  32.142  1.00 54.44           O
ATOM   1568  N   GLN L 104      29.570  12.071  30.925  1.00 51.70           N
ATOM   1569  CA  GLN L 104      28.886  11.861  29.639  1.00 51.67           C
ATOM   1571  CB  GLN L 104      29.305  12.921  28.598  1.00 52.35           C
ATOM   1574  CG  GLN L 104      30.581  12.630  27.784  1.00 52.79           C
ATOM   1577  CD  GLN L 104      31.854  12.921  28.543  1.00 53.59           C
ATOM   1578  OE1 GLN L 104      31.841  13.166  29.753  1.00 53.39           O
ATOM   1579  NE2 GLN L 104      32.968  12.903  27.831  1.00 51.28           N
ATOM   1582  C   GLN L 104      29.098  10.449  29.096  1.00 51.16           C
ATOM   1583  O   GLN L 104      28.619  10.111  28.015  1.00 50.46           O
ATOM   1585  N   GLY L 105      29.818   9.629  29.852  1.00 52.46           N
ATOM   1586  CA  GLY L 105      30.071   8.249  29.470  1.00 52.57           C
ATOM   1589  C   GLY L 105      31.240   8.128  28.517  1.00 52.29           C
ATOM   1590  O   GLY L 105      31.511   9.045  27.734  1.00 52.99           O
ATOM   1592  N   THR L 106      31.928   6.990  28.590  1.00 52.25           N
ATOM   1593  CA  THR L 106      33.051   6.688  27.709  1.00 52.43           C
ATOM   1595  CB  THR L 106      34.391   6.741  28.477  1.00 52.12           C
ATOM   1597  OG1 THR L 106      34.638   8.078  28.934  1.00 49.34           O
ATOM   1599  CG2 THR L 106      35.551   6.290  27.595  1.00 52.62           C
ATOM   1603  C   THR L 106      32.855   5.300  27.102  1.00 52.40           C
ATOM   1604  O   THR L 106      32.718   4.323  27.828  1.00 53.01           O
ATOM   1606  N   LYS L 107      32.851   5.226  25.775  1.00 53.39           N
ATOM   1607  CA  LYS L 107      32.646   3.972  25.057  1.00 54.31           C
ATOM   1609  CB  LYS L 107      32.114   4.244  23.647  1.00 55.17           C
ATOM   1612  CG  LYS L 107      31.300   3.111  23.024  1.00 55.52           C
ATOM   1615  CD  LYS L 107      30.815   3.508  21.617  1.00 57.87           C
ATOM   1618  CE  LYS L 107      29.491   2.835  21.229  1.00 60.84           C
ATOM   1621  NZ  LYS L 107      28.967   3.298  19.891  1.00 58.55           N
ATOM   1625  C   LYS L 107      33.965   3.240  24.963  1.00 54.57           C
ATOM   1626  O   LYS L 107      34.946   3.775  24.450  1.00 53.85           O
ATOM   1628  N   VAL L 108      33.992   2.015  25.466  1.00 55.85           N
ATOM   1629  CA  VAL L 108      35.201   1.204  25.429  1.00 55.48           C
ATOM   1631  CB  VAL L 108      35.516   0.622  26.821  1.00 54.97           C
ATOM   1633  CG1 VAL L 108      36.545  -0.498  26.735  1.00 54.29           C
ATOM   1637  CG2 VAL L 108      36.006   1.738  27.744  1.00 54.20           C
ATOM   1641  C   VAL L 108      34.976   0.101  24.428  1.00 54.93           C
ATOM   1642  O   VAL L 108      33.910  -0.506  24.417  1.00 55.37           O
ATOM   1644  N   GLU L 109      35.980  -0.151  23.593  1.00 55.63           N
ATOM   1645  CA  GLU L 109      35.896  -1.185  22.553  1.00 56.24           C
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ATOM   1647  CB  GLU L 109      35.520  -0.553  21.213  1.00 55.87           C
ATOM   1650  CG  GLU L 109      34.026  -0.230  21.125  1.00 59.28           C
ATOM   1653  CD  GLU L 109      33.636   0.546  19.880  1.00 59.04           C
ATOM   1654  OE1 GLU L 109      34.493   1.271  19.333  1.00 65.40           O
ATOM   1655  OE2 GLU L 109      32.463   0.435  19.458  1.00 63.24           O
ATOM   1656  C   GLU L 109      37.172  -2.022  22.421  1.00 55.96           C
ATOM   1657  O   GLU L 109      38.209  -1.708  23.011  1.00 56.62           O
ATOM   1659  N   ILE L 110      37.070  -3.103  21.655  1.00 55.26           N
ATOM   1660  CA  ILE L 110      38.171  -4.044  21.471  1.00 54.84           C
ATOM   1662  CB  ILE L 110      37.676  -5.520  21.615  1.00 53.97           C
ATOM   1664  CG1 ILE L 110      37.964  -6.046  23.018  1.00 53.00           C
ATOM   1667  CD1 ILE L 110      37.208  -5.335  24.077  1.00 57.14           C
ATOM   1671  CG2 ILE L 110      38.358  -6.449  20.626  1.00 57.07           C
ATOM   1675  C   ILE L 110      38.851  -3.823  20.118  1.00 55.03           C
ATOM   1676  O   ILE L 110      38.176  -3.633  19.100  1.00 55.16           O
ATOM   1678  N   LYS L 111      40.184  -3.840  20.117  1.00 54.09           N
ATOM   1679  CA  LYS L 111      40.950  -3.865  18.873  1.00 53.75           C
ATOM   1681  CB  LYS L 111      42.302  -3.150  19.010  1.00 54.21           C
ATOM   1684  CG  LYS L 111      42.196  -1.626  18.941  1.00 55.69           C
ATOM   1687  CD  LYS L 111      43.542  -0.952  18.674  1.00 55.59           C
ATOM   1690  CE  LYS L 111      43.376   0.573  18.529  1.00 57.45           C
ATOM   1693  NZ  LYS L 111      44.562   1.256  17.911  1.00 56.32           N
ATOM   1697  C   LYS L 111      41.126  -5.322  18.458  1.00 52.96           C
ATOM   1698  O   LYS L 111      41.512  -6.174  19.257  1.00 53.46           O
ATOM   1700  N   ARG L 112      40.838  -5.589  17.193  1.00 52.44           N
ATOM   1701  CA  ARG L 112      40.702  -6.940  16.682  1.00 51.40           C
ATOM   1703  CB  ARG L 112      39.212  -7.243  16.523  1.00 51.98           C
ATOM   1706  CG  ARG L 112      38.787  -8.647  16.869  1.00 50.47           C
ATOM   1709  CD  ARG L 112      37.574  -9.048  16.036  1.00 49.48           C
ATOM   1712  NE  ARG L 112      37.957  -9.432  14.678  1.00 43.18           N
ATOM   1714  CZ  ARG L 112      38.354 -10.652  14.317  1.00 42.39           C
ATOM   1715  NH1 ARG L 112      38.422 -11.634  15.200  1.00 43.28           N
ATOM   1718  NH2 ARG L 112      38.683 -10.900  13.057  1.00 45.12           N
ATOM   1721  C   ARG L 112      41.396  -7.011  15.325  1.00 50.66           C
ATOM   1722  O   ARG L 112      41.635  -5.982  14.692  1.00 49.67           O
ATOM   1724  N   THR L 113      41.721  -8.220  14.878  1.00 50.47           N
ATOM   1725  CA  THR L 113      42.254  -8.408  13.525  1.00 50.41           C
ATOM   1727  CB  THR L 113      42.738  -9.851  13.293  1.00 50.23           C
ATOM   1729  OG1 THR L 113      41.649 -10.765  13.472  1.00 51.99           O
ATOM   1731  CG2 THR L 113      43.850 -10.209  14.262  1.00 50.47           C
ATOM   1735  C   THR L 113      41.162  -8.082  12.511  1.00 50.13           C
ATOM   1736  O   THR L 113      39.978  -8.076  12.852  1.00 50.91           O
ATOM   1738  N   VAL L 114      41.544  -7.796  11.272  1.00 49.57           N
ATOM   1739  CA  VAL L 114      40.553  -7.403  10.271  1.00 49.63           C
ATOM   1741  CB  VAL L 114      41.199  -6.691   9.050  1.00 48.73           C
ATOM   1743  CG1 VAL L 114      40.183  -6.488   7.936  1.00 47.74           C
ATOM   1747  CG2 VAL L 114      41.777  -5.345   9.476  1.00 47.63           C
ATOM   1751  C   VAL L 114      39.722  -8.622   9.848  1.00 49.92           C
ATOM   1752  O   VAL L 114      40.269  -9.675   9.507  1.00 49.67           O
ATOM   1754  N   ALA L 115      38.399  -8.462   9.906  1.00 49.86           N
ATOM   1755  CA  ALA L 115      37.451  -9.497   9.507  1.00 49.19           C
ATOM   1757  CB  ALA L 115      36.633  -9.947  10.698  1.00 49.31           C
ATOM   1761  C   ALA L 115      36.535  -8.963   8.419  1.00 48.76           C
ATOM   1762  O   ALA L 115      35.754  -8.039   8.654  1.00 47.41           O
ATOM   1764  N   ALA L 116      36.638  -9.550   7.228  1.00 49.59           N
ATOM   1765  CA  ALA L 116      35.802  -9.165   6.097  1.00 49.37           C
ATOM   1767  CB  ALA L 116      36.165  -9.975   4.873  1.00 48.28           C
ATOM   1771  C   ALA L 116      34.340  -9.383   6.461  1.00 50.11           C
ATOM   1772  O   ALA L 116      34.035 -10.246   7.282  1.00 50.77           O
ATOM   1774  N   PRO L 117      33.428  -8.588   5.879  1.00 50.29           N
ATOM   1775  CA  PRO L 117      32.023  -8.851   6.133  1.00 50.04           C
ATOM   1777  CB  PRO L 117      31.356  -7.489   5.893  1.00 49.53           C
ATOM   1780  CG  PRO L 117      32.410  -6.599   5.286  1.00 49.57           C
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ATOM	1783	CD	PRO	L	117	33.601	-7.442	4.976	1.00	50.58	C
ATOM	1786	C	PRO	L	117	31.499	-9.885	5.152	1.00	50.47	C
ATOM	1787	O	PRO	L	117	31.836	-9.837	3.972	1.00	50.01	O
ATOM	1788	N	SER	L	118	30.703	-10.825	5.648	1.00	51.10	N
ATOM	1789	CA	SER	L	118	29.962	-11.740	4.792	1.00	50.63	C
ATOM	1791	CB	SER	L	118	29.693	-13.059	5.513	1.00	51.05	C
ATOM	1794	OG	SER	L	118	29.183	-12.832	6.820	1.00	49.77	O
ATOM	1796	C	SER	L	118	28.648	-11.060	4.431	1.00	51.04	C
ATOM	1797	O	SER	L	118	27.859	-10.717	5.317	1.00	50.74	O
ATOM	1799	N	VAL	L	119	28.427	-10.865	3.131	1.00	51.04	N
ATOM	1800	CA	VAL	L	119	27.300	-10.084	2.624	1.00	50.67	C
ATOM	1802	CB	VAL	L	119	27.745	-9.151	1.460	1.00	50.02	C
ATOM	1804	CG1	VAL	L	119	26.568	-8.317	0.946	1.00	47.92	C
ATOM	1808	CG2	VAL	L	119	28.897	-8.251	1.903	1.00	48.89	C
ATOM	1812	C	VAL	L	119	26.179	-10.983	2.113	1.00	50.98	C
ATOM	1813	O	VAL	L	119	26.434	-11.980	1.434	1.00	51.69	O
ATOM	1815	N	PHE	L	120	24.942	-10.612	2.429	1.00	51.17	N
ATOM	1816	CA	PHE	L	120	23.757	-11.283	1.903	1.00	53.08	C
ATOM	1818	CB	PHE	L	120	23.068	-12.106	3.002	1.00	53.27	C
ATOM	1821	CG	PHE	L	120	23.970	-13.113	3.687	1.00	54.14	C
ATOM	1822	CD1	PHE	L	120	24.866	-12.714	4.675	1.00	54.71	C
ATOM	1824	CE1	PHE	L	120	25.690	-13.636	5.313	1.00	51.45	C
ATOM	1826	CZ	PHE	L	120	25.613	-14.973	4.982	1.00	51.35	C
ATOM	1828	CE2	PHE	L	120	24.718	-15.390	4.007	1.00	53.76	C
ATOM	1830	CD2	PHE	L	120	23.900	-14.462	3.366	1.00	54.90	C
ATOM	1832	C	PHE	L	120	22.795	-10.215	1.383	1.00	53.98	C
ATOM	1833	O	PHE	L	120	22.800	-9.093	1.884	1.00	54.86	O
ATOM	1835	N	ILE	L	121	21.982	-10.550	0.381	1.00	55.74	N
ATOM	1836	CA	ILE	L	121	20.916	-9.645	-0.083	1.00	56.42	C
ATOM	1838	CB	ILE	L	121	21.187	-9.069	-1.491	1.00	56.16	C
ATOM	1840	CG1	ILE	L	121	20.244	-7.894	-1.776	1.00	55.98	C
ATOM	1843	CD1	ILE	L	121	20.615	-7.095	-3.018	1.00	56.25	C
ATOM	1847	CG2	ILE	L	121	21.056	-10.145	-2.569	1.00	56.85	C
ATOM	1851	C	ILE	L	121	19.565	-10.348	-0.068	1.00	57.75	C
ATOM	1852	O	ILE	L	121	19.470	-11.535	-0.373	1.00	58.73	O
ATOM	1854	N	PHE	L	122	18.529	-9.597	0.295	1.00	59.21	N
ATOM	1855	CA	PHE	L	122	17.187	-10.135	0.468	1.00	59.29	C
ATOM	1857	CB	PHE	L	122	16.779	-10.070	1.939	1.00	61.07	C
ATOM	1860	CG	PHE	L	122	17.673	-10.862	2.847	1.00	62.37	C
ATOM	1861	CD1	PHE	L	122	17.561	-12.242	2.912	1.00	63.05	C
ATOM	1863	CE1	PHE	L	122	18.381	-12.983	3.744	1.00	63.87	C
ATOM	1865	CZ	PHE	L	122	19.331	-12.341	4.526	1.00	63.53	C
ATOM	1867	CE2	PHE	L	122	19.456	-10.960	4.468	1.00	62.76	C
ATOM	1869	CD2	PHE	L	122	18.630	-10.228	3.630	1.00	62.86	C
ATOM	1871	C	PHE	L	122	16.202	-9.325	-0.354	1.00	59.29	C
ATOM	1872	O	PHE	L	122	16.111	-8.107	-0.187	1.00	59.29	O
ATOM	1874	N	PRO	L	123	15.455	-9.995	-1.242	1.00	58.87	N
ATOM	1875	CA	PRO	L	123	14.453	-9.272	-2.013	1.00	58.89	C
ATOM	1877	CB	PRO	L	123	14.165	-10.219	-3.182	1.00	59.19	C
ATOM	1880	CG	PRO	L	123	14.450	-11.582	-2.653	1.00	59.45	C
ATOM	1883	CD	PRO	L	123	15.483	-11.434	-1.567	1.00	59.04	C
ATOM	1886	C	PRO	L	123	13.201	-9.027	-1.168	1.00	58.28	C
ATOM	1887	O	PRO	L	123	12.977	-9.745	-0.196	1.00	58.56	O
ATOM	1888	N	PRO	L	124	12.394	-8.013	-1.522	1.00	57.89	N
ATOM	1889	CA	PRO	L	124	11.140	-7.784	-0.798	1.00	58.13	C
ATOM	1891	CB	PRO	L	124	10.569	-6.532	-1.471	1.00	58.19	C
ATOM	1894	CG	PRO	L	124	11.211	-6.493	-2.808	1.00	57.53	C
ATOM	1897	CD	PRO	L	124	12.586	-7.031	-2.600	1.00	57.38	C
ATOM	1900	C	PRO	L	124	10.160	-8.947	-0.950	1.00	58.10	C
ATOM	1901	O	PRO	L	124	10.000	-9.475	-2.051	1.00	58.38	O
ATOM	1902	N	SER	L	125	9.509	-9.331	0.145	1.00	57.47	N
ATOM	1903	CA	SER	L	125	8.545	-10.428	0.119	1.00	57.48	C
ATOM	1905	CB	SER	L	125	8.179	-10.849	1.541	1.00	57.88	C

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ATOM   1908  OG  SER L 125       7.590  -9.772   2.243  1.00 60.56           O
ATOM   1910  C   SER L 125       7.282 -10.035  -0.643  1.00 56.61           C
ATOM   1911  O   SER L 125       6.920  -8.859  -0.700  1.00 55.29           O
ATOM   1913  N   ASP L 126       6.619 -11.031  -1.228  1.00 56.62           N
ATOM   1914  CA  ASP L 126       5.383 -10.800  -1.974  1.00 56.49           C
ATOM   1916  CB  ASP L 126       4.930 -12.075  -2.697  1.00 55.78           C
ATOM   1919  CG  ASP L 126       5.773 -12.383  -3.921  1.00 54.08           C
ATOM   1920  OD1 ASP L 126       5.370 -13.253  -4.720  1.00 53.82           O
ATOM   1921  OD2 ASP L 126       6.837 -11.753  -4.093  1.00 51.90           O
ATOM   1922  C   ASP L 126       4.283 -10.292  -1.055  1.00 56.62           C
ATOM   1923  O   ASP L 126       3.468  -9.462  -1.457  1.00 57.02           O
ATOM   1925  N   GLU L 127       4.272 -10.786   0.179  1.00 56.79           N
ATOM   1926  CA  GLU L 127       3.324 -10.323   1.190  1.00 56.91           C
ATOM   1928  CB  GLU L 127       3.597 -11.020   2.531  1.00 56.92           C
ATOM   1931  CG  GLU L 127       3.247 -12.521   2.526  1.00 57.47           C
ATOM   1934  CD  GLU L 127       4.302 -13.404   3.187  1.00 56.55           C
ATOM   1935  OE1 GLU L 127       3.923 -14.371   3.883  1.00 51.13           O
ATOM   1936  OE2 GLU L 127       5.510 -13.142   3.000  1.00 55.50           O
ATOM   1937  C   GLU L 127       3.365  -8.796   1.346  1.00 57.23           C
ATOM   1938  O   GLU L 127       2.312  -8.153   1.413  1.00 57.81           O
ATOM   1940  N   GLN L 128       4.574  -8.225   1.376  1.00 56.33           N
ATOM   1941  CA  GLN L 128       4.756  -6.777   1.559  1.00 55.91           C
ATOM   1943  CB  GLN L 128       6.225  -6.431   1.833  1.00 55.96           C
ATOM   1946  CG  GLN L 128       6.441  -4.959   2.208  1.00 55.23           C
ATOM   1949  CD  GLN L 128       7.893  -4.555   2.254  1.00 53.28           C
ATOM   1950  OE1 GLN L 128       8.782  -5.361   2.000  1.00 50.86           O
ATOM   1951  NE2 GLN L 128       8.142  -3.293   2.576  1.00 48.52           N
ATOM   1954  C   GLN L 128       4.291  -5.974   0.355  1.00 55.73           C
ATOM   1955  O   GLN L 128       3.665  -4.925   0.502  1.00 55.43           O
ATOM   1957  N   LEU L 129       4.627  -6.457  -0.833  1.00 56.19           N
ATOM   1958  CA  LEU L 129       4.290  -5.754  -2.064  1.00 56.62           C
ATOM   1960  CB  LEU L 129       4.842  -6.515  -3.273  1.00 56.91           C
ATOM   1963  CG  LEU L 129       6.373  -6.569  -3.353  1.00 57.38           C
ATOM   1965  CD1 LEU L 129       6.849  -7.667  -4.293  1.00 57.69           C
ATOM   1969  CD2 LEU L 129       6.932  -5.219  -3.780  1.00 58.52           C
ATOM   1973  C   LEU L 129       2.778  -5.581  -2.168  1.00 56.69           C
ATOM   1974  O   LEU L 129       2.284  -4.496  -2.483  1.00 56.09           O
ATOM   1976  N   LYS L 130       2.051  -6.651  -1.860  1.00 56.77           N
ATOM   1977  CA  LYS L 130       0.594  -6.615  -1.833  1.00 56.47           C
ATOM   1979  CB  LYS L 130       0.030  -7.960  -1.355  1.00 56.00           C
ATOM   1982  CG  LYS L 130       0.195  -9.078  -2.389  1.00 55.88           C
ATOM   1985  CD  LYS L 130      -0.185 -10.451  -1.853  1.00 55.79           C
ATOM   1988  CE  LYS L 130      -0.033 -11.517  -2.930  1.00 53.50           C
ATOM   1991  NZ  LYS L 130      -0.372 -12.874  -2.429  1.00 52.48           N
ATOM   1995  C   LYS L 130       0.073  -5.458  -0.979  1.00 56.78           C
ATOM   1996  O   LYS L 130      -0.971  -4.892  -1.290  1.00 56.99           O
ATOM   1998  N   SER L 131       0.805  -5.096   0.077  1.00 57.09           N
ATOM   1999  CA  SER L 131       0.450  -3.927   0.895  1.00 57.34           C
ATOM   2001  CB  SER L 131       1.197  -3.927   2.235  1.00 57.08           C
ATOM   2004  OG  SER L 131       2.458  -3.296   2.125  1.00 56.21           O
ATOM   2006  C   SER L 131       0.690  -2.605   0.151  1.00 57.77           C
ATOM   2007  O   SER L 131       0.009  -1.620   0.419  1.00 58.13           O
ATOM   2009  N   GLY L 132       1.658  -2.581  -0.766  1.00 58.05           N
ATOM   2010  CA  GLY L 132       1.823  -1.449  -1.686  1.00 58.27           C
ATOM   2013  C   GLY L 132       3.159  -0.715  -1.674  1.00 58.75           C
ATOM   2014  O   GLY L 132       3.303   0.305  -2.352  1.00 58.07           O
ATOM   2016  N   THR L 133       4.131  -1.204  -0.902  1.00 59.16           N
ATOM   2017  CA  THR L 133       5.503  -0.665  -0.943  1.00 59.08           C
ATOM   2019  CB  THR L 133       5.770   0.352   0.177  1.00 58.61           C
ATOM   2021  OG1 THR L 133       5.641  -0.299   1.448  1.00 59.73           O
ATOM   2023  CG2 THR L 133       4.815   1.543   0.086  1.00 58.69           C
ATOM   2027  C   THR L 133       6.543  -1.770  -0.802  1.00 58.73           C
ATOM   2028  O   THR L 133       6.257  -2.824  -0.235  1.00 59.65           O
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ATOM   2030  N   ALA L 134       7.751  -1.505  -1.296  1.00 57.63           N
ATOM   2031  CA  ALA L 134       8.834  -2.483  -1.270  1.00 58.37           C
ATOM   2033  CB  ALA L 134       9.291  -2.793  -2.685  1.00 58.84           C
ATOM   2037  C   ALA L 134      10.021  -2.011  -0.425  1.00 58.96           C
ATOM   2038  O   ALA L 134      10.439  -0.851  -0.512  1.00 59.55           O
ATOM   2040  N   SER L 135      10.547  -2.927   0.391  1.00 58.21           N
ATOM   2041  CA  SER L 135      11.784  -2.717   1.133  1.00 57.20           C
ATOM   2043  CB  SER L 135      11.523  -2.746   2.644  1.00 57.71           C
ATOM   2046  OG  SER L 135      11.108  -1.476   3.121  1.00 58.76           O
ATOM   2048  C   SER L 135      12.768  -3.816   0.761  1.00 55.71           C
ATOM   2049  O   SER L 135      12.458  -4.992   0.929  1.00 55.68           O
ATOM   2051  N   VAL L 136      13.938  -3.434   0.248  1.00 54.44           N
ATOM   2052  CA  VAL L 136      15.007  -4.393  -0.057  1.00 54.20           C
ATOM   2054  CB  VAL L 136      15.438  -4.351  -1.568  1.00 54.24           C
ATOM   2056  CG1 VAL L 136      16.023  -3.009  -1.974  1.00 52.66           C
ATOM   2060  CG2 VAL L 136      16.421  -5.471  -1.884  1.00 55.76           C
ATOM   2064  C   VAL L 136      16.183  -4.182   0.912  1.00 53.60           C
ATOM   2065  O   VAL L 136      16.612  -3.050   1.158  1.00 53.72           O
ATOM   2067  N   VAL L 137      16.687  -5.284   1.465  1.00 53.30           N
ATOM   2068  CA  VAL L 137      17.637  -5.243   2.581  1.00 53.45           C
ATOM   2070  CB  VAL L 137      17.087  -6.015   3.804  1.00 52.01           C
ATOM   2072  CG1 VAL L 137      18.072  -5.978   4.961  1.00 50.63           C
ATOM   2076  CG2 VAL L 137      15.749  -5.450   4.228  1.00 51.67           C
ATOM   2080  C   VAL L 137      18.981  -5.854   2.200  1.00 54.41           C
ATOM   2081  O   VAL L 137      19.038  -6.880   1.521  1.00 55.20           O
ATOM   2083  N   CYS L 138      20.056  -5.212   2.647  1.00 55.76           N
ATOM   2084  CA  CYS L 138      21.406  -5.736   2.491  1.00 54.89           C
ATOM   2086  CB  CYS L 138      22.298  -4.729   1.779  1.00 55.45           C
ATOM   2089  SG  CYS L 138      23.884  -5.436   1.297  1.00 59.37           S
ATOM   2091  C   CYS L 138      21.963  -5.996   3.868  1.00 54.85           C
ATOM   2092  O   CYS L 138      21.772  -5.184   4.768  1.00 55.84           O
ATOM   2094  N   LEU L 139      22.654  -7.120   4.032  1.00 54.78           N
ATOM   2095  CA  LEU L 139      23.214  -7.519   5.331  1.00 54.82           C
ATOM   2097  CB  LEU L 139      22.598  -8.853   5.771  1.00 54.03           C
ATOM   2100  CG  LEU L 139      23.274  -9.583   6.933  1.00 53.90           C
ATOM   2102  CD1 LEU L 139      23.385  -8.660   8.139  1.00 51.76           C
ATOM   2106  CD2 LEU L 139      22.516 -10.861   7.269  1.00 52.76           C
ATOM   2110  C   LEU L 139      24.737  -7.651   5.245  1.00 55.59           C
ATOM   2111  O   LEU L 139      25.232  -8.375   4.384  1.00 57.06           O
ATOM   2113  N   LEU L 140      25.472  -6.955   6.117  1.00 55.07           N
ATOM   2114  CA  LEU L 140      26.923  -7.155   6.247  1.00 54.32           C
ATOM   2116  CB  LEU L 140      27.699  -5.849   6.110  1.00 53.60           C
ATOM   2119  CG  LEU L 140      27.248  -4.885   5.018  1.00 52.60           C
ATOM   2121  CD1 LEU L 140      28.239  -3.728   4.865  1.00 51.63           C
ATOM   2125  CD2 LEU L 140      27.074  -5.584   3.713  1.00 52.71           C
ATOM   2129  C   LEU L 140      27.196  -7.772   7.604  1.00 54.65           C
ATOM   2130  O   LEU L 140      27.284  -7.070   8.606  1.00 55.51           O
ATOM   2132  N   ASN L 141      27.337  -9.091   7.625  1.00 54.62           N
ATOM   2133  CA  ASN L 141      27.370  -9.837   8.872  1.00 54.74           C
ATOM   2135  CB  ASN L 141      26.737 -11.214   8.658  1.00 54.71           C
ATOM   2138  CG  ASN L 141      26.514 -11.960   9.945  1.00 52.97           C
ATOM   2139  OD1 ASN L 141      26.712 -13.163  10.008  1.00 51.47           O
ATOM   2140  ND2 ASN L 141      26.097 -11.250  10.981  1.00 56.80           N
ATOM   2143  C   ASN L 141      28.787  -9.985   9.428  1.00 55.57           C
ATOM   2144  O   ASN L 141      29.748 -10.164   8.663  1.00 55.86           O
ATOM   2146  N   ASN L 142      28.886  -9.877  10.758  1.00 55.10           N
ATOM   2147  CA  ASN L 142      30.111 -10.118  11.538  1.00 54.03           C
ATOM   2149  CB  ASN L 142      30.220 -11.612  11.876  1.00 52.77           C
ATOM   2152  CG  ASN L 142      29.186 -12.063  12.904  1.00 52.49           C
ATOM   2153  OD1 ASN L 142      28.338 -11.286  13.337  1.00 52.77           O
ATOM   2154  ND2 ASN L 142      29.263 -13.326  13.305  1.00 53.29           N
ATOM   2157  C   ASN L 142      31.413  -9.619  10.902  1.00 54.05           C
ATOM   2158  O   ASN L 142      32.076 -10.367  10.187  1.00 55.04           O
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ATOM   2160  N   PHE L 143      31.777  -8.363  11.171  1.00 54.33           N
ATOM   2161  CA  PHE L 143      32.999  -7.774  10.601  1.00 54.32           C
ATOM   2163  CB  PHE L 143      32.690  -7.096   9.265  1.00 55.46           C
ATOM   2166  CG  PHE L 143      31.807  -5.882   9.378  1.00 55.14           C
ATOM   2167  CD1 PHE L 143      32.360  -4.627   9.589  1.00 56.14           C
ATOM   2169  CE1 PHE L 143      31.555  -3.499   9.684  1.00 56.42           C
ATOM   2171  CZ  PHE L 143      30.176  -3.616   9.554  1.00 56.54           C
ATOM   2173  CE2 PHE L 143      29.610  -4.863   9.331  1.00 56.80           C
ATOM   2175  CD2 PHE L 143      30.425  -5.990   9.243  1.00 56.14           C
ATOM   2177  C   PHE L 143      33.692  -6.778  11.525  1.00 54.20           C
ATOM   2178  O   PHE L 143      33.065  -6.204  12.418  1.00 55.01           O
ATOM   2180  N   TYR L 144      34.989  -6.585  11.295  1.00 53.47           N
ATOM   2181  CA  TYR L 144      35.779  -5.605  12.028  1.00 53.67           C
ATOM   2183  CB  TYR L 144      36.611  -6.275  13.125  1.00 53.71           C
ATOM   2186  CG  TYR L 144      37.268  -5.270  14.034  1.00 53.86           C
ATOM   2187  CD1 TYR L 144      38.530  -4.755  13.749  1.00 54.17           C
ATOM   2189  CE1 TYR L 144      39.121  -3.807  14.577  1.00 52.92           C
ATOM   2191  CZ  TYR L 144      38.438  -3.360  15.694  1.00 53.53           C
ATOM   2192  OH  TYR L 144      38.990  -2.425  16.533  1.00 54.86           O
ATOM   2194  CE2 TYR L 144      37.181  -3.848  15.983  1.00 54.32           C
ATOM   2196  CD2 TYR L 144      36.604  -4.793  15.154  1.00 54.65           C
ATOM   2198  C   TYR L 144      36.708  -4.890  11.060  1.00 54.69           C
ATOM   2199  O   TYR L 144      37.288  -5.540  10.188  1.00 54.08           O
ATOM   2201  N   PRO L 145      36.865  -3.555  11.203  1.00 56.43           N
ATOM   2202  CA  PRO L 145      36.252  -2.625  12.167  1.00 57.34           C
ATOM   2204  CB  PRO L 145      37.319  -1.532  12.325  1.00 57.48           C
ATOM   2207  CG  PRO L 145      38.198  -1.630  11.084  1.00 57.29           C
ATOM   2210  CD  PRO L 145      37.772  -2.838  10.288  1.00 56.61           C
ATOM   2213  C   PRO L 145      34.927  -2.047  11.657  1.00 57.75           C
ATOM   2214  O   PRO L 145      34.408  -2.526  10.647  1.00 57.75           O
ATOM   2215  N   ARG L 146      34.384  -1.038  12.342  1.00 57.84           N
ATOM   2216  CA  ARG L 146      33.047  -0.538  12.004  1.00 58.28           C
ATOM   2218  CB  ARG L 146      32.482   0.417  13.079  1.00 58.97           C
ATOM   2221  CG  ARG L 146      30.938   0.508  13.054  1.00 59.22           C
ATOM   2224  CD  ARG L 146      30.342   1.588  13.972  1.00 60.35           C
ATOM   2227  NE  ARG L 146      30.340   1.200  15.392  1.00 65.96           N
ATOM   2229  CZ  ARG L 146      29.422   1.566  16.303  1.00 66.50           C
ATOM   2230  NH1 ARG L 146      28.378   2.333  15.975  1.00 66.24           N
ATOM   2233  NH2 ARG L 146      29.540   1.151  17.566  1.00 62.60           N
ATOM   2236  C   ARG L 146      33.001   0.115  10.622  1.00 57.81           C
ATOM   2237  O   ARG L 146      32.230  -0.321   9.778  1.00 57.22           O
ATOM   2239  N   GLU L 147      33.828   1.132  10.377  1.00 58.64           N
ATOM   2240  CA  GLU L 147      33.737   1.912   9.124  1.00 58.71           C
ATOM   2242  CB  GLU L 147      34.991   2.771   8.901  1.00 59.53           C
ATOM   2245  CG  GLU L 147      34.971   4.126   9.628  1.00 62.23           C
ATOM   2248  CD  GLU L 147      35.156   5.322   8.686  1.00 66.41           C
ATOM   2249  OE1 GLU L 147      35.624   5.143   7.537  1.00 63.81           O
ATOM   2250  OE2 GLU L 147      34.822   6.453   9.101  1.00 71.32           O
ATOM   2251  C   GLU L 147      33.495   1.024   7.902  1.00 57.91           C
ATOM   2252  O   GLU L 147      34.181   0.018   7.724  1.00 57.97           O
ATOM   2254  N   ALA L 148      32.513   1.388   7.074  1.00 57.47           N
ATOM   2255  CA  ALA L 148      32.159   0.575   5.895  1.00 57.40           C
ATOM   2257  CB  ALA L 148      31.487  -0.723   6.326  1.00 57.19           C
ATOM   2261  C   ALA L 148      31.259   1.308   4.910  1.00 56.76           C
ATOM   2262  O   ALA L 148      30.408   2.104   5.304  1.00 56.64           O
ATOM   2264  N   LYS L 149      31.443   1.003   3.628  1.00 56.80           N
ATOM   2265  CA  LYS L 149      30.663   1.602   2.554  1.00 57.51           C
ATOM   2267  CB  LYS L 149      31.605   2.128   1.460  1.00 57.49           C
ATOM   2270  CG  LYS L 149      30.924   2.854   0.280  1.00 56.81           C
ATOM   2273  CD  LYS L 149      31.212   4.358   0.274  1.00 56.29           C
ATOM   2276  CE  LYS L 149      30.764   5.022  -1.034  1.00 57.19           C
ATOM   2279  NZ  LYS L 149      31.501   6.292  -1.339  1.00 53.54           N
ATOM   2283  C   LYS L 149      29.697   0.563   1.972  1.00 58.12           C
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ATOM   2284  O   LYS L 149      30.122  -0.479   1.466  1.00 58.40           O
ATOM   2286  N   VAL L 150      28.401   0.848   2.074  1.00 57.96           N
ATOM   2287  CA  VAL L 150      27.376   0.114   1.337  1.00 58.18           C
ATOM   2289  CB  VAL L 150      26.215  -0.328   2.264  1.00 58.19           C
ATOM   2291  CG1 VAL L 150      24.997  -0.773   1.465  1.00 58.61           C
ATOM   2295  CG2 VAL L 150      26.671  -1.450   3.162  1.00 57.44           C
ATOM   2299  C   VAL L 150      26.872   1.031   0.221  1.00 58.47           C
ATOM   2300  O   VAL L 150      26.562   2.197   0.462  1.00 59.48           O
ATOM   2302  N   GLN L 151      26.813   0.507  -1.000  1.00 58.94           N
ATOM   2303  CA  GLN L 151      26.348   1.278  -2.148  1.00 57.56           C
ATOM   2305  CB  GLN L 151      27.503   1.532  -3.125  1.00 59.31           C
ATOM   2308  CG  GLN L 151      27.396   2.851  -3.907  1.00 61.39           C
ATOM   2311  CD  GLN L 151      27.697   4.095  -3.057  1.00 66.79           C
ATOM   2312  OE1 GLN L 151      27.803   5.202  -3.585  1.00 66.18           O
ATOM   2313  NE2 GLN L 151      27.835   3.913  -1.740  1.00 68.31           N
ATOM   2316  C   GLN L 151      25.224   0.532  -2.849  1.00 56.33           C
ATOM   2317  O   GLN L 151      25.377  -0.639  -3.201  1.00 55.81           O
ATOM   2319  N   TRP L 152      24.098   1.213  -3.045  1.00 54.22           N
ATOM   2320  CA  TRP L 152      22.950   0.625  -3.727  1.00 53.68           C
ATOM   2322  CB  TRP L 152      21.648   1.180  -3.155  1.00 53.40           C
ATOM   2325  CG  TRP L 152      21.233   0.523  -1.879  1.00 52.23           C
ATOM   2326  CD1 TRP L 152      21.240   1.076  -0.634  1.00 51.07           C
ATOM   2328  NE1 TRP L 152      20.794   0.165   0.288  1.00 52.84           N
ATOM   2330  CE2 TRP L 152      20.489  -1.008  -0.355  1.00 54.44           C
ATOM   2331  CD2 TRP L 152      20.753  -0.817  -1.725  1.00 50.08           C
ATOM   2332  CE3 TRP L 152      20.525  -1.877  -2.612  1.00 50.38           C
ATOM   2334  CZ3 TRP L 152      20.037  -3.079  -2.110  1.00 51.18           C
ATOM   2336  CH2 TRP L 152      19.778  -3.240  -0.742  1.00 52.04           C
ATOM   2338  CZ2 TRP L 152      19.995  -2.220   0.153  1.00 54.12           C
ATOM   2340  C   TRP L 152      22.991   0.875  -5.228  1.00 53.15           C
ATOM   2341  O   TRP L 152      23.531   1.882  -5.690  1.00 52.79           O
ATOM   2343  N   LYS L 153      22.404  -0.053  -5.978  1.00 53.15           N
ATOM   2344  CA  LYS L 153      22.346   0.031  -7.432  1.00 53.18           C
ATOM   2346  CB  LYS L 153      23.557  -0.673  -8.051  1.00 53.70           C
ATOM   2349  CG  LYS L 153      24.873   0.100  -7.936  1.00 55.50           C
ATOM   2352  CD  LYS L 153      26.052  -0.682  -8.519  1.00 55.28           C
ATOM   2355  CE  LYS L 153      27.224   0.234  -8.863  1.00 56.21           C
ATOM   2358  NZ  LYS L 153      28.422  -0.504  -9.376  1.00 56.19           N
ATOM   2362  C   LYS L 153      21.063  -0.615  -7.950  1.00 52.54           C
ATOM   2363  O   LYS L 153      20.824  -1.806  -7.731  1.00 50.96           O
ATOM   2365  N   VAL L 154      20.232   0.184  -8.614  1.00 52.66           N
ATOM   2366  CA  VAL L 154      19.081  -0.328  -9.355  1.00 52.24           C
ATOM   2368  CB  VAL L 154      17.738   0.298  -8.896  1.00 52.32           C
ATOM   2370  CG1 VAL L 154      16.572  -0.510  -9.434  1.00 53.43           C
ATOM   2374  CG2 VAL L 154      17.653   0.382  -7.384  1.00 53.10           C
ATOM   2378  C   VAL L 154      19.328   0.032 -10.807  1.00 51.53           C
ATOM   2379  O   VAL L 154      19.328   1.211 -11.154  1.00 51.98           O
ATOM   2381  N   ASP L 155      19.555  -0.978 -11.646  1.00 51.01           N
ATOM   2382  CA  ASP L 155      19.963  -0.759 -13.035  1.00 51.37           C
ATOM   2384  CB  ASP L 155      18.781  -0.282 -13.892  1.00 50.97           C
ATOM   2387  CG  ASP L 155      17.664  -1.309 -13.992  1.00 50.99           C
ATOM   2388  OD1 ASP L 155      17.870  -2.481 -13.619  1.00 53.87           O
ATOM   2389  OD2 ASP L 155      16.568  -0.937 -14.459  1.00 50.60           O
ATOM   2390  C   ASP L 155      21.113   0.257 -13.111  1.00 51.64           C
ATOM   2391  O   ASP L 155      20.938   1.362 -13.631  1.00 52.33           O
ATOM   2393  N   ASN L 156      22.268  -0.114 -12.551  1.00 51.53           N
ATOM   2394  CA  ASN L 156      23.492   0.712 -12.576  1.00 50.82           C
ATOM   2396  CB  ASN L 156      24.104   0.732 -13.990  1.00 51.40           C
ATOM   2399  CG  ASN L 156      24.537  -0.645 -14.472  1.00 52.43           C
ATOM   2400  OD1 ASN L 156      24.242  -1.661 -13.844  1.00 55.43           O
ATOM   2401  ND2 ASN L 156      25.240  -0.680 -15.602  1.00 51.24           N
ATOM   2404  C   ASN L 156      23.320   2.160 -12.092  1.00 50.40           C
ATOM   2405  O   ASN L 156      24.190   2.999 -12.340  1.00 51.06           O
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ATOM	2407	N	ALA	L	157	22.214	2.451	-11.408	1.00	49.53	N
ATOM	2408	CA	ALA	L	157	21.925	3.804	-10.944	1.00	48.75	C
ATOM	2410	CB	ALA	L	157	20.508	4.206	-11.317	1.00	48.22	C
ATOM	2414	C	ALA	L	157	22.139	3.888	-9.430	1.00	48.32	C
ATOM	2415	O	ALA	L	157	21.503	3.166	-8.657	1.00	47.52	O
ATOM	2417	N	LEU	L	158	23.058	4.759	-9.021	1.00	47.40	N
ATOM	2418	CA	LEU	L	158	23.330	4.994	-7.610	1.00	47.17	C
ATOM	2420	CB	LEU	L	158	24.492	5.986	-7.434	1.00	46.49	C
ATOM	2423	CG	LEU	L	158	24.748	6.565	-6.037	1.00	45.89	C
ATOM	2425	CD1	LEU	L	158	24.997	5.451	-5.035	1.00	46.28	C
ATOM	2429	CD2	LEU	L	158	25.913	7.549	-6.052	1.00	44.85	C
ATOM	2433	C	LEU	L	158	22.077	5.528	-6.935	1.00	47.55	C
ATOM	2434	O	LEU	L	158	21.603	6.618	-7.254	1.00	46.05	O
ATOM	2436	N	GLN	L	159	21.533	4.741	-6.013	1.00	49.28	N
ATOM	2437	CA	GLN	L	159	20.472	5.216	-5.133	1.00	48.82	C
ATOM	2439	CB	GLN	L	159	19.651	4.048	-4.581	1.00	49.37	C
ATOM	2442	CG	GLN	L	159	19.097	3.118	-5.657	1.00	52.12	C
ATOM	2445	CD	GLN	L	159	18.509	3.864	-6.848	1.00	54.32	C
ATOM	2446	OE1	GLN	L	159	18.903	3.636	-7.986	1.00	60.88	O
ATOM	2447	NE2	GLN	L	159	17.572	4.767	-6.585	1.00	57.08	N
ATOM	2450	C	GLN	L	159	21.130	5.993	-4.009	1.00	47.54	C
ATOM	2451	O	GLN	L	159	22.099	5.528	-3.418	1.00	46.19	O
ATOM	2453	N	SER	L	160	20.629	7.192	-3.741	1.00	47.41	N
ATOM	2454	CA	SER	L	160	21.212	8.031	-2.710	1.00	48.52	C
ATOM	2456	CB	SER	L	160	22.254	8.969	-3.322	1.00	48.45	C
ATOM	2459	OG	SER	L	160	23.003	9.634	-2.318	1.00	46.22	O
ATOM	2461	C	SER	L	160	20.130	8.823	-1.983	1.00	49.43	C
ATOM	2462	O	SER	L	160	19.366	9.578	-2.606	1.00	50.03	O
ATOM	2464	N	GLY	L	161	20.076	8.636	-0.663	1.00	49.49	N
ATOM	2465	CA	GLY	L	161	19.109	9.308	0.198	1.00	49.44	C
ATOM	2468	C	GLY	L	161	18.032	8.357	0.668	1.00	49.96	C
ATOM	2469	O	GLY	L	161	17.681	8.346	1.846	1.00	51.28	O
ATOM	2471	N	ASN	L	162	17.525	7.542	-0.255	1.00	50.03	N
ATOM	2472	CA	ASN	L	162	16.399	6.632	0.013	1.00	49.79	C
ATOM	2474	CB	ASN	L	162	15.590	6.382	-1.277	1.00	49.15	C
ATOM	2477	CG	ASN	L	162	16.409	5.740	-2.391	1.00	47.76	C
ATOM	2478	OD1	ASN	L	162	15.871	5.419	-3.452	1.00	48.43	O
ATOM	2479	ND2	ASN	L	162	17.706	5.559	-2.163	1.00	45.16	N
ATOM	2482	C	ASN	L	162	16.752	5.294	0.673	1.00	50.25	C
ATOM	2483	O	ASN	L	162	16.049	4.302	0.466	1.00	51.32	O
ATOM	2485	N	SER	L	163	17.823	5.260	1.465	1.00	49.85	N
ATOM	2486	CA	SER	L	163	18.153	4.063	2.234	1.00	50.83	C
ATOM	2488	CB	SER	L	163	19.187	3.198	1.504	1.00	51.81	C
ATOM	2491	OG	SER	L	163	20.504	3.455	1.971	1.00	52.20	O
ATOM	2493	C	SER	L	163	18.703	4.450	3.587	1.00	51.11	C
ATOM	2494	O	SER	L	163	19.406	5.450	3.697	1.00	52.65	O
ATOM	2496	N	GLN	L	164	18.400	3.650	4.605	1.00	50.62	N
ATOM	2497	CA	GLN	L	164	18.932	3.884	5.944	1.00	51.13	C
ATOM	2499	CB	GLN	L	164	17.890	4.551	6.852	1.00	50.47	C
ATOM	2502	CG	GLN	L	164	16.469	4.025	6.735	1.00	50.21	C
ATOM	2505	CD	GLN	L	164	15.444	4.939	7.416	1.00	50.71	C
ATOM	2506	OE1	GLN	L	164	15.783	5.749	8.291	1.00	45.21	O
ATOM	2507	NE2	GLN	L	164	14.181	4.810	7.010	1.00	48.25	N
ATOM	2510	C	GLN	L	164	19.496	2.608	6.565	1.00	52.13	C
ATOM	2511	O	GLN	L	164	19.087	1.496	6.229	1.00	53.65	O
ATOM	2513	N	GLU	L	165	20.461	2.778	7.459	1.00	52.75	N
ATOM	2514	CA	GLU	L	165	21.192	1.650	7.995	1.00	53.30	C
ATOM	2516	CB	GLU	L	165	22.575	1.550	7.351	1.00	54.18	C
ATOM	2519	CG	GLU	L	165	23.491	2.736	7.593	1.00	55.28	C
ATOM	2522	CD	GLU	L	165	24.625	2.819	6.573	1.00	56.57	C
ATOM	2523	OE1	GLU	L	165	24.447	2.363	5.415	1.00	55.10	O
ATOM	2524	OE2	GLU	L	165	25.694	3.362	6.929	1.00	59.92	O
ATOM	2525	C	GLU	L	165	21.326	1.678	9.501	1.00	52.77	C

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ATOM   2526  O   GLU L 165      21.321   2.730  10.133  1.00 51.98           O
ATOM   2528  N   SER L 166      21.449   0.483  10.056  1.00 53.19           N
ATOM   2529  CA  SER L 166      21.531   0.279  11.483  1.00 54.36           C
ATOM   2531  CB  SER L 166      20.221  -0.321  12.005  1.00 54.68           C
ATOM   2534  OG  SER L 166      20.280  -0.576  13.397  1.00 55.03           O
ATOM   2536  C   SER L 166      22.696  -0.666  11.719  1.00 54.89           C
ATOM   2537  O   SER L 166      23.051  -1.459  10.836  1.00 54.89           O
ATOM   2539  N   VAL L 167      23.293  -0.573  12.903  1.00 54.47           N
ATOM   2540  CA  VAL L 167      24.500  -1.330  13.203  1.00 54.81           C
ATOM   2542  CB  VAL L 167      25.770  -0.492  12.891  1.00 55.11           C
ATOM   2544  CG1 VAL L 167      25.720   0.876  13.583  1.00 56.53           C
ATOM   2548  CG2 VAL L 167      27.037  -1.250  13.266  1.00 56.23           C
ATOM   2552  C   VAL L 167      24.488  -1.790  14.650  1.00 54.84           C
ATOM   2553  O   VAL L 167      24.076  -1.044  15.538  1.00 56.13           O
ATOM   2555  N   THR L 168      24.916  -3.028  14.882  1.00 55.33           N
ATOM   2556  CA  THR L 168      24.980  -3.565  16.241  1.00 55.31           C
ATOM   2558  CB  THR L 168      24.971  -5.111  16.273  1.00 55.44           C
ATOM   2560  OG1 THR L 168      26.006  -5.625  15.424  1.00 55.55           O
ATOM   2562  CG2 THR L 168      23.618  -5.655  15.831  1.00 55.37           C
ATOM   2566  C   THR L 168      26.236  -3.078  16.945  1.00 55.40           C
ATOM   2567  O   THR L 168      27.163  -2.533  16.328  1.00 54.29           O
ATOM   2569  N   GLU L 169      26.252  -3.266  18.255  1.00 55.10           N
ATOM   2570  CA  GLU L 169      27.441  -2.977  19.021  1.00 55.62           C
ATOM   2572  CB  GLU L 169      27.093  -2.753  20.496  1.00 56.82           C
ATOM   2575  CG  GLU L 169      26.233  -1.508  20.728  1.00 59.20           C
ATOM   2578  CD  GLU L 169      26.990  -0.208  20.486  1.00 61.22           C
ATOM   2579  OE1 GLU L 169      27.626  -0.065  19.418  1.00 62.62           O
ATOM   2580  OE2 GLU L 169      26.944   0.674  21.370  1.00 63.58           O
ATOM   2581  C   GLU L 169      28.433  -4.112  18.853  1.00 54.99           C
ATOM   2582  O   GLU L 169      28.114  -5.178  18.308  1.00 54.03           O
ATOM   2584  N   GLN L 170      29.652  -3.865  19.303  1.00 54.11           N
ATOM   2585  CA  GLN L 170      30.684  -4.874  19.224  1.00 53.03           C
ATOM   2587  CB  GLN L 170      31.979  -4.392  19.883  1.00 51.58           C
ATOM   2590  CG  GLN L 170      33.223  -4.813  19.137  1.00 51.46           C
ATOM   2593  CD  GLN L 170      34.485  -4.253  19.745  1.00 52.07           C
ATOM   2594  OE1 GLN L 170      34.439  -3.524  20.742  1.00 49.88           O
ATOM   2595  NE2 GLN L 170      35.630  -4.590  19.152  1.00 46.95           N
ATOM   2598  C   GLN L 170      30.144  -6.114  19.919  1.00 52.15           C
ATOM   2599  O   GLN L 170      29.643  -6.026  21.042  1.00 50.29           O
ATOM   2601  N   ASP L 171      30.211  -7.255  19.237  1.00 52.42           N
ATOM   2602  CA  ASP L 171      29.774  -8.507  19.834  1.00 52.53           C
ATOM   2604  CB  ASP L 171      29.965  -9.676  18.871  1.00 51.89           C
ATOM   2607  CG  ASP L 171      29.331 -10.959  19.380  1.00 52.53           C
ATOM   2608  OD1 ASP L 171      30.060 -11.948  19.596  1.00 50.33           O
ATOM   2609  OD2 ASP L 171      28.102 -10.981  19.581  1.00 55.53           O
ATOM   2610  C   ASP L 171      30.576  -8.737  21.109  1.00 53.44           C
ATOM   2611  O   ASP L 171      31.779  -8.472  21.149  1.00 54.47           O
ATOM   2613  N   SER L 172      29.899  -9.204  22.153  1.00 53.54           N
ATOM   2614  CA  SER L 172      30.549  -9.528  23.417  1.00 52.97           C
ATOM   2616  CB  SER L 172      29.492  -9.784  24.489  1.00 52.34           C
ATOM   2619  OG  SER L 172      28.735 -10.939  24.176  1.00 50.12           O
ATOM   2621  C   SER L 172      31.463 -10.752  23.307  1.00 53.20           C
ATOM   2622  O   SER L 172      32.451 -10.846  24.029  1.00 53.94           O
ATOM   2624  N   LYS L 173      31.130 -11.682  22.410  1.00 54.24           N
ATOM   2625  CA  LYS L 173      31.874 -12.948  22.269  1.00 54.74           C
ATOM   2627  CB  LYS L 173      30.917 -14.117  21.952  1.00 54.91           C
ATOM   2630  CG  LYS L 173      30.235 -14.727  23.197  1.00 56.21           C
ATOM   2633  CD  LYS L 173      29.281 -15.895  22.862  1.00 56.16           C
ATOM   2636  CE  LYS L 173      27.807 -15.456  22.793  1.00 56.39           C
ATOM   2639  NZ  LYS L 173      26.865 -16.573  22.464  1.00 55.49           N
ATOM   2643  C   LYS L 173      33.019 -12.899  21.240  1.00 55.61           C
ATOM   2644  O   LYS L 173      34.143 -13.294  21.562  1.00 56.17           O
ATOM   2646  N   ASP L 174      32.742 -12.427  20.019  1.00 55.43           N
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ATOM   2647  CA  ASP L 174      33.746 -12.427  18.937  1.00 54.22           C
ATOM   2649  CB  ASP L 174      33.286 -13.348  17.794  1.00 54.45           C
ATOM   2652  CG  ASP L 174      32.373 -12.651  16.793  1.00 57.15           C
ATOM   2653  OD1 ASP L 174      31.531 -11.820  17.198  1.00 59.32           O
ATOM   2654  OD2 ASP L 174      32.505 -12.944  15.583  1.00 60.82           O
ATOM   2655  C   ASP L 174      34.146 -11.022  18.416  1.00 53.53           C
ATOM   2656  O   ASP L 174      34.848 -10.903  17.405  1.00 53.00           O
ATOM   2658  N   SER L 175      33.695  -9.973  19.108  1.00 53.42           N
ATOM   2659  CA  SER L 175      34.211  -8.596  18.929  1.00 52.83           C
ATOM   2661  CB  SER L 175      35.713  -8.567  19.235  1.00 52.50           C
ATOM   2664  OG  SER L 175      36.013  -9.360  20.373  1.00 51.82           O
ATOM   2666  C   SER L 175      33.949  -7.948  17.557  1.00 51.62           C
ATOM   2667  O   SER L 175      34.665  -7.033  17.151  1.00 49.10           O
ATOM   2669  N   THR L 176      32.901  -8.401  16.880  1.00 51.67           N
ATOM   2670  CA  THR L 176      32.591  -7.963  15.529  1.00 52.24           C
ATOM   2672  CB  THR L 176      32.355  -9.170  14.617  1.00 52.18           C
ATOM   2674  OG1 THR L 176      31.345 -10.007  15.192  1.00 52.78           O
ATOM   2676  CG2 THR L 176      33.639  -9.974  14.444  1.00 53.91           C
ATOM   2680  C   THR L 176      31.330  -7.116  15.498  1.00 52.64           C
ATOM   2681  O   THR L 176      30.546  -7.110  16.451  1.00 52.97           O
ATOM   2683  N   TYR L 177      31.146  -6.404  14.390  1.00 52.05           N
ATOM   2684  CA  TYR L 177      29.936  -5.636  14.155  1.00 52.18           C
ATOM   2686  CB  TYR L 177      30.280  -4.207  13.731  1.00 52.28           C
ATOM   2689  CG  TYR L 177      31.123  -3.476  14.741  1.00 50.99           C
ATOM   2690  CD1 TYR L 177      30.535  -2.826  15.813  1.00 53.06           C
ATOM   2692  CE1 TYR L 177      31.296  -2.161  16.762  1.00 52.96           C
ATOM   2694  CZ  TYR L 177      32.666  -2.140  16.639  1.00 53.33           C
ATOM   2695  OH  TYR L 177      33.414  -1.478  17.591  1.00 52.32           O
ATOM   2697  CE2 TYR L 177      33.282  -2.787  15.575  1.00 52.90           C
ATOM   2699  CD2 TYR L 177      32.507  -3.452  14.638  1.00 51.48           C
ATOM   2701  C   TYR L 177      29.129  -6.316  13.069  1.00 52.44           C
ATOM   2702  O   TYR L 177      29.671  -7.081  12.271  1.00 52.38           O
ATOM   2704  N   SER L 178      27.832  -6.041  13.050  1.00 52.19           N
ATOM   2705  CA  SER L 178      26.975  -6.447  11.947  1.00 52.95           C
ATOM   2707  CB  SER L 178      26.069  -7.599  12.362  1.00 53.30           C
ATOM   2710  OG  SER L 178      26.832  -8.717  12.776  1.00 52.50           O
ATOM   2712  C   SER L 178      26.158  -5.242  11.523  1.00 53.54           C
ATOM   2713  O   SER L 178      25.941  -4.335  12.323  1.00 54.29           O
ATOM   2715  N   LEU L 179      25.706  -5.234  10.269  1.00 54.64           N
ATOM   2716  CA  LEU L 179      25.068  -4.045   9.676  1.00 55.24           C
ATOM   2718  CB  LEU L 179      26.134  -3.110   9.076  1.00 55.63           C
ATOM   2721  CG  LEU L 179      25.724  -1.776   8.435  1.00 53.31           C
ATOM   2723  CD1 LEU L 179      26.905  -0.836   8.428  1.00 52.32           C
ATOM   2727  CD2 LEU L 179      25.209  -1.941   7.020  1.00 52.03           C
ATOM   2731  C   LEU L 179      24.033  -4.401   8.609  1.00 55.66           C
ATOM   2732  O   LEU L 179      24.249  -5.293   7.779  1.00 55.17           O
ATOM   2734  N   SER L 180      22.915  -3.680   8.649  1.00 55.32           N
ATOM   2735  CA  SER L 180      21.857  -3.796   7.663  1.00 53.86           C
ATOM   2737  CB  SER L 180      20.564  -4.282   8.317  1.00 53.72           C
ATOM   2740  OG  SER L 180      20.049  -3.313   9.219  1.00 52.78           O
ATOM   2742  C   SER L 180      21.623  -2.430   7.038  1.00 53.33           C
ATOM   2743  O   SER L 180      21.507  -1.435   7.742  1.00 52.83           O
ATOM   2745  N   SER L 181      21.576  -2.402   5.711  1.00 53.68           N
ATOM   2746  CA  SER L 181      21.180  -1.231   4.942  1.00 52.42           C
ATOM   2748  CB  SER L 181      22.240  -0.925   3.877  1.00 52.92           C
ATOM   2751  OG  SER L 181      21.837   0.122   3.010  1.00 53.65           O
ATOM   2753  C   SER L 181      19.850  -1.582   4.290  1.00 51.14           C
ATOM   2754  O   SER L 181      19.709  -2.670   3.726  1.00 49.09           O
ATOM   2756  N   THR L 182      18.872  -0.680   4.380  1.00 50.15           N
ATOM   2757  CA  THR L 182      17.566  -0.920   3.762  1.00 50.23           C
ATOM   2759  CB  THR L 182      16.461  -1.088   4.807  1.00 49.71           C
ATOM   2761  OG1 THR L 182      16.864  -2.069   5.767  1.00 48.24           O
ATOM   2763  CG2 THR L 182      15.150  -1.527   4.142  1.00 49.34           C
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ATOM   2767  C   THR L 182      17.160   0.193   2.811  1.00 48.67           C
ATOM   2768  O   THR L 182      17.108   1.352   3.197  1.00 44.88           O
ATOM   2770  N   LEU L 183      16.866  -0.201   1.571  1.00 50.93           N
ATOM   2771  CA  LEU L 183      16.392   0.696   0.512  1.00 51.96           C
ATOM   2773  CB  LEU L 183      17.008   0.278  -0.822  1.00 51.13           C
ATOM   2776  CG  LEU L 183      16.652   1.052  -2.091  1.00 51.40           C
ATOM   2778  CD1 LEU L 183      17.427   2.356  -2.178  1.00 51.77           C
ATOM   2782  CD2 LEU L 183      16.941   0.193  -3.303  1.00 51.95           C
ATOM   2786  C   LEU L 183      14.871   0.624   0.415  1.00 51.99           C
ATOM   2787  O   LEU L 183      14.291  -0.452   0.518  1.00 50.98           O
ATOM   2789  N   THR L 184      14.236   1.769   0.192  1.00 54.25           N
ATOM   2790  CA  THR L 184      12.777   1.873   0.233  1.00 55.46           C
ATOM   2792  CB  THR L 184      12.338   2.678   1.477  1.00 56.62           C
ATOM   2794  OG1 THR L 184      13.184   2.343   2.586  1.00 57.44           O
ATOM   2796  CG2 THR L 184      10.883   2.378   1.843  1.00 56.53           C
ATOM   2800  C   THR L 184      12.243   2.549  -1.032  1.00 56.07           C
ATOM   2801  O   THR L 184      12.634   3.675  -1.346  1.00 56.07           O
ATOM   2803  N   LEU L 185      11.366   1.849  -1.757  1.00 56.92           N
ATOM   2804  CA  LEU L 185      10.762   2.369  -2.997  1.00 57.75           C
ATOM   2806  CB  LEU L 185      11.253   1.588  -4.215  1.00 58.07           C
ATOM   2809  CG  LEU L 185      12.739   1.270  -4.323  1.00 61.99           C
ATOM   2811  CD1 LEU L 185      12.994   0.556  -5.651  1.00 61.55           C
ATOM   2815  CD2 LEU L 185      13.605   2.537  -4.182  1.00 65.29           C
ATOM   2819  C   LEU L 185       9.251   2.245  -2.978  1.00 57.44           C
ATOM   2820  O   LEU L 185       8.691   1.457  -2.215  1.00 57.24           O
ATOM   2822  N   SER L 186       8.594   3.005  -3.845  1.00 57.30           N
ATOM   2823  CA  SER L 186       7.167   2.816  -4.076  1.00 58.49           C
ATOM   2825  CB  SER L 186       6.544   4.052  -4.740  1.00 58.90           C
ATOM   2828  OG  SER L 186       7.098   4.296  -6.022  1.00 58.65           O
ATOM   2830  C   SER L 186       6.958   1.579  -4.951  1.00 58.87           C
ATOM   2831  O   SER L 186       7.773   1.289  -5.835  1.00 58.94           O
ATOM   2833  N   LYS L 187       5.871   0.853  -4.690  1.00 58.84           N
ATOM   2834  CA  LYS L 187       5.470  -0.293  -5.514  1.00 58.71           C
ATOM   2836  CB  LYS L 187       3.960  -0.565  -5.364  1.00 59.52           C
ATOM   2839  CG  LYS L 187       3.036   0.684  -5.440  1.00 58.94           C
ATOM   2842  CD  LYS L 187       1.740   0.409  -6.220  1.00 58.51           C
ATOM   2845  CE  LYS L 187       1.980   0.425  -7.730  1.00 56.51           C
ATOM   2848  NZ  LYS L 187       0.818  -0.065  -8.500  1.00 55.30           N
ATOM   2852  C   LYS L 187       5.813  -0.114  -7.001  1.00 58.68           C
ATOM   2853  O   LYS L 187       6.413  -0.997  -7.614  1.00 58.00           O
ATOM   2855  N   ALA L 188       5.445   1.042  -7.557  1.00 58.37           N
ATOM   2856  CA  ALA L 188       5.601   1.322  -8.983  1.00 57.88           C
ATOM   2858  CB  ALA L 188       4.815   2.576  -9.366  1.00 57.08           C
ATOM   2862  C   ALA L 188       7.069   1.486  -9.357  1.00 57.89           C
ATOM   2863  O   ALA L 188       7.530   0.906 -10.343  1.00 56.89           O
ATOM   2865  N   ASP L 189       7.797   2.269  -8.560  1.00 58.23           N
ATOM   2866  CA  ASP L 189       9.216   2.533  -8.816  1.00 57.62           C
ATOM   2868  CB  ASP L 189       9.774   3.565  -7.822  1.00 57.08           C
ATOM   2871  CG  ASP L 189       9.154   4.956  -8.001  1.00 59.38           C
ATOM   2872  OD1 ASP L 189       7.976   5.040  -8.407  1.00 62.30           O
ATOM   2873  OD2 ASP L 189       9.835   5.970  -7.728  1.00 60.32           O
ATOM   2874  C   ASP L 189      10.028   1.235  -8.788  1.00 57.16           C
ATOM   2875  O   ASP L 189      11.018   1.101  -9.516  1.00 56.54           O
ATOM   2877  N   TYR L 190       9.587   0.278  -7.970  1.00 56.48           N
ATOM   2878  CA  TYR L 190      10.200  -1.050  -7.921  1.00 56.08           C
ATOM   2880  CB  TYR L 190       9.757  -1.801  -6.659  1.00 55.94           C
ATOM   2883  CG  TYR L 190      10.393  -3.170  -6.508  1.00 56.42           C
ATOM   2884  CD1 TYR L 190      11.645  -3.318  -5.916  1.00 54.49           C
ATOM   2886  CE1 TYR L 190      12.234  -4.576  -5.780  1.00 54.37           C
ATOM   2888  CZ  TYR L 190      11.569  -5.703  -6.241  1.00 54.25           C
ATOM   2889  OH  TYR L 190      12.148  -6.947  -6.113  1.00 53.12           O
ATOM   2891  CE2 TYR L 190      10.325  -5.581  -6.833  1.00 54.89           C
ATOM   2893  CD2 TYR L 190       9.743  -4.319  -6.965  1.00 56.09           C
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ATOM	2895	C	TYR	L	190	9.869	-1.879	-9.168	1.00 55.03	C
ATOM	2896	O	TYR	L	190	10.770	-2.327	-9.879	1.00 54.57	O
ATOM	2898	N	GLU	L	191	8.577	-2.074	-9.425	1.00 54.94	N
ATOM	2899	CA	GLU	L	191	8.106	-2.881	-10.562	1.00 54.92	C
ATOM	2901	CB	GLU	L	191	6.616	-2.629	-10.815	1.00 54.51	C
ATOM	2904	CG	GLU	L	191	5.679	-3.328	-9.839	1.00 54.43	C
ATOM	2907	CD	GLU	L	191	4.256	-2.776	-9.894	1.00 55.51	C
ATOM	2908	OE1	GLU	L	191	3.731	-2.563	-11.008	1.00 52.00	O
ATOM	2909	OE2	GLU	L	191	3.659	-2.553	-8.819	1.00 59.15	O
ATOM	2910	C	GLU	L	191	8.882	-2.617	-11.855	1.00 55.01	C
ATOM	2911	O	GLU	L	191	9.134	-3.545	-12.626	1.00 54.87	O
ATOM	2913	N	LYS	L	192	9.250	-1.353	-12.076	1.00 54.95	N
ATOM	2914	CA	LYS	L	192	9.967	-0.920	-13.283	1.00 54.67	C
ATOM	2916	CB	LYS	L	192	10.267	0.584	-13.214	1.00 54.20	C
ATOM	2919	CG	LYS	L	192	9.045	1.485	-13.303	1.00 54.04	C
ATOM	2922	CD	LYS	L	192	9.440	2.936	-13.570	1.00 54.63	C
ATOM	2925	CE	LYS	L	192	8.286	3.894	-13.307	1.00 55.33	C
ATOM	2928	NZ	LYS	L	192	7.975	3.990	-11.849	1.00 57.07	N
ATOM	2932	C	LYS	L	192	11.284	-1.658	-13.550	1.00 54.85	C
ATOM	2933	O	LYS	L	192	11.530	-2.125	-14.669	1.00 54.13	O
ATOM	2935	N	HIS	L	193	12.122	-1.761	-12.524	1.00 54.78	N
ATOM	2936	CA	HIS	L	193	13.516	-2.156	-12.715	1.00 55.43	C
ATOM	2938	CB	HIS	L	193	14.414	-1.237	-11.897	1.00 55.85	C
ATOM	2941	CG	HIS	L	193	14.109	0.216	-12.099	1.00 56.95	C
ATOM	2942	ND1	HIS	L	193	14.181	0.824	-13.335	1.00 55.07	N
ATOM	2944	CE1	HIS	L	193	13.847	2.097	-13.216	1.00 56.78	C
ATOM	2946	NE2	HIS	L	193	13.555	2.335	-11.949	1.00 56.59	N
ATOM	2948	CD2	HIS	L	193	13.705	1.174	-11.230	1.00 55.90	C
ATOM	2950	C	HIS	L	193	13.773	-3.621	-12.386	1.00 55.24	C
ATOM	2951	O	HIS	L	193	12.971	-4.261	-11.711	1.00 55.40	O
ATOM	2953	N	LYS	L	194	14.893	-4.142	-12.883	1.00 55.20	N
ATOM	2954	CA	LYS	L	194	15.186	-5.571	-12.815	1.00 55.83	C
ATOM	2956	CB	LYS	L	194	15.388	-6.135	-14.222	1.00 55.21	C
ATOM	2959	CG	LYS	L	194	15.712	-7.623	-14.244	1.00 54.79	C
ATOM	2962	CD	LYS	L	194	15.212	-8.306	-15.509	1.00 55.94	C
ATOM	2965	CE	LYS	L	194	13.725	-8.643	-15.422	1.00 55.81	C
ATOM	2968	NZ	LYS	L	194	13.258	-9.413	-16.613	1.00 52.91	N
ATOM	2972	C	LYS	L	194	16.403	-5.882	-11.950	1.00 56.71	C
ATOM	2973	O	LYS	L	194	16.323	-6.726	-11.052	1.00 56.77	O
ATOM	2975	N	VAL	L	195	17.527	-5.221	-12.232	1.00 57.29	N
ATOM	2976	CA	VAL	L	195	18.760	-5.426	-11.462	1.00 57.20	C
ATOM	2978	CB	VAL	L	195	20.017	-4.910	-12.214	1.00 56.95	C
ATOM	2980	CG1	VAL	L	195	21.264	-4.968	-11.317	1.00 55.76	C
ATOM	2984	CG2	VAL	L	195	20.242	-5.710	-13.487	1.00 57.16	C
ATOM	2988	C	VAL	L	195	18.666	-4.720	-10.112	1.00 57.79	C
ATOM	2989	O	VAL	L	195	18.367	-3.527	-10.047	1.00 58.39	O
ATOM	2991	N	TYR	L	196	18.912	-5.474	-9.043	1.00 57.72	N
ATOM	2992	CA	TYR	L	196	19.020	-4.922	-7.699	1.00 57.74	C
ATOM	2994	CB	TYR	L	196	17.791	-5.289	-6.865	1.00 57.31	C
ATOM	2997	CG	TYR	L	196	16.614	-4.418	-7.220	1.00 57.57	C
ATOM	2998	CD1	TYR	L	196	15.773	-4.750	-8.277	1.00 58.23	C
ATOM	3000	CE1	TYR	L	196	14.703	-3.934	-8.628	1.00 57.87	C
ATOM	3002	CZ	TYR	L	196	14.478	-2.764	-7.927	1.00 57.41	C
ATOM	3003	OH	TYR	L	196	13.425	-1.951	-8.269	1.00 57.51	O
ATOM	3005	CE2	TYR	L	196	15.310	-2.408	-6.880	1.00 57.56	C
ATOM	3007	CD2	TYR	L	196	16.374	-3.232	-6.537	1.00 56.51	C
ATOM	3009	C	TYR	L	196	20.297	-5.449	-7.075	1.00 58.27	C
ATOM	3010	O	TYR	L	196	20.447	-6.657	-6.909	1.00 58.76	O
ATOM	3012	N	ALA	L	197	21.211	-4.531	-6.748	1.00 58.60	N
ATOM	3013	CA	ALA	L	197	22.565	-4.872	-6.305	1.00 58.40	C
ATOM	3015	CB	ALA	L	197	23.549	-4.628	-7.437	1.00 59.04	C
ATOM	3019	C	ALA	L	197	23.000	-4.082	-5.069	1.00 58.97	C
ATOM	3020	O	ALA	L	197	22.730	-2.881	-4.951	1.00 58.74	O

ATOM	3022	N	CYS	L	198	23.686	-4.770	-4.159	1.00 58.92	N
ATOM	3023	CA	CYS	L	198	24.255	-4.149	-2.970	1.00 58.33	C
ATOM	3025	CB	CYS	L	198	23.729	-4.828	-1.699	1.00 58.04	C
ATOM	3028	SG	CYS	L	198	24.536	-4.228	-0.198	1.00 60.24	S
ATOM	3030	C	CYS	L	198	25.777	-4.258	-3.035	1.00 58.31	C
ATOM	3031	O	CYS	L	198	26.338	-5.317	-2.755	1.00 59.22	O
ATOM	3033	N	GLU	L	199	26.438	-3.161	-3.401	1.00 57.62	N
ATOM	3034	CA	GLU	L	199	27.897	-3.131	-3.520	1.00 56.85	C
ATOM	3036	CB	GLU	L	199	28.321	-2.162	-4.627	1.00 58.52	C
ATOM	3039	CG	GLU	L	199	29.835	-1.997	-4.819	1.00 58.08	C
ATOM	3042	CD	GLU	L	199	30.172	-1.011	-5.924	1.00 58.08	C
ATOM	3043	OE1	GLU	L	199	29.237	-0.417	-6.507	1.00 57.49	O
ATOM	3044	OE2	GLU	L	199	31.372	-0.830	-6.214	1.00 62.44	O
ATOM	3045	C	GLU	L	199	28.533	-2.731	-2.192	1.00 54.23	C
ATOM	3046	O	GLU	L	199	28.288	-1.643	-1.679	1.00 51.14	O
ATOM	3048	N	VAL	L	200	29.365	-3.619	-1.660	1.00 53.99	N
ATOM	3049	CA	VAL	L	200	29.944	-3.454	-0.334	1.00 54.70	C
ATOM	3051	CB	VAL	L	200	29.566	-4.623	0.588	1.00 54.98	C
ATOM	3053	CG1	VAL	L	200	30.293	-4.515	1.931	1.00 53.68	C
ATOM	3057	CG2	VAL	L	200	28.056	-4.668	0.780	1.00 55.59	C
ATOM	3061	C	VAL	L	200	31.451	-3.394	-0.424	1.00 54.23	C
ATOM	3062	O	VAL	L	200	32.065	-4.194	-1.120	1.00 54.92	O
ATOM	3064	N	THR	L	201	32.035	-2.462	0.320	1.00 53.64	N
ATOM	3065	CA	THR	L	201	33.462	-2.191	0.263	1.00 53.08	C
ATOM	3067	CB	THR	L	201	33.784	-0.993	-0.669	1.00 52.20	C
ATOM	3069	OG1	THR	L	201	34.574	-0.028	0.034	1.00 49.12	O
ATOM	3071	CG2	THR	L	201	32.506	-0.314	-1.187	1.00 51.65	C
ATOM	3075	C	THR	L	201	33.993	-1.946	1.673	1.00 53.49	C
ATOM	3076	O	THR	L	201	33.421	-1.162	2.433	1.00 51.44	O
ATOM	3078	N	HIS	L	202	35.097	-2.620	1.998	1.00 55.44	N
ATOM	3079	CA	HIS	L	202	35.626	-2.679	3.358	1.00 55.07	C
ATOM	3081	CB	HIS	L	202	34.893	-3.782	4.121	1.00 56.07	C
ATOM	3084	CG	HIS	L	202	35.118	-3.758	5.599	1.00 56.86	C
ATOM	3085	ND1	HIS	L	202	35.185	-4.906	6.358	1.00 58.23	N
ATOM	3087	CE1	HIS	L	202	35.384	-4.585	7.623	1.00 63.59	C
ATOM	3089	NE2	HIS	L	202	35.454	-3.269	7.711	1.00 66.38	N
ATOM	3091	CD2	HIS	L	202	35.290	-2.727	6.459	1.00 59.85	C
ATOM	3093	C	HIS	L	202	37.131	-2.958	3.375	1.00 54.78	C
ATOM	3094	O	HIS	L	202	37.687	-3.510	2.427	1.00 54.71	O
ATOM	3096	N	GLN	L	203	37.776	-2.566	4.470	1.00 55.38	N
ATOM	3097	CA	GLN	L	203	39.191	-2.850	4.721	1.00 54.85	C
ATOM	3099	CB	GLN	L	203	39.525	-2.454	6.163	1.00 55.05	C
ATOM	3102	CG	GLN	L	203	41.007	-2.434	6.502	1.00 54.46	C
ATOM	3105	CD	GLN	L	203	41.269	-1.875	7.885	1.00 53.29	C
ATOM	3106	OE1	GLN	L	203	40.338	-1.593	8.637	1.00 57.10	O
ATOM	3107	NE2	GLN	L	203	42.538	-1.711	8.229	1.00 49.23	N
ATOM	3110	C	GLN	L	203	39.564	-4.320	4.493	1.00 54.95	C
ATOM	3111	O	GLN	L	203	40.635	-4.615	3.962	1.00 54.35	O
ATOM	3113	N	GLY	L	204	38.675	-5.230	4.894	1.00 55.44	N
ATOM	3114	CA	GLY	L	204	38.931	-6.673	4.828	1.00 54.77	C
ATOM	3117	C	GLY	L	204	38.742	-7.345	3.477	1.00 54.51	C
ATOM	3118	O	GLY	L	204	39.022	-8.536	3.341	1.00 54.11	O
ATOM	3120	N	LEU	L	205	38.258	-6.595	2.486	1.00 54.73	N
ATOM	3121	CA	LEU	L	205	38.124	-7.087	1.109	1.00 54.23	C
ATOM	3123	CB	LEU	L	205	36.699	-6.850	0.582	1.00 54.64	C
ATOM	3126	CG	LEU	L	205	35.499	-7.332	1.416	1.00 56.74	C
ATOM	3128	CD1	LEU	L	205	34.249	-6.519	1.087	1.00 58.06	C
ATOM	3132	CD2	LEU	L	205	35.234	-8.821	1.220	1.00 55.58	C
ATOM	3136	C	LEU	L	205	39.127	-6.356	0.214	1.00 53.26	C
ATOM	3137	O	LEU	L	205	39.269	-5.137	0.304	1.00 53.34	O
ATOM	3139	N	SER	L	206	39.821	-7.100	-0.641	1.00 52.19	N
ATOM	3140	CA	SER	L	206	40.758	-6.501	-1.598	1.00 51.87	C
ATOM	3142	CB	SER	L	206	41.622	-7.582	-2.254	1.00 51.36	C

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ATOM   3145  OG  SER L 206      40.855  -8.730  -2.575  1.00 49.90           O
ATOM   3147  C   SER L 206      40.027  -5.684  -2.666  1.00 51.02           C
ATOM   3148  O   SER L 206      40.561  -4.696  -3.167  1.00 49.33           O
ATOM   3150  N   SER L 207      38.811  -6.113  -3.005  1.00 51.49           N
ATOM   3151  CA  SER L 207      37.929  -5.394  -3.930  1.00 52.61           C
ATOM   3153  CB  SER L 207      37.900  -6.089  -5.288  1.00 51.42           C
ATOM   3156  OG  SER L 207      38.982  -6.983  -5.412  1.00 50.93           O
ATOM   3158  C   SER L 207      36.516  -5.380  -3.354  1.00 54.16           C
ATOM   3159  O   SER L 207      36.223  -6.133  -2.427  1.00 56.06           O
ATOM   3161  N   PRO L 208      35.626  -4.538  -3.906  1.00 54.93           N
ATOM   3162  CA  PRO L 208      34.249  -4.559  -3.416  1.00 54.53           C
ATOM   3164  CB  PRO L 208      33.649  -3.278  -3.997  1.00 54.14           C
ATOM   3167  CG  PRO L 208      34.428  -3.025  -5.226  1.00 55.93           C
ATOM   3170  CD  PRO L 208      35.819  -3.541  -4.973  1.00 55.59           C
ATOM   3173  C   PRO L 208      33.461  -5.792  -3.876  1.00 55.09           C
ATOM   3174  O   PRO L 208      33.719  -6.342  -4.951  1.00 54.84           O
ATOM   3175  N   VAL L 209      32.518  -6.213  -3.037  1.00 56.28           N
ATOM   3176  CA  VAL L 209      31.626  -7.329  -3.320  1.00 56.34           C
ATOM   3178  CB  VAL L 209      31.488  -8.255  -2.089  1.00 56.85           C
ATOM   3180  CG1 VAL L 209      30.517  -9.395  -2.371  1.00 57.34           C
ATOM   3184  CG2 VAL L 209      32.852  -8.799  -1.670  1.00 57.07           C
ATOM   3188  C   VAL L 209      30.262  -6.747  -3.662  1.00 56.83           C
ATOM   3189  O   VAL L 209      29.897  -5.688  -3.151  1.00 56.98           O
ATOM   3191  N   THR L 210      29.516  -7.438  -4.523  1.00 57.27           N
ATOM   3192  CA  THR L 210      28.193  -6.979  -4.959  1.00 57.11           C
ATOM   3194  CB  THR L 210      28.281  -6.236  -6.327  1.00 57.73           C
ATOM   3196  OG1 THR L 210      29.064  -5.046  -6.175  1.00 59.95           O
ATOM   3198  CG2 THR L 210      26.896  -5.848  -6.855  1.00 57.29           C
ATOM   3202  C   THR L 210      27.198  -8.143  -5.051  1.00 56.72           C
ATOM   3203  O   THR L 210      27.092  -8.797  -6.090  1.00 56.88           O
ATOM   3205  N   LYS L 211      26.479  -8.398  -3.958  1.00 55.82           N
ATOM   3206  CA  LYS L 211      25.370  -9.358  -3.978  1.00 55.38           C
ATOM   3208  CB  LYS L 211      25.107  -9.956  -2.587  1.00 55.13           C
ATOM   3211  CG  LYS L 211      25.494 -11.445  -2.441  1.00 56.34           C
ATOM   3214  CD  LYS L 211      27.009 -11.694  -2.368  1.00 57.34           C
ATOM   3217  CE  LYS L 211      27.667 -11.925  -3.737  1.00 58.85           C
ATOM   3220  NZ  LYS L 211      27.153 -13.124  -4.467  1.00 59.52           N
ATOM   3224  C   LYS L 211      24.113  -8.702  -4.563  1.00 54.52           C
ATOM   3225  O   LYS L 211      23.800  -7.549  -4.264  1.00 52.98           O
ATOM   3227  N   SER L 212      23.406  -9.451  -5.406  1.00 54.59           N
ATOM   3228  CA  SER L 212      22.364  -8.887  -6.257  1.00 54.55           C
ATOM   3230  CB  SER L 212      23.016  -8.276  -7.490  1.00 54.31           C
ATOM   3233  OG  SER L 212      23.769  -9.253  -8.179  1.00 53.91           O
ATOM   3235  C   SER L 212      21.351  -9.928  -6.715  1.00 54.64           C
ATOM   3236  O   SER L 212      21.641 -11.127  -6.717  1.00 54.46           O
ATOM   3238  N   PHE L 213      20.170  -9.466  -7.122  1.00 54.88           N
ATOM   3239  CA  PHE L 213      19.120 -10.369  -7.606  1.00 54.74           C
ATOM   3241  CB  PHE L 213      18.186 -10.776  -6.461  1.00 55.51           C
ATOM   3244  CG  PHE L 213      17.297  -9.663  -5.958  1.00 56.79           C
ATOM   3245  CD1 PHE L 213      16.051  -9.438  -6.528  1.00 56.38           C
ATOM   3247  CE1 PHE L 213      15.221  -8.421  -6.063  1.00 55.82           C
ATOM   3249  CZ  PHE L 213      15.628  -7.628  -5.008  1.00 55.42           C
ATOM   3251  CE2 PHE L 213      16.867  -7.849  -4.422  1.00 57.19           C
ATOM   3253  CD2 PHE L 213      17.693  -8.863  -4.897  1.00 57.95           C
ATOM   3255  C   PHE L 213      18.303  -9.786  -8.753  1.00 54.51           C
ATOM   3256  O   PHE L 213      18.350  -8.582  -9.013  1.00 55.25           O
ATOM   3258  N   ASN L 214      17.562 -10.669  -9.426  1.00 53.54           N
ATOM   3259  CA  ASN L 214      16.636 -10.307 -10.499  1.00 52.36           C
ATOM   3261  CB  ASN L 214      17.158 -10.830 -11.848  1.00 53.00           C
ATOM   3264  CG  ASN L 214      18.501 -10.238 -12.242  1.00 51.37           C
ATOM   3265  OD1 ASN L 214      18.974  -9.257 -11.659  1.00 45.19           O
ATOM   3266  ND2 ASN L 214      19.118 -10.833 -13.261  1.00 48.36           N
ATOM   3269  C   ASN L 214      15.221 -10.853 -10.196  1.00 51.48           C
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ATOM   3270  O   ASN L 214      14.630 -10.487  -9.184  1.00 51.07           O
ATOM   3272  N   ARG L 215      14.683 -11.721 -11.058  1.00 51.10           N
ATOM   3273  CA  ARG L 215      13.342 -12.286 -10.879  1.00 50.13           C
ATOM   3275  CB  ARG L 215      12.269 -11.313 -11.388  1.00 50.15           C
ATOM   3278  CG  ARG L 215      11.837 -10.215 -10.400  1.00 48.63           C
ATOM   3281  CD  ARG L 215      12.491  -8.850 -10.667  1.00 50.31           C
ATOM   3284  NE  ARG L 215      11.646  -7.745 -10.197  1.00 51.54           N
ATOM   3286  CZ  ARG L 215      10.960  -6.898 -10.974  1.00 52.47           C
ATOM   3287  NH1 ARG L 215      11.003  -6.976 -12.306  1.00 48.09           N
ATOM   3290  NH2 ARG L 215      10.224  -5.946 -10.407  1.00 51.46           N
ATOM   3293  C   ARG L 215      13.221 -13.618 -11.623  1.00 47.98           C
ATOM   3294  O   ARG L 215      13.342 -14.686 -11.027  1.00 45.06           O
ATOM   3296  N   GLU H   2      18.755  -9.742  45.341  1.00 56.61           N
ATOM   3297  CA  GLU H   2      18.462  -8.275  45.177  1.00 58.49           C
ATOM   3299  CB  GLU H   2      19.732  -7.423  45.229  1.00 58.68           C
ATOM   3302  CG  GLU H   2      20.202  -7.083  46.631  1.00 62.61           C
ATOM   3305  CD  GLU H   2      21.482  -7.799  47.043  1.00 67.23           C
ATOM   3306  OE1 GLU H   2      21.816  -8.863  46.460  1.00 64.18           O
ATOM   3307  OE2 GLU H   2      22.153  -7.282  47.967  1.00 70.83           O
ATOM   3308  C   GLU H   2      17.780  -7.990  43.863  1.00 58.26           C
ATOM   3309  O   GLU H   2      18.380  -8.172  42.806  1.00 60.92           O
ATOM   3313  N   GLN H   3      16.547  -7.507  43.933  1.00 56.73           N
ATOM   3314  CA  GLN H   3      15.727  -7.340  42.747  1.00 56.52           C
ATOM   3316  CB  GLN H   3      14.787  -8.532  42.573  1.00 57.42           C
ATOM   3319  CG  GLN H   3      15.473  -9.832  42.190  1.00 61.67           C
ATOM   3322  CD  GLN H   3      14.760 -10.546  41.052  1.00 67.16           C
ATOM   3323  OE1 GLN H   3      14.535  -9.964  39.985  1.00 66.35           O
ATOM   3324  NE2 GLN H   3      14.407 -11.814  41.270  1.00 68.91           N
ATOM   3327  C   GLN H   3      14.899  -6.081  42.836  1.00 56.35           C
ATOM   3328  O   GLN H   3      14.308  -5.789  43.881  1.00 58.04           O
ATOM   3330  N   LEU H   4      14.879  -5.332  41.739  1.00 54.56           N
ATOM   3331  CA  LEU H   4      13.946  -4.246  41.558  1.00 53.97           C
ATOM   3333  CB  LEU H   4      14.676  -2.909  41.550  1.00 53.64           C
ATOM   3336  CG  LEU H   4      15.263  -2.479  42.897  1.00 54.63           C
ATOM   3338  CD1 LEU H   4      16.194  -1.298  42.717  1.00 56.96           C
ATOM   3342  CD2 LEU H   4      14.182  -2.121  43.876  1.00 55.34           C
ATOM   3346  C   LEU H   4      13.241  -4.493  40.237  1.00 53.83           C
ATOM   3347  O   LEU H   4      13.875  -4.524  39.190  1.00 52.85           O
ATOM   3349  N   VAL H   5      11.933  -4.713  40.294  1.00 54.49           N
ATOM   3350  CA  VAL H   5      11.143  -4.951  39.101  1.00 54.69           C
ATOM   3352  CB  VAL H   5      10.267  -6.208  39.252  1.00 54.27           C
ATOM   3354  CG1 VAL H   5       9.321  -6.347  38.059  1.00 51.60           C
ATOM   3358  CG2 VAL H   5      11.137  -7.447  39.403  1.00 52.80           C
ATOM   3362  C   VAL H   5      10.252  -3.752  38.861  1.00 55.02           C
ATOM   3363  O   VAL H   5       9.437  -3.422  39.717  1.00 57.50           O
ATOM   3365  N   GLU H   6      10.398  -3.127  37.695  1.00 54.85           N
ATOM   3366  CA  GLU H   6       9.617  -1.945  37.318  1.00 55.62           C
ATOM   3368  CB  GLU H   6      10.446  -1.017  36.429  1.00 56.41           C
ATOM   3371  CG  GLU H   6      11.417  -0.136  37.185  1.00 58.95           C
ATOM   3374  CD  GLU H   6      12.278   0.686  36.253  1.00 61.09           C
ATOM   3375  OE1 GLU H   6      11.732   1.630  35.639  1.00 66.14           O
ATOM   3376  OE2 GLU H   6      13.488   0.385  36.135  1.00 64.83           O
ATOM   3377  C   GLU H   6       8.326  -2.289  36.580  1.00 55.06           C
ATOM   3378  O   GLU H   6       8.244  -3.302  35.875  1.00 53.72           O
ATOM   3380  N   SER H   7       7.329  -1.420  36.752  1.00 55.54           N
ATOM   3381  CA  SER H   7       6.017  -1.562  36.125  1.00 55.81           C
ATOM   3383  CB  SER H   7       5.046  -2.276  37.068  1.00 54.71           C
ATOM   3386  OG  SER H   7       5.521  -3.561  37.436  1.00 51.44           O
ATOM   3388  C   SER H   7       5.462  -0.179  35.774  1.00 57.33           C
ATOM   3389  O   SER H   7       5.658   0.783  36.521  1.00 57.12           O
ATOM   3391  N   GLY H   8       4.750  -0.105  34.649  1.00 58.14           N
ATOM   3392  CA  GLY H   8       4.306   1.159  34.062  1.00 57.37           C
ATOM   3395  C   GLY H   8       5.145   1.481  32.836  1.00 58.01           C
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ATOM   3396  O   GLY H   8       6.054   0.731  32.475  1.00 58.79           O
ATOM   3398  N   GLY H   9       4.844   2.604  32.192  1.00 57.77           N
ATOM   3399  CA  GLY H   9       5.608   3.053  31.028  1.00 56.11           C
ATOM   3402  C   GLY H   9       4.769   2.983  29.773  1.00 55.34           C
ATOM   3403  O   GLY H   9       3.687   2.407  29.787  1.00 56.26           O
ATOM   3405  N   GLY H  10       5.267   3.574  28.690  1.00 54.03           N
ATOM   3406  CA  GLY H  10       4.579   3.548  27.405  1.00 52.92           C
ATOM   3409  C   GLY H  10       4.240   4.935  26.908  1.00 52.43           C
ATOM   3410  O   GLY H  10       4.818   5.928  27.360  1.00 52.36           O
ATOM   3412  N   LEU H  11       3.289   4.994  25.977  1.00 51.79           N
ATOM   3413  CA  LEU H  11       2.924   6.236  25.295  1.00 50.93           C
ATOM   3415  CB  LEU H  11       2.307   5.910  23.925  1.00 51.75           C
ATOM   3418  CG  LEU H  11       1.987   7.022  22.911  1.00 51.71           C
ATOM   3420  CD1 LEU H  11       3.132   8.017  22.730  1.00 50.18           C
ATOM   3424  CD2 LEU H  11       1.605   6.397  21.575  1.00 49.22           C
ATOM   3428  C   LEU H  11       1.958   7.076  26.126  1.00 49.59           C
ATOM   3429  O   LEU H  11       1.003   6.558  26.708  1.00 47.51           O
ATOM   3431  N   VAL H  12       2.231   8.376  26.181  1.00 50.70           N
ATOM   3432  CA  VAL H  12       1.328   9.354  26.796  1.00 51.32           C
ATOM   3434  CB  VAL H  12       1.680   9.660  28.253  1.00 51.22           C
ATOM   3436  CG1 VAL H  12       1.292   8.503  29.149  1.00 56.15           C
ATOM   3440  CG2 VAL H  12       3.164   9.983  28.401  1.00 54.78           C
ATOM   3444  C   VAL H  12       1.381  10.660  26.033  1.00 50.66           C
ATOM   3445  O   VAL H  12       2.434  11.057  25.530  1.00 51.00           O
ATOM   3447  N   LYS H  13       0.232  11.317  25.945  1.00 50.88           N
ATOM   3448  CA  LYS H  13       0.142  12.621  25.305  1.00 51.70           C
ATOM   3450  CB  LYS H  13      -1.325  12.980  25.040  1.00 52.29           C
ATOM   3453  CG  LYS H  13      -1.902  12.304  23.802  1.00 51.28           C
ATOM   3456  CD  LYS H  13      -3.423  12.333  23.790  1.00 52.82           C
ATOM   3459  CE  LYS H  13      -3.984  12.401  22.377  1.00 55.83           C
ATOM   3462  NZ  LYS H  13      -3.195  11.584  21.423  1.00 57.61           N
ATOM   3466  C   LYS H  13       0.834  13.687  26.175  1.00 51.36           C
ATOM   3467  O   LYS H  13       0.913  13.537  27.393  1.00 49.24           O
ATOM   3469  N   PRO H  14       1.390  14.740  25.545  1.00 51.89           N
ATOM   3470  CA  PRO H  14       1.950  15.847  26.328  1.00 51.17           C
ATOM   3472  CB  PRO H  14       2.458  16.817  25.251  1.00 50.70           C
ATOM   3475  CG  PRO H  14       2.688  15.960  24.054  1.00 50.32           C
ATOM   3478  CD  PRO H  14       1.586  14.949  24.098  1.00 51.84           C
ATOM   3481  C   PRO H  14       0.908  16.519  27.219  1.00 49.57           C
ATOM   3482  O   PRO H  14      -0.220  16.746  26.786  1.00 50.07           O
ATOM   3483  N   GLY H  15       1.292  16.811  28.457  1.00 49.10           N
ATOM   3484  CA  GLY H  15       0.380  17.376  29.457  1.00 50.81           C
ATOM   3487  C   GLY H  15      -0.372  16.329  30.257  1.00 51.04           C
ATOM   3488  O   GLY H  15      -1.115  16.659  31.190  1.00 50.77           O
ATOM   3490  N   GLY H  16      -0.173  15.065  29.886  1.00 52.18           N
ATOM   3491  CA  GLY H  16      -0.841  13.939  30.517  1.00 52.36           C
ATOM   3494  C   GLY H  16      -0.041  13.363  31.665  1.00 53.40           C
ATOM   3495  O   GLY H  16       0.891  13.996  32.177  1.00 52.35           O
ATOM   3497  N   SER H  17      -0.413  12.143  32.049  1.00 55.01           N
ATOM   3498  CA  SER H  17       0.021  11.542  33.305  1.00 54.42           C
ATOM   3500  CB  SER H  17      -1.057  11.724  34.379  1.00 54.25           C
ATOM   3503  OG  SER H  17      -0.966  13.005  34.960  1.00 56.38           O
ATOM   3505  C   SER H  17       0.291  10.071  33.153  1.00 54.71           C
ATOM   3506  O   SER H  17      -0.162   9.432  32.206  1.00 55.94           O
ATOM   3508  N   LEU H  18       1.001   9.535  34.133  1.00 56.53           N
ATOM   3509  CA  LEU H  18       1.470   8.163  34.108  1.00 55.73           C
ATOM   3511  CB  LEU H  18       2.472   8.001  32.975  1.00 55.68           C
ATOM   3514  CG  LEU H  18       3.170   6.673  32.760  1.00 59.03           C
ATOM   3516  CD1 LEU H  18       2.195   5.476  32.790  1.00 64.04           C
ATOM   3520  CD2 LEU H  18       3.907   6.751  31.424  1.00 59.16           C
ATOM   3524  C   LEU H  18       2.148   7.911  35.438  1.00 56.06           C
ATOM   3525  O   LEU H  18       2.808   8.807  35.988  1.00 55.85           O
ATOM   3527  N   ARG H  19       1.965   6.715  35.979  1.00 56.64           N
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ATOM   3528  CA  ARG H  19       2.626   6.344  37.221  1.00 56.43           C
ATOM   3530  CB  ARG H  19       1.612   6.041  38.319  1.00 56.80           C
ATOM   3533  CG  ARG H  19       2.217   6.081  39.716  1.00 58.31           C
ATOM   3536  CD  ARG H  19       1.362   5.365  40.734  1.00 61.31           C
ATOM   3539  NE  ARG H  19       1.337   3.920  40.503  1.00 67.58           N
ATOM   3541  CZ  ARG H  19       0.699   3.041  41.276  1.00 70.39           C
ATOM   3542  NH1 ARG H  19       0.033   3.450  42.356  1.00 69.73           N
ATOM   3545  NH2 ARG H  19       0.730   1.743  40.971  1.00 69.82           N
ATOM   3548  C   ARG H  19       3.505   5.130  37.006  1.00 55.52           C
ATOM   3549  O   ARG H  19       3.079   4.128  36.416  1.00 56.01           O
ATOM   3551  N   LEU H  20       4.739   5.236  37.481  1.00 54.58           N
ATOM   3552  CA  LEU H  20       5.632   4.098  37.531  1.00 55.42           C
ATOM   3554  CB  LEU H  20       7.043   4.463  37.043  1.00 55.00           C
ATOM   3557  CG  LEU H  20       7.138   5.242  35.725  1.00 55.68           C
ATOM   3559  CD1 LEU H  20       8.580   5.646  35.434  1.00 58.29           C
ATOM   3563  CD2 LEU H  20       6.554   4.446  34.561  1.00 55.92           C
ATOM   3567  C   LEU H  20       5.673   3.616  38.963  1.00 54.49           C
ATOM   3568  O   LEU H  20       5.455   4.382  39.891  1.00 55.30           O
ATOM   3570  N   SER H  21       5.936   2.332  39.126  1.00 56.12           N
ATOM   3571  CA  SER H  21       6.166   1.746  40.428  1.00 56.93           C
ATOM   3573  CB  SER H  21       4.907   1.045  40.921  1.00 57.53           C
ATOM   3576  OG  SER H  21       4.584  -0.051  40.081  1.00 60.54           O
ATOM   3578  C   SER H  21       7.309   0.750  40.288  1.00 58.71           C
ATOM   3579  O   SER H  21       7.715   0.398  39.169  1.00 59.16           O
ATOM   3581  N   CYS H  22       7.811   0.285  41.425  1.00 59.31           N
ATOM   3582  CA  CYS H  22       8.981  -0.567  41.442  1.00 56.83           C
ATOM   3584  CB  CYS H  22      10.227   0.308  41.431  1.00 59.46           C
ATOM   3587  SG  CYS H  22      11.797  -0.553  41.533  1.00 65.61           S
ATOM   3589  C   CYS H  22       8.927  -1.433  42.683  1.00 55.37           C
ATOM   3590  O   CYS H  22       8.959  -0.926  43.802  1.00 53.14           O
ATOM   3592  N   ALA H  23       8.798  -2.742  42.473  1.00 55.34           N
ATOM   3593  CA  ALA H  23       8.735  -3.712  43.563  1.00 53.47           C
ATOM   3595  CB  ALA H  23       7.811  -4.829  43.212  1.00 53.08           C
ATOM   3599  C   ALA H  23      10.129  -4.258  43.833  1.00 52.42           C
ATOM   3600  O   ALA H  23      10.822  -4.679  42.908  1.00 50.73           O
ATOM   3602  N   ALA H  24      10.518  -4.246  45.108  1.00 52.07           N
ATOM   3603  CA  ALA H  24      11.829  -4.693  45.552  1.00 51.43           C
ATOM   3605  CB  ALA H  24      12.466  -3.626  46.466  1.00 51.29           C
ATOM   3609  C   ALA H  24      11.704  -5.998  46.309  1.00 50.38           C
ATOM   3610  O   ALA H  24      10.778  -6.162  47.107  1.00 49.98           O
ATOM   3612  N   SER H  25      12.638  -6.915  46.069  1.00 50.32           N
ATOM   3613  CA  SER H  25      12.796  -8.098  46.925  1.00 50.66           C
ATOM   3615  CB  SER H  25      12.191  -9.335  46.269  1.00 50.25           C
ATOM   3618  OG  SER H  25      13.117  -9.930  45.384  1.00 50.11           O
ATOM   3620  C   SER H  25      14.274  -8.338  47.167  1.00 50.55           C
ATOM   3621  O   SER H  25      15.113  -7.773  46.466  1.00 49.47           O
ATOM   3623  N   GLY H  26      14.588  -9.170  48.160  1.00 50.83           N
ATOM   3624  CA  GLY H  26      15.965  -9.604  48.400  1.00 50.46           C
ATOM   3627  C   GLY H  26      16.773  -8.832  49.428  1.00 50.67           C
ATOM   3628  O   GLY H  26      17.641  -9.409  50.055  1.00 51.46           O
ATOM   3630  N   PHE H  27      16.509  -7.534  49.598  1.00 52.07           N
ATOM   3631  CA  PHE H  27      17.244  -6.692  50.565  1.00 50.72           C
ATOM   3633  CB  PHE H  27      18.154  -5.700  49.825  1.00 50.11           C
ATOM   3636  CG  PHE H  27      17.418  -4.738  48.957  1.00 50.40           C
ATOM   3637  CD1 PHE H  27      17.043  -5.092  47.668  1.00 51.35           C
ATOM   3639  CE1 PHE H  27      16.363  -4.197  46.848  1.00 48.63           C
ATOM   3641  CZ  PHE H  27      16.050  -2.941  47.321  1.00 50.70           C
ATOM   3643  CE2 PHE H  27      16.426  -2.568  48.601  1.00 50.42           C
ATOM   3645  CD2 PHE H  27      17.104  -3.469  49.416  1.00 52.69           C
ATOM   3647  C   PHE H  27      16.301  -5.966  51.539  1.00 49.97           C
ATOM   3648  O   PHE H  27      15.099  -6.212  51.537  1.00 48.25           O
ATOM   3650  N   SER H  28      16.857  -5.095  52.385  1.00 51.01           N
ATOM   3651  CA  SER H  28      16.082  -4.395  53.417  1.00 50.58           C
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ATOM   3653  CB  SER H  28      16.892  -4.261  54.708  1.00 51.28           C
ATOM   3656  OG  SER H  28      16.076  -3.756  55.757  1.00 52.89           O
ATOM   3658  C   SER H  28      15.612  -3.024  52.943  1.00 49.79           C
ATOM   3659  O   SER H  28      16.250  -1.986  53.193  1.00 48.90           O
ATOM   3661  N   PHE H  29      14.472  -3.047  52.266  1.00 49.18           N
ATOM   3662  CA  PHE H  29      13.891  -1.875  51.626  1.00 50.01           C
ATOM   3664  CB  PHE H  29      12.496  -2.230  51.131  1.00 48.32           C
ATOM   3667  CG  PHE H  29      11.828  -1.151  50.327  1.00 48.58           C
ATOM   3668  CD1 PHE H  29      12.051  -1.046  48.972  1.00 47.02           C
ATOM   3670  CE1 PHE H  29      11.428  -0.069  48.227  1.00 45.47           C
ATOM   3672  CZ  PHE H  29      10.555   0.794  48.824  1.00 48.47           C
ATOM   3674  CE2 PHE H  29      10.304   0.696  50.183  1.00 47.66           C
ATOM   3676  CD2 PHE H  29      10.938  -0.269  50.924  1.00 47.81           C
ATOM   3678  C   PHE H  29      13.836  -0.677  52.563  1.00 50.10           C
ATOM   3679  O   PHE H  29      14.166   0.423  52.168  1.00 49.59           O
ATOM   3681  N   SER H  30      13.451  -0.905  53.811  1.00 52.28           N
ATOM   3682  CA  SER H  30      13.308   0.187  54.768  1.00 54.39           C
ATOM   3684  CB  SER H  30      12.611  -0.285  56.038  1.00 54.51           C
ATOM   3687  OG  SER H  30      11.244   0.062  55.986  1.00 60.29           O
ATOM   3689  C   SER H  30      14.622   0.839  55.142  1.00 55.97           C
ATOM   3690  O   SER H  30      14.633   1.979  55.575  1.00 58.83           O
ATOM   3692  N   ASP H  31      15.725   0.120  54.986  1.00 57.11           N
ATOM   3693  CA  ASP H  31      17.050   0.679  55.274  1.00 57.16           C
ATOM   3695  CB  ASP H  31      17.986  -0.438  55.773  1.00 57.00           C
ATOM   3698  CG  ASP H  31      17.502  -1.068  57.085  1.00 58.67           C
ATOM   3699  OD1 ASP H  31      17.234  -0.317  58.043  1.00 63.08           O
ATOM   3700  OD2 ASP H  31      17.384  -2.310  57.167  1.00 58.40           O
ATOM   3701  C   ASP H  31      17.672   1.401  54.057  1.00 57.43           C
ATOM   3702  O   ASP H  31      18.842   1.792  54.101  1.00 55.59           O
ATOM   3704  N   CYS H  32      16.896   1.594  52.989  1.00 56.14           N
ATOM   3705  CA  CYS H  32      17.442   2.115  51.750  1.00 57.19           C
ATOM   3707  CB  CYS H  32      17.338   1.047  50.664  1.00 57.68           C
ATOM   3710  SG  CYS H  32      18.330  -0.413  51.027  1.00 60.48           S
ATOM   3712  C   CYS H  32      16.779   3.403  51.269  1.00 57.32           C
ATOM   3713  O   CYS H  32      15.572   3.595  51.407  1.00 56.26           O
ATOM   3715  N   ARG H  33      17.592   4.295  50.716  1.00 58.05           N
ATOM   3716  CA  ARG H  33      17.075   5.390  49.915  1.00 59.05           C
ATOM   3718  CB  ARG H  33      18.127   6.483  49.699  1.00 60.10           C
ATOM   3721  CG  ARG H  33      18.419   7.317  50.911  1.00 61.65           C
ATOM   3724  CD  ARG H  33      19.060   8.657  50.536  1.00 63.60           C
ATOM   3727  NE  ARG H  33      19.339   9.429  51.748  1.00 66.43           N
ATOM   3729  CZ  ARG H  33      20.535   9.583  52.312  1.00 66.37           C
ATOM   3730  NH1 ARG H  33      21.632   9.065  51.772  1.00 71.77           N
ATOM   3733  NH2 ARG H  33      20.639  10.291  53.426  1.00 68.04           N
ATOM   3736  C   ARG H  33      16.685   4.807  48.567  1.00 58.44           C
ATOM   3737  O   ARG H  33      17.428   4.004  48.000  1.00 58.55           O
ATOM   3739  N   MET H  34      15.521   5.202  48.065  1.00 56.95           N
ATOM   3740  CA  MET H  34      15.090   4.804  46.745  1.00 56.14           C
ATOM   3742  CB  MET H  34      13.629   4.351  46.770  1.00 56.70           C
ATOM   3745  CG  MET H  34      13.337   3.183  47.740  1.00 58.76           C
ATOM   3748  SD  MET H  34      14.315   1.675  47.451  1.00 58.81           S
ATOM   3749  CE  MET H  34      13.826   1.233  45.797  1.00 60.09           C
ATOM   3753  C   MET H  34      15.291   6.000  45.834  1.00 54.94           C
ATOM   3754  O   MET H  34      15.118   7.140  46.250  1.00 55.91           O
ATOM   3756  N   TYR H  35      15.700   5.737  44.600  1.00 54.70           N
ATOM   3757  CA  TYR H  35      15.919   6.792  43.624  1.00 55.83           C
ATOM   3759  CB  TYR H  35      17.406   6.942  43.276  1.00 56.48           C
ATOM   3762  CG  TYR H  35      18.380   6.794  44.427  1.00 57.63           C
ATOM   3763  CD1 TYR H  35      18.827   7.899  45.132  1.00 54.66           C
ATOM   3765  CE1 TYR H  35      19.727   7.767  46.157  1.00 54.12           C
ATOM   3767  CZ  TYR H  35      20.198   6.522  46.491  1.00 55.23           C
ATOM   3768  OH  TYR H  35      21.087   6.378  47.517  1.00 55.85           O
ATOM   3770  CE2 TYR H  35      19.775   5.413  45.813  1.00 58.29           C
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ATOM	3772	CD2	TYR	H	35	18.881	5.550	44.779	1.00	57.08	C
ATOM	3774	C	TYR	H	35	15.182	6.475	42.338	1.00	55.62	C
ATOM	3775	O	TYR	H	35	14.958	5.304	42.015	1.00	53.71	O
ATOM	3777	N	TRP	H	36	14.811	7.533	41.613	1.00	55.28	N
ATOM	3778	CA	TRP	H	36	14.484	7.414	40.206	1.00	55.09	C
ATOM	3780	CB	TRP	H	36	13.076	7.920	39.909	1.00	55.00	C
ATOM	3783	CG	TRP	H	36	12.005	7.017	40.432	1.00	55.14	C
ATOM	3784	CD1	TRP	H	36	11.352	7.141	41.611	1.00	54.77	C
ATOM	3786	NE1	TRP	H	36	10.437	6.132	41.760	1.00	55.42	N
ATOM	3788	CE2	TRP	H	36	10.487	5.323	40.656	1.00	56.93	C
ATOM	3789	CD2	TRP	H	36	11.469	5.850	39.795	1.00	55.90	C
ATOM	3790	CE3	TRP	H	36	11.718	5.204	38.577	1.00	54.80	C
ATOM	3792	CZ3	TRP	H	36	10.987	4.076	38.263	1.00	53.18	C
ATOM	3794	CH2	TRP	H	36	10.014	3.573	39.141	1.00	55.17	C
ATOM	3796	CZ2	TRP	H	36	9.748	4.181	40.339	1.00	55.56	C
ATOM	3798	C	TRP	H	36	15.518	8.170	39.380	1.00	55.00	C
ATOM	3799	O	TRP	H	36	15.969	9.259	39.753	1.00	56.65	O
ATOM	3801	N	LEU	H	37	15.906	7.559	38.270	1.00	54.61	N
ATOM	3802	CA	LEU	H	37	16.780	8.178	37.280	1.00	54.88	C
ATOM	3804	CB	LEU	H	37	18.220	7.663	37.386	1.00	54.64	C
ATOM	3807	CG	LEU	H	37	18.783	7.212	38.736	1.00	54.68	C
ATOM	3809	CD1	LEU	H	37	20.234	7.604	38.853	1.00	53.68	C
ATOM	3813	CD2	LEU	H	37	18.635	5.705	38.917	1.00	55.23	C
ATOM	3817	C	LEU	H	37	16.219	7.864	35.886	1.00	54.80	C
ATOM	3818	O	LEU	H	37	15.391	6.948	35.728	1.00	53.49	O
ATOM	3820	N	ARG	H	38	16.667	8.631	34.889	1.00	53.19	N
ATOM	3821	CA	ARG	H	38	16.189	8.473	33.524	1.00	53.67	C
ATOM	3823	CB	ARG	H	38	15.041	9.436	33.227	1.00	54.81	C
ATOM	3826	CG	ARG	H	38	15.461	10.895	33.059	1.00	55.37	C
ATOM	3829	CD	ARG	H	38	14.294	11.769	32.632	1.00	52.74	C
ATOM	3832	NE	ARG	H	38	14.603	13.177	32.842	1.00	53.44	N
ATOM	3834	CZ	ARG	H	38	13.768	14.174	32.571	1.00	51.46	C
ATOM	3835	NH1	ARG	H	38	12.556	13.927	32.099	1.00	54.21	N
ATOM	3838	NH2	ARG	H	38	14.146	15.428	32.794	1.00	47.99	N
ATOM	3841	C	ARG	H	38	17.297	8.679	32.510	1.00	53.96	C
ATOM	3842	O	ARG	H	38	18.345	9.266	32.812	1.00	53.44	O
ATOM	3844	N	GLN	H	39	17.026	8.203	31.299	1.00	53.60	N
ATOM	3845	CA	GLN	H	39	17.998	8.180	30.212	1.00	53.28	C
ATOM	3847	CB	GLN	H	39	18.878	6.932	30.337	1.00	52.42	C
ATOM	3850	CG	GLN	H	39	19.753	6.609	29.129	1.00	51.84	C
ATOM	3853	CD	GLN	H	39	20.733	5.489	29.426	1.00	50.24	C
ATOM	3854	OE1	GLN	H	39	20.371	4.476	30.024	1.00	48.74	O
ATOM	3855	NE2	GLN	H	39	21.983	5.677	29.033	1.00	36.18	N
ATOM	3858	C	GLN	H	39	17.249	8.207	28.877	1.00	53.61	C
ATOM	3859	O	GLN	H	39	16.462	7.304	28.571	1.00	53.97	O
ATOM	3861	N	ALA	H	40	17.488	9.259	28.100	1.00	53.97	N
ATOM	3862	CA	ALA	H	40	16.848	9.433	26.796	1.00	54.45	C
ATOM	3864	CB	ALA	H	40	16.897	10.908	26.385	1.00	54.42	C
ATOM	3868	C	ALA	H	40	17.510	8.543	25.726	1.00	54.55	C
ATOM	3869	O	ALA	H	40	18.671	8.140	25.882	1.00	54.41	O
ATOM	3871	N	PRO	H	41	16.774	8.225	24.639	1.00	53.53	N
ATOM	3872	CA	PRO	H	41	17.395	7.361	23.643	1.00	53.62	C
ATOM	3874	CB	PRO	H	41	16.354	7.291	22.515	1.00	52.51	C
ATOM	3877	CG	PRO	H	41	15.076	7.676	23.139	1.00	54.06	C
ATOM	3880	CD	PRO	H	41	15.412	8.627	24.249	1.00	53.29	C
ATOM	3883	C	PRO	H	41	18.684	8.015	23.168	1.00	53.95	C
ATOM	3884	O	PRO	H	41	18.679	9.210	22.857	1.00	54.39	O
ATOM	3885	N	GLY	H	42	19.781	7.260	23.180	1.00	52.90	N
ATOM	3886	CA	GLY	H	42	21.064	7.759	22.713	1.00	52.60	C
ATOM	3889	C	GLY	H	42	21.788	8.724	23.638	1.00	53.38	C
ATOM	3890	O	GLY	H	42	22.838	9.236	23.270	1.00	56.12	O
ATOM	3892	N	LYS	H	43	21.267	8.960	24.839	1.00	53.22	N
ATOM	3893	CA	LYS	H	43	21.878	9.921	25.771	1.00	53.86	C

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ATOM   3895  CB  LYS H  43      20.853  11.003  26.128  1.00 55.45           C
ATOM   3898  CG  LYS H  43      21.004  12.300  25.356  1.00 57.82           C
ATOM   3901  CD  LYS H  43      21.144  12.083  23.846  1.00 61.25           C
ATOM   3904  CE  LYS H  43      21.021  13.402  23.092  1.00 62.25           C
ATOM   3907  NZ  LYS H  43      19.853  14.216  23.574  1.00 64.79           N
ATOM   3911  C   LYS H  43      22.460   9.274  27.047  1.00 53.34           C
ATOM   3912  O   LYS H  43      22.428   8.052  27.201  1.00 54.25           O
ATOM   3914  N   GLY H  44      23.008  10.102  27.938  1.00 50.96           N
ATOM   3915  CA  GLY H  44      23.567   9.640  29.201  1.00 52.62           C
ATOM   3918  C   GLY H  44      22.519   9.464  30.286  1.00 53.64           C
ATOM   3919  O   GLY H  44      21.330   9.362  30.003  1.00 55.33           O
ATOM   3921  N   LEU H  45      22.966   9.440  31.539  1.00 55.02           N
ATOM   3922  CA  LEU H  45      22.087   9.189  32.691  1.00 55.09           C
ATOM   3924  CB  LEU H  45      22.784   8.240  33.690  1.00 55.16           C
ATOM   3927  CG  LEU H  45      22.784   6.710  33.461  1.00 54.66           C
ATOM   3929  CD1 LEU H  45      22.710   6.332  32.014  1.00 58.85           C
ATOM   3933  CD2 LEU H  45      24.002   6.033  34.107  1.00 55.72           C
ATOM   3937  C   LEU H  45      21.720  10.511  33.381  1.00 55.25           C
ATOM   3938  O   LEU H  45      22.527  11.438  33.428  1.00 54.95           O
ATOM   3940  N   GLU H  46      20.504  10.592  33.914  1.00 55.05           N
ATOM   3941  CA  GLU H  46      20.095  11.745  34.717  1.00 55.03           C
ATOM   3943  CB  GLU H  46      19.177  12.655  33.903  1.00 54.16           C
ATOM   3946  CG  GLU H  46      18.809  13.958  34.619  1.00 56.93           C
ATOM   3949  CD  GLU H  46      17.682  14.733  33.958  1.00 57.58           C
ATOM   3950  OE1 GLU H  46      17.159  14.286  32.914  1.00 60.12           O
ATOM   3951  OE2 GLU H  46      17.322  15.798  34.499  1.00 58.36           O
ATOM   3952  C   GLU H  46      19.382  11.317  36.008  1.00 55.43           C
ATOM   3953  O   GLU H  46      18.308  10.716  35.958  1.00 57.18           O
ATOM   3955  N   TRP H  47      19.963  11.630  37.161  1.00 53.89           N
ATOM   3956  CA  TRP H  47      19.242  11.444  38.424  1.00 53.72           C
ATOM   3958  CB  TRP H  47      20.182  11.565  39.635  1.00 52.58           C
ATOM   3961  CG  TRP H  47      19.435  11.666  40.879  1.00 50.71           C
ATOM   3962  CD1 TRP H  47      18.956  10.642  41.637  1.00 50.80           C
ATOM   3964  NE1 TRP H  47      18.274  11.135  42.718  1.00 48.04           N
ATOM   3966  CE2 TRP H  47      18.285  12.503  42.656  1.00 51.75           C
ATOM   3967  CD2 TRP H  47      19.009  12.867  41.507  1.00 53.78           C
ATOM   3968  CE3 TRP H  47      19.177  14.224  41.216  1.00 52.61           C
ATOM   3970  CZ3 TRP H  47      18.617  15.154  42.062  1.00 51.30           C
ATOM   3972  CH2 TRP H  47      17.886  14.762  43.184  1.00 50.32           C
ATOM   3974  CZ2 TRP H  47      17.714  13.445  43.500  1.00 53.66           C
ATOM   3976  C   TRP H  47      18.119  12.486  38.512  1.00 53.45           C
ATOM   3977  O   TRP H  47      18.337  13.670  38.220  1.00 54.17           O
ATOM   3979  N   ILE H  48      16.924  12.056  38.906  1.00 53.21           N
ATOM   3980  CA  ILE H  48      15.785  12.981  38.988  1.00 53.31           C
ATOM   3982  CB  ILE H  48      14.741  12.734  37.881  1.00 51.93           C
ATOM   3984  CG1 ILE H  48      14.315  11.266  37.851  1.00 51.93           C
ATOM   3987  CD1 ILE H  48      13.205  10.986  36.853  1.00 54.53           C
ATOM   3991  CG2 ILE H  48      15.290  13.171  36.542  1.00 53.73           C
ATOM   3995  C   ILE H  48      15.028  12.975  40.297  1.00 53.62           C
ATOM   3996  O   ILE H  48      14.338  13.948  40.607  1.00 53.55           O
ATOM   3998  N   GLY H  49      15.116  11.883  41.049  1.00 54.16           N
ATOM   3999  CA  GLY H  49      14.315  11.749  42.262  1.00 53.84           C
ATOM   4002  C   GLY H  49      14.977  10.899  43.324  1.00 54.20           C
ATOM   4003  O   GLY H  49      15.670   9.919  43.022  1.00 55.43           O
ATOM   4005  N   VAL H  50      14.750  11.289  44.572  1.00 53.42           N
ATOM   4006  CA  VAL H  50      15.205  10.542  45.721  1.00 54.34           C
ATOM   4008  CB  VAL H  50      16.579  11.083  46.218  1.00 54.61           C
ATOM   4010  CG1 VAL H  50      16.465  12.522  46.717  1.00 53.17           C
ATOM   4014  CG2 VAL H  50      17.151  10.175  47.300  1.00 54.06           C
ATOM   4018  C   VAL H  50      14.150  10.628  46.840  1.00 55.50           C
ATOM   4019  O   VAL H  50      13.432  11.635  46.945  1.00 54.71           O
ATOM   4021  N   ILE H  51      14.067   9.567  47.653  1.00 54.88           N
ATOM   4022  CA  ILE H  51      13.206   9.525  48.850  1.00 53.35           C
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ATOM	4024	CB	ILE	H	51	11.815	8.922	48.542	1.00	52.77	C
ATOM	4026	CG1	ILE	H	51	10.865	9.075	49.736	1.00	53.45	C
ATOM	4029	CD1	ILE	H	51	9.419	8.785	49.378	1.00	51.87	C
ATOM	4033	CG2	ILE	H	51	11.925	7.456	48.142	1.00	54.42	C
ATOM	4037	C	ILE	H	51	13.919	8.724	49.943	1.00	53.48	C
ATOM	4038	O	ILE	H	51	14.509	7.685	49.667	1.00	53.93	O
ATOM	4040	N	SER	H	52	13.868	9.222	51.177	1.00	53.39	N
ATOM	4041	CA	SER	H	52	14.720	8.725	52.261	1.00	52.60	C
ATOM	4043	CB	SER	H	52	15.337	9.910	53.029	1.00	52.57	C
ATOM	4046	OG	SER	H	52	16.207	9.490	54.078	1.00	50.59	O
ATOM	4048	C	SER	H	52	13.969	7.823	53.227	1.00	52.36	C
ATOM	4049	O	SER	H	52	12.773	7.610	53.102	1.00	54.55	O
ATOM	4051	N	VAL	H	53	14.695	7.310	54.207	1.00	52.51	N
ATOM	4052	CA	VAL	H	53	14.135	6.431	55.223	1.00	52.84	C
ATOM	4054	CB	VAL	H	53	15.272	5.667	55.964	1.00	53.27	C
ATOM	4056	CG1	VAL	H	53	16.249	6.620	56.672	1.00	54.13	C
ATOM	4060	CG2	VAL	H	53	16.036	4.814	54.990	1.00	52.80	C
ATOM	4064	C	VAL	H	53	13.217	7.158	56.230	1.00	53.50	C
ATOM	4065	O	VAL	H	53	13.110	8.397	56.241	1.00	52.19	O
ATOM	4067	N	LYS	H	54	12.545	6.361	57.060	1.00	54.84	N
ATOM	4068	CA	LYS	H	54	11.631	6.861	58.088	1.00	54.42	C
ATOM	4070	CB	LYS	H	54	11.018	5.685	58.846	1.00	54.08	C
ATOM	4073	CG	LYS	H	54	9.967	6.062	59.887	1.00	56.89	C
ATOM	4076	CD	LYS	H	54	10.081	5.197	61.154	1.00	57.07	C
ATOM	4079	CE	LYS	H	54	8.962	5.500	62.151	1.00	57.48	C
ATOM	4082	NZ	LYS	H	54	8.849	4.444	63.192	1.00	58.62	N
ATOM	4086	C	LYS	H	54	12.335	7.797	59.076	1.00	53.83	C
ATOM	4087	O	LYS	H	54	11.767	8.800	59.494	1.00	52.64	O
ATOM	4089	N	SER	H	55	13.573	7.485	59.444	1.00	55.82	N
ATOM	4090	CA	SER	H	55	14.296	8.314	60.414	1.00	56.55	C
ATOM	4092	CB	SER	H	55	15.515	7.574	61.001	1.00	56.38	C
ATOM	4095	OG	SER	H	55	16.585	7.446	60.077	1.00	60.01	O
ATOM	4097	C	SER	H	55	14.674	9.690	59.839	1.00	56.53	C
ATOM	4098	O	SER	H	55	15.064	10.577	60.584	1.00	58.47	O
ATOM	4100	N	GLU	H	56	14.546	9.870	58.527	1.00	57.07	N
ATOM	4101	CA	GLU	H	56	14.610	11.209	57.913	1.00	58.15	C
ATOM	4103	CB	GLU	H	56	15.557	11.211	56.708	1.00	57.35	C
ATOM	4106	CG	GLU	H	56	17.022	11.218	57.083	1.00	58.37	C
ATOM	4109	CD	GLU	H	56	17.899	11.848	56.006	1.00	62.26	C
ATOM	4110	OE1	GLU	H	56	17.802	11.443	54.820	1.00	58.50	O
ATOM	4111	OE2	GLU	H	56	18.690	12.754	56.358	1.00	71.61	O
ATOM	4112	C	GLU	H	56	13.210	11.716	57.502	1.00	57.12	C
ATOM	4113	O	GLU	H	56	13.074	12.711	56.781	1.00	53.66	O
ATOM	4115	N	ASN	H	57	12.188	11.026	58.001	1.00	57.56	N
ATOM	4116	CA	ASN	H	57	10.781	11.347	57.756	1.00	57.52	C
ATOM	4118	CB	ASN	H	57	10.403	12.689	58.390	1.00	56.72	C
ATOM	4121	CG	ASN	H	57	10.492	12.653	59.895	1.00	55.01	C
ATOM	4122	OD1	ASN	H	57	9.794	11.894	60.551	1.00	56.76	O
ATOM	4123	ND2	ASN	H	57	11.366	13.457	60.444	1.00	51.60	N
ATOM	4126	C	ASN	H	57	10.425	11.308	56.284	1.00	58.12	C
ATOM	4127	O	ASN	H	57	9.737	12.204	55.773	1.00	59.67	O
ATOM	4129	N	TYR	H	58	10.906	10.273	55.600	1.00	56.23	N
ATOM	4130	CA	TYR	H	58	10.567	10.075	54.199	1.00	55.76	C
ATOM	4132	CB	TYR	H	58	9.114	9.597	54.095	1.00	56.09	C
ATOM	4135	CG	TYR	H	58	8.885	8.332	54.868	1.00	55.13	C
ATOM	4136	CD1	TYR	H	58	9.609	7.189	54.566	1.00	57.73	C
ATOM	4138	CE1	TYR	H	58	9.433	6.020	55.271	1.00	61.32	C
ATOM	4140	CZ	TYR	H	58	8.519	5.977	56.302	1.00	60.40	C
ATOM	4141	OH	TYR	H	58	8.358	4.795	56.987	1.00	57.92	O
ATOM	4143	CE2	TYR	H	58	7.784	7.103	56.627	1.00	56.82	C
ATOM	4145	CD2	TYR	H	58	7.975	8.274	55.908	1.00	55.38	C
ATOM	4147	C	TYR	H	58	10.791	11.338	53.371	1.00	54.33	C
ATOM	4148	O	TYR	H	58	10.063	11.604	52.420	1.00	55.27	O

ATOM	4150	N	GLY	H	59	11.814	12.103	53.739	1.00	53.44	N
ATOM	4151	CA	GLY	H	59	12.173	13.319	53.032	1.00	53.86	C
ATOM	4154	C	GLY	H	59	12.521	13.029	51.583	1.00	53.68	C
ATOM	4155	O	GLY	H	59	13.165	12.020	51.282	1.00	52.58	O
ATOM	4157	N	ALA	H	60	12.080	13.913	50.689	1.00	52.83	N
ATOM	4158	CA	ALA	H	60	12.232	13.701	49.262	1.00	52.99	C
ATOM	4160	CB	ALA	H	60	10.890	13.456	48.633	1.00	53.67	C
ATOM	4164	C	ALA	H	60	12.882	14.898	48.633	1.00	51.87	C
ATOM	4165	O	ALA	H	60	12.797	15.989	49.191	1.00	52.10	O
ATOM	4167	N	ASN	H	61	13.540	14.678	47.486	1.00	52.93	N
ATOM	4168	CA	ASN	H	61	14.198	15.752	46.711	1.00	53.25	C
ATOM	4170	CB	ASN	H	61	15.607	16.027	47.251	1.00	51.65	C
ATOM	4173	CG	ASN	H	61	15.936	17.513	47.317	1.00	55.58	C
ATOM	4174	OD1	ASN	H	61	16.572	17.976	48.270	1.00	58.39	O
ATOM	4175	ND2	ASN	H	61	15.503	18.268	46.311	1.00	50.08	N
ATOM	4178	C	ASN	H	61	14.250	15.418	45.208	1.00	54.37	C
ATOM	4179	O	ASN	H	61	14.214	14.254	44.822	1.00	56.21	O
ATOM	4181	N	TYR	H	62	14.321	16.448	44.366	1.00	54.90	N
ATOM	4182	CA	TYR	H	62	14.248	16.282	42.912	1.00	53.39	C
ATOM	4184	CB	TYR	H	62	12.856	16.731	42.457	1.00	51.38	C
ATOM	4187	CG	TYR	H	62	11.762	15.994	43.186	1.00	51.30	C
ATOM	4188	CD1	TYR	H	62	11.241	16.483	44.385	1.00	45.49	C
ATOM	4190	CE1	TYR	H	62	10.251	15.788	45.064	1.00	47.65	C
ATOM	4192	CZ	TYR	H	62	9.781	14.581	44.548	1.00	49.19	C
ATOM	4193	OH	TYR	H	62	8.807	13.882	45.202	1.00	48.16	O
ATOM	4195	CE2	TYR	H	62	10.285	14.078	43.371	1.00	49.98	C
ATOM	4197	CD2	TYR	H	62	11.278	14.777	42.701	1.00	51.03	C
ATOM	4199	C	TYR	H	62	15.316	17.054	42.118	1.00	53.24	C
ATOM	4200	O	TYR	H	62	15.916	18.008	42.612	1.00	52.50	O
ATOM	4202	N	ALA	H	63	15.541	16.627	40.879	1.00	53.98	N
ATOM	4203	CA	ALA	H	63	16.221	17.462	39.884	1.00	55.25	C
ATOM	4205	CB	ALA	H	63	16.659	16.617	38.708	1.00	54.70	C
ATOM	4209	C	ALA	H	63	15.286	18.602	39.407	1.00	56.77	C
ATOM	4210	O	ALA	H	63	14.079	18.406	39.239	1.00	56.91	O
ATOM	4212	N	GLU	H	64	15.836	19.789	39.168	1.00	56.51	N
ATOM	4213	CA	GLU	H	64	14.994	20.932	38.802	1.00	56.86	C
ATOM	4215	CB	GLU	H	64	15.802	22.237	38.752	1.00	57.10	C
ATOM	4218	CG	GLU	H	64	16.589	22.572	40.018	1.00	56.07	C
ATOM	4221	CD	GLU	H	64	15.771	22.446	41.281	1.00	54.00	C
ATOM	4222	OE1	GLU	H	64	16.361	22.118	42.329	1.00	53.38	O
ATOM	4223	OE2	GLU	H	64	14.546	22.667	41.223	1.00	52.25	O
ATOM	4224	C	GLU	H	64	14.249	20.764	37.477	1.00	56.81	C
ATOM	4225	O	GLU	H	64	13.353	21.540	37.183	1.00	59.92	O
ATOM	4227	N	SER	H	65	14.623	19.780	36.672	1.00	55.43	N
ATOM	4228	CA	SER	H	65	13.892	19.501	35.445	1.00	55.11	C
ATOM	4230	CB	SER	H	65	14.669	18.527	34.574	1.00	54.51	C
ATOM	4233	OG	SER	H	65	14.942	17.329	35.277	1.00	56.31	O
ATOM	4235	C	SER	H	65	12.517	18.913	35.713	1.00	56.54	C
ATOM	4236	O	SER	H	65	11.627	19.048	34.878	1.00	60.25	O
ATOM	4238	N	VAL	H	66	12.352	18.268	36.870	1.00	55.56	N
ATOM	4239	CA	VAL	H	66	11.148	17.498	37.186	1.00	53.62	C
ATOM	4241	CB	VAL	H	66	11.497	16.020	37.346	1.00	53.48	C
ATOM	4243	CG1	VAL	H	66	12.080	15.482	36.067	1.00	56.93	C
ATOM	4247	CG2	VAL	H	66	12.467	15.813	38.485	1.00	54.82	C
ATOM	4251	C	VAL	H	66	10.353	17.949	38.433	1.00	53.53	C
ATOM	4252	O	VAL	H	66	9.247	17.447	38.676	1.00	52.87	O
ATOM	4254	N	ARG	H	67	10.888	18.893	39.207	1.00	52.02	N
ATOM	4255	CA	ARG	H	67	10.225	19.323	40.428	1.00	51.19	C
ATOM	4257	CB	ARG	H	67	11.082	20.301	41.212	1.00	49.41	C
ATOM	4260	CG	ARG	H	67	10.703	20.369	42.673	1.00	49.96	C
ATOM	4263	CD	ARG	H	67	11.358	21.550	43.380	1.00	54.84	C
ATOM	4266	NE	ARG	H	67	12.801	21.393	43.493	1.00	56.17	N
ATOM	4268	CZ	ARG	H	67	13.408	20.610	44.377	1.00	59.32	C

ATOM	4269	NH1	ARG	H	67	14.730	20.534	44.359	1.00	64.31	N
ATOM	4272	NH2	ARG	H	67	12.716	19.912	45.274	1.00	55.70	N
ATOM	4275	C	ARG	H	67	8.891	19.969	40.122	1.00	51.27	C
ATOM	4276	O	ARG	H	67	8.801	20.857	39.268	1.00	52.23	O
ATOM	4278	N	GLY	H	68	7.862	19.510	40.832	1.00	52.42	N
ATOM	4279	CA	GLY	H	68	6.503	20.039	40.711	1.00	52.66	C
ATOM	4282	C	GLY	H	68	5.699	19.349	39.622	1.00	53.68	C
ATOM	4283	O	GLY	H	68	4.521	19.673	39.409	1.00	55.43	O
ATOM	4285	N	ARG	H	69	6.346	18.419	38.919	1.00	52.71	N
ATOM	4286	CA	ARG	H	69	5.698	17.625	37.881	1.00	53.37	C
ATOM	4288	CB	ARG	H	69	6.392	17.866	36.547	1.00	53.70	C
ATOM	4291	CG	ARG	H	69	6.292	19.303	36.063	1.00	51.13	C
ATOM	4294	CD	ARG	H	69	7.483	19.685	35.184	1.00	53.14	C
ATOM	4297	NE	ARG	H	69	7.428	19.013	33.886	1.00	56.05	N
ATOM	4299	CZ	ARG	H	69	8.304	18.120	33.425	1.00	53.79	C
ATOM	4300	NH1	ARG	H	69	9.377	17.763	34.117	1.00	50.39	N
ATOM	4303	NH2	ARG	H	69	8.110	17.588	32.232	1.00	51.24	N
ATOM	4306	C	ARG	H	69	5.752	16.146	38.221	1.00	53.87	C
ATOM	4307	O	ARG	H	69	4.798	15.407	37.991	1.00	55.13	O
ATOM	4309	N	PHE	H	70	6.893	15.720	38.748	1.00	54.83	N
ATOM	4310	CA	PHE	H	70	7.119	14.337	39.137	1.00	54.86	C
ATOM	4312	CB	PHE	H	70	8.495	13.875	38.625	1.00	53.83	C
ATOM	4315	CG	PHE	H	70	8.574	13.666	37.117	1.00	53.73	C
ATOM	4316	CD1	PHE	H	70	7.621	14.190	36.245	1.00	55.06	C
ATOM	4318	CE1	PHE	H	70	7.708	13.992	34.883	1.00	52.84	C
ATOM	4320	CZ	PHE	H	70	8.751	13.282	34.358	1.00	49.93	C
ATOM	4322	CE2	PHE	H	70	9.711	12.761	35.199	1.00	55.26	C
ATOM	4324	CD2	PHE	H	70	9.624	12.957	36.573	1.00	54.83	C
ATOM	4326	C	PHE	H	70	7.085	14.284	40.657	1.00	56.58	C
ATOM	4327	O	PHE	H	70	7.650	15.152	41.325	1.00	60.03	O
ATOM	4329	N	THR	H	71	6.424	13.281	41.215	1.00	56.18	N
ATOM	4330	CA	THR	H	71	6.453	13.076	42.657	1.00	56.15	C
ATOM	4332	CB	THR	H	71	5.082	13.333	43.264	1.00	57.19	C
ATOM	4334	OG1	THR	H	71	4.725	14.704	43.054	1.00	59.72	O
ATOM	4336	CG2	THR	H	71	5.068	13.010	44.759	1.00	55.03	C
ATOM	4340	C	THR	H	71	6.865	11.649	42.972	1.00	57.89	C
ATOM	4341	O	THR	H	71	6.399	10.705	42.330	1.00	58.11	O
ATOM	4343	N	ILE	H	72	7.727	11.504	43.977	1.00	58.52	N
ATOM	4344	CA	ILE	H	72	8.215	10.198	44.434	1.00	56.69	C
ATOM	4346	CB	ILE	H	72	9.763	10.185	44.490	1.00	57.00	C
ATOM	4348	CG1	ILE	H	72	10.293	8.757	44.597	1.00	60.26	C
ATOM	4351	CD1	ILE	H	72	11.817	8.686	44.564	1.00	60.94	C
ATOM	4355	CG2	ILE	H	72	10.289	11.024	45.643	1.00	58.10	C
ATOM	4359	C	ILE	H	72	7.612	9.864	45.799	1.00	53.96	C
ATOM	4360	O	ILE	H	72	7.488	10.734	46.647	1.00	55.60	O
ATOM	4362	N	SER	H	73	7.207	8.613	45.994	1.00	53.36	N
ATOM	4363	CA	SER	H	73	6.670	8.160	47.284	1.00	53.31	C
ATOM	4365	CB	SER	H	73	5.154	8.279	47.301	1.00	51.35	C
ATOM	4368	OG	SER	H	73	4.614	7.733	46.124	1.00	55.02	O
ATOM	4370	C	SER	H	73	7.094	6.725	47.552	1.00	52.52	C
ATOM	4371	O	SER	H	73	7.775	6.106	46.728	1.00	53.63	O
ATOM	4373	N	ARG	H	74	6.725	6.195	48.710	1.00	51.43	N
ATOM	4374	CA	ARG	H	74	7.070	4.812	49.010	1.00	52.90	C
ATOM	4376	CB	ARG	H	74	8.498	4.728	49.566	1.00	53.14	C
ATOM	4379	CG	ARG	H	74	8.693	5.350	50.950	1.00	52.48	C
ATOM	4382	CD	ARG	H	74	10.188	5.505	51.302	1.00	53.69	C
ATOM	4385	NE	ARG	H	74	10.863	4.218	51.487	1.00	54.77	N
ATOM	4387	CZ	ARG	H	74	12.183	4.060	51.565	1.00	57.39	C
ATOM	4388	NH1	ARG	H	74	13.000	5.105	51.483	1.00	60.70	N
ATOM	4391	NH2	ARG	H	74	12.692	2.848	51.714	1.00	59.30	N
ATOM	4394	C	ARG	H	74	6.111	4.152	49.977	1.00	52.64	C
ATOM	4395	O	ARG	H	74	5.481	4.820	50.791	1.00	53.87	O
ATOM	4397	N	ASP	H	75	6.020	2.830	49.883	1.00	52.49	N

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ATOM   4398  CA  ASP H  75       5.254   2.028  50.829  1.00 52.32           C
ATOM   4400  CB  ASP H  75       4.044   1.429  50.125  1.00 51.92           C
ATOM   4403  CG  ASP H  75       3.049   0.833  51.089  1.00 53.70           C
ATOM   4404  OD1 ASP H  75       3.464   0.322  52.152  1.00 51.27           O
ATOM   4405  OD2 ASP H  75       1.844   0.873  50.774  1.00 56.20           O
ATOM   4406  C   ASP H  75       6.139   0.924  51.418  1.00 52.67           C
ATOM   4407  O   ASP H  75       6.259  -0.160  50.838  1.00 52.67           O
ATOM   4409  N   ASP H  76       6.758   1.202  52.568  1.00 52.46           N
ATOM   4410  CA  ASP H  76       7.703   0.264  53.184  1.00 52.19           C
ATOM   4412  CB  ASP H  76       8.272   0.836  54.489  1.00 52.72           C
ATOM   4415  CG  ASP H  76       9.379   1.863  54.264  1.00 53.94           C
ATOM   4416  OD1 ASP H  76       9.929   1.939  53.146  1.00 53.65           O
ATOM   4417  OD2 ASP H  76       9.723   2.582  55.224  1.00 54.29           O
ATOM   4418  C   ASP H  76       7.052  -1.100  53.442  1.00 53.19           C
ATOM   4419  O   ASP H  76       7.680  -2.142  53.256  1.00 53.58           O
ATOM   4421  N   SER H  77       5.782  -1.091  53.842  1.00 54.06           N
ATOM   4422  CA  SER H  77       5.055  -2.330  54.139  1.00 52.40           C
ATOM   4424  CB  SER H  77       3.737  -2.015  54.843  1.00 49.84           C
ATOM   4427  OG  SER H  77       2.786  -1.555  53.906  1.00 49.87           O
ATOM   4429  C   SER H  77       4.795  -3.203  52.896  1.00 51.23           C
ATOM   4430  O   SER H  77       4.546  -4.406  53.028  1.00 50.69           O
ATOM   4432  N   LYS H  78       4.837  -2.598  51.710  1.00 50.63           N
ATOM   4433  CA  LYS H  78       4.704  -3.336  50.444  1.00 52.65           C
ATOM   4435  CB  LYS H  78       3.556  -2.753  49.598  1.00 52.68           C
ATOM   4438  CG  LYS H  78       2.167  -3.315  49.926  1.00 58.32           C
ATOM   4441  CD  LYS H  78       1.083  -2.835  48.937  1.00 58.24           C
ATOM   4444  CE  LYS H  78       0.847  -1.321  49.052  1.00 65.58           C
ATOM   4447  NZ  LYS H  78      -0.474  -0.849  48.507  1.00 65.69           N
ATOM   4451  C   LYS H  78       6.006  -3.293  49.641  1.00 51.77           C
ATOM   4452  O   LYS H  78       5.987  -3.500  48.436  1.00 49.77           O
ATOM   4454  N   ASN H  79       7.126  -3.020  50.317  1.00 52.69           N
ATOM   4455  CA  ASN H  79       8.454  -2.872  49.687  1.00 52.41           C
ATOM   4457  CB  ASN H  79       9.226  -4.205  49.718  1.00 51.45           C
ATOM   4460  CG  ASN H  79       9.598  -4.638  51.134  1.00 52.85           C
ATOM   4461  OD1 ASN H  79      10.001  -3.824  51.958  1.00 55.11           O
ATOM   4462  ND2 ASN H  79       9.456  -5.926  51.419  1.00 55.23           N
ATOM   4465  C   ASN H  79       8.438  -2.292  48.261  1.00 53.98           C
ATOM   4466  O   ASN H  79       9.052  -2.860  47.349  1.00 55.36           O
ATOM   4468  N   THR H  80       7.767  -1.146  48.090  1.00 53.60           N
ATOM   4469  CA  THR H  80       7.587  -0.522  46.771  1.00 52.30           C
ATOM   4471  CB  THR H  80       6.134  -0.719  46.280  1.00 53.91           C
ATOM   4473  OG1 THR H  80       5.827  -2.120  46.225  1.00 52.33           O
ATOM   4475  CG2 THR H  80       5.914  -0.074  44.893  1.00 54.14           C
ATOM   4479  C   THR H  80       7.868   0.980  46.765  1.00 51.52           C
ATOM   4480  O   THR H  80       7.515   1.690  47.700  1.00 52.39           O
ATOM   4482  N   VAL H  81       8.475   1.465  45.687  1.00 52.20           N
ATOM   4483  CA  VAL H  81       8.656   2.903  45.475  1.00 51.81           C
ATOM   4485  CB  VAL H  81      10.150   3.283  45.354  1.00 52.16           C
ATOM   4487  CG1 VAL H  81      10.811   2.602  44.172  1.00 51.14           C
ATOM   4491  CG2 VAL H  81      10.323   4.805  45.275  1.00 53.07           C
ATOM   4495  C   VAL H  81       7.903   3.308  44.218  1.00 51.61           C
ATOM   4496  O   VAL H  81       7.889   2.561  43.248  1.00 53.26           O
ATOM   4498  N   TYR H  82       7.279   4.487  44.245  1.00 52.19           N
ATOM   4499  CA  TYR H  82       6.498   4.991  43.114  1.00 52.06           C
ATOM   4501  CB  TYR H  82       5.083   5.299  43.552  1.00 50.72           C
ATOM   4504  CG  TYR H  82       4.404   4.144  44.218  1.00 50.09           C
ATOM   4505  CD1 TYR H  82       3.833   3.127  43.469  1.00 48.59           C
ATOM   4507  CE1 TYR H  82       3.203   2.069  44.084  1.00 49.96           C
ATOM   4509  CZ  TYR H  82       3.145   2.025  45.465  1.00 48.45           C
ATOM   4510  OH  TYR H  82       2.524   0.983  46.107  1.00 51.38           O
ATOM   4512  CE2 TYR H  82       3.706   3.024  46.217  1.00 47.82           C
ATOM   4514  CD2 TYR H  82       4.323   4.074  45.598  1.00 46.84           C
ATOM   4516  C   TYR H  82       7.082   6.259  42.529  1.00 52.74           C
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ATOM   4517  O   TYR H  82       7.774   6.997  43.226  1.00 53.39           O
ATOM   4519  N   LEU H  83       6.806   6.493  41.245  1.00 52.93           N
ATOM   4520  CA  LEU H  83       7.028   7.793  40.627  1.00 54.16           C
ATOM   4522  CB  LEU H  83       8.197   7.775  39.650  1.00 54.70           C
ATOM   4525  CG  LEU H  83       8.521   9.122  38.990  1.00 54.80           C
ATOM   4527  CD1 LEU H  83       9.090  10.097  40.007  1.00 57.34           C
ATOM   4531  CD2 LEU H  83       9.497   8.937  37.821  1.00 58.27           C
ATOM   4535  C   LEU H  83       5.775   8.205  39.891  1.00 54.10           C
ATOM   4536  O   LEU H  83       5.322   7.509  38.991  1.00 53.76           O
ATOM   4538  N   GLN H  84       5.233   9.351  40.285  1.00 55.40           N
ATOM   4539  CA  GLN H  84       4.024   9.905  39.705  1.00 55.25           C
ATOM   4541  CB  GLN H  84       3.123  10.470  40.808  1.00 54.66           C
ATOM   4544  CG  GLN H  84       1.861  11.151  40.325  1.00 55.13           C
ATOM   4547  CD  GLN H  84       0.886  10.190  39.690  1.00 57.62           C
ATOM   4548  OE1 GLN H  84       0.420   9.238  40.325  1.00 60.12           O
ATOM   4549  NE2 GLN H  84       0.572  10.428  38.423  1.00 58.65           N
ATOM   4552  C   GLN H  84       4.458  11.001  38.748  1.00 55.58           C
ATOM   4553  O   GLN H  84       5.028  12.007  39.160  1.00 56.38           O
ATOM   4555  N   MET H  85       4.196  10.793  37.467  1.00 56.10           N
ATOM   4556  CA  MET H  85       4.655  11.708  36.446  1.00 56.22           C
ATOM   4558  CB  MET H  85       5.404  10.931  35.374  1.00 56.39           C
ATOM   4561  CG  MET H  85       6.554  10.126  35.912  1.00 55.02           C
ATOM   4564  SD  MET H  85       7.564   9.425  34.599  1.00 55.69           S
ATOM   4565  CE  MET H  85       6.437   8.181  34.006  1.00 65.06           C
ATOM   4569  C   MET H  85       3.476  12.461  35.840  1.00 57.09           C
ATOM   4570  O   MET H  85       2.667  11.877  35.100  1.00 56.63           O
ATOM   4572  N   ASN H  86       3.392  13.752  36.172  1.00 55.80           N
ATOM   4573  CA  ASN H  86       2.342  14.645  35.688  1.00 54.96           C
ATOM   4575  CB  ASN H  86       1.591  15.252  36.872  1.00 54.56           C
ATOM   4578  CG  ASN H  86       0.807  14.223  37.657  1.00 54.97           C
ATOM   4579  OD1 ASN H  86       0.563  13.118  37.180  1.00 58.89           O
ATOM   4580  ND2 ASN H  86       0.403  14.584  38.867  1.00 48.38           N
ATOM   4583  C   ASN H  86       2.912  15.769  34.824  1.00 55.55           C
ATOM   4584  O   ASN H  86       4.109  16.065  34.885  1.00 57.17           O
ATOM   4586  N   SER H  87       2.048  16.390  34.023  1.00 54.90           N
ATOM   4587  CA  SER H  87       2.438  17.509  33.169  1.00 54.23           C
ATOM   4589  CB  SER H  87       2.870  18.711  34.011  1.00 53.82           C
ATOM   4592  OG  SER H  87       1.885  19.061  34.958  1.00 52.89           O
ATOM   4594  C   SER H  87       3.569  17.106  32.246  1.00 53.30           C
ATOM   4595  O   SER H  87       4.558  17.818  32.098  1.00 53.56           O
ATOM   4597  N   LEU H  88       3.419  15.954  31.620  1.00 53.53           N
ATOM   4598  CA  LEU H  88       4.496  15.411  30.811  1.00 55.13           C
ATOM   4600  CB  LEU H  88       4.195  13.969  30.411  1.00 55.58           C
ATOM   4603  CG  LEU H  88       4.303  13.013  31.602  1.00 56.69           C
ATOM   4605  CD1 LEU H  88       3.719  11.652  31.255  1.00 59.85           C
ATOM   4609  CD2 LEU H  88       5.742  12.880  32.063  1.00 53.31           C
ATOM   4613  C   LEU H  88       4.797  16.264  29.582  1.00 55.36           C
ATOM   4614  O   LEU H  88       3.910  16.647  28.826  1.00 55.54           O
ATOM   4616  N   LYS H  89       6.075  16.571  29.430  1.00 56.89           N
ATOM   4617  CA  LYS H  89       6.593  17.291  28.289  1.00 56.73           C
ATOM   4619  CB  LYS H  89       7.677  18.282  28.745  1.00 56.42           C
ATOM   4622  CG  LYS H  89       7.183  19.408  29.666  1.00 56.90           C
ATOM   4625  CD  LYS H  89       8.360  20.143  30.348  1.00 59.61           C
ATOM   4628  CE  LYS H  89       8.042  21.628  30.672  1.00 62.83           C
ATOM   4631  NZ  LYS H  89       7.226  21.848  31.909  1.00 64.95           N
ATOM   4635  C   LYS H  89       7.181  16.257  27.333  1.00 56.57           C
ATOM   4636  O   LYS H  89       7.568  15.159  27.751  1.00 55.89           O
ATOM   4638  N   THR H  90       7.243  16.609  26.052  1.00 56.34           N
ATOM   4639  CA  THR H  90       7.896  15.761  25.050  1.00 55.88           C
ATOM   4641  CB  THR H  90       7.869  16.378  23.610  1.00 55.65           C
ATOM   4643  OG1 THR H  90       9.055  15.993  22.913  1.00 59.72           O
ATOM   4645  CG2 THR H  90       7.788  17.903  23.608  1.00 56.91           C
ATOM   4649  C   THR H  90       9.332  15.374  25.438  1.00 54.81           C
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ATOM   4650  O   THR H  90       9.747  14.239  25.218  1.00 53.84           O
ATOM   4652  N   GLU H  91      10.068  16.300  26.047  1.00 55.64           N
ATOM   4653  CA  GLU H  91      11.484  16.056  26.429  1.00 56.87           C
ATOM   4655  CB  GLU H  91      12.257  17.364  26.706  1.00 57.54           C
ATOM   4658  CG  GLU H  91      11.434  18.554  27.241  1.00 64.21           C
ATOM   4661  CD  GLU H  91      10.746  19.361  26.125  1.00 69.95           C
ATOM   4662  OE1 GLU H  91      11.348  19.508  25.042  1.00 70.88           O
ATOM   4663  OE2 GLU H  91       9.608  19.850  26.327  1.00 71.83           O
ATOM   4664  C   GLU H  91      11.683  15.078  27.594  1.00 57.19           C
ATOM   4665  O   GLU H  91      12.819  14.729  27.924  1.00 58.19           O
ATOM   4667  N   ASP H  92      10.592  14.629  28.209  1.00 57.31           N
ATOM   4668  CA  ASP H  92      10.663  13.575  29.213  1.00 55.45           C
ATOM   4670  CB  ASP H  92       9.405  13.567  30.070  1.00 56.63           C
ATOM   4673  CG  ASP H  92       9.185  14.859  30.815  1.00 56.78           C
ATOM   4674  OD1 ASP H  92      10.104  15.341  31.507  1.00 53.91           O
ATOM   4675  OD2 ASP H  92       8.053  15.371  30.736  1.00 57.74           O
ATOM   4676  C   ASP H  92      10.796  12.188  28.584  1.00 54.42           C
ATOM   4677  O   ASP H  92      10.985  11.207  29.306  1.00 53.82           O
ATOM   4679  N   THR H  93      10.660  12.077  27.263  1.00 52.40           N
ATOM   4680  CA  THR H  93      10.750  10.762  26.650  1.00 53.62           C
ATOM   4682  CB  THR H  93      10.605  10.793  25.129  1.00 51.83           C
ATOM   4684  OG1 THR H  93       9.224  10.943  24.787  1.00 55.50           O
ATOM   4686  CG2 THR H  93      11.088   9.509  24.524  1.00 51.40           C
ATOM   4690  C   THR H  93      12.086  10.158  27.040  1.00 54.49           C
ATOM   4691  O   THR H  93      13.130  10.748  26.788  1.00 56.62           O
ATOM   4693  N   ALA H  94      12.041   8.995  27.681  1.00 55.02           N
ATOM   4694  CA  ALA H  94      13.245   8.322  28.147  1.00 54.50           C
ATOM   4696  CB  ALA H  94      13.992   9.207  29.138  1.00 55.34           C
ATOM   4700  C   ALA H  94      12.905   6.993  28.799  1.00 54.91           C
ATOM   4701  O   ALA H  94      11.755   6.733  29.151  1.00 56.76           O
ATOM   4703  N   VAL H  95      13.923   6.154  28.954  1.00 54.19           N
ATOM   4704  CA  VAL H  95      13.817   4.972  29.787  1.00 53.16           C
ATOM   4706  CB  VAL H  95      14.904   3.945  29.443  1.00 51.92           C
ATOM   4708  CG1 VAL H  95      14.937   2.804  30.472  1.00 52.53           C
ATOM   4712  CG2 VAL H  95      14.657   3.397  28.063  1.00 50.97           C
ATOM   4716  C   VAL H  95      13.958   5.430  31.227  1.00 53.10           C
ATOM   4717  O   VAL H  95      14.866   6.198  31.536  1.00 53.44           O
ATOM   4719  N   TYR H  96      13.059   4.963  32.094  1.00 52.44           N
ATOM   4720  CA  TYR H  96      13.074   5.335  33.510  1.00 52.33           C
ATOM   4722  CB  TYR H  96      11.703   5.872  33.940  1.00 51.22           C
ATOM   4725  CG  TYR H  96      11.478   7.299  33.484  1.00 49.91           C
ATOM   4726  CD1 TYR H  96      11.312   7.602  32.137  1.00 50.04           C
ATOM   4728  CE1 TYR H  96      11.124   8.904  31.715  1.00 50.07           C
ATOM   4730  CZ  TYR H  96      11.104   9.924  32.648  1.00 49.82           C
ATOM   4731  OH  TYR H  96      10.933  11.231  32.255  1.00 48.27           O
ATOM   4733  CE2 TYR H  96      11.264   9.642  33.988  1.00 49.93           C
ATOM   4735  CD2 TYR H  96      11.450   8.343  34.395  1.00 50.15           C
ATOM   4737  C   TYR H  96      13.492   4.151  34.369  1.00 52.95           C
ATOM   4738  O   TYR H  96      13.086   3.024  34.111  1.00 51.55           O
ATOM   4740  N   TYR H  97      14.302   4.440  35.391  1.00 54.42           N
ATOM   4741  CA  TYR H  97      14.959   3.445  36.240  1.00 53.98           C
ATOM   4743  CB  TYR H  97      16.467   3.553  36.036  1.00 53.03           C
ATOM   4746  CG  TYR H  97      16.998   2.998  34.744  1.00 50.86           C
ATOM   4747  CD1 TYR H  97      17.041   1.639  34.527  1.00 50.22           C
ATOM   4749  CE1 TYR H  97      17.529   1.126  33.352  1.00 53.55           C
ATOM   4751  CZ  TYR H  97      18.017   1.977  32.380  1.00 54.65           C
ATOM   4752  OH  TYR H  97      18.512   1.448  31.218  1.00 54.65           O
ATOM   4754  CE2 TYR H  97      18.010   3.335  32.576  1.00 52.02           C
ATOM   4756  CD2 TYR H  97      17.505   3.837  33.760  1.00 53.12           C
ATOM   4758  C   TYR H  97      14.683   3.725  37.733  1.00 55.90           C
ATOM   4759  O   TYR H  97      14.844   4.855  38.177  1.00 57.82           O
ATOM   4761  N   CYS H  98      14.278   2.717  38.508  1.00 55.79           N
ATOM   4762  CA  CYS H  98      14.275   2.856  39.968  1.00 55.82           C
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ATOM   4764  CB  CYS H  98      13.126   2.101  40.654  1.00 54.75           C
ATOM   4767  SG  CYS H  98      12.996   0.403  40.142  1.00 68.78           S
ATOM   4769  C   CYS H  98      15.603   2.306  40.412  1.00 55.31           C
ATOM   4770  O   CYS H  98      16.133   1.390  39.783  1.00 56.26           O
ATOM   4772  N   SER H  99      16.165   2.884  41.464  1.00 54.18           N
ATOM   4773  CA  SER H  99      17.404   2.367  42.023  1.00 53.10           C
ATOM   4775  CB  SER H  99      18.616   3.118  41.509  1.00 53.02           C
ATOM   4778  OG  SER H  99      19.783   2.461  41.947  1.00 49.61           O
ATOM   4780  C   SER H  99      17.358   2.490  43.505  1.00 52.12           C
ATOM   4781  O   SER H  99      16.516   3.193  44.031  1.00 53.03           O
ATOM   4783  N   ALA H 100      18.282   1.816  44.174  1.00 52.50           N
ATOM   4784  CA  ALA H 100      18.261   1.732  45.628  1.00 52.90           C
ATOM   4786  CB  ALA H 100      17.339   0.585  46.067  1.00 52.69           C
ATOM   4790  C   ALA H 100      19.660   1.526  46.205  1.00 54.07           C
ATOM   4791  O   ALA H 100      20.464   0.762  45.642  1.00 55.42           O
ATOM   4793  N   SER H 101      19.939   2.212  47.319  1.00 54.31           N
ATOM   4794  CA  SER H 101      21.122   1.943  48.152  1.00 52.63           C
ATOM   4796  CB  SER H 101      22.304   2.818  47.736  1.00 53.45           C
ATOM   4799  OG  SER H 101      22.061   4.188  48.003  1.00 47.14           O
ATOM   4801  C   SER H 101      20.820   2.153  49.638  1.00 53.12           C
ATOM   4802  O   SER H 101      19.904   2.895  50.007  1.00 51.79           O
ATOM   4804  N   TYR H 102      21.611   1.493  50.482  1.00 54.90           N
ATOM   4805  CA  TYR H 102      21.468   1.578  51.947  1.00 52.96           C
ATOM   4807  CB  TYR H 102      22.464   0.633  52.627  1.00 52.10           C
ATOM   4810  CG  TYR H 102      22.006  -0.797  52.615  1.00 55.07           C
ATOM   4811  CD1 TYR H 102      20.940  -1.193  53.410  1.00 54.91           C
ATOM   4813  CE1 TYR H 102      20.491  -2.507  53.419  1.00 54.68           C
ATOM   4815  CZ  TYR H 102      21.102  -3.454  52.627  1.00 54.77           C
ATOM   4816  OH  TYR H 102      20.611  -4.741  52.691  1.00 56.57           O
ATOM   4818  CE2 TYR H 102      22.172  -3.102  51.811  1.00 52.66           C
ATOM   4820  CD2 TYR H 102      22.625  -1.765  51.815  1.00 57.72           C
ATOM   4822  C   TYR H 102      21.662   3.007  52.469  1.00 51.08           C
ATOM   4823  O   TYR H 102      22.641   3.653  52.147  1.00 48.10           O
ATOM   4825  N   TYR H 103      20.714   3.488  53.267  1.00 52.21           N
ATOM   4826  CA  TYR H 103      20.837   4.781  53.924  1.00 52.09           C
ATOM   4828  CB  TYR H 103      19.742   4.958  54.983  1.00 50.42           C
ATOM   4831  CG  TYR H 103      19.961   6.180  55.868  1.00 51.64           C
ATOM   4832  CD1 TYR H 103      19.505   7.442  55.471  1.00 55.51           C
ATOM   4834  CE1 TYR H 103      19.708   8.564  56.249  1.00 47.49           C
ATOM   4836  CZ  TYR H 103      20.389   8.450  57.422  1.00 47.70           C
ATOM   4837  OH  TYR H 103      20.590   9.574  58.175  1.00 52.37           O
ATOM   4839  CE2 TYR H 103      20.869   7.216  57.846  1.00 50.51           C
ATOM   4841  CD2 TYR H 103      20.650   6.087  57.068  1.00 45.38           C
ATOM   4843  C   TYR H 103      22.207   4.933  54.594  1.00 54.36           C
ATOM   4844  O   TYR H 103      22.695   4.023  55.260  1.00 56.44           O
ATOM   4846  N   ARG H 104      22.810   6.103  54.413  1.00 55.01           N
ATOM   4847  CA  ARG H 104      24.032   6.471  55.113  1.00 52.47           C
ATOM   4849  CB  ARG H 104      25.154   6.712  54.105  1.00 51.34           C
ATOM   4852  CG  ARG H 104      25.431   5.571  53.177  1.00 48.98           C
ATOM   4855  CD  ARG H 104      26.500   5.962  52.181  1.00 53.59           C
ATOM   4858  NE  ARG H 104      27.759   6.218  52.870  1.00 59.16           N
ATOM   4860  CZ  ARG H 104      28.588   5.266  53.288  1.00 56.60           C
ATOM   4861  NH1 ARG H 104      28.310   3.989  53.064  1.00 60.42           N
ATOM   4864  NH2 ARG H 104      29.699   5.592  53.932  1.00 58.88           N
ATOM   4867  C   ARG H 104      23.805   7.761  55.896  1.00 51.92           C
ATOM   4868  O   ARG H 104      22.878   8.523  55.604  1.00 49.09           O
ATOM   4870  N   TYR H 105      24.672   8.006  56.876  1.00 53.28           N
ATOM   4871  CA  TYR H 105      24.710   9.292  57.579  1.00 53.37           C
ATOM   4873  CB  TYR H 105      25.341   9.130  58.969  1.00 54.72           C
ATOM   4876  CG  TYR H 105      24.659   8.197  59.964  1.00 51.95           C
ATOM   4877  CD1 TYR H 105      23.344   8.398  60.366  1.00 55.79           C
ATOM   4879  CE1 TYR H 105      22.734   7.557  61.330  1.00 54.92           C
ATOM   4881  CZ  TYR H 105      23.454   6.527  61.888  1.00 53.31           C
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ATOM   4882  OH  TYR H 105      22.870   5.700  62.804  1.00 56.11           O
ATOM   4884  CE2 TYR H 105      24.764   6.310  61.512  1.00 54.94           C
ATOM   4886  CD2 TYR H 105      25.365   7.151  60.562  1.00 55.89           C
ATOM   4888  C   TYR H 105      25.517  10.346  56.787  1.00 53.19           C
ATOM   4889  O   TYR H 105      25.500  11.519  57.126  1.00 55.29           O
ATOM   4891  N   ASP H 106      26.245   9.891  55.765  1.00 54.09           N
ATOM   4892  CA  ASP H 106      27.063  10.709  54.846  1.00 53.00           C
ATOM   4894  CB  ASP H 106      27.798   9.766  53.872  1.00 53.09           C
ATOM   4897  CG  ASP H 106      29.014   9.177  54.422  1.00 54.22           C
ATOM   4898  OD1 ASP H 106      29.776   8.637  53.613  1.00 54.29           O
ATOM   4899  OD2 ASP H 106      29.233   9.265  55.639  1.00 64.11           O
ATOM   4900  C   ASP H 106      26.277  11.592  53.899  1.00 54.00           C
ATOM   4901  O   ASP H 106      25.058  11.556  53.861  1.00 59.96           O
ATOM   4903  N   VAL H 107      27.020  12.328  53.075  1.00 53.17           N
ATOM   4904  CA  VAL H 107      26.528  12.882  51.822  1.00 51.23           C
ATOM   4906  CB  VAL H 107      27.299  14.164  51.419  1.00 51.31           C
ATOM   4908  CG1 VAL H 107      27.340  15.164  52.583  1.00 50.27           C
ATOM   4912  CG2 VAL H 107      28.710  13.843  50.917  1.00 53.04           C
ATOM   4916  C   VAL H 107      26.647  11.829  50.709  1.00 51.93           C
ATOM   4917  O   VAL H 107      26.268  12.070  49.557  1.00 50.89           O
ATOM   4919  N   GLY H 108      27.211  10.677  51.060  1.00 52.61           N
ATOM   4920  CA  GLY H 108      27.216   9.480  50.226  1.00 52.18           C
ATOM   4923  C   GLY H 108      25.843   8.997  49.798  1.00 52.13           C
ATOM   4924  O   GLY H 108      25.001   8.680  50.639  1.00 54.07           O
ATOM   4926  N   ALA H 109      25.631   8.972  48.482  1.00 50.43           N
ATOM   4927  CA  ALA H 109      24.467   8.357  47.862  1.00 49.42           C
ATOM   4929  CB  ALA H 109      23.346   9.340  47.756  1.00 48.70           C
ATOM   4933  C   ALA H 109      24.852   7.856  46.474  1.00 49.64           C
ATOM   4934  O   ALA H 109      25.498   8.573  45.708  1.00 49.95           O
ATOM   4936  N   TRP H 110      24.460   6.621  46.158  1.00 51.19           N
ATOM   4937  CA  TRP H 110      24.741   6.028  44.850  1.00 51.18           C
ATOM   4939  CB  TRP H 110      26.165   5.497  44.814  1.00 51.84           C
ATOM   4942  CG  TRP H 110      26.467   4.314  45.676  1.00 52.98           C
ATOM   4943  CD1 TRP H 110      26.327   2.998  45.340  1.00 54.46           C
ATOM   4945  NE1 TRP H 110      26.759   2.202  46.371  1.00 54.88           N
ATOM   4947  CE2 TRP H 110      27.207   2.998  47.389  1.00 48.87           C
ATOM   4948  CD2 TRP H 110      27.041   4.334  46.985  1.00 52.18           C
ATOM   4949  CE3 TRP H 110      27.415   5.351  47.859  1.00 52.85           C
ATOM   4951  CZ3 TRP H 110      27.942   5.010  49.078  1.00 53.94           C
ATOM   4953  CH2 TRP H 110      28.104   3.672  49.447  1.00 51.64           C
ATOM   4955  CZ2 TRP H 110      27.739   2.655  48.616  1.00 48.54           C
ATOM   4957  C   TRP H 110      23.737   4.950  44.457  1.00 52.28           C
ATOM   4958  O   TRP H 110      22.784   4.695  45.197  1.00 53.53           O
ATOM   4960  N   PHE H 111      23.944   4.331  43.291  1.00 51.09           N
ATOM   4961  CA  PHE H 111      22.916   3.485  42.675  1.00 50.65           C
ATOM   4963  CB  PHE H 111      22.488   4.117  41.340  1.00 50.25           C
ATOM   4966  CG  PHE H 111      22.282   5.612  41.448  1.00 49.04           C
ATOM   4967  CD1 PHE H 111      21.319   6.129  42.291  1.00 51.73           C
ATOM   4969  CE1 PHE H 111      21.149   7.495  42.429  1.00 51.55           C
ATOM   4971  CZ  PHE H 111      21.944   8.357  41.737  1.00 50.40           C
ATOM   4973  CE2 PHE H 111      22.919   7.861  40.912  1.00 51.14           C
ATOM   4975  CD2 PHE H 111      23.092   6.493  40.777  1.00 49.18           C
ATOM   4977  C   PHE H 111      23.408   2.041  42.566  1.00 50.05           C
ATOM   4978  O   PHE H 111      24.051   1.647  41.607  1.00 47.70           O
ATOM   4980  N   ALA H 112      23.101   1.264  43.597  1.00 50.93           N
ATOM   4981  CA  ALA H 112      23.694  -0.047  43.781  1.00 52.55           C
ATOM   4983  CB  ALA H 112      23.730  -0.390  45.248  1.00 52.52           C
ATOM   4987  C   ALA H 112      22.926  -1.109  43.022  1.00 54.37           C
ATOM   4988  O   ALA H 112      23.525  -1.917  42.311  1.00 55.53           O
ATOM   4990  N   TYR H 113      21.605  -1.109  43.205  1.00 55.46           N
ATOM   4991  CA  TYR H 113      20.693  -2.020  42.515  1.00 54.22           C
ATOM   4993  CB  TYR H 113      19.841  -2.817  43.511  1.00 57.01           C
ATOM   4996  CG  TYR H 113      20.528  -3.137  44.809  1.00 59.26           C
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ATOM   4997  CD1 TYR H 113      21.598  -4.025  44.852  1.00 61.30           C
ATOM   4999  CE1 TYR H 113      22.234  -4.333  46.053  1.00 60.62           C
ATOM   5001  CZ  TYR H 113      21.798  -3.738  47.223  1.00 63.36           C
ATOM   5002  OH  TYR H 113      22.433  -4.021  48.409  1.00 67.49           O
ATOM   5004  CE2 TYR H 113      20.734  -2.854  47.205  1.00 60.66           C
ATOM   5006  CD2 TYR H 113      20.106  -2.558  46.001  1.00 61.94           C
ATOM   5008  C   TYR H 113      19.768  -1.207  41.624  1.00 52.67           C
ATOM   5009  O   TYR H 113      19.360  -0.097  41.973  1.00 51.12           O
ATOM   5011  N   TRP H 114      19.413  -1.789  40.491  1.00 51.26           N
ATOM   5012  CA  TRP H 114      18.654  -1.098  39.470  1.00 52.96           C
ATOM   5014  CB  TRP H 114      19.516  -0.908  38.228  1.00 53.95           C
ATOM   5017  CG  TRP H 114      20.589   0.070  38.419  1.00 53.77           C
ATOM   5018  CD1 TRP H 114      21.685  -0.081  39.182  1.00 52.61           C
ATOM   5020  NE1 TRP H 114      22.457   1.048  39.123  1.00 57.47           N
ATOM   5022  CE2 TRP H 114      21.855   1.960  38.301  1.00 57.60           C
ATOM   5023  CD2 TRP H 114      20.667   1.378  37.841  1.00 57.75           C
ATOM   5024  CE3 TRP H 114      19.852   2.106  36.967  1.00 55.44           C
ATOM   5026  CZ3 TRP H 114      20.251   3.369  36.591  1.00 55.64           C
ATOM   5028  CH2 TRP H 114      21.445   3.924  37.067  1.00 55.42           C
ATOM   5030  CZ2 TRP H 114      22.259   3.236  37.920  1.00 56.16           C
ATOM   5032  C   TRP H 114      17.443  -1.888  39.051  1.00 53.33           C
ATOM   5033  O   TRP H 114      17.467  -3.114  39.040  1.00 54.38           O
ATOM   5035  N   GLY H 115      16.390  -1.165  38.679  1.00 53.62           N
ATOM   5036  CA  GLY H 115      15.269  -1.742  37.967  1.00 50.08           C
ATOM   5039  C   GLY H 115      15.730  -2.006  36.552  1.00 50.47           C
ATOM   5040  O   GLY H 115      16.763  -1.481  36.115  1.00 49.63           O
ATOM   5042  N   GLN H 116      14.958  -2.818  35.834  1.00 50.79           N
ATOM   5043  CA  GLN H 116      15.284  -3.206  34.462  1.00 48.84           C
ATOM   5045  CB  GLN H 116      14.426  -4.401  34.035  1.00 48.23           C
ATOM   5048  CG  GLN H 116      12.972  -4.094  33.619  1.00 50.59           C
ATOM   5051  CD  GLN H 116      11.966  -4.161  34.765  1.00 55.01           C
ATOM   5052  OE1 GLN H 116      12.343  -4.196  35.942  1.00 56.76           O
ATOM   5053  NE2 GLN H 116      10.674  -4.176  34.424  1.00 46.00           N
ATOM   5056  C   GLN H 116      15.106  -2.069  33.454  1.00 48.66           C
ATOM   5057  O   GLN H 116      15.481  -2.215  32.284  1.00 48.67           O
ATOM   5059  N   GLY H 117      14.512  -0.960  33.901  1.00 47.82           N
ATOM   5060  CA  GLY H 117      14.163   0.149  33.025  1.00 47.97           C
ATOM   5063  C   GLY H 117      12.816  -0.040  32.340  1.00 47.94           C
ATOM   5064  O   GLY H 117      12.427  -1.177  32.024  1.00 47.46           O
ATOM   5066  N   THR H 118      12.111   1.075  32.111  1.00 47.47           N
ATOM   5067  CA  THR H 118      10.911   1.093  31.261  1.00 48.10           C
ATOM   5069  CB  THR H 118       9.619   0.852  32.078  1.00 49.92           C
ATOM   5071  OG1 THR H 118       8.500   0.736  31.188  1.00 53.21           O
ATOM   5073  CG2 THR H 118       9.366   1.980  33.097  1.00 48.82           C
ATOM   5077  C   THR H 118      10.785   2.397  30.472  1.00 48.24           C
ATOM   5078  O   THR H 118      10.965   3.489  31.020  1.00 51.02           O
ATOM   5080  N   LEU H 119      10.461   2.276  29.187  1.00 49.10           N
ATOM   5081  CA  LEU H 119      10.445   3.423  28.261  1.00 48.79           C
ATOM   5083  CB  LEU H 119      10.652   2.953  26.815  1.00 47.98           C
ATOM   5086  CG  LEU H 119      10.711   4.035  25.728  1.00 48.73           C
ATOM   5088  CD1 LEU H 119      11.952   4.892  25.873  1.00 50.29           C
ATOM   5092  CD2 LEU H 119      10.674   3.408  24.360  1.00 47.50           C
ATOM   5096  C   LEU H 119       9.157   4.241  28.352  1.00 49.28           C
ATOM   5097  O   LEU H 119       8.055   3.704  28.236  1.00 48.59           O
ATOM   5099  N   VAL H 120       9.318   5.548  28.553  1.00 49.87           N
ATOM   5100  CA  VAL H 120       8.206   6.488  28.527  1.00 49.43           C
ATOM   5102  CB  VAL H 120       8.222   7.432  29.740  1.00 48.77           C
ATOM   5104  CG1 VAL H 120       6.952   8.280  29.774  1.00 47.34           C
ATOM   5108  CG2 VAL H 120       8.344   6.634  31.017  1.00 51.75           C
ATOM   5112  C   VAL H 120       8.327   7.305  27.257  1.00 48.47           C
ATOM   5113  O   VAL H 120       9.391   7.837  26.960  1.00 46.71           O
ATOM   5115  N   THR H 121       7.235   7.391  26.508  1.00 49.08           N
ATOM   5116  CA  THR H 121       7.230   8.126  25.253  1.00 50.28           C
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ATOM   5118  CB  THR H 121       7.036   7.190  24.057  1.00 49.88           C
ATOM   5120  OG1 THR H 121       8.009   6.141  24.111  1.00 52.48           O
ATOM   5122  CG2 THR H 121       7.202   7.949  22.772  1.00 50.04           C
ATOM   5126  C   THR H 121       6.138   9.183  25.274  1.00 50.24           C
ATOM   5127  O   THR H 121       4.951   8.868  25.238  1.00 49.85           O
ATOM   5129  N   VAL H 122       6.557  10.442  25.356  1.00 51.36           N
ATOM   5130  CA  VAL H 122       5.629  11.563  25.361  1.00 50.98           C
ATOM   5132  CB  VAL H 122       6.113  12.694  26.276  1.00 50.97           C
ATOM   5134  CG1 VAL H 122       5.019  13.776  26.393  1.00 54.22           C
ATOM   5138  CG2 VAL H 122       6.500  12.140  27.637  1.00 48.86           C
ATOM   5142  C   VAL H 122       5.495  12.073  23.926  1.00 50.50           C
ATOM   5143  O   VAL H 122       6.457  12.578  23.348  1.00 50.93           O
ATOM   5145  N   SER H 123       4.311  11.919  23.351  1.00 49.36           N
ATOM   5146  CA  SER H 123       4.106  12.238  21.948  1.00 50.02           C
ATOM   5148  CB  SER H 123       4.747  11.172  21.074  1.00 50.11           C
ATOM   5151  OG  SER H 123       4.358  11.332  19.727  1.00 50.26           O
ATOM   5153  C   SER H 123       2.630  12.332  21.615  1.00 50.86           C
ATOM   5154  O   SER H 123       1.784  11.868  22.380  1.00 51.80           O
ATOM   5156  N   SER H 124       2.327  12.953  20.479  1.00 51.04           N
ATOM   5157  CA  SER H 124       0.946  13.049  20.001  1.00 51.63           C
ATOM   5159  CB  SER H 124       0.691  14.405  19.340  1.00 51.59           C
ATOM   5162  OG  SER H 124       0.880  15.454  20.278  1.00 53.09           O
ATOM   5164  C   SER H 124       0.620  11.935  19.027  1.00 51.16           C
ATOM   5165  O   SER H 124      -0.554  11.669  18.770  1.00 52.25           O
ATOM   5167  N   ALA H 125       1.661  11.290  18.497  1.00 51.66           N
ATOM   5168  CA  ALA H 125       1.514  10.276  17.454  1.00 52.03           C
ATOM   5170  CB  ALA H 125       2.876   9.893  16.879  1.00 50.83           C
ATOM   5174  C   ALA H 125       0.797   9.049  18.002  1.00 52.57           C
ATOM   5175  O   ALA H 125       0.989   8.672  19.157  1.00 53.54           O
ATOM   5177  N   SER H 126      -0.040   8.443  17.166  1.00 53.66           N
ATOM   5178  CA  SER H 126      -0.878   7.333  17.590  1.00 53.99           C
ATOM   5180  CB  SER H 126      -2.092   7.182  16.662  1.00 54.29           C
ATOM   5183  OG  SER H 126      -2.543   8.446  16.187  1.00 56.55           O
ATOM   5185  C   SER H 126      -0.063   6.048  17.610  1.00 54.14           C
ATOM   5186  O   SER H 126       0.919   5.908  16.872  1.00 53.05           O
ATOM   5188  N   THR H 127      -0.475   5.122  18.471  1.00 54.72           N
ATOM   5189  CA  THR H 127       0.147   3.807  18.552  1.00 54.76           C
ATOM   5191  CB  THR H 127      -0.336   3.026  19.821  1.00 54.51           C
ATOM   5193  OG1 THR H 127       0.498   3.377  20.933  1.00 57.82           O
ATOM   5195  CG2 THR H 127      -0.275   1.504  19.638  1.00 55.20           C
ATOM   5199  C   THR H 127      -0.130   3.043  17.247  1.00 54.70           C
ATOM   5200  O   THR H 127      -1.238   3.093  16.713  1.00 54.82           O
ATOM   5202  N   LYS H 128       0.894   2.358  16.743  1.00 54.60           N
ATOM   5203  CA  LYS H 128       0.817   1.628  15.482  1.00 54.47           C
ATOM   5205  CB  LYS H 128       1.498   2.452  14.385  1.00 54.89           C
ATOM   5208  CG  LYS H 128       0.750   2.547  13.060  1.00 56.98           C
ATOM   5211  CD  LYS H 128       1.116   1.443  12.065  1.00 59.81           C
ATOM   5214  CE  LYS H 128       0.059   0.341  12.025  1.00 62.15           C
ATOM   5217  NZ  LYS H 128       0.349  -0.698  10.986  1.00 61.29           N
ATOM   5221  C   LYS H 128       1.513   0.274  15.667  1.00 54.39           C
ATOM   5222  O   LYS H 128       2.680   0.220  16.073  1.00 55.32           O
ATOM   5224  N   GLY H 129       0.788  -0.813  15.405  1.00 53.07           N
ATOM   5225  CA  GLY H 129       1.356  -2.153  15.482  1.00 52.52           C
ATOM   5228  C   GLY H 129       2.272  -2.381  14.295  1.00 53.52           C
ATOM   5229  O   GLY H 129       2.113  -1.738  13.259  1.00 54.78           O
ATOM   5231  N   PRO H 130       3.249  -3.288  14.432  1.00 53.18           N
ATOM   5232  CA  PRO H 130       4.123  -3.569  13.303  1.00 51.86           C
ATOM   5234  CB  PRO H 130       5.320  -4.254  13.955  1.00 52.61           C
ATOM   5237  CG  PRO H 130       4.738  -4.961  15.128  1.00 53.44           C
ATOM   5240  CD  PRO H 130       3.602  -4.094  15.615  1.00 53.56           C
ATOM   5243  C   PRO H 130       3.464  -4.506  12.310  1.00 51.39           C
ATOM   5244  O   PRO H 130       2.349  -4.970  12.540  1.00 50.84           O
ATOM   5245  N   SER H 131       4.166  -4.764  11.212  1.00 51.24           N
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ATOM   5246  CA  SER H 131       3.730  -5.690  10.184  1.00 51.19           C
ATOM   5248  CB  SER H 131       3.213  -4.915   8.975  1.00 51.90           C
ATOM   5251  OG  SER H 131       2.876  -3.586   9.343  1.00 54.06           O
ATOM   5253  C   SER H 131       4.963  -6.486   9.810  1.00 51.56           C
ATOM   5254  O   SER H 131       5.942  -5.916   9.327  1.00 53.23           O
ATOM   5256  N   VAL H 132       4.930  -7.793  10.041  1.00 50.73           N
ATOM   5257  CA  VAL H 132       6.133  -8.604   9.925  1.00 51.25           C
ATOM   5259  CB  VAL H 132       6.152  -9.686  11.011  1.00 51.00           C
ATOM   5261  CG1 VAL H 132       7.345 -10.632  10.830  1.00 52.31           C
ATOM   5265  CG2 VAL H 132       6.188  -9.028  12.390  1.00 50.95           C
ATOM   5269  C   VAL H 132       6.250  -9.230   8.536  1.00 52.46           C
ATOM   5270  O   VAL H 132       5.284  -9.813   8.041  1.00 53.84           O
ATOM   5272  N   PHE H 133       7.428  -9.096   7.914  1.00 52.65           N
ATOM   5273  CA  PHE H 133       7.707  -9.687   6.594  1.00 52.17           C
ATOM   5275  CB  PHE H 133       7.969  -8.609   5.538  1.00 52.59           C
ATOM   5278  CG  PHE H 133       6.910  -7.544   5.473  1.00 53.24           C
ATOM   5279  CD1 PHE H 133       5.643  -7.835   4.994  1.00 54.08           C
ATOM   5281  CE1 PHE H 133       4.662  -6.844   4.931  1.00 55.48           C
ATOM   5283  CZ  PHE H 133       4.949  -5.543   5.355  1.00 54.52           C
ATOM   5285  CE2 PHE H 133       6.209  -5.241   5.825  1.00 54.83           C
ATOM   5287  CD2 PHE H 133       7.186  -6.239   5.882  1.00 56.63           C
ATOM   5289  C   PHE H 133       8.918 -10.617   6.661  1.00 51.93           C
ATOM   5290  O   PHE H 133       9.834 -10.390   7.455  1.00 51.06           O
ATOM   5292  N   PRO H 134       8.919 -11.681   5.835  1.00 52.34           N
ATOM   5293  CA  PRO H 134      10.043 -12.604   5.795  1.00 52.10           C
ATOM   5295  CB  PRO H 134       9.427 -13.869   5.206  1.00 51.71           C
ATOM   5298  CG  PRO H 134       8.381 -13.369   4.299  1.00 51.88           C
ATOM   5301  CD  PRO H 134       7.846 -12.102   4.915  1.00 52.55           C
ATOM   5304  C   PRO H 134      11.174 -12.121   4.902  1.00 52.32           C
ATOM   5305  O   PRO H 134      10.939 -11.720   3.759  1.00 51.87           O
ATOM   5306  N   LEU H 135      12.388 -12.158   5.443  1.00 52.14           N
ATOM   5307  CA  LEU H 135      13.596 -12.021   4.654  1.00 52.42           C
ATOM   5309  CB  LEU H 135      14.631 -11.190   5.416  1.00 52.10           C
ATOM   5312  CG  LEU H 135      14.162  -9.791   5.852  1.00 52.50           C
ATOM   5314  CD1 LEU H 135      15.200  -9.132   6.751  1.00 50.35           C
ATOM   5318  CD2 LEU H 135      13.847  -8.891   4.653  1.00 51.15           C
ATOM   5322  C   LEU H 135      14.113 -13.436   4.354  1.00 53.24           C
ATOM   5323  O   LEU H 135      15.104 -13.885   4.928  1.00 53.43           O
ATOM   5325  N   ALA H 136      13.420 -14.141   3.460  1.00 53.42           N
ATOM   5326  CA  ALA H 136      13.774 -15.519   3.110  1.00 53.65           C
ATOM   5328  CB  ALA H 136      12.647 -16.165   2.289  1.00 53.57           C
ATOM   5332  C   ALA H 136      15.103 -15.584   2.344  1.00 54.09           C
ATOM   5333  O   ALA H 136      15.536 -14.579   1.778  1.00 53.45           O
ATOM   5335  N   PRO H 137      15.758 -16.768   2.329  1.00 54.99           N
ATOM   5336  CA  PRO H 137      16.987 -16.954   1.540  1.00 54.30           C
ATOM   5338  CB  PRO H 137      17.382 -18.412   1.832  1.00 54.19           C
ATOM   5341  CG  PRO H 137      16.133 -19.065   2.312  1.00 55.25           C
ATOM   5344  CD  PRO H 137      15.397 -17.999   3.062  1.00 54.79           C
ATOM   5347  C   PRO H 137      16.768 -16.751   0.044  1.00 53.70           C
ATOM   5348  O   PRO H 137      17.609 -17.150  -0.759  1.00 54.54           O
ATOM   5349  N   LEU H 149      19.007 -15.644   6.377  1.00 46.99           N
ATOM   5350  CA  LEU H 149      17.577 -15.368   6.508  1.00 48.77           C
ATOM   5352  CB  LEU H 149      16.769 -16.672   6.471  1.00 49.04           C
ATOM   5355  CG  LEU H 149      16.823 -17.619   7.684  1.00 47.39           C
ATOM   5357  CD1 LEU H 149      15.953 -17.140   8.854  1.00 47.18           C
ATOM   5361  CD2 LEU H 149      16.415 -19.030   7.269  1.00 47.12           C
ATOM   5365  C   LEU H 149      17.233 -14.576   7.779  1.00 50.43           C
ATOM   5366  O   LEU H 149      18.015 -14.548   8.740  1.00 50.30           O
ATOM   5368  N   GLY H 150      16.045 -13.959   7.777  1.00 51.43           N
ATOM   5369  CA  GLY H 150      15.605 -13.104   8.880  1.00 51.42           C
ATOM   5372  C   GLY H 150      14.151 -12.655   8.827  1.00 51.75           C
ATOM   5373  O   GLY H 150      13.316 -13.295   8.197  1.00 50.93           O
ATOM   5375  N   CYS H 151      13.878 -11.532   9.496  1.00 53.64           N
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ATOM   5376  CA  CYS H 151      12.529 -10.982   9.702  1.00 54.19           C
ATOM   5378  CB  CYS H 151      12.042 -11.333  11.110  1.00 54.88           C
ATOM   5381  SG  CYS H 151      10.798 -12.603  11.183  1.00 60.09           S
ATOM   5383  C   CYS H 151      12.527  -9.454   9.593  1.00 54.57           C
ATOM   5384  O   CYS H 151      13.247  -8.784  10.333  1.00 54.96           O
ATOM   5386  N   LEU H 152      11.698  -8.898   8.716  1.00 54.14           N
ATOM   5387  CA  LEU H 152      11.592  -7.444   8.593  1.00 53.95           C
ATOM   5389  CB  LEU H 152      11.585  -7.039   7.118  1.00 54.15           C
ATOM   5392  CG  LEU H 152      11.440  -5.543   6.833  1.00 53.66           C
ATOM   5394  CD1 LEU H 152      12.388  -4.729   7.709  1.00 51.76           C
ATOM   5398  CD2 LEU H 152      11.674  -5.254   5.360  1.00 52.94           C
ATOM   5402  C   LEU H 152      10.348  -6.895   9.292  1.00 53.79           C
ATOM   5403  O   LEU H 152       9.239  -7.018   8.779  1.00 53.53           O
ATOM   5405  N   VAL H 153      10.547  -6.270  10.450  1.00 54.57           N
ATOM   5406  CA  VAL H 153       9.450  -5.703  11.249  1.00 54.88           C
ATOM   5408  CB  VAL H 153       9.752  -5.781  12.777  1.00 55.19           C
ATOM   5410  CG1 VAL H 153       8.507  -5.449  13.583  1.00 57.25           C
ATOM   5414  CG2 VAL H 153      10.276  -7.157  13.167  1.00 55.23           C
ATOM   5418  C   VAL H 153       9.266  -4.237  10.871  1.00 54.80           C
ATOM   5419  O   VAL H 153      10.080  -3.403  11.257  1.00 55.94           O
ATOM   5421  N   LYS H 154       8.204  -3.909  10.138  1.00 54.35           N
ATOM   5422  CA  LYS H 154       8.077  -2.561   9.574  1.00 54.32           C
ATOM   5424  CB  LYS H 154       7.939  -2.639   8.046  1.00 53.57           C
ATOM   5427  CG  LYS H 154       8.284  -1.329   7.332  1.00 54.14           C
ATOM   5430  CD  LYS H 154       8.017  -1.395   5.832  1.00 54.01           C
ATOM   5433  CE  LYS H 154       7.848  -0.003   5.215  1.00 52.46           C
ATOM   5436  NZ  LYS H 154       9.110   0.785   5.227  1.00 53.22           N
ATOM   5440  C   LYS H 154       6.929  -1.729  10.169  1.00 54.37           C
ATOM   5441  O   LYS H 154       5.906  -2.271  10.591  1.00 53.67           O
ATOM   5443  N   ASP H 155       7.141  -0.407  10.201  1.00 54.97           N
ATOM   5444  CA  ASP H 155       6.102   0.610  10.466  1.00 54.72           C
ATOM   5446  CB  ASP H 155       5.071   0.640   9.319  1.00 55.06           C
ATOM   5449  CG  ASP H 155       5.623   1.239   8.026  1.00 57.44           C
ATOM   5450  OD1 ASP H 155       6.609   2.012   8.083  1.00 59.72           O
ATOM   5451  OD2 ASP H 155       5.054   0.939   6.945  1.00 57.21           O
ATOM   5452  C   ASP H 155       5.372   0.480  11.812  1.00 54.47           C
ATOM   5453  O   ASP H 155       4.239   0.007  11.862  1.00 55.92           O
ATOM   5455  N   TYR H 156       5.999   0.932  12.891  1.00 53.14           N
ATOM   5456  CA  TYR H 156       5.372   0.832  14.202  1.00 53.82           C
ATOM   5458  CB  TYR H 156       5.726  -0.512  14.833  1.00 53.59           C
ATOM   5461  CG  TYR H 156       7.155  -0.623  15.313  1.00 54.20           C
ATOM   5462  CD1 TYR H 156       8.131  -1.255  14.545  1.00 53.44           C
ATOM   5464  CE1 TYR H 156       9.444  -1.365  15.002  1.00 53.05           C
ATOM   5466  CZ  TYR H 156       9.780  -0.833  16.243  1.00 55.08           C
ATOM   5467  OH  TYR H 156      11.062  -0.918  16.741  1.00 57.00           O
ATOM   5469  CE2 TYR H 156       8.825  -0.205  17.012  1.00 53.99           C
ATOM   5471  CD2 TYR H 156       7.527  -0.107  16.549  1.00 55.19           C
ATOM   5473  C   TYR H 156       5.716   1.986  15.157  1.00 54.11           C
ATOM   5474  O   TYR H 156       6.721   2.691  14.984  1.00 53.40           O
ATOM   5476  N   PHE H 157       4.861   2.164  16.165  1.00 54.32           N
ATOM   5477  CA  PHE H 157       5.008   3.237  17.154  1.00 54.59           C
ATOM   5479  CB  PHE H 157       4.508   4.556  16.573  1.00 54.71           C
ATOM   5482  CG  PHE H 157       4.879   5.745  17.387  1.00 52.98           C
ATOM   5483  CD1 PHE H 157       6.082   6.397  17.169  1.00 53.25           C
ATOM   5485  CE1 PHE H 157       6.437   7.503  17.922  1.00 55.80           C
ATOM   5487  CZ  PHE H 157       5.582   7.970  18.925  1.00 55.72           C
ATOM   5489  CE2 PHE H 157       4.376   7.325  19.147  1.00 56.54           C
ATOM   5491  CD2 PHE H 157       4.032   6.213  18.374  1.00 55.21           C
ATOM   5493  C   PHE H 157       4.225   2.926  18.432  1.00 54.76           C
ATOM   5494  O   PHE H 157       3.140   2.351  18.375  1.00 55.93           O
ATOM   5496  N   PRO H 158       4.784   3.266  19.598  1.00 55.16           N
ATOM   5497  CA  PRO H 158       6.124   3.745  19.872  1.00 55.88           C
ATOM   5499  CB  PRO H 158       5.985   4.360  21.268  1.00 55.39           C
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ATOM   5502  CG  PRO H 158       4.988   3.528  21.915  1.00 54.26           C
ATOM   5505  CD  PRO H 158       4.000   3.155  20.841  1.00 56.33           C
ATOM   5508  C   PRO H 158       7.076   2.564  19.916  1.00 56.55           C
ATOM   5509  O   PRO H 158       6.733   1.480  19.454  1.00 56.07           O
ATOM   5510  N   GLU H 159       8.268   2.782  20.457  1.00 56.52           N
ATOM   5511  CA  GLU H 159       9.156   1.689  20.798  1.00 55.94           C
ATOM   5513  CB  GLU H 159      10.574   2.224  21.030  1.00 56.82           C
ATOM   5516  CG  GLU H 159      11.320   2.633  19.770  1.00 56.39           C
ATOM   5519  CD  GLU H 159      12.266   1.559  19.284  1.00 60.65           C
ATOM   5520  OE1 GLU H 159      13.453   1.884  19.064  1.00 62.67           O
ATOM   5521  OE2 GLU H 159      11.832   0.391  19.139  1.00 63.04           O
ATOM   5522  C   GLU H 159       8.593   1.061  22.073  1.00 55.33           C
ATOM   5523  O   GLU H 159       7.690   1.635  22.686  1.00 55.74           O
ATOM   5525  N   PRO H 160       9.098  -0.125  22.467  1.00 53.85           N
ATOM   5526  CA  PRO H 160      10.004  -1.007  21.746  1.00 52.78           C
ATOM   5528  CB  PRO H 160      10.924  -1.496  22.858  1.00 52.15           C
ATOM   5531  CG  PRO H 160      10.013  -1.591  24.054  1.00 52.29           C
ATOM   5534  CD  PRO H 160       8.825  -0.668  23.810  1.00 53.50           C
ATOM   5537  C   PRO H 160       9.298  -2.204  21.123  1.00 52.45           C
ATOM   5538  O   PRO H 160       8.115  -2.454  21.391  1.00 51.11           O
ATOM   5539  N   VAL H 161      10.041  -2.930  20.294  1.00 52.65           N
ATOM   5540  CA  VAL H 161       9.637  -4.244  19.803  1.00 52.85           C
ATOM   5542  CB  VAL H 161       9.481  -4.254  18.265  1.00 53.15           C
ATOM   5544  CG1 VAL H 161       9.358  -5.673  17.732  1.00 54.39           C
ATOM   5548  CG2 VAL H 161       8.278  -3.433  17.846  1.00 54.62           C
ATOM   5552  C   VAL H 161      10.744  -5.208  20.191  1.00 53.06           C
ATOM   5553  O   VAL H 161      11.919  -4.851  20.132  1.00 54.73           O
ATOM   5555  N   THR H 162      10.378  -6.421  20.589  1.00 52.31           N
ATOM   5556  CA  THR H 162      11.365  -7.453  20.858  1.00 52.49           C
ATOM   5558  CB  THR H 162      11.239  -7.974  22.277  1.00 52.92           C
ATOM   5560  OG1 THR H 162       9.893  -8.409  22.503  1.00 56.03           O
ATOM   5562  CG2 THR H 162      11.589  -6.881  23.266  1.00 52.72           C
ATOM   5566  C   THR H 162      11.172  -8.598  19.884  1.00 52.24           C
ATOM   5567  O   THR H 162      10.049  -8.861  19.448  1.00 51.87           O
ATOM   5569  N   VAL H 163      12.276  -9.262  19.544  1.00 52.59           N
ATOM   5570  CA  VAL H 163      12.278 -10.397  18.611  1.00 52.64           C
ATOM   5572  CB  VAL H 163      12.914 -10.023  17.259  1.00 51.61           C
ATOM   5574  CG1 VAL H 163      12.349 -10.910  16.156  1.00 52.12           C
ATOM   5578  CG2 VAL H 163      12.684  -8.561  16.934  1.00 51.50           C
ATOM   5582  C   VAL H 163      13.077 -11.570  19.180  1.00 52.73           C
ATOM   5583  O   VAL H 163      14.023 -11.370  19.935  1.00 52.59           O
ATOM   5585  N   SER H 164      12.706 -12.789  18.809  1.00 53.15           N
ATOM   5586  CA  SER H 164      13.407 -13.981  19.292  1.00 53.63           C
ATOM   5588  CB  SER H 164      12.991 -14.308  20.726  1.00 54.08           C
ATOM   5591  OG  SER H 164      11.600 -14.575  20.804  1.00 54.40           O
ATOM   5593  C   SER H 164      13.068 -15.151  18.399  1.00 53.97           C
ATOM   5594  O   SER H 164      11.940 -15.246  17.925  1.00 55.13           O
ATOM   5596  N   TRP H 165      14.028 -16.048  18.187  1.00 54.13           N
ATOM   5597  CA  TRP H 165      13.863 -17.128  17.209  1.00 54.37           C
ATOM   5599  CB  TRP H 165      15.104 -17.243  16.319  1.00 53.74           C
ATOM   5602  CG  TRP H 165      15.227 -16.085  15.383  1.00 52.17           C
ATOM   5603  CD1 TRP H 165      15.778 -14.864  15.653  1.00 50.28           C
ATOM   5605  NE1 TRP H 165      15.692 -14.053  14.549  1.00 51.40           N
ATOM   5607  CE2 TRP H 165      15.070 -14.740  13.538  1.00 52.68           C
ATOM   5608  CD2 TRP H 165      14.758 -16.025  14.031  1.00 53.23           C
ATOM   5609  CE3 TRP H 165      14.113 -16.937  13.183  1.00 52.56           C
ATOM   5611  CZ3 TRP H 165      13.805 -16.537  11.880  1.00 51.23           C
ATOM   5613  CH2 TRP H 165      14.124 -15.251  11.424  1.00 51.34           C
ATOM   5615  CZ2 TRP H 165      14.756 -14.342  12.232  1.00 51.54           C
ATOM   5617  C   TRP H 165      13.559 -18.450  17.886  1.00 54.67           C
ATOM   5618  O   TRP H 165      14.261 -18.855  18.814  1.00 55.34           O
ATOM   5620  N   ASN H 166      12.503 -19.108  17.414  1.00 54.61           N
ATOM   5621  CA  ASN H 166      12.048 -20.369  17.985  1.00 55.19           C
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ATOM   5623  CB  ASN H 166      13.069 -21.484  17.723  1.00 55.05           C
ATOM   5626  CG  ASN H 166      13.551 -21.508  16.286  1.00 55.74           C
ATOM   5627  OD1 ASN H 166      13.259 -20.600  15.503  1.00 57.20           O
ATOM   5628  ND2 ASN H 166      14.304 -22.545  15.933  1.00 54.79           N
ATOM   5631  C   ASN H 166      11.774 -20.231  19.479  1.00 55.45           C
ATOM   5632  O   ASN H 166      12.207 -21.058  20.276  1.00 56.31           O
ATOM   5634  N   SER H 167      11.070 -19.162  19.843  1.00 56.10           N
ATOM   5635  CA  SER H 167      10.640 -18.914  21.225  1.00 56.38           C
ATOM   5637  CB  SER H 167       9.587 -19.947  21.633  1.00 56.14           C
ATOM   5640  OG  SER H 167       8.594 -20.058  20.628  1.00 58.09           O
ATOM   5642  C   SER H 167      11.787 -18.884  22.242  1.00 56.39           C
ATOM   5643  O   SER H 167      11.624 -19.324  23.379  1.00 56.24           O
ATOM   5645  N   GLY H 168      12.935 -18.349  21.827  1.00 56.67           N
ATOM   5646  CA  GLY H 168      14.110 -18.236  22.696  1.00 56.47           C
ATOM   5649  C   GLY H 168      15.189 -19.290  22.472  1.00 56.51           C
ATOM   5650  O   GLY H 168      16.337 -19.085  22.879  1.00 56.55           O
ATOM   5652  N   ALA H 169      14.836 -20.399  21.811  1.00 56.03           N
ATOM   5653  CA  ALA H 169      15.723 -21.579  21.688  1.00 55.57           C
ATOM   5655  CB  ALA H 169      14.903 -22.822  21.329  1.00 54.96           C
ATOM   5659  C   ALA H 169      16.880 -21.424  20.697  1.00 55.09           C
ATOM   5660  O   ALA H 169      17.771 -22.269  20.654  1.00 54.27           O
ATOM   5662  N   LEU H 170      16.850 -20.359  19.900  1.00 54.95           N
ATOM   5663  CA  LEU H 170      17.897 -20.063  18.927  1.00 54.71           C
ATOM   5665  CB  LEU H 170      17.330 -20.216  17.510  1.00 54.56           C
ATOM   5668  CG  LEU H 170      18.010 -19.512  16.328  1.00 55.49           C
ATOM   5670  CD1 LEU H 170      19.522 -19.754  16.291  1.00 56.23           C
ATOM   5674  CD2 LEU H 170      17.354 -19.965  15.031  1.00 55.06           C
ATOM   5678  C   LEU H 170      18.408 -18.640  19.166  1.00 54.84           C
ATOM   5679  O   LEU H 170      17.719 -17.669  18.836  1.00 55.29           O
ATOM   5681  N   THR H 171      19.606 -18.519  19.740  1.00 54.01           N
ATOM   5682  CA  THR H 171      20.159 -17.211  20.120  1.00 53.50           C
ATOM   5684  CB  THR H 171      20.488 -17.149  21.617  1.00 53.39           C
ATOM   5686  OG1 THR H 171      21.473 -18.142  21.930  1.00 53.51           O
ATOM   5688  CG2 THR H 171      19.228 -17.355  22.465  1.00 52.71           C
ATOM   5692  C   THR H 171      21.433 -16.842  19.377  1.00 52.81           C
ATOM   5693  O   THR H 171      21.532 -15.747  18.843  1.00 51.22           O
ATOM   5695  N   SER H 172      22.410 -17.745  19.367  1.00 53.12           N
ATOM   5696  CA  SER H 172      23.724 -17.446  18.787  1.00 53.23           C
ATOM   5698  CB  SER H 172      24.791 -18.436  19.288  1.00 53.49           C
ATOM   5701  OG  SER H 172      24.888 -19.583  18.459  1.00 53.14           O
ATOM   5703  C   SER H 172      23.662 -17.425  17.251  1.00 53.04           C
ATOM   5704  O   SER H 172      23.128 -18.347  16.622  1.00 52.57           O
ATOM   5706  N   GLY H 173      24.219 -16.369  16.662  1.00 52.83           N
ATOM   5707  CA  GLY H 173      24.089 -16.111  15.231  1.00 53.02           C
ATOM   5710  C   GLY H 173      23.077 -15.012  14.956  1.00 53.10           C
ATOM   5711  O   GLY H 173      23.185 -14.303  13.961  1.00 52.33           O
ATOM   5713  N   VAL H 174      22.090 -14.872  15.839  1.00 53.83           N
ATOM   5714  CA  VAL H 174      21.074 -13.829  15.703  1.00 54.56           C
ATOM   5716  CB  VAL H 174      19.909 -14.004  16.720  1.00 54.65           C
ATOM   5718  CG1 VAL H 174      18.953 -12.816  16.674  1.00 53.10           C
ATOM   5722  CG2 VAL H 174      19.154 -15.302  16.457  1.00 56.10           C
ATOM   5726  C   VAL H 174      21.691 -12.454  15.922  1.00 55.19           C
ATOM   5727  O   VAL H 174      22.483 -12.263  16.848  1.00 54.90           O
ATOM   5729  N   HIS H 175      21.318 -11.517  15.049  1.00 55.07           N
ATOM   5730  CA  HIS H 175      21.626 -10.101  15.204  1.00 53.78           C
ATOM   5732  CB  HIS H 175      22.630  -9.647  14.146  1.00 55.18           C
ATOM   5735  CG  HIS H 175      24.013 -10.175  14.355  1.00 56.38           C
ATOM   5736  ND1 HIS H 175      24.871  -9.660  15.303  1.00 56.74           N
ATOM   5738  CE1 HIS H 175      26.018 -10.312  15.253  1.00 58.40           C
ATOM   5740  NE2 HIS H 175      25.936 -11.228  14.304  1.00 58.07           N
ATOM   5742  CD2 HIS H 175      24.693 -11.162  13.725  1.00 55.44           C
ATOM   5744  C   HIS H 175      20.344  -9.310  15.025  1.00 52.26           C
ATOM   5745  O   HIS H 175      19.908  -9.074  13.896  1.00 52.01           O
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ATOM   5747  N   THR H 176      19.726  -8.919  16.131  1.00 50.96           N
ATOM   5748  CA  THR H 176      18.593  -8.005  16.071  1.00 50.96           C
ATOM   5750  CB  THR H 176      17.641  -8.207  17.247  1.00 50.09           C
ATOM   5752  OG1 THR H 176      17.200  -9.569  17.260  1.00 49.15           O
ATOM   5754  CG2 THR H 176      16.435  -7.272  17.144  1.00 48.81           C
ATOM   5758  C   THR H 176      19.140  -6.584  16.058  1.00 50.24           C
ATOM   5759  O   THR H 176      19.942  -6.218  16.923  1.00 49.54           O
ATOM   5761  N   PHE H 177      18.721  -5.798  15.066  1.00 50.40           N
ATOM   5762  CA  PHE H 177      19.301  -4.472  14.839  1.00 50.56           C
ATOM   5764  CB  PHE H 177      19.302  -4.126  13.352  1.00 49.81           C
ATOM   5767  CG  PHE H 177      20.236  -4.974  12.534  1.00 48.87           C
ATOM   5768  CD1 PHE H 177      19.775  -6.109  11.876  1.00 47.29           C
ATOM   5770  CE1 PHE H 177      20.640  -6.896  11.125  1.00 49.15           C
ATOM   5772  CZ  PHE H 177      21.986  -6.545  11.015  1.00 48.85           C
ATOM   5774  CE2 PHE H 177      22.456  -5.409  11.661  1.00 49.17           C
ATOM   5776  CD2 PHE H 177      21.583  -4.632  12.418  1.00 49.41           C
ATOM   5778  C   PHE H 177      18.556  -3.395  15.602  1.00 50.98           C
ATOM   5779  O   PHE H 177      17.347  -3.500  15.792  1.00 51.24           O
ATOM   5781  N   PRO H 178      19.281  -2.353  16.050  1.00 52.21           N
ATOM   5782  CA  PRO H 178      18.612  -1.172  16.589  1.00 51.10           C
ATOM   5784  CB  PRO H 178      19.745  -0.146  16.741  1.00 50.08           C
ATOM   5787  CG  PRO H 178      20.984  -0.911  16.801  1.00 50.78           C
ATOM   5790  CD  PRO H 178      20.752  -2.225  16.087  1.00 52.81           C
ATOM   5793  C   PRO H 178      17.586  -0.657  15.596  1.00 51.37           C
ATOM   5794  O   PRO H 178      17.849  -0.631  14.392  1.00 53.28           O
ATOM   5795  N   ALA H 179      16.425  -0.260  16.092  1.00 51.75           N
ATOM   5796  CA  ALA H 179      15.386   0.271  15.230  1.00 52.20           C
ATOM   5798  CB  ALA H 179      14.126   0.544  16.021  1.00 53.05           C
ATOM   5802  C   ALA H 179      15.853   1.541  14.541  1.00 52.48           C
ATOM   5803  O   ALA H 179      16.837   2.172  14.949  1.00 50.37           O
ATOM   5805  N   VAL H 180      15.137   1.893  13.481  1.00 52.84           N
ATOM   5806  CA  VAL H 180      15.411   3.103  12.739  1.00 53.15           C
ATOM   5808  CB  VAL H 180      16.018   2.787  11.373  1.00 52.57           C
ATOM   5810  CG1 VAL H 180      16.049   4.022  10.507  1.00 53.76           C
ATOM   5814  CG2 VAL H 180      17.418   2.223  11.543  1.00 54.03           C
ATOM   5818  C   VAL H 180      14.125   3.893  12.578  1.00 52.96           C
ATOM   5819  O   VAL H 180      13.071   3.338  12.301  1.00 53.63           O
ATOM   5821  N   LEU H 181      14.234   5.200  12.752  1.00 53.47           N
ATOM   5822  CA  LEU H 181      13.091   6.078  12.664  1.00 54.62           C
ATOM   5824  CB  LEU H 181      13.286   7.260  13.606  1.00 53.92           C
ATOM   5827  CG  LEU H 181      12.173   8.295  13.667  1.00 53.57           C
ATOM   5829  CD1 LEU H 181      10.804   7.646  13.619  1.00 56.77           C
ATOM   5833  CD2 LEU H 181      12.330   9.105  14.930  1.00 54.91           C
ATOM   5837  C   LEU H 181      12.908   6.546  11.228  1.00 55.19           C
ATOM   5838  O   LEU H 181      13.681   7.361  10.721  1.00 55.15           O
ATOM   5840  N   GLN H 182      11.892   6.006  10.567  1.00 56.48           N
ATOM   5841  CA  GLN H 182      11.571   6.408   9.198  1.00 57.31           C
ATOM   5843  CB  GLN H 182      10.562   5.436   8.568  1.00 56.69           C
ATOM   5846  CG  GLN H 182      11.143   4.041   8.305  1.00 56.48           C
ATOM   5849  CD  GLN H 182      10.089   2.935   8.250  1.00 59.11           C
ATOM   5850  OE1 GLN H 182       9.146   2.918   9.044  1.00 64.81           O
ATOM   5851  NE2 GLN H 182      10.265   1.990   7.329  1.00 55.62           N
ATOM   5854  C   GLN H 182      11.032   7.842   9.200  1.00 58.24           C
ATOM   5855  O   GLN H 182      10.706   8.391  10.263  1.00 57.97           O
ATOM   5857  N   SER H 183      10.957   8.454   8.020  1.00 57.77           N
ATOM   5858  CA  SER H 183      10.542   9.852   7.924  1.00 57.23           C
ATOM   5860  CB  SER H 183      10.719  10.378   6.511  1.00 55.75           C
ATOM   5863  OG  SER H 183       9.603  10.023   5.738  1.00 57.78           O
ATOM   5865  C   SER H 183       9.090   9.993   8.347  1.00 57.27           C
ATOM   5866  O   SER H 183       8.704  10.997   8.938  1.00 59.06           O
ATOM   5868  N   SER H 184       8.303   8.962   8.059  1.00 57.26           N
ATOM   5869  CA  SER H 184       6.907   8.872   8.487  1.00 57.21           C
ATOM   5871  CB  SER H 184       6.339   7.542   8.015  1.00 57.40           C
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ATOM   5874  OG  SER H 184       7.181   6.483   8.434  1.00 57.06           O
ATOM   5876  C   SER H 184       6.684   8.964  10.001  1.00 57.94           C
ATOM   5877  O   SER H 184       5.545   9.107  10.446  1.00 58.79           O
ATOM   5879  N   GLY H 185       7.750   8.854  10.793  1.00 57.97           N
ATOM   5880  CA  GLY H 185       7.628   8.854  12.252  1.00 57.40           C
ATOM   5883  C   GLY H 185       7.417   7.461  12.829  1.00 57.11           C
ATOM   5884  O   GLY H 185       7.483   7.265  14.039  1.00 58.00           O
ATOM   5886  N   LEU H 186       7.154   6.490  11.964  1.00 57.04           N
ATOM   5887  CA  LEU H 186       7.085   5.105  12.372  1.00 56.45           C
ATOM   5889  CB  LEU H 186       6.257   4.300  11.376  1.00 55.19           C
ATOM   5892  CG  LEU H 186       4.829   4.795  11.146  1.00 53.58           C
ATOM   5894  CD1 LEU H 186       4.129   3.972  10.075  1.00 53.03           C
ATOM   5898  CD2 LEU H 186       4.039   4.755  12.446  1.00 54.82           C
ATOM   5902  C   LEU H 186       8.499   4.554  12.438  1.00 56.74           C
ATOM   5903  O   LEU H 186       9.391   5.013  11.723  1.00 55.76           O
ATOM   5905  N   TYR H 187       8.697   3.580  13.318  1.00 57.41           N
ATOM   5906  CA  TYR H 187       9.970   2.886  13.424  1.00 57.88           C
ATOM   5908  CB  TYR H 187      10.238   2.471  14.868  1.00 59.35           C
ATOM   5911  CG  TYR H 187      10.617   3.620  15.767  1.00 62.62           C
ATOM   5912  CD1 TYR H 187      11.901   4.153  15.731  1.00 63.67           C
ATOM   5914  CE1 TYR H 187      12.260   5.210  16.559  1.00 62.88           C
ATOM   5916  CZ  TYR H 187      11.333   5.743  17.431  1.00 60.29           C
ATOM   5917  OH  TYR H 187      11.712   6.786  18.234  1.00 62.21           O
ATOM   5919  CE2 TYR H 187      10.048   5.236  17.490  1.00 60.31           C
ATOM   5921  CD2 TYR H 187       9.695   4.178  16.662  1.00 63.69           C
ATOM   5923  C   TYR H 187       9.958   1.648  12.548  1.00 58.14           C
ATOM   5924  O   TYR H 187       8.899   1.185  12.130  1.00 59.34           O
ATOM   5926  N   SER H 188      11.145   1.115  12.285  1.00 57.39           N
ATOM   5927  CA  SER H 188      11.293  -0.161  11.611  1.00 56.96           C
ATOM   5929  CB  SER H 188      11.241   0.037  10.108  1.00 57.73           C
ATOM   5932  OG  SER H 188      11.937  -1.002   9.451  1.00 60.59           O
ATOM   5934  C   SER H 188      12.618  -0.788  12.003  1.00 56.89           C
ATOM   5935  O   SER H 188      13.582  -0.075  12.283  1.00 58.30           O
ATOM   5937  N   LEU H 189      12.659  -2.118  12.033  1.00 55.93           N
ATOM   5938  CA  LEU H 189      13.890  -2.850  12.336  1.00 56.36           C
ATOM   5940  CB  LEU H 189      14.096  -2.967  13.855  1.00 56.13           C
ATOM   5943  CG  LEU H 189      13.239  -3.899  14.722  1.00 55.37           C
ATOM   5945  CD1 LEU H 189      13.532  -5.378  14.521  1.00 55.17           C
ATOM   5949  CD2 LEU H 189      13.455  -3.554  16.182  1.00 56.81           C
ATOM   5953  C   LEU H 189      13.931  -4.236  11.680  1.00 57.58           C
ATOM   5954  O   LEU H 189      12.971  -4.670  11.035  1.00 59.39           O
ATOM   5956  N   SER H 190      15.060  -4.920  11.843  1.00 57.17           N
ATOM   5957  CA  SER H 190      15.222  -6.278  11.341  1.00 55.83           C
ATOM   5959  CB  SER H 190      16.051  -6.275  10.057  1.00 55.58           C
ATOM   5962  OG  SER H 190      15.542  -5.322   9.144  1.00 55.88           O
ATOM   5964  C   SER H 190      15.904  -7.144  12.381  1.00 55.29           C
ATOM   5965  O   SER H 190      16.632  -6.650  13.245  1.00 55.43           O
ATOM   5967  N   SER H 191      15.647  -8.440  12.299  1.00 55.26           N
ATOM   5968  CA  SER H 191      16.392  -9.420  13.062  1.00 55.03           C
ATOM   5970  CB  SER H 191      15.520 -10.066  14.127  1.00 54.46           C
ATOM   5973  OG  SER H 191      16.321 -10.813  15.017  1.00 51.63           O
ATOM   5975  C   SER H 191      16.914 -10.470  12.098  1.00 55.74           C
ATOM   5976  O   SER H 191      16.236 -10.831  11.132  1.00 55.17           O
ATOM   5978  N   VAL H 192      18.112 -10.969  12.380  1.00 56.08           N
ATOM   5979  CA  VAL H 192      18.844 -11.790  11.430  1.00 54.96           C
ATOM   5981  CB  VAL H 192      19.663 -10.854  10.508  1.00 53.98           C
ATOM   5983  CG1 VAL H 192      21.127 -11.276  10.402  1.00 53.64           C
ATOM   5987  CG2 VAL H 192      18.999 -10.750   9.140  1.00 53.30           C
ATOM   5991  C   VAL H 192      19.711 -12.838  12.138  1.00 55.11           C
ATOM   5992  O   VAL H 192      19.478 -14.047  12.017  1.00 55.73           O
ATOM   5994  N   CYS H 207      10.632 -17.018  14.378  1.00 55.43           N
ATOM   5995  CA  CYS H 207      10.729 -15.566  14.521  1.00 56.24           C
ATOM   5997  CB  CYS H 207      10.796 -14.899  13.152  1.00 56.42           C
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ATOM   6000  SG  CYS H 207      10.656 -13.085  13.167  1.00 57.75           S
ATOM   6002  C   CYS H 207       9.539 -15.008  15.285  1.00 56.52           C
ATOM   6003  O   CYS H 207       8.453 -14.868  14.723  1.00 56.56           O
ATOM   6005  N   ASN H 208       9.761 -14.676  16.557  1.00 57.08           N
ATOM   6006  CA  ASN H 208       8.695 -14.254  17.472  1.00 56.60           C
ATOM   6008  CB  ASN H 208       8.783 -15.025  18.791  1.00 55.66           C
ATOM   6011  CG  ASN H 208       8.787 -16.517  18.592  1.00 53.76           C
ATOM   6012  OD1 ASN H 208       9.796 -17.178  18.823  1.00 51.70           O
ATOM   6013  ND2 ASN H 208       7.663 -17.058  18.149  1.00 49.89           N
ATOM   6016  C   ASN H 208       8.767 -12.765  17.762  1.00 56.85           C
ATOM   6017  O   ASN H 208       9.413 -12.339  18.721  1.00 57.67           O
ATOM   6019  N   VAL H 209       8.105 -11.976  16.924  1.00 56.05           N
ATOM   6020  CA  VAL H 209       8.006 -10.541  17.149  1.00 56.06           C
ATOM   6022  CB  VAL H 209       7.655  -9.797  15.837  1.00 55.08           C
ATOM   6024  CG1 VAL H 209       7.410  -8.313  16.086  1.00 54.24           C
ATOM   6028  CG2 VAL H 209       8.772  -9.984  14.815  1.00 54.17           C
ATOM   6032  C   VAL H 209       6.969 -10.285  18.251  1.00 56.23           C
ATOM   6033  O   VAL H 209       6.042 -11.074  18.438  1.00 56.87           O
ATOM   6035  N   ASN H 210       7.151  -9.198  18.994  1.00 56.35           N
ATOM   6036  CA  ASN H 210       6.243  -8.837  20.071  1.00 56.02           C
ATOM   6038  CB  ASN H 210       6.656  -9.595  21.332  1.00 56.52           C
ATOM   6041  CG  ASN H 210       5.617  -9.532  22.429  1.00 57.82           C
ATOM   6042  OD1 ASN H 210       4.434  -9.302  22.179  1.00 62.49           O
ATOM   6043  ND2 ASN H 210       6.058  -9.751  23.661  1.00 60.77           N
ATOM   6046  C   ASN H 210       6.277  -7.322  20.302  1.00 55.82           C
ATOM   6047  O   ASN H 210       7.320  -6.780  20.665  1.00 56.48           O
ATOM   6049  N   HIS H 211       5.155  -6.644  20.049  1.00 55.43           N
ATOM   6050  CA  HIS H 211       5.041  -5.189  20.237  1.00 55.23           C
ATOM   6052  CB  HIS H 211       4.803  -4.472  18.910  1.00 55.50           C
ATOM   6055  CG  HIS H 211       4.696  -2.978  19.031  1.00 56.91           C
ATOM   6056  ND1 HIS H 211       5.665  -2.209  19.639  1.00 58.04           N
ATOM   6058  CE1 HIS H 211       5.311  -0.937  19.588  1.00 55.70           C
ATOM   6060  NE2 HIS H 211       4.151  -0.848  18.962  1.00 55.60           N
ATOM   6062  CD2 HIS H 211       3.747  -2.110  18.601  1.00 57.37           C
ATOM   6064  C   HIS H 211       3.892  -4.899  21.180  1.00 55.66           C
ATOM   6065  O   HIS H 211       2.745  -4.762  20.760  1.00 56.02           O
ATOM   6067  N   LYS H 212       4.214  -4.792  22.462  1.00 56.17           N
ATOM   6068  CA  LYS H 212       3.198  -4.730  23.507  1.00 55.44           C
ATOM   6070  CB  LYS H 212       3.837  -4.961  24.880  1.00 55.30           C
ATOM   6073  CG  LYS H 212       4.241  -6.417  25.068  1.00 56.91           C
ATOM   6076  CD  LYS H 212       5.050  -6.679  26.329  1.00 57.02           C
ATOM   6079  CE  LYS H 212       5.528  -8.128  26.343  1.00 57.36           C
ATOM   6082  NZ  LYS H 212       5.745  -8.644  27.711  1.00 58.76           N
ATOM   6086  C   LYS H 212       2.332  -3.470  23.496  1.00 54.93           C
ATOM   6087  O   LYS H 212       1.142  -3.559  23.786  1.00 56.04           O
ATOM   6089  N   PRO H 213       2.902  -2.300  23.148  1.00 54.30           N
ATOM   6090  CA  PRO H 213       2.045  -1.103  23.109  1.00 53.96           C
ATOM   6092  CB  PRO H 213       2.941  -0.045  22.453  1.00 52.86           C
ATOM   6095  CG  PRO H 213       4.322  -0.486  22.782  1.00 53.71           C
ATOM   6098  CD  PRO H 213       4.298  -1.985  22.793  1.00 53.61           C
ATOM   6101  C   PRO H 213       0.756  -1.308  22.305  1.00 53.55           C
ATOM   6102  O   PRO H 213      -0.318  -0.951  22.784  1.00 53.75           O
ATOM   6103  N   SER H 214       0.877  -1.894  21.111  1.00 52.97           N
ATOM   6104  CA  SER H 214      -0.274  -2.218  20.260  1.00 52.11           C
ATOM   6106  CB  SER H 214       0.141  -2.171  18.787  1.00 51.61           C
ATOM   6109  OG  SER H 214       0.941  -3.290  18.451  1.00 48.22           O
ATOM   6111  C   SER H 214      -0.871  -3.602  20.576  1.00 51.53           C
ATOM   6112  O   SER H 214      -1.894  -3.988  20.003  1.00 49.67           O
ATOM   6114  N   ASN H 215      -0.219  -4.333  21.482  1.00 50.52           N
ATOM   6115  CA  ASN H 215      -0.587  -5.697  21.824  1.00 50.79           C
ATOM   6117  CB  ASN H 215      -1.947  -5.724  22.530  1.00 50.96           C
ATOM   6120  CG  ASN H 215      -2.207  -7.030  23.260  1.00 49.61           C
ATOM   6121  OD1 ASN H 215      -1.329  -7.563  23.943  1.00 43.81           O
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ATOM   6122  ND2 ASN H 215      -3.418  -7.549  23.118  1.00 44.87           N
ATOM   6125  C   ASN H 215      -0.566  -6.596  20.584  1.00 50.66           C
ATOM   6126  O   ASN H 215      -1.523  -7.311  20.291  1.00 49.48           O
ATOM   6128  N   THR H 216       0.546  -6.534  19.858  1.00 51.75           N
ATOM   6129  CA  THR H 216       0.783  -7.383  18.695  1.00 52.28           C
ATOM   6131  CB  THR H 216       1.427  -6.596  17.533  1.00 52.32           C
ATOM   6133  OG1 THR H 216       0.564  -5.525  17.130  1.00 54.18           O
ATOM   6135  CG2 THR H 216       1.688  -7.504  16.338  1.00 50.91           C
ATOM   6139  C   THR H 216       1.734  -8.503  19.088  1.00 53.09           C
ATOM   6140  O   THR H 216       2.838  -8.253  19.579  1.00 54.22           O
ATOM   6142  N   LYS H 217       1.291  -9.736  18.882  1.00 53.84           N
ATOM   6143  CA  LYS H 217       2.140 -10.900  19.049  1.00 53.18           C
ATOM   6145  CB  LYS H 217       1.735 -11.689  20.301  1.00 54.58           C
ATOM   6148  CG  LYS H 217       2.588 -12.925  20.601  1.00 56.14           C
ATOM   6151  CD  LYS H 217       4.077 -12.657  20.389  1.00 59.75           C
ATOM   6154  CE  LYS H 217       4.965 -13.729  21.000  1.00 59.59           C
ATOM   6157  NZ  LYS H 217       6.397 -13.496  20.640  1.00 57.35           N
ATOM   6161  C   LYS H 217       1.989 -11.748  17.798  1.00 52.45           C
ATOM   6162  O   LYS H 217       0.918 -12.300  17.550  1.00 52.10           O
ATOM   6164  N   VAL H 218       3.059 -11.833  17.012  1.00 50.92           N
ATOM   6165  CA  VAL H 218       3.043 -12.569  15.753  1.00 51.32           C
ATOM   6167  CB  VAL H 218       2.928 -11.605  14.542  1.00 51.04           C
ATOM   6169  CG1 VAL H 218       3.798 -10.388  14.743  1.00 53.14           C
ATOM   6173  CG2 VAL H 218       3.278 -12.301  13.223  1.00 50.80           C
ATOM   6177  C   VAL H 218       4.287 -13.452  15.637  1.00 51.09           C
ATOM   6178  O   VAL H 218       5.373 -13.061  16.067  1.00 50.45           O
ATOM   6180  N   ASP H 219       4.101 -14.645  15.062  1.00 51.30           N
ATOM   6181  CA  ASP H 219       5.170 -15.634  14.887  1.00 51.12           C
ATOM   6183  CB  ASP H 219       4.891 -16.894  15.734  1.00 51.20           C
ATOM   6186  CG  ASP H 219       4.837 -16.610  17.252  1.00 51.57           C
ATOM   6187  OD1 ASP H 219       5.390 -15.582  17.706  1.00 51.74           O
ATOM   6188  OD2 ASP H 219       4.251 -17.434  17.998  1.00 47.82           O
ATOM   6189  C   ASP H 219       5.293 -16.020  13.409  1.00 50.40           C
ATOM   6190  O   ASP H 219       6.351 -15.865  12.791  1.00 48.83           O
ATOM   6192  N   ASP A   1     -34.411  -5.350  50.267  1.00 62.89           N
ATOM   6193  CA  ASP A   1     -33.058  -5.496  49.658  1.00 62.67           C
ATOM   6195  CB  ASP A   1     -33.165  -5.591  48.131  1.00 63.84           C
ATOM   6198  CG  ASP A   1     -34.000  -6.776  47.659  1.00 67.09           C
ATOM   6199  OD1 ASP A   1     -34.688  -7.402  48.504  1.00 66.69           O
ATOM   6200  OD2 ASP A   1     -33.971  -7.068  46.432  1.00 65.56           O
ATOM   6201  C   ASP A   1     -32.150  -4.313  49.999  1.00 61.98           C
ATOM   6202  O   ASP A   1     -32.607  -3.283  50.484  1.00 61.81           O
ATOM   6206  N   ILE A   2     -30.855  -4.493  49.766  1.00 60.61           N
ATOM   6207  CA  ILE A   2     -29.931  -3.385  49.582  1.00 59.42           C
ATOM   6209  CB  ILE A   2     -28.597  -3.603  50.327  1.00 58.74           C
ATOM   6211  CG1 ILE A   2     -28.849  -3.911  51.803  1.00 60.40           C
ATOM   6214  CD1 ILE A   2     -27.599  -3.849  52.685  1.00 61.03           C
ATOM   6218  CG2 ILE A   2     -27.723  -2.376  50.230  1.00 59.49           C
ATOM   6222  C   ILE A   2     -29.693  -3.318  48.077  1.00 58.25           C
ATOM   6223  O   ILE A   2     -29.661  -4.351  47.403  1.00 57.52           O
ATOM   6225  N   VAL A   3     -29.548  -2.107  47.549  1.00 57.16           N
ATOM   6226  CA  VAL A   3     -29.382  -1.901  46.112  1.00 56.68           C
ATOM   6228  CB  VAL A   3     -30.429  -0.887  45.575  1.00 55.38           C
ATOM   6230  CG1 VAL A   3     -29.871   0.533  45.508  1.00 58.42           C
ATOM   6234  CG2 VAL A   3     -30.923  -1.313  44.218  1.00 54.30           C
ATOM   6238  C   VAL A   3     -27.939  -1.469  45.805  1.00 56.42           C
ATOM   6239  O   VAL A   3     -27.361  -0.677  46.544  1.00 56.80           O
ATOM   6241  N   MET A   4     -27.366  -2.015  44.730  1.00 55.69           N
ATOM   6242  CA  MET A   4     -25.977  -1.755  44.352  1.00 54.40           C
ATOM   6244  CB  MET A   4     -25.188  -3.062  44.257  1.00 55.52           C
ATOM   6247  CG  MET A   4     -25.150  -3.850  45.542  1.00 57.44           C
ATOM   6250  SD  MET A   4     -24.211  -3.014  46.833  1.00 59.92           S
ATOM   6251  CE  MET A   4     -25.341  -3.183  48.192  1.00 63.07           C
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ATOM   6255  C   MET A   4     -25.930  -1.058  43.008  1.00 53.29           C
ATOM   6256  O   MET A   4     -26.354  -1.611  41.996  1.00 52.73           O
ATOM   6258  N   THR A   5     -25.396   0.155  42.999  1.00 52.96           N
ATOM   6259  CA  THR A   5     -25.404   0.983  41.805  1.00 54.17           C
ATOM   6261  CB  THR A   5     -26.084   2.344  42.084  1.00 53.75           C
ATOM   6263  OG1 THR A   5     -27.384   2.129  42.650  1.00 54.50           O
ATOM   6265  CG2 THR A   5     -26.206   3.151  40.808  1.00 51.76           C
ATOM   6269  C   THR A   5     -23.984   1.230  41.327  1.00 54.59           C
ATOM   6270  O   THR A   5     -23.268   2.047  41.900  1.00 56.57           O
ATOM   6272  N   GLN A   6     -23.567   0.515  40.288  1.00 54.82           N
ATOM   6273  CA  GLN A   6     -22.250   0.747  39.716  1.00 53.99           C
ATOM   6275  CB  GLN A   6     -21.759  -0.456  38.916  1.00 54.48           C
ATOM   6278  CG  GLN A   6     -21.411  -1.646  39.772  1.00 54.04           C
ATOM   6281  CD  GLN A   6     -20.882  -2.784  38.949  1.00 53.42           C
ATOM   6282  OE1 GLN A   6     -21.480  -3.855  38.903  1.00 53.23           O
ATOM   6283  NE2 GLN A   6     -19.763  -2.556  38.273  1.00 53.75           N
ATOM   6286  C   GLN A   6     -22.328   1.968  38.833  1.00 54.63           C
ATOM   6287  O   GLN A   6     -23.404   2.320  38.338  1.00 55.98           O
ATOM   6289  N   SER A   7     -21.176   2.605  38.640  1.00 54.86           N
ATOM   6290  CA  SER A   7     -21.079   3.872  37.925  1.00 52.70           C
ATOM   6292  CB  SER A   7     -21.507   5.002  38.864  1.00 51.79           C
ATOM   6295  OG  SER A   7     -20.677   6.136  38.726  1.00 55.10           O
ATOM   6297  C   SER A   7     -19.634   4.073  37.471  1.00 51.64           C
ATOM   6298  O   SER A   7     -18.734   3.985  38.292  1.00 51.21           O
ATOM   6300  N   PRO A   8     -19.396   4.318  36.169  1.00 51.31           N
ATOM   6301  CA  PRO A   8     -20.311   4.405  35.038  1.00 51.31           C
ATOM   6303  CB  PRO A   8     -19.504   5.193  34.013  1.00 51.28           C
ATOM   6306  CG  PRO A   8     -18.107   4.767  34.259  1.00 51.39           C
ATOM   6309  CD  PRO A   8     -18.002   4.546  35.745  1.00 51.55           C
ATOM   6312  C   PRO A   8     -20.652   3.029  34.480  1.00 51.44           C
ATOM   6313  O   PRO A   8     -20.041   2.038  34.881  1.00 52.24           O
ATOM   6314  N   ASP A   9     -21.616   2.982  33.561  1.00 51.77           N
ATOM   6315  CA  ASP A   9     -22.070   1.726  32.961  1.00 52.74           C
ATOM   6317  CB  ASP A   9     -23.361   1.935  32.150  1.00 52.67           C
ATOM   6320  CG  ASP A   9     -24.619   1.938  33.022  1.00 55.81           C
ATOM   6321  OD1 ASP A   9     -24.841   0.965  33.793  1.00 56.53           O
ATOM   6322  OD2 ASP A   9     -25.396   2.913  32.914  1.00 57.39           O
ATOM   6323  C   ASP A   9     -20.998   1.124  32.065  1.00 53.19           C
ATOM   6324  O   ASP A   9     -20.723  -0.073  32.140  1.00 54.60           O
ATOM   6326  N   SER A  10     -20.411   1.964  31.219  1.00 53.70           N
ATOM   6327  CA  SER A  10     -19.372   1.558  30.281  1.00 55.01           C
ATOM   6329  CB  SER A  10     -19.858   1.711  28.842  1.00 55.57           C
ATOM   6332  OG  SER A  10     -21.249   1.977  28.793  1.00 60.63           O
ATOM   6334  C   SER A  10     -18.159   2.455  30.473  1.00 56.39           C
ATOM   6335  O   SER A  10     -18.296   3.657  30.737  1.00 56.62           O
ATOM   6337  N   LEU A  11     -16.974   1.876  30.321  1.00 56.64           N
ATOM   6338  CA  LEU A  11     -15.742   2.626  30.481  1.00 56.45           C
ATOM   6340  CB  LEU A  11     -15.107   2.333  31.846  1.00 57.19           C
ATOM   6343  CG  LEU A  11     -13.760   3.026  32.092  1.00 57.84           C
ATOM   6345  CD1 LEU A  11     -13.862   4.552  31.927  1.00 59.14           C
ATOM   6349  CD2 LEU A  11     -13.227   2.665  33.459  1.00 57.21           C
ATOM   6353  C   LEU A  11     -14.782   2.266  29.365  1.00 56.22           C
ATOM   6354  O   LEU A  11     -14.583   1.095  29.062  1.00 56.51           O
ATOM   6356  N   ALA A  12     -14.197   3.285  28.751  1.00 56.13           N
ATOM   6357  CA  ALA A  12     -13.225   3.081  27.703  1.00 56.48           C
ATOM   6359  CB  ALA A  12     -13.791   3.520  26.383  1.00 56.72           C
ATOM   6363  C   ALA A  12     -11.979   3.876  28.059  1.00 57.47           C
ATOM   6364  O   ALA A  12     -12.067   5.022  28.510  1.00 58.00           O
ATOM   6366  N   VAL A  13     -10.820   3.250  27.882  1.00 57.30           N
ATOM   6367  CA  VAL A  13      -9.556   3.864  28.247  1.00 56.51           C
ATOM   6369  CB  VAL A  13      -9.416   3.927  29.802  1.00 56.78           C
ATOM   6371  CG1 VAL A  13      -8.584   2.759  30.351  1.00 57.74           C
ATOM   6375  CG2 VAL A  13      -8.838   5.263  30.259  1.00 58.51           C
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ATOM   6379  C   VAL A  13      -8.407   3.087  27.594  1.00 56.26           C
ATOM   6380  O   VAL A  13      -8.499   1.869  27.413  1.00 56.31           O
ATOM   6382  N   SER A  14      -7.337   3.796  27.239  1.00 54.96           N
ATOM   6383  CA  SER A  14      -6.213   3.202  26.504  1.00 54.21           C
ATOM   6385  CB  SER A  14      -5.243   4.293  26.033  1.00 54.54           C
ATOM   6388  OG  SER A  14      -5.831   5.115  25.042  1.00 55.88           O
ATOM   6390  C   SER A  14      -5.433   2.177  27.323  1.00 52.87           C
ATOM   6391  O   SER A  14      -5.550   2.126  28.543  1.00 51.72           O
ATOM   6393  N   LEU A  15      -4.629   1.371  26.630  1.00 52.43           N
ATOM   6394  CA  LEU A  15      -3.735   0.405  27.280  1.00 52.14           C
ATOM   6396  CB  LEU A  15      -2.943  -0.414  26.242  1.00 51.79           C
ATOM   6399  CG  LEU A  15      -3.565  -1.665  25.605  1.00 49.60           C
ATOM   6401  CD1 LEU A  15      -2.507  -2.445  24.837  1.00 45.32           C
ATOM   6405  CD2 LEU A  15      -4.215  -2.565  26.644  1.00 52.34           C
ATOM   6409  C   LEU A  15      -2.756   1.101  28.222  1.00 51.43           C
ATOM   6410  O   LEU A  15      -2.328   2.226  27.975  1.00 51.94           O
ATOM   6412  N   GLY A  16      -2.414   0.423  29.310  1.00 51.71           N
ATOM   6413  CA  GLY A  16      -1.516   0.978  30.315  1.00 52.44           C
ATOM   6416  C   GLY A  16      -2.109   2.106  31.147  1.00 52.76           C
ATOM   6417  O   GLY A  16      -1.501   2.534  32.136  1.00 53.41           O
ATOM   6419  N   GLU A  17      -3.298   2.574  30.766  1.00 52.43           N
ATOM   6420  CA  GLU A  17      -3.942   3.714  31.413  1.00 52.43           C
ATOM   6422  CB  GLU A  17      -4.888   4.401  30.419  1.00 52.30           C
ATOM   6425  CG  GLU A  17      -5.165   5.874  30.679  1.00 53.08           C
ATOM   6428  CD  GLU A  17      -5.608   6.614  29.418  1.00 54.16           C
ATOM   6429  OE1 GLU A  17      -6.464   6.083  28.671  1.00 52.55           O
ATOM   6430  OE2 GLU A  17      -5.087   7.726  29.173  1.00 55.19           O
ATOM   6431  C   GLU A  17      -4.699   3.256  32.661  1.00 52.05           C
ATOM   6432  O   GLU A  17      -5.048   2.081  32.803  1.00 51.50           O
ATOM   6434  N   ARG A  18      -4.944   4.192  33.568  1.00 52.76           N
ATOM   6435  CA  ARG A  18      -5.617   3.885  34.824  1.00 52.69           C
ATOM   6437  CB  ARG A  18      -5.244   4.921  35.890  1.00 52.82           C
ATOM   6440  CG  ARG A  18      -6.057   4.835  37.167  1.00 54.81           C
ATOM   6443  CD  ARG A  18      -5.311   5.391  38.364  1.00 57.22           C
ATOM   6446  NE  ARG A  18      -6.232   5.823  39.418  1.00 61.94           N
ATOM   6448  CZ  ARG A  18      -6.736   7.054  39.534  1.00 64.92           C
ATOM   6449  NH1 ARG A  18      -7.568   7.332  40.535  1.00 63.87           N
ATOM   6452  NH2 ARG A  18      -6.418   8.016  38.663  1.00 63.06           N
ATOM   6455  C   ARG A  18      -7.126   3.846  34.607  1.00 51.84           C
ATOM   6456  O   ARG A  18      -7.671   4.634  33.825  1.00 50.14           O
ATOM   6458  N   ALA A  19      -7.794   2.930  35.303  1.00 50.97           N
ATOM   6459  CA  ALA A  19      -9.232   2.775  35.168  1.00 52.04           C
ATOM   6461  CB  ALA A  19      -9.542   1.633  34.229  1.00 52.55           C
ATOM   6465  C   ALA A  19      -9.895   2.545  36.518  1.00 52.46           C
ATOM   6466  O   ALA A  19      -9.438   1.725  37.314  1.00 54.85           O
ATOM   6468  N   THR A  20     -10.988   3.262  36.755  1.00 52.38           N
ATOM   6469  CA  THR A  20     -11.682   3.234  38.030  1.00 52.68           C
ATOM   6471  CB  THR A  20     -11.642   4.618  38.677  1.00 52.17           C
ATOM   6473  OG1 THR A  20     -10.299   4.882  39.094  1.00 53.12           O
ATOM   6475  CG2 THR A  20     -12.587   4.709  39.886  1.00 51.87           C
ATOM   6479  C   THR A  20     -13.121   2.807  37.819  1.00 53.77           C
ATOM   6480  O   THR A  20     -13.714   3.140  36.796  1.00 54.57           O
ATOM   6482  N   ILE A  21     -13.666   2.055  38.776  1.00 53.63           N
ATOM   6483  CA  ILE A  21     -15.078   1.694  38.771  1.00 54.12           C
ATOM   6485  CB  ILE A  21     -15.312   0.215  38.397  1.00 54.52           C
ATOM   6487  CG1 ILE A  21     -14.723  -0.085  37.011  1.00 53.22           C
ATOM   6490  CD1 ILE A  21     -14.581  -1.556  36.724  1.00 53.52           C
ATOM   6494  CG2 ILE A  21     -16.825  -0.123  38.428  1.00 52.99           C
ATOM   6498  C   ILE A  21     -15.642   1.952  40.150  1.00 54.97           C
ATOM   6499  O   ILE A  21     -15.121   1.447  41.143  1.00 57.00           O
ATOM   6501  N   ASN A  22     -16.722   2.725  40.189  1.00 55.69           N
ATOM   6502  CA  ASN A  22     -17.374   3.130  41.425  1.00 56.19           C
ATOM   6504  CB  ASN A  22     -17.885   4.574  41.297  1.00 56.94           C
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ATOM	6507	CG	ASN	A	22	-17.326	5.483	42.355	1.00	58.56	C
ATOM	6508	OD1	ASN	A	22	-17.781	5.482	43.502	1.00	60.89	O
ATOM	6509	ND2	ASN	A	22	-16.327	6.273	41.977	1.00	59.32	N
ATOM	6512	C	ASN	A	22	-18.544	2.199	41.699	1.00	56.65	C
ATOM	6513	O	ASN	A	22	-19.209	1.750	40.768	1.00	58.28	O
ATOM	6515	N	CYS	A	23	-18.803	1.925	42.972	1.00	57.08	N
ATOM	6516	CA	CYS	A	23	-19.936	1.101	43.362	1.00	56.36	C
ATOM	6518	CB	CYS	A	23	-19.491	-0.362	43.491	1.00	56.50	C
ATOM	6521	SG	CYS	A	23	-20.630	-1.402	44.393	1.00	62.63	S
ATOM	6523	C	CYS	A	23	-20.547	1.643	44.658	1.00	55.22	C
ATOM	6524	O	CYS	A	23	-19.828	1.883	45.626	1.00	54.61	O
ATOM	6526	N	ARG	A	24	-21.865	1.860	44.660	1.00	55.40	N
ATOM	6527	CA	ARG	A	24	-22.569	2.419	45.822	1.00	55.68	C
ATOM	6529	CB	ARG	A	24	-23.126	3.801	45.499	1.00	56.07	C
ATOM	6532	CG	ARG	A	24	-23.595	4.537	46.745	1.00	57.94	C
ATOM	6535	CD	ARG	A	24	-24.590	5.617	46.447	1.00	61.37	C
ATOM	6538	NE	ARG	A	24	-24.492	6.684	47.437	1.00	68.16	N
ATOM	6540	CZ	ARG	A	24	-23.520	7.595	47.469	1.00	71.66	C
ATOM	6541	NH1	ARG	A	24	-22.534	7.580	46.574	1.00	73.60	N
ATOM	6544	NH2	ARG	A	24	-23.523	8.528	48.409	1.00	73.88	N
ATOM	6547	C	ARG	A	24	-23.727	1.542	46.314	1.00	54.23	C
ATOM	6548	O	ARG	A	24	-24.450	0.970	45.508	1.00	55.74	O
ATOM	6550	N	ALA	A	25	-23.912	1.494	47.638	1.00	52.44	N
ATOM	6551	CA	ALA	A	25	-24.962	0.703	48.297	1.00	51.11	C
ATOM	6553	CB	ALA	A	25	-24.324	-0.161	49.370	1.00	50.89	C
ATOM	6557	C	ALA	A	25	-26.056	1.600	48.918	1.00	49.83	C
ATOM	6558	O	ALA	A	25	-25.788	2.755	49.242	1.00	49.35	O
ATOM	6560	N	SER	A	26	-27.274	1.071	49.087	1.00	49.01	N
ATOM	6561	CA	SER	A	26	-28.400	1.832	49.681	1.00	48.88	C
ATOM	6563	CB	SER	A	26	-29.728	1.065	49.615	1.00	46.84	C
ATOM	6566	OG	SER	A	26	-29.680	-0.006	48.714	1.00	49.73	O
ATOM	6568	C	SER	A	26	-28.161	2.111	51.143	1.00	48.80	C
ATOM	6569	O	SER	A	26	-28.505	3.176	51.651	1.00	48.99	O
ATOM	6571	N	LYS	A	27	-27.626	1.099	51.816	1.00	49.72	N
ATOM	6572	CA	LYS	A	27	-27.365	1.113	53.243	1.00	50.92	C
ATOM	6574	CB	LYS	A	27	-28.191	0.021	53.952	1.00	52.36	C
ATOM	6577	CG	LYS	A	27	-29.471	0.520	54.631	1.00	54.84	C
ATOM	6580	CD	LYS	A	27	-30.459	-0.614	54.982	1.00	55.28	C
ATOM	6583	CE	LYS	A	27	-29.811	-1.810	55.703	1.00	58.27	C
ATOM	6586	NZ	LYS	A	27	-30.839	-2.772	56.233	1.00	58.20	N
ATOM	6590	C	LYS	A	27	-25.896	0.818	53.416	1.00	49.94	C
ATOM	6591	O	LYS	A	27	-25.240	0.347	52.485	1.00	48.23	O
ATOM	6593	N	SER	A	28	-25.388	1.080	54.616	1.00	52.04	N
ATOM	6594	CA	SER	A	28	-24.003	0.771	54.941	1.00	52.27	C
ATOM	6596	CB	SER	A	28	-23.594	1.359	56.287	1.00	52.57	C
ATOM	6599	OG	SER	A	28	-22.310	0.879	56.662	1.00	55.08	O
ATOM	6601	C	SER	A	28	-23.849	-0.724	54.997	1.00	52.92	C
ATOM	6602	O	SER	A	28	-24.727	-1.409	55.523	1.00	54.03	O
ATOM	6604	N	VAL	A	29	-22.733	-1.206	54.448	1.00	53.35	N
ATOM	6605	CA	VAL	A	29	-22.382	-2.627	54.442	1.00	53.35	C
ATOM	6607	CB	VAL	A	29	-22.083	-3.120	52.992	1.00	53.96	C
ATOM	6609	CG1	VAL	A	29	-20.827	-2.481	52.424	1.00	55.20	C
ATOM	6613	CG2	VAL	A	29	-23.248	-2.838	52.078	1.00	55.72	C
ATOM	6617	C	VAL	A	29	-21.179	-2.888	55.369	1.00	53.13	C
ATOM	6618	O	VAL	A	29	-20.337	-3.725	55.097	1.00	53.14	O
ATOM	6620	N	SER	A	30	-21.110	-2.173	56.485	1.00	55.25	N
ATOM	6621	CA	SER	A	30	-19.919	-2.210	57.329	1.00	54.74	C
ATOM	6623	CB	SER	A	30	-19.150	-0.888	57.190	1.00	54.89	C
ATOM	6626	OG	SER	A	30	-18.834	-0.622	55.828	1.00	55.23	O
ATOM	6628	C	SER	A	30	-20.249	-2.486	58.801	1.00	54.12	C
ATOM	6629	O	SER	A	30	-20.890	-1.670	59.445	1.00	54.38	O
ATOM	6631	N	THR	A	31	-19.838	-3.657	59.295	1.00	53.64	N
ATOM	6632	CA	THR	A	31	-19.766	-3.965	60.733	1.00	53.55	C

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ATOM   6634  CB  THR A  31     -21.041  -4.675  61.274  1.00 53.52           C
ATOM   6636  OG1 THR A  31     -21.744  -5.300  60.193  1.00 53.91           O
ATOM   6638  CG2 THR A  31     -21.977  -3.690  61.993  1.00 53.02           C
ATOM   6642  C   THR A  31     -18.555  -4.869  61.010  1.00 53.72           C
ATOM   6643  O   THR A  31     -18.047  -5.548  60.112  1.00 53.44           O
ATOM   6645  N   SER A  32     -18.106  -4.868  62.259  1.00 53.57           N
ATOM   6646  CA  SER A  32     -16.932  -5.638  62.692  1.00 53.74           C
ATOM   6648  CB  SER A  32     -17.252  -7.130  62.755  1.00 52.83           C
ATOM   6651  OG  SER A  32     -18.435  -7.346  63.496  1.00 56.13           O
ATOM   6653  C   SER A  32     -15.694  -5.373  61.823  1.00 53.92           C
ATOM   6654  O   SER A  32     -15.058  -6.295  61.308  1.00 54.25           O
ATOM   6656  N   GLY A  33     -15.362  -4.092  61.673  1.00 54.78           N
ATOM   6657  CA  GLY A  33     -14.157  -3.675  60.958  1.00 54.44           C
ATOM   6660  C   GLY A  33     -14.032  -4.386  59.635  1.00 54.01           C
ATOM   6661  O   GLY A  33     -12.944  -4.815  59.253  1.00 55.52           O
ATOM   6663  N   TYR A  34     -15.170  -4.530  58.961  1.00 53.14           N
ATOM   6664  CA  TYR A  34     -15.244  -5.167  57.661  1.00 52.80           C
ATOM   6666  CB  TYR A  34     -15.715  -6.611  57.793  1.00 53.20           C
ATOM   6669  CG  TYR A  34     -14.664  -7.634  58.102  1.00 52.44           C
ATOM   6670  CD1 TYR A  34     -13.507  -7.724  57.346  1.00 51.21           C
ATOM   6672  CE1 TYR A  34     -12.557  -8.700  57.616  1.00 54.76           C
ATOM   6674  CZ  TYR A  34     -12.774  -9.610  58.637  1.00 53.21           C
ATOM   6675  OH  TYR A  34     -11.839 -10.571  58.906  1.00 53.19           O
ATOM   6677  CE2 TYR A  34     -13.919  -9.549  59.393  1.00 54.25           C
ATOM   6679  CD2 TYR A  34     -14.862  -8.570  59.118  1.00 57.68           C
ATOM   6681  C   TYR A  34     -16.261  -4.432  56.813  1.00 51.48           C
ATOM   6682  O   TYR A  34     -17.321  -4.049  57.304  1.00 49.85           O
ATOM   6684  N   SER A  35     -15.938  -4.235  55.544  1.00 50.36           N
ATOM   6685  CA  SER A  35     -16.916  -3.762  54.606  1.00 51.65           C
ATOM   6687  CB  SER A  35     -16.390  -2.575  53.821  1.00 50.96           C
ATOM   6690  OG  SER A  35     -16.136  -1.489  54.702  1.00 50.03           O
ATOM   6692  C   SER A  35     -17.232  -4.944  53.723  1.00 52.86           C
ATOM   6693  O   SER A  35     -16.390  -5.399  52.959  1.00 53.24           O
ATOM   6695  N   TYR A  36     -18.450  -5.457  53.869  1.00 54.35           N
ATOM   6696  CA  TYR A  36     -18.875  -6.664  53.189  1.00 55.09           C
ATOM   6698  CB  TYR A  36     -20.046  -7.277  53.946  1.00 55.65           C
ATOM   6701  CG  TYR A  36     -19.615  -7.768  55.323  1.00 58.22           C
ATOM   6702  CD1 TYR A  36     -18.954  -8.995  55.480  1.00 56.18           C
ATOM   6704  CE1 TYR A  36     -18.555  -9.446  56.736  1.00 56.58           C
ATOM   6706  CZ  TYR A  36     -18.795  -8.665  57.854  1.00 56.60           C
ATOM   6707  OH  TYR A  36     -18.397  -9.096  59.101  1.00 54.95           O
ATOM   6709  CE2 TYR A  36     -19.437  -7.441  57.723  1.00 56.91           C
ATOM   6711  CD2 TYR A  36     -19.838  -6.998  56.462  1.00 56.88           C
ATOM   6713  C   TYR A  36     -19.189  -6.399  51.717  1.00 56.74           C
ATOM   6714  O   TYR A  36     -20.360  -6.314  51.315  1.00 58.41           O
ATOM   6716  N   ILE A  37     -18.110  -6.270  50.933  1.00 56.11           N
ATOM   6717  CA  ILE A  37     -18.155  -5.894  49.511  1.00 55.20           C
ATOM   6719  CB  ILE A  37     -17.755  -4.408  49.294  1.00 54.78           C
ATOM   6721  CG1 ILE A  37     -18.826  -3.479  49.851  1.00 58.08           C
ATOM   6724  CD1 ILE A  37     -20.089  -3.396  48.995  1.00 61.32           C
ATOM   6728  CG2 ILE A  37     -17.547  -4.081  47.806  1.00 54.99           C
ATOM   6732  C   ILE A  37     -17.181  -6.759  48.733  1.00 54.28           C
ATOM   6733  O   ILE A  37     -16.086  -7.045  49.197  1.00 51.48           O
ATOM   6735  N   TYR A  38     -17.577  -7.160  47.534  1.00 54.21           N
ATOM   6736  CA  TYR A  38     -16.772  -8.069  46.737  1.00 55.52           C
ATOM   6738  CB  TYR A  38     -17.335  -9.484  46.899  1.00 56.13           C
ATOM   6741  CG  TYR A  38     -17.734  -9.751  48.331  1.00 53.82           C
ATOM   6742  CD1 TYR A  38     -16.800 -10.179  49.249  1.00 56.52           C
ATOM   6744  CE1 TYR A  38     -17.136 -10.402  50.559  1.00 54.97           C
ATOM   6746  CZ  TYR A  38     -18.421 -10.179  50.968  1.00 55.92           C
ATOM   6747  OH  TYR A  38     -18.746 -10.407  52.278  1.00 57.07           O
ATOM   6749  CE2 TYR A  38     -19.372  -9.739  50.077  1.00 53.57           C
ATOM   6751  CD2 TYR A  38     -19.021  -9.517  48.772  1.00 51.57           C
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ATOM   6753  C   TYR A  38     -16.798  -7.601  45.290  1.00 55.89           C
ATOM   6754  O   TYR A  38     -17.738  -6.915  44.896  1.00 57.00           O
ATOM   6756  N   TRP A  39     -15.764  -7.943  44.515  1.00 55.58           N
ATOM   6757  CA  TRP A  39     -15.670  -7.535  43.101  1.00 55.14           C
ATOM   6759  CB  TRP A  39     -14.585  -6.481  42.881  1.00 53.93           C
ATOM   6762  CG  TRP A  39     -14.865  -5.137  43.472  1.00 54.45           C
ATOM   6763  CD1 TRP A  39     -14.481  -4.691  44.699  1.00 55.89           C
ATOM   6765  NE1 TRP A  39     -14.903  -3.397  44.887  1.00 54.96           N
ATOM   6767  CE2 TRP A  39     -15.561  -2.977  43.765  1.00 49.30           C
ATOM   6768  CD2 TRP A  39     -15.559  -4.049  42.850  1.00 51.41           C
ATOM   6769  CE3 TRP A  39     -16.177  -3.876  41.610  1.00 53.35           C
ATOM   6771  CZ3 TRP A  39     -16.766  -2.659  41.327  1.00 54.21           C
ATOM   6773  CH2 TRP A  39     -16.752  -1.613  42.261  1.00 54.27           C
ATOM   6775  CZ2 TRP A  39     -16.154  -1.755  43.482  1.00 52.84           C
ATOM   6777  C   TRP A  39     -15.372  -8.720  42.192  1.00 55.86           C
ATOM   6778  O   TRP A  39     -14.481  -9.524  42.466  1.00 56.12           O
ATOM   6780  N   TYR A  40     -16.099  -8.794  41.083  1.00 55.71           N
ATOM   6781  CA  TYR A  40     -15.950  -9.885  40.151  1.00 54.20           C
ATOM   6783  CB  TYR A  40     -17.236 -10.677  40.105  1.00 53.85           C
ATOM   6786  CG  TYR A  40     -17.621 -11.220  41.452  1.00 53.84           C
ATOM   6787  CD1 TYR A  40     -17.003 -12.350  41.960  1.00 52.48           C
ATOM   6789  CE1 TYR A  40     -17.341 -12.857  43.177  1.00 51.31           C
ATOM   6791  CZ  TYR A  40     -18.309 -12.240  43.922  1.00 52.90           C
ATOM   6792  OH  TYR A  40     -18.644 -12.744  45.154  1.00 53.71           O
ATOM   6794  CE2 TYR A  40     -18.938 -11.109  43.448  1.00 54.72           C
ATOM   6796  CD2 TYR A  40     -18.591 -10.606  42.218  1.00 53.75           C
ATOM   6798  C   TYR A  40     -15.604  -9.392  38.765  1.00 54.49           C
ATOM   6799  O   TYR A  40     -15.945  -8.274  38.387  1.00 54.57           O
ATOM   6801  N   GLN A  41     -14.908 -10.245  38.021  1.00 55.19           N
ATOM   6802  CA  GLN A  41     -14.630 -10.023  36.610  1.00 54.66           C
ATOM   6804  CB  GLN A  41     -13.134 -10.155  36.356  1.00 54.91           C
ATOM   6807  CG  GLN A  41     -12.718 -10.065  34.891  1.00 54.62           C
ATOM   6810  CD  GLN A  41     -11.217 -10.069  34.731  1.00 53.29           C
ATOM   6811  OE1 GLN A  41     -10.549 -11.071  34.995  1.00 50.58           O
ATOM   6812  NE2 GLN A  41     -10.674  -8.942  34.310  1.00 52.61           N
ATOM   6815  C   GLN A  41     -15.368 -11.101  35.832  1.00 54.45           C
ATOM   6816  O   GLN A  41     -15.259 -12.277  36.181  1.00 53.70           O
ATOM   6818  N   GLN A  42     -16.123 -10.704  34.803  1.00 53.94           N
ATOM   6819  CA  GLN A  42     -16.718 -11.669  33.868  1.00 54.62           C
ATOM   6821  CB  GLN A  42     -18.245 -11.740  34.003  1.00 54.68           C
ATOM   6824  CG  GLN A  42     -18.860 -12.891  33.170  1.00 53.39           C
ATOM   6827  CD  GLN A  42     -20.365 -13.000  33.293  1.00 51.05           C
ATOM   6828  OE1 GLN A  42     -21.074 -12.000  33.336  1.00 48.41           O
ATOM   6829  NE2 GLN A  42     -20.859 -14.225  33.336  1.00 49.52           N
ATOM   6832  C   GLN A  42     -16.346 -11.360  32.416  1.00 55.58           C
ATOM   6833  O   GLN A  42     -16.720 -10.306  31.882  1.00 55.08           O
ATOM   6835  N   LYS A  43     -15.626 -12.294  31.789  1.00 55.46           N
ATOM   6836  CA  LYS A  43     -15.292 -12.209  30.366  1.00 55.65           C
ATOM   6838  CB  LYS A  43     -13.932 -12.839  30.086  1.00 54.68           C
ATOM   6841  CG  LYS A  43     -12.775 -12.062  30.668  1.00 54.75           C
ATOM   6844  CD  LYS A  43     -11.503 -12.885  30.686  1.00 55.94           C
ATOM   6847  CE  LYS A  43     -10.375 -12.126  31.358  1.00 58.33           C
ATOM   6850  NZ  LYS A  43      -9.035 -12.660  31.001  1.00 57.56           N
ATOM   6854  C   LYS A  43     -16.347 -12.935  29.549  1.00 56.58           C
ATOM   6855  O   LYS A  43     -16.790 -14.023  29.929  1.00 57.00           O
ATOM   6857  N   PRO A  44     -16.740 -12.357  28.406  1.00 57.55           N
ATOM   6858  CA  PRO A  44     -17.830 -12.946  27.623  1.00 57.67           C
ATOM   6860  CB  PRO A  44     -17.746 -12.218  26.277  1.00 58.27           C
ATOM   6863  CG  PRO A  44     -16.494 -11.352  26.338  1.00 59.33           C
ATOM   6866  CD  PRO A  44     -16.175 -11.155  27.771  1.00 57.79           C
ATOM   6869  C   PRO A  44     -17.649 -14.450  27.435  1.00 58.24           C
ATOM   6870  O   PRO A  44     -16.535 -14.906  27.170  1.00 59.17           O
ATOM   6871  N   GLY A  45     -18.730 -15.206  27.607  1.00 58.29           N
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ATOM   6872  CA  GLY A  45     -18.689 -16.661  27.482  1.00 58.14           C
ATOM   6875  C   GLY A  45     -18.251 -17.423  28.727  1.00 58.93           C
ATOM   6876  O   GLY A  45     -18.321 -18.655  28.745  1.00 58.45           O
ATOM   6878  N   GLN A  46     -17.829 -16.715  29.780  1.00 58.95           N
ATOM   6879  CA  GLN A  46     -17.197 -17.370  30.944  1.00 58.13           C
ATOM   6881  CB  GLN A  46     -15.761 -16.887  31.082  1.00 57.66           C
ATOM   6884  CG  GLN A  46     -14.876 -17.334  29.967  1.00 57.84           C
ATOM   6887  CD  GLN A  46     -13.556 -16.649  30.013  1.00 58.02           C
ATOM   6888  OE1 GLN A  46     -13.096 -16.241  31.074  1.00 59.99           O
ATOM   6889  NE2 GLN A  46     -12.933 -16.500  28.858  1.00 62.54           N
ATOM   6892  C   GLN A  46     -17.893 -17.159  32.288  1.00 57.25           C
ATOM   6893  O   GLN A  46     -18.670 -16.216  32.456  1.00 56.93           O
ATOM   6895  N   PRO A  47     -17.597 -18.035  33.263  1.00 56.40           N
ATOM   6896  CA  PRO A  47     -18.057 -17.725  34.613  1.00 56.63           C
ATOM   6898  CB  PRO A  47     -17.583 -18.928  35.452  1.00 56.08           C
ATOM   6901  CG  PRO A  47     -16.489 -19.565  34.647  1.00 56.71           C
ATOM   6904  CD  PRO A  47     -16.862 -19.312  33.208  1.00 56.14           C
ATOM   6907  C   PRO A  47     -17.395 -16.451  35.108  1.00 55.38           C
ATOM   6908  O   PRO A  47     -16.299 -16.119  34.660  1.00 55.28           O
ATOM   6909  N   PRO A  48     -18.068 -15.720  35.999  1.00 54.95           N
ATOM   6910  CA  PRO A  48     -17.354 -14.666  36.712  1.00 54.76           C
ATOM   6912  CB  PRO A  48     -18.432 -14.047  37.617  1.00 55.39           C
ATOM   6915  CG  PRO A  48     -19.744 -14.474  37.009  1.00 55.42           C
ATOM   6918  CD  PRO A  48     -19.495 -15.784  36.356  1.00 53.86           C
ATOM   6921  C   PRO A  48     -16.195 -15.218  37.547  1.00 54.08           C
ATOM   6922  O   PRO A  48     -16.126 -16.416  37.839  1.00 53.70           O
ATOM   6923  N   LYS A  49     -15.308 -14.319  37.940  1.00 54.11           N
ATOM   6924  CA  LYS A  49     -14.078 -14.662  38.626  1.00 53.40           C
ATOM   6926  CB  LYS A  49     -12.924 -14.574  37.616  1.00 53.57           C
ATOM   6929  CG  LYS A  49     -11.519 -14.593  38.178  1.00 54.85           C
ATOM   6932  CD  LYS A  49     -10.495 -14.468  37.056  1.00 54.92           C
ATOM   6935  CE  LYS A  49      -9.116 -14.072  37.583  1.00 58.10           C
ATOM   6938  NZ  LYS A  49      -8.308 -13.354  36.545  1.00 59.59           N
ATOM   6942  C   LYS A  49     -13.917 -13.654  39.743  1.00 51.86           C
ATOM   6943  O   LYS A  49     -14.029 -12.458  39.508  1.00 51.35           O
ATOM   6945  N   LEU A  50     -13.682 -14.133  40.959  1.00 53.13           N
ATOM   6946  CA  LEU A  50     -13.545 -13.245  42.122  1.00 53.31           C
ATOM   6948  CB  LEU A  50     -13.620 -14.020  43.441  1.00 51.20           C
ATOM   6951  CG  LEU A  50     -13.397 -13.212  44.724  1.00 51.81           C
ATOM   6953  CD1 LEU A  50     -14.486 -12.193  44.949  1.00 53.08           C
ATOM   6957  CD2 LEU A  50     -13.322 -14.132  45.921  1.00 53.48           C
ATOM   6961  C   LEU A  50     -12.225 -12.528  42.057  1.00 54.02           C
ATOM   6962  O   LEU A  50     -11.183 -13.162  41.943  1.00 56.64           O
ATOM   6964  N   LEU A  51     -12.276 -11.207  42.155  1.00 54.52           N
ATOM   6965  CA  LEU A  51     -11.071 -10.397  42.184  1.00 55.06           C
ATOM   6967  CB  LEU A  51     -11.276  -9.123  41.358  1.00 56.57           C
ATOM   6970  CG  LEU A  51     -11.540  -9.333  39.867  1.00 55.21           C
ATOM   6972  CD1 LEU A  51     -11.735  -7.987  39.175  1.00 54.74           C
ATOM   6976  CD2 LEU A  51     -10.409 -10.130  39.247  1.00 54.47           C
ATOM   6980  C   LEU A  51     -10.712 -10.014  43.603  1.00 53.83           C
ATOM   6981  O   LEU A  51      -9.638 -10.356  44.104  1.00 52.66           O
ATOM   6983  N   ILE A  52     -11.628  -9.292  44.234  1.00 53.69           N
ATOM   6984  CA  ILE A  52     -11.381  -8.680  45.521  1.00 54.72           C
ATOM   6986  CB  ILE A  52     -11.218  -7.150  45.370  1.00 55.20           C
ATOM   6988  CG1 ILE A  52     -10.026  -6.877  44.444  1.00 57.47           C
ATOM   6991  CD1 ILE A  52      -9.359  -5.528  44.627  1.00 58.35           C
ATOM   6995  CG2 ILE A  52     -11.043  -6.456  46.750  1.00 55.97           C
ATOM   6999  C   ILE A  52     -12.518  -9.029  46.459  1.00 53.90           C
ATOM   7000  O   ILE A  52     -13.674  -9.081  46.048  1.00 55.25           O
ATOM   7002  N   TYR A  53     -12.183  -9.283  47.719  1.00 52.27           N
ATOM   7003  CA  TYR A  53     -13.179  -9.683  48.691  1.00 51.84           C
ATOM   7005  CB  TYR A  53     -13.201 -11.209  48.844  1.00 50.98           C
ATOM   7008  CG  TYR A  53     -11.973 -11.804  49.485  1.00 50.18           C
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ATOM   7009  CD1 TYR A  53     -10.886 -12.204  48.721  1.00 52.88           C
ATOM   7011  CE1 TYR A  53      -9.771 -12.740  49.311  1.00 50.55           C
ATOM   7013  CZ  TYR A  53      -9.738 -12.895  50.678  1.00 51.51           C
ATOM   7014  OH  TYR A  53      -8.636 -13.418  51.302  1.00 53.71           O
ATOM   7016  CE2 TYR A  53     -10.797 -12.498  51.452  1.00 53.37           C
ATOM   7018  CD2 TYR A  53     -11.899 -11.958  50.857  1.00 53.24           C
ATOM   7020  C   TYR A  53     -12.952  -8.978  50.023  1.00 52.24           C
ATOM   7021  O   TYR A  53     -11.810  -8.709  50.417  1.00 50.39           O
ATOM   7023  N   LEU A  54     -14.070  -8.693  50.693  1.00 51.91           N
ATOM   7024  CA  LEU A  54     -14.142  -7.791  51.839  1.00 51.34           C
ATOM   7026  CB  LEU A  54     -13.530  -8.446  53.072  1.00 53.03           C
ATOM   7029  CG  LEU A  54     -14.257  -9.740  53.462  1.00 55.48           C
ATOM   7031  CD1 LEU A  54     -13.459 -10.524  54.486  1.00 56.22           C
ATOM   7035  CD2 LEU A  54     -15.664  -9.444  53.983  1.00 58.34           C
ATOM   7039  C   LEU A  54     -13.532  -6.425  51.529  1.00 51.04           C
ATOM   7040  O   LEU A  54     -12.740  -5.887  52.296  1.00 53.31           O
ATOM   7042  N   ALA A  55     -13.920  -5.888  50.373  1.00 51.41           N
ATOM   7043  CA  ALA A  55     -13.646  -4.503  49.947  1.00 51.08           C
ATOM   7045  CB  ALA A  55     -13.919  -3.508  51.088  1.00 49.76           C
ATOM   7049  C   ALA A  55     -12.258  -4.270  49.347  1.00 51.09           C
ATOM   7050  O   ALA A  55     -12.118  -3.509  48.369  1.00 49.89           O
ATOM   7052  N   SER A  56     -11.246  -4.915  49.932  1.00 49.94           N
ATOM   7053  CA  SER A  56      -9.855  -4.603  49.608  1.00 48.78           C
ATOM   7055  CB  SER A  56      -9.346  -3.566  50.594  1.00 46.21           C
ATOM   7058  OG  SER A  56      -9.611  -4.007  51.902  1.00 52.26           O
ATOM   7060  C   SER A  56      -8.874  -5.777  49.567  1.00 46.29           C
ATOM   7061  O   SER A  56      -7.741  -5.593  49.124  1.00 44.20           O
ATOM   7063  N   ILE A  57      -9.277  -6.972  49.986  1.00 46.78           N
ATOM   7064  CA  ILE A  57      -8.342  -8.101  49.975  1.00 48.96           C
ATOM   7066  CB  ILE A  57      -8.703  -9.197  50.987  1.00 48.05           C
ATOM   7068  CG1 ILE A  57      -8.893  -8.610  52.390  1.00 48.51           C
ATOM   7071  CD1 ILE A  57      -9.619  -9.541  53.371  1.00 49.13           C
ATOM   7075  CG2 ILE A  57      -7.615 -10.239  51.019  1.00 46.24           C
ATOM   7079  C   ILE A  57      -8.281  -8.733  48.588  1.00 50.59           C
ATOM   7080  O   ILE A  57      -9.301  -9.163  48.049  1.00 52.03           O
ATOM   7082  N   LEU A  58      -7.074  -8.800  48.034  1.00 50.85           N
ATOM   7083  CA  LEU A  58      -6.845  -9.365  46.707  1.00 51.56           C
ATOM   7085  CB  LEU A  58      -5.473  -8.913  46.196  1.00 50.88           C
ATOM   7088  CG  LEU A  58      -5.054  -9.229  44.764  1.00 50.99           C
ATOM   7090  CD1 LEU A  58      -6.046  -8.664  43.744  1.00 52.86           C
ATOM   7094  CD2 LEU A  58      -3.665  -8.674  44.530  1.00 51.73           C
ATOM   7098  C   LEU A  58      -6.904 -10.897  46.745  1.00 53.01           C
ATOM   7099  O   LEU A  58      -6.243 -11.534  47.571  1.00 52.97           O
ATOM   7101  N   GLU A  59      -7.699 -11.490  45.861  1.00 53.69           N
ATOM   7102  CA  GLU A  59      -7.753 -12.941  45.770  1.00 54.08           C
ATOM   7104  CB  GLU A  59      -8.912 -13.381  44.868  1.00 54.86           C
ATOM   7107  CG  GLU A  59      -9.010 -14.896  44.584  1.00 57.29           C
ATOM   7110  CD  GLU A  59      -9.437 -15.736  45.791  1.00 60.28           C
ATOM   7111  OE1 GLU A  59      -9.639 -15.172  46.882  1.00 62.11           O
ATOM   7112  OE2 GLU A  59      -9.585 -16.973  45.635  1.00 59.47           O
ATOM   7113  C   GLU A  59      -6.410 -13.436  45.237  1.00 54.90           C
ATOM   7114  O   GLU A  59      -5.736 -12.742  44.469  1.00 53.94           O
ATOM   7116  N   SER A  60      -6.013 -14.632  45.658  1.00 56.06           N
ATOM   7117  CA  SER A  60      -4.727 -15.176  45.237  1.00 56.26           C
ATOM   7119  CB  SER A  60      -4.332 -16.402  46.075  1.00 55.50           C
ATOM   7122  OG  SER A  60      -4.715 -17.609  45.446  1.00 58.42           O
ATOM   7124  C   SER A  60      -4.814 -15.511  43.749  1.00 56.72           C
ATOM   7125  O   SER A  60      -5.868 -15.936  43.271  1.00 57.74           O
ATOM   7127  N   GLY A  61      -3.722 -15.287  43.022  1.00 56.44           N
ATOM   7128  CA  GLY A  61      -3.703 -15.481  41.571  1.00 56.26           C
ATOM   7131  C   GLY A  61      -4.197 -14.284  40.767  1.00 56.56           C
ATOM   7132  O   GLY A  61      -4.145 -14.292  39.544  1.00 57.60           O
ATOM   7134  N   VAL A  62      -4.679 -13.247  41.441  1.00 56.92           N
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ATOM   7135  CA  VAL A  62      -5.113 -12.039  40.753  1.00 55.52           C
ATOM   7137  CB  VAL A  62      -6.345 -11.413  41.432  1.00 56.32           C
ATOM   7139  CG1 VAL A  62      -6.833 -10.187  40.647  1.00 56.97           C
ATOM   7143  CG2 VAL A  62      -7.456 -12.453  41.555  1.00 54.97           C
ATOM   7147  C   VAL A  62      -3.959 -11.047  40.758  1.00 53.94           C
ATOM   7148  O   VAL A  62      -3.345 -10.829  41.797  1.00 51.87           O
ATOM   7150  N   PRO A  63      -3.637 -10.477  39.587  1.00 54.41           N
ATOM   7151  CA  PRO A  63      -2.656  -9.408  39.462  1.00 54.10           C
ATOM   7153  CB  PRO A  63      -2.759  -9.015  37.986  1.00 54.17           C
ATOM   7156  CG  PRO A  63      -3.230 -10.228  37.301  1.00 53.64           C
ATOM   7159  CD  PRO A  63      -4.166 -10.881  38.269  1.00 56.16           C
ATOM   7162  C   PRO A  63      -2.944  -8.195  40.352  1.00 54.03           C
ATOM   7163  O   PRO A  63      -4.086  -7.750  40.449  1.00 50.84           O
ATOM   7164  N   ASP A  64      -1.883  -7.657  40.955  1.00 55.52           N
ATOM   7165  CA  ASP A  64      -1.972  -6.565  41.941  1.00 56.14           C
ATOM   7167  CB  ASP A  64      -0.768  -6.594  42.906  1.00 57.41           C
ATOM   7170  CG  ASP A  64       0.494  -7.131  42.257  1.00 59.16           C
ATOM   7171  OD1 ASP A  64       0.572  -8.359  42.044  1.00 63.24           O
ATOM   7172  OD2 ASP A  64       1.403  -6.336  41.964  1.00 61.08           O
ATOM   7173  C   ASP A  64      -2.134  -5.164  41.330  1.00 56.14           C
ATOM   7174  O   ASP A  64      -2.122  -4.159  42.046  1.00 55.96           O
ATOM   7176  N   ARG A  65      -2.293  -5.084  40.013  1.00 55.75           N
ATOM   7177  CA  ARG A  65      -2.857  -3.871  39.422  1.00 54.91           C
ATOM   7179  CB  ARG A  65      -2.768  -3.869  37.890  1.00 52.92           C
ATOM   7182  CG  ARG A  65      -3.238  -5.140  37.206  1.00 53.78           C
ATOM   7185  CD  ARG A  65      -3.464  -4.930  35.707  1.00 54.01           C
ATOM   7188  NE  ARG A  65      -2.866  -6.013  34.918  1.00 55.33           N
ATOM   7190  CZ  ARG A  65      -3.466  -7.149  34.569  1.00 53.08           C
ATOM   7191  NH1 ARG A  65      -4.712  -7.385  34.918  1.00 58.22           N
ATOM   7194  NH2 ARG A  65      -2.817  -8.057  33.859  1.00 50.59           N
ATOM   7197  C   ARG A  65      -4.310  -3.707  39.900  1.00 55.59           C
ATOM   7198  O   ARG A  65      -4.839  -2.593  39.895  1.00 57.22           O
ATOM   7200  N   PHE A  66      -4.937  -4.809  40.329  1.00 54.50           N
ATOM   7201  CA  PHE A  66      -6.304  -4.775  40.860  1.00 53.47           C
ATOM   7203  CB  PHE A  66      -7.025  -6.106  40.638  1.00 53.02           C
ATOM   7206  CG  PHE A  66      -7.353  -6.388  39.207  1.00 52.34           C
ATOM   7207  CD1 PHE A  66      -8.426  -5.763  38.597  1.00 54.62           C
ATOM   7209  CE1 PHE A  66      -8.736  -6.027  37.261  1.00 55.04           C
ATOM   7211  CZ  PHE A  66      -7.971  -6.926  36.541  1.00 53.88           C
ATOM   7213  CE2 PHE A  66      -6.898  -7.555  37.148  1.00 52.38           C
ATOM   7215  CD2 PHE A  66      -6.594  -7.286  38.467  1.00 55.32           C
ATOM   7217  C   PHE A  66      -6.330  -4.457  42.345  1.00 52.53           C
ATOM   7218  O   PHE A  66      -5.888  -5.262  43.167  1.00 53.67           O
ATOM   7220  N   SER A  67      -6.879  -3.292  42.673  1.00 51.14           N
ATOM   7221  CA  SER A  67      -7.042  -2.869  44.050  1.00 51.37           C
ATOM   7223  CB  SER A  67      -6.077  -1.735  44.363  1.00 50.33           C
ATOM   7226  OG  SER A  67      -6.054  -0.799  43.298  1.00 55.07           O
ATOM   7228  C   SER A  67      -8.470  -2.406  44.281  1.00 51.76           C
ATOM   7229  O   SER A  67      -9.132  -1.929  43.360  1.00 52.61           O
ATOM   7231  N   GLY A  68      -8.931  -2.561  45.519  1.00 51.87           N
ATOM   7232  CA  GLY A  68     -10.273  -2.167  45.929  1.00 51.41           C
ATOM   7235  C   GLY A  68     -10.196  -1.332  47.192  1.00 51.27           C
ATOM   7236  O   GLY A  68      -9.432  -1.650  48.092  1.00 50.99           O
ATOM   7238  N   SER A  69     -10.981  -0.260  47.256  1.00 51.77           N
ATOM   7239  CA  SER A  69     -10.959   0.650  48.391  1.00 52.17           C
ATOM   7241  CB  SER A  69     -10.138   1.864  48.024  1.00 50.86           C
ATOM   7244  OG  SER A  69     -10.575   2.340  46.777  1.00 59.28           O
ATOM   7246  C   SER A  69     -12.382   1.049  48.788  1.00 53.47           C
ATOM   7247  O   SER A  69     -13.348   0.465  48.298  1.00 55.90           O
ATOM   7249  N   GLY A  70     -12.509   2.006  49.709  1.00 54.20           N
ATOM   7250  CA  GLY A  70     -13.807   2.514  50.139  1.00 53.73           C
ATOM   7253  C   GLY A  70     -14.384   1.787  51.341  1.00 54.85           C
ATOM   7254  O   GLY A  70     -13.969   0.677  51.669  1.00 56.68           O
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ATOM   7256  N   SER A  71     -15.356   2.427  51.989  1.00 54.91           N
ATOM   7257  CA  SER A  71     -16.000   1.913  53.191  1.00 54.12           C
ATOM   7259  CB  SER A  71     -15.161   2.242  54.422  1.00 53.07           C
ATOM   7262  OG  SER A  71     -15.441   3.559  54.890  1.00 57.24           O
ATOM   7264  C   SER A  71     -17.379   2.545  53.367  1.00 55.67           C
ATOM   7265  O   SER A  71     -17.686   3.581  52.771  1.00 55.30           O
ATOM   7267  N   GLY A  72     -18.189   1.941  54.232  1.00 57.09           N
ATOM   7268  CA  GLY A  72     -19.520   2.452  54.532  1.00 55.83           C
ATOM   7271  C   GLY A  72     -20.460   2.161  53.381  1.00 57.35           C
ATOM   7272  O   GLY A  72     -21.050   1.073  53.303  1.00 59.43           O
ATOM   7274  N   THR A  73     -20.574   3.120  52.469  1.00 55.93           N
ATOM   7275  CA  THR A  73     -21.540   3.030  51.390  1.00 54.91           C
ATOM   7277  CB  THR A  73     -22.703   4.005  51.659  1.00 53.72           C
ATOM   7279  OG1 THR A  73     -23.872   3.536  50.984  1.00 58.09           O
ATOM   7281  CG2 THR A  73     -22.369   5.433  51.220  1.00 52.98           C
ATOM   7285  C   THR A  73     -20.958   3.236  49.985  1.00 55.23           C
ATOM   7286  O   THR A  73     -21.652   3.020  48.991  1.00 56.02           O
ATOM   7288  N   ASP A  74     -19.692   3.642  49.908  1.00 56.51           N
ATOM   7289  CA  ASP A  74     -19.025   3.942  48.639  1.00 56.04           C
ATOM   7291  CB  ASP A  74     -18.639   5.423  48.556  1.00 55.46           C
ATOM   7294  CG  ASP A  74     -19.844   6.352  48.540  1.00 61.93           C
ATOM   7295  OD1 ASP A  74     -19.639   7.577  48.680  1.00 68.46           O
ATOM   7296  OD2 ASP A  74     -20.993   5.880  48.381  1.00 67.34           O
ATOM   7297  C   ASP A  74     -17.767   3.107  48.533  1.00 54.94           C
ATOM   7298  O   ASP A  74     -16.970   3.067  49.468  1.00 52.69           O
ATOM   7300  N   PHE A  75     -17.595   2.443  47.390  1.00 54.87           N
ATOM   7301  CA  PHE A  75     -16.428   1.604  47.141  1.00 55.21           C
ATOM   7303  CB  PHE A  75     -16.782   0.146  47.387  1.00 55.21           C
ATOM   7306  CG  PHE A  75     -17.312  -0.082  48.744  1.00 52.92           C
ATOM   7307  CD1 PHE A  75     -16.460  -0.417  49.765  1.00 52.09           C
ATOM   7309  CE1 PHE A  75     -16.937  -0.591  51.044  1.00 56.53           C
ATOM   7311  CZ  PHE A  75     -18.289  -0.390  51.321  1.00 58.39           C
ATOM   7313  CE2 PHE A  75     -19.154  -0.030  50.298  1.00 56.60           C
ATOM   7315  CD2 PHE A  75     -18.657   0.131  49.019  1.00 54.00           C
ATOM   7317  C   PHE A  75     -15.904   1.784  45.745  1.00 55.28           C
ATOM   7318  O   PHE A  75     -16.603   2.291  44.872  1.00 56.32           O
ATOM   7320  N   THR A  76     -14.661   1.367  45.546  1.00 56.75           N
ATOM   7321  CA  THR A  76     -13.986   1.540  44.266  1.00 56.78           C
ATOM   7323  CB  THR A  76     -13.141   2.821  44.276  1.00 55.69           C
ATOM   7325  OG1 THR A  76     -13.948   3.914  44.720  1.00 57.58           O
ATOM   7327  CG2 THR A  76     -12.597   3.122  42.892  1.00 55.81           C
ATOM   7331  C   THR A  76     -13.072   0.363  43.931  1.00 56.89           C
ATOM   7332  O   THR A  76     -12.251  -0.053  44.756  1.00 55.38           O
ATOM   7334  N   LEU A  77     -13.235  -0.169  42.722  1.00 56.38           N
ATOM   7335  CA  LEU A  77     -12.234  -1.043  42.127  1.00 56.83           C
ATOM   7337  CB  LEU A  77     -12.893  -2.085  41.230  1.00 57.48           C
ATOM   7340  CG  LEU A  77     -11.940  -3.084  40.571  1.00 56.79           C
ATOM   7342  CD1 LEU A  77     -11.533  -4.145  41.568  1.00 56.56           C
ATOM   7346  CD2 LEU A  77     -12.587  -3.712  39.346  1.00 57.61           C
ATOM   7350  C   LEU A  77     -11.308  -0.175  41.288  1.00 56.72           C
ATOM   7351  O   LEU A  77     -11.775   0.701  40.565  1.00 57.99           O
ATOM   7353  N   THR A  78     -10.004  -0.414  41.374  1.00 56.10           N
ATOM   7354  CA  THR A  78      -9.041   0.313  40.552  1.00 55.74           C
ATOM   7356  CB  THR A  78      -8.213   1.289  41.404  1.00 54.03           C
ATOM   7358  OG1 THR A  78      -9.085   2.273  41.958  1.00 53.94           O
ATOM   7360  CG2 THR A  78      -7.172   1.996  40.570  1.00 54.92           C
ATOM   7364  C   THR A  78      -8.121  -0.657  39.806  1.00 55.53           C
ATOM   7365  O   THR A  78      -7.576  -1.595  40.404  1.00 52.71           O
ATOM   7367  N   ILE A  79      -7.977  -0.423  38.497  1.00 55.87           N
ATOM   7368  CA  ILE A  79      -6.981  -1.110  37.668  1.00 57.16           C
ATOM   7370  CB  ILE A  79      -7.603  -1.777  36.408  1.00 57.32           C
ATOM   7372  CG1 ILE A  79      -8.932  -2.461  36.740  1.00 57.61           C
ATOM   7375  CD1 ILE A  79      -9.640  -3.041  35.524  1.00 58.33           C
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ATOM   7379  CG2 ILE A  79      -6.610  -2.779  35.789  1.00 56.93           C
ATOM   7383  C   ILE A  79      -5.921  -0.106  37.213  1.00 56.44           C
ATOM   7384  O   ILE A  79      -6.125   0.637  36.249  1.00 57.25           O
ATOM   7386  N   SER A  80      -4.793  -0.083  37.911  1.00 57.15           N
ATOM   7387  CA  SER A  80      -3.686   0.812  37.559  1.00 58.14           C
ATOM   7389  CB  SER A  80      -2.757   1.013  38.755  1.00 59.15           C
ATOM   7392  OG  SER A  80      -2.139  -0.213  39.116  1.00 59.69           O
ATOM   7394  C   SER A  80      -2.901   0.190  36.426  1.00 57.23           C
ATOM   7395  O   SER A  80      -2.210  -0.800  36.631  1.00 59.05           O
ATOM   7397  N   SER A  81      -2.999   0.761  35.238  1.00 55.34           N
ATOM   7398  CA  SER A  81      -2.395   0.150  34.060  1.00 56.22           C
ATOM   7400  CB  SER A  81      -0.949  -0.300  34.348  1.00 55.71           C
ATOM   7403  OG  SER A  81      -0.171  -0.335  33.169  1.00 56.15           O
ATOM   7405  C   SER A  81      -3.274  -1.012  33.557  1.00 55.92           C
ATOM   7406  O   SER A  81      -3.194  -2.132  34.052  1.00 55.71           O
ATOM   7408  N   LEU A  82      -4.116  -0.720  32.569  1.00 54.92           N
ATOM   7409  CA  LEU A  82      -5.085  -1.677  32.040  1.00 54.27           C
ATOM   7411  CB  LEU A  82      -6.288  -0.921  31.487  1.00 53.66           C
ATOM   7414  CG  LEU A  82      -7.345  -1.788  30.812  1.00 54.67           C
ATOM   7416  CD1 LEU A  82      -8.290  -2.386  31.864  1.00 56.13           C
ATOM   7420  CD2 LEU A  82      -8.110  -0.980  29.774  1.00 54.60           C
ATOM   7424  C   LEU A  82      -4.495  -2.506  30.912  1.00 53.85           C
ATOM   7425  O   LEU A  82      -4.050  -1.950  29.914  1.00 53.85           O
ATOM   7427  N   GLN A  83      -4.530  -3.829  31.044  1.00 53.85           N
ATOM   7428  CA  GLN A  83      -4.055  -4.716  29.975  1.00 54.02           C
ATOM   7430  CB  GLN A  83      -3.403  -5.979  30.540  1.00 53.64           C
ATOM   7433  CG  GLN A  83      -2.419  -5.723  31.659  1.00 53.69           C
ATOM   7436  CD  GLN A  83      -1.535  -4.528  31.408  1.00 52.02           C
ATOM   7437  OE1 GLN A  83      -0.933  -4.395  30.339  1.00 50.05           O
ATOM   7438  NE2 GLN A  83      -1.462  -3.636  32.392  1.00 49.57           N
ATOM   7441  C   GLN A  83      -5.186  -5.113  29.043  1.00 54.44           C
ATOM   7442  O   GLN A  83      -6.362  -4.903  29.350  1.00 55.00           O
ATOM   7444  N   ALA A  84      -4.808  -5.699  27.908  1.00 53.86           N
ATOM   7445  CA  ALA A  84      -5.759  -6.107  26.885  1.00 54.10           C
ATOM   7447  CB  ALA A  84      -5.022  -6.624  25.656  1.00 53.64           C
ATOM   7451  C   ALA A  84      -6.728  -7.164  27.408  1.00 54.54           C
ATOM   7452  O   ALA A  84      -7.925  -7.109  27.108  1.00 53.93           O
ATOM   7454  N   GLU A  85      -6.215  -8.102  28.208  1.00 55.06           N
ATOM   7455  CA  GLU A  85      -7.039  -9.191  28.750  1.00 55.56           C
ATOM   7457  CB  GLU A  85      -6.190 -10.452  28.996  1.00 56.05           C
ATOM   7460  CG  GLU A  85      -5.453 -10.532  30.340  1.00 57.21           C
ATOM   7463  CD  GLU A  85      -4.196  -9.679  30.405  1.00 63.04           C
ATOM   7464  OE1 GLU A  85      -3.691  -9.227  29.344  1.00 68.17           O
ATOM   7465  OE2 GLU A  85      -3.708  -9.473  31.537  1.00 59.53           O
ATOM   7466  C   GLU A  85      -7.843  -8.804  30.008  1.00 55.93           C
ATOM   7467  O   GLU A  85      -8.433  -9.674  30.669  1.00 55.78           O
ATOM   7469  N   ASP A  86      -7.866  -7.508  30.331  1.00 55.50           N
ATOM   7470  CA  ASP A  86      -8.756  -6.975  31.373  1.00 55.34           C
ATOM   7472  CB  ASP A  86      -8.094  -5.793  32.097  1.00 55.33           C
ATOM   7475  CG  ASP A  86      -6.767  -6.168  32.737  1.00 56.50           C
ATOM   7476  OD1 ASP A  86      -6.478  -7.378  32.813  1.00 62.79           O
ATOM   7477  OD2 ASP A  86      -6.010  -5.263  33.163  1.00 57.49           O
ATOM   7478  C   ASP A  86     -10.104  -6.547  30.779  1.00 54.55           C
ATOM   7479  O   ASP A  86     -11.024  -6.167  31.507  1.00 54.08           O
ATOM   7481  N   VAL A  87     -10.220  -6.611  29.458  1.00 53.82           N
ATOM   7482  CA  VAL A  87     -11.446  -6.211  28.789  1.00 53.67           C
ATOM   7484  CB  VAL A  87     -11.226  -6.076  27.246  1.00 53.52           C
ATOM   7486  CG1 VAL A  87     -11.322  -7.423  26.532  1.00 54.55           C
ATOM   7490  CG2 VAL A  87     -12.189  -5.081  26.652  1.00 53.97           C
ATOM   7494  C   VAL A  87     -12.524  -7.221  29.194  1.00 52.94           C
ATOM   7495  O   VAL A  87     -12.381  -8.421  28.960  1.00 51.45           O
ATOM   7497  N   ALA A  88     -13.567  -6.722  29.861  1.00 53.57           N
ATOM   7498  CA  ALA A  88     -14.594  -7.563  30.505  1.00 52.41           C
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ATOM   7500  CB  ALA A  88     -13.940  -8.539  31.490  1.00 51.52           C
ATOM   7504  C   ALA A  88     -15.632  -6.696  31.234  1.00 52.14           C
ATOM   7505  O   ALA A  88     -15.485  -5.475  31.329  1.00 51.35           O
ATOM   7507  N   VAL A  89     -16.685  -7.334  31.741  1.00 53.01           N
ATOM   7508  CA  VAL A  89     -17.688  -6.654  32.573  1.00 52.63           C
ATOM   7510  CB  VAL A  89     -19.114  -7.097  32.208  1.00 51.69           C
ATOM   7512  CG1 VAL A  89     -20.134  -6.425  33.113  1.00 52.60           C
ATOM   7516  CG2 VAL A  89     -19.407  -6.766  30.742  1.00 49.94           C
ATOM   7520  C   VAL A  89     -17.411  -6.918  34.059  1.00 52.90           C
ATOM   7521  O   VAL A  89     -17.124  -8.049  34.444  1.00 55.74           O
ATOM   7523  N   TYR A  90     -17.498  -5.870  34.881  1.00 52.72           N
ATOM   7524  CA  TYR A  90     -17.139  -5.941  36.303  1.00 52.61           C
ATOM   7526  CB  TYR A  90     -16.036  -4.927  36.603  1.00 51.58           C
ATOM   7529  CG  TYR A  90     -14.706  -5.298  35.992  1.00 52.00           C
ATOM   7530  CD1 TYR A  90     -14.322  -4.801  34.746  1.00 50.13           C
ATOM   7532  CE1 TYR A  90     -13.102  -5.150  34.182  1.00 48.99           C
ATOM   7534  CZ  TYR A  90     -12.256  -6.008  34.865  1.00 50.14           C
ATOM   7535  OH  TYR A  90     -11.043  -6.366  34.335  1.00 51.47           O
ATOM   7537  CE2 TYR A  90     -12.615  -6.512  36.092  1.00 51.56           C
ATOM   7539  CD2 TYR A  90     -13.834  -6.159  36.652  1.00 51.85           C
ATOM   7541  C   TYR A  90     -18.328  -5.684  37.230  1.00 52.79           C
ATOM   7542  O   TYR A  90     -19.021  -4.675  37.101  1.00 53.04           O
ATOM   7544  N   TYR A  91     -18.537  -6.593  38.178  1.00 54.01           N
ATOM   7545  CA  TYR A  91     -19.675  -6.534  39.103  1.00 54.80           C
ATOM   7547  CB  TYR A  91     -20.503  -7.823  38.999  1.00 53.92           C
ATOM   7550  CG  TYR A  91     -21.130  -8.084  37.645  1.00 54.43           C
ATOM   7551  CD1 TYR A  91     -22.388  -7.586  37.333  1.00 50.63           C
ATOM   7553  CE1 TYR A  91     -22.978  -7.832  36.096  1.00 50.12           C
ATOM   7555  CZ  TYR A  91     -22.309  -8.588  35.155  1.00 52.43           C
ATOM   7556  OH  TYR A  91     -22.892  -8.831  33.934  1.00 53.15           O
ATOM   7558  CE2 TYR A  91     -21.054  -9.100  35.435  1.00 54.13           C
ATOM   7560  CD2 TYR A  91     -20.471  -8.848  36.681  1.00 54.93           C
ATOM   7562  C   TYR A  91     -19.210  -6.376  40.554  1.00 55.26           C
ATOM   7563  O   TYR A  91     -18.219  -6.979  40.950  1.00 55.07           O
ATOM   7565  N   CYS A  92     -19.925  -5.568  41.340  1.00 56.72           N
ATOM   7566  CA  CYS A  92     -19.740  -5.557  42.799  1.00 56.96           C
ATOM   7568  CB  CYS A  92     -19.608  -4.140  43.392  1.00 55.92           C
ATOM   7571  SG  CYS A  92     -21.050  -3.071  43.241  1.00 63.17           S
ATOM   7573  C   CYS A  92     -20.898  -6.307  43.433  1.00 57.25           C
ATOM   7574  O   CYS A  92     -21.929  -6.541  42.797  1.00 56.74           O
ATOM   7576  N   GLN A  93     -20.715  -6.679  44.693  1.00 56.62           N
ATOM   7577  CA  GLN A  93     -21.663  -7.523  45.393  1.00 56.15           C
ATOM   7579  CB  GLN A  93     -21.379  -8.986  45.037  1.00 57.98           C
ATOM   7582  CG  GLN A  93     -22.295 -10.036  45.683  1.00 58.17           C
ATOM   7585  CD  GLN A  93     -21.580 -10.882  46.714  1.00 56.58           C
ATOM   7586  OE1 GLN A  93     -20.509 -11.433  46.447  1.00 55.72           O
ATOM   7587  NE2 GLN A  93     -22.174 -11.003  47.894  1.00 53.83           N
ATOM   7590  C   GLN A  93     -21.493  -7.275  46.879  1.00 56.63           C
ATOM   7591  O   GLN A  93     -20.373  -7.026  47.336  1.00 59.58           O
ATOM   7593  N   HIS A  94     -22.598  -7.313  47.621  1.00 55.54           N
ATOM   7594  CA  HIS A  94     -22.579  -7.114  49.072  1.00 54.51           C
ATOM   7596  CB  HIS A  94     -23.499  -5.950  49.449  1.00 54.63           C
ATOM   7599  CG  HIS A  94     -24.944  -6.329  49.558  1.00 53.37           C
ATOM   7600  ND1 HIS A  94     -25.520  -6.729  50.743  1.00 54.18           N
ATOM   7602  CE1 HIS A  94     -26.795  -7.008  50.542  1.00 57.87           C
ATOM   7604  NE2 HIS A  94     -27.068  -6.801  49.267  1.00 56.34           N
ATOM   7606  CD2 HIS A  94     -25.925  -6.381  48.629  1.00 56.76           C
ATOM   7608  C   HIS A  94     -23.044  -8.396  49.770  1.00 53.97           C
ATOM   7609  O   HIS A  94     -23.712  -9.220  49.148  1.00 54.58           O
ATOM   7611  N   SER A  95     -22.698  -8.567  51.048  1.00 53.62           N
ATOM   7612  CA  SER A  95     -23.309  -9.635  51.857  1.00 53.91           C
ATOM   7614  CB  SER A  95     -22.408 -10.880  51.916  1.00 52.95           C
ATOM   7617  OG  SER A  95     -21.462 -10.790  52.959  1.00 52.57           O
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ATOM   7619  C   SER A  95     -23.744  -9.218  53.275  1.00 53.46           C
ATOM   7620  O   SER A  95     -23.901 -10.066  54.145  1.00 55.35           O
ATOM   7622  N   ARG A  96     -24.000  -7.927  53.466  1.00 52.66           N
ATOM   7623  CA  ARG A  96     -24.400  -7.369  54.752  1.00 52.63           C
ATOM   7625  CB  ARG A  96     -24.627  -5.861  54.610  1.00 53.08           C
ATOM   7628  CG  ARG A  96     -24.999  -5.168  55.909  1.00 52.58           C
ATOM   7631  CD  ARG A  96     -23.848  -5.201  56.891  1.00 52.12           C
ATOM   7634  NE  ARG A  96     -24.241  -4.734  58.219  1.00 53.82           N
ATOM   7636  CZ  ARG A  96     -24.848  -5.478  59.142  1.00 51.83           C
ATOM   7637  NH1 ARG A  96     -25.172  -6.742  58.896  1.00 57.15           N
ATOM   7640  NH2 ARG A  96     -25.135  -4.952  60.321  1.00 49.85           N
ATOM   7643  C   ARG A  96     -25.661  -7.996  55.326  1.00 52.29           C
ATOM   7644  O   ARG A  96     -25.788  -8.152  56.536  1.00 51.71           O
ATOM   7646  N   GLU A  97     -26.609  -8.315  54.454  1.00 52.96           N
ATOM   7647  CA  GLU A  97     -27.821  -9.034  54.846  1.00 53.56           C
ATOM   7649  CB  GLU A  97     -28.880  -8.047  55.339  1.00 53.02           C
ATOM   7652  CG  GLU A  97     -29.345  -7.073  54.253  1.00 58.84           C
ATOM   7655  CD  GLU A  97     -30.179  -5.913  54.775  1.00 59.30           C
ATOM   7656  OE1 GLU A  97     -29.786  -5.305  55.796  1.00 65.24           O
ATOM   7657  OE2 GLU A  97     -31.216  -5.600  54.139  1.00 64.70           O
ATOM   7658  C   GLU A  97     -28.325  -9.822  53.632  1.00 52.14           C
ATOM   7659  O   GLU A  97     -27.807  -9.672  52.530  1.00 53.56           O
ATOM   7661  N   LEU A  98     -29.315 -10.672  53.832  1.00 50.29           N
ATOM   7662  CA  LEU A  98     -30.009 -11.282  52.706  1.00 51.31           C
ATOM   7664  CB  LEU A  98     -30.608 -12.631  53.113  1.00 50.51           C
ATOM   7667  CG  LEU A  98     -29.833 -13.898  52.731  1.00 51.04           C
ATOM   7669  CD1 LEU A  98     -28.413 -13.809  53.106  1.00 56.07           C
ATOM   7673  CD2 LEU A  98     -30.444 -15.092  53.411  1.00 53.98           C
ATOM   7677  C   LEU A  98     -31.101 -10.320  52.226  1.00 50.17           C
ATOM   7678  O   LEU A  98     -31.675  -9.604  53.038  1.00 55.19           O
ATOM   7680  N   PRO A  99     -31.386 -10.278  50.917  1.00 47.74           N
ATOM   7681  CA  PRO A  99     -30.712 -10.973  49.831  1.00 49.71           C
ATOM   7683  CB  PRO A  99     -31.673 -10.808  48.655  1.00 48.71           C
ATOM   7686  CG  PRO A  99     -32.405  -9.597  48.940  1.00 46.65           C
ATOM   7689  CD  PRO A  99     -32.524  -9.489  50.425  1.00 45.81           C
ATOM   7692  C   PRO A  99     -29.355 -10.366  49.478  1.00 51.03           C
ATOM   7693  O   PRO A  99     -29.139  -9.155  49.638  1.00 51.72           O
ATOM   7694  N   TRP A 100     -28.459 -11.229  49.007  1.00 50.96           N
ATOM   7695  CA  TRP A 100     -27.146 -10.831  48.527  1.00 50.00           C
ATOM   7697  CB  TRP A 100     -26.174 -12.012  48.639  1.00 50.47           C
ATOM   7700  CG  TRP A 100     -25.953 -12.494  50.040  1.00 50.98           C
ATOM   7701  CD1 TRP A 100     -25.847 -11.729  51.151  1.00 54.01           C
ATOM   7703  NE1 TRP A 100     -25.616 -12.512  52.253  1.00 54.49           N
ATOM   7705  CE2 TRP A 100     -25.562 -13.822  51.861  1.00 49.41           C
ATOM   7706  CD2 TRP A 100     -25.770 -13.850  50.469  1.00 52.99           C
ATOM   7707  CE3 TRP A 100     -25.763 -15.087  49.809  1.00 55.37           C
ATOM   7709  CZ3 TRP A 100     -25.561 -16.243  50.562  1.00 56.13           C
ATOM   7711  CH2 TRP A 100     -25.364 -16.175  51.957  1.00 54.04           C
ATOM   7713  CZ2 TRP A 100     -25.369 -14.977  52.616  1.00 48.69           C
ATOM   7715  C   TRP A 100     -27.257 -10.352  47.071  1.00 48.92           C
ATOM   7716  O   TRP A 100     -27.376 -11.155  46.147  1.00 48.02           O
ATOM   7718  N   THR A 101     -27.224  -9.040  46.868  1.00 48.80           N
ATOM   7719  CA  THR A 101     -27.430  -8.471  45.533  1.00 48.58           C
ATOM   7721  CB  THR A 101     -28.487  -7.372  45.566  1.00 47.16           C
ATOM   7723  OG1 THR A 101     -28.111  -6.378  46.531  1.00 49.81           O
ATOM   7725  CG2 THR A 101     -29.840  -7.962  45.940  1.00 44.07           C
ATOM   7729  C   THR A 101     -26.138  -7.948  44.869  1.00 48.42           C
ATOM   7730  O   THR A 101     -25.174  -7.547  45.540  1.00 46.67           O
ATOM   7732  N   PHE A 102     -26.141  -7.990  43.539  1.00 47.33           N
ATOM   7733  CA  PHE A 102     -25.065  -7.461  42.728  1.00 48.71           C
ATOM   7735  CB  PHE A 102     -24.836  -8.375  41.530  1.00 49.22           C
ATOM   7738  CG  PHE A 102     -24.308  -9.735  41.871  1.00 48.06           C
ATOM   7739  CD1 PHE A 102     -22.948  -9.990  41.839  1.00 47.28           C
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ATOM   7741  CE1 PHE A 102     -22.459 -11.242  42.114  1.00 47.72           C
ATOM   7743  CZ  PHE A 102     -23.320 -12.274  42.410  1.00 49.08           C
ATOM   7745  CE2 PHE A 102     -24.672 -12.045  42.429  1.00 52.29           C
ATOM   7747  CD2 PHE A 102     -25.165 -10.776  42.151  1.00 50.38           C
ATOM   7749  C   PHE A 102     -25.392  -6.054  42.183  1.00 48.86           C
ATOM   7750  O   PHE A 102     -26.530  -5.583  42.243  1.00 46.85           O
ATOM   7752  N   GLY A 103     -24.373  -5.393  41.651  1.00 50.32           N
ATOM   7753  CA  GLY A 103     -24.561  -4.175  40.865  1.00 51.64           C
ATOM   7756  C   GLY A 103     -24.857  -4.527  39.417  1.00 52.58           C
ATOM   7757  O   GLY A 103     -24.665  -5.672  39.009  1.00 53.77           O
ATOM   7759  N   GLN A 104     -25.307  -3.547  38.634  1.00 51.82           N
ATOM   7760  CA  GLN A 104     -25.784  -3.819  37.275  1.00 51.41           C
ATOM   7762  CB  GLN A 104     -26.653  -2.660  36.755  1.00 51.48           C
ATOM   7765  CG  GLN A 104     -25.918  -1.472  36.086  1.00 54.19           C
ATOM   7768  CD  GLN A 104     -25.046  -0.637  37.035  1.00 54.97           C
ATOM   7769  OE1 GLN A 104     -25.432  -0.328  38.165  1.00 52.40           O
ATOM   7770  NE2 GLN A 104     -23.870  -0.249  36.552  1.00 53.59           N
ATOM   7773  C   GLN A 104     -24.658  -4.168  36.288  1.00 51.25           C
ATOM   7774  O   GLN A 104     -24.925  -4.495  35.128  1.00 51.06           O
ATOM   7776  N   GLY A 105     -23.410  -4.097  36.746  1.00 52.04           N
ATOM   7777  CA  GLY A 105     -22.253  -4.457  35.920  1.00 53.02           C
ATOM   7780  C   GLY A 105     -21.667  -3.266  35.187  1.00 52.44           C
ATOM   7781  O   GLY A 105     -22.410  -2.394  34.746  1.00 54.03           O
ATOM   7783  N   THR A 106     -20.338  -3.222  35.069  1.00 52.03           N
ATOM   7784  CA  THR A 106     -19.651  -2.143  34.341  1.00 52.72           C
ATOM   7786  CB  THR A 106     -18.836  -1.204  35.291  1.00 52.36           C
ATOM   7788  OG1 THR A 106     -19.726  -0.394  36.070  1.00 49.16           O
ATOM   7790  CG2 THR A 106     -17.921  -0.278  34.499  1.00 51.63           C
ATOM   7794  C   THR A 106     -18.729  -2.726  33.265  1.00 52.67           C
ATOM   7795  O   THR A 106     -17.800  -3.476  33.563  1.00 52.64           O
ATOM   7797  N   LYS A 107     -18.997  -2.356  32.019  1.00 53.56           N
ATOM   7798  CA  LYS A 107     -18.216  -2.797  30.865  1.00 54.50           C
ATOM   7800  CB  LYS A 107     -19.056  -2.633  29.584  1.00 55.33           C
ATOM   7803  CG  LYS A 107     -18.694  -3.555  28.426  1.00 55.32           C
ATOM   7806  CD  LYS A 107     -19.661  -3.351  27.255  1.00 57.23           C
ATOM   7809  CE  LYS A 107     -19.892  -4.643  26.463  1.00 59.97           C
ATOM   7812  NZ  LYS A 107     -20.999  -4.524  25.456  1.00 58.78           N
ATOM   7816  C   LYS A 107     -16.937  -1.960  30.763  1.00 54.40           C
ATOM   7817  O   LYS A 107     -16.979  -0.728  30.828  1.00 53.19           O
ATOM   7819  N   VAL A 108     -15.804  -2.637  30.606  1.00 54.82           N
ATOM   7820  CA  VAL A 108     -14.511  -1.969  30.472  1.00 55.05           C
ATOM   7822  CB  VAL A 108     -13.567  -2.356  31.613  1.00 54.32           C
ATOM   7824  CG1 VAL A 108     -12.180  -1.740  31.403  1.00 54.65           C
ATOM   7828  CG2 VAL A 108     -14.159  -1.908  32.934  1.00 54.76           C
ATOM   7832  C   VAL A 108     -13.879  -2.342  29.139  1.00 55.39           C
ATOM   7833  O   VAL A 108     -13.765  -3.524  28.815  1.00 56.54           O
ATOM   7835  N   GLU A 109     -13.461  -1.330  28.380  1.00 55.65           N
ATOM   7836  CA  GLU A 109     -13.000  -1.520  27.010  1.00 55.70           C
ATOM   7838  CB  GLU A 109     -14.096  -1.111  26.023  1.00 55.49           C
ATOM   7841  CG  GLU A 109     -15.315  -2.019  26.060  1.00 57.22           C
ATOM   7844  CD  GLU A 109     -16.368  -1.649  25.026  1.00 59.67           C
ATOM   7845  OE1 GLU A 109     -17.384  -2.374  24.913  1.00 65.87           O
ATOM   7846  OE2 GLU A 109     -16.187  -0.641  24.314  1.00 65.28           O
ATOM   7847  C   GLU A 109     -11.735  -0.738  26.727  1.00 54.66           C
ATOM   7848  O   GLU A 109     -11.360   0.158  27.483  1.00 54.68           O
ATOM   7850  N   ILE A 110     -11.092  -1.095  25.619  1.00 54.72           N
ATOM   7851  CA  ILE A 110      -9.846  -0.474  25.179  1.00 54.28           C
ATOM   7853  CB  ILE A 110      -8.905  -1.525  24.520  1.00 53.48           C
ATOM   7855  CG1 ILE A 110      -8.066  -2.224  25.588  1.00 53.77           C
ATOM   7858  CD1 ILE A 110      -8.881  -3.021  26.591  1.00 58.37           C
ATOM   7862  CG2 ILE A 110      -7.955  -0.889  23.512  1.00 55.60           C
ATOM   7866  C   ILE A 110     -10.124   0.675  24.210  1.00 53.88           C
ATOM   7867  O   ILE A 110     -10.812   0.493  23.211  1.00 53.96           O
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ATOM	7869	N	LYS	A	111	-9.601	1.859	24.529	1.00	53.81	N
ATOM	7870	CA	LYS	A	111	-9.520	2.957	23.566	1.00	53.70	C
ATOM	7872	CB	LYS	A	111	-9.334	4.321	24.247	1.00	54.81	C
ATOM	7875	CG	LYS	A	111	-10.597	5.186	24.332	1.00	55.76	C
ATOM	7878	CD	LYS	A	111	-10.225	6.673	24.356	1.00	54.86	C
ATOM	7881	CE	LYS	A	111	-11.443	7.572	24.436	1.00	56.09	C
ATOM	7884	NZ	LYS	A	111	-11.130	8.946	23.941	1.00	56.07	N
ATOM	7888	C	LYS	A	111	-8.353	2.674	22.622	1.00	52.73	C
ATOM	7889	O	LYS	A	111	-7.286	2.224	23.040	1.00	52.75	O
ATOM	7891	N	ARG	A	112	-8.564	2.970	21.349	1.00	52.16	N
ATOM	7892	CA	ARG	A	112	-7.737	2.438	20.279	1.00	51.34	C
ATOM	7894	CB	ARG	A	112	-8.366	1.124	19.796	1.00	51.68	C
ATOM	7897	CG	ARG	A	112	-7.402	0.056	19.307	1.00	50.70	C
ATOM	7900	CD	ARG	A	112	-8.101	-0.871	18.306	1.00	49.45	C
ATOM	7903	NE	ARG	A	112	-8.000	-0.347	16.947	1.00	43.37	N
ATOM	7905	CZ	ARG	A	112	-7.017	-0.634	16.096	1.00	42.48	C
ATOM	7906	NH1	ARG	A	112	-6.042	-1.475	16.420	1.00	43.80	N
ATOM	7909	NH2	ARG	A	112	-7.016	-0.084	14.896	1.00	45.43	N
ATOM	7912	C	ARG	A	112	-7.694	3.438	19.130	1.00	50.60	C
ATOM	7913	O	ARG	A	112	-8.498	4.370	19.071	1.00	49.78	O
ATOM	7915	N	THR	A	113	-6.761	3.245	18.210	1.00	50.40	N
ATOM	7916	CA	THR	A	113	-6.773	4.017	16.978	1.00	50.07	C
ATOM	7918	CB	THR	A	113	-5.461	3.877	16.187	1.00	49.90	C
ATOM	7920	OG1	THR	A	113	-5.318	2.529	15.726	1.00	51.67	O
ATOM	7922	CG2	THR	A	113	-4.261	4.250	17.053	1.00	50.19	C
ATOM	7926	C	THR	A	113	-7.939	3.511	16.138	1.00	49.54	C
ATOM	7927	O	THR	A	113	-8.385	2.377	16.300	1.00	48.69	O
ATOM	7929	N	VAL	A	114	-8.434	4.366	15.254	1.00	49.70	N
ATOM	7930	CA	VAL	A	114	-9.531	4.005	14.377	1.00	49.23	C
ATOM	7932	CB	VAL	A	114	-10.137	5.246	13.694	1.00	48.83	C
ATOM	7934	CG1	VAL	A	114	-11.138	4.839	12.602	1.00	48.71	C
ATOM	7938	CG2	VAL	A	114	-10.793	6.150	14.726	1.00	47.21	C
ATOM	7942	C	VAL	A	114	-9.026	3.029	13.318	1.00	49.85	C
ATOM	7943	O	VAL	A	114	-7.996	3.270	12.679	1.00	49.97	O
ATOM	7945	N	ALA	A	115	-9.758	1.927	13.161	1.00	50.08	N
ATOM	7946	CA	ALA	A	115	-9.490	0.922	12.138	1.00	49.55	C
ATOM	7948	CB	ALA	A	115	-9.220	-0.438	12.781	1.00	48.81	C
ATOM	7952	C	ALA	A	115	-10.706	0.833	11.230	1.00	49.65	C
ATOM	7953	O	ALA	A	115	-11.824	0.691	11.723	1.00	49.77	O
ATOM	7955	N	ALA	A	116	-10.488	0.920	9.917	1.00	49.56	N
ATOM	7956	CA	ALA	A	116	-11.565	0.786	8.935	1.00	49.41	C
ATOM	7958	CB	ALA	A	116	-11.090	1.241	7.563	1.00	48.58	C
ATOM	7962	C	ALA	A	116	-12.057	-0.663	8.864	1.00	50.01	C
ATOM	7963	O	ALA	A	116	-11.254	-1.595	8.956	1.00	49.43	O
ATOM	7965	N	PRO	A	117	-13.382	-0.860	8.710	1.00	50.75	N
ATOM	7966	CA	PRO	A	117	-13.883	-2.212	8.464	1.00	50.58	C
ATOM	7968	CB	PRO	A	117	-15.382	-2.104	8.759	1.00	50.21	C
ATOM	7971	CG	PRO	A	117	-15.719	-0.667	8.592	1.00	49.70	C
ATOM	7974	CD	PRO	A	117	-14.465	0.141	8.756	1.00	50.74	C
ATOM	7977	C	PRO	A	117	-13.672	-2.625	7.012	1.00	51.44	C
ATOM	7978	O	PRO	A	117	-14.023	-1.872	6.102	1.00	50.88	O
ATOM	7979	N	SER	A	118	-13.084	-3.797	6.799	1.00	51.74	N
ATOM	7980	CA	SER	A	118	-13.089	-4.407	5.479	1.00	50.75	C
ATOM	7982	CB	SER	A	118	-12.096	-5.571	5.408	1.00	50.93	C
ATOM	7985	OG	SER	A	118	-10.764	-5.122	5.578	1.00	50.05	O
ATOM	7987	C	SER	A	118	-14.511	-4.906	5.266	1.00	51.06	C
ATOM	7988	O	SER	A	118	-15.121	-5.420	6.204	1.00	51.50	O
ATOM	7990	N	VAL	A	119	-15.041	-4.730	4.053	1.00	50.99	N
ATOM	7991	CA	VAL	A	119	-16.410	-5.150	3.722	1.00	49.93	C
ATOM	7993	CB	VAL	A	119	-17.306	-3.929	3.399	1.00	49.47	C
ATOM	7995	CG1	VAL	A	119	-18.764	-4.355	3.228	1.00	47.94	C
ATOM	7999	CG2	VAL	A	119	-17.177	-2.859	4.497	1.00	48.88	C
ATOM	8003	C	VAL	A	119	-16.418	-6.133	2.548	1.00	49.26	C

ATOM	8004	O	VAL	A	119	-16.619	-7.338	2.728	1.00	48.94	O
ATOM	8006	N	VAL	A	137	-26.350	-11.364	3.345	1.00	52.92	N
ATOM	8007	CA	VAL	A	137	-25.473	-11.254	4.508	1.00	53.45	C
ATOM	8009	CB	VAL	A	137	-24.879	-12.620	4.906	1.00	52.41	C
ATOM	8011	CG1	VAL	A	137	-23.918	-12.468	6.093	1.00	50.85	C
ATOM	8015	CG2	VAL	A	137	-25.990	-13.602	5.241	1.00	52.25	C
ATOM	8019	C	VAL	A	137	-24.315	-10.284	4.276	1.00	53.76	C
ATOM	8020	O	VAL	A	137	-23.485	-10.509	3.401	1.00	54.18	O
ATOM	8022	N	CYS	A	138	-24.252	-9.233	5.091	1.00	54.63	N
ATOM	8023	CA	CYS	A	138	-23.176	-8.246	5.022	1.00	54.74	C
ATOM	8025	CB	CYS	A	138	-23.751	-6.836	5.120	1.00	55.44	C
ATOM	8028	SG	CYS	A	138	-22.624	-5.571	4.524	1.00	56.29	S
ATOM	8030	C	CYS	A	138	-22.171	-8.457	6.147	1.00	55.03	C
ATOM	8031	O	CYS	A	138	-22.554	-8.786	7.268	1.00	56.14	O
ATOM	8033	N	LEU	A	139	-20.890	-8.256	5.848	1.00	54.31	N
ATOM	8034	CA	LEU	A	139	-19.826	-8.442	6.830	1.00	53.98	C
ATOM	8036	CB	LEU	A	139	-18.983	-9.663	6.469	1.00	53.28	C
ATOM	8039	CG	LEU	A	139	-17.700	-9.830	7.293	1.00	53.23	C
ATOM	8041	CD1	LEU	A	139	-18.030	-9.996	8.772	1.00	51.68	C
ATOM	8045	CD2	LEU	A	139	-16.892	-11.000	6.782	1.00	52.53	C
ATOM	8049	C	LEU	A	139	-18.914	-7.226	6.903	1.00	54.68	C
ATOM	8050	O	LEU	A	139	-18.308	-6.845	5.904	1.00	56.02	O
ATOM	8052	N	LEU	A	140	-18.804	-6.637	8.090	1.00	54.60	N
ATOM	8053	CA	LEU	A	140	-17.828	-5.576	8.349	1.00	54.27	C
ATOM	8055	CB	LEU	A	140	-18.487	-4.378	9.045	1.00	54.07	C
ATOM	8058	CG	LEU	A	140	-19.584	-3.624	8.280	1.00	52.55	C
ATOM	8060	CD1	LEU	A	140	-20.827	-4.478	8.019	1.00	51.87	C
ATOM	8064	CD2	LEU	A	140	-19.961	-2.385	9.053	1.00	52.40	C
ATOM	8068	C	LEU	A	140	-16.749	-6.175	9.237	1.00	54.38	C
ATOM	8069	O	LEU	A	140	-17.044	-6.627	10.343	1.00	55.50	O
ATOM	8071	N	ASN	A	141	-15.506	-6.189	8.762	1.00	54.13	N
ATOM	8072	CA	ASN	A	141	-14.439	-6.912	9.455	1.00	54.40	C
ATOM	8074	CB	ASN	A	141	-13.759	-7.887	8.484	1.00	54.36	C
ATOM	8077	CG	ASN	A	141	-13.104	-9.081	9.185	1.00	53.38	C
ATOM	8078	OD1	ASN	A	141	-12.731	-10.048	8.530	1.00	51.81	O
ATOM	8079	ND2	ASN	A	141	-12.964	-9.019	10.504	1.00	55.85	N
ATOM	8082	C	ASN	A	141	-13.395	-5.990	10.102	1.00	55.01	C
ATOM	8083	O	ASN	A	141	-12.799	-5.139	9.433	1.00	55.64	O
ATOM	8085	N	ASN	A	142	-13.206	-6.180	11.411	1.00	54.47	N
ATOM	8086	CA	ASN	A	142	-12.149	-5.547	12.213	1.00	53.54	C
ATOM	8088	CB	ASN	A	142	-10.787	-6.176	11.889	1.00	52.77	C
ATOM	8091	CG	ASN	A	142	-10.739	-7.670	12.205	1.00	52.05	C
ATOM	8092	OD1	ASN	A	142	-11.202	-8.112	13.256	1.00	51.93	O
ATOM	8093	ND2	ASN	A	142	-10.185	-8.451	11.288	1.00	51.89	N
ATOM	8096	C	ASN	A	142	-12.095	-4.024	12.130	1.00	53.21	C
ATOM	8097	O	ASN	A	142	-11.225	-3.457	11.475	1.00	54.01	O
ATOM	8099	N	PHE	A	143	-13.030	-3.374	12.823	1.00	54.16	N
ATOM	8100	CA	PHE	A	143	-13.115	-1.909	12.864	1.00	54.45	C
ATOM	8102	CB	PHE	A	143	-14.330	-1.421	12.072	1.00	55.13	C
ATOM	8105	CG	PHE	A	143	-15.656	-1.852	12.649	1.00	54.31	C
ATOM	8106	CD1	PHE	A	143	-16.322	-1.050	13.563	1.00	55.41	C
ATOM	8108	CE1	PHE	A	143	-17.550	-1.440	14.095	1.00	55.65	C
ATOM	8110	CZ	PHE	A	143	-18.123	-2.642	13.708	1.00	55.84	C
ATOM	8112	CE2	PHE	A	143	-17.469	-3.451	12.792	1.00	55.98	C
ATOM	8114	CD2	PHE	A	143	-16.243	-3.051	12.264	1.00	55.54	C
ATOM	8116	C	PHE	A	143	-13.192	-1.366	14.288	1.00	54.61	C
ATOM	8117	O	PHE	A	143	-13.381	-2.124	15.243	1.00	54.71	O
ATOM	8119	N	TYR	A	144	-13.047	-0.048	14.417	1.00	54.02	N
ATOM	8120	CA	TYR	A	144	-13.157	0.619	15.716	1.00	54.45	C
ATOM	8122	CB	TYR	A	144	-11.862	0.444	16.533	1.00	53.86	C
ATOM	8125	CG	TYR	A	144	-11.971	0.974	17.951	1.00	54.68	C
ATOM	8126	CD1	TYR	A	144	-11.704	2.313	18.237	1.00	55.07	C
ATOM	8128	CE1	TYR	A	144	-11.823	2.811	19.528	1.00	52.91	C

ATOM	8130	CZ	TYR	A	144	-12.214	1.970	20.547	1.00	53.28	C
ATOM	8131	OH	TYR	A	144	-12.329	2.469	21.822	1.00	55.54	O
ATOM	8133	CE2	TYR	A	144	-12.489	0.637	20.293	1.00	53.44	C
ATOM	8135	CD2	TYR	A	144	-12.367	0.145	19.002	1.00	54.46	C
ATOM	8137	C	TYR	A	144	-13.458	2.108	15.518	1.00	55.01	C
ATOM	8138	O	TYR	A	144	-12.868	2.735	14.637	1.00	55.16	O
ATOM	8140	N	PRO	A	145	-14.368	2.685	16.332	1.00	55.73	N
ATOM	8141	CA	PRO	A	145	-15.161	2.107	17.412	1.00	56.70	C
ATOM	8143	CB	PRO	A	145	-15.390	3.309	18.333	1.00	56.28	C
ATOM	8146	CG	PRO	A	145	-15.447	4.472	17.417	1.00	55.85	C
ATOM	8149	CD	PRO	A	145	-14.665	4.121	16.174	1.00	55.75	C
ATOM	8152	C	PRO	A	145	-16.492	1.517	16.917	1.00	57.75	C
ATOM	8153	O	PRO	A	145	-16.688	1.363	15.709	1.00	58.63	O
ATOM	8154	N	ARG	A	146	-17.388	1.192	17.848	1.00	58.22	N
ATOM	8155	CA	ARG	A	146	-18.698	0.625	17.525	1.00	58.14	C
ATOM	8157	CB	ARG	A	146	-19.180	-0.236	18.699	1.00	58.94	C
ATOM	8160	CG	ARG	A	146	-20.125	-1.365	18.309	1.00	60.14	C
ATOM	8163	CD	ARG	A	146	-20.915	-1.924	19.508	1.00	61.01	C
ATOM	8166	NE	ARG	A	146	-20.064	-2.473	20.570	1.00	64.92	N
ATOM	8168	CZ	ARG	A	146	-20.469	-3.339	21.502	1.00	64.17	C
ATOM	8169	NH1	ARG	A	146	-21.721	-3.785	21.519	1.00	65.11	N
ATOM	8172	NH2	ARG	A	146	-19.611	-3.774	22.420	1.00	62.06	N
ATOM	8175	C	ARG	A	146	-19.726	1.722	17.227	1.00	56.33	C
ATOM	8176	O	ARG	A	146	-19.790	2.254	16.122	1.00	54.77	O
ATOM	8178	N	SER	A	160	-36.742	-0.105	5.921	1.00	47.65	N
ATOM	8179	CA	SER	A	160	-36.853	-1.554	5.872	1.00	48.11	C
ATOM	8181	CB	SER	A	160	-35.716	-2.138	5.035	1.00	47.68	C
ATOM	8184	OG	SER	A	160	-35.706	-1.600	3.728	1.00	46.12	O
ATOM	8186	C	SER	A	160	-36.801	-2.152	7.273	1.00	48.80	C
ATOM	8187	O	SER	A	160	-36.028	-1.701	8.114	1.00	49.61	O
ATOM	8189	N	GLY	A	161	-37.626	-3.166	7.516	1.00	49.18	N
ATOM	8190	CA	GLY	A	161	-37.570	-3.947	8.754	1.00	49.41	C
ATOM	8193	C	GLY	A	161	-37.327	-5.418	8.458	1.00	49.98	C
ATOM	8194	O	GLY	A	161	-37.954	-6.290	9.060	1.00	50.56	O
ATOM	8196	N	ASN	A	162	-36.405	-5.686	7.532	1.00	50.18	N
ATOM	8197	CA	ASN	A	162	-36.124	-7.045	7.036	1.00	49.88	C
ATOM	8199	CB	ASN	A	162	-36.604	-7.178	5.583	1.00	48.98	C
ATOM	8202	CG	ASN	A	162	-36.151	-6.017	4.705	1.00	47.85	C
ATOM	8203	OD1	ASN	A	162	-34.971	-5.662	4.674	1.00	48.45	O
ATOM	8204	ND2	ASN	A	162	-37.093	-5.414	3.997	1.00	46.18	N
ATOM	8207	C	ASN	A	162	-34.637	-7.415	7.150	1.00	50.21	C
ATOM	8208	O	ASN	A	162	-34.149	-8.318	6.461	1.00	50.61	O
ATOM	8210	N	SER	A	163	-33.930	-6.710	8.028	1.00	50.15	N
ATOM	8211	CA	SER	A	163	-32.514	-6.947	8.262	1.00	50.83	C
ATOM	8213	CB	SER	A	163	-31.660	-5.957	7.466	1.00	51.23	C
ATOM	8216	OG	SER	A	163	-31.782	-4.635	7.975	1.00	50.65	O
ATOM	8218	C	SER	A	163	-32.217	-6.788	9.743	1.00	51.26	C
ATOM	8219	O	SER	A	163	-32.763	-5.896	10.392	1.00	52.28	O
ATOM	8221	N	GLN	A	164	-31.349	-7.649	10.264	1.00	50.89	N
ATOM	8222	CA	GLN	A	164	-30.905	-7.576	11.659	1.00	51.71	C
ATOM	8224	CB	GLN	A	164	-31.667	-8.593	12.522	1.00	51.48	C
ATOM	8227	CG	GLN	A	164	-31.821	-9.978	11.880	1.00	51.08	C
ATOM	8230	CD	GLN	A	164	-32.641	-10.939	12.710	1.00	49.96	C
ATOM	8231	OE1	GLN	A	164	-33.117	-10.596	13.790	1.00	46.20	O
ATOM	8232	NE2	GLN	A	164	-32.812	-12.156	12.206	1.00	47.01	N
ATOM	8235	C	GLN	A	164	-29.392	-7.816	11.712	1.00	53.01	C
ATOM	8236	O	GLN	A	164	-28.825	-8.434	10.807	1.00	54.44	O
ATOM	8238	N	GLU	A	165	-28.730	-7.323	12.752	1.00	53.17	N
ATOM	8239	CA	GLU	A	165	-27.273	-7.427	12.807	1.00	53.68	C
ATOM	8241	CB	GLU	A	165	-26.621	-6.082	12.460	1.00	54.11	C
ATOM	8244	CG	GLU	A	165	-27.462	-4.861	12.792	1.00	55.35	C
ATOM	8247	CD	GLU	A	165	-26.721	-3.563	12.526	1.00	55.26	C
ATOM	8248	OE1	GLU	A	165	-25.626	-3.379	13.095	1.00	54.38	O

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ATOM   8249  OE2 GLU A 165     -27.236  -2.724  11.759  1.00 57.24           O
ATOM   8250  C   GLU A 165     -26.745  -7.959  14.134  1.00 52.96           C
ATOM   8251  O   GLU A 165     -27.397  -7.832  15.165  1.00 52.13           O
ATOM   8253  N   SER A 166     -25.564  -8.572  14.083  1.00 53.53           N
ATOM   8254  CA  SER A 166     -24.878  -9.080  15.280  1.00 54.46           C
ATOM   8256  CB  SER A 166     -24.863 -10.612  15.298  1.00 54.98           C
ATOM   8259  OG  SER A 166     -24.240 -11.106  16.475  1.00 53.82           O
ATOM   8261  C   SER A 166     -23.448  -8.552  15.333  1.00 54.86           C
ATOM   8262  O   SER A 166     -22.759  -8.503  14.309  1.00 55.52           O
ATOM   8264  N   VAL A 167     -23.010  -8.181  16.535  1.00 54.69           N
ATOM   8265  CA  VAL A 167     -21.699  -7.567  16.753  1.00 54.47           C
ATOM   8267  CB  VAL A 167     -21.848  -6.073  17.172  1.00 54.48           C
ATOM   8269  CG1 VAL A 167     -22.861  -5.898  18.303  1.00 54.93           C
ATOM   8273  CG2 VAL A 167     -20.500  -5.469  17.555  1.00 55.79           C
ATOM   8277  C   VAL A 167     -20.898  -8.361  17.798  1.00 54.48           C
ATOM   8278  O   VAL A 167     -21.455  -8.820  18.795  1.00 54.42           O
ATOM   8280  N   THR A 168     -19.598  -8.534  17.556  1.00 55.27           N
ATOM   8281  CA  THR A 168     -18.714  -9.250  18.492  1.00 55.17           C
ATOM   8283  CB  THR A 168     -17.457  -9.839  17.785  1.00 55.15           C
ATOM   8285  OG1 THR A 168     -16.790  -8.812  17.036  1.00 55.27           O
ATOM   8287  CG2 THR A 168     -17.832 -10.990  16.860  1.00 54.96           C
ATOM   8291  C   THR A 168     -18.221  -8.341  19.618  1.00 55.08           C
ATOM   8292  O   THR A 168     -18.278  -7.111  19.517  1.00 54.83           O
ATOM   8294  N   GLU A 169     -17.733  -8.967  20.686  1.00 55.14           N
ATOM   8295  CA  GLU A 169     -16.988  -8.264  21.733  1.00 55.30           C
ATOM   8297  CB  GLU A 169     -16.850  -9.140  22.981  1.00 55.53           C
ATOM   8300  CG  GLU A 169     -18.177  -9.504  23.636  1.00 57.81           C
ATOM   8303  CD  GLU A 169     -18.696  -8.433  24.581  1.00 60.48           C
ATOM   8304  OE1 GLU A 169     -18.468  -7.232  24.330  1.00 62.19           O
ATOM   8305  OE2 GLU A 169     -19.348  -8.798  25.582  1.00 63.26           O
ATOM   8306  C   GLU A 169     -15.600  -7.886  21.207  1.00 55.10           C
ATOM   8307  O   GLU A 169     -15.083  -8.525  20.290  1.00 56.12           O
ATOM   8309  N   GLN A 170     -15.006  -6.847  21.787  1.00 53.52           N
ATOM   8310  CA  GLN A 170     -13.671  -6.387  21.394  1.00 52.45           C
ATOM   8312  CB  GLN A 170     -13.160  -5.354  22.405  1.00 52.40           C
ATOM   8315  CG  GLN A 170     -12.549  -4.110  21.796  1.00 51.45           C
ATOM   8318  CD  GLN A 170     -12.176  -3.075  22.841  1.00 51.48           C
ATOM   8319  OE1 GLN A 170     -12.497  -3.218  24.024  1.00 49.48           O
ATOM   8320  NE2 GLN A 170     -11.490  -2.024  22.409  1.00 48.24           N
ATOM   8323  C   GLN A 170     -12.700  -7.572  21.308  1.00 51.71           C
ATOM   8324  O   GLN A 170     -12.640  -8.401  22.220  1.00 50.99           O
ATOM   8326  N   ASP A 171     -11.954  -7.651  20.209  1.00 51.94           N
ATOM   8327  CA  ASP A 171     -11.039  -8.770  19.956  1.00 52.82           C
ATOM   8329  CB  ASP A 171     -10.508  -8.685  18.517  1.00 52.66           C
ATOM   8332  CG  ASP A 171      -9.890  -9.991  18.027  1.00 52.81           C
ATOM   8333  OD1 ASP A 171      -9.208 -10.685  18.811  1.00 50.99           O
ATOM   8334  OD2 ASP A 171     -10.073 -10.309  16.832  1.00 55.51           O
ATOM   8335  C   ASP A 171      -9.866  -8.779  20.948  1.00 53.35           C
ATOM   8336  O   ASP A 171      -9.300  -7.727  21.252  1.00 53.94           O
ATOM   8338  N   SER A 172      -9.491  -9.969  21.424  1.00 53.69           N
ATOM   8339  CA  SER A 172      -8.437 -10.121  22.450  1.00 53.40           C
ATOM   8341  CB  SER A 172      -8.504 -11.513  23.092  1.00 52.64           C
ATOM   8344  OG  SER A 172      -8.211 -12.525  22.143  1.00 50.98           O
ATOM   8346  C   SER A 172      -7.010  -9.873  21.943  1.00 53.76           C
ATOM   8347  O   SER A 172      -6.064  -9.888  22.735  1.00 53.69           O
ATOM   8349  N   LYS A 173      -6.853  -9.666  20.635  1.00 54.72           N
ATOM   8350  CA  LYS A 173      -5.566  -9.281  20.054  1.00 54.91           C
ATOM   8352  CB  LYS A 173      -5.212 -10.179  18.861  1.00 55.00           C
ATOM   8355  CG  LYS A 173      -4.851 -11.607  19.240  1.00 55.63           C
ATOM   8358  CD  LYS A 173      -4.326 -12.380  18.041  1.00 54.81           C
ATOM   8361  CE  LYS A 173      -4.517 -13.870  18.212  1.00 54.73           C
ATOM   8364  NZ  LYS A 173      -4.018 -14.612  17.028  1.00 54.59           N
ATOM   8368  C   LYS A 173      -5.584  -7.815  19.620  1.00 55.44           C
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ATOM   8369  O   LYS A 173      -4.912  -6.975  20.224  1.00 56.78           O
ATOM   8371  N   ASP A 174      -6.371  -7.508  18.592  1.00 54.48           N
ATOM   8372  CA  ASP A 174      -6.323  -6.189  17.953  1.00 53.90           C
ATOM   8374  CB  ASP A 174      -6.367  -6.333  16.419  1.00 54.32           C
ATOM   8377  CG  ASP A 174      -7.598  -7.076  15.920  1.00 55.74           C
ATOM   8378  OD1 ASP A 174      -8.095  -7.970  16.627  1.00 58.47           O
ATOM   8379  OD2 ASP A 174      -8.060  -6.781  14.802  1.00 59.46           O
ATOM   8380  C   ASP A 174      -7.392  -5.203  18.440  1.00 53.26           C
ATOM   8381  O   ASP A 174      -7.563  -4.141  17.841  1.00 53.00           O
ATOM   8383  N   SER A 175      -8.094  -5.544  19.522  1.00 52.51           N
ATOM   8384  CA  SER A 175      -9.109  -4.664  20.123  1.00 52.19           C
ATOM   8386  CB  SER A 175      -8.430  -3.523  20.881  1.00 51.48           C
ATOM   8389  OG  SER A 175      -7.405  -4.015  21.710  1.00 50.96           O
ATOM   8391  C   SER A 175     -10.098  -4.078  19.107  1.00 51.93           C
ATOM   8392  O   SER A 175     -10.425  -2.886  19.168  1.00 50.08           O
ATOM   8394  N   THR A 176     -10.568  -4.920  18.185  1.00 52.18           N
ATOM   8395  CA  THR A 176     -11.485  -4.490  17.120  1.00 52.77           C
ATOM   8397  CB  THR A 176     -10.864  -4.662  15.714  1.00 52.54           C
ATOM   8399  OG1 THR A 176     -10.547  -6.042  15.491  1.00 54.57           O
ATOM   8401  CG2 THR A 176      -9.608  -3.816  15.559  1.00 53.68           C
ATOM   8405  C   THR A 176     -12.802  -5.258  17.144  1.00 52.28           C
ATOM   8406  O   THR A 176     -12.895  -6.338  17.718  1.00 52.14           O
ATOM   8408  N   TYR A 177     -13.809  -4.679  16.497  1.00 52.77           N
ATOM   8409  CA  TYR A 177     -15.143  -5.267  16.413  1.00 53.30           C
ATOM   8411  CB  TYR A 177     -16.212  -4.228  16.792  1.00 53.44           C
ATOM   8414  CG  TYR A 177     -16.077  -3.644  18.190  1.00 52.52           C
ATOM   8415  CD1 TYR A 177     -16.263  -4.434  19.317  1.00 51.79           C
ATOM   8417  CE1 TYR A 177     -16.146  -3.901  20.592  1.00 52.84           C
ATOM   8419  CZ  TYR A 177     -15.855  -2.561  20.751  1.00 52.74           C
ATOM   8420  OH  TYR A 177     -15.740  -2.029  22.010  1.00 51.71           O
ATOM   8422  CE2 TYR A 177     -15.680  -1.752  19.651  1.00 53.28           C
ATOM   8424  CD2 TYR A 177     -15.795  -2.293  18.378  1.00 53.10           C
ATOM   8426  C   TYR A 177     -15.425  -5.785  14.998  1.00 53.07           C
ATOM   8427  O   TYR A 177     -14.957  -5.211  14.018  1.00 52.16           O
ATOM   8429  N   SER A 178     -16.180  -6.880  14.912  1.00 53.72           N
ATOM   8430  CA  SER A 178     -16.719  -7.389  13.648  1.00 53.81           C
ATOM   8432  CB  SER A 178     -16.131  -8.761  13.302  1.00 53.62           C
ATOM   8435  OG  SER A 178     -14.794  -8.646  12.846  1.00 52.54           O
ATOM   8437  C   SER A 178     -18.234  -7.487  13.778  1.00 54.33           C
ATOM   8438  O   SER A 178     -18.761  -7.673  14.876  1.00 54.29           O
ATOM   8440  N   LEU A 179     -18.928  -7.372  12.652  1.00 54.92           N
ATOM   8441  CA  LEU A 179     -20.377  -7.195  12.657  1.00 55.07           C
ATOM   8443  CB  LEU A 179     -20.692  -5.692  12.767  1.00 55.89           C
ATOM   8446  CG  LEU A 179     -22.136  -5.172  12.675  1.00 54.50           C
ATOM   8448  CD1 LEU A 179     -22.265  -3.878  13.485  1.00 53.09           C
ATOM   8452  CD2 LEU A 179     -22.590  -4.957  11.224  1.00 52.26           C
ATOM   8456  C   LEU A 179     -21.017  -7.792  11.400  1.00 55.70           C
ATOM   8457  O   LEU A 179     -20.570  -7.521  10.277  1.00 56.43           O
ATOM   8459  N   SER A 180     -22.062  -8.596  11.596  1.00 55.16           N
ATOM   8460  CA  SER A 180     -22.848  -9.144  10.485  1.00 54.15           C
ATOM   8462  CB  SER A 180     -22.985 -10.668  10.614  1.00 54.76           C
ATOM   8465  OG  SER A 180     -23.683 -11.046  11.797  1.00 53.36           O
ATOM   8467  C   SER A 180     -24.234  -8.504  10.442  1.00 53.39           C
ATOM   8468  O   SER A 180     -24.947  -8.505  11.439  1.00 53.06           O
ATOM   8470  N   SER A 181     -24.592  -7.938   9.293  1.00 53.50           N
ATOM   8471  CA  SER A 181     -25.956  -7.467   9.040  1.00 52.75           C
ATOM   8473  CB  SER A 181     -25.960  -6.000   8.621  1.00 52.81           C
ATOM   8476  OG  SER A 181     -27.293  -5.552   8.453  1.00 52.98           O
ATOM   8478  C   SER A 181     -26.581  -8.325   7.943  1.00 51.46           C
ATOM   8479  O   SER A 181     -26.160  -8.258   6.788  1.00 50.02           O
ATOM   8481  N   THR A 182     -27.585  -9.118   8.317  1.00 50.26           N
ATOM   8482  CA  THR A 182     -28.130 -10.183   7.471  1.00 49.62           C
ATOM   8484  CB  THR A 182     -28.230 -11.499   8.285  1.00 49.53           C
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ATOM   8486  OG1 THR A 182     -26.922 -11.879   8.732  1.00 48.74           O
ATOM   8488  CG2 THR A 182     -28.835 -12.636   7.463  1.00 49.54           C
ATOM   8492  C   THR A 182     -29.496  -9.818   6.895  1.00 47.65           C
ATOM   8493  O   THR A 182     -30.334  -9.249   7.584  1.00 45.40           O
ATOM   8495  N   GLU B   2     -10.619 -25.043  44.227  1.00 57.08           N
ATOM   8496  CA  GLU B   2     -10.247 -25.315  42.812  1.00 58.19           C
ATOM   8498  CB  GLU B   2      -9.263 -26.489  42.721  1.00 58.76           C
ATOM   8501  CG  GLU B   2      -7.890 -26.169  43.263  1.00 61.44           C
ATOM   8504  CD  GLU B   2      -6.782 -26.549  42.304  1.00 65.00           C
ATOM   8505  OE1 GLU B   2      -6.864 -26.192  41.106  1.00 62.53           O
ATOM   8506  OE2 GLU B   2      -5.816 -27.197  42.749  1.00 69.73           O
ATOM   8507  C   GLU B   2     -11.445 -25.567  41.894  1.00 58.94           C
ATOM   8508  O   GLU B   2     -11.996 -24.629  41.316  1.00 62.34           O
ATOM   8512  N   GLN B   3     -11.857 -26.829  41.792  1.00 57.51           N
ATOM   8513  CA  GLN B   3     -12.697 -27.301  40.695  1.00 56.95           C
ATOM   8515  CB  GLN B   3     -12.164 -28.657  40.217  1.00 59.45           C
ATOM   8518  CG  GLN B   3     -11.163 -28.600  39.065  1.00 62.13           C
ATOM   8521  CD  GLN B   3     -11.856 -28.624  37.717  1.00 65.49           C
ATOM   8522  OE1 GLN B   3     -11.426 -29.315  36.799  1.00 65.20           O
ATOM   8523  NE2 GLN B   3     -12.956 -27.884  37.603  1.00 68.30           N
ATOM   8526  C   GLN B   3     -14.169 -27.462  41.073  1.00 56.52           C
ATOM   8527  O   GLN B   3     -14.493 -28.179  42.024  1.00 57.38           O
ATOM   8529  N   LEU B   4     -15.049 -26.787  40.332  1.00 55.34           N
ATOM   8530  CA  LEU B   4     -16.489 -27.070  40.366  1.00 54.52           C
ATOM   8532  CB  LEU B   4     -17.298 -25.874  40.847  1.00 53.96           C
ATOM   8535  CG  LEU B   4     -17.243 -25.570  42.343  1.00 55.82           C
ATOM   8537  CD1 LEU B   4     -17.456 -24.082  42.582  1.00 57.87           C
ATOM   8541  CD2 LEU B   4     -18.255 -26.389  43.121  1.00 55.41           C
ATOM   8545  C   LEU B   4     -16.932 -27.430  38.965  1.00 54.14           C
ATOM   8546  O   LEU B   4     -17.100 -26.561  38.109  1.00 51.87           O
ATOM   8548  N   VAL B   5     -17.082 -28.725  38.721  1.00 54.92           N
ATOM   8549  CA  VAL B   5     -17.660 -29.186  37.475  1.00 55.15           C
ATOM   8551  CB  VAL B   5     -16.917 -30.432  36.881  1.00 54.37           C
ATOM   8553  CG1 VAL B   5     -17.087 -31.674  37.735  1.00 54.00           C
ATOM   8557  CG2 VAL B   5     -17.388 -30.706  35.461  1.00 54.09           C
ATOM   8561  C   VAL B   5     -19.146 -29.400  37.756  1.00 55.56           C
ATOM   8562  O   VAL B   5     -19.533 -29.729  38.877  1.00 56.25           O
ATOM   8564  N   GLU B   6     -19.960 -29.210  36.725  1.00 56.11           N
ATOM   8565  CA  GLU B   6     -21.390 -28.975  36.863  1.00 56.43           C
ATOM   8567  CB  GLU B   6     -21.649 -27.482  36.654  1.00 57.11           C
ATOM   8570  CG  GLU B   6     -22.951 -26.943  37.183  1.00 57.87           C
ATOM   8573  CD  GLU B   6     -23.194 -25.525  36.691  1.00 61.03           C
ATOM   8574  OE1 GLU B   6     -22.325 -24.652  36.915  1.00 64.83           O
ATOM   8575  OE2 GLU B   6     -24.244 -25.291  36.059  1.00 67.42           O
ATOM   8576  C   GLU B   6     -22.107 -29.799  35.798  1.00 55.21           C
ATOM   8577  O   GLU B   6     -21.562 -30.010  34.716  1.00 54.09           O
ATOM   8579  N   SER B   7     -23.318 -30.259  36.098  1.00 55.29           N
ATOM   8580  CA  SER B   7     -24.021 -31.203  35.218  1.00 55.46           C
ATOM   8582  CB  SER B   7     -23.842 -32.643  35.722  1.00 54.36           C
ATOM   8585  OG  SER B   7     -22.474 -32.978  35.905  1.00 51.02           O
ATOM   8587  C   SER B   7     -25.507 -30.891  35.125  1.00 56.51           C
ATOM   8588  O   SER B   7     -26.108 -30.385  36.083  1.00 57.60           O
ATOM   8590  N   GLY B   8     -26.092 -31.196  33.970  1.00 56.40           N
ATOM   8591  CA  GLY B   8     -27.522 -30.986  33.728  1.00 56.69           C
ATOM   8594  C   GLY B   8     -27.799 -29.744  32.903  1.00 57.21           C
ATOM   8595  O   GLY B   8     -26.883 -28.991  32.568  1.00 58.60           O
ATOM   8597  N   GLY B   9     -29.067 -29.539  32.560  1.00 57.00           N
ATOM   8598  CA  GLY B   9     -29.489 -28.322  31.870  1.00 56.00           C
ATOM   8601  C   GLY B   9     -30.020 -28.553  30.474  1.00 54.36           C
ATOM   8602  O   GLY B   9     -29.999 -29.669  29.965  1.00 53.60           O
ATOM   8604  N   GLY B  10     -30.494 -27.473  29.863  1.00 53.60           N
ATOM   8605  CA  GLY B  10     -31.076 -27.513  28.532  1.00 52.66           C
ATOM   8608  C   GLY B  10     -32.545 -27.157  28.551  1.00 52.35           C
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ATOM	8609	O	GLY	B	10	-33.019	-26.454	29.451	1.00	52.72	O
ATOM	8611	N	LEU	B	11	-33.268	-27.676	27.561	1.00	52.28	N
ATOM	8612	CA	LEU	B	11	-34.657	-27.285	27.281	1.00	51.37	C
ATOM	8614	CB	LEU	B	11	-34.945	-27.495	25.788	1.00	50.49	C
ATOM	8617	CG	LEU	B	11	-36.305	-27.092	25.221	1.00	50.40	C
ATOM	8619	CD1	LEU	B	11	-36.770	-25.732	25.714	1.00	50.55	C
ATOM	8623	CD2	LEU	B	11	-36.229	-27.104	23.713	1.00	49.33	C
ATOM	8627	C	LEU	B	11	-35.689	-28.041	28.129	1.00	50.09	C
ATOM	8628	O	LEU	B	11	-35.608	-29.258	28.279	1.00	48.56	O
ATOM	8630	N	VAL	B	12	-36.643	-27.304	28.696	1.00	51.19	N
ATOM	8631	CA	VAL	B	12	-37.828	-27.895	29.354	1.00	52.09	C
ATOM	8633	CB	VAL	B	12	-37.734	-27.909	30.890	1.00	51.33	C
ATOM	8635	CG1	VAL	B	12	-36.587	-28.792	31.361	1.00	55.61	C
ATOM	8639	CG2	VAL	B	12	-37.589	-26.499	31.417	1.00	54.73	C
ATOM	8643	C	VAL	B	12	-39.084	-27.106	29.028	1.00	51.94	C
ATOM	8644	O	VAL	B	12	-39.020	-25.921	28.711	1.00	54.02	O
ATOM	8646	N	LYS	B	13	-40.228	-27.764	29.135	1.00	51.40	N
ATOM	8647	CA	LYS	B	13	-41.496	-27.076	29.018	1.00	51.60	C
ATOM	8649	CB	LYS	B	13	-42.591	-28.079	28.666	1.00	52.55	C
ATOM	8652	CG	LYS	B	13	-42.497	-28.541	27.218	1.00	51.71	C
ATOM	8655	CD	LYS	B	13	-43.403	-29.713	26.932	1.00	53.42	C
ATOM	8658	CE	LYS	B	13	-44.022	-29.609	25.535	1.00	57.86	C
ATOM	8661	NZ	LYS	B	13	-43.026	-29.251	24.488	1.00	60.17	N
ATOM	8665	C	LYS	B	13	-41.819	-26.296	30.310	1.00	51.77	C
ATOM	8666	O	LYS	B	13	-41.368	-26.677	31.404	1.00	50.24	O
ATOM	8668	N	PRO	B	14	-42.560	-25.174	30.180	1.00	51.25	N
ATOM	8669	CA	PRO	B	14	-43.053	-24.450	31.345	1.00	50.84	C
ATOM	8671	CB	PRO	B	14	-43.947	-23.368	30.739	1.00	50.58	C
ATOM	8674	CG	PRO	B	14	-43.419	-23.163	29.392	1.00	51.33	C
ATOM	8677	CD	PRO	B	14	-42.959	-24.509	28.930	1.00	51.92	C
ATOM	8680	C	PRO	B	14	-43.876	-25.361	32.230	1.00	50.15	C
ATOM	8681	O	PRO	B	14	-44.657	-26.166	31.722	1.00	48.51	O
ATOM	8682	N	GLY	B	15	-43.680	-25.245	33.539	1.00	49.84	N
ATOM	8683	CA	GLY	B	15	-44.306	-26.149	34.496	1.00	50.35	C
ATOM	8686	C	GLY	B	15	-43.468	-27.389	34.719	1.00	50.13	C
ATOM	8687	O	GLY	B	15	-43.669	-28.109	35.693	1.00	49.66	O
ATOM	8689	N	GLY	B	16	-42.513	-27.628	33.824	1.00	51.34	N
ATOM	8690	CA	GLY	B	16	-41.660	-28.798	33.892	1.00	51.56	C
ATOM	8693	C	GLY	B	16	-40.668	-28.748	35.033	1.00	51.79	C
ATOM	8694	O	GLY	B	16	-40.675	-27.832	35.860	1.00	50.14	O
ATOM	8696	N	SER	B	17	-39.800	-29.749	35.056	1.00	53.70	N
ATOM	8697	CA	SER	B	17	-38.873	-29.950	36.152	1.00	54.04	C
ATOM	8699	CB	SER	B	17	-39.341	-31.118	37.016	1.00	53.95	C
ATOM	8702	OG	SER	B	17	-39.022	-30.879	38.371	1.00	57.07	O
ATOM	8704	C	SER	B	17	-37.479	-30.228	35.628	1.00	54.29	C
ATOM	8705	O	SER	B	17	-37.301	-30.568	34.457	1.00	54.05	O
ATOM	8707	N	LEU	B	18	-36.497	-30.088	36.514	1.00	56.13	N
ATOM	8708	CA	LEU	B	18	-35.094	-30.239	36.147	1.00	55.96	C
ATOM	8710	CB	LEU	B	18	-34.684	-29.083	35.248	1.00	55.43	C
ATOM	8713	CG	LEU	B	18	-33.469	-29.297	34.377	1.00	57.88	C
ATOM	8715	CD1	LEU	B	18	-33.559	-30.610	33.593	1.00	62.27	C
ATOM	8719	CD2	LEU	B	18	-33.357	-28.112	33.446	1.00	59.37	C
ATOM	8723	C	LEU	B	18	-34.186	-30.257	37.372	1.00	56.02	C
ATOM	8724	O	LEU	B	18	-34.433	-29.546	38.358	1.00	56.21	O
ATOM	8726	N	ARG	B	19	-33.131	-31.061	37.310	1.00	55.91	N
ATOM	8727	CA	ARG	B	19	-32.171	-31.131	38.404	1.00	56.28	C
ATOM	8729	CB	ARG	B	19	-32.180	-32.513	39.056	1.00	56.33	C
ATOM	8732	CG	ARG	B	19	-31.287	-32.611	40.286	1.00	57.91	C
ATOM	8735	CD	ARG	B	19	-31.716	-33.730	41.210	1.00	60.36	C
ATOM	8738	NE	ARG	B	19	-30.588	-34.523	41.690	1.00	66.71	N
ATOM	8740	CZ	ARG	B	19	-29.875	-35.367	40.938	1.00	68.93	C
ATOM	8741	NH1	ARG	B	19	-30.131	-35.517	39.646	1.00	71.03	N
ATOM	8744	NH2	ARG	B	19	-28.880	-36.060	41.474	1.00	67.69	N

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ATOM   8747  C   ARG B  19     -30.772 -30.776  37.921  1.00 55.07           C
ATOM   8748  O   ARG B  19     -30.311 -31.277  36.898  1.00 55.74           O
ATOM   8750  N   LEU B  20     -30.124 -29.880  38.659  1.00 54.38           N
ATOM   8751  CA  LEU B  20     -28.742 -29.520  38.430  1.00 55.17           C
ATOM   8753  CB  LEU B  20     -28.600 -28.003  38.338  1.00 55.06           C
ATOM   8756  CG  LEU B  20     -29.485 -27.251  37.349  1.00 53.99           C
ATOM   8758  CD1 LEU B  20     -29.205 -25.762  37.431  1.00 59.86           C
ATOM   8762  CD2 LEU B  20     -29.234 -27.724  35.955  1.00 57.03           C
ATOM   8766  C   LEU B  20     -27.898 -30.045  39.589  1.00 55.45           C
ATOM   8767  O   LEU B  20     -28.297 -29.971  40.750  1.00 56.96           O
ATOM   8769  N   SER B  21     -26.736 -30.589  39.268  1.00 56.77           N
ATOM   8770  CA  SER B  21     -25.786 -31.031  40.280  1.00 57.56           C
ATOM   8772  CB  SER B  21     -25.630 -32.559  40.261  1.00 58.44           C
ATOM   8775  OG  SER B  21     -25.331 -33.044  38.964  1.00 61.05           O
ATOM   8777  C   SER B  21     -24.470 -30.330  40.000  1.00 58.45           C
ATOM   8778  O   SER B  21     -24.350 -29.591  39.022  1.00 59.84           O
ATOM   8780  N   CYS B  22     -23.486 -30.556  40.860  1.00 59.72           N
ATOM   8781  CA  CYS B  22     -22.234 -29.823  40.790  1.00 57.37           C
ATOM   8783  CB  CYS B  22     -22.471 -28.404  41.314  1.00 59.22           C
ATOM   8786  SG  CYS B  22     -21.015 -27.363  41.431  1.00 66.17           S
ATOM   8788  C   CYS B  22     -21.172 -30.549  41.606  1.00 55.34           C
ATOM   8789  O   CYS B  22     -21.183 -30.503  42.826  1.00 54.96           O
ATOM   8791  N   ALA B  23     -20.269 -31.245  40.927  1.00 54.59           N
ATOM   8792  CA  ALA B  23     -19.203 -31.985  41.605  1.00 53.62           C
ATOM   8794  CB  ALA B  23     -18.717 -33.133  40.725  1.00 53.08           C
ATOM   8798  C   ALA B  23     -18.040 -31.062  41.979  1.00 51.29           C
ATOM   8799  O   ALA B  23     -17.522 -30.341  41.127  1.00 49.95           O
ATOM   8801  N   ALA B  24     -17.637 -31.099  43.249  1.00 50.12           N
ATOM   8802  CA  ALA B  24     -16.557 -30.248  43.769  1.00 51.29           C
ATOM   8804  CB  ALA B  24     -17.019 -29.529  45.015  1.00 50.63           C
ATOM   8808  C   ALA B  24     -15.278 -31.031  44.076  1.00 51.65           C
ATOM   8809  O   ALA B  24     -15.298 -32.250  44.275  1.00 52.72           O
ATOM   8811  N   SER B  25     -14.161 -30.322  44.125  1.00 51.28           N
ATOM   8812  CA  SER B  25     -12.893 -30.948  44.491  1.00 51.56           C
ATOM   8814  CB  SER B  25     -12.464 -31.936  43.426  1.00 51.06           C
ATOM   8817  OG  SER B  25     -12.485 -31.294  42.169  1.00 54.28           O
ATOM   8819  C   SER B  25     -11.800 -29.910  44.650  1.00 51.41           C
ATOM   8820  O   SER B  25     -11.938 -28.767  44.197  1.00 50.73           O
ATOM   8822  N   GLY B  26     -10.710 -30.327  45.284  1.00 50.89           N
ATOM   8823  CA  GLY B  26      -9.582 -29.446  45.538  1.00 51.21           C
ATOM   8826  C   GLY B  26      -9.792 -28.487  46.696  1.00 51.63           C
ATOM   8827  O   GLY B  26      -9.025 -27.543  46.850  1.00 54.29           O
ATOM   8829  N   PHE B  27     -10.822 -28.712  47.510  1.00 51.25           N
ATOM   8830  CA  PHE B  27     -11.032 -27.918  48.732  1.00 50.85           C
ATOM   8832  CB  PHE B  27     -11.564 -26.505  48.420  1.00 50.94           C
ATOM   8835  CG  PHE B  27     -12.918 -26.490  47.771  1.00 49.96           C
ATOM   8836  CD1 PHE B  27     -13.042 -26.584  46.395  1.00 50.30           C
ATOM   8838  CE1 PHE B  27     -14.275 -26.584  45.791  1.00 49.66           C
ATOM   8840  CZ  PHE B  27     -15.421 -26.480  46.562  1.00 52.41           C
ATOM   8842  CE2 PHE B  27     -15.313 -26.384  47.937  1.00 52.69           C
ATOM   8844  CD2 PHE B  27     -14.062 -26.386  48.534  1.00 52.95           C
ATOM   8846  C   PHE B  27     -11.964 -28.625  49.711  1.00 50.71           C
ATOM   8847  O   PHE B  27     -12.604 -29.626  49.383  1.00 49.79           O
ATOM   8849  N   SER B  28     -12.037 -28.093  50.921  1.00 51.23           N
ATOM   8850  CA  SER B  28     -12.810 -28.732  51.963  1.00 51.26           C
ATOM   8852  CB  SER B  28     -12.317 -28.294  53.343  1.00 51.82           C
ATOM   8855  OG  SER B  28     -12.676 -29.267  54.315  1.00 56.76           O
ATOM   8857  C   SER B  28     -14.295 -28.421  51.766  1.00 51.01           C
ATOM   8858  O   SER B  28     -14.767 -27.321  52.085  1.00 50.89           O
ATOM   8860  N   PHE B  29     -15.020 -29.401  51.232  1.00 49.80           N
ATOM   8861  CA  PHE B  29     -16.424 -29.226  50.894  1.00 50.56           C
ATOM   8863  CB  PHE B  29     -16.922 -30.445  50.129  1.00 48.59           C
ATOM   8866  CG  PHE B  29     -18.296 -30.281  49.564  1.00 48.64           C
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ATOM   8867  CD1 PHE B  29     -18.499 -29.536  48.408  1.00 48.66           C
ATOM   8869  CE1 PHE B  29     -19.767 -29.381  47.881  1.00 45.83           C
ATOM   8871  CZ  PHE B  29     -20.841 -29.976  48.510  1.00 48.48           C
ATOM   8873  CE2 PHE B  29     -20.644 -30.732  49.657  1.00 46.72           C
ATOM   8875  CD2 PHE B  29     -19.384 -30.876  50.178  1.00 45.58           C
ATOM   8877  C   PHE B  29     -17.270 -29.001  52.145  1.00 50.93           C
ATOM   8878  O   PHE B  29     -18.035 -28.036  52.227  1.00 51.03           O
ATOM   8880  N   SER B  30     -17.111 -29.896  53.113  1.00 52.75           N
ATOM   8881  CA  SER B  30     -17.761 -29.786  54.420  1.00 54.67           C
ATOM   8883  CB  SER B  30     -17.106 -30.743  55.416  1.00 54.82           C
ATOM   8886  OG  SER B  30     -16.120 -31.537  54.777  1.00 62.14           O
ATOM   8888  C   SER B  30     -17.679 -28.375  55.009  1.00 56.32           C
ATOM   8889  O   SER B  30     -18.636 -27.918  55.635  1.00 58.67           O
ATOM   8891  N   ASP B  31     -16.537 -27.705  54.815  1.00 55.95           N
ATOM   8892  CA  ASP B  31     -16.261 -26.399  55.437  1.00 56.09           C
ATOM   8894  CB  ASP B  31     -14.766 -26.260  55.691  1.00 55.87           C
ATOM   8897  CG  ASP B  31     -14.270 -27.238  56.715  1.00 56.33           C
ATOM   8898  OD1 ASP B  31     -14.667 -27.110  57.883  1.00 60.60           O
ATOM   8899  OD2 ASP B  31     -13.483 -28.136  56.368  1.00 57.54           O
ATOM   8900  C   ASP B  31     -16.752 -25.194  54.629  1.00 56.83           C
ATOM   8901  O   ASP B  31     -16.520 -24.037  55.019  1.00 54.50           O
ATOM   8903  N   CYS B  32     -17.449 -25.471  53.527  1.00 56.79           N
ATOM   8904  CA  CYS B  32     -17.879 -24.441  52.606  1.00 57.15           C
ATOM   8906  CB  CYS B  32     -17.375 -24.770  51.212  1.00 56.78           C
ATOM   8909  SG  CYS B  32     -15.670 -24.337  51.018  1.00 62.87           S
ATOM   8911  C   CYS B  32     -19.379 -24.302  52.558  1.00 57.47           C
ATOM   8912  O   CYS B  32     -20.100 -25.295  52.661  1.00 57.32           O
ATOM   8914  N   ARG B  33     -19.837 -23.059  52.419  1.00 58.33           N
ATOM   8915  CA  ARG B  33     -21.210 -22.776  52.020  1.00 59.05           C
ATOM   8917  CB  ARG B  33     -21.611 -21.320  52.318  1.00 59.99           C
ATOM   8920  CG  ARG B  33     -21.955 -21.018  53.781  1.00 61.46           C
ATOM   8923  CD  ARG B  33     -22.959 -19.840  53.914  1.00 63.66           C
ATOM   8926  NE  ARG B  33     -23.243 -19.502  55.316  1.00 65.64           N
ATOM   8928  CZ  ARG B  33     -22.510 -18.677  56.073  1.00 66.84           C
ATOM   8929  NH1 ARG B  33     -21.434 -18.058  55.592  1.00 70.69           N
ATOM   8932  NH2 ARG B  33     -22.854 -18.466  57.332  1.00 66.86           N
ATOM   8935  C   ARG B  33     -21.235 -23.015  50.529  1.00 58.50           C
ATOM   8936  O   ARG B  33     -20.234 -22.734  49.853  1.00 59.17           O
ATOM   8938  N   MET B  34     -22.349 -23.554  50.023  1.00 57.59           N
ATOM   8939  CA  MET B  34     -22.551 -23.730  48.575  1.00 57.08           C
ATOM   8941  CB  MET B  34     -22.892 -25.185  48.246  1.00 56.43           C
ATOM   8944  CG  MET B  34     -21.795 -26.188  48.589  1.00 59.03           C
ATOM   8947  SD  MET B  34     -20.187 -25.877  47.796  1.00 55.54           S
ATOM   8948  CE  MET B  34     -20.597 -26.020  46.063  1.00 58.54           C
ATOM   8952  C   MET B  34     -23.667 -22.804  48.108  1.00 56.49           C
ATOM   8953  O   MET B  34     -24.628 -22.581  48.850  1.00 57.23           O
ATOM   8955  N   TYR B  35     -23.535 -22.266  46.892  1.00 55.09           N
ATOM   8956  CA  TYR B  35     -24.489 -21.283  46.355  1.00 55.50           C
ATOM   8958  CB  TYR B  35     -23.839 -19.904  46.252  1.00 56.01           C
ATOM   8961  CG  TYR B  35     -23.056 -19.483  47.468  1.00 56.77           C
ATOM   8962  CD1 TYR B  35     -23.701 -18.927  48.564  1.00 55.10           C
ATOM   8964  CE1 TYR B  35     -23.006 -18.536  49.686  1.00 52.25           C
ATOM   8966  CZ  TYR B  35     -21.652 -18.685  49.719  1.00 54.90           C
ATOM   8967  OH  TYR B  35     -20.987 -18.280  50.842  1.00 57.35           O
ATOM   8969  CE2 TYR B  35     -20.972 -19.232  48.642  1.00 57.56           C
ATOM   8971  CD2 TYR B  35     -21.678 -19.629  47.522  1.00 55.05           C
ATOM   8973  C   TYR B  35     -24.941 -21.656  44.964  1.00 54.79           C
ATOM   8974  O   TYR B  35     -24.202 -22.305  44.248  1.00 56.20           O
ATOM   8976  N   TRP B  36     -26.141 -21.232  44.574  1.00 54.86           N
ATOM   8977  CA  TRP B  36     -26.541 -21.236  43.160  1.00 54.98           C
ATOM   8979  CB  TRP B  36     -27.751 -22.131  42.898  1.00 54.48           C
ATOM   8982  CG  TRP B  36     -27.408 -23.582  42.976  1.00 55.86           C
ATOM   8983  CD1 TRP B  36     -27.541 -24.395  44.064  1.00 54.37           C
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ATOM   8985  NE1 TRP B  36     -27.105 -25.662  43.761  1.00 56.03           N
ATOM   8987  CE2 TRP B  36     -26.673 -25.689  42.460  1.00 57.33           C
ATOM   8988  CD2 TRP B  36     -26.846 -24.396  41.932  1.00 56.78           C
ATOM   8989  CE3 TRP B  36     -26.486 -24.158  40.599  1.00 56.68           C
ATOM   8991  CZ3 TRP B  36     -25.970 -25.208  39.843  1.00 54.32           C
ATOM   8993  CH2 TRP B  36     -25.807 -26.481  40.398  1.00 55.83           C
ATOM   8995  CZ2 TRP B  36     -26.155 -26.744  41.700  1.00 57.22           C
ATOM   8997  C   TRP B  36     -26.827 -19.806  42.714  1.00 55.54           C
ATOM   8998  O   TRP B  36     -27.441 -19.026  43.441  1.00 55.81           O
ATOM   9000  N   LEU B  37     -26.344 -19.464  41.523  1.00 55.47           N
ATOM   9001  CA  LEU B  37     -26.583 -18.159  40.935  1.00 54.90           C
ATOM   9003  CB  LEU B  37     -25.330 -17.290  41.024  1.00 55.21           C
ATOM   9006  CG  LEU B  37     -24.711 -17.145  42.408  1.00 54.85           C
ATOM   9008  CD1 LEU B  37     -23.591 -18.143  42.567  1.00 54.81           C
ATOM   9012  CD2 LEU B  37     -24.186 -15.745  42.607  1.00 55.66           C
ATOM   9016  C   LEU B  37     -26.967 -18.341  39.484  1.00 53.45           C
ATOM   9017  O   LEU B  37     -26.745 -19.405  38.912  1.00 53.70           O
ATOM   9019  N   ARG B  38     -27.539 -17.308  38.884  1.00 51.89           N
ATOM   9020  CA  ARG B  38     -27.839 -17.386  37.474  1.00 53.70           C
ATOM   9022  CB  ARG B  38     -29.251 -17.929  37.253  1.00 54.93           C
ATOM   9025  CG  ARG B  38     -30.344 -16.976  37.662  1.00 54.15           C
ATOM   9028  CD  ARG B  38     -31.695 -17.639  37.583  1.00 52.86           C
ATOM   9031  NE  ARG B  38     -32.709 -16.776  38.171  1.00 55.65           N
ATOM   9033  CZ  ARG B  38     -34.008 -17.040  38.179  1.00 52.73           C
ATOM   9034  NH1 ARG B  38     -34.467 -18.163  37.654  1.00 56.57           N
ATOM   9037  NH2 ARG B  38     -34.845 -16.184  38.737  1.00 50.56           N
ATOM   9040  C   ARG B  38     -27.664 -16.056  36.769  1.00 53.95           C
ATOM   9041  O   ARG B  38     -27.407 -15.024  37.404  1.00 52.49           O
ATOM   9043  N   GLN B  39     -27.805 -16.115  35.444  1.00 53.23           N
ATOM   9044  CA  GLN B  39     -27.607 -14.973  34.570  1.00 53.43           C
ATOM   9046  CB  GLN B  39     -26.111 -14.763  34.335  1.00 52.16           C
ATOM   9049  CG  GLN B  39     -25.794 -13.536  33.524  1.00 51.85           C
ATOM   9052  CD  GLN B  39     -24.324 -13.418  33.196  1.00 52.08           C
ATOM   9053  OE1 GLN B  39     -23.727 -14.341  32.626  1.00 50.41           O
ATOM   9054  NE2 GLN B  39     -23.729 -12.271  33.539  1.00 40.20           N
ATOM   9057  C   GLN B  39     -28.349 -15.181  33.237  1.00 52.91           C
ATOM   9058  O   GLN B  39     -27.919 -15.955  32.384  1.00 50.90           O
ATOM   9060  N   ALA B  40     -29.467 -14.479  33.081  1.00 53.76           N
ATOM   9061  CA  ALA B  40     -30.296 -14.578  31.886  1.00 53.31           C
ATOM   9063  CB  ALA B  40     -31.648 -13.975  32.141  1.00 54.55           C
ATOM   9067  C   ALA B  40     -29.624 -13.845  30.748  1.00 53.53           C
ATOM   9068  O   ALA B  40     -28.959 -12.840  30.987  1.00 54.11           O
ATOM   9070  N   PRO B  41     -29.840 -14.308  29.501  1.00 53.44           N
ATOM   9071  CA  PRO B  41     -29.039 -13.847  28.366  1.00 53.05           C
ATOM   9073  CB  PRO B  41     -29.725 -14.505  27.163  1.00 52.72           C
ATOM   9076  CG  PRO B  41     -30.438 -15.665  27.719  1.00 52.85           C
ATOM   9079  CD  PRO B  41     -30.885 -15.257  29.074  1.00 52.51           C
ATOM   9082  C   PRO B  41     -29.014 -12.324  28.215  1.00 52.17           C
ATOM   9083  O   PRO B  41     -30.066 -11.689  28.111  1.00 50.43           O
ATOM   9084  N   GLY B  42     -27.810 -11.758  28.234  1.00 52.35           N
ATOM   9085  CA  GLY B  42     -27.619 -10.316  28.112  1.00 53.15           C
ATOM   9088  C   GLY B  42     -27.682  -9.540  29.420  1.00 54.04           C
ATOM   9089  O   GLY B  42     -27.270  -8.384  29.467  1.00 55.99           O
ATOM   9091  N   LYS B  43     -28.191 -10.159  30.482  1.00 53.44           N
ATOM   9092  CA  LYS B  43     -28.391  -9.473  31.752  1.00 53.87           C
ATOM   9094  CB  LYS B  43     -29.770  -9.812  32.310  1.00 55.93           C
ATOM   9097  CG  LYS B  43     -30.905  -9.683  31.306  1.00 57.94           C
ATOM   9100  CD  LYS B  43     -30.919  -8.333  30.608  1.00 60.93           C
ATOM   9103  CE  LYS B  43     -32.143  -8.187  29.724  1.00 61.33           C
ATOM   9106  NZ  LYS B  43     -32.168  -9.225  28.660  1.00 63.96           N
ATOM   9110  C   LYS B  43     -27.309  -9.851  32.762  1.00 53.65           C
ATOM   9111  O   LYS B  43     -26.430 -10.645  32.462  1.00 54.42           O
ATOM   9113  N   GLY B  44     -27.380  -9.276  33.958  1.00 52.36           N
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ATOM   9114  CA  GLY B  44     -26.357  -9.474  34.968  1.00 53.12           C
ATOM   9117  C   GLY B  44     -26.629 -10.664  35.861  1.00 54.61           C
ATOM   9118  O   GLY B  44     -27.464 -11.508  35.551  1.00 57.61           O
ATOM   9120  N   LEU B  45     -25.932 -10.701  36.992  1.00 55.46           N
ATOM   9121  CA  LEU B  45     -25.900 -11.853  37.885  1.00 54.85           C
ATOM   9123  CB  LEU B  45     -24.515 -11.947  38.530  1.00 54.97           C
ATOM   9126  CG  LEU B  45     -23.403 -12.727  37.833  1.00 54.76           C
ATOM   9128  CD1 LEU B  45     -23.460 -12.538  36.350  1.00 60.04           C
ATOM   9132  CD2 LEU B  45     -22.040 -12.316  38.390  1.00 55.62           C
ATOM   9136  C   LEU B  45     -26.940 -11.742  39.002  1.00 56.15           C
ATOM   9137  O   LEU B  45     -27.078 -10.691  39.634  1.00 56.57           O
ATOM   9139  N   GLU B  46     -27.639 -12.843  39.265  1.00 55.98           N
ATOM   9140  CA  GLU B  46     -28.593 -12.919  40.362  1.00 55.75           C
ATOM   9142  CB  GLU B  46     -30.002 -13.171  39.810  1.00 55.04           C
ATOM   9145  CG  GLU B  46     -31.140 -13.062  40.842  1.00 56.99           C
ATOM   9148  CD  GLU B  46     -32.483 -13.590  40.324  1.00 59.02           C
ATOM   9149  OE1 GLU B  46     -32.580 -13.917  39.121  1.00 62.34           O
ATOM   9150  OE2 GLU B  46     -33.442 -13.671  41.119  1.00 60.17           O
ATOM   9151  C   GLU B  46     -28.184 -14.059  41.300  1.00 56.63           C
ATOM   9152  O   GLU B  46     -27.946 -15.190  40.848  1.00 58.14           O
ATOM   9154  N   TRP B  47     -28.087 -13.759  42.597  1.00 54.97           N
ATOM   9155  CA  TRP B  47     -27.993 -14.812  43.608  1.00 54.73           C
ATOM   9157  CB  TRP B  47     -27.452 -14.298  44.947  1.00 53.01           C
ATOM   9160  CG  TRP B  47     -27.611 -15.321  45.990  1.00 51.23           C
ATOM   9161  CD1 TRP B  47     -26.851 -16.446  46.163  1.00 51.35           C
ATOM   9163  NE1 TRP B  47     -27.335 -17.187  47.215  1.00 49.44           N
ATOM   9165  CE2 TRP B  47     -28.437 -16.552  47.725  1.00 51.97           C
ATOM   9166  CD2 TRP B  47     -28.643 -15.378  46.966  1.00 51.78           C
ATOM   9167  CE3 TRP B  47     -29.723 -14.550  47.281  1.00 51.58           C
ATOM   9169  CZ3 TRP B  47     -30.555 -14.915  48.320  1.00 51.38           C
ATOM   9171  CH2 TRP B  47     -30.325 -16.083  49.059  1.00 49.92           C
ATOM   9173  CZ2 TRP B  47     -29.276 -16.914  48.775  1.00 52.11           C
ATOM   9175  C   TRP B  47     -29.385 -15.390  43.827  1.00 54.17           C
ATOM   9176  O   TRP B  47     -30.326 -14.628  44.030  1.00 55.25           O
ATOM   9178  N   ILE B  48     -29.504 -16.722  43.811  1.00 54.39           N
ATOM   9179  CA  ILE B  48     -30.800 -17.393  43.988  1.00 53.47           C
ATOM   9181  CB  ILE B  48     -31.279 -18.055  42.681  1.00 52.77           C
ATOM   9183  CG1 ILE B  48     -30.381 -19.235  42.295  1.00 53.12           C
ATOM   9186  CD1 ILE B  48     -30.981 -20.127  41.226  1.00 54.34           C
ATOM   9190  CG2 ILE B  48     -31.332 -17.013  41.570  1.00 53.53           C
ATOM   9194  C   ILE B  48     -30.891 -18.423  45.111  1.00 52.30           C
ATOM   9195  O   ILE B  48     -31.997 -18.798  45.507  1.00 53.16           O
ATOM   9197  N   GLY B  49     -29.768 -18.895  45.633  1.00 52.45           N
ATOM   9198  CA  GLY B  49     -29.852 -19.812  46.763  1.00 53.11           C
ATOM   9201  C   GLY B  49     -28.557 -20.165  47.446  1.00 52.97           C
ATOM   9202  O   GLY B  49     -27.521 -20.253  46.802  1.00 54.06           O
ATOM   9204  N   VAL B  50     -28.632 -20.403  48.754  1.00 53.18           N
ATOM   9205  CA  VAL B  50     -27.471 -20.855  49.523  1.00 53.84           C
ATOM   9207  CB  VAL B  50     -26.856 -19.717  50.363  1.00 53.71           C
ATOM   9209  CG1 VAL B  50     -27.902 -19.066  51.260  1.00 55.07           C
ATOM   9213  CG2 VAL B  50     -25.682 -20.236  51.203  1.00 52.34           C
ATOM   9217  C   VAL B  50     -27.850 -21.991  50.459  1.00 55.14           C
ATOM   9218  O   VAL B  50     -28.969 -22.016  50.971  1.00 56.13           O
ATOM   9220  N   ILE B  51     -26.908 -22.919  50.666  1.00 55.41           N
ATOM   9221  CA  ILE B  51     -27.008 -23.967  51.695  1.00 53.53           C
ATOM   9223  CB  ILE B  51     -27.197 -25.352  51.072  1.00 52.94           C
ATOM   9225  CG1 ILE B  51     -27.559 -26.383  52.146  1.00 53.13           C
ATOM   9228  CD1 ILE B  51     -28.330 -27.584  51.604  1.00 52.90           C
ATOM   9232  CG2 ILE B  51     -25.949 -25.784  50.309  1.00 54.26           C
ATOM   9236  C   ILE B  51     -25.740 -23.971  52.552  1.00 54.39           C
ATOM   9237  O   ILE B  51     -24.636 -23.956  52.015  1.00 57.35           O
ATOM   9239  N   SER B  52     -25.899 -24.003  53.874  1.00 53.14           N
ATOM   9240  CA  SER B  52     -24.781 -23.839  54.801  1.00 52.08           C
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ATOM   9242  CB  SER B  52     -25.221 -22.962  55.975  1.00 51.15           C
ATOM   9245  OG  SER B  52     -24.131 -22.645  56.820  1.00 50.26           O
ATOM   9247  C   SER B  52     -24.247 -25.192  55.305  1.00 53.46           C
ATOM   9248  O   SER B  52     -24.642 -26.256  54.819  1.00 54.16           O
ATOM   9250  N   VAL B  53     -23.357 -25.135  56.293  1.00 52.86           N
ATOM   9251  CA  VAL B  53     -22.594 -26.295  56.742  1.00 52.66           C
ATOM   9253  CB  VAL B  53     -21.214 -25.846  57.268  1.00 53.38           C
ATOM   9255  CG1 VAL B  53     -21.344 -24.855  58.444  1.00 54.96           C
ATOM   9259  CG2 VAL B  53     -20.422 -25.216  56.139  1.00 51.78           C
ATOM   9263  C   VAL B  53     -23.343 -27.137  57.783  1.00 54.05           C
ATOM   9264  O   VAL B  53     -24.492 -26.853  58.105  1.00 54.07           O
ATOM   9266  N   LYS B  54     -22.698 -28.186  58.288  1.00 54.87           N
ATOM   9267  CA  LYS B  54     -23.329 -29.084  59.262  1.00 54.71           C
ATOM   9269  CB  LYS B  54     -22.444 -30.307  59.510  1.00 54.04           C
ATOM   9272  CG  LYS B  54     -23.055 -31.376  60.395  1.00 55.17           C
ATOM   9275  CD  LYS B  54     -21.987 -32.332  60.885  1.00 56.41           C
ATOM   9278  CE  LYS B  54     -22.578 -33.563  61.554  1.00 57.98           C
ATOM   9281  NZ  LYS B  54     -21.517 -34.593  61.796  1.00 59.34           N
ATOM   9285  C   LYS B  54     -23.595 -28.385  60.587  1.00 53.88           C
ATOM   9286  O   LYS B  54     -24.588 -28.659  61.245  1.00 53.59           O
ATOM   9288  N   SER B  55     -22.699 -27.490  60.978  1.00 55.35           N
ATOM   9289  CA  SER B  55     -22.815 -26.779  62.255  1.00 56.38           C
ATOM   9291  CB  SER B  55     -21.518 -26.019  62.561  1.00 57.30           C
ATOM   9294  OG  SER B  55     -20.700 -25.901  61.402  1.00 61.19           O
ATOM   9296  C   SER B  55     -24.022 -25.839  62.296  1.00 56.69           C
ATOM   9297  O   SER B  55     -24.580 -25.602  63.358  1.00 56.87           O
ATOM   9299  N   GLU B  56     -24.418 -25.313  61.138  1.00 57.23           N
ATOM   9300  CA  GLU B  56     -25.676 -24.582  61.009  1.00 57.48           C
ATOM   9302  CB  GLU B  56     -25.498 -23.388  60.055  1.00 57.50           C
ATOM   9305  CG  GLU B  56     -24.838 -22.151  60.682  1.00 58.69           C
ATOM   9308  CD  GLU B  56     -25.187 -20.859  59.924  1.00 61.99           C
ATOM   9309  OE1 GLU B  56     -25.070 -20.837  58.682  1.00 60.54           O
ATOM   9310  OE2 GLU B  56     -25.583 -19.863  60.566  1.00 70.96           O
ATOM   9311  C   GLU B  56     -26.847 -25.484  60.539  1.00 56.68           C
ATOM   9312  O   GLU B  56     -27.827 -24.984  59.991  1.00 56.23           O
ATOM   9314  N   ASN B  57     -26.754 -26.797  60.769  1.00 56.37           N
ATOM   9315  CA  ASN B  57     -27.807 -27.757  60.386  1.00 56.82           C
ATOM   9317  CB  ASN B  57     -29.083 -27.556  61.237  1.00 57.35           C
ATOM   9320  CG  ASN B  57     -28.819 -27.574  62.739  1.00 55.98           C
ATOM   9321  OD1 ASN B  57     -28.299 -28.552  63.285  1.00 58.87           O
ATOM   9322  ND2 ASN B  57     -29.217 -26.505  63.419  1.00 49.56           N
ATOM   9325  C   ASN B  57     -28.190 -27.711  58.891  1.00 57.60           C
ATOM   9326  O   ASN B  57     -29.367 -27.807  58.532  1.00 57.42           O
ATOM   9328  N   TYR B  58     -27.198 -27.552  58.023  1.00 57.86           N
ATOM   9329  CA  TYR B  58     -27.428 -27.504  56.570  1.00 56.14           C
ATOM   9331  CB  TYR B  58     -27.682 -28.910  56.038  1.00 55.95           C
ATOM   9334  CG  TYR B  58     -26.587 -29.893  56.375  1.00 55.36           C
ATOM   9335  CD1 TYR B  58     -25.282 -29.670  55.960  1.00 55.28           C
ATOM   9337  CE1 TYR B  58     -24.276 -30.570  56.257  1.00 59.89           C
ATOM   9339  CZ  TYR B  58     -24.570 -31.719  56.982  1.00 60.17           C
ATOM   9340  OH  TYR B  58     -23.574 -32.620  57.288  1.00 56.52           O
ATOM   9342  CE2 TYR B  58     -25.863 -31.959  57.408  1.00 56.62           C
ATOM   9344  CD2 TYR B  58     -26.862 -31.050  57.101  1.00 55.43           C
ATOM   9346  C   TYR B  58     -28.573 -26.568  56.175  1.00 54.78           C
ATOM   9347  O   TYR B  58     -29.306 -26.817  55.209  1.00 54.62           O
ATOM   9349  N   GLY B  59     -28.710 -25.481  56.926  1.00 54.25           N
ATOM   9350  CA  GLY B  59     -29.779 -24.509  56.700  1.00 54.82           C
ATOM   9353  C   GLY B  59     -29.661 -23.869  55.334  1.00 53.54           C
ATOM   9354  O   GLY B  59     -28.552 -23.694  54.836  1.00 53.40           O
ATOM   9356  N   ALA B  60     -30.805 -23.529  54.738  1.00 53.00           N
ATOM   9357  CA  ALA B  60     -30.864 -22.996  53.373  1.00 52.32           C
ATOM   9359  CB  ALA B  60     -31.502 -24.016  52.448  1.00 51.71           C
ATOM   9363  C   ALA B  60     -31.644 -21.693  53.320  1.00 51.58           C
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ATOM   9364  O   ALA B  60     -32.417 -21.382  54.220  1.00 53.08           O
ATOM   9366  N   ASN B  61     -31.441 -20.931  52.256  1.00 51.85           N
ATOM   9367  CA  ASN B  61     -32.195 -19.704  52.030  1.00 52.22           C
ATOM   9369  CB  ASN B  61     -31.624 -18.552  52.873  1.00 52.98           C
ATOM   9372  CG  ASN B  61     -32.717 -17.666  53.500  1.00 55.92           C
ATOM   9373  OD1 ASN B  61     -32.621 -17.260  54.658  1.00 59.75           O
ATOM   9374  ND2 ASN B  61     -33.747 -17.378  52.742  1.00 49.51           N
ATOM   9377  C   ASN B  61     -32.155 -19.372  50.541  1.00 53.18           C
ATOM   9378  O   ASN B  61     -31.187 -19.708  49.846  1.00 55.85           O
ATOM   9380  N   TYR B  62     -33.207 -18.716  50.061  1.00 52.93           N
ATOM   9381  CA  TYR B  62     -33.451 -18.542  48.634  1.00 52.14           C
ATOM   9383  CB  TYR B  62     -34.603 -19.448  48.199  1.00 50.84           C
ATOM   9386  CG  TYR B  62     -34.363 -20.911  48.494  1.00 49.79           C
ATOM   9387  CD1 TYR B  62     -34.676 -21.454  49.733  1.00 42.10           C
ATOM   9389  CE1 TYR B  62     -34.444 -22.775  50.009  1.00 44.59           C
ATOM   9391  CZ  TYR B  62     -33.892 -23.591  49.034  1.00 49.21           C
ATOM   9392  OH  TYR B  62     -33.662 -24.923  49.286  1.00 49.24           O
ATOM   9394  CE2 TYR B  62     -33.571 -23.078  47.798  1.00 49.63           C
ATOM   9396  CD2 TYR B  62     -33.807 -21.746  47.532  1.00 50.35           C
ATOM   9398  C   TYR B  62     -33.822 -17.109  48.322  1.00 52.40           C
ATOM   9399  O   TYR B  62     -34.206 -16.347  49.199  1.00 49.96           O
ATOM   9401  N   ALA B  63     -33.686 -16.748  47.057  1.00 54.42           N
ATOM   9402  CA  ALA B  63     -34.194 -15.482  46.568  1.00 54.68           C
ATOM   9404  CB  ALA B  63     -33.541 -15.119  45.257  1.00 54.68           C
ATOM   9408  C   ALA B  63     -35.682 -15.669  46.382  1.00 55.78           C
ATOM   9409  O   ALA B  63     -36.134 -16.765  46.070  1.00 55.96           O
ATOM   9411  N   GLU B  64     -36.438 -14.592  46.558  1.00 57.66           N
ATOM   9412  CA  GLU B  64     -37.899 -14.659  46.523  1.00 56.77           C
ATOM   9414  CB  GLU B  64     -38.514 -13.367  47.084  1.00 56.49           C
ATOM   9417  CG  GLU B  64     -38.081 -12.997  48.511  1.00 54.77           C
ATOM   9420  CD  GLU B  64     -38.364 -14.086  49.544  1.00 55.72           C
ATOM   9421  OE1 GLU B  64     -39.184 -15.000  49.284  1.00 55.18           O
ATOM   9422  OE2 GLU B  64     -37.742 -14.046  50.627  1.00 55.25           O
ATOM   9423  C   GLU B  64     -38.475 -14.949  45.134  1.00 56.79           C
ATOM   9424  O   GLU B  64     -39.633 -15.339  45.016  1.00 59.39           O
ATOM   9426  N   SER B  65     -37.683 -14.775  44.083  1.00 56.67           N
ATOM   9427  CA  SER B  65     -38.166 -15.095  42.740  1.00 56.33           C
ATOM   9429  CB  SER B  65     -37.318 -14.388  41.674  1.00 55.40           C
ATOM   9432  OG  SER B  65     -36.086 -15.050  41.467  1.00 52.67           O
ATOM   9434  C   SER B  65     -38.163 -16.609  42.495  1.00 56.91           C
ATOM   9435  O   SER B  65     -38.684 -17.078  41.489  1.00 59.57           O
ATOM   9437  N   VAL B  66     -37.589 -17.365  43.422  1.00 55.11           N
ATOM   9438  CA  VAL B  66     -37.310 -18.779  43.207  1.00 53.81           C
ATOM   9440  CB  VAL B  66     -35.810 -18.913  42.895  1.00 54.11           C
ATOM   9442  CG1 VAL B  66     -35.076 -19.720  43.946  1.00 58.69           C
ATOM   9446  CG2 VAL B  66     -35.591 -19.450  41.503  1.00 53.52           C
ATOM   9450  C   VAL B  66     -37.748 -19.701  44.372  1.00 52.72           C
ATOM   9451  O   VAL B  66     -37.892 -20.910  44.190  1.00 50.48           O
ATOM   9453  N   ARG B  67     -37.973 -19.117  45.549  1.00 52.58           N
ATOM   9454  CA  ARG B  67     -38.397 -19.840  46.755  1.00 51.78           C
ATOM   9456  CB  ARG B  67     -38.478 -18.861  47.935  1.00 50.98           C
ATOM   9459  CG  ARG B  67     -38.942 -19.441  49.267  1.00 52.10           C
ATOM   9462  CD  ARG B  67     -39.295 -18.353  50.288  1.00 53.07           C
ATOM   9465  NE  ARG B  67     -38.205 -18.050  51.211  1.00 56.20           N
ATOM   9467  CZ  ARG B  67     -37.204 -17.209  50.958  1.00 60.91           C
ATOM   9468  NH1 ARG B  67     -37.121 -16.579  49.798  1.00 69.43           N
ATOM   9471  NH2 ARG B  67     -36.264 -16.989  51.858  1.00 54.63           N
ATOM   9474  C   ARG B  67     -39.740 -20.514  46.548  1.00 51.61           C
ATOM   9475  O   ARG B  67     -40.662 -19.918  45.994  1.00 52.70           O
ATOM   9477  N   GLY B  68     -39.838 -21.760  46.999  1.00 52.22           N
ATOM   9478  CA  GLY B  68     -41.040 -22.571  46.817  1.00 51.72           C
ATOM   9481  C   GLY B  68     -41.021 -23.390  45.541  1.00 52.26           C
ATOM   9482  O   GLY B  68     -41.893 -24.240  45.340  1.00 55.36           O
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ATOM   9484  N   ARG B  69     -40.044 -23.142  44.671  1.00 51.46           N
ATOM   9485  CA  ARG B  69     -39.971 -23.827  43.379  1.00 52.71           C
ATOM   9487  CB  ARG B  69     -40.192 -22.832  42.241  1.00 53.50           C
ATOM   9490  CG  ARG B  69     -41.606 -22.293  42.200  1.00 51.31           C
ATOM   9493  CD  ARG B  69     -41.877 -21.449  40.975  1.00 52.31           C
ATOM   9496  NE  ARG B  69     -40.846 -20.441  40.752  1.00 55.92           N
ATOM   9498  CZ  ARG B  69     -40.002 -20.412  39.721  1.00 51.70           C
ATOM   9499  NH1 ARG B  69     -40.047 -21.326  38.767  1.00 49.27           N
ATOM   9502  NH2 ARG B  69     -39.119 -19.435  39.635  1.00 46.31           N
ATOM   9505  C   ARG B  69     -38.648 -24.533  43.186  1.00 53.27           C
ATOM   9506  O   ARG B  69     -38.609 -25.664  42.709  1.00 55.74           O
ATOM   9508  N   PHE B  70     -37.565 -23.844  43.523  1.00 54.04           N
ATOM   9509  CA  PHE B  70     -36.230 -24.410  43.467  1.00 54.35           C
ATOM   9511  CB  PHE B  70     -35.240 -23.406  42.886  1.00 53.43           C
ATOM   9514  CG  PHE B  70     -35.491 -23.036  41.441  1.00 55.01           C
ATOM   9515  CD1 PHE B  70     -36.716 -23.262  40.817  1.00 52.51           C
ATOM   9517  CE1 PHE B  70     -36.912 -22.898  39.497  1.00 52.41           C
ATOM   9519  CZ  PHE B  70     -35.905 -22.289  38.788  1.00 49.52           C
ATOM   9521  CE2 PHE B  70     -34.689 -22.046  39.391  1.00 53.29           C
ATOM   9523  CD2 PHE B  70     -34.483 -22.417  40.706  1.00 55.29           C
ATOM   9525  C   PHE B  70     -35.798 -24.759  44.883  1.00 55.98           C
ATOM   9526  O   PHE B  70     -36.134 -24.040  45.843  1.00 57.10           O
ATOM   9528  N   THR B  71     -35.046 -25.856  45.004  1.00 56.70           N
ATOM   9529  CA  THR B  71     -34.500 -26.311  46.284  1.00 56.44           C
ATOM   9531  CB  THR B  71     -35.271 -27.527  46.796  1.00 56.36           C
ATOM   9533  OG1 THR B  71     -36.640 -27.166  47.016  1.00 57.34           O
ATOM   9535  CG2 THR B  71     -34.660 -28.047  48.098  1.00 55.70           C
ATOM   9539  C   THR B  71     -33.017 -26.688  46.165  1.00 57.57           C
ATOM   9540  O   THR B  71     -32.606 -27.292  45.169  1.00 56.61           O
ATOM   9542  N   ILE B  72     -32.229 -26.334  47.190  1.00 58.19           N
ATOM   9543  CA  ILE B  72     -30.821 -26.747  47.287  1.00 57.13           C
ATOM   9545  CB  ILE B  72     -29.888 -25.635  47.795  1.00 57.16           C
ATOM   9547  CG1 ILE B  72     -30.201 -24.315  47.142  1.00 60.50           C
ATOM   9550  CD1 ILE B  72     -29.264 -23.249  47.597  1.00 62.72           C
ATOM   9554  CG2 ILE B  72     -28.412 -25.953  47.491  1.00 57.36           C
ATOM   9558  C   ILE B  72     -30.679 -27.864  48.289  1.00 54.97           C
ATOM   9559  O   ILE B  72     -31.323 -27.846  49.331  1.00 55.85           O
ATOM   9561  N   SER B  73     -29.812 -28.820  47.973  1.00 53.85           N
ATOM   9562  CA  SER B  73     -29.405 -29.849  48.920  1.00 53.27           C
ATOM   9564  CB  SER B  73     -30.334 -31.055  48.839  1.00 51.63           C
ATOM   9567  OG  SER B  73     -30.422 -31.532  47.506  1.00 55.19           O
ATOM   9569  C   SER B  73     -27.976 -30.252  48.593  1.00 52.79           C
ATOM   9570  O   SER B  73     -27.455 -29.921  47.519  1.00 52.93           O
ATOM   9572  N   ARG B  74     -27.348 -30.969  49.518  1.00 51.93           N
ATOM   9573  CA  ARG B  74     -25.943 -31.305  49.393  1.00 51.59           C
ATOM   9575  CB  ARG B  74     -25.108 -30.273  50.136  1.00 50.64           C
ATOM   9578  CG  ARG B  74     -25.368 -30.224  51.630  1.00 49.70           C
ATOM   9581  CD  ARG B  74     -24.673 -29.044  52.284  1.00 53.08           C
ATOM   9584  NE  ARG B  74     -23.217 -29.088  52.125  1.00 54.58           N
ATOM   9586  CZ  ARG B  74     -22.418 -28.029  52.210  1.00 57.86           C
ATOM   9587  NH1 ARG B  74     -22.916 -26.820  52.450  1.00 60.01           N
ATOM   9590  NH2 ARG B  74     -21.109 -28.176  52.039  1.00 61.08           N
ATOM   9593  C   ARG B  74     -25.631 -32.683  49.939  1.00 52.07           C
ATOM   9594  O   ARG B  74     -26.329 -33.202  50.810  1.00 52.51           O
ATOM   9596  N   ASP B  75     -24.569 -33.272  49.413  1.00 52.35           N
ATOM   9597  CA  ASP B  75     -24.046 -34.514  49.934  1.00 51.94           C
ATOM   9599  CB  ASP B  75     -24.294 -35.638  48.937  1.00 50.84           C
ATOM   9602  CG  ASP B  75     -24.053 -37.002  49.533  1.00 52.31           C
ATOM   9603  OD1 ASP B  75     -23.303 -37.086  50.530  1.00 50.83           O
ATOM   9604  OD2 ASP B  75     -24.621 -37.987  49.008  1.00 53.27           O
ATOM   9605  C   ASP B  75     -22.550 -34.329  50.217  1.00 52.87           C
ATOM   9606  O   ASP B  75     -21.706 -34.446  49.317  1.00 52.64           O
ATOM   9608  N   ASP B  76     -22.226 -34.028  51.472  1.00 52.56           N
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ATOM   9609  CA  ASP B  76     -20.828 -33.858  51.871  1.00 52.98           C
ATOM   9611  CB  ASP B  76     -20.722 -33.459  53.350  1.00 52.94           C
ATOM   9614  CG  ASP B  76     -21.218 -32.046  53.622  1.00 54.99           C
ATOM   9615  OD1 ASP B  76     -21.386 -31.259  52.662  1.00 52.49           O
ATOM   9616  OD2 ASP B  76     -21.441 -31.724  54.813  1.00 56.04           O
ATOM   9617  C   ASP B  76     -19.979 -35.114  51.600  1.00 53.20           C
ATOM   9618  O   ASP B  76     -18.778 -35.011  51.300  1.00 52.44           O
ATOM   9620  N   SER B  77     -20.599 -36.289  51.698  1.00 52.38           N
ATOM   9621  CA  SER B  77     -19.895 -37.539  51.416  1.00 52.35           C
ATOM   9623  CB  SER B  77     -20.690 -38.740  51.919  1.00 51.38           C
ATOM   9626  OG  SER B  77     -21.713 -39.071  51.000  1.00 50.69           O
ATOM   9628  C   SER B  77     -19.607 -37.726  49.925  1.00 51.61           C
ATOM   9629  O   SER B  77     -18.793 -38.558  49.570  1.00 51.60           O
ATOM   9631  N   LYS B  78     -20.289 -36.981  49.058  1.00 52.03           N
ATOM   9632  CA  LYS B  78     -20.003 -37.013  47.619  1.00 53.43           C
ATOM   9634  CB  LYS B  78     -21.240 -37.511  46.848  1.00 53.95           C
ATOM   9637  CG  LYS B  78     -21.445 -39.026  46.955  1.00 57.91           C
ATOM   9640  CD  LYS B  78     -22.436 -39.586  45.932  1.00 57.80           C
ATOM   9643  CE  LYS B  78     -23.887 -39.403  46.376  1.00 65.44           C
ATOM   9646  NZ  LYS B  78     -24.870 -40.098  45.483  1.00 64.81           N
ATOM   9650  C   LYS B  78     -19.507 -35.658  47.073  1.00 52.27           C
ATOM   9651  O   LYS B  78     -19.393 -35.480  45.866  1.00 49.95           O
ATOM   9653  N   ASN B  79     -19.187 -34.724  47.971  1.00 52.77           N
ATOM   9654  CA  ASN B  79     -18.720 -33.383  47.604  1.00 52.21           C
ATOM   9656  CB  ASN B  79     -17.231 -33.416  47.241  1.00 49.93           C
ATOM   9659  CG  ASN B  79     -16.335 -33.377  48.464  1.00 51.60           C
ATOM   9660  OD1 ASN B  79     -16.767 -33.666  49.578  1.00 53.74           O
ATOM   9661  ND2 ASN B  79     -15.080 -33.004  48.262  1.00 54.23           N
ATOM   9664  C   ASN B  79     -19.550 -32.739  46.494  1.00 52.81           C
ATOM   9665  O   ASN B  79     -19.016 -32.212  45.524  1.00 55.10           O
ATOM   9667  N   THR B  80     -20.864 -32.775  46.653  1.00 52.23           N
ATOM   9668  CA  THR B  80     -21.765 -32.401  45.577  1.00 51.61           C
ATOM   9670  CB  THR B  80     -22.325 -33.657  44.898  1.00 52.29           C
ATOM   9672  OG1 THR B  80     -21.240 -34.462  44.422  1.00 49.01           O
ATOM   9674  CG2 THR B  80     -23.238 -33.292  43.736  1.00 52.69           C
ATOM   9678  C   THR B  80     -22.926 -31.575  46.101  1.00 50.80           C
ATOM   9679  O   THR B  80     -23.485 -31.884  47.151  1.00 50.17           O
ATOM   9681  N   VAL B  81     -23.285 -30.526  45.367  1.00 50.84           N
ATOM   9682  CA  VAL B  81     -24.454 -29.720  45.712  1.00 52.11           C
ATOM   9684  CB  VAL B  81     -24.060 -28.280  46.065  1.00 51.35           C
ATOM   9686  CG1 VAL B  81     -23.434 -27.559  44.864  1.00 53.00           C
ATOM   9690  CG2 VAL B  81     -25.268 -27.525  46.603  1.00 51.31           C
ATOM   9694  C   VAL B  81     -25.482 -29.762  44.575  1.00 52.11           C
ATOM   9695  O   VAL B  81     -25.107 -29.781  43.406  1.00 53.31           O
ATOM   9697  N   TYR B  82     -26.767 -29.798  44.925  1.00 51.73           N
ATOM   9698  CA  TYR B  82     -27.840 -29.960  43.930  1.00 53.05           C
ATOM   9700  CB  TYR B  82     -28.661 -31.238  44.187  1.00 51.60           C
ATOM   9703  CG  TYR B  82     -27.877 -32.528  44.256  1.00 50.27           C
ATOM   9704  CD1 TYR B  82     -27.556 -33.229  43.105  1.00 49.45           C
ATOM   9706  CE1 TYR B  82     -26.841 -34.430  43.164  1.00 48.96           C
ATOM   9708  CZ  TYR B  82     -26.456 -34.942  44.390  1.00 49.17           C
ATOM   9709  OH  TYR B  82     -25.747 -36.122  44.449  1.00 51.97           O
ATOM   9711  CE2 TYR B  82     -26.773 -34.266  45.552  1.00 48.85           C
ATOM   9713  CD2 TYR B  82     -27.488 -33.067  45.480  1.00 48.53           C
ATOM   9715  C   TYR B  82     -28.817 -28.790  43.957  1.00 53.68           C
ATOM   9716  O   TYR B  82     -29.086 -28.230  45.025  1.00 53.44           O
ATOM   9718  N   LEU B  83     -29.359 -28.447  42.786  1.00 53.66           N
ATOM   9719  CA  LEU B  83     -30.510 -27.540  42.687  1.00 54.91           C
ATOM   9721  CB  LEU B  83     -30.124 -26.220  42.031  1.00 55.04           C
ATOM   9724  CG  LEU B  83     -31.220 -25.153  41.963  1.00 54.30           C
ATOM   9726  CD1 LEU B  83     -31.369 -24.472  43.283  1.00 56.42           C
ATOM   9730  CD2 LEU B  83     -30.880 -24.129  40.903  1.00 58.69           C
ATOM   9734  C   LEU B  83     -31.645 -28.194  41.892  1.00 55.59           C
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ATOM   9735  O   LEU B  83     -31.608 -28.229  40.660  1.00 54.62           O
ATOM   9737  N   GLN B  84     -32.639 -28.713  42.617  1.00 56.31           N
ATOM   9738  CA  GLN B  84     -33.860 -29.249  42.033  1.00 55.50           C
ATOM   9740  CB  GLN B  84     -34.578 -30.146  43.050  1.00 55.99           C
ATOM   9743  CG  GLN B  84     -35.857 -30.834  42.548  1.00 55.42           C
ATOM   9746  CD  GLN B  84     -35.587 -31.896  41.500  1.00 56.92           C
ATOM   9747  OE1 GLN B  84     -34.722 -32.760  41.667  1.00 55.45           O
ATOM   9748  NE2 GLN B  84     -36.332 -31.834  40.409  1.00 59.02           N
ATOM   9751  C   GLN B  84     -34.737 -28.063  41.667  1.00 56.02           C
ATOM   9752  O   GLN B  84     -35.104 -27.273  42.527  1.00 55.65           O
ATOM   9754  N   MET B  85     -35.048 -27.928  40.383  1.00 57.32           N
ATOM   9755  CA  MET B  85     -35.857 -26.819  39.892  1.00 56.07           C
ATOM   9757  CB  MET B  85     -35.164 -26.145  38.705  1.00 55.29           C
ATOM   9760  CG  MET B  85     -33.773 -25.651  39.030  1.00 54.69           C
ATOM   9763  SD  MET B  85     -32.923 -24.798  37.686  1.00 55.74           S
ATOM   9764  CE  MET B  85     -32.627 -26.160  36.572  1.00 64.07           C
ATOM   9768  C   MET B  85     -37.211 -27.371  39.473  1.00 56.77           C
ATOM   9769  O   MET B  85     -37.298 -28.211  38.563  1.00 55.53           O
ATOM   9771  N   ASN B  86     -38.259 -26.917  40.157  1.00 55.85           N
ATOM   9772  CA  ASN B  86     -39.625 -27.314  39.832  1.00 54.92           C
ATOM   9774  CB  ASN B  86     -40.265 -28.020  41.020  1.00 53.97           C
ATOM   9777  CG  ASN B  86     -39.564 -29.313  41.376  1.00 55.14           C
ATOM   9778  OD1 ASN B  86     -38.758 -29.837  40.602  1.00 62.05           O
ATOM   9779  ND2 ASN B  86     -39.861 -29.836  42.555  1.00 48.25           N
ATOM   9782  C   ASN B  86     -40.461 -26.113  39.441  1.00 55.08           C
ATOM   9783  O   ASN B  86     -40.068 -24.977  39.703  1.00 56.57           O
ATOM   9785  N   SER B  87     -41.603 -26.378  38.804  1.00 54.35           N
ATOM   9786  CA  SER B  87     -42.563 -25.345  38.413  1.00 53.73           C
ATOM   9788  CB  SER B  87     -43.197 -24.694  39.659  1.00 53.16           C
ATOM   9791  OG  SER B  87     -43.769 -25.650  40.542  1.00 50.56           O
ATOM   9793  C   SER B  87     -41.890 -24.287  37.537  1.00 54.03           C
ATOM   9794  O   SER B  87     -42.020 -23.087  37.776  1.00 55.01           O
ATOM   9796  N   LEU B  88     -41.168 -24.734  36.520  1.00 53.64           N
ATOM   9797  CA  LEU B  88     -40.330 -23.823  35.749  1.00 54.98           C
ATOM   9799  CB  LEU B  88     -39.379 -24.603  34.834  1.00 55.57           C
ATOM   9802  CG  LEU B  88     -38.251 -25.274  35.613  1.00 56.38           C
ATOM   9804  CD1 LEU B  88     -37.610 -26.381  34.813  1.00 57.26           C
ATOM   9808  CD2 LEU B  88     -37.213 -24.236  36.068  1.00 54.65           C
ATOM   9812  C   LEU B  88     -41.127 -22.817  34.931  1.00 55.40           C
ATOM   9813  O   LEU B  88     -41.974 -23.192  34.126  1.00 57.09           O
ATOM   9815  N   LYS B  89     -40.844 -21.538  35.161  1.00 57.08           N
ATOM   9816  CA  LYS B  89     -41.357 -20.438  34.340  1.00 56.55           C
ATOM   9818  CB  LYS B  89     -41.600 -19.193  35.203  1.00 55.69           C
ATOM   9821  CG  LYS B  89     -42.761 -19.321  36.163  1.00 55.59           C
ATOM   9824  CD  LYS B  89     -42.532 -18.509  37.434  1.00 58.84           C
ATOM   9827  CE  LYS B  89     -43.827 -18.307  38.216  1.00 61.73           C
ATOM   9830  NZ  LYS B  89     -44.545 -19.585  38.493  1.00 63.76           N
ATOM   9834  C   LYS B  89     -40.371 -20.095  33.213  1.00 56.57           C
ATOM   9835  O   LYS B  89     -39.182 -20.443  33.266  1.00 54.37           O
ATOM   9837  N   THR B  90     -40.891 -19.402  32.203  1.00 56.99           N
ATOM   9838  CA  THR B  90     -40.110 -18.979  31.036  1.00 56.12           C
ATOM   9840  CB  THR B  90     -41.011 -18.347  29.916  1.00 55.05           C
ATOM   9842  OG1 THR B  90     -40.211 -17.544  29.051  1.00 59.38           O
ATOM   9844  CG2 THR B  90     -42.119 -17.466  30.484  1.00 56.71           C
ATOM   9848  C   THR B  90     -38.943 -18.051  31.421  1.00 55.29           C
ATOM   9849  O   THR B  90     -37.840 -18.188  30.892  1.00 54.64           O
ATOM   9851  N   GLU B  91     -39.167 -17.140  32.364  1.00 56.38           N
ATOM   9852  CA  GLU B  91     -38.101 -16.212  32.795  1.00 57.43           C
ATOM   9854  CB  GLU B  91     -38.669 -14.971  33.512  1.00 58.33           C
ATOM   9857  CG  GLU B  91     -39.371 -15.239  34.842  1.00 64.12           C
ATOM   9860  CD  GLU B  91     -40.824 -15.645  34.683  1.00 70.42           C
ATOM   9861  OE1 GLU B  91     -41.286 -15.821  33.523  1.00 70.14           O
ATOM   9862  OE2 GLU B  91     -41.499 -15.784  35.731  1.00 70.97           O
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ATOM   9863  C   GLU B  91     -36.978 -16.851  33.639  1.00 56.22           C
ATOM   9864  O   GLU B  91     -35.985 -16.202  33.926  1.00 56.66           O
ATOM   9866  N   ASP B  92     -37.126 -18.115  34.025  1.00 56.07           N
ATOM   9867  CA  ASP B  92     -36.012 -18.861  34.611  1.00 55.37           C
ATOM   9869  CB  ASP B  92     -36.458 -20.245  35.103  1.00 56.00           C
ATOM   9872  CG  ASP B  92     -37.489 -20.180  36.228  1.00 56.68           C
ATOM   9873  OD1 ASP B  92     -37.443 -19.252  37.057  1.00 54.69           O
ATOM   9874  OD2 ASP B  92     -38.343 -21.080  36.291  1.00 55.56           O
ATOM   9875  C   ASP B  92     -34.893 -19.045  33.592  1.00 55.02           C
ATOM   9876  O   ASP B  92     -33.745 -19.273  33.975  1.00 56.48           O
ATOM   9878  N   THR B  93     -35.229 -18.969  32.301  1.00 53.61           N
ATOM   9879  CA  THR B  93     -34.240 -19.095  31.230  1.00 54.02           C
ATOM   9881  CB  THR B  93     -34.794 -18.615  29.864  1.00 53.54           C
ATOM   9883  OG1 THR B  93     -35.888 -19.450  29.460  1.00 54.04           O
ATOM   9885  CG2 THR B  93     -33.721 -18.663  28.791  1.00 51.70           C
ATOM   9889  C   THR B  93     -32.993 -18.298  31.588  1.00 54.58           C
ATOM   9890  O   THR B  93     -33.043 -17.074  31.704  1.00 56.03           O
ATOM   9892  N   ALA B  94     -31.890 -19.009  31.795  1.00 54.48           N
ATOM   9893  CA  ALA B  94     -30.639 -18.398  32.213  1.00 53.89           C
ATOM   9895  CB  ALA B  94     -30.812 -17.734  33.549  1.00 54.78           C
ATOM   9899  C   ALA B  94     -29.551 -19.453  32.305  1.00 54.97           C
ATOM   9900  O   ALA B  94     -29.835 -20.654  32.289  1.00 57.34           O
ATOM   9902  N   VAL B  95     -28.303 -19.000  32.395  1.00 54.16           N
ATOM   9903  CA  VAL B  95     -27.167 -19.888  32.656  1.00 52.86           C
ATOM   9905  CB  VAL B  95     -25.848 -19.336  32.055  1.00 51.41           C
ATOM   9907  CG1 VAL B  95     -24.635 -20.044  32.630  1.00 51.86           C
ATOM   9911  CG2 VAL B  95     -25.858 -19.474  30.549  1.00 49.75           C
ATOM   9915  C   VAL B  95     -27.054 -19.984  34.163  1.00 53.07           C
ATOM   9916  O   VAL B  95     -26.937 -18.958  34.828  1.00 54.33           O
ATOM   9918  N   TYR B  96     -27.105 -21.201  34.704  1.00 53.08           N
ATOM   9919  CA  TYR B  96     -27.027 -21.399  36.160  1.00 53.07           C
ATOM   9921  CB  TYR B  96     -28.024 -22.463  36.605  1.00 51.09           C
ATOM   9924  CG  TYR B  96     -29.449 -21.980  36.555  1.00 49.90           C
ATOM   9925  CD1 TYR B  96     -30.114 -21.836  35.344  1.00 48.90           C
ATOM   9927  CE1 TYR B  96     -31.406 -21.386  35.298  1.00 48.16           C
ATOM   9929  CZ  TYR B  96     -32.063 -21.082  36.478  1.00 49.56           C
ATOM   9930  OH  TYR B  96     -33.364 -20.634  36.452  1.00 49.14           O
ATOM   9932  CE2 TYR B  96     -31.422 -21.218  37.688  1.00 48.55           C
ATOM   9934  CD2 TYR B  96     -30.129 -21.660  37.719  1.00 49.45           C
ATOM   9936  C   TYR B  96     -25.605 -21.786  36.573  1.00 54.19           C
ATOM   9937  O   TYR B  96     -24.992 -22.657  35.945  1.00 54.08           O
ATOM   9939  N   TYR B  97     -25.089 -21.128  37.614  1.00 53.45           N
ATOM   9940  CA  TYR B  97     -23.738 -21.374  38.126  1.00 53.72           C
ATOM   9942  CB  TYR B  97     -22.932 -20.071  38.162  1.00 53.06           C
ATOM   9945  CG  TYR B  97     -22.673 -19.409  36.815  1.00 52.93           C
ATOM   9946  CD1 TYR B  97     -21.601 -19.805  36.006  1.00 50.63           C
ATOM   9948  CE1 TYR B  97     -21.355 -19.193  34.790  1.00 50.03           C
ATOM   9950  CZ  TYR B  97     -22.176 -18.172  34.374  1.00 52.12           C
ATOM   9951  OH  TYR B  97     -21.957 -17.551  33.176  1.00 53.65           O
ATOM   9953  CE2 TYR B  97     -23.232 -17.755  35.155  1.00 52.35           C
ATOM   9955  CD2 TYR B  97     -23.472 -18.367  36.371  1.00 51.39           C
ATOM   9957  C   TYR B  97     -23.824 -21.899  39.549  1.00 55.05           C
ATOM   9958  O   TYR B  97     -24.636 -21.391  40.324  1.00 57.89           O
ATOM   9960  N   CYS B  98     -23.019 -22.909  39.898  1.00 54.63           N
ATOM   9961  CA  CYS B  98     -22.827 -23.276  41.309  1.00 55.19           C
ATOM   9963  CB  CYS B  98     -22.713 -24.790  41.528  1.00 54.48           C
ATOM   9966  SG  CYS B  98     -21.534 -25.613  40.472  1.00 68.35           S
ATOM   9968  C   CYS B  98     -21.579 -22.571  41.798  1.00 54.49           C
ATOM   9969  O   CYS B  98     -20.642 -22.367  41.026  1.00 55.68           O
ATOM   9971  N   SER B  99     -21.564 -22.175  43.066  1.00 53.13           N
ATOM   9972  CA  SER B  99     -20.394 -21.490  43.627  1.00 53.77           C
ATOM   9974  CB  SER B  99     -20.594 -19.965  43.597  1.00 53.95           C
ATOM   9977  OG  SER B  99     -19.434 -19.277  44.022  1.00 49.57           O
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ATOM   9979  C   SER B  99     -20.113 -21.972  45.042  1.00 52.56           C
ATOM   9980  O   SER B  99     -20.932 -22.659  45.637  1.00 53.56           O
ATOM   9982  N   ALA B 100     -18.950 -21.617  45.576  1.00 52.16           N
ATOM   9983  CA  ALA B 100     -18.620 -21.956  46.955  1.00 52.43           C
ATOM   9985  CB  ALA B 100     -18.032 -23.345  47.004  1.00 52.84           C
ATOM   9989  C   ALA B 100     -17.668 -20.949  47.619  1.00 53.04           C
ATOM   9990  O   ALA B 100     -16.899 -20.255  46.945  1.00 52.36           O
ATOM   9992  N   SER B 101     -17.756 -20.870  48.947  1.00 53.97           N
ATOM   9993  CA  SER B 101     -16.791 -20.137  49.786  1.00 52.83           C
ATOM   9995  CB  SER B 101     -17.125 -18.648  49.854  1.00 54.11           C
ATOM   9998  OG  SER B 101     -18.316 -18.425  50.589  1.00 46.21           O
ATOM  10000  C   SER B 101     -16.822 -20.701  51.193  1.00 52.47           C
ATOM  10001  O   SER B 101     -17.836 -21.237  51.612  1.00 53.65           O
ATOM  10003  N   TYR B 102     -15.730 -20.544  51.932  1.00 52.80           N
ATOM  10004  CA  TYR B 102     -15.628 -21.122  53.265  1.00 51.97           C
ATOM  10006  CB  TYR B 102     -14.222 -20.916  53.833  1.00 52.49           C
ATOM  10009  CG  TYR B 102     -13.183 -21.826  53.220  1.00 54.73           C
ATOM  10010  CD1 TYR B 102     -12.084 -21.318  52.538  1.00 50.64           C
ATOM  10012  CE1 TYR B 102     -11.143 -22.161  51.985  1.00 52.41           C
ATOM  10014  CZ  TYR B 102     -11.303 -23.533  52.102  1.00 53.41           C
ATOM  10015  OH  TYR B 102     -10.394 -24.418  51.559  1.00 53.51           O
ATOM  10017  CE2 TYR B 102     -12.387 -24.048  52.770  1.00 53.95           C
ATOM  10019  CD2 TYR B 102     -13.313 -23.205  53.320  1.00 56.68           C
ATOM  10021  C   TYR B 102     -16.666 -20.543  54.227  1.00 51.78           C
ATOM  10022  O   TYR B 102     -16.870 -19.331  54.287  1.00 50.00           O
ATOM  10024  N   TYR B 103     -17.332 -21.415  54.978  1.00 51.38           N
ATOM  10025  CA  TYR B 103     -18.215 -20.959  56.037  1.00 52.05           C
ATOM  10027  CB  TYR B 103     -18.696 -22.141  56.886  1.00 51.00           C
ATOM  10030  CG  TYR B 103     -19.436 -21.711  58.120  1.00 49.10           C
ATOM  10031  CD1 TYR B 103     -20.698 -21.163  58.034  1.00 53.66           C
ATOM  10033  CE1 TYR B 103     -21.377 -20.747  59.166  1.00 49.68           C
ATOM  10035  CZ  TYR B 103     -20.777 -20.859  60.388  1.00 46.64           C
ATOM  10036  OH  TYR B 103     -21.439 -20.449  61.520  1.00 51.79           O
ATOM  10038  CE2 TYR B 103     -19.526 -21.394  60.487  1.00 50.57           C
ATOM  10040  CD2 TYR B 103     -18.863 -21.815  59.358  1.00 46.30           C
ATOM  10042  C   TYR B 103     -17.476 -19.958  56.922  1.00 54.26           C
ATOM  10043  O   TYR B 103     -16.319 -20.191  57.294  1.00 58.94           O
ATOM  10045  N   ARG B 104     -18.133 -18.846  57.244  1.00 53.89           N
ATOM  10046  CA  ARG B 104     -17.620 -17.890  58.233  1.00 52.36           C
ATOM  10048  CB  ARG B 104     -17.416 -16.517  57.591  1.00 51.34           C
ATOM  10051  CG  ARG B 104     -16.383 -16.520  56.488  1.00 51.26           C
ATOM  10054  CD  ARG B 104     -16.401 -15.220  55.742  1.00 53.11           C
ATOM  10057  NE  ARG B 104     -16.093 -14.115  56.633  1.00 55.60           N
ATOM  10059  CZ  ARG B 104     -14.873 -13.650  56.861  1.00 54.62           C
ATOM  10060  NH1 ARG B 104     -13.831 -14.178  56.247  1.00 57.54           N
ATOM  10063  NH2 ARG B 104     -14.701 -12.636  57.699  1.00 57.92           N
ATOM  10066  C   ARG B 104     -18.588 -17.770  59.402  1.00 51.58           C
ATOM  10067  O   ARG B 104     -19.765 -18.069  59.270  1.00 49.33           O
ATOM  10069  N   TYR B 105     -18.096 -17.319  60.548  1.00 53.11           N
ATOM  10070  CA  TYR B 105     -18.973 -17.062  61.691  1.00 53.34           C
ATOM  10072  CB  TYR B 105     -18.178 -16.993  62.986  1.00 54.09           C
ATOM  10075  CG  TYR B 105     -17.639 -18.301  63.486  1.00 53.00           C
ATOM  10076  CD1 TYR B 105     -18.422 -19.447  63.478  1.00 54.00           C
ATOM  10078  CE1 TYR B 105     -17.937 -20.631  63.962  1.00 54.01           C
ATOM  10080  CZ  TYR B 105     -16.662 -20.682  64.478  1.00 53.68           C
ATOM  10081  OH  TYR B 105     -16.192 -21.872  64.948  1.00 57.62           O
ATOM  10083  CE2 TYR B 105     -15.863 -19.560  64.514  1.00 53.46           C
ATOM  10085  CD2 TYR B 105     -16.355 -18.378  64.025  1.00 55.08           C
ATOM  10087  C   TYR B 105     -19.740 -15.754  61.565  1.00 54.37           C
ATOM  10088  O   TYR B 105     -20.695 -15.543  62.306  1.00 58.57           O
ATOM  10090  N   ASP B 106     -19.314 -14.870  60.667  1.00 52.73           N
ATOM  10091  CA  ASP B 106     -19.924 -13.560  60.547  1.00 52.30           C
ATOM  10093  CB  ASP B 106     -18.844 -12.463  60.565  1.00 53.61           C
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ATOM  10096  CG  ASP B 106     -18.021 -12.388  59.269  1.00 54.59           C
ATOM  10097  OD1 ASP B 106     -18.312 -13.140  58.311  1.00 53.22           O
ATOM  10098  OD2 ASP B 106     -17.074 -11.568  59.222  1.00 54.25           O
ATOM  10099  C   ASP B 106     -20.805 -13.445  59.309  1.00 54.57           C
ATOM  10100  O   ASP B 106     -21.054 -14.415  58.583  1.00 58.76           O
ATOM  10102  N   VAL B 107     -21.248 -12.225  59.061  1.00 54.02           N
ATOM  10103  CA  VAL B 107     -22.125 -11.899  57.947  1.00 52.17           C
ATOM  10105  CB  VAL B 107     -22.685 -10.488  58.246  1.00 51.49           C
ATOM  10107  CG1 VAL B 107     -23.697 -10.585  59.361  1.00 52.19           C
ATOM  10111  CG2 VAL B 107     -23.302  -9.837  57.068  1.00 56.32           C
ATOM  10115  C   VAL B 107     -21.441 -12.024  56.547  1.00 52.08           C
ATOM  10116  O   VAL B 107     -22.039 -11.719  55.520  1.00 50.75           O
ATOM  10118  N   GLY B 108     -20.202 -12.506  56.497  1.00 52.12           N
ATOM  10119  CA  GLY B 108     -19.478 -12.612  55.233  1.00 52.33           C
ATOM  10122  C   GLY B 108     -19.911 -13.769  54.345  1.00 52.52           C
ATOM  10123  O   GLY B 108     -19.943 -14.926  54.782  1.00 54.48           O
ATOM  10125  N   ALA B 109     -20.251 -13.463  53.097  1.00 50.38           N
ATOM  10126  CA  ALA B 109     -20.533 -14.504  52.105  1.00 50.55           C
ATOM  10128  CB  ALA B 109     -21.955 -14.975  52.225  1.00 50.23           C
ATOM  10132  C   ALA B 109     -20.251 -13.999  50.686  1.00 51.08           C
ATOM  10133  O   ALA B 109     -20.675 -12.897  50.290  1.00 51.57           O
ATOM  10135  N   TRP B 110     -19.510 -14.787  49.922  1.00 51.10           N
ATOM  10136  CA  TRP B 110     -19.153 -14.376  48.568  1.00 51.34           C
ATOM  10138  CB  TRP B 110     -17.991 -13.378  48.584  1.00 50.07           C
ATOM  10141  CG  TRP B 110     -16.712 -13.934  49.046  1.00 52.07           C
ATOM  10142  CD1 TRP B 110     -15.805 -14.622  48.297  1.00 54.76           C
ATOM  10144  NE1 TRP B 110     -14.719 -14.971  49.065  1.00 54.63           N
ATOM  10146  CE2 TRP B 110     -14.908 -14.502  50.339  1.00 50.63           C
ATOM  10147  CD2 TRP B 110     -16.156 -13.839  50.364  1.00 54.61           C
ATOM  10148  CE3 TRP B 110     -16.594 -13.267  51.568  1.00 55.01           C
ATOM  10150  CZ3 TRP B 110     -15.776 -13.373  52.692  1.00 55.26           C
ATOM  10152  CH2 TRP B 110     -14.540 -14.041  52.629  1.00 51.97           C
ATOM  10154  CZ2 TRP B 110     -14.093 -14.611  51.467  1.00 48.32           C
ATOM  10156  C   TRP B 110     -18.875 -15.608  47.720  1.00 51.67           C
ATOM  10157  O   TRP B 110     -19.025 -16.739  48.191  1.00 54.15           O
ATOM  10159  N   PHE B 111     -18.505 -15.392  46.468  1.00 49.72           N
ATOM  10160  CA  PHE B 111     -18.537 -16.454  45.488  1.00 50.72           C
ATOM  10162  CB  PHE B 111     -19.567 -16.075  44.418  1.00 51.31           C
ATOM  10165  CG  PHE B 111     -20.890 -15.600  45.011  1.00 51.22           C
ATOM  10166  CD1 PHE B 111     -21.367 -14.316  44.770  1.00 51.31           C
ATOM  10168  CE1 PHE B 111     -22.568 -13.887  45.332  1.00 53.15           C
ATOM  10170  CZ  PHE B 111     -23.300 -14.742  46.165  1.00 52.64           C
ATOM  10172  CE2 PHE B 111     -22.827 -16.017  46.418  1.00 51.14           C
ATOM  10174  CD2 PHE B 111     -21.628 -16.435  45.847  1.00 51.50           C
ATOM  10176  C   PHE B 111     -17.127 -16.718  44.953  1.00 51.07           C
ATOM  10177  O   PHE B 111     -16.697 -16.131  43.960  1.00 49.39           O
ATOM  10179  N   ALA B 112     -16.423 -17.627  45.636  1.00 51.90           N
ATOM  10180  CA  ALA B 112     -14.972 -17.785  45.494  1.00 52.28           C
ATOM  10182  CB  ALA B 112     -14.369 -18.279  46.807  1.00 52.43           C
ATOM  10186  C   ALA B 112     -14.562 -18.706  44.349  1.00 54.01           C
ATOM  10187  O   ALA B 112     -13.589 -18.423  43.642  1.00 54.86           O
ATOM  10189  N   TYR B 113     -15.277 -19.816  44.187  1.00 54.23           N
ATOM  10190  CA  TYR B 113     -15.046 -20.741  43.071  1.00 54.55           C
ATOM  10192  CB  TYR B 113     -14.529 -22.095  43.591  1.00 57.92           C
ATOM  10195  CG  TYR B 113     -13.599 -21.915  44.769  1.00 59.49           C
ATOM  10196  CD1 TYR B 113     -12.394 -21.228  44.629  1.00 59.51           C
ATOM  10198  CE1 TYR B 113     -11.555 -21.029  45.712  1.00 59.73           C
ATOM  10200  CZ  TYR B 113     -11.924 -21.508  46.961  1.00 62.35           C
ATOM  10201  OH  TYR B 113     -11.107 -21.307  48.051  1.00 65.57           O
ATOM  10203  CE2 TYR B 113     -13.112 -22.190  47.125  1.00 61.64           C
ATOM  10205  CD2 TYR B 113     -13.947 -22.383  46.033  1.00 63.21           C
ATOM  10207  C   TYR B 113     -16.357 -20.874  42.306  1.00 54.00           C
ATOM  10208  O   TYR B 113     -17.426 -20.586  42.869  1.00 54.33           O
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ATOM  10210  N   TRP B 114     -16.283 -21.260  41.029  1.00 50.42           N
ATOM  10211  CA  TRP B 114     -17.471 -21.300  40.176  1.00 51.94           C
ATOM  10213  CB  TRP B 114     -17.543 -20.046  39.296  1.00 53.17           C
ATOM  10216  CG  TRP B 114     -17.786 -18.763  40.023  1.00 53.22           C
ATOM  10217  CD1 TRP B 114     -16.930 -18.132  40.868  1.00 53.88           C
ATOM  10219  NE1 TRP B 114     -17.499 -16.975  41.346  1.00 57.40           N
ATOM  10221  CE2 TRP B 114     -18.742 -16.826  40.791  1.00 58.34           C
ATOM  10222  CD2 TRP B 114     -18.959 -17.938  39.948  1.00 57.89           C
ATOM  10223  CE3 TRP B 114     -20.178 -18.038  39.262  1.00 56.51           C
ATOM  10225  CZ3 TRP B 114     -21.126 -17.026  39.429  1.00 55.40           C
ATOM  10227  CH2 TRP B 114     -20.877 -15.929  40.278  1.00 54.29           C
ATOM  10229  CZ2 TRP B 114     -19.697 -15.814  40.967  1.00 55.22           C
ATOM  10231  C   TRP B 114     -17.482 -22.501  39.261  1.00 51.60           C
ATOM  10232  O   TRP B 114     -16.434 -22.951  38.831  1.00 54.50           O
ATOM  10234  N   GLY B 115     -18.671 -23.002  38.939  1.00 51.17           N
ATOM  10235  CA  GLY B 115     -18.827 -23.991  37.874  1.00 50.06           C
ATOM  10238  C   GLY B 115     -18.732 -23.314  36.522  1.00 49.72           C
ATOM  10239  O   GLY B 115     -18.733 -22.088  36.451  1.00 50.08           O
ATOM  10241  N   GLN B 116     -18.657 -24.103  35.450  1.00 48.81           N
ATOM  10242  CA  GLN B 116     -18.618 -23.544  34.085  1.00 48.45           C
ATOM  10244  CB  GLN B 116     -18.281 -24.582  32.986  1.00 49.52           C
ATOM  10247  CG  GLN B 116     -17.847 -25.990  33.413  1.00 52.27           C
ATOM  10250  CD  GLN B 116     -19.019 -26.866  33.840  1.00 53.91           C
ATOM  10251  OE1 GLN B 116     -19.926 -27.143  33.054  1.00 53.87           O
ATOM  10252  NE2 GLN B 116     -19.002 -27.301  35.093  1.00 48.40           N
ATOM  10255  C   GLN B 116     -19.952 -22.909  33.723  1.00 46.90           C
ATOM  10256  O   GLN B 116     -20.043 -22.171  32.740  1.00 44.48           O
ATOM  10258  N   GLY B 117     -20.985 -23.233  34.504  1.00 47.53           N
ATOM  10259  CA  GLY B 117     -22.349 -22.806  34.230  1.00 47.80           C
ATOM  10262  C   GLY B 117     -22.985 -23.749  33.237  1.00 47.66           C
ATOM  10263  O   GLY B 117     -22.282 -24.502  32.570  1.00 49.32           O
ATOM  10265  N   THR B 118     -24.313 -23.727  33.138  1.00 48.93           N
ATOM  10266  CA  THR B 118     -25.018 -24.482  32.085  1.00 48.76           C
ATOM  10268  CB  THR B 118     -25.210 -25.981  32.464  1.00 48.89           C
ATOM  10270  OG1 THR B 118     -25.548 -26.734  31.291  1.00 53.32           O
ATOM  10272  CG2 THR B 118     -26.274 -26.165  33.519  1.00 46.00           C
ATOM  10276  C   THR B 118     -26.351 -23.835  31.727  1.00 48.20           C
ATOM  10277  O   THR B 118     -27.108 -23.424  32.604  1.00 51.12           O
ATOM  10279  N   LEU B 119     -26.629 -23.742  30.433  1.00 48.41           N
ATOM  10280  CA  LEU B 119     -27.837 -23.082  29.954  1.00 48.50           C
ATOM  10282  CB  LEU B 119     -27.752 -22.797  28.450  1.00 47.16           C
ATOM  10285  CG  LEU B 119     -28.871 -21.914  27.879  1.00 48.41           C
ATOM  10287  CD1 LEU B 119     -28.763 -20.489  28.376  1.00 50.05           C
ATOM  10291  CD2 LEU B 119     -28.854 -21.927  26.373  1.00 48.50           C
ATOM  10295  C   LEU B 119     -29.071 -23.931  30.250  1.00 49.81           C
ATOM  10296  O   LEU B 119     -29.124 -25.120  29.897  1.00 48.20           O
ATOM  10298  N   VAL B 120     -30.044 -23.300  30.916  1.00 50.44           N
ATOM  10299  CA  VAL B 120     -31.374 -23.871  31.149  1.00 49.07           C
ATOM  10301  CB  VAL B 120     -31.696 -23.910  32.634  1.00 48.16           C
ATOM  10303  CG1 VAL B 120     -33.125 -24.369  32.865  1.00 47.73           C
ATOM  10307  CG2 VAL B 120     -30.711 -24.804  33.347  1.00 50.96           C
ATOM  10311  C   VAL B 120     -32.394 -22.990  30.446  1.00 48.51           C
ATOM  10312  O   VAL B 120     -32.524 -21.814  30.774  1.00 47.70           O
ATOM  10314  N   THR B 121     -33.109 -23.568  29.485  1.00 49.00           N
ATOM  10315  CA  THR B 121     -34.019 -22.825  28.627  1.00 49.43           C
ATOM  10317  CB  THR B 121     -33.644 -22.974  27.128  1.00 50.87           C
ATOM  10319  OG1 THR B 121     -32.226 -22.823  26.946  1.00 54.94           O
ATOM  10321  CG2 THR B 121     -34.391 -21.944  26.283  1.00 50.14           C
ATOM  10325  C   THR B 121     -35.409 -23.381  28.802  1.00 49.73           C
ATOM  10326  O   THR B 121     -35.670 -24.532  28.455  1.00 49.51           O
ATOM  10328  N   VAL B 122     -36.306 -22.560  29.335  1.00 50.80           N
ATOM  10329  CA  VAL B 122     -37.697 -22.951  29.521  1.00 49.91           C
ATOM  10331  CB  VAL B 122     -38.254 -22.403  30.852  1.00 51.14           C
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ATOM  10333  CG1 VAL B 122     -39.628 -23.022  31.162  1.00 53.69           C
ATOM  10337  CG2 VAL B 122     -37.264 -22.651  32.004  1.00 49.84           C
ATOM  10341  C   VAL B 122     -38.514 -22.410  28.352  1.00 48.98           C
ATOM  10342  O   VAL B 122     -38.596 -21.198  28.168  1.00 48.36           O
ATOM  10344  N   SER B 123     -39.097 -23.311  27.562  1.00 49.19           N
ATOM  10345  CA  SER B 123     -39.938 -22.948  26.404  1.00 49.47           C
ATOM  10347  CB  SER B 123     -39.063 -22.518  25.225  1.00 50.02           C
ATOM  10350  OG  SER B 123     -39.798 -22.400  24.021  1.00 47.49           O
ATOM  10352  C   SER B 123     -40.804 -24.120  25.974  1.00 49.56           C
ATOM  10353  O   SER B 123     -40.503 -25.268  26.290  1.00 49.63           O
ATOM  10355  N   SER B 124     -41.881 -23.832  25.252  1.00 50.64           N
ATOM  10356  CA  SER B 124     -42.711 -24.892  24.666  1.00 51.03           C
ATOM  10358  CB  SER B 124     -44.201 -24.604  24.887  1.00 50.91           C
ATOM  10361  OG  SER B 124     -44.578 -23.356  24.346  1.00 51.52           O
ATOM  10363  C   SER B 124     -42.401 -25.118  23.174  1.00 51.23           C
ATOM  10364  O   SER B 124     -42.993 -25.990  22.531  1.00 51.97           O
ATOM  10366  N   ALA B 125     -41.465 -24.339  22.635  1.00 51.66           N
ATOM  10367  CA  ALA B 125     -40.969 -24.535  21.272  1.00 51.70           C
ATOM  10369  CB  ALA B 125     -40.193 -23.310  20.824  1.00 51.31           C
ATOM  10373  C   ALA B 125     -40.072 -25.771  21.211  1.00 52.38           C
ATOM  10374  O   ALA B 125     -39.141 -25.901  22.004  1.00 53.23           O
ATOM  10376  N   SER B 126     -40.338 -26.674  20.269  1.00 53.10           N
ATOM  10377  CA  SER B 126     -39.575 -27.926  20.184  1.00 53.58           C
ATOM  10379  CB  SER B 126     -40.368 -29.007  19.440  1.00 53.05           C
ATOM  10382  OG  SER B 126     -41.300 -28.435  18.542  1.00 56.47           O
ATOM  10384  C   SER B 126     -38.166 -27.747  19.586  1.00 54.18           C
ATOM  10385  O   SER B 126     -37.827 -26.702  19.016  1.00 52.27           O
ATOM  10387  N   THR B 127     -37.359 -28.793  19.739  1.00 54.57           N
ATOM  10388  CA  THR B 127     -35.938 -28.748  19.441  1.00 54.14           C
ATOM  10390  CB  THR B 127     -35.205 -29.901  20.166  1.00 54.37           C
ATOM  10392  OG1 THR B 127     -35.526 -29.864  21.563  1.00 58.43           O
ATOM  10394  CG2 THR B 127     -33.697 -29.796  20.009  1.00 55.13           C
ATOM  10398  C   THR B 127     -35.703 -28.831  17.941  1.00 53.64           C
ATOM  10399  O   THR B 127     -36.071 -29.816  17.313  1.00 55.32           O
ATOM  10401  N   LYS B 128     -35.087 -27.793  17.378  1.00 53.39           N
ATOM  10402  CA  LYS B 128     -34.868 -27.684  15.938  1.00 54.12           C
ATOM  10404  CB  LYS B 128     -35.488 -26.374  15.421  1.00 55.29           C
ATOM  10407  CG  LYS B 128     -36.405 -26.501  14.176  1.00 57.14           C
ATOM  10410  CD  LYS B 128     -35.818 -25.867  12.899  1.00 60.15           C
ATOM  10413  CE  LYS B 128     -35.289 -26.900  11.908  1.00 60.15           C
ATOM  10416  NZ  LYS B 128     -34.401 -26.272  10.887  1.00 58.48           N
ATOM  10420  C   LYS B 128     -33.373 -27.708  15.644  1.00 53.97           C
ATOM  10421  O   LYS B 128     -32.579 -27.153  16.402  1.00 56.83           O
ATOM  10423  N   GLY B 129     -32.999 -28.365  14.550  1.00 52.74           N
ATOM  10424  CA  GLY B 129     -31.609 -28.460  14.123  1.00 52.53           C
ATOM  10427  C   GLY B 129     -31.348 -27.524  12.957  1.00 53.65           C
ATOM  10428  O   GLY B 129     -32.216 -27.344  12.096  1.00 55.42           O
ATOM  10430  N   PRO B 130     -30.134 -26.955  12.887  1.00 52.88           N
ATOM  10431  CA  PRO B 130     -29.880 -25.847  11.978  1.00 51.85           C
ATOM  10433  CB  PRO B 130     -28.570 -25.274  12.503  1.00 52.02           C
ATOM  10436  CG  PRO B 130     -27.857 -26.454  13.040  1.00 52.63           C
ATOM  10439  CD  PRO B 130     -28.915 -27.348  13.616  1.00 53.25           C
ATOM  10442  C   PRO B 130     -29.694 -26.297  10.543  1.00 50.96           C
ATOM  10443  O   PRO B 130     -29.504 -27.483  10.293  1.00 49.72           O
ATOM  10444  N   SER B 131     -29.770 -25.341   9.620  1.00 50.80           N
ATOM  10445  CA  SER B 131     -29.361 -25.546   8.238  1.00 51.40           C
ATOM  10447  CB  SER B 131     -30.365 -24.945   7.254  1.00 51.80           C
ATOM  10450  OG  SER B 131     -31.597 -25.637   7.266  1.00 53.81           O
ATOM  10452  C   SER B 131     -28.041 -24.829   8.079  1.00 51.38           C
ATOM  10453  O   SER B 131     -27.904 -23.685   8.514  1.00 52.12           O
ATOM  10455  N   VAL B 132     -27.075 -25.498   7.459  1.00 50.81           N
ATOM  10456  CA  VAL B 132     -25.760 -24.914   7.260  1.00 51.30           C
ATOM  10458  CB  VAL B 132     -24.634 -25.875   7.699  1.00 50.80           C
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ATOM  10460  CG1 VAL B 132     -23.266 -25.228   7.489  1.00 51.91           C
ATOM  10464  CG2 VAL B 132     -24.818 -26.263   9.154  1.00 51.85           C
ATOM  10468  C   VAL B 132     -25.581 -24.529   5.800  1.00 51.62           C
ATOM  10469  O   VAL B 132     -25.290 -25.378   4.961  1.00 52.48           O
ATOM  10471  N   PHE B 133     -25.764 -23.245   5.505  1.00 52.30           N
ATOM  10472  CA  PHE B 133     -25.522 -22.713   4.163  1.00 52.24           C
ATOM  10474  CB  PHE B 133     -26.550 -21.636   3.821  1.00 52.74           C
ATOM  10477  CG  PHE B 133     -27.970 -22.097   3.952  1.00 53.46           C
ATOM  10478  CD1 PHE B 133     -28.580 -22.807   2.929  1.00 54.14           C
ATOM  10480  CE1 PHE B 133     -29.889 -23.236   3.048  1.00 53.90           C
ATOM  10482  CZ  PHE B 133     -30.605 -22.962   4.198  1.00 53.29           C
ATOM  10484  CE2 PHE B 133     -30.012 -22.259   5.226  1.00 54.94           C
ATOM  10486  CD2 PHE B 133     -28.697 -21.829   5.102  1.00 56.08           C
ATOM  10488  C   PHE B 133     -24.113 -22.124   4.077  1.00 52.45           C
ATOM  10489  O   PHE B 133     -23.610 -21.578   5.062  1.00 53.33           O
ATOM  10491  N   PRO B 134     -23.472 -22.227   2.899  1.00 51.97           N
ATOM  10492  CA  PRO B 134     -22.132 -21.683   2.723  1.00 51.57           C
ATOM  10494  CB  PRO B 134     -21.638 -22.420   1.480  1.00 52.22           C
ATOM  10497  CG  PRO B 134     -22.869 -22.623   0.665  1.00 50.46           C
ATOM  10500  CD  PRO B 134     -23.975 -22.851   1.658  1.00 52.33           C
ATOM  10503  C   PRO B 134     -22.165 -20.175   2.464  1.00 51.61           C
ATOM  10504  O   PRO B 134     -23.246 -19.605   2.290  1.00 51.20           O
ATOM  10505  N   LEU B 135     -20.989 -19.545   2.442  1.00 51.72           N
ATOM  10506  CA  LEU B 135     -20.849 -18.131   2.060  1.00 51.73           C
ATOM  10508  CB  LEU B 135     -20.709 -17.249   3.302  1.00 51.84           C
ATOM  10511  CG  LEU B 135     -21.907 -17.206   4.258  1.00 50.97           C
ATOM  10513  CD1 LEU B 135     -21.518 -16.558   5.576  1.00 49.13           C
ATOM  10517  CD2 LEU B 135     -23.079 -16.472   3.628  1.00 49.92           C
ATOM  10521  C   LEU B 135     -19.642 -17.923   1.144  1.00 51.94           C
ATOM  10522  O   LEU B 135     -19.785 -17.582  -0.036  1.00 51.14           O
ATOM  10524  N   GLY B 150     -17.257 -18.194   4.805  1.00 50.98           N
ATOM  10525  CA  GLY B 150     -17.955 -18.404   6.068  1.00 51.58           C
ATOM  10528  C   GLY B 150     -19.010 -19.500   6.050  1.00 51.76           C
ATOM  10529  O   GLY B 150     -19.250 -20.138   5.029  1.00 51.44           O
ATOM  10531  N   CYS B 151     -19.636 -19.715   7.203  1.00 53.60           N
ATOM  10532  CA  CYS B 151     -20.713 -20.692   7.351  1.00 54.06           C
ATOM  10534  CB  CYS B 151     -20.242 -21.878   8.193  1.00 55.07           C
ATOM  10537  SG  CYS B 151     -19.457 -23.203   7.250  1.00 58.07           S
ATOM  10539  C   CYS B 151     -21.934 -20.045   8.007  1.00 54.00           C
ATOM  10540  O   CYS B 151     -21.836 -19.455   9.082  1.00 52.58           O
ATOM  10542  N   LEU B 152     -23.080 -20.155   7.345  1.00 54.08           N
ATOM  10543  CA  LEU B 152     -24.332 -19.644   7.884  1.00 54.21           C
ATOM  10545  CB  LEU B 152     -25.193 -19.028   6.775  1.00 54.31           C
ATOM  10548  CG  LEU B 152     -26.653 -18.648   7.066  1.00 53.56           C
ATOM  10550  CD1 LEU B 152     -26.873 -18.037   8.452  1.00 50.58           C
ATOM  10554  CD2 LEU B 152     -27.135 -17.700   5.974  1.00 53.72           C
ATOM  10558  C   LEU B 152     -25.060 -20.794   8.551  1.00 54.49           C
ATOM  10559  O   LEU B 152     -25.333 -21.814   7.919  1.00 53.81           O
ATOM  10561  N   VAL B 153     -25.348 -20.620   9.837  1.00 54.89           N
ATOM  10562  CA  VAL B 153     -26.092 -21.592  10.615  1.00 55.00           C
ATOM  10564  CB  VAL B 153     -25.368 -21.915  11.934  1.00 55.96           C
ATOM  10566  CG1 VAL B 153     -25.982 -23.146  12.593  1.00 57.04           C
ATOM  10570  CG2 VAL B 153     -23.865 -22.118  11.683  1.00 55.95           C
ATOM  10574  C   VAL B 153     -27.465 -20.984  10.888  1.00 55.09           C
ATOM  10575  O   VAL B 153     -27.587 -20.031  11.665  1.00 55.00           O
ATOM  10577  N   LYS B 154     -28.489 -21.539  10.238  1.00 54.89           N
ATOM  10578  CA  LYS B 154     -29.812 -20.923  10.195  1.00 54.47           C
ATOM  10580  CB  LYS B 154     -30.191 -20.627   8.743  1.00 53.92           C
ATOM  10583  CG  LYS B 154     -31.503 -19.884   8.617  1.00 54.64           C
ATOM  10586  CD  LYS B 154     -31.628 -19.138   7.310  1.00 53.53           C
ATOM  10589  CE  LYS B 154     -32.944 -18.382   7.259  1.00 52.78           C
ATOM  10592  NZ  LYS B 154     -33.058 -17.372   8.345  1.00 53.36           N
ATOM  10596  C   LYS B 154     -30.906 -21.777  10.850  1.00 54.58           C
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ATOM  10597  O   LYS B 154     -30.892 -23.003  10.743  1.00 53.65           O
ATOM  10599  N   ASP B 155     -31.838 -21.099  11.526  1.00 54.82           N
ATOM  10600  CA  ASP B 155     -33.038 -21.706  12.110  1.00 54.65           C
ATOM  10602  CB  ASP B 155     -34.035 -22.075  11.008  1.00 55.54           C
ATOM  10605  CG  ASP B 155     -34.593 -20.859  10.287  1.00 57.21           C
ATOM  10606  OD1 ASP B 155     -34.802 -19.812  10.934  1.00 59.60           O
ATOM  10607  OD2 ASP B 155     -34.832 -20.958   9.065  1.00 58.84           O
ATOM  10608  C   ASP B 155     -32.765 -22.929  12.977  1.00 54.95           C
ATOM  10609  O   ASP B 155     -32.877 -24.067  12.504  1.00 54.96           O
ATOM  10611  N   TYR B 156     -32.417 -22.682  14.241  1.00 54.53           N
ATOM  10612  CA  TYR B 156     -32.275 -23.744  15.244  1.00 54.05           C
ATOM  10614  CB  TYR B 156     -30.817 -24.189  15.391  1.00 54.00           C
ATOM  10617  CG  TYR B 156     -29.877 -23.147  15.979  1.00 55.08           C
ATOM  10618  CD1 TYR B 156     -29.226 -22.230  15.159  1.00 54.02           C
ATOM  10620  CE1 TYR B 156     -28.362 -21.279  15.685  1.00 52.80           C
ATOM  10622  CZ  TYR B 156     -28.135 -21.236  17.042  1.00 53.30           C
ATOM  10623  OH  TYR B 156     -27.276 -20.288  17.538  1.00 55.28           O
ATOM  10625  CE2 TYR B 156     -28.761 -22.137  17.888  1.00 53.76           C
ATOM  10627  CD2 TYR B 156     -29.624 -23.093  17.353  1.00 55.51           C
ATOM  10629  C   TYR B 156     -32.798 -23.297  16.595  1.00 54.11           C
ATOM  10630  O   TYR B 156     -32.922 -22.106  16.862  1.00 54.77           O
ATOM  10632  N   PHE B 157     -33.092 -24.270  17.445  1.00 54.54           N
ATOM  10633  CA  PHE B 157     -33.561 -24.013  18.802  1.00 54.76           C
ATOM  10635  CB  PHE B 157     -35.047 -23.645  18.789  1.00 54.48           C
ATOM  10638  CG  PHE B 157     -35.577 -23.162  20.117  1.00 54.78           C
ATOM  10639  CD1 PHE B 157     -35.537 -21.814  20.451  1.00 55.46           C
ATOM  10641  CE1 PHE B 157     -36.044 -21.358  21.680  1.00 55.34           C
ATOM  10643  CZ  PHE B 157     -36.593 -22.252  22.580  1.00 54.44           C
ATOM  10645  CE2 PHE B 157     -36.646 -23.597  22.261  1.00 56.51           C
ATOM  10647  CD2 PHE B 157     -36.144 -24.050  21.026  1.00 56.92           C
ATOM  10649  C   PHE B 157     -33.324 -25.300  19.588  1.00 55.42           C
ATOM  10650  O   PHE B 157     -33.478 -26.383  19.039  1.00 57.32           O
ATOM  10652  N   PRO B 158     -32.883 -25.199  20.848  1.00 55.16           N
ATOM  10653  CA  PRO B 158     -32.460 -24.025  21.604  1.00 55.61           C
ATOM  10655  CB  PRO B 158     -32.567 -24.512  23.049  1.00 56.14           C
ATOM  10658  CG  PRO B 158     -32.202 -25.956  22.955  1.00 55.07           C
ATOM  10661  CD  PRO B 158     -32.786 -26.429  21.653  1.00 54.87           C
ATOM  10664  C   PRO B 158     -31.012 -23.633  21.298  1.00 55.52           C
ATOM  10665  O   PRO B 158     -30.384 -24.213  20.422  1.00 55.39           O
ATOM  10666  N   GLU B 159     -30.494 -22.644  22.017  1.00 56.01           N
ATOM  10667  CA  GLU B 159     -29.056 -22.412  22.066  1.00 55.50           C
ATOM  10669  CB  GLU B 159     -28.759 -21.113  22.811  1.00 55.51           C
ATOM  10672  CG  GLU B 159     -29.104 -19.859  22.047  1.00 57.18           C
ATOM  10675  CD  GLU B 159     -27.952 -19.375  21.194  1.00 61.22           C
ATOM  10676  OE1 GLU B 159     -27.540 -18.209  21.369  1.00 63.05           O
ATOM  10677  OE2 GLU B 159     -27.447 -20.165  20.363  1.00 62.01           O
ATOM  10678  C   GLU B 159     -28.407 -23.575  22.815  1.00 55.02           C
ATOM  10679  O   GLU B 159     -29.092 -24.305  23.538  1.00 56.36           O
ATOM  10681  N   PRO B 160     -27.084 -23.744  22.679  1.00 53.60           N
ATOM  10682  CA  PRO B 160     -26.167 -23.063  21.803  1.00 52.61           C
ATOM  10684  CB  PRO B 160     -24.990 -22.789  22.733  1.00 51.90           C
ATOM  10687  CG  PRO B 160     -24.969 -23.998  23.654  1.00 52.09           C
ATOM  10690  CD  PRO B 160     -26.343 -24.645  23.578  1.00 54.16           C
ATOM  10693  C   PRO B 160     -25.693 -23.925  20.641  1.00 52.11           C
ATOM  10694  O   PRO B 160     -25.957 -25.128  20.587  1.00 50.42           O
ATOM  10695  N   VAL B 161     -24.989 -23.278  19.721  1.00 53.03           N
ATOM  10696  CA  VAL B 161     -24.278 -23.947  18.647  1.00 52.97           C
ATOM  10698  CB  VAL B 161     -24.822 -23.531  17.260  1.00 52.23           C
ATOM  10700  CG1 VAL B 161     -23.858 -23.891  16.149  1.00 53.59           C
ATOM  10704  CG2 VAL B 161     -26.153 -24.195  17.006  1.00 54.81           C
ATOM  10708  C   VAL B 161     -22.818 -23.559  18.771  1.00 53.12           C
ATOM  10709  O   VAL B 161     -22.501 -22.440  19.179  1.00 53.70           O
ATOM  10711  N   THR B 162     -21.938 -24.495  18.434  1.00 52.95           N
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ATOM  10712  CA  THR B 162     -20.509 -24.234  18.386  1.00 52.79           C
ATOM  10714  CB  THR B 162     -19.732 -25.158  19.341  1.00 52.78           C
ATOM  10716  OG1 THR B 162     -19.589 -26.459  18.754  1.00 56.12           O
ATOM  10718  CG2 THR B 162     -20.461 -25.277  20.676  1.00 52.34           C
ATOM  10722  C   THR B 162     -20.029 -24.448  16.959  1.00 52.48           C
ATOM  10723  O   THR B 162     -20.527 -25.322  16.249  1.00 52.28           O
ATOM  10725  N   VAL B 163     -19.066 -23.635  16.546  1.00 52.43           N
ATOM  10726  CA  VAL B 163     -18.519 -23.701  15.207  1.00 51.71           C
ATOM  10728  CB  VAL B 163     -18.977 -22.506  14.343  1.00 50.84           C
ATOM  10730  CG1 VAL B 163     -18.816 -22.837  12.873  1.00 50.88           C
ATOM  10734  CG2 VAL B 163     -20.421 -22.129  14.641  1.00 50.99           C
ATOM  10738  C   VAL B 163     -16.998 -23.685  15.293  1.00 51.91           C
ATOM  10739  O   VAL B 163     -16.417 -22.849  15.983  1.00 50.40           O
ATOM  10741  N   SER B 164     -16.366 -24.623  14.594  1.00 53.30           N
ATOM  10742  CA  SER B 164     -14.915 -24.645  14.434  1.00 53.24           C
ATOM  10744  CB  SER B 164     -14.309 -25.834  15.184  1.00 53.81           C
ATOM  10747  OG  SER B 164     -14.376 -27.024  14.415  1.00 54.22           O
ATOM  10749  C   SER B 164     -14.576 -24.726  12.951  1.00 53.06           C
ATOM  10750  O   SER B 164     -15.450 -24.994  12.124  1.00 53.23           O
ATOM  10752  N   TRP B 165     -13.310 -24.485  12.620  1.00 53.53           N
ATOM  10753  CA  TRP B 165     -12.838 -24.590  11.240  1.00 54.03           C
ATOM  10755  CB  TRP B 165     -12.416 -23.215  10.701  1.00 53.15           C
ATOM  10758  CG  TRP B 165     -13.602 -22.329  10.439  1.00 52.43           C
ATOM  10759  CD1 TRP B 165     -14.224 -21.497  11.334  1.00 51.83           C
ATOM  10761  NE1 TRP B 165     -15.292 -20.868  10.734  1.00 51.54           N
ATOM  10763  CE2 TRP B 165     -15.386 -21.294   9.435  1.00 52.27           C
ATOM  10764  CD2 TRP B 165     -14.336 -22.218   9.212  1.00 52.52           C
ATOM  10765  CE3 TRP B 165     -14.208 -22.807   7.944  1.00 52.13           C
ATOM  10767  CZ3 TRP B 165     -15.114 -22.455   6.946  1.00 51.05           C
ATOM  10769  CH2 TRP B 165     -16.145 -21.527   7.196  1.00 51.97           C
ATOM  10771  CZ2 TRP B 165     -16.299 -20.941   8.433  1.00 52.34           C
ATOM  10773  C   TRP B 165     -11.707 -25.611  11.150  1.00 54.86           C
ATOM  10774  O   TRP B 165     -10.758 -25.571  11.941  1.00 55.61           O
ATOM  10776  N   ASN B 166     -11.839 -26.535  10.196  1.00 54.82           N
ATOM  10777  CA  ASN B 166     -10.924 -27.665  10.043  1.00 54.89           C
ATOM  10779  CB  ASN B 166      -9.587 -27.186   9.465  1.00 54.64           C
ATOM  10782  CG  ASN B 166      -9.735 -26.565   8.084  1.00 55.47           C
ATOM  10783  OD1 ASN B 166     -10.793 -26.653   7.462  1.00 57.53           O
ATOM  10784  ND2 ASN B 166      -8.670 -25.938   7.597  1.00 54.29           N
ATOM  10787  C   ASN B 166     -10.714 -28.440  11.350  1.00 55.57           C
ATOM  10788  O   ASN B 166      -9.596 -28.836  11.674  1.00 56.25           O
ATOM  10790  N   SER B 167     -11.803 -28.649  12.090  1.00 56.35           N
ATOM  10791  CA  SER B 167     -11.769 -29.335  13.386  1.00 56.44           C
ATOM  10793  CB  SER B 167     -11.582 -30.843  13.192  1.00 56.83           C
ATOM  10796  OG  SER B 167     -12.694 -31.411  12.524  1.00 59.25           O
ATOM  10798  C   SER B 167     -10.681 -28.787  14.309  1.00 56.60           C
ATOM  10799  O   SER B 167      -9.582 -29.337  14.386  1.00 56.11           O
ATOM  10801  N   GLY B 168     -10.987 -27.685  14.989  1.00 56.94           N
ATOM  10802  CA  GLY B 168     -10.068 -27.079  15.946  1.00 56.24           C
ATOM  10805  C   GLY B 168      -8.907 -26.322  15.319  1.00 56.00           C
ATOM  10806  O   GLY B 168      -8.587 -25.219  15.752  1.00 56.18           O
ATOM  10808  N   ALA B 169      -8.276 -26.907  14.304  1.00 55.35           N
ATOM  10809  CA  ALA B 169      -7.036 -26.363  13.746  1.00 55.70           C
ATOM  10811  CB  ALA B 169      -6.641 -27.128  12.471  1.00 54.85           C
ATOM  10815  C   ALA B 169      -7.107 -24.857  13.468  1.00 55.84           C
ATOM  10816  O   ALA B 169      -6.441 -24.064  14.141  1.00 55.07           O
ATOM  10818  N   LEU B 170      -7.930 -24.477  12.493  1.00 55.93           N
ATOM  10819  CA  LEU B 170      -7.988 -23.098  12.003  1.00 55.07           C
ATOM  10821  CB  LEU B 170      -8.675 -23.077  10.633  1.00 54.39           C
ATOM  10824  CG  LEU B 170      -8.881 -21.726   9.955  1.00 55.49           C
ATOM  10826  CD1 LEU B 170      -7.600 -20.904   9.982  1.00 56.43           C
ATOM  10830  CD2 LEU B 170      -9.366 -21.930   8.527  1.00 54.96           C
ATOM  10834  C   LEU B 170      -8.700 -22.159  12.990  1.00 54.79           C
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ATOM  10835  O   LEU B 170      -9.921 -21.993  12.934  1.00 54.70           O
ATOM  10837  N   THR B 171      -7.919 -21.552  13.886  1.00 54.41           N
ATOM  10838  CA  THR B 171      -8.439 -20.655  14.931  1.00 53.99           C
ATOM  10840  CB  THR B 171      -7.620 -20.756  16.262  1.00 54.29           C
ATOM  10842  OG1 THR B 171      -6.212 -20.826  15.973  1.00 54.71           O
ATOM  10844  CG2 THR B 171      -8.039 -21.971  17.085  1.00 53.13           C
ATOM  10848  C   THR B 171      -8.420 -19.188  14.508  1.00 53.64           C
ATOM  10849  O   THR B 171      -9.437 -18.497  14.609  1.00 52.66           O
ATOM  10851  N   SER B 172      -7.255 -18.717  14.058  1.00 53.25           N
ATOM  10852  CA  SER B 172      -7.043 -17.292  13.799  1.00 53.18           C
ATOM  10854  CB  SER B 172      -5.549 -16.974  13.670  1.00 53.75           C
ATOM  10857  OG  SER B 172      -5.068 -17.268  12.366  1.00 53.04           O
ATOM  10859  C   SER B 172      -7.782 -16.833  12.543  1.00 52.72           C
ATOM  10860  O   SER B 172      -7.923 -17.594  11.585  1.00 51.57           O
ATOM  10862  N   GLY B 173      -8.245 -15.583  12.571  1.00 52.76           N
ATOM  10863  CA  GLY B 173      -9.048 -15.001  11.496  1.00 53.18           C
ATOM  10866  C   GLY B 173     -10.546 -15.149  11.726  1.00 54.24           C
ATOM  10867  O   GLY B 173     -11.343 -14.422  11.124  1.00 54.13           O
ATOM  10869  N   VAL B 174     -10.925 -16.077  12.607  1.00 54.26           N
ATOM  10870  CA  VAL B 174     -12.318 -16.467  12.786  1.00 54.61           C
ATOM  10872  CB  VAL B 174     -12.425 -17.841  13.519  1.00 55.14           C
ATOM  10874  CG1 VAL B 174     -13.874 -18.157  13.936  1.00 53.49           C
ATOM  10878  CG2 VAL B 174     -11.861 -18.954  12.639  1.00 56.13           C
ATOM  10882  C   VAL B 174     -13.089 -15.404  13.567  1.00 55.82           C
ATOM  10883  O   VAL B 174     -12.572 -14.845  14.541  1.00 55.91           O
ATOM  10885  N   HIS B 175     -14.319 -15.131  13.123  1.00 55.64           N
ATOM  10886  CA  HIS B 175     -15.271 -14.306  13.879  1.00 53.98           C
ATOM  10888  CB  HIS B 175     -15.350 -12.882  13.313  1.00 54.89           C
ATOM  10891  CG  HIS B 175     -14.168 -12.028  13.654  1.00 55.41           C
ATOM  10892  ND1 HIS B 175     -13.902 -11.606  14.939  1.00 56.66           N
ATOM  10894  CE1 HIS B 175     -12.803 -10.871  14.941  1.00 58.66           C
ATOM  10896  NE2 HIS B 175     -12.349 -10.797  13.702  1.00 58.90           N
ATOM  10898  CD2 HIS B 175     -13.185 -11.512  12.877  1.00 56.60           C
ATOM  10900  C   HIS B 175     -16.651 -14.960  13.872  1.00 52.07           C
ATOM  10901  O   HIS B 175     -17.406 -14.827  12.913  1.00 52.28           O
ATOM  10903  N   THR B 176     -16.959 -15.679  14.945  1.00 50.90           N
ATOM  10904  CA  THR B 176     -18.259 -16.310  15.116  1.00 50.65           C
ATOM  10906  CB  THR B 176     -18.135 -17.652  15.848  1.00 49.92           C
ATOM  10908  OG1 THR B 176     -17.176 -18.475  15.165  1.00 50.40           O
ATOM  10910  CG2 THR B 176     -19.475 -18.371  15.896  1.00 49.15           C
ATOM  10914  C   THR B 176     -19.168 -15.358  15.885  1.00 49.46           C
ATOM  10915  O   THR B 176     -18.838 -14.912  16.975  1.00 48.82           O
ATOM  10917  N   PHE B 177     -20.312 -15.044  15.293  1.00 49.87           N
ATOM  10918  CA  PHE B 177     -21.176 -13.992  15.800  1.00 50.35           C
ATOM  10920  CB  PHE B 177     -21.945 -13.342  14.642  1.00 49.43           C
ATOM  10923  CG  PHE B 177     -21.070 -12.582  13.700  1.00 48.44           C
ATOM  10924  CD1 PHE B 177     -20.562 -13.183  12.559  1.00 48.42           C
ATOM  10926  CE1 PHE B 177     -19.739 -12.480  11.697  1.00 48.71           C
ATOM  10928  CZ  PHE B 177     -19.414 -11.165  11.977  1.00 48.09           C
ATOM  10930  CE2 PHE B 177     -19.909 -10.563  13.113  1.00 47.31           C
ATOM  10932  CD2 PHE B 177     -20.730 -11.267  13.967  1.00 48.42           C
ATOM  10934  C   PHE B 177     -22.160 -14.508  16.845  1.00 50.87           C
ATOM  10935  O   PHE B 177     -22.620 -15.653  16.763  1.00 49.53           O
ATOM  10937  N   PRO B 178     -22.485 -13.658  17.838  1.00 51.19           N
ATOM  10938  CA  PRO B 178     -23.611 -13.934  18.713  1.00 50.97           C
ATOM  10940  CB  PRO B 178     -23.845 -12.600  19.421  1.00 49.54           C
ATOM  10943  CG  PRO B 178     -22.546 -11.938  19.420  1.00 50.84           C
ATOM  10946  CD  PRO B 178     -21.801 -12.405  18.202  1.00 51.45           C
ATOM  10949  C   PRO B 178     -24.832 -14.308  17.892  1.00 51.79           C
ATOM  10950  O   PRO B 178     -25.114 -13.670  16.870  1.00 51.45           O
ATOM  10951  N   ALA B 179     -25.543 -15.343  18.325  1.00 52.55           N
ATOM  10952  CA  ALA B 179     -26.758 -15.743  17.638  1.00 52.43           C
ATOM  10954  CB  ALA B 179     -27.279 -17.070  18.169  1.00 53.11           C
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ATOM  10958  C   ALA B 179     -27.789 -14.645  17.815  1.00 52.27           C
ATOM  10959  O   ALA B 179     -27.708 -13.856  18.754  1.00 51.59           O
ATOM  10961  N   VAL B 180     -28.735 -14.598  16.885  1.00 52.97           N
ATOM  10962  CA  VAL B 180     -29.787 -13.596  16.871  1.00 53.18           C
ATOM  10964  CB  VAL B 180     -29.653 -12.712  15.617  1.00 52.02           C
ATOM  10966  CG1 VAL B 180     -30.919 -11.934  15.343  1.00 53.61           C
ATOM  10970  CG2 VAL B 180     -28.484 -11.765  15.788  1.00 53.87           C
ATOM  10974  C   VAL B 180     -31.122 -14.330  16.895  1.00 54.16           C
ATOM  10975  O   VAL B 180     -31.280 -15.363  16.242  1.00 55.58           O
ATOM  10977  N   LEU B 181     -32.078 -13.820  17.662  1.00 53.82           N
ATOM  10978  CA  LEU B 181     -33.393 -14.423  17.674  1.00 54.37           C
ATOM  10980  CB  LEU B 181     -34.050 -14.301  19.044  1.00 54.04           C
ATOM  10983  CG  LEU B 181     -35.393 -15.025  19.231  1.00 53.59           C
ATOM  10985  CD1 LEU B 181     -35.511 -16.323  18.446  1.00 53.80           C
ATOM  10989  CD2 LEU B 181     -35.626 -15.296  20.708  1.00 54.14           C
ATOM  10993  C   LEU B 181     -34.237 -13.755  16.606  1.00 55.94           C
ATOM  10994  O   LEU B 181     -34.463 -12.546  16.644  1.00 56.27           O
ATOM  10996  N   GLN B 182     -34.681 -14.553  15.639  1.00 56.99           N
ATOM  10997  CA  GLN B 182     -35.534 -14.076  14.563  1.00 56.96           C
ATOM  10999  CB  GLN B 182     -35.501 -15.068  13.394  1.00 56.74           C
ATOM  11002  CG  GLN B 182     -34.139 -15.166  12.715  1.00 56.72           C
ATOM  11005  CD  GLN B 182     -33.890 -16.517  12.071  1.00 57.96           C
ATOM  11006  OE1 GLN B 182     -33.863 -16.640  10.845  1.00 62.10           O
ATOM  11007  NE2 GLN B 182     -33.702 -17.537  12.895  1.00 55.29           N
ATOM  11010  C   GLN B 182     -36.959 -13.898  15.090  1.00 58.09           C
ATOM  11011  O   GLN B 182     -37.246 -14.218  16.255  1.00 57.07           O
ATOM  11013  N   SER B 183     -37.841 -13.374  14.234  1.00 57.94           N
ATOM  11014  CA  SER B 183     -39.255 -13.215  14.577  1.00 57.43           C
ATOM  11016  CB  SER B 183     -39.954 -12.272  13.593  1.00 57.09           C
ATOM  11019  OG  SER B 183     -40.108 -12.869  12.318  1.00 57.50           O
ATOM  11021  C   SER B 183     -39.965 -14.569  14.603  1.00 57.57           C
ATOM  11022  O   SER B 183     -40.976 -14.727  15.290  1.00 57.40           O
ATOM  11024  N   SER B 184     -39.425 -15.537  13.857  1.00 58.06           N
ATOM  11025  CA  SER B 184     -39.964 -16.905  13.809  1.00 57.73           C
ATOM  11027  CB  SER B 184     -39.379 -17.666  12.605  1.00 57.67           C
ATOM  11030  OG  SER B 184     -37.958 -17.609  12.579  1.00 56.30           O
ATOM  11032  C   SER B 184     -39.720 -17.698  15.104  1.00 57.79           C
ATOM  11033  O   SER B 184     -40.263 -18.790  15.279  1.00 57.78           O
ATOM  11035  N   GLY B 185     -38.908 -17.153  16.007  1.00 57.52           N
ATOM  11036  CA  GLY B 185     -38.628 -17.802  17.280  1.00 57.44           C
ATOM  11039  C   GLY B 185     -37.419 -18.718  17.222  1.00 57.41           C
ATOM  11040  O   GLY B 185     -37.057 -19.320  18.228  1.00 58.57           O
ATOM  11042  N   LEU B 186     -36.785 -18.812  16.054  1.00 57.04           N
ATOM  11043  CA  LEU B 186     -35.582 -19.628  15.870  1.00 56.95           C
ATOM  11045  CB  LEU B 186     -35.674 -20.413  14.553  1.00 56.42           C
ATOM  11048  CG  LEU B 186     -37.010 -21.124  14.292  1.00 54.96           C
ATOM  11050  CD1 LEU B 186     -36.956 -21.958  13.014  1.00 52.21           C
ATOM  11054  CD2 LEU B 186     -37.401 -21.989  15.489  1.00 54.82           C
ATOM  11058  C   LEU B 186     -34.314 -18.755  15.883  1.00 57.67           C
ATOM  11059  O   LEU B 186     -34.372 -17.549  15.613  1.00 57.57           O
ATOM  11061  N   TYR B 187     -33.175 -19.371  16.202  1.00 58.06           N
ATOM  11062  CA  TYR B 187     -31.894 -18.670  16.243  1.00 57.81           C
ATOM  11064  CB  TYR B 187     -31.019 -19.189  17.382  1.00 59.04           C
ATOM  11067  CG  TYR B 187     -31.534 -18.780  18.730  1.00 61.73           C
ATOM  11068  CD1 TYR B 187     -31.416 -17.467  19.160  1.00 63.16           C
ATOM  11070  CE1 TYR B 187     -31.902 -17.073  20.393  1.00 62.08           C
ATOM  11072  CZ  TYR B 187     -32.519 -17.996  21.206  1.00 60.34           C
ATOM  11073  OH  TYR B 187     -32.993 -17.596  22.429  1.00 62.56           O
ATOM  11075  CE2 TYR B 187     -32.655 -19.310  20.801  1.00 60.08           C
ATOM  11077  CD2 TYR B 187     -32.168 -19.694  19.568  1.00 63.07           C
ATOM  11079  C   TYR B 187     -31.159 -18.823  14.930  1.00 58.28           C
ATOM  11080  O   TYR B 187     -31.404 -19.766  14.171  1.00 58.80           O
ATOM  11082  N   SER B 188     -30.254 -17.882  14.677  1.00 58.08           N
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ATOM  11083  CA  SER B 188     -29.443 -17.870  13.465  1.00 57.89           C
ATOM  11085  CB  SER B 188     -30.237 -17.265  12.299  1.00 58.09           C
ATOM  11088  OG  SER B 188     -29.429 -17.130  11.146  1.00 58.62           O
ATOM  11090  C   SER B 188     -28.161 -17.073  13.712  1.00 58.02           C
ATOM  11091  O   SER B 188     -28.202 -15.983  14.297  1.00 58.64           O
ATOM  11093  N   LEU B 189     -27.030 -17.630  13.282  1.00 56.99           N
ATOM  11094  CA  LEU B 189     -25.739 -16.958  13.402  1.00 56.45           C
ATOM  11096  CB  LEU B 189     -25.023 -17.360  14.705  1.00 56.10           C
ATOM  11099  CG  LEU B 189     -24.424 -18.773  14.886  1.00 55.79           C
ATOM  11101  CD1 LEU B 189     -23.070 -18.949  14.183  1.00 55.76           C
ATOM  11105  CD2 LEU B 189     -24.276 -19.121  16.374  1.00 55.78           C
ATOM  11109  C   LEU B 189     -24.875 -17.277  12.190  1.00 57.46           C
ATOM  11110  O   LEU B 189     -25.180 -18.190  11.415  1.00 58.38           O
ATOM  11112  N   SER B 190     -23.805 -16.503  12.032  1.00 56.80           N
ATOM  11113  CA  SER B 190     -22.800 -16.763  11.021  1.00 55.83           C
ATOM  11115  CB  SER B 190     -22.747 -15.619  10.013  1.00 55.86           C
ATOM  11118  OG  SER B 190     -23.635 -15.867   8.938  1.00 55.59           O
ATOM  11120  C   SER B 190     -21.438 -16.944  11.666  1.00 55.69           C
ATOM  11121  O   SER B 190     -21.196 -16.468  12.770  1.00 55.67           O
ATOM  11123  N   SER B 191     -20.566 -17.663  10.964  1.00 56.15           N
ATOM  11124  CA  SER B 191     -19.149 -17.770  11.305  1.00 55.29           C
ATOM  11126  CB  SER B 191     -18.817 -19.177  11.814  1.00 55.19           C
ATOM  11129  OG  SER B 191     -17.557 -19.211  12.463  1.00 52.68           O
ATOM  11131  C   SER B 191     -18.360 -17.444  10.036  1.00 55.60           C
ATOM  11132  O   SER B 191     -18.728 -17.875   8.943  1.00 55.41           O
ATOM  11134  N   VAL B 192     -17.288 -16.676  10.181  1.00 55.17           N
ATOM  11135  CA  VAL B 192     -16.591 -16.131   9.029  1.00 54.48           C
ATOM  11137  CB  VAL B 192     -17.286 -14.828   8.565  1.00 53.82           C
ATOM  11139  CG1 VAL B 192     -16.980 -13.665   9.518  1.00 52.71           C
ATOM  11143  CG2 VAL B 192     -16.897 -14.491   7.137  1.00 53.89           C
ATOM  11147  C   VAL B 192     -15.117 -15.875   9.342  1.00 54.97           C
ATOM  11148  O   VAL B 192     -14.650 -16.163  10.448  1.00 55.22           O
ATOM  11150  N   CYS B 207     -16.049 -25.963   7.676  1.00 54.86           N
ATOM  11151  CA  CYS B 207     -16.419 -25.637   9.056  1.00 56.53           C
ATOM  11153  CB  CYS B 207     -17.285 -24.369   9.099  1.00 56.31           C
ATOM  11156  SG  CYS B 207     -19.022 -24.617   8.655  1.00 58.00           S
ATOM  11158  C   CYS B 207     -17.154 -26.805   9.724  1.00 56.35           C
ATOM  11159  O   CYS B 207     -17.791 -27.615   9.048  1.00 56.18           O
ATOM  11161  N   ASN B 208     -17.044 -26.889  11.048  1.00 56.47           N
ATOM  11162  CA  ASN B 208     -17.747 -27.902  11.840  1.00 56.52           C
ATOM  11164  CB  ASN B 208     -16.786 -28.635  12.797  1.00 56.78           C
ATOM  11167  CG  ASN B 208     -15.723 -29.443  12.078  1.00 54.16           C
ATOM  11168  OD1 ASN B 208     -15.494 -29.263  10.887  1.00 51.91           O
ATOM  11169  ND2 ASN B 208     -15.068 -30.345  12.808  1.00 48.76           N
ATOM  11172  C   ASN B 208     -18.821 -27.242  12.685  1.00 56.17           C
ATOM  11173  O   ASN B 208     -18.540 -26.794  13.797  1.00 56.49           O
ATOM  11175  N   VAL B 209     -20.045 -27.178  12.175  1.00 55.42           N
ATOM  11176  CA  VAL B 209     -21.166 -26.722  12.998  1.00 55.89           C
ATOM  11178  CB  VAL B 209     -22.338 -26.194  12.141  1.00 55.09           C
ATOM  11180  CG1 VAL B 209     -23.559 -25.895  13.007  1.00 53.33           C
ATOM  11184  CG2 VAL B 209     -21.909 -24.955  11.367  1.00 53.58           C
ATOM  11188  C   VAL B 209     -21.607 -27.885  13.895  1.00 56.01           C
ATOM  11189  O   VAL B 209     -21.630 -29.037  13.459  1.00 56.65           O
ATOM  11191  N   ASN B 210     -21.925 -27.581  15.150  1.00 56.29           N
ATOM  11192  CA  ASN B 210     -22.360 -28.596  16.112  1.00 56.44           C
ATOM  11194  CB  ASN B 210     -21.183 -29.037  16.993  1.00 56.72           C
ATOM  11197  CG  ASN B 210     -21.601 -30.009  18.092  1.00 57.71           C
ATOM  11198  OD1 ASN B 210     -21.491 -31.226  17.943  1.00 61.62           O
ATOM  11199  ND2 ASN B 210     -22.091 -29.470  19.198  1.00 61.75           N
ATOM  11202  C   ASN B 210     -23.501 -28.066  16.976  1.00 56.60           C
ATOM  11203  O   ASN B 210     -23.357 -27.019  17.613  1.00 57.84           O
ATOM  11205  N   HIS B 211     -24.620 -28.796  17.000  1.00 55.66           N
ATOM  11206  CA  HIS B 211     -25.807 -28.392  17.756  1.00 56.04           C
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ATOM  11208  CB  HIS B 211     -26.929 -27.966  16.796  1.00 55.63           C
ATOM  11211  CG  HIS B 211     -28.188 -27.528  17.482  1.00 56.30           C
ATOM  11212  ND1 HIS B 211     -28.188 -26.697  18.582  1.00 57.16           N
ATOM  11214  CE1 HIS B 211     -29.433 -26.482  18.966  1.00 55.91           C
ATOM  11216  NE2 HIS B 211     -30.241 -27.133  18.149  1.00 55.11           N
ATOM  11218  CD2 HIS B 211     -29.487 -27.797  17.215  1.00 54.92           C
ATOM  11220  C   HIS B 211     -26.257 -29.529  18.680  1.00 56.66           C
ATOM  11221  O   HIS B 211     -27.142 -30.323  18.341  1.00 57.63           O
ATOM  11223  N   LYS B 212     -25.646 -29.587  19.861  1.00 56.14           N
ATOM  11224  CA  LYS B 212     -25.885 -30.680  20.807  1.00 55.28           C
ATOM  11226  CB  LYS B 212     -25.077 -30.473  22.090  1.00 54.88           C
ATOM  11229  CG  LYS B 212     -23.642 -30.927  21.951  1.00 56.58           C
ATOM  11232  CD  LYS B 212     -22.683 -30.153  22.846  1.00 56.60           C
ATOM  11235  CE  LYS B 212     -21.232 -30.476  22.470  1.00 57.54           C
ATOM  11238  NZ  LYS B 212     -20.252 -29.606  23.168  1.00 59.75           N
ATOM  11242  C   LYS B 212     -27.353 -30.926  21.143  1.00 54.35           C
ATOM  11243  O   LYS B 212     -27.778 -32.075  21.153  1.00 54.94           O
ATOM  11245  N   PRO B 213     -28.127 -29.859  21.424  1.00 54.43           N
ATOM  11246  CA  PRO B 213     -29.548 -30.017  21.764  1.00 53.34           C
ATOM  11248  CB  PRO B 213     -30.072 -28.580  21.733  1.00 52.85           C
ATOM  11251  CG  PRO B 213     -28.905 -27.756  22.105  1.00 54.65           C
ATOM  11254  CD  PRO B 213     -27.716 -28.441  21.487  1.00 54.93           C
ATOM  11257  C   PRO B 213     -30.357 -30.876  20.798  1.00 53.66           C
ATOM  11258  O   PRO B 213     -31.285 -31.559  21.228  1.00 54.84           O
ATOM  11259  N   SER B 214     -30.023 -30.829  19.509  1.00 53.19           N
ATOM  11260  CA  SER B 214     -30.718 -31.623  18.505  1.00 51.84           C
ATOM  11262  CB  SER B 214     -31.213 -30.723  17.372  1.00 52.17           C
ATOM  11265  OG  SER B 214     -30.219 -30.578  16.372  1.00 49.60           O
ATOM  11267  C   SER B 214     -29.824 -32.709  17.921  1.00 51.68           C
ATOM  11268  O   SER B 214     -30.157 -33.280  16.881  1.00 50.86           O
ATOM  11270  N   ASN B 215     -28.693 -32.990  18.571  1.00 51.08           N
ATOM  11271  CA  ASN B 215     -27.734 -33.986  18.065  1.00 51.21           C
ATOM  11273  CB  ASN B 215     -28.305 -35.398  18.265  1.00 51.21           C
ATOM  11276  CG  ASN B 215     -27.589 -36.160  19.348  1.00 51.03           C
ATOM  11277  OD1 ASN B 215     -27.975 -36.125  20.526  1.00 42.90           O
ATOM  11278  ND2 ASN B 215     -26.519 -36.846  18.959  1.00 48.48           N
ATOM  11281  C   ASN B 215     -27.314 -33.784  16.598  1.00 50.17           C
ATOM  11282  O   ASN B 215     -27.053 -34.746  15.887  1.00 47.72           O
ATOM  11284  N   THR B 216     -27.226 -32.529  16.170  1.00 50.54           N
ATOM  11285  CA  THR B 216     -26.949 -32.199  14.782  1.00 51.78           C
ATOM  11287  CB  THR B 216     -27.861 -31.051  14.300  1.00 51.31           C
ATOM  11289  OG1 THR B 216     -29.231 -31.446  14.428  1.00 51.33           O
ATOM  11291  CG2 THR B 216     -27.567 -30.676  12.849  1.00 49.41           C
ATOM  11295  C   THR B 216     -25.497 -31.793  14.576  1.00 53.65           C
ATOM  11296  O   THR B 216     -25.179 -30.605  14.568  1.00 55.97           O
ATOM  11298  N   LYS B 217     -24.614 -32.779  14.416  1.00 54.64           N
ATOM  11299  CA  LYS B 217     -23.261 -32.518  13.904  1.00 53.77           C
ATOM  11301  CB  LYS B 217     -22.290 -33.680  14.186  1.00 55.54           C
ATOM  11304  CG  LYS B 217     -21.547 -33.608  15.529  1.00 56.86           C
ATOM  11307  CD  LYS B 217     -20.019 -33.579  15.321  1.00 59.77           C
ATOM  11310  CE  LYS B 217     -19.232 -33.967  16.583  1.00 59.68           C
ATOM  11313  NZ  LYS B 217     -19.541 -33.154  17.804  1.00 57.76           N
ATOM  11317  C   LYS B 217     -23.371 -32.314  12.403  1.00 52.56           C
ATOM  11318  O   LYS B 217     -24.271 -32.868  11.771  1.00 52.15           O
ATOM  11320  N   VAL B 218     -22.460 -31.521  11.843  1.00 51.64           N
ATOM  11321  CA  VAL B 218     -22.422 -31.266  10.395  1.00 51.59           C
ATOM  11323  CB  VAL B 218     -23.644 -30.411   9.924  1.00 51.11           C
ATOM  11325  CG1 VAL B 218     -23.941 -29.302  10.916  1.00 52.27           C
ATOM  11329  CG2 VAL B 218     -23.440 -29.849   8.514  1.00 51.13           C
ATOM  11333  C   VAL B 218     -21.102 -30.600   9.986  1.00 51.07           C
ATOM  11334  O   VAL B 218     -20.607 -29.703  10.678  1.00 50.95           O
ATOM  11336  N   ASP B 219     -20.545 -31.063   8.865  1.00 51.19           N
ATOM  11337  CA  ASP B 219     -19.296 -30.543   8.311  1.00 51.13           C
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ATOM  11339  CB  ASP B 219     -18.227 -31.643   8.275  1.00 50.74           C
ATOM  11342  CG  ASP B 219     -17.914 -32.205   9.649  1.00 50.73           C
ATOM  11343  OD1 ASP B 219     -18.449 -33.279   9.992  1.00 50.08           O
ATOM  11344  OD2 ASP B 219     -17.138 -31.572  10.390  1.00 48.77           O
ATOM  11345  C   ASP B 219     -19.534 -30.014   6.899  1.00 51.08           C
ATOM  11346  O   ASP B 219     -19.593 -30.788   5.942  1.00 50.93           O
ATOM  11348  N   LYS B 220     -19.689 -28.697   6.775  1.00 51.69           N
ATOM  11349  CA  LYS B 220     -19.817 -28.042   5.464  1.00 51.82           C
ATOM  11351  CB  LYS B 220     -20.766 -26.833   5.555  1.00 51.81           C
ATOM  11354  CG  LYS B 220     -20.751 -25.871   4.357  1.00 51.08           C
ATOM  11357  CD  LYS B 220     -21.316 -26.491   3.090  1.00 51.47           C
ATOM  11360  CE  LYS B 220     -22.839 -26.556   3.120  1.00 50.51           C
ATOM  11363  NZ  LYS B 220     -23.408 -26.913   1.786  1.00 47.07           N
ATOM  11367  C   LYS B 220     -18.436 -27.613   4.980  1.00 52.28           C
ATOM  11368  O   LYS B 220     -17.534 -27.376   5.790  1.00 52.85           O
ATOM  11370  N   LYS C  26      28.164 -13.137  51.471  1.00 60.01           N
ATOM  11371  CA  LYS C  26      29.169 -13.369  52.563  1.00 59.98           C
ATOM  11373  CB  LYS C  26      30.565 -12.872  52.150  1.00 60.63           C
ATOM  11376  CG  LYS C  26      31.654 -13.161  53.179  1.00 58.50           C
ATOM  11379  CD  LYS C  26      32.994 -13.488  52.532  1.00 60.70           C
ATOM  11382  CE  LYS C  26      33.823 -12.249  52.201  1.00 63.05           C
ATOM  11385  NZ  LYS C  26      35.179 -12.625  51.670  1.00 61.96           N
ATOM  11389  C   LYS C  26      28.736 -12.699  53.867  1.00 59.05           C
ATOM  11390  O   LYS C  26      28.399 -11.512  53.886  1.00 58.89           O
ATOM  11394  N   LYS C  27      28.748 -13.467  54.953  1.00 57.05           N
ATOM  11395  CA  LYS C  27      28.266 -12.976  56.224  1.00 55.84           C
ATOM  11397  CB  LYS C  27      28.153 -14.119  57.221  1.00 55.53           C
ATOM  11400  CG  LYS C  27      27.478 -13.719  58.526  1.00 58.17           C
ATOM  11403  CD  LYS C  27      27.092 -14.934  59.391  1.00 58.02           C
ATOM  11406  CE  LYS C  27      25.952 -14.596  60.370  1.00 62.26           C
ATOM  11409  NZ  LYS C  27      24.573 -14.553  59.739  1.00 67.83           N
ATOM  11413  C   LYS C  27      29.219 -11.907  56.733  1.00 56.17           C
ATOM  11414  O   LYS C  27      30.427 -12.127  56.786  1.00 60.04           O
ATOM  11416  N   VAL C  28      28.675 -10.746  57.083  1.00 54.84           N
ATOM  11417  CA  VAL C  28      29.463  -9.623  57.596  1.00 51.88           C
ATOM  11419  CB  VAL C  28      29.184  -8.356  56.767  1.00 50.96           C
ATOM  11421  CG1 VAL C  28      29.497  -7.086  57.541  1.00 54.32           C
ATOM  11425  CG2 VAL C  28      29.992  -8.395  55.481  1.00 53.31           C
ATOM  11429  C   VAL C  28      29.162  -9.397  59.086  1.00 50.48           C
ATOM  11430  O   VAL C  28      28.006  -9.408  59.496  1.00 49.04           O
ATOM  11432  N   VAL C  29      30.204  -9.191  59.889  1.00 48.62           N
ATOM  11433  CA  VAL C  29      30.038  -8.995  61.325  1.00 48.51           C
ATOM  11435  CB  VAL C  29      30.320 -10.315  62.063  1.00 47.93           C
ATOM  11437  CG1 VAL C  29      30.342 -10.127  63.598  1.00 47.74           C
ATOM  11441  CG2 VAL C  29      29.290 -11.342  61.645  1.00 45.01           C
ATOM  11445  C   VAL C  29      30.923  -7.854  61.849  1.00 48.33           C
ATOM  11446  O   VAL C  29      32.099  -7.792  61.525  1.00 51.32           O
ATOM  11448  N   LEU C  30      30.349  -6.968  62.664  1.00 47.56           N
ATOM  11449  CA  LEU C  30      31.028  -5.753  63.103  1.00 48.48           C
ATOM  11451  CB  LEU C  30      30.105  -4.559  62.958  1.00 46.33           C
ATOM  11454  CG  LEU C  30      29.439  -4.407  61.599  1.00 48.81           C
ATOM  11456  CD1 LEU C  30      28.714  -3.095  61.584  1.00 50.91           C
ATOM  11460  CD2 LEU C  30      30.445  -4.468  60.459  1.00 53.26           C
ATOM  11464  C   LEU C  30      31.465  -5.825  64.544  1.00 50.16           C
ATOM  11465  O   LEU C  30      30.711  -6.301  65.381  1.00 53.16           O
ATOM  11467  N   GLY C  31      32.671  -5.337  64.839  1.00 50.43           N
ATOM  11468  CA  GLY C  31      33.162  -5.274  66.215  1.00 51.69           C
ATOM  11471  C   GLY C  31      33.683  -3.894  66.561  1.00 52.83           C
ATOM  11472  O   GLY C  31      34.135  -3.173  65.682  1.00 54.58           O
ATOM  11474  N   LYS C  32      33.606  -3.517  67.836  1.00 53.59           N
ATOM  11475  CA  LYS C  32      34.333  -2.340  68.334  1.00 55.03           C
ATOM  11477  CB  LYS C  32      33.679  -1.722  69.582  1.00 57.09           C
ATOM  11480  CG  LYS C  32      32.264  -1.227  69.410  1.00 57.40           C
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ATOM  11483  CD  LYS C  32      31.542  -1.099  70.753  1.00 58.52           C
ATOM  11486  CE  LYS C  32      32.280  -0.194  71.735  1.00 60.64           C
ATOM  11489  NZ  LYS C  32      31.338   0.582  72.579  1.00 62.18           N
ATOM  11493  C   LYS C  32      35.752  -2.729  68.732  1.00 54.41           C
ATOM  11494  O   LYS C  32      35.966  -3.763  69.391  1.00 51.25           O
ATOM  11496  N   LYS C  33      36.704  -1.879  68.342  1.00 53.74           N
ATOM  11497  CA  LYS C  33      38.079  -1.907  68.851  1.00 53.62           C
ATOM  11499  CB  LYS C  33      38.753  -0.584  68.493  1.00 52.86           C
ATOM  11502  CG  LYS C  33      40.175  -0.401  68.966  1.00 53.21           C
ATOM  11505  CD  LYS C  33      40.697   0.950  68.448  1.00 54.88           C
ATOM  11508  CE  LYS C  33      42.126   1.230  68.873  1.00 56.32           C
ATOM  11511  NZ  LYS C  33      42.898   1.847  67.763  1.00 59.96           N
ATOM  11515  C   LYS C  33      38.095  -2.113  70.364  1.00 52.83           C
ATOM  11516  O   LYS C  33      37.467  -1.352  71.102  1.00 52.70           O
ATOM  11518  N   GLY C  34      38.769  -3.167  70.819  1.00 52.99           N
ATOM  11519  CA  GLY C  34      38.898  -3.452  72.257  1.00 53.22           C
ATOM  11522  C   GLY C  34      37.936  -4.485  72.827  1.00 52.44           C
ATOM  11523  O   GLY C  34      38.268  -5.188  73.781  1.00 50.64           O
ATOM  11525  N   ASP C  35      36.742  -4.586  72.257  1.00 53.38           N
ATOM  11526  CA  ASP C  35      35.770  -5.574  72.719  1.00 54.95           C
ATOM  11528  CB  ASP C  35      34.368  -5.274  72.165  1.00 56.98           C
ATOM  11531  CG  ASP C  35      33.727  -4.056  72.806  1.00 63.61           C
ATOM  11532  OD1 ASP C  35      34.421  -3.325  73.557  1.00 70.58           O
ATOM  11533  OD2 ASP C  35      32.523  -3.830  72.547  1.00 72.74           O
ATOM  11534  C   ASP C  35      36.188  -6.968  72.301  1.00 52.79           C
ATOM  11535  O   ASP C  35      37.206  -7.153  71.653  1.00 52.66           O
ATOM  11537  N   THR C  36      35.404  -7.953  72.700  1.00 52.25           N
ATOM  11538  CA  THR C  36      35.542  -9.270  72.130  1.00 53.63           C
ATOM  11540  CB  THR C  36      35.588 -10.390  73.201  1.00 53.74           C
ATOM  11542  OG1 THR C  36      34.273 -10.880  73.433  1.00 55.27           O
ATOM  11544  CG2 THR C  36      36.191  -9.900  74.515  1.00 54.22           C
ATOM  11548  C   THR C  36      34.373  -9.493  71.173  1.00 54.02           C
ATOM  11549  O   THR C  36      33.337  -8.825  71.266  1.00 53.73           O
ATOM  11551  N   VAL C  37      34.557 -10.415  70.238  1.00 54.25           N
ATOM  11552  CA  VAL C  37      33.502 -10.784  69.310  1.00 54.17           C
ATOM  11554  CB  VAL C  37      33.690 -10.133  67.929  1.00 53.80           C
ATOM  11556  CG1 VAL C  37      35.001 -10.564  67.299  1.00 56.09           C
ATOM  11560  CG2 VAL C  37      32.510 -10.467  67.004  1.00 54.53           C
ATOM  11564  C   VAL C  37      33.499 -12.290  69.177  1.00 54.74           C
ATOM  11565  O   VAL C  37      34.540 -12.929  69.362  1.00 54.93           O
ATOM  11567  N   GLU C  38      32.326 -12.846  68.878  1.00 55.08           N
ATOM  11568  CA  GLU C  38      32.159 -14.281  68.700  1.00 54.83           C
ATOM  11570  CB  GLU C  38      31.117 -14.816  69.684  1.00 55.08           C
ATOM  11573  CG  GLU C  38      30.929 -16.326  69.617  1.00 57.61           C
ATOM  11576  CD  GLU C  38      30.170 -16.914  70.808  1.00 60.50           C
ATOM  11577  OE1 GLU C  38      30.197 -16.329  71.920  1.00 67.06           O
ATOM  11578  OE2 GLU C  38      29.550 -17.986  70.623  1.00 70.26           O
ATOM  11579  C   GLU C  38      31.734 -14.567  67.267  1.00 53.48           C
ATOM  11580  O   GLU C  38      30.671 -14.137  66.835  1.00 54.35           O
ATOM  11582  N   LEU C  39      32.578 -15.273  66.524  1.00 51.18           N
ATOM  11583  CA  LEU C  39      32.232 -15.688  65.183  1.00 50.96           C
ATOM  11585  CB  LEU C  39      33.442 -15.564  64.262  1.00 51.16           C
ATOM  11588  CG  LEU C  39      34.228 -14.243  64.260  1.00 56.33           C
ATOM  11590  CD1 LEU C  39      35.338 -14.271  63.195  1.00 55.53           C
ATOM  11594  CD2 LEU C  39      33.316 -13.030  64.047  1.00 58.88           C
ATOM  11598  C   LEU C  39      31.728 -17.141  65.255  1.00 51.32           C
ATOM  11599  O   LEU C  39      32.482 -18.054  65.607  1.00 50.22           O
ATOM  11601  N   THR C  40      30.452 -17.351  64.934  1.00 49.60           N
ATOM  11602  CA  THR C  40      29.842 -18.664  65.100  1.00 48.53           C
ATOM  11604  CB  THR C  40      28.295 -18.599  65.232  1.00 47.90           C
ATOM  11606  OG1 THR C  40      27.721 -18.140  64.013  1.00 49.16           O
ATOM  11608  CG2 THR C  40      27.879 -17.660  66.343  1.00 49.93           C
ATOM  11612  C   THR C  40      30.193 -19.581  63.952  1.00 45.05           C
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ATOM  11613  O   THR C  40      30.483 -19.144  62.859  1.00 42.59           O
ATOM  11615  N   CYS C  41      30.185 -20.868  64.233  1.00 46.96           N
ATOM  11616  CA  CYS C  41      30.311 -21.876  63.206  1.00 46.67           C
ATOM  11618  CB  CYS C  41      31.772 -22.189  62.931  1.00 47.21           C
ATOM  11621  SG  CYS C  41      32.041 -23.392  61.602  1.00 51.63           S
ATOM  11623  C   CYS C  41      29.590 -23.098  63.736  1.00 46.73           C
ATOM  11624  O   CYS C  41      30.068 -23.759  64.656  1.00 48.14           O
ATOM  11626  N   THR C  42      28.412 -23.360  63.192  1.00 44.51           N
ATOM  11627  CA  THR C  42      27.601 -24.442  63.668  1.00 45.24           C
ATOM  11629  CB  THR C  42      26.185 -23.975  63.991  1.00 45.83           C
ATOM  11631  OG1 THR C  42      26.251 -22.803  64.806  1.00 47.28           O
ATOM  11633  CG2 THR C  42      25.410 -25.059  64.732  1.00 44.75           C
ATOM  11637  C   THR C  42      27.557 -25.476  62.577  1.00 46.40           C
ATOM  11638  O   THR C  42      27.142 -25.184  61.455  1.00 47.68           O
ATOM  11640  N   ALA C  43      27.992 -26.683  62.910  1.00 46.08           N
ATOM  11641  CA  ALA C  43      27.946 -27.780  61.981  1.00 47.28           C
ATOM  11643  CB  ALA C  43      28.871 -28.877  62.440  1.00 47.90           C
ATOM  11647  C   ALA C  43      26.520 -28.299  61.854  1.00 47.86           C
ATOM  11648  O   ALA C  43      25.673 -28.014  62.699  1.00 46.45           O
ATOM  11650  N   SER C  44      26.272 -29.060  60.788  1.00 49.88           N
ATOM  11651  CA  SER C  44      24.988 -29.714  60.563  1.00 51.53           C
ATOM  11653  CB  SER C  44      24.991 -30.481  59.241  1.00 52.86           C
ATOM  11656  OG  SER C  44      24.590 -29.632  58.181  1.00 59.29           O
ATOM  11658  C   SER C  44      24.640 -30.664  61.685  1.00 51.75           C
ATOM  11659  O   SER C  44      23.523 -30.652  62.176  1.00 53.82           O
ATOM  11661  N   GLN C  45      25.599 -31.485  62.088  1.00 52.81           N
ATOM  11662  CA  GLN C  45      25.367 -32.476  63.134  1.00 54.12           C
ATOM  11664  CB  GLN C  45      26.247 -33.695  62.887  1.00 55.04           C
ATOM  11667  CG  GLN C  45      25.933 -34.407  61.572  1.00 55.90           C
ATOM  11670  CD  GLN C  45      27.048 -35.325  61.108  1.00 55.97           C
ATOM  11671  OE1 GLN C  45      28.232 -35.050  61.325  1.00 64.59           O
ATOM  11672  NE2 GLN C  45      26.676 -36.419  60.452  1.00 59.45           N
ATOM  11675  C   GLN C  45      25.664 -31.889  64.506  1.00 54.60           C
ATOM  11676  O   GLN C  45      26.526 -31.023  64.626  1.00 56.59           O
ATOM  11678  N   LYS C  46      24.953 -32.362  65.533  1.00 54.27           N
ATOM  11679  CA  LYS C  46      25.227 -31.980  66.924  1.00 54.48           C
ATOM  11681  CB  LYS C  46      23.968 -32.086  67.794  1.00 54.52           C
ATOM  11684  CG  LYS C  46      22.783 -31.267  67.365  1.00 52.41           C
ATOM  11687  CD  LYS C  46      21.924 -30.866  68.572  1.00 54.77           C
ATOM  11690  CE  LYS C  46      21.458 -32.064  69.406  1.00 57.20           C
ATOM  11693  NZ  LYS C  46      20.435 -31.672  70.427  1.00 56.68           N
ATOM  11697  C   LYS C  46      26.303 -32.886  67.536  1.00 54.76           C
ATOM  11698  O   LYS C  46      26.115 -33.467  68.603  1.00 53.95           O
ATOM  11700  N   LYS C  47      27.431 -32.999  66.858  1.00 56.37           N
ATOM  11701  CA  LYS C  47      28.505 -33.874  67.280  1.00 56.39           C
ATOM  11703  CB  LYS C  47      28.653 -35.010  66.261  1.00 56.71           C
ATOM  11706  CG  LYS C  47      29.576 -36.134  66.686  1.00 57.86           C
ATOM  11709  CD  LYS C  47      29.487 -37.345  65.752  1.00 58.87           C
ATOM  11712  CE  LYS C  47      30.158 -38.579  66.391  1.00 62.40           C
ATOM  11715  NZ  LYS C  47      29.723 -39.892  65.808  1.00 62.09           N
ATOM  11719  C   LYS C  47      29.761 -33.015  67.360  1.00 56.23           C
ATOM  11720  O   LYS C  47      29.801 -31.925  66.786  1.00 55.56           O
ATOM  11722  N   SER C  48      30.766 -33.480  68.096  1.00 56.31           N
ATOM  11723  CA  SER C  48      32.079 -32.832  68.102  1.00 56.56           C
ATOM  11725  CB  SER C  48      32.761 -33.040  69.452  1.00 57.19           C
ATOM  11728  OG  SER C  48      33.877 -32.182  69.593  1.00 61.69           O
ATOM  11730  C   SER C  48      32.947 -33.401  66.967  1.00 55.96           C
ATOM  11731  O   SER C  48      33.245 -34.588  66.950  1.00 55.51           O
ATOM  11733  N   ILE C  49      33.326 -32.559  66.009  1.00 55.40           N
ATOM  11734  CA  ILE C  49      34.099 -33.003  64.849  1.00 54.42           C
ATOM  11736  CB  ILE C  49      33.361 -32.770  63.506  1.00 55.01           C
ATOM  11738  CG1 ILE C  49      31.858 -33.008  63.637  1.00 55.05           C
ATOM  11741  CD1 ILE C  49      31.500 -34.398  64.102  1.00 61.71           C
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ATOM  11745  CG2 ILE C  49      33.979 -33.638  62.392  1.00 56.17           C
ATOM  11749  C   ILE C  49      35.362 -32.182  64.778  1.00 53.51           C
ATOM  11750  O   ILE C  49      35.442 -31.136  65.418  1.00 52.65           O
ATOM  11752  N   GLN C  50      36.331 -32.660  63.991  1.00 53.17           N
ATOM  11753  CA  GLN C  50      37.566 -31.925  63.699  1.00 52.52           C
ATOM  11755  CB  GLN C  50      38.513 -32.783  62.851  1.00 52.60           C
ATOM  11758  CG  GLN C  50      39.904 -32.186  62.617  1.00 54.35           C
ATOM  11761  CD  GLN C  50      40.876 -32.469  63.759  1.00 59.17           C
ATOM  11762  OE1 GLN C  50      41.207 -33.626  64.041  1.00 62.37           O
ATOM  11763  NE2 GLN C  50      41.346 -31.411  64.411  1.00 57.50           N
ATOM  11766  C   GLN C  50      37.252 -30.628  62.957  1.00 50.99           C
ATOM  11767  O   GLN C  50      36.667 -30.653  61.875  1.00 50.10           O
ATOM  11769  N   PHE C  51      37.631 -29.500  63.547  1.00 49.43           N
ATOM  11770  CA  PHE C  51      37.421 -28.218  62.906  1.00 51.04           C
ATOM  11772  CB  PHE C  51      36.202 -27.512  63.508  1.00 51.97           C
ATOM  11775  CG  PHE C  51      36.476 -26.821  64.814  1.00 52.93           C
ATOM  11776  CD1 PHE C  51      36.221 -27.461  66.016  1.00 55.61           C
ATOM  11778  CE1 PHE C  51      36.471 -26.819  67.231  1.00 55.44           C
ATOM  11780  CZ  PHE C  51      36.985 -25.524  67.238  1.00 53.11           C
ATOM  11782  CE2 PHE C  51      37.240 -24.878  66.041  1.00 50.74           C
ATOM  11784  CD2 PHE C  51      36.977 -25.520  64.840  1.00 50.87           C
ATOM  11786  C   PHE C  51      38.662 -27.349  63.033  1.00 50.80           C
ATOM  11787  O   PHE C  51      39.440 -27.512  63.976  1.00 50.32           O
ATOM  11789  N   HIS C  52      38.846 -26.449  62.064  1.00 50.35           N
ATOM  11790  CA  HIS C  52      39.877 -25.414  62.131  1.00 51.58           C
ATOM  11792  CB  HIS C  52      41.092 -25.721  61.239  1.00 54.29           C
ATOM  11795  CG  HIS C  52      41.352 -27.177  61.032  1.00 61.03           C
ATOM  11796  ND1 HIS C  52      42.530 -27.782  61.420  1.00 64.68           N
ATOM  11798  CE1 HIS C  52      42.485 -29.065  61.103  1.00 69.28           C
ATOM  11800  NE2 HIS C  52      41.319 -29.313  60.529  1.00 71.55           N
ATOM  11802  CD2 HIS C  52      40.595 -28.147  60.466  1.00 64.78           C
ATOM  11804  C   HIS C  52      39.303 -24.101  61.648  1.00 49.52           C
ATOM  11805  O   HIS C  52      38.661 -24.047  60.606  1.00 45.19           O
ATOM  11807  N   TRP C  53      39.564 -23.041  62.398  1.00 50.33           N
ATOM  11808  CA  TRP C  53      39.377 -21.692  61.901  1.00 50.90           C
ATOM  11810  CB  TRP C  53      39.007 -20.760  63.037  1.00 50.92           C
ATOM  11813  CG  TRP C  53      37.574 -20.747  63.361  1.00 52.00           C
ATOM  11814  CD1 TRP C  53      36.930 -21.525  64.281  1.00 50.78           C
ATOM  11816  NE1 TRP C  53      35.598 -21.206  64.309  1.00 50.62           N
ATOM  11818  CE2 TRP C  53      35.357 -20.200  63.409  1.00 52.10           C
ATOM  11819  CD2 TRP C  53      36.585 -19.884  62.794  1.00 51.07           C
ATOM  11820  CE3 TRP C  53      36.619 -18.874  61.828  1.00 51.36           C
ATOM  11822  CZ3 TRP C  53      35.429 -18.217  61.505  1.00 52.54           C
ATOM  11824  CH2 TRP C  53      34.218 -18.557  62.138  1.00 50.79           C
ATOM  11826  CZ2 TRP C  53      34.164 -19.537  63.090  1.00 51.23           C
ATOM  11828  C   TRP C  53      40.684 -21.215  61.288  1.00 50.71           C
ATOM  11829  O   TRP C  53      41.751 -21.492  61.837  1.00 49.29           O
ATOM  11831  N   LYS C  54      40.606 -20.502  60.164  1.00 51.43           N
ATOM  11832  CA  LYS C  54      41.786 -19.846  59.592  1.00 54.01           C
ATOM  11834  CB  LYS C  54      42.523 -20.771  58.615  1.00 54.33           C
ATOM  11837  CG  LYS C  54      41.668 -21.433  57.559  1.00 57.34           C
ATOM  11840  CD  LYS C  54      42.530 -22.177  56.525  1.00 59.68           C
ATOM  11843  CE  LYS C  54      43.137 -23.468  57.082  1.00 65.29           C
ATOM  11846  NZ  LYS C  54      44.174 -23.216  58.126  1.00 64.51           N
ATOM  11850  C   LYS C  54      41.465 -18.499  58.944  1.00 53.86           C
ATOM  11851  O   LYS C  54      40.311 -18.213  58.620  1.00 54.20           O
ATOM  11853  N   ASN C  55      42.492 -17.661  58.793  1.00 53.28           N
ATOM  11854  CA  ASN C  55      42.309 -16.338  58.195  1.00 52.70           C
ATOM  11856  CB  ASN C  55      43.340 -15.327  58.710  1.00 52.32           C
ATOM  11859  CG  ASN C  55      44.748 -15.578  58.175  1.00 56.98           C
ATOM  11860  OD1 ASN C  55      44.954 -16.362  57.243  1.00 62.48           O
ATOM  11861  ND2 ASN C  55      45.726 -14.908  58.770  1.00 52.08           N
ATOM  11864  C   ASN C  55      42.361 -16.476  56.685  1.00 52.05           C
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ATOM  11865  O   ASN C  55      42.626 -17.565  56.178  1.00 53.34           O
ATOM  11867  N   SER C  56      42.107 -15.378  55.977  1.00 51.78           N
ATOM  11868  CA  SER C  56      41.969 -15.402  54.520  1.00 50.44           C
ATOM  11870  CB  SER C  56      41.379 -14.088  54.002  1.00 52.03           C
ATOM  11873  OG  SER C  56      42.232 -12.986  54.269  1.00 47.78           O
ATOM  11875  C   SER C  56      43.280 -15.681  53.808  1.00 49.37           C
ATOM  11876  O   SER C  56      43.266 -16.096  52.660  1.00 49.39           O
ATOM  11878  N   ASN C  57      44.407 -15.451  54.480  1.00 48.93           N
ATOM  11879  CA  ASN C  57      45.716 -15.845  53.942  1.00 48.85           C
ATOM  11881  CB  ASN C  57      46.818 -14.913  54.464  1.00 46.84           C
ATOM  11884  CG  ASN C  57      48.106 -15.016  53.666  1.00 47.55           C
ATOM  11885  OD1 ASN C  57      48.100 -15.441  52.507  1.00 41.91           O
ATOM  11886  ND2 ASN C  57      49.226 -14.631  54.290  1.00 40.76           N
ATOM  11889  C   ASN C  57      46.057 -17.310  54.255  1.00 49.15           C
ATOM  11890  O   ASN C  57      47.199 -17.725  54.094  1.00 49.21           O
ATOM  11892  N   GLN C  58      45.061 -18.085  54.698  1.00 49.87           N
ATOM  11893  CA  GLN C  58      45.193 -19.533  54.929  1.00 49.83           C
ATOM  11895  CB  GLN C  58      45.604 -20.260  53.637  1.00 51.88           C
ATOM  11898  CG  GLN C  58      44.591 -20.107  52.509  1.00 57.51           C
ATOM  11901  CD  GLN C  58      43.262 -20.740  52.868  1.00 63.74           C
ATOM  11902  OE1 GLN C  58      43.185 -21.955  53.077  1.00 70.68           O
ATOM  11903  NE2 GLN C  58      42.215 -19.919  52.976  1.00 60.17           N
ATOM  11906  C   GLN C  58      46.136 -19.887  56.074  1.00 48.57           C
ATOM  11907  O   GLN C  58      46.795 -20.919  56.049  1.00 48.86           O
ATOM  11909  N   ILE C  59      46.171 -19.028  57.083  1.00 47.49           N
ATOM  11910  CA  ILE C  59      46.969 -19.247  58.275  1.00 47.89           C
ATOM  11912  CB  ILE C  59      47.631 -17.929  58.699  1.00 46.22           C
ATOM  11914  CG1 ILE C  59      48.799 -17.640  57.752  1.00 48.38           C
ATOM  11917  CD1 ILE C  59      49.292 -16.207  57.795  1.00 51.54           C
ATOM  11921  CG2 ILE C  59      48.118 -17.981  60.146  1.00 46.49           C
ATOM  11925  C   ILE C  59      46.080 -19.816  59.382  1.00 47.68           C
ATOM  11926  O   ILE C  59      45.030 -19.252  59.694  1.00 47.67           O
ATOM  11928  N   LYS C  60      46.496 -20.934  59.969  1.00 48.47           N
ATOM  11929  CA  LYS C  60      45.711 -21.585  61.023  1.00 50.47           C
ATOM  11931  CB  LYS C  60      46.325 -22.940  61.414  1.00 52.15           C
ATOM  11934  CG  LYS C  60      46.128 -24.058  60.372  1.00 55.65           C
ATOM  11937  CD  LYS C  60      47.158 -25.182  60.533  1.00 56.86           C
ATOM  11940  CE  LYS C  60      46.864 -26.390  59.628  1.00 60.51           C
ATOM  11943  NZ  LYS C  60      45.893 -27.364  60.218  1.00 59.92           N
ATOM  11947  C   LYS C  60      45.616 -20.693  62.255  1.00 49.45           C
ATOM  11948  O   LYS C  60      46.640 -20.319  62.834  1.00 49.71           O
ATOM  11950  N   ILE C  61      44.391 -20.342  62.643  1.00 48.86           N
ATOM  11951  CA  ILE C  61      44.159 -19.597  63.884  1.00 49.70           C
ATOM  11953  CB  ILE C  61      42.869 -18.756  63.846  1.00 49.40           C
ATOM  11955  CG1 ILE C  61      42.859 -17.792  62.645  1.00 55.67           C
ATOM  11958  CD1 ILE C  61      43.969 -16.746  62.640  1.00 60.68           C
ATOM  11962  CG2 ILE C  61      42.694 -18.019  65.173  1.00 47.13           C
ATOM  11966  C   ILE C  61      44.044 -20.575  65.053  1.00 49.52           C
ATOM  11967  O   ILE C  61      44.846 -20.539  65.995  1.00 49.21           O
ATOM  11969  N   LEU C  62      43.031 -21.433  64.992  1.00 49.01           N
ATOM  11970  CA  LEU C  62      42.840 -22.452  66.001  1.00 48.54           C
ATOM  11972  CB  LEU C  62      42.273 -21.854  67.304  1.00 49.35           C
ATOM  11975  CG  LEU C  62      40.911 -21.151  67.410  1.00 49.77           C
ATOM  11977  CD1 LEU C  62      39.740 -22.087  67.148  1.00 55.73           C
ATOM  11981  CD2 LEU C  62      40.772 -20.551  68.803  1.00 49.08           C
ATOM  11985  C   LEU C  62      41.978 -23.611  65.521  1.00 47.29           C
ATOM  11986  O   LEU C  62      41.242 -23.524  64.530  1.00 43.42           O
ATOM  11988  N   GLY C  63      42.105 -24.712  66.242  1.00 47.91           N
ATOM  11989  CA  GLY C  63      41.293 -25.883  66.000  1.00 49.38           C
ATOM  11992  C   GLY C  63      41.284 -26.752  67.230  1.00 49.12           C
ATOM  11993  O   GLY C  63      41.922 -26.428  68.227  1.00 48.47           O
ATOM  11995  N   ASN C  64      40.547 -27.852  67.158  1.00 49.67           N
ATOM  11996  CA  ASN C  64      40.516 -28.815  68.243  1.00 50.30           C
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ATOM  11998  CB  ASN C  64      39.090 -29.278  68.522  1.00 51.03           C
ATOM  12001  CG  ASN C  64      38.447 -29.982  67.332  1.00 53.00           C
ATOM  12002  OD1 ASN C  64      37.229 -30.141  67.292  1.00 52.75           O
ATOM  12003  ND2 ASN C  64      39.257 -30.399  66.363  1.00 51.45           N
ATOM  12006  C   ASN C  64      41.389 -30.014  67.936  1.00 51.71           C
ATOM  12007  O   ASN C  64      41.810 -30.222  66.795  1.00 54.54           O
ATOM  12009  N   GLN C  65      41.673 -30.779  68.981  1.00 51.60           N
ATOM  12010  CA  GLN C  65      42.219 -32.120  68.858  1.00 50.36           C
ATOM  12012  CB  GLN C  65      43.735 -32.119  68.999  1.00 51.11           C
ATOM  12015  CG  GLN C  65      44.467 -32.563  67.748  1.00 53.84           C
ATOM  12018  CD  GLN C  65      45.705 -33.364  68.068  1.00 52.74           C
ATOM  12019  OE1 GLN C  65      45.986 -33.649  69.231  1.00 53.47           O
ATOM  12020  NE2 GLN C  65      46.447 -33.748  67.035  1.00 60.86           N
ATOM  12023  C   GLN C  65      41.589 -32.919  69.968  1.00 48.91           C
ATOM  12024  O   GLN C  65      42.148 -33.020  71.054  1.00 50.08           O
ATOM  12026  N   GLY C  66      40.400 -33.447  69.704  1.00 47.30           N
ATOM  12027  CA  GLY C  66      39.597 -34.060  70.746  1.00 47.50           C
ATOM  12030  C   GLY C  66      38.984 -32.964  71.589  1.00 47.01           C
ATOM  12031  O   GLY C  66      38.156 -32.197  71.091  1.00 49.82           O
ATOM  12033  N   SER C  67      39.395 -32.881  72.855  1.00 46.08           N
ATOM  12034  CA  SER C  67      38.905 -31.842  73.769  1.00 46.10           C
ATOM  12036  CB  SER C  67      38.529 -32.450  75.114  1.00 44.60           C
ATOM  12039  OG  SER C  67      39.682 -32.937  75.756  1.00 45.61           O
ATOM  12041  C   SER C  67      39.924 -30.725  73.996  1.00 46.42           C
ATOM  12042  O   SER C  67      39.612 -29.734  74.653  1.00 44.76           O
ATOM  12044  N   PHE C  68      41.135 -30.890  73.465  1.00 47.67           N
ATOM  12045  CA  PHE C  68      42.190 -29.894  73.630  1.00 46.14           C
ATOM  12047  CB  PHE C  68      43.585 -30.532  73.555  1.00 46.58           C
ATOM  12050  CG  PHE C  68      43.782 -31.729  74.459  1.00 45.25           C
ATOM  12051  CD1 PHE C  68      43.144 -31.822  75.690  1.00 42.29           C
ATOM  12053  CE1 PHE C  68      43.345 -32.925  76.509  1.00 45.51           C
ATOM  12055  CZ  PHE C  68      44.203 -33.948  76.105  1.00 48.47           C
ATOM  12057  CE2 PHE C  68      44.854 -33.861  74.883  1.00 46.46           C
ATOM  12059  CD2 PHE C  68      44.646 -32.755  74.074  1.00 46.23           C
ATOM  12061  C   PHE C  68      42.060 -28.866  72.521  1.00 45.92           C
ATOM  12062  O   PHE C  68      41.804 -29.227  71.376  1.00 46.72           O
ATOM  12064  N   LEU C  69      42.238 -27.592  72.868  1.00 44.98           N
ATOM  12065  CA  LEU C  69      42.315 -26.508  71.887  1.00 43.95           C
ATOM  12067  CB  LEU C  69      41.911 -25.192  72.543  1.00 43.59           C
ATOM  12070  CG  LEU C  69      41.955 -23.900  71.725  1.00 42.68           C
ATOM  12072  CD1 LEU C  69      40.875 -23.875  70.643  1.00 43.98           C
ATOM  12076  CD2 LEU C  69      41.794 -22.710  72.655  1.00 43.54           C
ATOM  12080  C   LEU C  69      43.740 -26.374  71.363  1.00 44.13           C
ATOM  12081  O   LEU C  69      44.700 -26.472  72.129  1.00 44.01           O
ATOM  12083  N   THR C  70      43.872 -26.145  70.061  1.00 44.55           N
ATOM  12084  CA  THR C  70      45.177 -25.928  69.432  1.00 45.70           C
ATOM  12086  CB  THR C  70      45.547 -27.096  68.492  1.00 45.37           C
ATOM  12088  OG1 THR C  70      44.538 -27.258  67.484  1.00 50.25           O
ATOM  12090  CG2 THR C  70      45.659 -28.392  69.281  1.00 46.74           C
ATOM  12094  C   THR C  70      45.194 -24.580  68.689  1.00 45.58           C
ATOM  12095  O   THR C  70      44.170 -24.093  68.225  1.00 41.96           O
ATOM  12097  N   LYS C  71      46.366 -23.968  68.612  1.00 47.29           N
ATOM  12098  CA  LYS C  71      46.482 -22.610  68.115  1.00 49.01           C
ATOM  12100  CB  LYS C  71      46.656 -21.637  69.290  1.00 48.87           C
ATOM  12103  CG  LYS C  71      45.527 -21.721  70.320  1.00 51.79           C
ATOM  12106  CD  LYS C  71      45.729 -20.796  71.513  1.00 51.26           C
ATOM  12109  CE  LYS C  71      44.727 -19.663  71.535  1.00 54.67           C
ATOM  12112  NZ  LYS C  71      44.920 -18.739  72.704  1.00 53.55           N
ATOM  12116  C   LYS C  71      47.664 -22.517  67.170  1.00 49.45           C
ATOM  12117  O   LYS C  71      48.778 -22.844  67.546  1.00 52.94           O
ATOM  12119  N   GLY C  72      47.417 -22.082  65.942  1.00 50.42           N
ATOM  12120  CA  GLY C  72      48.480 -21.863  64.970  1.00 52.01           C
ATOM  12123  C   GLY C  72      49.279 -20.592  65.234  1.00 53.24           C
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ATOM  12124  O   GLY C  72      49.119 -19.953  66.282  1.00 52.05           O
ATOM  12126  N   PRO C  73      50.145 -20.209  64.277  1.00 55.29           N
ATOM  12127  CA  PRO C  73      51.111 -19.144  64.492  1.00 56.96           C
ATOM  12129  CB  PRO C  73      52.349 -19.682  63.768  1.00 57.24           C
ATOM  12132  CG  PRO C  73      51.760 -20.496  62.593  1.00 57.57           C
ATOM  12135  CD  PRO C  73      50.296 -20.776  62.924  1.00 55.20           C
ATOM  12138  C   PRO C  73      50.679 -17.812  63.893  1.00 57.99           C
ATOM  12139  O   PRO C  73      51.506 -17.088  63.338  1.00 57.92           O
ATOM  12140  N   SER C  74      49.397 -17.485  63.999  1.00 59.72           N
ATOM  12141  CA  SER C  74      48.945 -16.159  63.608  1.00 62.22           C
ATOM  12143  CB  SER C  74      47.426 -16.122  63.404  1.00 62.70           C
ATOM  12146  OG  SER C  74      46.735 -16.009  64.635  1.00 64.56           O
ATOM  12148  C   SER C  74      49.372 -15.191  64.704  1.00 63.86           C
ATOM  12149  O   SER C  74      49.746 -15.619  65.799  1.00 65.56           O
ATOM  12151  N   LYS C  75      49.333 -13.894  64.405  1.00 65.11           N
ATOM  12152  CA  LYS C  75      49.570 -12.864  65.424  1.00 65.91           C
ATOM  12154  CB  LYS C  75      49.800 -11.484  64.787  1.00 67.46           C
ATOM  12157  CG  LYS C  75      51.264 -11.222  64.374  1.00 69.39           C
ATOM  12160  CD  LYS C  75      51.624  -9.727  64.412  1.00 69.10           C
ATOM  12163  CE  LYS C  75      50.724  -8.870  63.504  1.00 68.97           C
ATOM  12166  NZ  LYS C  75      51.058  -7.414  63.608  1.00 67.31           N
ATOM  12170  C   LYS C  75      48.410 -12.795  66.416  1.00 64.56           C
ATOM  12171  O   LYS C  75      48.538 -12.234  67.497  1.00 65.96           O
ATOM  12173  N   LEU C  76      47.290 -13.391  66.043  1.00 63.47           N
ATOM  12174  CA  LEU C  76      46.102 -13.423  66.873  1.00 64.07           C
ATOM  12176  CB  LEU C  76      44.911 -13.842  65.999  1.00 63.13           C
ATOM  12179  CG  LEU C  76      43.567 -13.140  66.168  1.00 64.68           C
ATOM  12181  CD1 LEU C  76      43.696 -11.710  66.667  1.00 67.11           C
ATOM  12185  CD2 LEU C  76      42.834 -13.158  64.846  1.00 64.16           C
ATOM  12189  C   LEU C  76      46.244 -14.388  68.064  1.00 65.87           C
ATOM  12190  O   LEU C  76      45.465 -14.306  69.020  1.00 67.90           O
ATOM  12192  N   ASN C  77      47.252 -15.269  68.011  1.00 64.59           N
ATOM  12193  CA  ASN C  77      47.359 -16.442  68.889  1.00 61.96           C
ATOM  12195  CB  ASN C  77      48.829 -16.865  69.053  1.00 62.45           C
ATOM  12198  CG  ASN C  77      48.981 -18.257  69.689  1.00 63.63           C
ATOM  12199  OD1 ASN C  77      48.095 -18.736  70.402  1.00 61.38           O
ATOM  12200  ND2 ASN C  77      50.111 -18.904  69.426  1.00 60.68           N
ATOM  12203  C   ASN C  77      46.713 -16.292  70.260  1.00 60.33           C
ATOM  12204  O   ASN C  77      45.728 -16.963  70.571  1.00 60.02           O
ATOM  12206  N   ASP C  78      47.264 -15.406  71.074  1.00 59.78           N
ATOM  12207  CA  ASP C  78      46.886 -15.344  72.484  1.00 59.37           C
ATOM  12209  CB  ASP C  78      47.933 -14.574  73.307  1.00 60.96           C
ATOM  12212  CG  ASP C  78      48.142 -13.139  72.817  1.00 68.22           C
ATOM  12213  OD1 ASP C  78      47.528 -12.745  71.794  1.00 74.99           O
ATOM  12214  OD2 ASP C  78      48.931 -12.407  73.451  1.00 70.19           O
ATOM  12215  C   ASP C  78      45.496 -14.760  72.696  1.00 56.69           C
ATOM  12216  O   ASP C  78      44.914 -14.967  73.749  1.00 57.54           O
ATOM  12218  N   ARG C  79      44.959 -14.049  71.706  1.00 55.44           N
ATOM  12219  CA  ARG C  79      43.624 -13.439  71.833  1.00 55.03           C
ATOM  12221  CB  ARG C  79      43.627 -12.036  71.230  1.00 54.51           C
ATOM  12224  CG  ARG C  79      44.768 -11.182  71.759  1.00 54.43           C
ATOM  12227  CD  ARG C  79      44.593  -9.700  71.522  1.00 52.55           C
ATOM  12230  NE  ARG C  79      45.095  -9.286  70.212  1.00 53.43           N
ATOM  12232  CZ  ARG C  79      44.361  -9.177  69.106  1.00 48.10           C
ATOM  12233  NH1 ARG C  79      43.072  -9.453  69.118  1.00 46.25           N
ATOM  12236  NH2 ARG C  79      44.926  -8.782  67.979  1.00 50.99           N
ATOM  12239  C   ARG C  79      42.473 -14.273  71.251  1.00 54.28           C
ATOM  12240  O   ARG C  79      41.306 -13.936  71.457  1.00 52.66           O
ATOM  12242  N   ALA C  80      42.801 -15.356  70.545  1.00 54.83           N
ATOM  12243  CA  ALA C  80      41.790 -16.283  70.020  1.00 55.71           C
ATOM  12245  CB  ALA C  80      42.296 -16.985  68.778  1.00 55.69           C
ATOM  12249  C   ALA C  80      41.424 -17.321  71.060  1.00 55.74           C
ATOM  12250  O   ALA C  80      42.289 -17.745  71.823  1.00 56.62           O
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ATOM  12252  N   ASP C  81      40.147 -17.715  71.077  1.00 55.46           N
ATOM  12253  CA  ASP C  81      39.658 -18.824  71.902  1.00 55.03           C
ATOM  12255  CB  ASP C  81      39.338 -18.347  73.328  1.00 55.68           C
ATOM  12258  CG  ASP C  81      39.621 -19.416  74.395  1.00 59.76           C
ATOM  12259  OD1 ASP C  81      39.527 -20.630  74.092  1.00 69.94           O
ATOM  12260  OD2 ASP C  81      39.943 -19.041  75.545  1.00 65.85           O
ATOM  12261  C   ASP C  81      38.405 -19.446  71.268  1.00 54.83           C
ATOM  12262  O   ASP C  81      37.948 -19.001  70.212  1.00 52.87           O
ATOM  12264  N   SER C  82      37.866 -20.481  71.911  1.00 53.85           N
ATOM  12265  CA  SER C  82      36.600 -21.077  71.500  1.00 54.26           C
ATOM  12267  CB  SER C  82      36.856 -22.356  70.703  1.00 53.01           C
ATOM  12270  OG  SER C  82      35.686 -22.766  70.020  1.00 48.51           O
ATOM  12272  C   SER C  82      35.741 -21.351  72.737  1.00 54.89           C
ATOM  12273  O   SER C  82      36.020 -20.811  73.801  1.00 53.62           O
ATOM  12275  N   ARG C  83      34.686 -22.155  72.590  1.00 57.39           N
ATOM  12276  CA  ARG C  83      33.909 -22.651  73.738  1.00 58.61           C
ATOM  12278  CB  ARG C  83      32.495 -22.086  73.729  1.00 59.21           C
ATOM  12281  CG  ARG C  83      32.444 -20.636  74.096  1.00 62.88           C
ATOM  12284  CD  ARG C  83      31.035 -20.086  73.991  1.00 65.60           C
ATOM  12287  NE  ARG C  83      30.976 -18.734  74.525  1.00 68.85           N
ATOM  12289  CZ  ARG C  83      31.002 -18.435  75.823  1.00 72.92           C
ATOM  12290  NH1 ARG C  83      31.079 -19.388  76.756  1.00 72.34           N
ATOM  12293  NH2 ARG C  83      30.950 -17.164  76.194  1.00 73.93           N
ATOM  12296  C   ARG C  83      33.839 -24.165  73.722  1.00 57.52           C
ATOM  12297  O   ARG C  83      32.949 -24.745  73.099  1.00 57.14           O
ATOM  12299  N   ARG C  84      34.771 -24.796  74.427  1.00 57.71           N
ATOM  12300  CA  ARG C  84      34.871 -26.264  74.461  1.00 58.06           C
ATOM  12302  CB  ARG C  84      36.059 -26.707  75.336  1.00 56.96           C
ATOM  12305  CG  ARG C  84      37.400 -26.156  74.852  1.00 57.30           C
ATOM  12308  CD  ARG C  84      38.611 -26.749  75.562  1.00 56.98           C
ATOM  12311  NE  ARG C  84      38.487 -26.721  77.021  1.00 57.55           N
ATOM  12313  CZ  ARG C  84      38.165 -27.766  77.787  1.00 53.66           C
ATOM  12314  NH1 ARG C  84      37.933 -28.959  77.249  1.00 53.42           N
ATOM  12317  NH2 ARG C  84      38.073 -27.617  79.108  1.00 51.09           N
ATOM  12320  C   ARG C  84      33.567 -26.929  74.929  1.00 57.61           C
ATOM  12321  O   ARG C  84      33.255 -28.056  74.537  1.00 56.95           O
ATOM  12323  N   SER C  85      32.805 -26.224  75.759  1.00 57.66           N
ATOM  12324  CA  SER C  85      31.504 -26.707  76.187  1.00 58.22           C
ATOM  12326  CB  SER C  85      30.854 -25.700  77.136  1.00 57.05           C
ATOM  12329  OG  SER C  85      31.486 -24.440  77.018  1.00 56.63           O
ATOM  12331  C   SER C  85      30.628 -26.970  74.966  1.00 59.49           C
ATOM  12332  O   SER C  85      30.105 -28.067  74.795  1.00 62.80           O
ATOM  12334  N   LEU C  86      30.530 -25.983  74.086  1.00 59.43           N
ATOM  12335  CA  LEU C  86      29.652 -26.067  72.916  1.00 59.07           C
ATOM  12337  CB  LEU C  86      29.493 -24.677  72.289  1.00 60.30           C
ATOM  12340  CG  LEU C  86      29.013 -23.547  73.201  1.00 61.10           C
ATOM  12342  CD1 LEU C  86      28.992 -22.214  72.435  1.00 62.00           C
ATOM  12346  CD2 LEU C  86      27.652 -23.888  73.780  1.00 59.65           C
ATOM  12350  C   LEU C  86      30.090 -27.052  71.815  1.00 57.92           C
ATOM  12351  O   LEU C  86      29.343 -27.261  70.860  1.00 57.94           O
ATOM  12353  N   TRP C  87      31.276 -27.647  71.941  1.00 56.42           N
ATOM  12354  CA  TRP C  87      31.819 -28.542  70.902  1.00 56.36           C
ATOM  12356  CB  TRP C  87      33.262 -28.955  71.242  1.00 53.05           C
ATOM  12359  CG  TRP C  87      34.266 -27.856  71.027  1.00 49.88           C
ATOM  12360  CD1 TRP C  87      34.011 -26.574  70.624  1.00 49.46           C
ATOM  12362  NE1 TRP C  87      35.173 -25.860  70.554  1.00 50.06           N
ATOM  12364  CE2 TRP C  87      36.214 -26.670  70.923  1.00 51.72           C
ATOM  12365  CD2 TRP C  87      35.677 -27.934  71.232  1.00 49.41           C
ATOM  12366  CE3 TRP C  87      36.545 -28.953  71.637  1.00 48.38           C
ATOM  12368  CZ3 TRP C  87      37.892 -28.682  71.720  1.00 48.78           C
ATOM  12370  CH2 TRP C  87      38.397 -27.415  71.405  1.00 49.18           C
ATOM  12372  CZ2 TRP C  87      37.578 -26.398  71.008  1.00 49.49           C
ATOM  12374  C   TRP C  87      30.964 -29.781  70.666  1.00 56.44           C
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ATOM  12375  O   TRP C  87      30.622 -30.106  69.521  1.00 56.65           O
ATOM  12377  N   ASP C  88      30.627 -30.466  71.752  1.00 57.30           N
ATOM  12378  CA  ASP C  88      29.741 -31.628  71.698  1.00 57.07           C
ATOM  12380  CB  ASP C  88      29.238 -31.981  73.101  1.00 58.07           C
ATOM  12383  CG  ASP C  88      30.359 -32.068  74.125  1.00 61.73           C
ATOM  12384  OD1 ASP C  88      30.513 -33.143  74.743  1.00 63.87           O
ATOM  12385  OD2 ASP C  88      31.087 -31.061  74.306  1.00 65.80           O
ATOM  12386  C   ASP C  88      28.548 -31.338  70.786  1.00 57.36           C
ATOM  12387  O   ASP C  88      28.242 -32.114  69.876  1.00 58.34           O
ATOM  12389  N   GLN C  89      27.914 -30.188  71.011  1.00 55.42           N
ATOM  12390  CA  GLN C  89      26.702 -29.809  70.292  1.00 54.39           C
ATOM  12392  CB  GLN C  89      25.920 -28.778  71.117  1.00 54.91           C
ATOM  12395  CG  GLN C  89      25.355 -29.367  72.410  1.00 58.10           C
ATOM  12398  CD  GLN C  89      24.678 -30.737  72.191  1.00 66.71           C
ATOM  12399  OE1 GLN C  89      23.583 -30.817  71.625  1.00 72.60           O
ATOM  12400  NE2 GLN C  89      25.341 -31.815  72.625  1.00 62.85           N
ATOM  12403  C   GLN C  89      26.902 -29.324  68.852  1.00 52.31           C
ATOM  12404  O   GLN C  89      25.933 -28.969  68.195  1.00 49.09           O
ATOM  12406  N   GLY C  90      28.140 -29.330  68.360  1.00 52.74           N
ATOM  12407  CA  GLY C  90      28.442 -28.926  66.981  1.00 52.64           C
ATOM  12410  C   GLY C  90      28.722 -27.442  66.755  1.00 52.34           C
ATOM  12411  O   GLY C  90      28.834 -27.003  65.613  1.00 53.04           O
ATOM  12413  N   ASN C  91      28.839 -26.669  67.831  1.00 51.54           N
ATOM  12414  CA  ASN C  91      29.204 -25.257  67.741  1.00 50.86           C
ATOM  12416  CB  ASN C  91      28.387 -24.426  68.738  1.00 51.53           C
ATOM  12419  CG  ASN C  91      27.044 -24.010  68.180  1.00 52.68           C
ATOM  12420  OD1 ASN C  91      26.975 -23.418  67.106  1.00 53.48           O
ATOM  12421  ND2 ASN C  91      25.967 -24.335  68.891  1.00 58.97           N
ATOM  12424  C   ASN C  91      30.690 -25.062  67.997  1.00 50.03           C
ATOM  12425  O   ASN C  91      31.192 -25.424  69.057  1.00 50.42           O
ATOM  12427  N   PHE C  92      31.383 -24.475  67.023  1.00 50.70           N
ATOM  12428  CA  PHE C  92      32.838 -24.291  67.079  1.00 50.26           C
ATOM  12430  CB  PHE C  92      33.505 -25.135  65.992  1.00 51.29           C
ATOM  12433  CG  PHE C  92      32.976 -26.540  65.909  1.00 53.12           C
ATOM  12434  CD1 PHE C  92      33.031 -27.384  67.015  1.00 52.44           C
ATOM  12436  CE1 PHE C  92      32.532 -28.680  66.951  1.00 54.20           C
ATOM  12438  CZ  PHE C  92      31.978 -29.147  65.771  1.00 56.26           C
ATOM  12440  CE2 PHE C  92      31.915 -28.311  64.658  1.00 55.76           C
ATOM  12442  CD2 PHE C  92      32.411 -27.016  64.732  1.00 54.62           C
ATOM  12444  C   PHE C  92      33.212 -22.821  66.899  1.00 49.64           C
ATOM  12445  O   PHE C  92      33.858 -22.468  65.926  1.00 47.94           O
ATOM  12447  N   PRO C  93      32.790 -21.952  67.836  1.00 49.91           N
ATOM  12448  CA  PRO C  93      33.041 -20.515  67.700  1.00 48.95           C
ATOM  12450  CB  PRO C  93      32.271 -19.916  68.880  1.00 48.64           C
ATOM  12453  CG  PRO C  93      32.208 -21.002  69.874  1.00 50.23           C
ATOM  12456  CD  PRO C  93      32.045 -22.255  69.071  1.00 49.54           C
ATOM  12459  C   PRO C  93      34.509 -20.104  67.807  1.00 48.69           C
ATOM  12460  O   PRO C  93      35.252 -20.647  68.625  1.00 47.80           O
ATOM  12461  N   LEU C  94      34.905 -19.149  66.970  1.00 47.68           N
ATOM  12462  CA  LEU C  94      36.141 -18.413  67.153  1.00 47.35           C
ATOM  12464  CB  LEU C  94      36.734 -17.993  65.811  1.00 47.54           C
ATOM  12467  CG  LEU C  94      37.947 -17.060  65.785  1.00 44.95           C
ATOM  12469  CD1 LEU C  94      39.010 -17.545  66.720  1.00 46.78           C
ATOM  12473  CD2 LEU C  94      38.501 -16.986  64.380  1.00 45.52           C
ATOM  12477  C   LEU C  94      35.758 -17.193  67.943  1.00 47.76           C
ATOM  12478  O   LEU C  94      34.848 -16.467  67.544  1.00 49.08           O
ATOM  12480  N   ILE C  95      36.424 -16.990  69.076  1.00 48.89           N
ATOM  12481  CA  ILE C  95      36.196 -15.830  69.931  1.00 49.35           C
ATOM  12483  CB  ILE C  95      35.779 -16.251  71.352  1.00 49.40           C
ATOM  12485  CG1 ILE C  95      34.377 -16.871  71.334  1.00 49.70           C
ATOM  12488  CD1 ILE C  95      34.099 -17.771  72.528  1.00 50.42           C
ATOM  12492  CG2 ILE C  95      35.830 -15.051  72.301  1.00 48.17           C
ATOM  12496  C   ILE C  95      37.481 -15.047  70.033  1.00 49.05           C
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ATOM  12497  O   ILE C  95      38.464 -15.539  70.575  1.00 52.28           O
ATOM  12499  N   ILE C  96      37.464 -13.820  69.542  1.00 49.49           N
ATOM  12500  CA  ILE C  96      38.635 -12.960  69.587  1.00 51.44           C
ATOM  12502  CB  ILE C  96      38.871 -12.309  68.219  1.00 51.82           C
ATOM  12504  CG1 ILE C  96      39.147 -13.405  67.175  1.00 53.58           C
ATOM  12507  CD1 ILE C  96      38.880 -12.987  65.737  1.00 50.22           C
ATOM  12511  CG2 ILE C  96      40.026 -11.307  68.285  1.00 49.59           C
ATOM  12515  C   ILE C  96      38.453 -11.888  70.662  1.00 52.26           C
ATOM  12516  O   ILE C  96      37.537 -11.072  70.574  1.00 48.81           O
ATOM  12518  N   LYS C  97      39.346 -11.899  71.655  1.00 55.67           N
ATOM  12519  CA  LYS C  97      39.336 -10.941  72.777  1.00 58.16           C
ATOM  12521  CB  LYS C  97      40.023 -11.537  74.022  1.00 59.75           C
ATOM  12524  CG  LYS C  97      39.806 -13.056  74.261  1.00 66.39           C
ATOM  12527  CD  LYS C  97      41.097 -13.770  74.749  1.00 66.00           C
ATOM  12530  CE  LYS C  97      41.082 -15.278  74.423  1.00 66.98           C
ATOM  12533  NZ  LYS C  97      42.370 -15.967  74.749  1.00 63.46           N
ATOM  12537  C   LYS C  97      40.120  -9.694  72.371  1.00 57.90           C
ATOM  12538  O   LYS C  97      41.092  -9.805  71.616  1.00 58.73           O
ATOM  12540  N   ASN C  98      39.725  -8.524  72.868  1.00 55.01           N
ATOM  12541  CA  ASN C  98      40.537  -7.309  72.695  1.00 56.09           C
ATOM  12543  CB  ASN C  98      41.855  -7.411  73.477  1.00 56.23           C
ATOM  12546  CG  ASN C  98      41.650  -7.488  74.980  1.00 64.42           C
ATOM  12547  OD1 ASN C  98      42.620  -7.553  75.737  1.00 73.67           O
ATOM  12548  ND2 ASN C  98      40.391  -7.478  75.425  1.00 76.01           N
ATOM  12551  C   ASN C  98      40.854  -6.997  71.238  1.00 54.18           C
ATOM  12552  O   ASN C  98      41.997  -7.118  70.798  1.00 53.05           O
ATOM  12554  N   LEU C  99      39.840  -6.564  70.506  1.00 52.80           N
ATOM  12555  CA  LEU C  99      39.943  -6.439  69.065  1.00 53.17           C
ATOM  12557  CB  LEU C  99      38.549  -6.345  68.442  1.00 52.14           C
ATOM  12560  CG  LEU C  99      37.763  -7.658  68.493  1.00 49.63           C
ATOM  12562  CD1 LEU C  99      36.258  -7.425  68.480  1.00 50.11           C
ATOM  12566  CD2 LEU C  99      38.185  -8.592  67.365  1.00 47.55           C
ATOM  12570  C   LEU C  99      40.788  -5.255  68.623  1.00 53.85           C
ATOM  12571  O   LEU C  99      40.670  -4.155  69.170  1.00 54.38           O
ATOM  12573  N   LYS C 100      41.641  -5.511  67.630  1.00 54.72           N
ATOM  12574  CA  LYS C 100      42.381  -4.478  66.906  1.00 55.03           C
ATOM  12576  CB  LYS C 100      43.879  -4.809  66.862  1.00 53.16           C
ATOM  12579  CG  LYS C 100      44.446  -5.120  68.235  1.00 57.21           C
ATOM  12582  CD  LYS C 100      45.951  -5.258  68.269  1.00 56.55           C
ATOM  12585  CE  LYS C 100      46.397  -5.802  69.623  1.00 54.62           C
ATOM  12588  NZ  LYS C 100      47.884  -5.823  69.749  1.00 61.43           N
ATOM  12592  C   LYS C 100      41.815  -4.372  65.491  1.00 56.37           C
ATOM  12593  O   LYS C 100      41.201  -5.322  64.979  1.00 56.17           O
ATOM  12595  N   ILE C 101      42.032  -3.215  64.866  1.00 56.50           N
ATOM  12596  CA  ILE C 101      41.509  -2.943  63.531  1.00 55.45           C
ATOM  12598  CB  ILE C 101      41.833  -1.489  63.057  1.00 55.19           C
ATOM  12600  CG1 ILE C 101      40.871  -0.465  63.668  1.00 54.74           C
ATOM  12603  CD1 ILE C 101      40.566  -0.635  65.131  1.00 54.39           C
ATOM  12607  CG2 ILE C 101      41.694  -1.359  61.538  1.00 56.87           C
ATOM  12611  C   ILE C 101      42.058  -3.980  62.553  1.00 54.95           C
ATOM  12612  O   ILE C 101      41.334  -4.454  61.683  1.00 54.33           O
ATOM  12614  N   GLU C 102      43.324  -4.356  62.725  1.00 55.84           N
ATOM  12615  CA  GLU C 102      43.979  -5.315  61.814  1.00 56.73           C
ATOM  12617  CB  GLU C 102      45.506  -5.336  61.987  1.00 58.00           C
ATOM  12620  CG  GLU C 102      45.998  -5.602  63.400  1.00 64.70           C
ATOM  12623  CD  GLU C 102      46.065  -4.338  64.258  1.00 73.67           C
ATOM  12624  OE1 GLU C 102      45.506  -3.283  63.850  1.00 74.00           O
ATOM  12625  OE2 GLU C 102      46.674  -4.410  65.351  1.00 78.25           O
ATOM  12626  C   GLU C 102      43.439  -6.738  61.897  1.00 55.16           C
ATOM  12627  O   GLU C 102      43.764  -7.553  61.048  1.00 56.66           O
ATOM  12629  N   ASP C 103      42.625  -7.039  62.902  1.00 53.48           N
ATOM  12630  CA  ASP C 103      41.923  -8.320  62.942  1.00 52.84           C
ATOM  12632  CB  ASP C 103      41.302  -8.555  64.316  1.00 52.09           C
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ATOM  12635  CG  ASP C 103      42.343  -8.645  65.420  1.00 52.06           C
ATOM  12636  OD1 ASP C 103      43.532  -8.926  65.128  1.00 45.27           O
ATOM  12637  OD2 ASP C 103      41.965  -8.426  66.586  1.00 47.52           O
ATOM  12638  C   ASP C 103      40.838  -8.384  61.872  1.00 51.90           C
ATOM  12639  O   ASP C 103      40.330  -9.462  61.556  1.00 47.95           O
ATOM  12641  N   SER C 104      40.472  -7.229  61.323  1.00 52.59           N
ATOM  12642  CA  SER C 104      39.541  -7.201  60.211  1.00 53.58           C
ATOM  12644  CB  SER C 104      39.267  -5.774  59.765  1.00 52.91           C
ATOM  12647  OG  SER C 104      38.857  -4.998  60.868  1.00 55.45           O
ATOM  12649  C   SER C 104      40.116  -8.013  59.052  1.00 54.73           C
ATOM  12650  O   SER C 104      41.226  -7.739  58.576  1.00 54.05           O
ATOM  12652  N   ASP C 105      39.334  -9.006  58.626  1.00 54.20           N
ATOM  12653  CA  ASP C 105      39.711  -9.976  57.613  1.00 51.83           C
ATOM  12655  CB  ASP C 105      40.834 -10.857  58.168  1.00 52.72           C
ATOM  12658  CG  ASP C 105      41.569 -11.648  57.094  1.00 54.56           C
ATOM  12659  OD1 ASP C 105      41.063 -11.799  55.963  1.00 51.16           O
ATOM  12660  OD2 ASP C 105      42.675 -12.135  57.402  1.00 57.46           O
ATOM  12661  C   ASP C 105      38.472 -10.832  57.341  1.00 50.25           C
ATOM  12662  O   ASP C 105      37.481 -10.733  58.053  1.00 47.82           O
ATOM  12664  N   THR C 106      38.508 -11.663  56.311  1.00 51.72           N
ATOM  12665  CA  THR C 106      37.584 -12.791  56.258  1.00 50.98           C
ATOM  12667  CB  THR C 106      37.240 -13.207  54.842  1.00 50.93           C
ATOM  12669  OG1 THR C 106      36.247 -12.319  54.329  1.00 54.88           O
ATOM  12671  CG2 THR C 106      36.672 -14.618  54.820  1.00 54.12           C
ATOM  12675  C   THR C 106      38.215 -13.964  56.994  1.00 49.63           C
ATOM  12676  O   THR C 106      39.396 -14.260  56.810  1.00 48.56           O
ATOM  12678  N   TYR C 107      37.403 -14.614  57.821  1.00 47.37           N
ATOM  12679  CA  TYR C 107      37.806 -15.780  58.583  1.00 48.49           C
ATOM  12681  CB  TYR C 107      37.531 -15.521  60.061  1.00 46.75           C
ATOM  12684  CG  TYR C 107      38.492 -14.538  60.692  1.00 45.97           C
ATOM  12685  CD1 TYR C 107      38.156 -13.201  60.838  1.00 46.31           C
ATOM  12687  CE1 TYR C 107      39.030 -12.308  61.413  1.00 43.07           C
ATOM  12689  CZ  TYR C 107      40.260 -12.744  61.842  1.00 38.51           C
ATOM  12690  OH  TYR C 107      41.138 -11.866  62.410  1.00 39.85           O
ATOM  12692  CE2 TYR C 107      40.620 -14.062  61.708  1.00 42.91           C
ATOM  12694  CD2 TYR C 107      39.739 -14.950  61.141  1.00 44.33           C
ATOM  12696  C   TYR C 107      37.040 -17.023  58.098  1.00 49.31           C
ATOM  12697  O   TYR C 107      35.852 -16.943  57.757  1.00 50.98           O
ATOM  12699  N   ILE C 108      37.719 -18.165  58.069  1.00 48.86           N
ATOM  12700  CA  ILE C 108      37.170 -19.380  57.450  1.00 50.48           C
ATOM  12702  CB  ILE C 108      37.996 -19.833  56.211  1.00 49.66           C
ATOM  12704  CG1 ILE C 108      38.380 -18.639  55.331  1.00 49.00           C
ATOM  12707  CD1 ILE C 108      39.364 -18.987  54.240  1.00 49.70           C
ATOM  12711  CG2 ILE C 108      37.205 -20.837  55.385  1.00 48.20           C
ATOM  12715  C   ILE C 108      37.092 -20.553  58.427  1.00 51.00           C
ATOM  12716  O   ILE C 108      38.063 -20.881  59.094  1.00 50.60           O
ATOM  12718  N   CYS C 109      35.928 -21.189  58.484  1.00 53.24           N
ATOM  12719  CA  CYS C 109      35.703 -22.307  59.364  1.00 54.78           C
ATOM  12721  CB  CYS C 109      34.418 -22.111  60.143  1.00 53.67           C
ATOM  12724  SG  CYS C 109      34.102 -23.412  61.332  1.00 56.28           S
ATOM  12726  C   CYS C 109      35.624 -23.553  58.507  1.00 57.51           C
ATOM  12727  O   CYS C 109      34.681 -23.734  57.736  1.00 57.78           O
ATOM  12729  N   GLU C 110      36.645 -24.392  58.649  1.00 61.09           N
ATOM  12730  CA  GLU C 110      36.827 -25.600  57.864  1.00 63.08           C
ATOM  12732  CB  GLU C 110      38.312 -25.678  57.432  1.00 64.52           C
ATOM  12735  CG  GLU C 110      38.649 -26.539  56.182  1.00 65.80           C
ATOM  12738  CD  GLU C 110      40.165 -26.558  55.829  1.00 68.32           C
ATOM  12739  OE1 GLU C 110      40.902 -25.606  56.192  1.00 70.02           O
ATOM  12740  OE2 GLU C 110      40.616 -27.535  55.176  1.00 72.71           O
ATOM  12741  C   GLU C 110      36.435 -26.799  58.746  1.00 64.18           C
ATOM  12742  O   GLU C 110      36.989 -26.967  59.835  1.00 64.29           O
ATOM  12744  N   VAL C 111      35.481 -27.616  58.294  1.00 65.46           N
ATOM  12745  CA  VAL C 111      35.103 -28.842  59.029  1.00 67.28           C
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ATOM  12747  CB  VAL C 111      33.592 -28.943  59.253  1.00 67.09           C
ATOM  12749  CG1 VAL C 111      32.827 -28.804  57.929  1.00 71.87           C
ATOM  12753  CG2 VAL C 111      33.150 -27.890  60.269  1.00 62.06           C
ATOM  12757  C   VAL C 111      35.687 -30.118  58.385  1.00 70.68           C
ATOM  12758  O   VAL C 111      36.897 -30.356  58.527  1.00 74.31           O
ATOM  12760  N   GLU C 112      34.875 -30.953  57.723  1.00 70.85           N
ATOM  12761  CA  GLU C 112      35.412 -32.098  56.967  1.00 70.44           C
ATOM  12763  CB  GLU C 112      34.302 -33.088  56.544  1.00 72.33           C
ATOM  12766  CG  GLU C 112      33.117 -32.488  55.740  1.00 76.96           C
ATOM  12769  CD  GLU C 112      31.783 -32.493  56.496  1.00 83.20           C
ATOM  12770  OE1 GLU C 112      31.267 -33.595  56.799  1.00 82.70           O
ATOM  12771  OE2 GLU C 112      31.239 -31.394  56.764  1.00 83.34           O
ATOM  12772  C   GLU C 112      36.208 -31.542  55.776  1.00 69.64           C
ATOM  12773  O   GLU C 112      37.237 -30.902  55.974  1.00 68.45           O
ATOM  12775  N   ASP C 113      35.750 -31.761  54.550  1.00 69.24           N
ATOM  12776  CA  ASP C 113      36.288 -31.019  53.421  1.00 68.90           C
ATOM  12778  CB  ASP C 113      36.375 -31.920  52.173  1.00 70.79           C
ATOM  12781  CG  ASP C 113      35.010 -32.440  51.699  1.00 75.31           C
ATOM  12782  OD1 ASP C 113      34.967 -33.039  50.597  1.00 74.76           O
ATOM  12783  OD2 ASP C 113      33.993 -32.263  52.416  1.00 77.85           O
ATOM  12784  C   ASP C 113      35.488 -29.731  53.144  1.00 67.66           C
ATOM  12785  O   ASP C 113      35.714 -29.080  52.130  1.00 68.60           O
ATOM  12787  N   GLN C 114      34.581 -29.351  54.050  1.00 66.10           N
ATOM  12788  CA  GLN C 114      33.674 -28.212  53.822  1.00 64.38           C
ATOM  12790  CB  GLN C 114      32.254 -28.566  54.275  1.00 64.59           C
ATOM  12793  CG  GLN C 114      31.610 -29.698  53.477  1.00 64.96           C
ATOM  12796  CD  GLN C 114      31.648 -29.456  51.981  1.00 64.44           C
ATOM  12797  OE1 GLN C 114      32.238 -30.237  51.230  1.00 69.81           O
ATOM  12798  NE2 GLN C 114      31.041 -28.357  51.542  1.00 58.73           N
ATOM  12801  C   GLN C 114      34.140 -26.926  54.508  1.00 62.41           C
ATOM  12802  O   GLN C 114      34.875 -26.978  55.491  1.00 62.74           O
ATOM  12804  N   LYS C 115      33.707 -25.781  53.976  1.00 59.25           N
ATOM  12805  CA  LYS C 115      34.153 -24.466  54.454  1.00 58.31           C
ATOM  12807  CB  LYS C 115      35.215 -23.882  53.522  1.00 58.36           C
ATOM  12810  CG  LYS C 115      36.517 -24.629  53.525  1.00 61.04           C
ATOM  12813  CD  LYS C 115      37.409 -24.182  52.387  1.00 61.58           C
ATOM  12816  CE  LYS C 115      38.614 -25.107  52.219  1.00 62.86           C
ATOM  12819  NZ  LYS C 115      39.216 -24.941  50.868  1.00 62.77           N
ATOM  12823  C   LYS C 115      33.012 -23.475  54.513  1.00 55.16           C
ATOM  12824  O   LYS C 115      32.016 -23.631  53.817  1.00 54.49           O
ATOM  12826  N   GLU C 116      33.202 -22.434  55.315  1.00 53.47           N
ATOM  12827  CA  GLU C 116      32.199 -21.395  55.545  1.00 53.55           C
ATOM  12829  CB  GLU C 116      31.223 -21.864  56.623  1.00 51.70           C
ATOM  12832  CG  GLU C 116      30.510 -20.767  57.366  1.00 53.11           C
ATOM  12835  CD  GLU C 116      29.298 -21.269  58.117  1.00 54.70           C
ATOM  12836  OE1 GLU C 116      29.472 -21.756  59.251  1.00 50.98           O
ATOM  12837  OE2 GLU C 116      28.169 -21.160  57.575  1.00 61.27           O
ATOM  12838  C   GLU C 116      32.906 -20.100  55.966  1.00 52.91           C
ATOM  12839  O   GLU C 116      33.875 -20.146  56.713  1.00 50.94           O
ATOM  12841  N   GLU C 117      32.417 -18.955  55.494  1.00 53.45           N
ATOM  12842  CA  GLU C 117      33.135 -17.684  55.652  1.00 54.09           C
ATOM  12844  CB  GLU C 117      33.458 -17.091  54.277  1.00 53.32           C
ATOM  12847  CG  GLU C 117      34.366 -17.962  53.438  1.00 54.45           C
ATOM  12850  CD  GLU C 117      34.934 -17.245  52.227  1.00 56.38           C
ATOM  12851  OE1 GLU C 117      34.742 -16.012  52.092  1.00 60.16           O
ATOM  12852  OE2 GLU C 117      35.586 -17.927  51.407  1.00 57.41           O
ATOM  12853  C   GLU C 117      32.375 -16.635  56.453  1.00 53.34           C
ATOM  12854  O   GLU C 117      31.165 -16.477  56.280  1.00 53.72           O
ATOM  12856  N   VAL C 118      33.098 -15.910  57.311  1.00 52.42           N
ATOM  12857  CA  VAL C 118      32.570 -14.709  57.956  1.00 53.21           C
ATOM  12859  CB  VAL C 118      32.438 -14.861  59.483  1.00 54.38           C
ATOM  12861  CG1 VAL C 118      31.290 -13.987  59.994  1.00 55.42           C
ATOM  12865  CG2 VAL C 118      32.209 -16.302  59.877  1.00 57.17           C
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ATOM  12869  C   VAL C 118      33.525 -13.564  57.717  1.00 52.25           C
ATOM  12870  O   VAL C 118      34.717 -13.733  57.916  1.00 55.22           O
ATOM  12872  N   GLN C 119      33.013 -12.415  57.287  1.00 51.56           N
ATOM  12873  CA  GLN C 119      33.826 -11.208  57.171  1.00 52.32           C
ATOM  12875  CB  GLN C 119      33.404 -10.353  55.980  1.00 52.94           C
ATOM  12878  CG  GLN C 119      34.306  -9.138  55.680  1.00 54.41           C
ATOM  12881  CD  GLN C 119      33.673  -8.152  54.668  1.00 58.73           C
ATOM  12882  OE1 GLN C 119      33.008  -8.557  53.706  1.00 67.09           O
ATOM  12883  NE2 GLN C 119      33.876  -6.856  54.899  1.00 65.24           N
ATOM  12886  C   GLN C 119      33.644 -10.422  58.442  1.00 51.96           C
ATOM  12887  O   GLN C 119      32.522 -10.058  58.792  1.00 50.71           O
ATOM  12889  N   LEU C 120      34.758 -10.192  59.136  1.00 52.15           N
ATOM  12890  CA  LEU C 120      34.803  -9.365  60.333  1.00 50.35           C
ATOM  12892  CB  LEU C 120      35.768  -9.954  61.350  1.00 47.65           C
ATOM  12895  CG  LEU C 120      35.959  -9.089  62.597  1.00 48.62           C
ATOM  12897  CD1 LEU C 120      34.628  -8.828  63.304  1.00 41.97           C
ATOM  12901  CD2 LEU C 120      36.966  -9.735  63.541  1.00 49.72           C
ATOM  12905  C   LEU C 120      35.282  -7.967  59.973  1.00 51.47           C
ATOM  12906  O   LEU C 120      36.336  -7.804  59.349  1.00 52.89           O
ATOM  12908  N   LEU C 121      34.517  -6.960  60.369  1.00 50.82           N
ATOM  12909  CA  LEU C 121      34.991  -5.593  60.292  1.00 52.00           C
ATOM  12911  CB  LEU C 121      34.101  -4.758  59.361  1.00 53.51           C
ATOM  12914  CG  LEU C 121      33.904  -5.313  57.943  1.00 51.77           C
ATOM  12916  CD1 LEU C 121      33.007  -4.396  57.146  1.00 50.39           C
ATOM  12920  CD2 LEU C 121      35.229  -5.512  57.232  1.00 49.89           C
ATOM  12924  C   LEU C 121      35.004  -5.012  61.696  1.00 52.38           C
ATOM  12925  O   LEU C 121      33.953  -4.858  62.310  1.00 53.44           O
ATOM  12927  N   VAL C 122      36.198  -4.711  62.207  1.00 53.37           N
ATOM  12928  CA  VAL C 122      36.356  -4.034  63.500  1.00 53.90           C
ATOM  12930  CB  VAL C 122      37.611  -4.500  64.228  1.00 53.89           C
ATOM  12932  CG1 VAL C 122      37.757  -3.765  65.569  1.00 52.63           C
ATOM  12936  CG2 VAL C 122      37.580  -6.012  64.410  1.00 56.49           C
ATOM  12940  C   VAL C 122      36.493  -2.532  63.293  1.00 54.43           C
ATOM  12941  O   VAL C 122      37.331  -2.101  62.500  1.00 55.12           O
ATOM  12943  N   PHE C 123      35.686  -1.751  64.013  1.00 54.82           N
ATOM  12944  CA  PHE C 123      35.684  -0.292  63.889  1.00 56.06           C
ATOM  12946  CB  PHE C 123      34.286   0.234  63.544  1.00 56.94           C
ATOM  12949  CG  PHE C 123      33.877  -0.018  62.126  1.00 53.01           C
ATOM  12950  CD1 PHE C 123      34.573   0.568  61.078  1.00 55.73           C
ATOM  12952  CE1 PHE C 123      34.209   0.331  59.758  1.00 58.17           C
ATOM  12954  CZ  PHE C 123      33.138  -0.490  59.482  1.00 56.84           C
ATOM  12956  CE2 PHE C 123      32.434  -1.073  60.525  1.00 58.38           C
ATOM  12958  CD2 PHE C 123      32.804  -0.833  61.837  1.00 51.88           C
ATOM  12960  C   PHE C 123      36.135   0.355  65.171  1.00 57.02           C
ATOM  12961  O   PHE C 123      35.908  -0.172  66.250  1.00 57.02           O
ATOM  12963  N   GLY C 124      36.778   1.507  65.040  1.00 59.18           N
ATOM  12964  CA  GLY C 124      37.255   2.262  66.188  1.00 60.08           C
ATOM  12967  C   GLY C 124      36.881   3.722  66.047  1.00 61.27           C
ATOM  12968  O   GLY C 124      36.670   4.219  64.934  1.00 57.87           O
ATOM  12970  N   LEU C 125      36.801   4.403  67.186  1.00 63.32           N
ATOM  12971  CA  LEU C 125      36.464   5.818  67.233  1.00 64.26           C
ATOM  12973  CB  LEU C 125      35.060   5.986  67.810  1.00 65.00           C
ATOM  12976  CG  LEU C 125      34.523   7.414  67.873  1.00 65.30           C
ATOM  12978  CD1 LEU C 125      34.674   8.084  66.512  1.00 65.34           C
ATOM  12982  CD2 LEU C 125      33.070   7.418  68.341  1.00 64.50           C
ATOM  12986  C   LEU C 125      37.485   6.545  68.103  1.00 64.66           C
ATOM  12987  O   LEU C 125      37.717   6.143  69.230  1.00 66.76           O
ATOM  12989  N   THR C 126      38.077   7.615  67.582  1.00 64.70           N
ATOM  12990  CA  THR C 126      39.171   8.308  68.261  1.00 66.19           C
ATOM  12992  CB  THR C 126      40.550   7.724  67.837  1.00 65.47           C
ATOM  12994  OG1 THR C 126      41.511   8.780  67.721  1.00 67.12           O
ATOM  12996  CG2 THR C 126      40.479   7.036  66.502  1.00 66.34           C
ATOM  13000  C   THR C 126      39.193   9.837  68.035  1.00 67.79           C
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ATOM  13001  O   THR C 126      39.015  10.317  66.907  1.00 68.05           O
ATOM  13003  N   ALA C 127      39.432  10.584  69.117  1.00 68.20           N
ATOM  13004  CA  ALA C 127      39.708  12.021  69.040  1.00 68.54           C
ATOM  13006  CB  ALA C 127      39.517  12.678  70.404  1.00 66.69           C
ATOM  13010  C   ALA C 127      41.132  12.268  68.537  1.00 69.70           C
ATOM  13011  O   ALA C 127      42.056  11.533  68.882  1.00 69.66           O
ATOM  13013  N   ASN C 128      41.307  13.310  67.726  1.00 71.66           N
ATOM  13014  CA  ASN C 128      42.642  13.728  67.280  1.00 72.32           C
ATOM  13016  CB  ASN C 128      42.549  14.719  66.112  1.00 73.36           C
ATOM  13019  CG  ASN C 128      41.821  14.129  64.898  1.00 75.66           C
ATOM  13020  OD1 ASN C 128      40.979  13.230  65.033  1.00 74.10           O
ATOM  13021  ND2 ASN C 128      42.140  14.637  63.711  1.00 70.84           N
ATOM  13024  C   ASN C 128      43.422  14.337  68.441  1.00 72.77           C
ATOM  13025  O   ASN C 128      44.572  13.977  68.672  1.00 73.63           O
ATOM  13027  N   SER C 129      42.778  15.243  69.176  1.00 73.54           N
ATOM  13028  CA  SER C 129      43.343  15.808  70.408  1.00 72.84           C
ATOM  13030  CB  SER C 129      42.825  17.236  70.626  1.00 74.19           C
ATOM  13033  OG  SER C 129      42.779  17.967  69.413  1.00 76.55           O
ATOM  13035  C   SER C 129      42.975  14.936  71.614  1.00 71.58           C
ATOM  13036  O   SER C 129      42.510  13.810  71.463  1.00 72.40           O
ATOM  13038  N   ASP C 130      43.198  15.468  72.812  1.00 71.16           N
ATOM  13039  CA  ASP C 130      42.730  14.850  74.053  1.00 69.49           C
ATOM  13041  CB  ASP C 130      43.382  15.546  75.265  1.00 70.05           C
ATOM  13044  CG  ASP C 130      43.197  14.783  76.576  1.00 71.63           C
ATOM  13045  OD1 ASP C 130      42.504  13.740  76.599  1.00 73.08           O
ATOM  13046  OD2 ASP C 130      43.753  15.242  77.599  1.00 72.89           O
ATOM  13047  C   ASP C 130      41.198  14.954  74.116  1.00 68.54           C
ATOM  13048  O   ASP C 130      40.596  15.819  73.470  1.00 69.62           O
ATOM  13050  N   THR C 131      40.582  14.052  74.876  1.00 65.67           N
ATOM  13051  CA  THR C 131      39.136  14.034  75.078  1.00 61.78           C
ATOM  13053  CB  THR C 131      38.667  12.615  75.546  1.00 60.74           C
ATOM  13055  OG1 THR C 131      37.349  12.355  75.069  1.00 61.20           O
ATOM  13057  CG2 THR C 131      38.714  12.438  77.073  1.00 58.94           C
ATOM  13061  C   THR C 131      38.749  15.147  76.068  1.00 59.98           C
ATOM  13062  O   THR C 131      37.696  15.770  75.928  1.00 58.13           O
ATOM  13064  N   HIS C 132      39.622  15.395  77.050  1.00 58.56           N
ATOM  13065  CA  HIS C 132      39.476  16.513  77.990  1.00 57.41           C
ATOM  13067  CB  HIS C 132      40.223  16.234  79.302  1.00 59.02           C
ATOM  13070  CG  HIS C 132      39.864  14.925  79.943  1.00 61.69           C
ATOM  13071  ND1 HIS C 132      40.534  13.750  79.668  1.00 65.34           N
ATOM  13073  CE1 HIS C 132      40.009  12.767  80.375  1.00 60.86           C
ATOM  13075  NE2 HIS C 132      39.021  13.261  81.099  1.00 62.30           N
ATOM  13077  CD2 HIS C 132      38.915  14.609  80.855  1.00 59.02           C
ATOM  13079  C   HIS C 132      40.025  17.779  77.333  1.00 55.34           C
ATOM  13080  O   HIS C 132      41.202  17.846  77.008  1.00 57.95           O
ATOM  13082  N   LEU C 133      39.179  18.787  77.162  1.00 53.02           N
ATOM  13083  CA  LEU C 133      39.434  19.851  76.197  1.00 50.98           C
ATOM  13085  CB  LEU C 133      38.708  19.471  74.921  1.00 50.94           C
ATOM  13088  CG  LEU C 133      39.339  19.853  73.596  1.00 55.43           C
ATOM  13090  CD1 LEU C 133      40.569  18.968  73.285  1.00 57.77           C
ATOM  13094  CD2 LEU C 133      38.279  19.745  72.495  1.00 53.54           C
ATOM  13098  C   LEU C 133      38.912  21.197  76.688  1.00 48.12           C
ATOM  13099  O   LEU C 133      37.886  21.241  77.346  1.00 49.92           O
ATOM  13101  N   LEU C 134      39.598  22.290  76.368  1.00 45.02           N
ATOM  13102  CA  LEU C 134      39.136  23.634  76.772  1.00 44.51           C
ATOM  13104  CB  LEU C 134      40.233  24.694  76.620  1.00 42.50           C
ATOM  13107  CG  LEU C 134      41.098  24.970  77.850  1.00 41.84           C
ATOM  13109  CD1 LEU C 134      41.712  23.689  78.383  1.00 41.05           C
ATOM  13113  CD2 LEU C 134      42.168  26.005  77.527  1.00 43.34           C
ATOM  13117  C   LEU C 134      37.927  24.090  75.972  1.00 44.51           C
ATOM  13118  O   LEU C 134      37.749  23.701  74.824  1.00 43.86           O
ATOM  13120  N   GLN C 135      37.113  24.947  76.578  1.00 46.00           N
ATOM  13121  CA  GLN C 135      35.953  25.515  75.898  1.00 45.14           C
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ATOM  13123  CB  GLN C 135      35.086  26.294  76.880  1.00 44.72           C
ATOM  13126  CG  GLN C 135      33.868  26.907  76.226  1.00 46.28           C
ATOM  13129  CD  GLN C 135      32.920  27.494  77.227  1.00 45.70           C
ATOM  13130  OE1 GLN C 135      31.768  27.060  77.324  1.00 53.66           O
ATOM  13131  NE2 GLN C 135      33.392  28.481  77.988  1.00 28.37           N
ATOM  13134  C   GLN C 135      36.350  26.428  74.732  1.00 43.60           C
ATOM  13135  O   GLN C 135      37.233  27.287  74.863  1.00 42.29           O
ATOM  13137  N   GLY C 136      35.672  26.242  73.605  1.00 42.19           N
ATOM  13138  CA  GLY C 136      35.973  26.982  72.387  1.00 44.99           C
ATOM  13141  C   GLY C 136      36.978  26.289  71.478  1.00 45.49           C
ATOM  13142  O   GLY C 136      37.163  26.714  70.340  1.00 44.08           O
ATOM  13144  N   GLN C 137      37.639  25.241  71.979  1.00 46.91           N
ATOM  13145  CA  GLN C 137      38.539  24.421  71.160  1.00 47.59           C
ATOM  13147  CB  GLN C 137      39.455  23.527  72.014  1.00 46.17           C
ATOM  13150  CG  GLN C 137      40.366  24.241  72.991  1.00 42.61           C
ATOM  13153  CD  GLN C 137      41.387  25.092  72.305  1.00 47.64           C
ATOM  13154  OE1 GLN C 137      41.485  26.294  72.556  1.00 57.64           O
ATOM  13155  NE2 GLN C 137      42.150  24.486  71.416  1.00 51.71           N
ATOM  13158  C   GLN C 137      37.681  23.531  70.284  1.00 48.99           C
ATOM  13159  O   GLN C 137      36.523  23.276  70.588  1.00 50.44           O
ATOM  13161  N   SER C 138      38.254  23.054  69.193  1.00 52.18           N
ATOM  13162  CA  SER C 138      37.536  22.187  68.282  1.00 53.77           C
ATOM  13164  CB  SER C 138      37.931  22.500  66.848  1.00 54.12           C
ATOM  13167  OG  SER C 138      37.621  23.846  66.541  1.00 60.63           O
ATOM  13169  C   SER C 138      37.853  20.742  68.615  1.00 55.38           C
ATOM  13170  O   SER C 138      38.875  20.436  69.223  1.00 55.88           O
ATOM  13172  N   LEU C 139      36.960  19.858  68.207  1.00 57.14           N
ATOM  13173  CA  LEU C 139      37.120  18.437  68.415  1.00 57.11           C
ATOM  13175  CB  LEU C 139      36.086  17.970  69.427  1.00 58.66           C
ATOM  13178  CG  LEU C 139      35.830  16.472  69.507  1.00 60.28           C
ATOM  13180  CD1 LEU C 139      37.148  15.751  69.779  1.00 65.64           C
ATOM  13184  CD2 LEU C 139      34.777  16.173  70.583  1.00 59.13           C
ATOM  13188  C   LEU C 139      36.890  17.736  67.089  1.00 57.54           C
ATOM  13189  O   LEU C 139      35.884  17.990  66.423  1.00 57.65           O
ATOM  13191  N   THR C 140      37.819  16.873  66.701  1.00 55.84           N
ATOM  13192  CA  THR C 140      37.641  16.056  65.511  1.00 55.23           C
ATOM  13194  CB  THR C 140      38.803  16.234  64.522  1.00 54.09           C
ATOM  13196  OG1 THR C 140      38.839  17.585  64.062  1.00 49.54           O
ATOM  13198  CG2 THR C 140      38.643  15.300  63.320  1.00 55.04           C
ATOM  13202  C   THR C 140      37.575  14.596  65.925  1.00 55.52           C
ATOM  13203  O   THR C 140      38.542  14.067  66.467  1.00 55.17           O
ATOM  13205  N   LEU C 141      36.436  13.955  65.673  1.00 56.14           N
ATOM  13206  CA  LEU C 141      36.301  12.509  65.856  1.00 56.06           C
ATOM  13208  CB  LEU C 141      34.885  12.138  66.284  1.00 55.13           C
ATOM  13211  CG  LEU C 141      34.393  12.856  67.543  1.00 54.55           C
ATOM  13213  CD1 LEU C 141      33.072  12.277  67.984  1.00 55.40           C
ATOM  13217  CD2 LEU C 141      35.414  12.769  68.678  1.00 55.73           C
ATOM  13221  C   LEU C 141      36.656  11.826  64.555  1.00 56.15           C
ATOM  13222  O   LEU C 141      36.362  12.341  63.479  1.00 57.21           O
ATOM  13224  N   THR C 142      37.316  10.680  64.654  1.00 57.30           N
ATOM  13225  CA  THR C 142      37.834   9.996  63.474  1.00 58.06           C
ATOM  13227  CB  THR C 142      39.313  10.341  63.258  1.00 57.47           C
ATOM  13229  OG1 THR C 142      39.463  11.763  63.254  1.00 61.17           O
ATOM  13231  CG2 THR C 142      39.825   9.791  61.935  1.00 56.93           C
ATOM  13235  C   THR C 142      37.650   8.481  63.599  1.00 58.80           C
ATOM  13236  O   THR C 142      38.083   7.868  64.577  1.00 57.62           O
ATOM  13238  N   LEU C 143      36.976   7.896  62.612  1.00 58.40           N
ATOM  13239  CA  LEU C 143      36.783   6.457  62.565  1.00 58.37           C
ATOM  13241  CB  LEU C 143      35.722   6.080  61.520  1.00 57.10           C
ATOM  13244  CG  LEU C 143      34.273   5.905  61.977  1.00 55.46           C
ATOM  13246  CD1 LEU C 143      33.895   6.843  63.108  1.00 56.46           C
ATOM  13250  CD2 LEU C 143      33.340   6.100  60.799  1.00 57.96           C
ATOM  13254  C   LEU C 143      38.102   5.790  62.214  1.00 58.83           C
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ATOM  13255  O   LEU C 143      38.830   6.280  61.355  1.00 60.93           O
ATOM  13257  N   GLU C 144      38.412   4.693  62.893  1.00 57.52           N
ATOM  13258  CA  GLU C 144      39.456   3.797  62.440  1.00 58.34           C
ATOM  13260  CB  GLU C 144      40.271   3.263  63.603  1.00 58.84           C
ATOM  13263  CG  GLU C 144      40.925   4.355  64.417  1.00 61.40           C
ATOM  13266  CD  GLU C 144      41.677   3.805  65.593  1.00 60.71           C
ATOM  13267  OE1 GLU C 144      42.697   3.121  65.361  1.00 70.68           O
ATOM  13268  OE2 GLU C 144      41.237   4.031  66.742  1.00 60.94           O
ATOM  13269  C   GLU C 144      38.767   2.666  61.719  1.00 58.59           C
ATOM  13270  O   GLU C 144      37.847   2.049  62.259  1.00 60.83           O
ATOM  13272  N   SER C 145      39.234   2.397  60.504  1.00 58.97           N
ATOM  13273  CA  SER C 145      38.552   1.542  59.544  1.00 57.62           C
ATOM  13275  CB  SER C 145      37.951   2.412  58.441  1.00 58.80           C
ATOM  13278  OG  SER C 145      36.697   2.930  58.829  1.00 66.00           O
ATOM  13280  C   SER C 145      39.522   0.592  58.878  1.00 56.23           C
ATOM  13281  O   SER C 145      40.648   0.982  58.555  1.00 57.81           O
ATOM  13283  N   PRO C 146      39.087  -0.649  58.634  1.00 54.08           N
ATOM  13284  CA  PRO C 146      39.866  -1.520  57.764  1.00 53.84           C
ATOM  13286  CB  PRO C 146      39.318  -2.912  58.076  1.00 53.93           C
ATOM  13289  CG  PRO C 146      37.921  -2.677  58.529  1.00 54.99           C
ATOM  13292  CD  PRO C 146      37.883  -1.313  59.161  1.00 53.90           C
ATOM  13295  C   PRO C 146      39.669  -1.159  56.295  1.00 53.49           C
ATOM  13296  O   PRO C 146      38.703  -0.482  55.957  1.00 53.16           O
ATOM  13297  N   PRO C 147      40.562  -1.637  55.416  1.00 55.44           N
ATOM  13298  CA  PRO C 147      40.616  -1.167  54.030  1.00 55.00           C
ATOM  13300  CB  PRO C 147      41.714  -2.038  53.405  1.00 55.62           C
ATOM  13303  CG  PRO C 147      42.539  -2.479  54.534  1.00 57.05           C
ATOM  13306  CD  PRO C 147      41.590  -2.661  55.674  1.00 56.94           C
ATOM  13309  C   PRO C 147      39.320  -1.266  53.215  1.00 54.73           C
ATOM  13310  O   PRO C 147      38.941  -0.298  52.544  1.00 57.19           O
ATOM  13311  N   GLY C 148      38.652  -2.411  53.249  1.00 52.29           N
ATOM  13312  CA  GLY C 148      37.464  -2.595  52.408  1.00 52.17           C
ATOM  13315  C   GLY C 148      36.237  -1.789  52.824  1.00 50.22           C
ATOM  13316  O   GLY C 148      35.320  -1.594  52.040  1.00 46.84           O
ATOM  13318  N   SER C 149      36.237  -1.310  54.062  1.00 50.79           N
ATOM  13319  CA  SER C 149      35.034  -0.845  54.733  1.00 51.54           C
ATOM  13321  CB  SER C 149      35.307  -0.734  56.238  1.00 52.67           C
ATOM  13324  OG  SER C 149      36.156   0.374  56.504  1.00 53.58           O
ATOM  13326  C   SER C 149      34.540   0.504  54.230  1.00 51.45           C
ATOM  13327  O   SER C 149      35.192   1.177  53.433  1.00 52.31           O
ATOM  13329  N   SER C 150      33.400   0.918  54.757  1.00 50.20           N
ATOM  13330  CA  SER C 150      32.718   2.076  54.246  1.00 50.72           C
ATOM  13332  CB  SER C 150      31.914   1.653  53.026  1.00 51.30           C
ATOM  13335  OG  SER C 150      31.170   2.752  52.557  1.00 57.24           O
ATOM  13337  C   SER C 150      31.780   2.701  55.274  1.00 49.72           C
ATOM  13338  O   SER C 150      30.622   2.963  54.966  1.00 49.54           O
ATOM  13340  N   PRO C 151      32.279   2.961  56.492  1.00 47.89           N
ATOM  13341  CA  PRO C 151      31.375   3.391  57.546  1.00 47.74           C
ATOM  13343  CB  PRO C 151      32.236   3.256  58.801  1.00 47.05           C
ATOM  13346  CG  PRO C 151      33.612   3.492  58.314  1.00 46.59           C
ATOM  13349  CD  PRO C 151      33.674   2.879  56.966  1.00 47.73           C
ATOM  13352  C   PRO C 151      30.860   4.827  57.380  1.00 46.51           C
ATOM  13353  O   PRO C 151      31.380   5.591  56.570  1.00 44.35           O
ATOM  13354  N   SER C 152      29.789   5.135  58.107  1.00 47.30           N
ATOM  13355  CA  SER C 152      29.282   6.494  58.285  1.00 49.22           C
ATOM  13357  CB  SER C 152      27.880   6.724  57.679  1.00 49.04           C
ATOM  13360  OG  SER C 152      27.697   6.074  56.434  1.00 56.60           O
ATOM  13362  C   SER C 152      29.148   6.603  59.771  1.00 50.48           C
ATOM  13363  O   SER C 152      29.031   5.591  60.455  1.00 50.84           O
ATOM  13365  N   VAL C 153      29.116   7.828  60.272  1.00 52.23           N
ATOM  13366  CA  VAL C 153      29.083   8.051  61.700  1.00 51.85           C
ATOM  13368  CB  VAL C 153      30.483   8.458  62.225  1.00 50.48           C
ATOM  13370  CG1 VAL C 153      31.040   9.642  61.457  1.00 52.69           C
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ATOM  13374  CG2 VAL C 153      30.433   8.752  63.698  1.00 52.75           C
ATOM  13378  C   VAL C 153      28.024   9.092  62.031  1.00 52.30           C
ATOM  13379  O   VAL C 153      27.772  10.003  61.247  1.00 48.78           O
ATOM  13381  N   GLN C 154      27.380   8.904  63.180  1.00 53.85           N
ATOM  13382  CA  GLN C 154      26.485   9.892  63.751  1.00 54.16           C
ATOM  13384  CB  GLN C 154      25.026   9.537  63.502  1.00 54.93           C
ATOM  13387  CG  GLN C 154      24.088  10.066  64.583  1.00 53.16           C
ATOM  13390  CD  GLN C 154      22.652   9.871  64.241  1.00 50.89           C
ATOM  13391  OE1 GLN C 154      22.007   8.953  64.737  1.00 53.15           O
ATOM  13392  NE2 GLN C 154      22.131  10.735  63.394  1.00 39.18           N
ATOM  13395  C   GLN C 154      26.724   9.934  65.242  1.00 56.50           C
ATOM  13396  O   GLN C 154      26.533   8.935  65.939  1.00 57.26           O
ATOM  13398  N   CYS C 155      27.121  11.100  65.726  1.00 57.78           N
ATOM  13399  CA  CYS C 155      27.325  11.307  67.143  1.00 56.92           C
ATOM  13401  CB  CYS C 155      28.694  11.905  67.380  1.00 57.67           C
ATOM  13404  SG  CYS C 155      29.955  10.746  66.917  1.00 61.13           S
ATOM  13406  C   CYS C 155      26.250  12.214  67.688  1.00 57.19           C
ATOM  13407  O   CYS C 155      25.771  13.133  67.018  1.00 55.37           O
ATOM  13409  N   ARG C 156      25.875  11.932  68.922  1.00 57.40           N
ATOM  13410  CA  ARG C 156      24.841  12.660  69.605  1.00 56.08           C
ATOM  13412  CB  ARG C 156      23.671  11.705  69.799  1.00 56.11           C
ATOM  13415  CG  ARG C 156      22.543  12.210  70.658  1.00 59.89           C
ATOM  13418  CD  ARG C 156      21.253  11.382  70.489  1.00 63.64           C
ATOM  13421  NE  ARG C 156      21.484  10.021  69.980  1.00 68.96           N
ATOM  13423  CZ  ARG C 156      20.962   9.505  68.862  1.00 69.73           C
ATOM  13424  NH1 ARG C 156      20.138  10.201  68.078  1.00 64.69           N
ATOM  13427  NH2 ARG C 156      21.264   8.258  68.527  1.00 75.77           N
ATOM  13430  C   ARG C 156      25.464  13.118  70.926  1.00 54.21           C
ATOM  13431  O   ARG C 156      25.943  12.282  71.697  1.00 52.54           O
ATOM  13433  N   SER C 157      25.514  14.437  71.157  1.00 52.79           N
ATOM  13434  CA  SER C 157      26.035  14.999  72.429  1.00 52.24           C
ATOM  13436  CB  SER C 157      26.209  16.528  72.325  1.00 53.85           C
ATOM  13439  OG  SER C 157      24.962  17.211  72.264  1.00 55.35           O
ATOM  13441  C   SER C 157      25.127  14.648  73.617  1.00 49.81           C
ATOM  13442  O   SER C 157      24.094  14.010  73.455  1.00 50.61           O
ATOM  13444  N   PRO C 158      25.510  15.049  74.828  1.00 47.61           N
ATOM  13445  CA  PRO C 158      24.577  14.786  75.926  1.00 46.50           C
ATOM  13447  CB  PRO C 158      25.363  15.206  77.177  1.00 44.45           C
ATOM  13450  CG  PRO C 158      26.807  15.244  76.732  1.00 47.62           C
ATOM  13453  CD  PRO C 158      26.762  15.661  75.296  1.00 49.56           C
ATOM  13456  C   PRO C 158      23.259  15.558  75.805  1.00 44.87           C
ATOM  13457  O   PRO C 158      22.320  15.281  76.553  1.00 44.21           O
ATOM  13458  N   ARG C 159      23.184  16.503  74.871  1.00 43.29           N
ATOM  13459  CA  ARG C 159      21.946  17.248  74.630  1.00 43.47           C
ATOM  13461  CB  ARG C 159      22.263  18.680  74.225  1.00 38.69           C
ATOM  13464  CG  ARG C 159      22.867  19.454  75.363  1.00 39.57           C
ATOM  13467  CD  ARG C 159      23.619  20.649  74.859  1.00 46.59           C
ATOM  13470  NE  ARG C 159      22.789  21.472  73.985  1.00 52.09           N
ATOM  13472  CZ  ARG C 159      23.241  22.245  72.998  1.00 53.47           C
ATOM  13473  NH1 ARG C 159      22.373  22.943  72.276  1.00 55.12           N
ATOM  13476  NH2 ARG C 159      24.543  22.328  72.722  1.00 50.97           N
ATOM  13479  C   ARG C 159      21.048  16.591  73.593  1.00 42.68           C
ATOM  13480  O   ARG C 159      19.992  17.112  73.276  1.00 41.59           O
ATOM  13482  N   GLY C 160      21.461  15.447  73.064  1.00 44.46           N
ATOM  13483  CA  GLY C 160      20.621  14.708  72.140  1.00 46.94           C
ATOM  13486  C   GLY C 160      20.629  15.230  70.713  1.00 48.82           C
ATOM  13487  O   GLY C 160      19.939  14.673  69.859  1.00 49.55           O
ATOM  13489  N   LYS C 161      21.405  16.285  70.445  1.00 50.66           N
ATOM  13490  CA  LYS C 161      21.554  16.821  69.087  1.00 51.33           C
ATOM  13492  CB  LYS C 161      21.989  18.286  69.118  1.00 52.12           C
ATOM  13495  CG  LYS C 161      20.814  19.259  69.051  1.00 54.16           C
ATOM  13498  CD  LYS C 161      21.059  20.552  69.833  1.00 54.75           C
ATOM  13501  CE  LYS C 161      20.208  21.712  69.279  1.00 60.67           C
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ATOM	13504	NZ	LYS	C	161	18.936	21.257	68.624	1.00	62.40	N
ATOM	13508	C	LYS	C	161	22.517	15.977	68.246	1.00	52.08	C
ATOM	13509	O	LYS	C	161	23.698	15.823	68.577	1.00	51.42	O
ATOM	13511	N	ASN	C	162	21.973	15.418	67.165	1.00	53.76	N
ATOM	13512	CA	ASN	C	162	22.719	14.558	66.248	1.00	53.27	C
ATOM	13514	CB	ASN	C	162	21.762	13.682	65.414	1.00	52.35	C
ATOM	13517	CG	ASN	C	162	21.140	12.541	66.232	1.00	54.54	C
ATOM	13518	OD1	ASN	C	162	19.929	12.431	66.352	1.00	56.59	O
ATOM	13519	ND2	ASN	C	162	21.980	11.697	66.801	1.00	64.74	N
ATOM	13522	C	ASN	C	162	23.632	15.371	65.335	1.00	53.02	C
ATOM	13523	O	ASN	C	162	23.293	16.464	64.904	1.00	52.72	O
ATOM	13525	N	ILE	C	163	24.810	14.825	65.076	1.00	54.51	N
ATOM	13526	CA	ILE	C	163	25.796	15.426	64.182	1.00	54.29	C
ATOM	13528	CB	ILE	C	163	26.833	16.317	64.956	1.00	55.78	C
ATOM	13530	CG1	ILE	C	163	28.259	16.124	64.434	1.00	56.60	C
ATOM	13533	CD1	ILE	C	163	29.290	16.963	65.166	1.00	58.16	C
ATOM	13537	CG2	ILE	C	163	26.826	16.026	66.463	1.00	59.34	C
ATOM	13541	C	ILE	C	163	26.429	14.256	63.430	1.00	52.97	C
ATOM	13542	O	ILE	C	163	26.642	13.185	64.011	1.00	52.84	O
ATOM	13544	N	GLN	C	164	26.708	14.457	62.144	1.00	51.29	N
ATOM	13545	CA	GLN	C	164	26.970	13.348	61.228	1.00	51.18	C
ATOM	13547	CB	GLN	C	164	25.715	13.058	60.400	1.00	49.19	C
ATOM	13550	CG	GLN	C	164	24.463	12.853	61.257	1.00	49.09	C
ATOM	13553	CD	GLN	C	164	23.235	12.547	60.446	1.00	48.60	C
ATOM	13554	OE1	GLN	C	164	22.120	12.617	60.949	1.00	45.05	O
ATOM	13555	NE2	GLN	C	164	23.429	12.201	59.181	1.00	42.88	N
ATOM	13558	C	GLN	C	164	28.143	13.602	60.292	1.00	52.81	C
ATOM	13559	O	GLN	C	164	28.612	14.730	60.147	1.00	54.69	O
ATOM	13561	N	GLY	C	165	28.605	12.536	59.645	1.00	53.15	N
ATOM	13562	CA	GLY	C	165	29.761	12.618	58.765	1.00	51.77	C
ATOM	13565	C	GLY	C	165	30.208	11.267	58.257	1.00	50.80	C
ATOM	13566	O	GLY	C	165	29.573	10.249	58.541	1.00	50.17	O
ATOM	13568	N	GLY	C	166	31.305	11.276	57.501	1.00	49.63	N
ATOM	13569	CA	GLY	C	166	31.852	10.072	56.877	1.00	50.14	C
ATOM	13572	C	GLY	C	166	32.712	9.269	57.821	1.00	49.13	C
ATOM	13573	O	GLY	C	166	32.198	8.633	58.735	1.00	48.51	O
ATOM	13575	N	LYS	C	167	34.022	9.287	57.579	1.00	50.12	N
ATOM	13576	CA	LYS	C	167	35.004	8.694	58.493	1.00	51.62	C
ATOM	13578	CB	LYS	C	167	36.231	8.219	57.716	1.00	51.14	C
ATOM	13581	CG	LYS	C	167	35.879	7.157	56.684	1.00	50.23	C
ATOM	13584	CD	LYS	C	167	37.022	6.193	56.362	1.00	50.34	C
ATOM	13587	CE	LYS	C	167	37.566	6.339	54.943	1.00	53.65	C
ATOM	13590	NZ	LYS	C	167	37.725	4.997	54.263	1.00	52.26	N
ATOM	13594	C	LYS	C	167	35.414	9.699	59.560	1.00	51.64	C
ATOM	13595	O	LYS	C	167	36.056	9.349	60.545	1.00	50.45	O
ATOM	13597	N	THR	C	168	35.030	10.951	59.345	1.00	54.51	N
ATOM	13598	CA	THR	C	168	35.330	12.037	60.260	1.00	55.70	C
ATOM	13600	CB	THR	C	168	36.499	12.885	59.715	1.00	55.88	C
ATOM	13602	OG1	THR	C	168	37.732	12.253	60.079	1.00	58.05	O
ATOM	13604	CG2	THR	C	168	36.488	14.322	60.268	1.00	56.12	C
ATOM	13608	C	THR	C	168	34.105	12.915	60.485	1.00	56.05	C
ATOM	13609	O	THR	C	168	33.313	13.156	59.570	1.00	56.23	O
ATOM	13611	N	LEU	C	169	33.954	13.360	61.726	1.00	57.16	N
ATOM	13612	CA	LEU	C	169	33.083	14.481	62.051	1.00	59.11	C
ATOM	13614	CB	LEU	C	169	31.708	14.011	62.551	1.00	60.26	C
ATOM	13617	CG	LEU	C	169	31.620	13.203	63.845	1.00	59.74	C
ATOM	13619	CD1	LEU	C	169	31.716	14.080	65.070	1.00	63.90	C
ATOM	13623	CD2	LEU	C	169	30.319	12.452	63.870	1.00	62.44	C
ATOM	13627	C	LEU	C	169	33.790	15.353	63.077	1.00	57.74	C
ATOM	13628	O	LEU	C	169	34.628	14.868	63.842	1.00	54.79	O
ATOM	13630	N	SER	C	170	33.449	16.638	63.069	1.00	58.40	N
ATOM	13631	CA	SER	C	170	34.145	17.635	63.858	1.00	59.45	C
ATOM	13633	CB	SER	C	170	35.186	18.324	62.990	1.00	58.68	C

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ATOM  13636  OG  SER C 170      35.812  19.369  63.719  1.00 66.56           O
ATOM  13638  C   SER C 170      33.214  18.702  64.395  1.00 59.30           C
ATOM  13639  O   SER C 170      32.517  19.342  63.623  1.00 61.92           O
ATOM  13641  N   VAL C 171      33.213  18.902  65.709  1.00 60.36           N
ATOM  13642  CA  VAL C 171      32.604  20.093  66.304  1.00 61.92           C
ATOM  13644  CB  VAL C 171      31.946  19.800  67.667  1.00 62.56           C
ATOM  13646  CG1 VAL C 171      31.675  21.111  68.441  1.00 64.73           C
ATOM  13650  CG2 VAL C 171      30.664  19.013  67.471  1.00 63.91           C
ATOM  13654  C   VAL C 171      33.683  21.135  66.527  1.00 62.32           C
ATOM  13655  O   VAL C 171      34.661  20.861  67.223  1.00 64.51           O
ATOM  13657  N   SER C 172      33.514  22.320  65.940  1.00 61.27           N
ATOM  13658  CA  SER C 172      34.406  23.444  66.229  1.00 62.74           C
ATOM  13660  CB  SER C 172      34.711  24.258  64.971  1.00 62.68           C
ATOM  13663  OG  SER C 172      33.522  24.736  64.381  1.00 64.10           O
ATOM  13665  C   SER C 172      33.754  24.326  67.282  1.00 64.49           C
ATOM  13666  O   SER C 172      32.520  24.449  67.323  1.00 67.37           O
ATOM  13668  N   GLN C 173      34.572  24.931  68.137  1.00 61.64           N
ATOM  13669  CA  GLN C 173      34.050  25.722  69.244  1.00 59.97           C
ATOM  13671  CB  GLN C 173      33.278  26.931  68.723  1.00 61.20           C
ATOM  13674  CG  GLN C 173      34.083  27.852  67.871  1.00 60.16           C
ATOM  13677  CD  GLN C 173      33.290  29.058  67.500  1.00 60.41           C
ATOM  13678  OE1 GLN C 173      32.284  28.956  66.793  1.00 57.88           O
ATOM  13679  NE2 GLN C 173      33.719  30.219  67.985  1.00 61.41           N
ATOM  13682  C   GLN C 173      33.156  24.895  70.176  1.00 58.42           C
ATOM  13683  O   GLN C 173      31.954  25.138  70.301  1.00 57.60           O
ATOM  13685  N   LEU C 174      33.767  23.927  70.842  1.00 57.29           N
ATOM  13686  CA  LEU C 174      33.060  23.051  71.770  1.00 55.11           C
ATOM  13688  CB  LEU C 174      34.032  21.984  72.284  1.00 54.98           C
ATOM  13691  CG  LEU C 174      33.514  20.660  72.857  1.00 57.86           C
ATOM  13693  CD1 LEU C 174      32.168  20.248  72.279  1.00 57.73           C
ATOM  13697  CD2 LEU C 174      34.558  19.548  72.648  1.00 56.96           C
ATOM  13701  C   LEU C 174      32.479  23.879  72.917  1.00 51.79           C
ATOM  13702  O   LEU C 174      33.158  24.752  73.442  1.00 53.25           O
ATOM  13704  N   GLU C 175      31.221  23.617  73.278  1.00 49.51           N
ATOM  13705  CA  GLU C 175      30.515  24.363  74.339  1.00 47.81           C
ATOM  13707  CB  GLU C 175      29.102  24.732  73.891  1.00 46.65           C
ATOM  13710  CG  GLU C 175      29.026  25.677  72.721  1.00 49.04           C
ATOM  13713  CD  GLU C 175      27.613  25.804  72.179  1.00 51.02           C
ATOM  13714  OE1 GLU C 175      27.064  24.786  71.716  1.00 58.42           O
ATOM  13715  OE2 GLU C 175      27.052  26.918  72.210  1.00 57.27           O
ATOM  13716  C   GLU C 175      30.390  23.562  75.631  1.00 44.63           C
ATOM  13717  O   GLU C 175      30.128  22.354  75.613  1.00 39.63           O
ATOM  13719  N   LEU C 176      30.524  24.259  76.756  1.00 44.39           N
ATOM  13720  CA  LEU C 176      30.380  23.638  78.074  1.00 43.53           C
ATOM  13722  CB  LEU C 176      30.285  24.706  79.164  1.00 41.00           C
ATOM  13725  CG  LEU C 176      30.257  24.229  80.617  1.00 41.24           C
ATOM  13727  CD1 LEU C 176      31.241  23.066  80.863  1.00 39.80           C
ATOM  13731  CD2 LEU C 176      30.551  25.397  81.560  1.00 38.79           C
ATOM  13735  C   LEU C 176      29.160  22.729  78.148  1.00 44.00           C
ATOM  13736  O   LEU C 176      29.223  21.630  78.708  1.00 42.30           O
ATOM  13738  N   GLN C 177      28.053  23.177  77.565  1.00 45.38           N
ATOM  13739  CA  GLN C 177      26.797  22.451  77.705  1.00 47.50           C
ATOM  13741  CB  GLN C 177      25.603  23.315  77.296  1.00 49.76           C
ATOM  13744  CG  GLN C 177      25.538  23.635  75.807  1.00 55.28           C
ATOM  13747  CD  GLN C 177      24.236  24.285  75.410  1.00 50.75           C
ATOM  13748  OE1 GLN C 177      23.259  24.259  76.160  1.00 51.96           O
ATOM  13749  NE2 GLN C 177      24.215  24.870  74.217  1.00 54.32           N
ATOM  13752  C   GLN C 177      26.759  21.130  76.960  1.00 47.08           C
ATOM  13753  O   GLN C 177      25.878  20.313  77.216  1.00 47.81           O
ATOM  13755  N   ASP C 178      27.698  20.935  76.035  1.00 48.66           N
ATOM  13756  CA  ASP C 178      27.913  19.638  75.387  1.00 47.73           C
ATOM  13758  CB  ASP C 178      28.383  19.837  73.947  1.00 49.15           C
ATOM  13761  CG  ASP C 178      27.313  20.434  73.063  1.00 53.90           C
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ATOM  13762  OD1 ASP C 178      26.238  19.801  72.937  1.00 57.06           O
ATOM  13763  OD2 ASP C 178      27.558  21.522  72.483  1.00 54.50           O
ATOM  13764  C   ASP C 178      28.932  18.768  76.132  1.00 45.84           C
ATOM  13765  O   ASP C 178      29.294  17.700  75.647  1.00 44.87           O
ATOM  13767  N   SER C 179      29.402  19.210  77.298  1.00 44.40           N
ATOM  13768  CA  SER C 179      30.276  18.366  78.102  1.00 44.05           C
ATOM  13770  CB  SER C 179      30.708  19.046  79.381  1.00 39.93           C
ATOM  13773  OG  SER C 179      31.755  18.292  79.959  1.00 35.87           O
ATOM  13775  C   SER C 179      29.553  17.096  78.496  1.00 45.97           C
ATOM  13776  O   SER C 179      28.377  17.139  78.850  1.00 47.73           O
ATOM  13778  N   GLY C 180      30.258  15.973  78.450  1.00 46.96           N
ATOM  13779  CA  GLY C 180      29.717  14.726  78.962  1.00 47.05           C
ATOM  13782  C   GLY C 180      29.989  13.557  78.057  1.00 48.32           C
ATOM  13783  O   GLY C 180      30.950  13.556  77.290  1.00 50.20           O
ATOM  13785  N   THR C 181      29.126  12.556  78.166  1.00 51.42           N
ATOM  13786  CA  THR C 181      29.191  11.357  77.347  1.00 51.57           C
ATOM  13788  CB  THR C 181      28.468  10.176  78.019  1.00 50.15           C
ATOM  13790  OG1 THR C 181      29.088   9.868  79.267  1.00 48.31           O
ATOM  13792  CG2 THR C 181      28.520   8.951  77.136  1.00 52.72           C
ATOM  13796  C   THR C 181      28.484  11.599  76.036  1.00 52.53           C
ATOM  13797  O   THR C 181      27.288  11.889  76.024  1.00 54.75           O
ATOM  13799  N   TRP C 182      29.213  11.458  74.937  1.00 53.02           N
ATOM  13800  CA  TRP C 182      28.601  11.436  73.619  1.00 54.10           C
ATOM  13802  CB  TRP C 182      29.541  12.043  72.586  1.00 55.45           C
ATOM  13805  CG  TRP C 182      29.727  13.504  72.758  1.00 56.76           C
ATOM  13806  CD1 TRP C 182      30.085  14.155  73.898  1.00 60.16           C
ATOM  13808  NE1 TRP C 182      30.149  15.503  73.672  1.00 59.10           N
ATOM  13810  CE2 TRP C 182      29.843  15.745  72.362  1.00 53.99           C
ATOM  13811  CD2 TRP C 182      29.576  14.506  71.756  1.00 55.33           C
ATOM  13812  CE3 TRP C 182      29.224  14.478  70.404  1.00 59.35           C
ATOM  13814  CZ3 TRP C 182      29.164  15.671  69.711  1.00 59.52           C
ATOM  13816  CH2 TRP C 182      29.449  16.890  70.344  1.00 58.91           C
ATOM  13818  CZ2 TRP C 182      29.787  16.943  71.666  1.00 57.26           C
ATOM  13820  C   TRP C 182      28.282   9.986  73.273  1.00 55.33           C
ATOM  13821  O   TRP C 182      28.917   9.065  73.791  1.00 55.48           O
ATOM  13823  N   THR C 183      27.292   9.787  72.410  1.00 55.73           N
ATOM  13824  CA  THR C 183      26.933   8.456  71.952  1.00 55.94           C
ATOM  13826  CB  THR C 183      25.531   8.068  72.443  1.00 57.10           C
ATOM  13828  OG1 THR C 183      25.506   8.113  73.877  1.00 56.95           O
ATOM  13830  CG2 THR C 183      25.143   6.658  71.961  1.00 56.74           C
ATOM  13834  C   THR C 183      26.964   8.447  70.442  1.00 55.99           C
ATOM  13835  O   THR C 183      26.160   9.128  69.814  1.00 58.49           O
ATOM  13837  N   CYS C 184      27.897   7.692  69.862  1.00 55.92           N
ATOM  13838  CA  CYS C 184      28.028   7.604  68.404  1.00 56.60           C
ATOM  13840  CB  CYS C 184      29.453   7.931  67.966  1.00 58.31           C
ATOM  13843  SG  CYS C 184      30.084   9.514  68.543  1.00 65.31           S
ATOM  13845  C   CYS C 184      27.652   6.230  67.846  1.00 55.76           C
ATOM  13846  O   CYS C 184      28.143   5.205  68.309  1.00 56.36           O
ATOM  13848  N   THR C 185      26.790   6.227  66.836  1.00 52.97           N
ATOM  13849  CA  THR C 185      26.487   5.032  66.082  1.00 52.39           C
ATOM  13851  CB  THR C 185      25.005   4.987  65.731  1.00 51.66           C
ATOM  13853  OG1 THR C 185      24.236   5.242  66.904  1.00 55.04           O
ATOM  13855  CG2 THR C 185      24.626   3.640  65.164  1.00 52.45           C
ATOM  13859  C   THR C 185      27.276   5.038  64.782  1.00 52.20           C
ATOM  13860  O   THR C 185      27.112   5.932  63.953  1.00 54.60           O
ATOM  13862  N   VAL C 186      28.145   4.053  64.602  1.00 52.40           N
ATOM  13863  CA  VAL C 186      28.777   3.833  63.299  1.00 51.70           C
ATOM  13865  CB  VAL C 186      30.227   3.320  63.427  1.00 51.97           C
ATOM  13867  CG1 VAL C 186      30.646   2.516  62.219  1.00 52.91           C
ATOM  13871  CG2 VAL C 186      31.174   4.491  63.617  1.00 53.74           C
ATOM  13875  C   VAL C 186      27.890   2.863  62.525  1.00 51.87           C
ATOM  13876  O   VAL C 186      27.232   2.017  63.119  1.00 54.33           O
ATOM  13878  N   LEU C 187      27.870   3.014  61.202  1.00 49.51           N
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ATOM  13879  CA  LEU C 187      26.944   2.312  60.325  1.00 46.53           C
ATOM  13881  CB  LEU C 187      25.860   3.285  59.871  1.00 46.55           C
ATOM  13884  CG  LEU C 187      24.714   2.822  58.980  1.00 45.89           C
ATOM  13886  CD1 LEU C 187      23.966   1.675  59.621  1.00 49.43           C
ATOM  13890  CD2 LEU C 187      23.780   3.986  58.754  1.00 42.85           C
ATOM  13894  C   LEU C 187      27.709   1.783  59.122  1.00 45.36           C
ATOM  13895  O   LEU C 187      28.382   2.541  58.414  1.00 42.71           O
ATOM  13897  N   GLN C 188      27.606   0.474  58.917  1.00 44.20           N
ATOM  13898  CA  GLN C 188      28.295  -0.230  57.846  1.00 45.92           C
ATOM  13900  CB  GLN C 188      29.492  -0.999  58.428  1.00 44.75           C
ATOM  13903  CG  GLN C 188      30.114  -2.072  57.560  1.00 40.45           C
ATOM  13906  CD  GLN C 188      30.611  -1.544  56.240  1.00 34.48           C
ATOM  13907  OE1 GLN C 188      30.129  -1.937  55.183  1.00 42.07           O
ATOM  13908  NE2 GLN C 188      31.582  -0.657  56.290  1.00 26.66           N
ATOM  13911  C   GLN C 188      27.232  -1.148  57.257  1.00 48.74           C
ATOM  13912  O   GLN C 188      26.934  -2.211  57.827  1.00 49.49           O
ATOM  13914  N   ASN C 189      26.642  -0.692  56.142  1.00 51.03           N
ATOM  13915  CA  ASN C 189      25.413  -1.256  55.553  1.00 51.55           C
ATOM  13917  CB  ASN C 189      25.676  -2.697  55.060  1.00 54.40           C
ATOM  13920  CG  ASN C 189      26.290  -2.747  53.664  1.00 56.61           C
ATOM  13921  OD1 ASN C 189      26.306  -1.753  52.937  1.00 57.14           O
ATOM  13922  ND2 ASN C 189      26.792  -3.920  53.286  1.00 53.90           N
ATOM  13925  C   ASN C 189      24.175  -1.169  56.489  1.00 52.25           C
ATOM  13926  O   ASN C 189      24.025  -0.211  57.254  1.00 50.29           O
ATOM  13928  N   GLN C 190      23.264  -2.133  56.363  1.00 53.26           N
ATOM  13929  CA  GLN C 190      22.233  -2.430  57.364  1.00 53.65           C
ATOM  13931  CB  GLN C 190      21.779  -3.893  57.182  1.00 53.30           C
ATOM  13934  CG  GLN C 190      20.279  -4.140  57.320  1.00 57.71           C
ATOM  13937  CD  GLN C 190      19.801  -5.469  56.659  1.00 60.12           C
ATOM  13938  OE1 GLN C 190      20.177  -5.785  55.519  1.00 68.35           O
ATOM  13939  NE2 GLN C 190      18.948  -6.224  57.371  1.00 54.81           N
ATOM  13942  C   GLN C 190      22.740  -2.206  58.806  1.00 52.57           C
ATOM  13943  O   GLN C 190      22.121  -1.475  59.574  1.00 53.06           O
ATOM  13945  N   LYS C 191      23.893  -2.798  59.130  1.00 51.26           N
ATOM  13946  CA  LYS C 191      24.366  -2.982  60.520  1.00 50.33           C
ATOM  13948  CB  LYS C 191      25.378  -4.132  60.557  1.00 51.36           C
ATOM  13951  CG  LYS C 191      24.881  -5.444  59.999  1.00 51.36           C
ATOM  13954  CD  LYS C 191      25.973  -6.152  59.210  1.00 52.98           C
ATOM  13957  CE  LYS C 191      25.556  -7.573  58.849  1.00 56.10           C
ATOM  13960  NZ  LYS C 191      25.402  -8.412  60.083  1.00 56.31           N
ATOM  13964  C   LYS C 191      25.035  -1.772  61.192  1.00 48.05           C
ATOM  13965  O   LYS C 191      25.643  -0.936  60.525  1.00 47.80           O
ATOM  13967  N   LYS C 192      24.963  -1.733  62.526  1.00 45.81           N
ATOM  13968  CA  LYS C 192      25.579  -0.672  63.323  1.00 46.03           C
ATOM  13970  CB  LYS C 192      24.541   0.300  63.897  1.00 44.66           C
ATOM  13973  CG  LYS C 192      23.234   0.419  63.151  1.00 47.30           C
ATOM  13976  CD  LYS C 192      22.445   1.606  63.671  1.00 44.85           C
ATOM  13979  CE  LYS C 192      20.989   1.548  63.286  1.00 45.32           C
ATOM  13982  NZ  LYS C 192      20.428   2.916  63.195  1.00 43.18           N
ATOM  13986  C   LYS C 192      26.366  -1.182  64.518  1.00 45.85           C
ATOM  13987  O   LYS C 192      26.203  -2.301  64.979  1.00 45.34           O
ATOM  13989  N   VAL C 193      27.184  -0.290  65.051  1.00 48.81           N
ATOM  13990  CA  VAL C 193      27.940  -0.528  66.270  1.00 49.30           C
ATOM  13992  CB  VAL C 193      29.374  -1.022  65.933  1.00 47.83           C
ATOM  13994  CG1 VAL C 193      29.947  -0.279  64.745  1.00 48.63           C
ATOM  13998  CG2 VAL C 193      30.287  -0.882  67.110  1.00 50.20           C
ATOM  14002  C   VAL C 193      27.907   0.790  67.077  1.00 49.53           C
ATOM  14003  O   VAL C 193      27.955   1.865  66.490  1.00 49.16           O
ATOM  14005  N   GLU C 194      27.784   0.708  68.404  1.00 51.78           N
ATOM  14006  CA  GLU C 194      27.653   1.912  69.239  1.00 53.26           C
ATOM  14008  CB  GLU C 194      26.448   1.801  70.179  1.00 53.82           C
ATOM  14011  CG  GLU C 194      25.765   3.138  70.458  1.00 55.02           C
ATOM  14014  CD  GLU C 194      24.825   3.092  71.662  1.00 57.08           C
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ATOM	14015	OE1	GLU	C	194	25.344	3.124	72.806	1.00	58.59	O
ATOM	14016	OE2	GLU	C	194	23.580	3.040	71.462	1.00	52.08	O
ATOM	14017	C	GLU	C	194	28.915	2.181	70.055	1.00	53.30	C
ATOM	14018	O	GLU	C	194	29.534	1.264	70.578	1.00	53.86	O
ATOM	14020	N	PHE	C	195	29.286	3.452	70.146	1.00	54.73	N
ATOM	14021	CA	PHE	C	195	30.432	3.900	70.929	1.00	55.20	C
ATOM	14023	CB	PHE	C	195	31.439	4.581	70.020	1.00	53.63	C
ATOM	14026	CG	PHE	C	195	32.159	3.651	69.097	1.00	53.31	C
ATOM	14027	CD1	PHE	C	195	33.329	3.026	69.497	1.00	50.92	C
ATOM	14029	CE1	PHE	C	195	34.011	2.185	68.648	1.00	49.87	C
ATOM	14031	CZ	PHE	C	195	33.532	1.954	67.373	1.00	53.60	C
ATOM	14033	CE2	PHE	C	195	32.368	2.573	66.953	1.00	55.58	C
ATOM	14035	CD2	PHE	C	195	31.691	3.428	67.815	1.00	54.78	C
ATOM	14037	C	PHE	C	195	29.973	4.920	71.967	1.00	56.05	C
ATOM	14038	O	PHE	C	195	29.085	5.721	71.697	1.00	58.22	O
ATOM	14040	N	LYS	C	196	30.567	4.896	73.153	1.00	56.59	N
ATOM	14041	CA	LYS	C	196	30.411	6.006	74.088	1.00	57.72	C
ATOM	14043	CB	LYS	C	196	29.777	5.567	75.404	1.00	56.84	C
ATOM	14046	CG	LYS	C	196	28.278	5.340	75.268	1.00	61.21	C
ATOM	14049	CD	LYS	C	196	27.572	5.335	76.609	1.00	62.04	C
ATOM	14052	CE	LYS	C	196	26.103	5.760	76.490	1.00	63.05	C
ATOM	14055	NZ	LYS	C	196	25.589	6.237	77.822	1.00	64.58	N
ATOM	14059	C	LYS	C	196	31.761	6.630	74.314	1.00	57.71	C
ATOM	14060	O	LYS	C	196	32.777	5.946	74.338	1.00	58.77	O
ATOM	14062	N	ILE	C	197	31.774	7.941	74.456	1.00	59.12	N
ATOM	14063	CA	ILE	C	197	33.023	8.652	74.595	1.00	61.05	C
ATOM	14065	CB	ILE	C	197	33.650	8.914	73.217	1.00	60.77	C
ATOM	14067	CG1	ILE	C	197	35.032	9.538	73.361	1.00	62.63	C
ATOM	14070	CD1	ILE	C	197	35.667	9.879	72.034	1.00	63.56	C
ATOM	14074	CG2	ILE	C	197	32.756	9.795	72.362	1.00	63.71	C
ATOM	14078	C	ILE	C	197	32.767	9.938	75.363	1.00	61.22	C
ATOM	14079	O	ILE	C	197	31.947	10.761	74.954	1.00	63.17	O
ATOM	14081	N	ASP	C	198	33.460	10.078	76.493	1.00	61.92	N
ATOM	14082	CA	ASP	C	198	33.315	11.225	77.389	1.00	61.85	C
ATOM	14084	CB	ASP	C	198	33.735	10.836	78.812	1.00	61.19	C
ATOM	14087	CG	ASP	C	198	32.729	9.908	79.483	1.00	66.39	C
ATOM	14088	OD1	ASP	C	198	33.121	9.156	80.403	1.00	63.50	O
ATOM	14089	OD2	ASP	C	198	31.538	9.930	79.086	1.00	67.52	O
ATOM	14090	C	ASP	C	198	34.150	12.395	76.917	1.00	61.02	C
ATOM	14091	O	ASP	C	198	35.350	12.404	77.126	1.00	62.43	O
ATOM	14093	N	ILE	C	199	33.514	13.363	76.260	1.00	61.99	N
ATOM	14094	CA	ILE	C	199	34.177	14.610	75.885	1.00	62.43	C
ATOM	14096	CB	ILE	C	199	33.641	15.220	74.576	1.00	64.37	C
ATOM	14098	CG1	ILE	C	199	34.198	14.489	73.354	1.00	69.62	C
ATOM	14101	CD1	ILE	C	199	34.269	12.983	73.482	1.00	74.01	C
ATOM	14105	CG2	ILE	C	199	34.065	16.681	74.450	1.00	62.51	C
ATOM	14109	C	ILE	C	199	33.934	15.591	77.012	1.00	63.20	C
ATOM	14110	O	ILE	C	199	32.833	16.146	77.154	1.00	63.65	O
ATOM	14112	N	VAL	C	200	34.976	15.776	77.814	1.00	61.56	N
ATOM	14113	CA	VAL	C	200	34.967	16.676	78.945	1.00	58.21	C
ATOM	14115	CB	VAL	C	200	35.951	16.179	79.992	1.00	56.92	C
ATOM	14117	CG1	VAL	C	200	36.215	17.238	81.045	1.00	54.06	C
ATOM	14121	CG2	VAL	C	200	35.436	14.887	80.605	1.00	56.77	C
ATOM	14125	C	VAL	C	200	35.415	18.041	78.469	1.00	58.15	C
ATOM	14126	O	VAL	C	200	36.495	18.158	77.887	1.00	60.20	O
ATOM	14128	N	VAL	C	201	34.603	19.072	78.695	1.00	56.11	N
ATOM	14129	CA	VAL	C	201	35.046	20.430	78.375	1.00	55.47	C
ATOM	14131	CB	VAL	C	201	34.115	21.190	77.381	1.00	54.61	C
ATOM	14133	CG1	VAL	C	201	32.718	20.835	77.589	1.00	58.30	C
ATOM	14137	CG2	VAL	C	201	34.295	22.711	77.477	1.00	55.72	C
ATOM	14141	C	VAL	C	201	35.338	21.198	79.660	1.00	54.91	C
ATOM	14142	O	VAL	C	201	34.556	21.184	80.617	1.00	55.55	O
ATOM	14144	N	LEU	C	202	36.507	21.833	79.661	1.00	54.19	N

ATOM	14145	CA	LEU	C	202	37.038	22.547	80.809	1.00	53.61	C
ATOM	14147	CB	LEU	C	202	38.562	22.359	80.883	1.00	55.10	C
ATOM	14150	CG	LEU	C	202	39.088	20.915	80.763	1.00	55.91	C
ATOM	14152	CD1	LEU	C	202	40.534	20.872	80.268	1.00	59.24	C
ATOM	14156	CD2	LEU	C	202	38.970	20.203	82.085	1.00	55.43	C
ATOM	14160	C	LEU	C	202	36.690	24.014	80.603	1.00	50.53	C
ATOM	14161	O	LEU	C	202	36.819	24.509	79.493	1.00	45.58	O
ATOM	14163	N	ALA	C	203	36.248	24.690	81.666	1.00	49.45	N
ATOM	14164	CA	ALA	C	203	35.725	26.049	81.558	1.00	48.94	C
ATOM	14166	CB	ALA	C	203	34.464	26.044	80.695	1.00	49.85	C
ATOM	14170	C	ALA	C	203	35.397	26.661	82.909	1.00	48.75	C
ATOM	14171	O	ALA	C	203	35.269	25.953	83.904	1.00	51.06	O
ATOM	14173	N	PHE	C	204	35.243	27.982	82.931	1.00	46.88	N
ATOM	14174	CA	PHE	C	204	34.678	28.665	84.089	1.00	44.42	C
ATOM	14176	CB	PHE	C	204	34.998	30.164	84.065	1.00	43.59	C
ATOM	14179	CG	PHE	C	204	36.445	30.474	84.271	1.00	41.29	C
ATOM	14180	CD1	PHE	C	204	37.012	30.355	85.529	1.00	41.92	C
ATOM	14182	CE1	PHE	C	204	38.355	30.627	85.735	1.00	41.92	C
ATOM	14184	CZ	PHE	C	204	39.147	31.031	84.671	1.00	40.62	C
ATOM	14186	CE2	PHE	C	204	38.592	31.157	83.406	1.00	41.05	C
ATOM	14188	CD2	PHE	C	204	37.247	30.878	83.209	1.00	40.69	C
ATOM	14190	C	PHE	C	204	33.180	28.472	84.017	1.00	43.70	C
ATOM	14191	O	PHE	C	204	32.628	28.441	82.929	1.00	44.89	O
ATOM	14193	N	GLN	C	205	32.514	28.375	85.161	1.00	41.85	N
ATOM	14194	CA	GLN	C	205	31.058	28.270	85.172	1.00	41.47	C
ATOM	14196	CB	GLN	C	205	30.555	28.033	86.580	1.00	40.99	C
ATOM	14199	CG	GLN	C	205	31.150	26.813	87.223	1.00	40.41	C
ATOM	14202	CD	GLN	C	205	30.457	26.449	88.495	1.00	38.27	C
ATOM	14203	OE1	GLN	C	205	29.376	26.950	88.800	1.00	36.94	O
ATOM	14204	NE2	GLN	C	205	31.076	25.571	89.255	1.00	41.62	N
ATOM	14207	C	GLN	C	205	30.354	29.500	84.606	1.00	42.28	C
ATOM	14208	O	GLN	C	205	29.230	29.407	84.085	1.00	42.60	O
ATOM	14210	N	LYS	C	206	30.999	30.653	84.721	1.00	44.49	N
ATOM	14211	CA	LYS	C	206	30.414	31.897	84.241	1.00	46.15	C
ATOM	14213	CB	LYS	C	206	30.145	32.842	85.421	1.00	48.93	C
ATOM	14216	CG	LYS	C	206	28.766	32.668	86.074	1.00	56.59	C
ATOM	14219	CD	LYS	C	206	27.563	32.894	85.102	1.00	65.83	C
ATOM	14222	CE	LYS	C	206	27.577	34.277	84.394	1.00	70.35	C
ATOM	14225	NZ	LYS	C	206	26.461	34.471	83.403	1.00	63.81	N
ATOM	14229	C	LYS	C	206	31.298	32.573	83.194	1.00	45.29	C
ATOM	14230	O	LYS	C	206	32.529	32.561	83.291	1.00	44.31	O
ATOM	14232	N	ALA	C	207	30.655	33.154	82.185	1.00	43.87	N
ATOM	14233	CA	ALA	C	207	31.370	33.903	81.155	1.00	44.67	C
ATOM	14235	CB	ALA	C	207	30.504	34.090	79.926	1.00	41.97	C
ATOM	14239	C	ALA	C	207	31.762	35.254	81.709	1.00	44.74	C
ATOM	14240	O	ALA	C	207	32.826	35.769	81.420	1.00	43.21	O
ATOM	14242	N	SER	C	208	30.872	35.819	82.511	1.00	47.30	N
ATOM	14243	CA	SER	C	208	31.007	37.180	82.957	1.00	47.65	C
ATOM	14245	CB	SER	C	208	30.285	38.115	81.994	1.00	47.36	C
ATOM	14248	OG	SER	C	208	30.415	39.462	82.420	1.00	53.29	O
ATOM	14250	C	SER	C	208	30.447	37.350	84.358	1.00	48.57	C
ATOM	14251	O	SER	C	208	29.727	36.494	84.891	1.00	50.08	O
ATOM	14253	N	SER	C	209	30.760	38.505	84.917	1.00	49.32	N
ATOM	14254	CA	SER	C	209	30.621	38.769	86.321	1.00	48.98	C
ATOM	14256	CB	SER	C	209	31.751	38.037	87.045	1.00	50.62	C
ATOM	14259	OG	SER	C	209	32.210	38.728	88.188	1.00	59.43	O
ATOM	14261	C	SER	C	209	30.713	40.286	86.491	1.00	47.64	C
ATOM	14262	O	SER	C	209	31.487	40.943	85.799	1.00	47.90	O
ATOM	14264	N	ILE	C	210	29.909	40.844	87.385	1.00	46.95	N
ATOM	14265	CA	ILE	C	210	29.902	42.287	87.597	1.00	47.27	C
ATOM	14267	CB	ILE	C	210	29.042	43.031	86.530	1.00	47.38	C
ATOM	14269	CG1	ILE	C	210	29.102	44.548	86.763	1.00	49.06	C
ATOM	14272	CD1	ILE	C	210	28.607	45.379	85.596	1.00	49.19	C

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ATOM  14276  CG2 ILE C 210      27.597  42.528  86.520  1.00 46.24           C
ATOM  14280  C   ILE C 210      29.446  42.661  89.009  1.00 46.41           C
ATOM  14281  O   ILE C 210      28.397  42.225  89.479  1.00 45.11           O
ATOM  14283  N   VAL C 211      30.246  43.489  89.672  1.00 46.59           N
ATOM  14284  CA  VAL C 211      29.962  43.879  91.035  1.00 46.30           C
ATOM  14286  CB  VAL C 211      30.907  43.149  92.044  1.00 46.18           C
ATOM  14288  CG1 VAL C 211      32.351  43.226  91.608  1.00 47.36           C
ATOM  14292  CG2 VAL C 211      30.733  43.682  93.460  1.00 48.64           C
ATOM  14296  C   VAL C 211      29.999  45.403  91.130  1.00 44.55           C
ATOM  14297  O   VAL C 211      30.917  46.046  90.634  1.00 40.49           O
ATOM  14299  N   TYR C 212      28.942  45.946  91.730  1.00 45.51           N
ATOM  14300  CA  TYR C 212      28.722  47.374  91.878  1.00 48.17           C
ATOM  14302  CB  TYR C 212      27.258  47.732  91.553  1.00 47.46           C
ATOM  14305  CG  TYR C 212      26.786  47.358  90.148  1.00 48.61           C
ATOM  14306  CD1 TYR C 212      26.505  48.339  89.196  1.00 47.15           C
ATOM  14308  CE1 TYR C 212      26.072  48.000  87.912  1.00 46.34           C
ATOM  14310  CZ  TYR C 212      25.912  46.664  87.572  1.00 48.17           C
ATOM  14311  OH  TYR C 212      25.487  46.307  86.314  1.00 47.91           O
ATOM  14313  CE2 TYR C 212      26.180  45.672  88.494  1.00 47.49           C
ATOM  14315  CD2 TYR C 212      26.612  46.019  89.775  1.00 50.98           C
ATOM  14317  C   TYR C 212      29.032  47.672  93.340  1.00 49.98           C
ATOM  14318  O   TYR C 212      28.768  46.819  94.187  1.00 50.87           O
ATOM  14320  N   LYS C 213      29.570  48.860  93.644  1.00 51.40           N
ATOM  14321  CA  LYS C 213      30.138  49.127  94.976  1.00 52.57           C
ATOM  14323  CB  LYS C 213      31.559  48.533  95.041  1.00 53.08           C
ATOM  14326  CG  LYS C 213      31.822  47.630  96.247  1.00 54.03           C
ATOM  14329  CD  LYS C 213      30.942  46.381  96.218  1.00 53.27           C
ATOM  14332  CE  LYS C 213      31.320  45.380  97.282  1.00 54.67           C
ATOM  14335  NZ  LYS C 213      30.348  44.249  97.333  1.00 55.09           N
ATOM  14339  C   LYS C 213      30.196  50.612  95.379  1.00 53.57           C
ATOM  14340  O   LYS C 213      30.429  51.483  94.549  1.00 52.52           O
ATOM  14342  N   LYS C 214      29.981  50.883  96.666  1.00 55.25           N
ATOM  14343  CA  LYS C 214      30.251  52.205  97.243  1.00 55.95           C
ATOM  14345  CB  LYS C 214      29.592  52.366  98.621  1.00 56.83           C
ATOM  14348  CG  LYS C 214      28.067  52.405  98.612  1.00 58.82           C
ATOM  14351  CD  LYS C 214      27.471  52.174 100.009  1.00 57.13           C
ATOM  14354  CE  LYS C 214      25.950  52.033  99.949  1.00 57.89           C
ATOM  14357  NZ  LYS C 214      25.388  51.233 101.062  1.00 59.14           N
ATOM  14361  C   LYS C 214      31.756  52.357  97.402  1.00 56.14           C
ATOM  14362  O   LYS C 214      32.459  51.377  97.661  1.00 55.57           O
ATOM  14364  N   GLU C 215      32.248  53.584  97.264  1.00 56.42           N
ATOM  14365  CA  GLU C 215      33.672  53.853  97.440  1.00 56.75           C
ATOM  14367  CB  GLU C 215      33.974  55.340  97.242  1.00 56.84           C
ATOM  14370  CG  GLU C 215      35.464  55.690  97.250  1.00 57.52           C
ATOM  14373  CD  GLU C 215      35.724  57.190  97.290  1.00 59.53           C
ATOM  14374  OE1 GLU C 215      34.754  57.977  97.260  1.00 65.50           O
ATOM  14375  OE2 GLU C 215      36.905  57.587  97.355  1.00 65.80           O
ATOM  14376  C   GLU C 215      34.111  53.421  98.836  1.00 55.85           C
ATOM  14377  O   GLU C 215      33.486  53.793  99.825  1.00 54.87           O
ATOM  14379  N   GLY C 216      35.174  52.625  98.900  1.00 55.70           N
ATOM  14380  CA  GLY C 216      35.746  52.191 100.171  1.00 55.61           C
ATOM  14383  C   GLY C 216      35.405  50.757 100.525  1.00 55.64           C
ATOM  14384  O   GLY C 216      36.227  50.060 101.125  1.00 56.14           O
ATOM  14386  N   GLU C 217      34.197  50.319 100.163  1.00 54.60           N
ATOM  14387  CA  GLU C 217      33.743  48.962 100.464  1.00 54.10           C
ATOM  14389  CB  GLU C 217      32.343  48.705  99.891  1.00 54.35           C
ATOM  14392  CG  GLU C 217      31.191  49.326 100.692  1.00 56.49           C
ATOM  14395  CD  GLU C 217      29.816  48.763 100.301  1.00 58.03           C
ATOM  14396  OE1 GLU C 217      29.488  48.746  99.092  1.00 60.23           O
ATOM  14397  OE2 GLU C 217      29.060  48.337 101.206  1.00 63.81           O
ATOM  14398  C   GLU C 217      34.716  47.939  99.903  1.00 51.94           C
ATOM  14399  O   GLU C 217      35.206  48.094  98.791  1.00 49.07           O
ATOM  14401  N   GLN C 218      35.009  46.912 100.697  1.00 52.70           N
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ATOM	14402	CA	GLN	C	218	35.832	45.788	100.254	1.00	52.78	C
ATOM	14404	CB	GLN	C	218	36.166	44.864	101.433	1.00	52.99	C
ATOM	14407	CG	GLN	C	218	37.024	43.652	101.074	1.00	52.54	C
ATOM	14410	CD	GLN	C	218	37.133	42.643	102.201	1.00	51.80	C
ATOM	14411	OE1	GLN	C	218	37.783	42.892	103.223	1.00	47.06	O
ATOM	14412	NE2	GLN	C	218	36.511	41.485	102.010	1.00	47.09	N
ATOM	14415	C	GLN	C	218	35.075	45.019	99.177	1.00	52.58	C
ATOM	14416	O	GLN	C	218	33.849	44.915	99.240	1.00	51.73	O
ATOM	14418	N	VAL	C	219	35.814	44.487	98.202	1.00	53.06	N
ATOM	14419	CA	VAL	C	219	35.235	43.821	97.038	1.00	53.35	C
ATOM	14421	CB	VAL	C	219	35.668	44.525	95.756	1.00	52.52	C
ATOM	14423	CG1	VAL	C	219	34.956	43.905	94.545	1.00	55.27	C
ATOM	14427	CG2	VAL	C	219	35.413	46.025	95.867	1.00	50.71	C
ATOM	14431	C	VAL	C	219	35.685	42.368	96.917	1.00	54.20	C
ATOM	14432	O	VAL	C	219	36.879	42.095	96.923	1.00	53.66	O
ATOM	14434	N	GLU	C	220	34.726	41.448	96.790	1.00	55.43	N
ATOM	14435	CA	GLU	C	220	35.018	40.027	96.546	1.00	55.04	C
ATOM	14437	CB	GLU	C	220	34.121	39.120	97.396	1.00	55.39	C
ATOM	14440	CG	GLU	C	220	34.056	39.469	98.889	1.00	55.85	C
ATOM	14443	CD	GLU	C	220	35.313	39.106	99.667	1.00	54.78	C
ATOM	14444	OE1	GLU	C	220	35.300	39.287	100.900	1.00	56.96	O
ATOM	14445	OE2	GLU	C	220	36.305	38.644	99.068	1.00	50.64	O
ATOM	14446	C	GLU	C	220	34.808	39.697	95.072	1.00	55.11	C
ATOM	14447	O	GLU	C	220	33.986	40.315	94.403	1.00	55.17	O
ATOM	14449	N	PHE	C	221	35.557	38.713	94.587	1.00	55.52	N
ATOM	14450	CA	PHE	C	221	35.558	38.316	93.180	1.00	54.61	C
ATOM	14452	CB	PHE	C	221	36.736	38.954	92.446	1.00	56.74	C
ATOM	14455	CG	PHE	C	221	36.448	40.290	91.824	1.00	57.01	C
ATOM	14456	CD1	PHE	C	221	35.319	40.488	91.039	1.00	59.62	C
ATOM	14458	CE1	PHE	C	221	35.079	41.707	90.442	1.00	60.01	C
ATOM	14460	CZ	PHE	C	221	35.984	42.750	90.607	1.00	62.05	C
ATOM	14462	CE2	PHE	C	221	37.126	42.560	91.372	1.00	59.83	C
ATOM	14464	CD2	PHE	C	221	37.357	41.333	91.963	1.00	58.66	C
ATOM	14466	C	PHE	C	221	35.755	36.814	93.099	1.00	53.59	C
ATOM	14467	O	PHE	C	221	36.796	36.311	93.519	1.00	51.58	O
ATOM	14469	N	SER	C	222	34.788	36.102	92.534	1.00	54.29	N
ATOM	14470	CA	SER	C	222	34.844	34.643	92.515	1.00	54.22	C
ATOM	14472	CB	SER	C	222	33.697	34.079	93.341	1.00	52.62	C
ATOM	14475	OG	SER	C	222	34.172	33.030	94.157	1.00	54.46	O
ATOM	14477	C	SER	C	222	34.803	34.082	91.093	1.00	54.63	C
ATOM	14478	O	SER	C	222	34.035	34.562	90.263	1.00	56.26	O
ATOM	14480	N	PHE	C	223	35.627	33.066	90.827	1.00	53.95	N
ATOM	14481	CA	PHE	C	223	35.737	32.460	89.494	1.00	53.72	C
ATOM	14483	CB	PHE	C	223	37.087	32.810	88.867	1.00	55.45	C
ATOM	14486	CG	PHE	C	223	37.410	34.261	88.945	1.00	57.79	C
ATOM	14487	CD1	PHE	C	223	37.148	35.106	87.885	1.00	59.55	C
ATOM	14489	CE1	PHE	C	223	37.439	36.457	87.972	1.00	59.44	C
ATOM	14491	CZ	PHE	C	223	37.974	36.972	89.136	1.00	56.41	C
ATOM	14493	CE2	PHE	C	223	38.223	36.136	90.195	1.00	57.94	C
ATOM	14495	CD2	PHE	C	223	37.940	34.794	90.101	1.00	59.58	C
ATOM	14497	C	PHE	C	223	35.567	30.949	89.574	1.00	52.46	C
ATOM	14498	O	PHE	C	223	36.512	30.192	89.351	1.00	51.78	O
ATOM	14500	N	PRO	C	224	34.351	30.498	89.905	1.00	51.98	N
ATOM	14501	CA	PRO	C	224	34.119	29.061	89.983	1.00	51.20	C
ATOM	14503	CB	PRO	C	224	32.643	28.960	90.367	1.00	49.21	C
ATOM	14506	CG	PRO	C	224	32.063	30.267	89.992	1.00	50.96	C
ATOM	14509	CD	PRO	C	224	33.136	31.264	90.215	1.00	51.52	C
ATOM	14512	C	PRO	C	224	34.382	28.363	88.651	1.00	49.85	C
ATOM	14513	O	PRO	C	224	34.005	28.871	87.588	1.00	48.29	O
ATOM	14514	N	LEU	C	225	35.044	27.214	88.735	1.00	49.32	N
ATOM	14515	CA	LEU	C	225	35.375	26.409	87.576	1.00	50.30	C
ATOM	14517	CB	LEU	C	225	36.752	25.793	87.761	1.00	49.70	C
ATOM	14520	CG	LEU	C	225	37.909	26.787	87.649	1.00	50.42	C

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ATOM  14522  CD1 LEU C 225      39.138  26.257  88.374  1.00 51.05           C
ATOM  14526  CD2 LEU C 225      38.212  27.098  86.194  1.00 48.90           C
ATOM  14530  C   LEU C 225      34.353  25.303  87.364  1.00 50.79           C
ATOM  14531  O   LEU C 225      33.601  24.950  88.269  1.00 51.80           O
ATOM  14533  N   ALA C 226      34.318  24.774  86.150  1.00 51.03           N
ATOM  14534  CA  ALA C 226      33.535  23.585  85.868  1.00 51.57           C
ATOM  14536  CB  ALA C 226      33.521  23.301  84.381  1.00 51.65           C
ATOM  14540  C   ALA C 226      34.162  22.429  86.627  1.00 50.65           C
ATOM  14541  O   ALA C 226      35.369  22.275  86.631  1.00 51.36           O
ATOM  14543  N   PHE C 227      33.345  21.623  87.283  1.00 50.74           N
ATOM  14544  CA  PHE C 227      33.859  20.562  88.134  1.00 53.88           C
ATOM  14546  CB  PHE C 227      32.796  19.489  88.341  1.00 50.95           C
ATOM  14549  CG  PHE C 227      33.324  18.242  88.973  1.00 47.51           C
ATOM  14550  CD1 PHE C 227      33.177  17.019  88.347  1.00 39.76           C
ATOM  14552  CE1 PHE C 227      33.668  15.869  88.926  1.00 47.50           C
ATOM  14554  CZ  PHE C 227      34.329  15.936  90.156  1.00 49.06           C
ATOM  14556  CE2 PHE C 227      34.489  17.157  90.786  1.00 46.39           C
ATOM  14558  CD2 PHE C 227      33.993  18.303  90.189  1.00 43.47           C
ATOM  14560  C   PHE C 227      35.134  19.905  87.595  1.00 57.01           C
ATOM  14561  O   PHE C 227      36.095  19.703  88.341  1.00 58.36           O
ATOM  14563  N   THR C 228      35.131  19.562  86.311  1.00 59.43           N
ATOM  14564  CA  THR C 228      36.256  18.844  85.706  1.00 62.28           C
ATOM  14566  CB  THR C 228      36.067  18.638  84.201  1.00 63.18           C
ATOM  14568  OG1 THR C 228      37.332  18.260  83.644  1.00 67.90           O
ATOM  14570  CG2 THR C 228      35.570  19.918  83.504  1.00 64.97           C
ATOM  14574  C   THR C 228      37.661  19.457  85.869  1.00 64.19           C
ATOM  14575  O   THR C 228      38.642  18.712  85.976  1.00 63.72           O
ATOM  14577  N   VAL C 229      37.756  20.791  85.875  1.00 65.75           N
ATOM  14578  CA  VAL C 229      39.066  21.494  85.906  1.00 66.45           C
ATOM  14580  CB  VAL C 229      39.058  22.863  85.068  1.00 68.23           C
ATOM  14582  CG1 VAL C 229      37.655  23.450  84.889  1.00 67.49           C
ATOM  14586  CG2 VAL C 229      40.026  23.921  85.637  1.00 67.21           C
ATOM  14590  C   VAL C 229      39.662  21.680  87.318  1.00 66.08           C
ATOM  14591  O   VAL C 229      40.829  22.049  87.453  1.00 64.25           O
ATOM  14593  N   GLU C 230      38.884  21.358  88.350  1.00 67.35           N
ATOM  14594  CA  GLU C 230      39.255  21.631  89.744  1.00 68.15           C
ATOM  14596  CB  GLU C 230      38.043  21.422  90.651  1.00 68.56           C
ATOM  14599  CG  GLU C 230      36.860  22.324  90.385  1.00 70.87           C
ATOM  14602  CD  GLU C 230      35.747  22.097  91.405  1.00 73.82           C
ATOM  14603  OE1 GLU C 230      35.631  20.959  91.924  1.00 79.59           O
ATOM  14604  OE2 GLU C 230      34.993  23.051  91.695  1.00 80.44           O
ATOM  14605  C   GLU C 230      40.419  20.808  90.324  1.00 67.98           C
ATOM  14606  O   GLU C 230      40.823  21.055  91.466  1.00 69.49           O
ATOM  14608  N   LYS C 231      40.941  19.829  89.582  1.00 67.30           N
ATOM  14609  CA  LYS C 231      42.073  19.017  90.063  1.00 66.42           C
ATOM  14611  CB  LYS C 231      41.608  17.576  90.295  1.00 67.27           C
ATOM  14614  CG  LYS C 231      41.010  17.387  91.680  1.00 69.67           C
ATOM  14617  CD  LYS C 231      40.456  15.988  91.915  1.00 70.79           C
ATOM  14620  CE  LYS C 231      39.836  15.889  93.324  1.00 74.18           C
ATOM  14623  NZ  LYS C 231      39.333  14.521  93.669  1.00 74.04           N
ATOM  14627  C   LYS C 231      43.307  19.074  89.151  1.00 63.49           C
ATOM  14628  O   LYS C 231      44.230  18.276  89.283  1.00 62.46           O
ATOM  14630  N   LEU C 232      43.330  20.067  88.270  1.00 61.95           N
ATOM  14631  CA  LEU C 232      44.328  20.178  87.216  1.00 61.41           C
ATOM  14633  CB  LEU C 232      43.640  20.603  85.918  1.00 62.35           C
ATOM  14636  CG  LEU C 232      42.863  19.549  85.129  1.00 61.71           C
ATOM  14638  CD1 LEU C 232      41.838  18.851  85.987  1.00 68.58           C
ATOM  14642  CD2 LEU C 232      42.208  20.203  83.930  1.00 62.39           C
ATOM  14646  C   LEU C 232      45.410  21.207  87.562  1.00 60.34           C
ATOM  14647  O   LEU C 232      45.138  22.207  88.234  1.00 60.57           O
ATOM  14649  N   THR C 233      46.632  20.963  87.091  1.00 58.14           N
ATOM  14650  CA  THR C 233      47.716  21.947  87.215  1.00 57.26           C
ATOM  14652  CB  THR C 233      49.106  21.312  87.039  1.00 56.18           C
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ATOM	14654	OG1	THR	C	233	49.327	20.343	88.075	1.00	56.61	O
ATOM	14656	CG2	THR	C	233	50.187	22.377	87.099	1.00	56.96	C
ATOM	14660	C	THR	C	233	47.542	23.080	86.190	1.00	55.74	C
ATOM	14661	O	THR	C	233	47.146	22.854	85.043	1.00	54.68	O
ATOM	14663	N	GLY	C	234	47.832	24.305	86.606	1.00	53.66	N
ATOM	14664	CA	GLY	C	234	47.617	25.433	85.730	1.00	53.19	C
ATOM	14667	C	GLY	C	234	48.256	26.705	86.212	1.00	51.79	C
ATOM	14668	O	GLY	C	234	48.789	26.773	87.317	1.00	51.14	O
ATOM	14670	N	SER	C	235	48.190	27.711	85.351	1.00	51.72	N
ATOM	14671	CA	SER	C	235	48.648	29.054	85.664	1.00	52.13	C
ATOM	14673	CB	SER	C	235	50.064	29.272	85.132	1.00	52.74	C
ATOM	14676	OG	SER	C	235	50.230	28.636	83.876	1.00	59.91	O
ATOM	14678	C	SER	C	235	47.677	30.048	85.048	1.00	49.69	C
ATOM	14679	O	SER	C	235	47.068	29.767	84.021	1.00	47.18	O
ATOM	14681	N	GLY	C	236	47.527	31.201	85.690	1.00	48.98	N
ATOM	14682	CA	GLY	C	236	46.566	32.191	85.244	1.00	48.93	C
ATOM	14685	C	GLY	C	236	46.867	33.601	85.700	1.00	48.65	C
ATOM	14686	O	GLY	C	236	47.683	33.826	86.586	1.00	48.83	O
ATOM	14688	N	GLU	C	237	46.167	34.550	85.096	1.00	49.66	N
ATOM	14689	CA	GLU	C	237	46.495	35.950	85.231	1.00	50.05	C
ATOM	14691	CB	GLU	C	237	47.498	36.314	84.146	1.00	49.39	C
ATOM	14694	CG	GLU	C	237	48.141	37.671	84.328	1.00	50.62	C
ATOM	14697	CD	GLU	C	237	49.331	37.892	83.410	1.00	49.34	C
ATOM	14698	OE1	GLU	C	237	50.023	38.915	83.596	1.00	43.92	O
ATOM	14699	OE2	GLU	C	237	49.572	37.047	82.515	1.00	46.20	O
ATOM	14700	C	GLU	C	237	45.251	36.820	85.092	1.00	51.27	C
ATOM	14701	O	GLU	C	237	44.408	36.578	84.229	1.00	51.12	O
ATOM	14703	N	LEU	C	238	45.145	37.829	85.952	1.00	52.08	N
ATOM	14704	CA	LEU	C	238	44.088	38.829	85.865	1.00	51.50	C
ATOM	14706	CB	LEU	C	238	43.587	39.180	87.263	1.00	51.30	C
ATOM	14709	CG	LEU	C	238	42.230	39.867	87.446	1.00	52.07	C
ATOM	14711	CD1	LEU	C	238	42.282	40.692	88.707	1.00	48.98	C
ATOM	14715	CD2	LEU	C	238	41.808	40.752	86.297	1.00	57.12	C
ATOM	14719	C	LEU	C	238	44.652	40.078	85.208	1.00	52.61	C
ATOM	14720	O	LEU	C	238	45.466	40.779	85.809	1.00	56.47	O
ATOM	14722	N	TRP	C	239	44.240	40.350	83.975	1.00	52.26	N
ATOM	14723	CA	TRP	C	239	44.584	41.604	83.313	1.00	52.01	C
ATOM	14725	CB	TRP	C	239	44.808	41.387	81.822	1.00	52.69	C
ATOM	14728	CG	TRP	C	239	46.004	40.578	81.512	1.00	52.47	C
ATOM	14729	CD1	TRP	C	239	46.090	39.211	81.472	1.00	51.83	C
ATOM	14731	NE1	TRP	C	239	47.369	38.832	81.136	1.00	51.73	N
ATOM	14733	CE2	TRP	C	239	48.132	39.958	80.952	1.00	52.18	C
ATOM	14734	CD2	TRP	C	239	47.300	41.077	81.182	1.00	51.43	C
ATOM	14735	CE3	TRP	C	239	47.841	42.363	81.058	1.00	49.98	C
ATOM	14737	CZ3	TRP	C	239	49.185	42.492	80.715	1.00	51.19	C
ATOM	14739	CH2	TRP	C	239	49.989	41.362	80.492	1.00	51.43	C
ATOM	14741	CZ2	TRP	C	239	49.482	40.089	80.605	1.00	51.88	C
ATOM	14743	C	TRP	C	239	43.425	42.552	83.499	1.00	51.25	C
ATOM	14744	O	TRP	C	239	42.278	42.146	83.351	1.00	48.99	O
ATOM	14746	N	TRP	C	240	43.727	43.815	83.794	1.00	52.34	N
ATOM	14747	CA	TRP	C	240	42.699	44.814	84.076	1.00	53.06	C
ATOM	14749	CB	TRP	C	240	42.779	45.206	85.545	1.00	53.29	C
ATOM	14752	CG	TRP	C	240	41.596	45.948	85.999	1.00	53.25	C
ATOM	14753	CD1	TRP	C	240	41.419	47.292	85.980	1.00	53.47	C
ATOM	14755	NE1	TRP	C	240	40.186	47.613	86.478	1.00	52.91	N
ATOM	14757	CE2	TRP	C	240	39.536	46.459	86.823	1.00	54.15	C
ATOM	14758	CD2	TRP	C	240	40.399	45.389	86.529	1.00	55.70	C
ATOM	14759	CE3	TRP	C	240	39.972	44.081	86.789	1.00	57.67	C
ATOM	14761	CZ3	TRP	C	240	38.714	43.889	87.331	1.00	55.91	C
ATOM	14763	CH2	TRP	C	240	37.875	44.981	87.614	1.00	56.10	C
ATOM	14765	CZ2	TRP	C	240	38.267	46.268	87.365	1.00	55.23	C
ATOM	14767	C	TRP	C	240	42.844	46.069	83.203	1.00	53.20	C
ATOM	14768	O	TRP	C	240	43.957	46.490	82.914	1.00	52.68	O

ATOM	14770	N	GLN	C	241	41.717	46.659	82.799	1.00	53.23	N
ATOM	14771	CA	GLN	C	241	41.699	47.940	82.072	1.00	54.32	C
ATOM	14773	CB	GLN	C	241	41.372	47.717	80.596	1.00	53.81	C
ATOM	14776	CG	GLN	C	241	41.333	48.994	79.760	1.00	53.12	C
ATOM	14779	CD	GLN	C	241	41.006	48.736	78.296	1.00	53.30	C
ATOM	14780	OE1	GLN	C	241	40.582	47.641	77.923	1.00	46.07	O
ATOM	14781	NE2	GLN	C	241	41.198	49.755	77.458	1.00	51.31	N
ATOM	14784	C	GLN	C	241	40.663	48.872	82.702	1.00	55.22	C
ATOM	14785	O	GLN	C	241	39.470	48.577	82.681	1.00	54.52	O
ATOM	14787	N	ALA	C	242	41.117	50.014	83.213	1.00	56.80	N
ATOM	14788	CA	ALA	C	242	40.366	50.742	84.236	1.00	57.99	C
ATOM	14790	CB	ALA	C	242	41.268	50.929	85.462	1.00	58.03	C
ATOM	14794	C	ALA	C	242	39.716	52.089	83.846	1.00	59.52	C
ATOM	14795	O	ALA	C	242	39.595	52.974	84.699	1.00	61.31	O
ATOM	14797	N	GLU	C	243	39.266	52.242	82.600	1.00	60.54	N
ATOM	14798	CA	GLU	C	243	38.531	53.464	82.173	1.00	61.09	C
ATOM	14800	CB	GLU	C	243	37.263	53.702	83.032	1.00	61.18	C
ATOM	14803	CG	GLU	C	243	36.330	54.792	82.474	1.00	60.52	C
ATOM	14806	CD	GLU	C	243	35.196	55.186	83.421	1.00	61.11	C
ATOM	14807	OE1	GLU	C	243	35.351	56.183	84.171	1.00	57.89	O
ATOM	14808	OE2	GLU	C	243	34.145	54.512	83.401	1.00	59.35	O
ATOM	14809	C	GLU	C	243	39.412	54.727	82.163	1.00	61.71	C
ATOM	14810	O	GLU	C	243	39.424	55.502	83.119	1.00	61.42	O
ATOM	14812	N	ARG	C	244	40.104	54.927	81.044	1.00	62.33	N
ATOM	14813	CA	ARG	C	244	41.129	55.959	80.844	1.00	62.50	C
ATOM	14815	CB	ARG	C	244	41.330	56.908	82.046	1.00	63.30	C
ATOM	14818	CG	ARG	C	244	42.099	56.339	83.272	1.00	64.05	C
ATOM	14821	CD	ARG	C	244	43.612	56.658	83.262	1.00	64.05	C
ATOM	14824	NE	ARG	C	244	43.888	58.096	83.155	1.00	63.61	N
ATOM	14826	CZ	ARG	C	244	44.500	58.705	82.133	1.00	64.13	C
ATOM	14827	NH1	ARG	C	244	44.671	60.022	82.173	1.00	63.73	N
ATOM	14830	NH2	ARG	C	244	44.952	58.030	81.077	1.00	62.98	N
ATOM	14833	C	ARG	C	244	42.424	55.241	80.485	1.00	63.61	C
ATOM	14834	O	ARG	C	244	43.214	55.742	79.682	1.00	66.59	O
ATOM	14836	N	ALA	C	245	42.616	54.059	81.071	1.00	63.14	N
ATOM	14837	CA	ALA	C	245	43.802	53.230	80.846	1.00	62.60	C
ATOM	14839	CB	ALA	C	245	43.623	51.874	81.526	1.00	63.00	C
ATOM	14843	C	ALA	C	245	44.117	53.022	79.370	1.00	61.76	C
ATOM	14844	O	ALA	C	245	45.282	53.082	78.968	1.00	59.83	O
ATOM	14846	N	SER	C	246	43.080	52.748	78.577	1.00	62.06	N
ATOM	14847	CA	SER	C	246	43.225	52.490	77.132	1.00	63.25	C
ATOM	14849	CB	SER	C	246	43.945	53.661	76.438	1.00	63.50	C
ATOM	14852	OG	SER	C	246	45.059	53.215	75.681	1.00	63.10	O
ATOM	14854	C	SER	C	246	43.910	51.152	76.776	1.00	63.94	C
ATOM	14855	O	SER	C	246	43.932	50.763	75.606	1.00	62.97	O
ATOM	14857	N	SER	C	247	44.437	50.456	77.787	1.00	64.20	N
ATOM	14858	CA	SER	C	247	45.252	49.252	77.606	1.00	63.13	C
ATOM	14860	CB	SER	C	247	46.611	49.607	76.978	1.00	62.58	C
ATOM	14863	OG	SER	C	247	47.167	50.782	77.554	1.00	61.80	O
ATOM	14865	C	SER	C	247	45.434	48.549	78.965	1.00	63.42	C
ATOM	14866	O	SER	C	247	45.598	49.215	79.999	1.00	63.66	O
ATOM	14868	N	SER	C	248	45.413	47.214	78.959	1.00	61.92	N
ATOM	14869	CA	SER	C	248	45.346	46.439	80.203	1.00	61.13	C
ATOM	14871	CB	SER	C	248	44.736	45.058	79.948	1.00	61.93	C
ATOM	14874	OG	SER	C	248	45.534	44.305	79.054	1.00	63.11	O
ATOM	14876	C	SER	C	248	46.692	46.264	80.895	1.00	59.90	C
ATOM	14877	O	SER	C	248	47.670	45.897	80.255	1.00	59.40	O
ATOM	14879	N	LYS	C	249	46.727	46.528	82.203	1.00	59.67	N
ATOM	14880	CA	LYS	C	249	47.884	46.206	83.048	1.00	58.19	C
ATOM	14882	CB	LYS	C	249	48.237	47.371	83.990	1.00	57.21	C
ATOM	14885	CG	LYS	C	249	47.360	47.533	85.225	1.00	58.66	C
ATOM	14888	CD	LYS	C	249	47.904	48.649	86.142	1.00	59.90	C
ATOM	14891	CE	LYS	C	249	46.980	48.945	87.333	1.00	59.35	C

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ATOM  14894  NZ  LYS C 249      45.554  49.194  86.912  1.00 58.33           N
ATOM  14898  C   LYS C 249      47.618  44.922  83.834  1.00 56.62           C
ATOM  14899  O   LYS C 249      46.466  44.603  84.147  1.00 56.93           O
ATOM  14901  N   SER C 250      48.683  44.183  84.138  1.00 55.39           N
ATOM  14902  CA  SER C 250      48.556  42.921  84.879  1.00 54.20           C
ATOM  14904  CB  SER C 250      49.763  42.000  84.642  1.00 53.70           C
ATOM  14907  OG  SER C 250      49.641  40.785  85.366  1.00 47.84           O
ATOM  14909  C   SER C 250      48.410  43.230  86.360  1.00 52.24           C
ATOM  14910  O   SER C 250      49.211  43.974  86.915  1.00 52.45           O
ATOM  14912  N   TRP C 251      47.379  42.661  86.982  1.00 50.50           N
ATOM  14913  CA  TRP C 251      47.109  42.861  88.406  1.00 49.58           C
ATOM  14915  CB  TRP C 251      45.596  42.900  88.662  1.00 48.98           C
ATOM  14918  CG  TRP C 251      44.996  44.280  88.617  1.00 49.55           C
ATOM  14919  CD1 TRP C 251      45.534  45.402  88.037  1.00 49.34           C
ATOM  14921  NE1 TRP C 251      44.688  46.466  88.200  1.00 47.82           N
ATOM  14923  CE2 TRP C 251      43.574  46.051  88.882  1.00 49.06           C
ATOM  14924  CD2 TRP C 251      43.731  44.678  89.157  1.00 47.03           C
ATOM  14925  CE3 TRP C 251      42.720  44.008  89.856  1.00 48.73           C
ATOM  14927  CZ3 TRP C 251      41.590  44.719  90.248  1.00 49.10           C
ATOM  14929  CH2 TRP C 251      41.463  46.087  89.960  1.00 50.83           C
ATOM  14931  CZ2 TRP C 251      42.442  46.770  89.283  1.00 49.80           C
ATOM  14933  C   TRP C 251      47.757  41.762  89.244  1.00 48.60           C
ATOM  14934  O   TRP C 251      48.449  42.043  90.224  1.00 47.76           O
ATOM  14936  N   ILE C 252      47.540  40.512  88.847  1.00 47.01           N
ATOM  14937  CA  ILE C 252      48.033  39.384  89.615  1.00 45.92           C
ATOM  14939  CB  ILE C 252      47.026  39.030  90.731  1.00 44.48           C
ATOM  14941  CG1 ILE C 252      47.670  38.165  91.809  1.00 44.56           C
ATOM  14944  CD1 ILE C 252      46.904  38.174  93.094  1.00 46.91           C
ATOM  14948  CG2 ILE C 252      45.804  38.358  90.157  1.00 43.65           C
ATOM  14952  C   ILE C 252      48.315  38.177  88.715  1.00 46.47           C
ATOM  14953  O   ILE C 252      47.797  38.076  87.595  1.00 47.24           O
ATOM  14955  N   THR C 253      49.148  37.277  89.230  1.00 45.39           N
ATOM  14956  CA  THR C 253      49.623  36.103  88.519  1.00 44.64           C
ATOM  14958  CB  THR C 253      50.991  36.430  87.863  1.00 44.18           C
ATOM  14960  OG1 THR C 253      50.779  36.916  86.536  1.00 44.41           O
ATOM  14962  CG2 THR C 253      51.914  35.250  87.796  1.00 44.21           C
ATOM  14966  C   THR C 253      49.718  34.988  89.555  1.00 44.74           C
ATOM  14967  O   THR C 253      50.139  35.236  90.689  1.00 43.55           O
ATOM  14969  N   PHE C 254      49.316  33.771  89.181  1.00 45.62           N
ATOM  14970  CA  PHE C 254      49.211  32.672  90.155  1.00 46.51           C
ATOM  14972  CB  PHE C 254      47.912  32.819  90.944  1.00 46.44           C
ATOM  14975  CG  PHE C 254      46.706  32.632  90.106  1.00 44.57           C
ATOM  14976  CD1 PHE C 254      46.226  33.672  89.336  1.00 46.93           C
ATOM  14978  CE1 PHE C 254      45.109  33.492  88.523  1.00 51.75           C
ATOM  14980  CZ  PHE C 254      44.470  32.253  88.478  1.00 47.49           C
ATOM  14982  CE2 PHE C 254      44.959  31.203  89.239  1.00 45.96           C
ATOM  14984  CD2 PHE C 254      46.076  31.396  90.041  1.00 46.05           C
ATOM  14986  C   PHE C 254      49.233  31.268  89.541  1.00 47.34           C
ATOM  14987  O   PHE C 254      48.806  31.071  88.400  1.00 47.65           O
ATOM  14989  N   ASP C 255      49.689  30.293  90.328  1.00 47.51           N
ATOM  14990  CA  ASP C 255      49.701  28.891  89.910  1.00 47.48           C
ATOM  14992  CB  ASP C 255      51.072  28.289  90.158  1.00 48.12           C
ATOM  14995  CG  ASP C 255      52.072  28.695  89.113  1.00 52.79           C
ATOM  14996  OD1 ASP C 255      51.671  29.342  88.121  1.00 55.48           O
ATOM  14997  OD2 ASP C 255      53.262  28.359  89.278  1.00 61.66           O
ATOM  14998  C   ASP C 255      48.653  28.054  90.622  1.00 47.00           C
ATOM  14999  O   ASP C 255      48.396  28.239  91.805  1.00 46.38           O
ATOM  15001  N   LEU C 256      48.058  27.127  89.880  1.00 47.65           N
ATOM  15002  CA  LEU C 256      47.085  26.186  90.418  1.00 47.62           C
ATOM  15004  CB  LEU C 256      45.805  26.227  89.588  1.00 47.25           C
ATOM  15007  CG  LEU C 256      44.667  25.297  90.000  1.00 48.43           C
ATOM  15009  CD1 LEU C 256      44.353  25.465  91.470  1.00 49.72           C
ATOM  15013  CD2 LEU C 256      43.428  25.564  89.159  1.00 46.55           C
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ATOM	15017	C	LEU	C	256	47.688	24.785	90.385	1.00	47.74	C
ATOM	15018	O	LEU	C	256	48.224	24.361	89.365	1.00	47.04	O
ATOM	15020	N	LYS	C	257	47.625	24.089	91.515	1.00	49.23	N
ATOM	15021	CA	LYS	C	257	48.102	22.714	91.610	1.00	49.52	C
ATOM	15023	CB	LYS	C	257	49.616	22.682	91.786	1.00	49.85	C
ATOM	15026	CG	LYS	C	257	50.180	21.273	91.835	1.00	51.35	C
ATOM	15029	CD	LYS	C	257	51.472	21.146	91.043	1.00	56.71	C
ATOM	15032	CE	LYS	C	257	51.781	19.682	90.720	1.00	59.11	C
ATOM	15035	NZ	LYS	C	257	53.033	19.521	89.910	1.00	62.57	N
ATOM	15039	C	LYS	C	257	47.439	22.003	92.778	1.00	49.14	C
ATOM	15040	O	LYS	C	257	47.587	22.435	93.922	1.00	49.80	O
ATOM	15042	N	ASN	C	258	46.715	20.925	92.482	1.00	47.65	N
ATOM	15043	CA	ASN	C	258	46.021	20.140	93.503	1.00	51.51	C
ATOM	15045	CB	ASN	C	258	47.027	19.327	94.353	1.00	52.58	C
ATOM	15048	CG	ASN	C	258	47.408	17.987	93.711	1.00	56.47	C
ATOM	15049	OD1	ASN	C	258	47.016	17.680	92.582	1.00	57.19	O
ATOM	15050	ND2	ASN	C	258	48.174	17.184	94.442	1.00	55.28	N
ATOM	15053	C	ASN	C	258	45.123	20.990	94.401	1.00	50.58	C
ATOM	15054	O	ASN	C	258	45.204	20.917	95.619	1.00	49.41	O
ATOM	15056	N	LYS	C	259	44.274	21.802	93.778	1.00	53.21	N
ATOM	15057	CA	LYS	C	259	43.327	22.690	94.485	1.00	53.98	C
ATOM	15059	CB	LYS	C	259	42.461	21.907	95.498	1.00	54.69	C
ATOM	15062	CG	LYS	C	259	41.936	20.542	95.001	1.00	59.35	C
ATOM	15065	CD	LYS	C	259	40.428	20.517	94.664	1.00	66.23	C
ATOM	15068	CE	LYS	C	259	39.543	20.004	95.824	1.00	67.76	C
ATOM	15071	NZ	LYS	C	259	39.204	21.046	96.851	1.00	64.81	N
ATOM	15075	C	LYS	C	259	43.987	23.902	95.181	1.00	53.79	C
ATOM	15076	O	LYS	C	259	43.284	24.840	95.564	1.00	54.56	O
ATOM	15078	N	GLU	C	260	45.316	23.892	95.325	1.00	52.48	N
ATOM	15079	CA	GLU	C	260	46.051	24.958	96.023	1.00	52.41	C
ATOM	15081	CB	GLU	C	260	47.304	24.394	96.716	1.00	52.76	C
ATOM	15084	CG	GLU	C	260	47.064	23.808	98.100	1.00	55.53	C
ATOM	15087	CD	GLU	C	260	48.361	23.501	98.847	1.00	58.26	C
ATOM	15088	OE1	GLU	C	260	48.306	23.278	100.076	1.00	64.23	O
ATOM	15089	OE2	GLU	C	260	49.438	23.482	98.210	1.00	68.33	O
ATOM	15090	C	GLU	C	260	46.465	26.084	95.067	1.00	50.41	C
ATOM	15091	O	GLU	C	260	46.881	25.818	93.943	1.00	51.33	O
ATOM	15093	N	VAL	C	261	46.380	27.331	95.534	1.00	48.09	N
ATOM	15094	CA	VAL	C	261	46.668	28.509	94.713	1.00	46.83	C
ATOM	15096	CB	VAL	C	261	45.421	29.423	94.586	1.00	45.44	C
ATOM	15098	CG1	VAL	C	261	45.711	30.604	93.687	1.00	46.97	C
ATOM	15102	CG2	VAL	C	261	44.240	28.650	94.044	1.00	45.02	C
ATOM	15106	C	VAL	C	261	47.836	29.324	95.289	1.00	45.24	C
ATOM	15107	O	VAL	C	261	47.718	29.920	96.358	1.00	41.26	O
ATOM	15109	N	SER	C	262	48.952	29.335	94.559	1.00	46.20	N
ATOM	15110	CA	SER	C	262	50.138	30.128	94.894	1.00	47.83	C
ATOM	15112	CB	SER	C	262	51.396	29.311	94.621	1.00	47.10	C
ATOM	15115	OG	SER	C	262	51.506	28.252	95.542	1.00	51.61	O
ATOM	15117	C	SER	C	262	50.204	31.391	94.045	1.00	49.15	C
ATOM	15118	O	SER	C	262	50.085	31.304	92.823	1.00	51.69	O
ATOM	15120	N	VAL	C	263	50.436	32.550	94.665	1.00	48.68	N
ATOM	15121	CA	VAL	C	263	50.494	33.810	93.907	1.00	48.91	C
ATOM	15123	CB	VAL	C	263	49.712	34.981	94.607	1.00	48.17	C
ATOM	15125	CG1	VAL	C	263	48.663	34.440	95.578	1.00	46.85	C
ATOM	15129	CG2	VAL	C	263	50.627	35.953	95.327	1.00	51.31	C
ATOM	15133	C	VAL	C	263	51.958	34.168	93.579	1.00	49.79	C
ATOM	15134	O	VAL	C	263	52.799	34.316	94.472	1.00	48.47	O
ATOM	15136	N	LYS	C	264	52.262	34.289	92.291	1.00	50.90	N
ATOM	15137	CA	LYS	C	264	53.635	34.529	91.850	1.00	51.12	C
ATOM	15139	CB	LYS	C	264	53.896	33.805	90.540	1.00	51.57	C
ATOM	15142	CG	LYS	C	264	53.756	32.305	90.607	1.00	55.55	C
ATOM	15145	CD	LYS	C	264	54.067	31.680	89.244	1.00	56.56	C
ATOM	15148	CE	LYS	C	264	53.023	32.050	88.179	1.00	58.78	C

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ATOM  15151  NZ  LYS C 264      53.138  31.219  86.946  1.00 58.89           N
ATOM  15155  C   LYS C 264      53.967  36.001  91.653  1.00 49.17           C
ATOM  15156  O   LYS C 264      55.116  36.387  91.786  1.00 48.14           O
ATOM  15158  N   ARG C 265      52.973  36.810  91.307  1.00 49.03           N
ATOM  15159  CA  ARG C 265      53.209  38.210  90.960  1.00 50.08           C
ATOM  15161  CB  ARG C 265      53.455  38.332  89.458  1.00 50.30           C
ATOM  15164  CG  ARG C 265      54.691  39.104  89.043  1.00 49.45           C
ATOM  15167  CD  ARG C 265      55.041  38.759  87.605  1.00 49.01           C
ATOM  15170  NE  ARG C 265      56.273  39.395  87.136  1.00 52.33           N
ATOM  15172  CZ  ARG C 265      56.916  39.068  86.011  1.00 50.45           C
ATOM  15173  NH1 ARG C 265      58.028  39.706  85.664  1.00 49.84           N
ATOM  15176  NH2 ARG C 265      56.455  38.107  85.222  1.00 53.21           N
ATOM  15179  C   ARG C 265      51.974  38.995  91.339  1.00 50.17           C
ATOM  15180  O   ARG C 265      50.869  38.489  91.224  1.00 51.12           O
ATOM  15182  N   VAL C 266      52.156  40.224  91.804  1.00 51.61           N
ATOM  15183  CA  VAL C 266      51.040  41.033  92.284  1.00 53.46           C
ATOM  15185  CB  VAL C 266      50.835  40.893  93.811  1.00 54.83           C
ATOM  15187  CG1 VAL C 266      49.637  41.726  94.278  1.00 56.37           C
ATOM  15191  CG2 VAL C 266      50.653  39.430  94.207  1.00 58.89           C
ATOM  15195  C   VAL C 266      51.319  42.484  92.002  1.00 53.73           C
ATOM  15196  O   VAL C 266      52.465  42.910  92.032  1.00 54.06           O
ATOM  15198  N   THR C 267      50.268  43.247  91.733  1.00 55.45           N
ATOM  15199  CA  THR C 267      50.418  44.685  91.566  1.00 55.96           C
ATOM  15201  CB  THR C 267      49.238  45.339  90.782  1.00 56.37           C
ATOM  15203  OG1 THR C 267      49.562  46.699  90.459  1.00 54.71           O
ATOM  15205  CG2 THR C 267      47.946  45.320  91.593  1.00 57.41           C
ATOM  15209  C   THR C 267      50.539  45.347  92.928  1.00 56.70           C
ATOM  15210  O   THR C 267      49.844  44.978  93.885  1.00 55.32           O
ATOM  15212  N   GLN C 268      51.465  46.298  93.001  1.00 57.43           N
ATOM  15213  CA  GLN C 268      51.418  47.354  94.000  1.00 56.91           C
ATOM  15215  CB  GLN C 268      52.780  48.060  94.120  1.00 56.93           C
ATOM  15218  CG  GLN C 268      53.514  48.362  92.784  1.00 56.06           C
ATOM  15221  CD  GLN C 268      54.714  49.288  92.955  1.00 54.89           C
ATOM  15222  OE1 GLN C 268      54.943  50.186  92.146  1.00 51.57           O
ATOM  15223  NE2 GLN C 268      55.481  49.073  94.013  1.00 52.66           N
ATOM  15226  C   GLN C 268      50.336  48.319  93.518  1.00 57.79           C
ATOM  15227  O   GLN C 268      50.519  48.967  92.493  1.00 59.74           O
ATOM  15229  N   ASP C 269      49.200  48.374  94.219  1.00 57.82           N
ATOM  15230  CA  ASP C 269      48.039  49.205  93.813  1.00 57.20           C
ATOM  15232  CB  ASP C 269      48.487  50.617  93.397  1.00 56.58           C
ATOM  15235  CG  ASP C 269      47.428  51.663  93.652  1.00 57.36           C
ATOM  15236  OD1 ASP C 269      46.776  52.122  92.695  1.00 59.34           O
ATOM  15237  OD2 ASP C 269      47.242  52.032  94.821  1.00 60.71           O
ATOM  15238  C   ASP C 269      47.184  48.568  92.683  1.00 55.97           C
ATOM  15239  O   ASP C 269      47.613  48.507  91.529  1.00 52.98           O
ATOM  15241  N   PRO C 270      45.984  48.058  93.016  1.00 56.48           N
ATOM  15242  CA  PRO C 270      45.418  47.872  94.354  1.00 58.21           C
ATOM  15244  CB  PRO C 270      43.958  47.479  94.078  1.00 57.77           C
ATOM  15247  CG  PRO C 270      43.956  46.913  92.715  1.00 55.92           C
ATOM  15250  CD  PRO C 270      45.066  47.595  91.961  1.00 57.28           C
ATOM  15253  C   PRO C 270      46.142  46.750  95.087  1.00 58.74           C
ATOM  15254  O   PRO C 270      46.739  45.884  94.444  1.00 58.59           O
ATOM  15255  N   LYS C 271      46.098  46.767  96.416  1.00 60.62           N
ATOM  15256  CA  LYS C 271      46.734  45.714  97.208  1.00 61.47           C
ATOM  15258  CB  LYS C 271      47.033  46.190  98.629  1.00 61.51           C
ATOM  15261  CG  LYS C 271      48.022  47.357  98.669  1.00 60.55           C
ATOM  15264  CD  LYS C 271      49.267  47.031  99.497  1.00 61.33           C
ATOM  15267  CE  LYS C 271      50.385  48.047  99.261  1.00 63.15           C
ATOM  15270  NZ  LYS C 271      51.744  47.472  99.468  1.00 62.50           N
ATOM  15274  C   LYS C 271      45.836  44.483  97.195  1.00 62.96           C
ATOM  15275  O   LYS C 271      44.858  44.395  97.942  1.00 64.70           O
ATOM  15277  N   LEU C 272      46.196  43.539  96.329  1.00 62.64           N
ATOM  15278  CA  LEU C 272      45.325  42.439  95.933  1.00 62.58           C
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ATOM  15280  CB  LEU C 272      45.549  42.156  94.438  1.00 63.18           C
ATOM  15283  CG  LEU C 272      44.366  42.188  93.468  1.00 61.62           C
ATOM  15285  CD1 LEU C 272      43.627  40.889  93.484  1.00 62.32           C
ATOM  15289  CD2 LEU C 272      43.421  43.347  93.770  1.00 62.98           C
ATOM  15293  C   LEU C 272      45.657  41.196  96.752  1.00 62.94           C
ATOM  15294  O   LEU C 272      46.822  40.800  96.816  1.00 63.09           O
ATOM  15296  N   GLN C 273      44.647  40.576  97.363  1.00 63.24           N
ATOM  15297  CA  GLN C 273      44.861  39.377  98.201  1.00 64.03           C
ATOM  15299  CB  GLN C 273      44.604  39.670  99.694  1.00 63.96           C
ATOM  15302  CG  GLN C 273      43.360  40.522 100.034  1.00 66.07           C
ATOM  15305  CD  GLN C 273      43.506  41.289 101.360  1.00 66.75           C
ATOM  15306  OE1 GLN C 273      44.102  40.789 102.316  1.00 69.08           O
ATOM  15307  NE2 GLN C 273      42.963  42.509 101.411  1.00 66.69           N
ATOM  15310  C   GLN C 273      44.029  38.186  97.719  1.00 64.15           C
ATOM  15311  O   GLN C 273      42.802  38.198  97.804  1.00 66.11           O
ATOM  15313  N   MET C 274      44.711  37.157  97.218  1.00 63.20           N
ATOM  15314  CA  MET C 274      44.049  36.003  96.617  1.00 62.63           C
ATOM  15316  CB  MET C 274      44.845  35.499  95.412  1.00 62.63           C
ATOM  15319  CG  MET C 274      44.157  34.381  94.641  1.00 63.68           C
ATOM  15322  SD  MET C 274      44.652  34.271  92.906  1.00 66.50           S
ATOM  15323  CE  MET C 274      43.761  35.674  92.237  1.00 67.97           C
ATOM  15327  C   MET C 274      43.880  34.872  97.612  1.00 61.22           C
ATOM  15328  O   MET C 274      44.754  34.620  98.430  1.00 61.87           O
ATOM  15330  N   GLY C 275      42.748  34.186  97.521  1.00 60.68           N
ATOM  15331  CA  GLY C 275      42.475  33.023  98.345  1.00 60.59           C
ATOM  15334  C   GLY C 275      43.493  31.915  98.151  1.00 60.84           C
ATOM  15335  O   GLY C 275      44.138  31.798  97.106  1.00 60.35           O
ATOM  15337  N   LYS C 276      43.603  31.077  99.169  1.00 61.47           N
ATOM  15338  CA  LYS C 276      44.681  30.095  99.270  1.00 61.21           C
ATOM  15340  CB  LYS C 276      44.967  29.785 100.748  1.00 62.19           C
ATOM  15343  CG  LYS C 276      43.720  29.409 101.590  1.00 65.47           C
ATOM  15346  CD  LYS C 276      43.103  30.615 102.333  1.00 67.04           C
ATOM  15349  CE  LYS C 276      41.612  30.417 102.632  1.00 66.23           C
ATOM  15352  NZ  LYS C 276      41.367  29.395 103.692  1.00 59.95           N
ATOM  15356  C   LYS C 276      44.351  28.807  98.518  1.00 60.48           C
ATOM  15357  O   LYS C 276      45.243  28.020  98.207  1.00 59.19           O
ATOM  15359  N   LYS C 277      43.064  28.609  98.234  1.00 59.98           N
ATOM  15360  CA  LYS C 277      42.549  27.351  97.701  1.00 59.13           C
ATOM  15362  CB  LYS C 277      42.187  26.416  98.863  1.00 59.67           C
ATOM  15365  CG  LYS C 277      43.362  25.594  99.395  1.00 62.99           C
ATOM  15368  CD  LYS C 277      43.094  25.014 100.790  1.00 63.32           C
ATOM  15371  CE  LYS C 277      43.454  26.007 101.910  1.00 67.77           C
ATOM  15374  NZ  LYS C 277      43.650  25.350 103.249  1.00 66.56           N
ATOM  15378  C   LYS C 277      41.329  27.599  96.806  1.00 56.72           C
ATOM  15379  O   LYS C 277      40.806  28.710  96.753  1.00 57.13           O
ATOM  15381  N   LEU C 278      40.881  26.571  96.096  1.00 54.32           N
ATOM  15382  CA  LEU C 278      39.716  26.713  95.227  1.00 52.98           C
ATOM  15384  CB  LEU C 278      39.525  25.478  94.362  1.00 51.77           C
ATOM  15387  CG  LEU C 278      40.576  25.328  93.271  1.00 54.79           C
ATOM  15389  CD1 LEU C 278      40.435  23.980  92.607  1.00 57.28           C
ATOM  15393  CD2 LEU C 278      40.467  26.454  92.242  1.00 56.60           C
ATOM  15397  C   LEU C 278      38.469  26.932  96.054  1.00 50.20           C
ATOM  15398  O   LEU C 278      38.413  26.492  97.202  1.00 48.54           O
ATOM  15400  N   PRO C 279      37.465  27.624  95.484  1.00 48.92           N
ATOM  15401  CA  PRO C 279      37.466  28.241  94.163  1.00 48.87           C
ATOM  15403  CB  PRO C 279      35.991  28.569  93.940  1.00 48.66           C
ATOM  15406  CG  PRO C 279      35.480  28.845  95.289  1.00 47.76           C
ATOM  15409  CD  PRO C 279      36.183  27.855  96.174  1.00 48.41           C
ATOM  15412  C   PRO C 279      38.294  29.529  94.104  1.00 49.11           C
ATOM  15413  O   PRO C 279      38.301  30.310  95.059  1.00 48.14           O
ATOM  15414  N   LEU C 280      38.974  29.736  92.976  1.00 48.91           N
ATOM  15415  CA  LEU C 280      39.736  30.954  92.735  1.00 48.31           C
ATOM  15417  CB  LEU C 280      40.032  31.141  91.245  1.00 45.56           C
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ATOM  15420  CG  LEU C 280      40.723  30.005  90.488  1.00 45.81           C
ATOM  15422  CD1 LEU C 280      40.958  30.396  89.043  1.00 46.69           C
ATOM  15426  CD2 LEU C 280      42.033  29.620  91.134  1.00 44.94           C
ATOM  15430  C   LEU C 280      38.916  32.122  93.248  1.00 48.75           C
ATOM  15431  O   LEU C 280      37.744  32.272  92.909  1.00 48.16           O
ATOM  15433  N   HIS C 281      39.522  32.937  94.094  1.00 51.52           N
ATOM  15434  CA  HIS C 281      38.776  33.987  94.749  1.00 52.97           C
ATOM  15436  CB  HIS C 281      37.944  33.388  95.882  1.00 55.29           C
ATOM  15439  CG  HIS C 281      37.171  34.401  96.666  1.00 55.78           C
ATOM  15440  ND1 HIS C 281      37.540  34.798  97.932  1.00 57.68           N
ATOM  15442  CE1 HIS C 281      36.676  35.691  98.379  1.00 60.74           C
ATOM  15444  NE2 HIS C 281      35.760  35.890  97.447  1.00 60.85           N
ATOM  15446  CD2 HIS C 281      36.045  35.093  96.365  1.00 59.12           C
ATOM  15448  C   HIS C 281      39.718  35.029  95.295  1.00 53.59           C
ATOM  15449  O   HIS C 281      40.495  34.745  96.199  1.00 54.41           O
ATOM  15451  N   LEU C 282      39.662  36.231  94.740  1.00 54.10           N
ATOM  15452  CA  LEU C 282      40.476  37.311  95.256  1.00 55.59           C
ATOM  15454  CB  LEU C 282      41.479  37.827  94.216  1.00 57.69           C
ATOM  15457  CG  LEU C 282      41.109  38.746  93.043  1.00 61.91           C
ATOM  15459  CD1 LEU C 282      40.456  40.052  93.499  1.00 64.07           C
ATOM  15463  CD2 LEU C 282      40.245  38.068  92.016  1.00 65.90           C
ATOM  15467  C   LEU C 282      39.587  38.411  95.763  1.00 55.77           C
ATOM  15468  O   LEU C 282      38.398  38.461  95.427  1.00 53.36           O
ATOM  15470  N   THR C 283      40.179  39.281  96.586  1.00 56.22           N
ATOM  15471  CA  THR C 283      39.478  40.441  97.127  1.00 56.13           C
ATOM  15473  CB  THR C 283      38.901  40.176  98.553  1.00 56.10           C
ATOM  15475  OG1 THR C 283      38.975  41.369  99.347  1.00 51.35           O
ATOM  15477  CG2 THR C 283      39.633  39.028  99.265  1.00 56.68           C
ATOM  15481  C   THR C 283      40.317  41.721  97.119  1.00 56.00           C
ATOM  15482  O   THR C 283      41.525  41.702  97.367  1.00 55.55           O
ATOM  15484  N   LEU C 284      39.647  42.825  96.797  1.00 56.47           N
ATOM  15485  CA  LEU C 284      40.190  44.152  96.991  1.00 57.17           C
ATOM  15487  CB  LEU C 284      39.660  45.129  95.952  1.00 56.86           C
ATOM  15490  CG  LEU C 284      40.173  45.008  94.524  1.00 58.84           C
ATOM  15492  CD1 LEU C 284      39.788  43.674  93.911  1.00 61.44           C
ATOM  15496  CD2 LEU C 284      39.624  46.161  93.700  1.00 58.80           C
ATOM  15500  C   LEU C 284      39.715  44.618  98.344  1.00 57.25           C
ATOM  15501  O   LEU C 284      38.510  44.690  98.572  1.00 56.00           O
ATOM  15503  N   PRO C 285      40.647  44.941  99.251  1.00 59.41           N
ATOM  15504  CA  PRO C 285      40.234  45.538 100.531  1.00 60.45           C
ATOM  15506  CB  PRO C 285      41.563  45.785 101.268  1.00 60.29           C
ATOM  15509  CG  PRO C 285      42.650  45.570 100.265  1.00 60.05           C
ATOM  15512  CD  PRO C 285      42.104  44.738  99.160  1.00 59.55           C
ATOM  15515  C   PRO C 285      39.435  46.847 100.401  1.00 60.94           C
ATOM  15516  O   PRO C 285      38.739  47.228 101.343  1.00 61.14           O
ATOM  15517  N   GLN C 286      39.500  47.490  99.233  1.00 62.02           N
ATOM  15518  CA  GLN C 286      39.100  48.892  99.067  1.00 63.02           C
ATOM  15520  CB  GLN C 286      40.281  49.809  99.434  1.00 64.74           C
ATOM  15523  CG  GLN C 286      41.704  49.172  99.295  1.00 70.58           C
ATOM  15526  CD  GLN C 286      42.080  48.713  97.865  1.00 75.12           C
ATOM  15527  OE1 GLN C 286      42.483  49.522  97.027  1.00 77.23           O
ATOM  15528  NE2 GLN C 286      41.985  47.408  97.609  1.00 71.67           N
ATOM  15531  C   GLN C 286      38.612  49.227  97.643  1.00 62.97           C
ATOM  15532  O   GLN C 286      39.400  49.249  96.690  1.00 62.71           O
ATOM  15534  N   ALA C 287      37.318  49.499  97.498  1.00 62.09           N
ATOM  15535  CA  ALA C 287      36.791  49.964  96.216  1.00 61.81           C
ATOM  15537  CB  ALA C 287      35.293  49.800  96.159  1.00 62.58           C
ATOM  15541  C   ALA C 287      37.167  51.427  96.013  1.00 61.81           C
ATOM  15542  O   ALA C 287      37.006  52.247  96.919  1.00 60.71           O
ATOM  15544  N   LEU C 288      37.677  51.741  94.825  1.00 61.62           N
ATOM  15545  CA  LEU C 288      38.071  53.107  94.485  1.00 60.16           C
ATOM  15547  CB  LEU C 288      39.554  53.325  94.791  1.00 61.22           C
ATOM  15550  CG  LEU C 288      39.958  53.460  96.260  1.00 64.94           C
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ATOM	15552	CD1	LEU	C	288	41.489	53.510	96.400	1.00	65.46	C
ATOM	15556	CD2	LEU	C	288	39.302	54.701	96.880	1.00	65.41	C
ATOM	15560	C	LEU	C	288	37.814	53.415	93.012	1.00	58.56	C
ATOM	15561	O	LEU	C	288	37.878	52.514	92.168	1.00	58.21	O
ATOM	15563	N	PRO	C	289	37.527	54.692	92.695	1.00	56.06	N
ATOM	15564	CA	PRO	C	289	37.300	55.065	91.305	1.00	55.45	C
ATOM	15566	CB	PRO	C	289	37.254	56.605	91.344	1.00	56.33	C
ATOM	15569	CG	PRO	C	289	37.631	57.008	92.731	1.00	55.40	C
ATOM	15572	CD	PRO	C	289	37.373	55.842	93.603	1.00	56.31	C
ATOM	15575	C	PRO	C	289	38.396	54.575	90.354	1.00	53.92	C
ATOM	15576	O	PRO	C	289	38.083	54.128	89.250	1.00	54.03	O
ATOM	15577	N	GLN	C	290	39.656	54.644	90.781	1.00	52.07	N
ATOM	15578	CA	GLN	C	290	40.785	54.321	89.896	1.00	51.62	C
ATOM	15580	CB	GLN	C	290	42.111	54.860	90.453	1.00	51.09	C
ATOM	15583	CG	GLN	C	290	42.518	54.334	91.836	1.00	50.62	C
ATOM	15586	CD	GLN	C	290	42.359	55.372	92.944	1.00	48.92	C
ATOM	15587	OE1	GLN	C	290	41.281	55.935	93.141	1.00	50.38	O
ATOM	15588	NE2	GLN	C	290	43.436	55.619	93.677	1.00	38.93	N
ATOM	15591	C	GLN	C	290	40.916	52.826	89.565	1.00	51.22	C
ATOM	15592	O	GLN	C	290	41.587	52.462	88.595	1.00	51.06	O
ATOM	15594	N	TYR	C	291	40.276	51.967	90.355	1.00	50.25	N
ATOM	15595	CA	TYR	C	291	40.289	50.529	90.089	1.00	49.57	C
ATOM	15597	CB	TYR	C	291	40.384	49.746	91.397	1.00	51.28	C
ATOM	15600	CG	TYR	C	291	41.530	50.188	92.263	1.00	50.55	C
ATOM	15601	CD1	TYR	C	291	42.804	50.358	91.719	1.00	53.72	C
ATOM	15603	CE1	TYR	C	291	43.866	50.770	92.498	1.00	55.53	C
ATOM	15605	CZ	TYR	C	291	43.664	51.024	93.843	1.00	55.96	C
ATOM	15606	OH	TYR	C	291	44.724	51.428	94.608	1.00	54.10	O
ATOM	15608	CE2	TYR	C	291	42.407	50.866	94.409	1.00	53.50	C
ATOM	15610	CD2	TYR	C	291	41.350	50.445	93.617	1.00	51.86	C
ATOM	15612	C	TYR	C	291	39.067	50.068	89.313	1.00	48.31	C
ATOM	15613	O	TYR	C	291	38.974	48.891	88.970	1.00	46.37	O
ATOM	15615	N	ALA	C	292	38.142	50.991	89.039	1.00	47.83	N
ATOM	15616	CA	ALA	C	292	36.881	50.663	88.368	1.00	47.22	C
ATOM	15618	CB	ALA	C	292	35.852	51.766	88.573	1.00	47.73	C
ATOM	15622	C	ALA	C	292	37.133	50.459	86.897	1.00	45.67	C
ATOM	15623	O	ALA	C	292	37.833	51.244	86.280	1.00	48.25	O
ATOM	15625	N	GLY	C	293	36.550	49.408	86.337	1.00	45.01	N
ATOM	15626	CA	GLY	C	293	36.777	49.063	84.943	1.00	45.06	C
ATOM	15629	C	GLY	C	293	36.457	47.617	84.628	1.00	43.41	C
ATOM	15630	O	GLY	C	293	35.526	47.044	85.188	1.00	44.31	O
ATOM	15632	N	SER	C	294	37.231	47.031	83.724	1.00	43.46	N
ATOM	15633	CA	SER	C	294	36.982	45.670	83.282	1.00	45.43	C
ATOM	15635	CB	SER	C	294	36.201	45.666	81.982	1.00	44.75	C
ATOM	15638	OG	SER	C	294	35.833	44.339	81.659	1.00	45.27	O
ATOM	15640	C	SER	C	294	38.262	44.887	83.067	1.00	45.48	C
ATOM	15641	O	SER	C	294	39.237	45.404	82.518	1.00	43.96	O
ATOM	15643	N	GLY	C	295	38.235	43.626	83.479	1.00	47.01	N
ATOM	15644	CA	GLY	C	295	39.391	42.760	83.350	1.00	49.10	C
ATOM	15647	C	GLY	C	295	39.055	41.414	82.769	1.00	49.83	C
ATOM	15648	O	GLY	C	295	37.922	41.158	82.367	1.00	50.35	O
ATOM	15650	N	ASN	C	296	40.066	40.558	82.716	1.00	52.72	N
ATOM	15651	CA	ASN	C	296	39.915	39.184	82.250	1.00	54.40	C
ATOM	15653	CB	ASN	C	296	40.311	39.046	80.761	1.00	55.45	C
ATOM	15656	CG	ASN	C	296	39.126	39.164	79.808	1.00	60.32	C
ATOM	15657	OD1	ASN	C	296	37.970	39.045	80.220	1.00	69.70	O
ATOM	15658	ND2	ASN	C	296	39.413	39.388	78.519	1.00	56.58	N
ATOM	15661	C	ASN	C	296	40.820	38.299	83.077	1.00	54.20	C
ATOM	15662	O	ASN	C	296	42.043	38.426	83.003	1.00	54.47	O
ATOM	15664	N	LEU	C	297	40.226	37.419	83.873	1.00	54.66	N
ATOM	15665	CA	LEU	C	297	40.972	36.321	84.474	1.00	54.56	C
ATOM	15667	CB	LEU	C	297	40.152	35.637	85.564	1.00	53.85	C
ATOM	15670	CG	LEU	C	297	41.010	34.824	86.531	1.00	54.84	C

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ATOM  15672  CD1 LEU C 297      41.612  35.742  87.598  1.00 55.62           C
ATOM  15676  CD2 LEU C 297      40.222  33.704  87.181  1.00 56.64           C
ATOM  15680  C   LEU C 297      41.253  35.334  83.353  1.00 54.66           C
ATOM  15681  O   LEU C 297      40.333  34.948  82.648  1.00 56.15           O
ATOM  15683  N   THR C 298      42.509  34.944  83.166  1.00 53.50           N
ATOM  15684  CA  THR C 298      42.867  34.024  82.086  1.00 52.46           C
ATOM  15686  CB  THR C 298      43.818  34.682  81.056  1.00 52.13           C
ATOM  15688  OG1 THR C 298      44.623  35.673  81.703  1.00 58.09           O
ATOM  15690  CG2 THR C 298      43.037  35.353  79.958  1.00 51.47           C
ATOM  15694  C   THR C 298      43.555  32.834  82.689  1.00 50.44           C
ATOM  15695  O   THR C 298      44.479  33.016  83.453  1.00 49.47           O
ATOM  15697  N   LEU C 299      43.112  31.624  82.345  1.00 51.46           N
ATOM  15698  CA  LEU C 299      43.686  30.385  82.911  1.00 52.21           C
ATOM  15700  CB  LEU C 299      42.630  29.640  83.740  1.00 51.12           C
ATOM  15703  CG  LEU C 299      43.014  28.884  85.016  1.00 51.18           C
ATOM  15705  CD1 LEU C 299      42.167  27.628  85.149  1.00 52.26           C
ATOM  15709  CD2 LEU C 299      44.471  28.518  85.085  1.00 54.18           C
ATOM  15713  C   LEU C 299      44.183  29.443  81.820  1.00 52.74           C
ATOM  15714  O   LEU C 299      43.394  28.986  80.987  1.00 56.41           O
ATOM  15716  N   ALA C 300      45.477  29.138  81.821  1.00 50.94           N
ATOM  15717  CA  ALA C 300      46.000  28.075  80.959  1.00 50.98           C
ATOM  15719  CB  ALA C 300      47.303  28.479  80.326  1.00 49.38           C
ATOM  15723  C   ALA C 300      46.171  26.792  81.761  1.00 49.99           C
ATOM  15724  O   ALA C 300      46.526  26.826  82.931  1.00 48.15           O
ATOM  15726  N   LEU C 301      45.915  25.661  81.119  1.00 52.33           N
ATOM  15727  CA  LEU C 301      46.000  24.363  81.777  1.00 52.08           C
ATOM  15729  CB  LEU C 301      44.660  23.672  81.642  1.00 51.48           C
ATOM  15732  CG  LEU C 301      43.514  24.413  82.338  1.00 53.12           C
ATOM  15734  CD1 LEU C 301      42.183  23.764  81.989  1.00 55.00           C
ATOM  15738  CD2 LEU C 301      43.704  24.452  83.855  1.00 54.54           C
ATOM  15742  C   LEU C 301      47.130  23.489  81.214  1.00 52.91           C
ATOM  15743  O   LEU C 301      47.392  23.499  80.006  1.00 53.94           O
ATOM  15745  N   GLU C 302      47.813  22.756  82.100  1.00 52.53           N
ATOM  15746  CA  GLU C 302      48.928  21.876  81.701  1.00 51.61           C
ATOM  15748  CB  GLU C 302      49.450  21.067  82.895  1.00 49.30           C
ATOM  15751  CG  GLU C 302      50.804  20.385  82.667  1.00 53.13           C
ATOM  15754  CD  GLU C 302      51.221  19.463  83.823  1.00 53.07           C
ATOM  15755  OE1 GLU C 302      52.254  19.727  84.471  1.00 48.58           O
ATOM  15756  OE2 GLU C 302      50.509  18.473  84.086  1.00 57.14           O
ATOM  15757  C   GLU C 302      48.503  20.930  80.566  1.00 51.69           C
ATOM  15758  O   GLU C 302      47.457  20.281  80.635  1.00 51.41           O
ATOM  15760  N   ALA C 303      49.301  20.899  79.504  1.00 51.40           N
ATOM  15761  CA  ALA C 303      49.089  19.992  78.386  1.00 51.60           C
ATOM  15763  CB  ALA C 303      49.238  18.545  78.849  1.00 49.45           C
ATOM  15767  C   ALA C 303      47.749  20.197  77.677  1.00 53.60           C
ATOM  15768  O   ALA C 303      47.310  19.324  76.935  1.00 55.31           O
ATOM  15770  N   LYS C 304      47.094  21.334  77.898  1.00 54.59           N
ATOM  15771  CA  LYS C 304      45.888  21.676  77.150  1.00 54.23           C
ATOM  15773  CB  LYS C 304      44.696  21.969  78.062  1.00 55.42           C
ATOM  15776  CG  LYS C 304      44.341  20.880  79.069  1.00 58.77           C
ATOM  15779  CD  LYS C 304      44.177  19.500  78.445  1.00 65.40           C
ATOM  15782  CE  LYS C 304      43.549  18.512  79.432  1.00 68.77           C
ATOM  15785  NZ  LYS C 304      44.119  18.611  80.811  1.00 75.82           N
ATOM  15789  C   LYS C 304      46.203  22.909  76.341  1.00 54.72           C
ATOM  15790  O   LYS C 304      46.881  23.817  76.808  1.00 55.64           O
ATOM  15792  N   THR C 305      45.699  22.932  75.122  1.00 56.26           N
ATOM  15793  CA  THR C 305      45.961  24.010  74.197  1.00 56.85           C
ATOM  15795  CB  THR C 305      46.020  23.434  72.747  1.00 57.67           C
ATOM  15797  OG1 THR C 305      46.833  24.270  71.905  1.00 62.10           O
ATOM  15799  CG2 THR C 305      44.623  23.253  72.144  1.00 56.44           C
ATOM  15803  C   THR C 305      44.868  25.072  74.415  1.00 58.13           C
ATOM  15804  O   THR C 305      43.740  24.733  74.788  1.00 61.03           O
ATOM  15806  N   GLY C 306      45.210  26.346  74.225  1.00 57.84           N
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ATOM	15807	CA	GLY	C	306	44.277	27.454	74.484	1.00	56.97	C
ATOM	15810	C	GLY	C	306	44.309	27.975	75.919	1.00	57.05	C
ATOM	15811	O	GLY	C	306	45.099	27.515	76.750	1.00	58.91	O
ATOM	15813	N	LYS	C	307	43.449	28.950	76.204	1.00	55.87	N
ATOM	15814	CA	LYS	C	307	43.263	29.479	77.559	1.00	55.32	C
ATOM	15816	CB	LYS	C	307	43.977	30.833	77.712	1.00	54.88	C
ATOM	15819	CG	LYS	C	307	45.503	30.764	77.759	1.00	55.79	C
ATOM	15822	CD	LYS	C	307	46.178	31.828	76.862	1.00	55.83	C
ATOM	15825	CE	LYS	C	307	46.583	33.078	77.612	1.00	53.46	C
ATOM	15828	NZ	LYS	C	307	47.798	32.841	78.423	1.00	46.54	N
ATOM	15832	C	LYS	C	307	41.772	29.664	77.863	1.00	54.09	C
ATOM	15833	O	LYS	C	307	41.002	30.086	77.007	1.00	52.18	O
ATOM	15835	N	LEU	C	308	41.374	29.360	79.092	1.00	55.57	N
ATOM	15836	CA	LEU	C	308	40.048	29.748	79.594	1.00	54.38	C
ATOM	15838	CB	LEU	C	308	39.630	28.873	80.766	1.00	51.97	C
ATOM	15841	CG	LEU	C	308	39.722	27.373	80.526	1.00	52.51	C
ATOM	15843	CD1	LEU	C	308	39.420	26.638	81.805	1.00	51.52	C
ATOM	15847	CD2	LEU	C	308	38.771	26.979	79.413	1.00	53.45	C
ATOM	15851	C	LEU	C	308	40.112	31.194	80.070	1.00	54.94	C
ATOM	15852	O	LEU	C	308	41.188	31.696	80.411	1.00	53.89	O
ATOM	15854	N	HIS	C	309	38.963	31.857	80.104	1.00	54.30	N
ATOM	15855	CA	HIS	C	309	38.892	33.193	80.667	1.00	54.34	C
ATOM	15857	CB	HIS	C	309	39.417	34.219	79.675	1.00	54.86	C
ATOM	15860	CG	HIS	C	309	38.779	34.123	78.337	1.00	56.38	C
ATOM	15861	ND1	HIS	C	309	37.620	34.795	78.021	1.00	61.79	N
ATOM	15863	CE1	HIS	C	309	37.276	34.512	76.777	1.00	62.46	C
ATOM	15865	NE2	HIS	C	309	38.170	33.676	76.278	1.00	65.05	N
ATOM	15867	CD2	HIS	C	309	39.120	33.414	77.237	1.00	61.15	C
ATOM	15869	C	HIS	C	309	37.488	33.566	81.112	1.00	54.11	C
ATOM	15870	O	HIS	C	309	36.505	32.971	80.680	1.00	55.91	O
ATOM	15872	N	GLN	C	310	37.422	34.550	82.002	1.00	53.63	N
ATOM	15873	CA	GLN	C	310	36.171	35.055	82.549	1.00	53.49	C
ATOM	15875	CB	GLN	C	310	35.883	34.435	83.921	1.00	51.89	C
ATOM	15878	CG	GLN	C	310	34.777	35.146	84.698	1.00	53.15	C
ATOM	15881	CD	GLN	C	310	34.332	34.402	85.939	1.00	54.86	C
ATOM	15882	OE1	GLN	C	310	34.822	33.311	86.248	1.00	62.77	O
ATOM	15883	NE2	GLN	C	310	33.391	34.992	86.662	1.00	51.39	N
ATOM	15886	C	GLN	C	310	36.329	36.546	82.688	1.00	53.43	C
ATOM	15887	O	GLN	C	310	37.351	36.994	83.202	1.00	57.46	O
ATOM	15889	N	GLU	C	311	35.340	37.317	82.243	1.00	52.22	N
ATOM	15890	CA	GLU	C	311	35.429	38.761	82.361	1.00	53.58	C
ATOM	15892	CB	GLU	C	311	34.816	39.467	81.147	1.00	54.22	C
ATOM	15895	CG	GLU	C	311	33.398	40.014	81.329	1.00	59.50	C
ATOM	15898	CD	GLU	C	311	33.042	41.104	80.318	1.00	58.01	C
ATOM	15899	OE1	GLU	C	311	33.860	41.389	79.413	1.00	57.32	O
ATOM	15900	OE2	GLU	C	311	31.933	41.675	80.434	1.00	62.91	O
ATOM	15901	C	GLU	C	311	34.846	39.250	83.699	1.00	53.73	C
ATOM	15902	O	GLU	C	311	33.908	38.661	84.252	1.00	53.70	O
ATOM	15904	N	VAL	C	312	35.444	40.323	84.215	1.00	53.28	N
ATOM	15905	CA	VAL	C	312	35.098	40.873	85.517	1.00	52.30	C
ATOM	15907	CB	VAL	C	312	36.175	40.622	86.598	1.00	53.43	C
ATOM	15909	CG1	VAL	C	312	35.628	39.717	87.701	1.00	57.05	C
ATOM	15913	CG2	VAL	C	312	37.450	40.058	85.992	1.00	56.18	C
ATOM	15917	C	VAL	C	312	34.939	42.357	85.395	1.00	51.99	C
ATOM	15918	O	VAL	C	312	35.651	43.001	84.624	1.00	51.64	O
ATOM	15920	N	ASN	C	313	34.017	42.892	86.191	1.00	51.65	N
ATOM	15921	CA	ASN	C	313	33.638	44.286	86.119	1.00	49.32	C
ATOM	15923	CB	ASN	C	313	32.438	44.426	85.196	1.00	48.44	C
ATOM	15926	CG	ASN	C	313	32.815	44.221	83.759	1.00	45.89	C
ATOM	15927	OD1	ASN	C	313	32.339	43.308	83.095	1.00	38.92	O
ATOM	15928	ND2	ASN	C	313	33.724	45.049	83.281	1.00	51.95	N
ATOM	15931	C	ASN	C	313	33.344	44.875	87.483	1.00	48.98	C
ATOM	15932	O	ASN	C	313	32.650	44.265	88.303	1.00	46.07	O

ATOM	15934	N	LEU	C	314	33.889	46.070	87.709	1.00	48.99	N
ATOM	15935	CA	LEU	C	314	33.756	46.762	88.980	1.00	47.98	C
ATOM	15937	CB	LEU	C	314	35.114	46.840	89.677	1.00	48.55	C
ATOM	15940	CG	LEU	C	314	35.188	46.913	91.208	1.00	48.14	C
ATOM	15942	CD1	LEU	C	314	33.922	47.434	91.875	1.00	49.00	C
ATOM	15946	CD2	LEU	C	314	36.402	47.749	91.612	1.00	46.00	C
ATOM	15950	C	LEU	C	314	33.246	48.156	88.705	1.00	46.12	C
ATOM	15951	O	LEU	C	314	33.892	48.914	87.986	1.00	44.60	O
ATOM	15953	N	VAL	C	315	32.084	48.476	89.268	1.00	46.55	N
ATOM	15954	CA	VAL	C	315	31.492	49.810	89.165	1.00	48.31	C
ATOM	15956	CB	VAL	C	315	30.033	49.743	88.660	1.00	48.87	C
ATOM	15958	CG1	VAL	C	315	29.352	51.142	88.711	1.00	48.61	C
ATOM	15962	CG2	VAL	C	315	29.979	49.150	87.257	1.00	46.96	C
ATOM	15966	C	VAL	C	315	31.492	50.423	90.550	1.00	48.60	C
ATOM	15967	O	VAL	C	315	31.057	49.773	91.494	1.00	48.35	O
ATOM	15969	N	VAL	C	316	31.978	51.658	90.684	1.00	50.12	N
ATOM	15970	CA	VAL	C	316	31.987	52.322	91.996	1.00	51.50	C
ATOM	15972	CB	VAL	C	316	33.420	52.384	92.641	1.00	50.80	C
ATOM	15974	CG1	VAL	C	316	34.016	53.791	92.611	1.00	51.53	C
ATOM	15978	CG2	VAL	C	316	34.362	51.365	91.993	1.00	48.64	C
ATOM	15982	C	VAL	C	316	31.301	53.696	91.965	1.00	53.36	C
ATOM	15983	O	VAL	C	316	31.335	54.408	90.955	1.00	52.62	O
ATOM	15985	N	MET	C	317	30.678	54.043	93.092	1.00	55.34	N
ATOM	15986	CA	MET	C	317	29.909	55.271	93.242	1.00	55.75	C
ATOM	15988	CB	MET	C	317	28.457	54.914	93.573	1.00	55.48	C
ATOM	15991	CG	MET	C	317	27.571	56.095	93.955	1.00	56.94	C
ATOM	15994	SD	MET	C	317	25.975	55.578	94.619	1.00	59.40	S
ATOM	15995	CE	MET	C	317	25.119	55.060	93.131	1.00	58.37	C
ATOM	15999	C	MET	C	317	30.514	56.104	94.365	1.00	56.25	C
ATOM	16000	O	MET	C	317	30.941	55.552	95.378	1.00	56.82	O
ATOM	16002	N	ARG	C	318	30.555	57.425	94.171	1.00	57.90	N
ATOM	16003	CA	ARG	C	318	30.971	58.400	95.207	1.00	57.97	C
ATOM	16005	CB	ARG	C	318	32.270	59.107	94.775	1.00	57.36	C
ATOM	16008	CG	ARG	C	318	32.761	60.231	95.695	1.00	58.75	C
ATOM	16011	CD	ARG	C	318	33.948	60.981	95.107	1.00	60.71	C
ATOM	16014	NE	ARG	C	318	35.186	60.207	95.163	1.00	63.93	N
ATOM	16016	CZ	ARG	C	318	36.370	60.640	94.729	1.00	65.87	C
ATOM	16017	NH1	ARG	C	318	36.503	61.846	94.182	1.00	67.21	N
ATOM	16020	NH2	ARG	C	318	37.433	59.850	94.833	1.00	66.87	N
ATOM	16023	C	ARG	C	318	29.824	59.409	95.401	1.00	57.93	C
ATOM	16024	O	ARG	C	318	28.942	59.500	94.542	1.00	59.39	O
ATOM	16026	N	ALA	C	319	29.811	60.148	96.513	1.00	56.94	N
ATOM	16027	CA	ALA	C	319	28.779	61.175	96.717	1.00	56.32	C
ATOM	16029	CB	ALA	C	319	27.472	60.512	97.139	1.00	55.67	C
ATOM	16033	C	ALA	C	319	29.149	62.293	97.712	1.00	56.15	C
ATOM	16034	O	ALA	C	319	29.554	62.022	98.843	1.00	54.59	O
ATOM	16036	N	THR	C	320	29.015	63.543	97.256	1.00	56.55	N
ATOM	16037	CA	THR	C	320	28.993	64.741	98.111	1.00	56.45	C
ATOM	16039	CB	THR	C	320	30.386	65.083	98.735	1.00	57.04	C
ATOM	16041	OG1	THR	C	320	30.835	64.004	99.564	1.00	55.35	O
ATOM	16043	CG2	THR	C	320	30.328	66.378	99.589	1.00	56.22	C
ATOM	16047	C	THR	C	320	28.498	65.922	97.261	1.00	57.29	C
ATOM	16048	O	THR	C	320	27.834	66.842	97.751	1.00	58.33	O
ATOM	16050	N	VAL	C	330	29.705	58.049	89.659	1.00	55.06	N
ATOM	16051	CA	VAL	C	330	29.701	56.652	89.240	1.00	56.85	C
ATOM	16053	CB	VAL	C	330	28.305	56.237	88.691	1.00	56.62	C
ATOM	16055	CG1	VAL	C	330	28.388	55.089	87.689	1.00	55.47	C
ATOM	16059	CG2	VAL	C	330	27.390	55.852	89.841	1.00	56.71	C
ATOM	16063	C	VAL	C	330	30.804	56.391	88.208	1.00	57.90	C
ATOM	16064	O	VAL	C	330	30.755	56.915	87.091	1.00	59.13	O
ATOM	16066	N	TRP	C	331	31.788	55.578	88.598	1.00	57.92	N
ATOM	16067	CA	TRP	C	331	32.913	55.208	87.731	1.00	57.68	C
ATOM	16069	CB	TRP	C	331	34.254	55.418	88.452	1.00	58.00	C

ATOM	16072	CG	TRP	C	331	34.369	56.735	89.167	1.00	58.37	C
ATOM	16073	CD1	TRP	C	331	33.790	57.076	90.359	1.00	59.27	C
ATOM	16075	NE1	TRP	C	331	34.120	58.364	90.698	1.00	58.13	N
ATOM	16077	CE2	TRP	C	331	34.930	58.883	89.725	1.00	58.30	C
ATOM	16078	CD2	TRP	C	331	35.112	57.879	88.744	1.00	57.76	C
ATOM	16079	CE3	TRP	C	331	35.910	58.159	87.631	1.00	59.16	C
ATOM	16081	CZ3	TRP	C	331	36.496	59.423	87.531	1.00	59.85	C
ATOM	16083	CH2	TRP	C	331	36.295	60.398	88.526	1.00	59.38	C
ATOM	16085	CZ2	TRP	C	331	35.518	60.147	89.625	1.00	59.26	C
ATOM	16087	C	TRP	C	331	32.768	53.742	87.329	1.00	57.31	C
ATOM	16088	O	TRP	C	331	32.085	52.978	88.005	1.00	56.27	O
ATOM	16090	N	GLY	C	332	33.416	53.357	86.233	1.00	57.45	N
ATOM	16091	CA	GLY	C	332	33.375	51.975	85.751	1.00	57.64	C
ATOM	16094	C	GLY	C	332	32.506	51.791	84.518	1.00	57.59	C
ATOM	16095	O	GLY	C	332	31.910	52.752	84.025	1.00	57.31	O
ATOM	16097	N	PRO	C	333	32.414	50.545	84.018	1.00	58.46	N
ATOM	16098	CA	PRO	C	333	31.732	50.235	82.768	1.00	59.07	C
ATOM	16100	CB	PRO	C	333	32.371	48.904	82.358	1.00	59.60	C
ATOM	16103	CG	PRO	C	333	32.650	48.223	83.648	1.00	59.05	C
ATOM	16106	CD	PRO	C	333	32.967	49.328	84.645	1.00	59.59	C
ATOM	16109	C	PRO	C	333	30.225	50.084	82.942	1.00	59.62	C
ATOM	16110	O	PRO	C	333	29.701	48.973	82.883	1.00	60.90	O
ATOM	16111	N	THR	C	334	29.541	51.201	83.166	1.00	60.47	N
ATOM	16112	CA	THR	C	334	28.085	51.216	83.248	1.00	60.23	C
ATOM	16114	CB	THR	C	334	27.570	52.473	83.979	1.00	59.50	C
ATOM	16116	OG1	THR	C	334	28.134	53.648	83.377	1.00	59.67	O
ATOM	16118	CG2	THR	C	334	27.935	52.432	85.446	1.00	59.63	C
ATOM	16122	C	THR	C	334	27.488	51.245	81.856	1.00	60.60	C
ATOM	16123	O	THR	C	334	28.079	51.811	80.939	1.00	59.82	O
ATOM	16125	N	SER	C	335	26.317	50.634	81.707	1.00	62.05	N
ATOM	16126	CA	SER	C	335	25.449	50.904	80.565	1.00	63.29	C
ATOM	16128	CB	SER	C	335	24.318	49.883	80.516	1.00	63.64	C
ATOM	16131	OG	SER	C	335	23.435	50.161	79.450	1.00	65.85	O
ATOM	16133	C	SER	C	335	24.893	52.339	80.711	1.00	64.34	C
ATOM	16134	O	SER	C	335	24.634	52.793	81.831	1.00	63.83	O
ATOM	16136	N	PRO	C	336	24.720	53.063	79.590	1.00	64.64	N
ATOM	16137	CA	PRO	C	336	24.385	54.496	79.689	1.00	64.48	C
ATOM	16139	CB	PRO	C	336	24.532	54.987	78.239	1.00	64.30	C
ATOM	16142	CG	PRO	C	336	24.291	53.782	77.409	1.00	65.37	C
ATOM	16145	CD	PRO	C	336	24.838	52.621	78.187	1.00	64.06	C
ATOM	16148	C	PRO	C	336	22.981	54.821	80.249	1.00	65.44	C
ATOM	16149	O	PRO	C	336	22.066	55.133	79.479	1.00	66.87	O
ATOM	16150	N	LYS	C	337	22.831	54.758	81.579	1.00	64.56	N
ATOM	16151	CA	LYS	C	337	21.564	55.093	82.266	1.00	62.95	C
ATOM	16153	CB	LYS	C	337	20.710	53.834	82.472	1.00	62.05	C
ATOM	16156	CG	LYS	C	337	20.170	53.233	81.178	1.00	62.02	C
ATOM	16159	CD	LYS	C	337	21.107	52.176	80.566	1.00	61.81	C
ATOM	16162	CE	LYS	C	337	21.019	52.134	79.034	1.00	60.44	C
ATOM	16165	NZ	LYS	C	337	19.635	52.350	78.526	1.00	59.46	N
ATOM	16169	C	LYS	C	337	21.810	55.788	83.615	1.00	61.03	C
ATOM	16170	O	LYS	C	337	20.879	56.051	84.383	1.00	58.00	O
ATOM	16172	N	ARG	C	354	20.546	61.328	83.040	1.00	55.99	N
ATOM	16173	CA	ARG	C	354	20.589	59.985	82.461	1.00	56.57	C
ATOM	16175	CB	ARG	C	354	19.567	59.876	81.322	1.00	57.24	C
ATOM	16178	CG	ARG	C	354	19.072	58.458	81.004	1.00	56.58	C
ATOM	16181	CD	ARG	C	354	18.319	58.462	79.677	1.00	57.64	C
ATOM	16184	NE	ARG	C	354	17.457	57.294	79.483	1.00	59.21	N
ATOM	16186	CZ	ARG	C	354	17.869	56.084	79.098	1.00	62.12	C
ATOM	16187	NH1	ARG	C	354	19.160	55.835	78.874	1.00	63.09	N
ATOM	16190	NH2	ARG	C	354	16.980	55.105	78.944	1.00	60.23	N
ATOM	16193	C	ARG	C	354	21.989	59.617	81.947	1.00	56.42	C
ATOM	16194	O	ARG	C	354	22.176	58.550	81.353	1.00	56.98	O
ATOM	16196	N	GLU	C	355	22.963	60.496	82.181	1.00	55.97	N

ATOM	16197	CA	GLU	C	355	24.348	60.265	81.743	1.00	56.10	C
ATOM	16199	CB	GLU	C	355	25.094	61.595	81.495	1.00	56.26	C
ATOM	16202	CG	GLU	C	355	24.971	62.665	82.594	1.00	58.07	C
ATOM	16205	CD	GLU	C	355	25.775	63.924	82.291	1.00	59.24	C
ATOM	16206	OE1	GLU	C	355	26.180	64.108	81.121	1.00	63.00	O
ATOM	16207	OE2	GLU	C	355	25.991	64.736	83.223	1.00	59.75	O
ATOM	16208	C	GLU	C	355	25.066	59.333	82.739	1.00	55.60	C
ATOM	16209	O	GLU	C	355	24.707	58.153	82.826	1.00	56.66	O
ATOM	16211	N	LYS	C	356	26.080	59.821	83.458	1.00	53.49	N
ATOM	16212	CA	LYS	C	356	26.651	59.066	84.580	1.00	51.84	C
ATOM	16214	CB	LYS	C	356	27.597	57.966	84.071	1.00	53.18	C
ATOM	16217	CG	LYS	C	356	28.828	58.448	83.315	1.00	54.06	C
ATOM	16220	CD	LYS	C	356	29.508	57.283	82.569	1.00	53.29	C
ATOM	16223	CE	LYS	C	356	30.107	56.250	83.520	1.00	54.75	C
ATOM	16226	NZ	LYS	C	356	30.751	55.123	82.792	1.00	55.37	N
ATOM	16230	C	LYS	C	356	27.350	59.955	85.605	1.00	49.04	C
ATOM	16231	O	LYS	C	356	28.331	59.548	86.225	1.00	45.89	O
ATOM	16233	N	ALA	C	357	26.806	61.159	85.790	1.00	48.50	N
ATOM	16234	CA	ALA	C	357	27.351	62.157	86.714	1.00	46.63	C
ATOM	16236	CB	ALA	C	357	28.579	62.816	86.112	1.00	45.61	C
ATOM	16240	C	ALA	C	357	26.298	63.215	87.034	1.00	45.31	C
ATOM	16241	O	ALA	C	357	25.644	63.728	86.128	1.00	45.63	O
ATOM	16243	N	VAL	C	358	26.125	63.520	88.320	1.00	44.05	N
ATOM	16244	CA	VAL	C	358	25.309	64.657	88.759	1.00	42.95	C
ATOM	16246	CB	VAL	C	358	23.887	64.238	89.194	1.00	41.93	C
ATOM	16248	CG1	VAL	C	358	23.062	65.487	89.580	1.00	44.44	C
ATOM	16252	CG2	VAL	C	358	23.187	63.431	88.093	1.00	39.41	C
ATOM	16256	C	VAL	C	358	25.986	65.344	89.938	1.00	41.70	C
ATOM	16257	O	VAL	C	358	26.273	64.705	90.950	1.00	40.16	O
ATOM	16259	N	GLN	C	369	20.802	59.693	99.692	1.00	58.70	N
ATOM	16260	CA	GLN	C	369	20.248	58.830	98.652	1.00	58.80	C
ATOM	16262	CB	GLN	C	369	18.712	58.912	98.650	1.00	58.56	C
ATOM	16265	CG	GLN	C	369	18.019	57.828	99.472	1.00	58.03	C
ATOM	16268	CD	GLN	C	369	17.886	56.511	98.719	1.00	58.02	C
ATOM	16269	OE1	GLN	C	369	16.807	55.919	98.665	1.00	56.87	O
ATOM	16270	NE2	GLN	C	369	18.981	56.051	98.129	1.00	57.80	N
ATOM	16273	C	GLN	C	369	20.805	59.160	97.260	1.00	58.81	C
ATOM	16274	O	GLN	C	369	20.224	59.951	96.517	1.00	58.46	O
ATOM	16276	N	CYS	C	370	21.934	58.546	96.920	1.00	58.82	N
ATOM	16277	CA	CYS	C	370	22.497	58.633	95.577	1.00	58.96	C
ATOM	16279	CB	CYS	C	370	23.986	58.982	95.644	1.00	58.34	C
ATOM	16282	SG	CYS	C	370	24.823	59.093	94.034	1.00	58.56	S
ATOM	16284	C	CYS	C	370	22.299	57.266	94.940	1.00	58.95	C
ATOM	16285	O	CYS	C	370	22.869	56.297	95.414	1.00	59.29	O
ATOM	16287	N	LEU	C	371	21.487	57.185	93.886	1.00	59.28	N
ATOM	16288	CA	LEU	C	371	21.130	55.892	93.290	1.00	60.81	C
ATOM	16290	CB	LEU	C	371	19.635	55.612	93.451	1.00	61.08	C
ATOM	16293	CG	LEU	C	371	19.071	55.621	94.878	1.00	62.29	C
ATOM	16295	CD1	LEU	C	371	18.817	57.048	95.375	1.00	61.30	C
ATOM	16299	CD2	LEU	C	371	17.792	54.792	94.941	1.00	61.35	C
ATOM	16303	C	LEU	C	371	21.491	55.780	91.810	1.00	61.35	C
ATOM	16304	O	LEU	C	371	21.272	56.713	91.035	1.00	60.21	O
ATOM	16306	N	LEU	C	372	22.030	54.616	91.434	1.00	62.36	N
ATOM	16307	CA	LEU	C	372	22.347	54.292	90.043	1.00	62.61	C
ATOM	16309	CB	LEU	C	372	23.659	53.503	89.972	1.00	62.88	C
ATOM	16312	CG	LEU	C	372	24.294	53.140	88.618	1.00	62.86	C
ATOM	16314	CD1	LEU	C	372	23.871	51.756	88.154	1.00	63.96	C
ATOM	16318	CD2	LEU	C	372	24.010	54.179	87.545	1.00	61.39	C
ATOM	16322	C	LEU	C	372	21.177	53.500	89.461	1.00	62.81	C
ATOM	16323	O	LEU	C	372	20.928	52.364	89.859	1.00	62.23	O
ATOM	16325	N	SER	C	373	20.470	54.117	88.515	1.00	64.42	N
ATOM	16326	CA	SER	C	373	19.113	53.705	88.144	1.00	64.55	C
ATOM	16328	CB	SER	C	373	18.329	54.911	87.605	1.00	64.64	C

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ATOM  16331  OG  SER C 373      17.017  54.536  87.230  1.00 63.48           O
ATOM  16333  C   SER C 373      19.049  52.511  87.180  1.00 65.11           C
ATOM  16334  O   SER C 373      19.255  51.380  87.610  1.00 65.77           O
ATOM  16336  N   ASP C 374      18.795  52.765  85.892  1.00 66.20           N
ATOM  16337  CA  ASP C 374      18.306  51.744  84.933  1.00 66.59           C
ATOM  16339  CB  ASP C 374      19.238  50.520  84.834  1.00 66.84           C
ATOM  16342  CG  ASP C 374      18.656  49.396  83.962  1.00 67.39           C
ATOM  16343  OD1 ASP C 374      17.629  49.613  83.271  1.00 67.44           O
ATOM  16344  OD2 ASP C 374      19.230  48.284  83.976  1.00 67.12           O
ATOM  16345  C   ASP C 374      16.863  51.304  85.253  1.00 67.09           C
ATOM  16346  O   ASP C 374      16.644  50.266  85.898  1.00 66.14           O
ATOM  16348  N   SER C 375      15.897  52.094  84.769  1.00 66.87           N
ATOM  16349  CA  SER C 375      14.466  51.872  85.017  1.00 66.49           C
ATOM  16351  CB  SER C 375      14.014  50.519  84.447  1.00 65.83           C
ATOM  16354  OG  SER C 375      14.576  50.279  83.166  1.00 64.07           O
ATOM  16356  C   SER C 375      14.162  51.980  86.521  1.00 66.91           C
ATOM  16357  O   SER C 375      14.897  52.645  87.258  1.00 66.74           O
ATOM  16359  N   GLY C 376      13.079  51.347  86.973  1.00 67.56           N
ATOM  16360  CA  GLY C 376      12.790  51.242  88.405  1.00 67.85           C
ATOM  16363  C   GLY C 376      13.810  50.390  89.148  1.00 68.64           C
ATOM  16364  O   GLY C 376      13.990  50.545  90.360  1.00 68.85           O
ATOM  16366  N   GLN C 377      14.475  49.493  88.413  1.00 68.94           N
ATOM  16367  CA  GLN C 377      15.485  48.581  88.964  1.00 68.70           C
ATOM  16369  CB  GLN C 377      15.870  47.539  87.901  1.00 67.76           C
ATOM  16372  CG  GLN C 377      16.831  46.447  88.365  1.00 66.43           C
ATOM  16375  CD  GLN C 377      16.306  45.645  89.539  1.00 60.07           C
ATOM  16376  OE1 GLN C 377      15.103  45.434  89.680  1.00 52.17           O
ATOM  16377  NE2 GLN C 377      17.215  45.187  90.389  1.00 59.82           N
ATOM  16380  C   GLN C 377      16.726  49.340  89.446  1.00 69.09           C
ATOM  16381  O   GLN C 377      17.379  50.020  88.659  1.00 69.17           O
ATOM  16383  N   VAL C 378      17.040  49.211  90.736  1.00 69.57           N
ATOM  16384  CA  VAL C 378      18.168  49.919  91.356  1.00 69.61           C
ATOM  16386  CB  VAL C 378      17.785  50.471  92.747  1.00 68.96           C
ATOM  16388  CG1 VAL C 378      18.987  51.135  93.419  1.00 67.72           C
ATOM  16392  CG2 VAL C 378      16.615  51.447  92.628  1.00 67.99           C
ATOM  16396  C   VAL C 378      19.377  49.001  91.510  1.00 69.56           C
ATOM  16397  O   VAL C 378      19.230  47.810  91.768  1.00 67.72           O
ATOM  16399  N   LEU C 379      20.569  49.573  91.353  1.00 70.96           N
ATOM  16400  CA  LEU C 379      21.818  48.824  91.472  1.00 72.24           C
ATOM  16402  CB  LEU C 379      22.551  48.821  90.129  1.00 71.75           C
ATOM  16405  CG  LEU C 379      21.825  48.183  88.943  1.00 70.13           C
ATOM  16407  CD1 LEU C 379      22.418  48.670  87.631  1.00 68.84           C
ATOM  16411  CD2 LEU C 379      21.875  46.669  89.023  1.00 69.36           C
ATOM  16415  C   LEU C 379      22.766  49.354  92.556  1.00 73.37           C
ATOM  16416  O   LEU C 379      23.766  48.701  92.840  1.00 72.68           O
ATOM  16418  N   LEU C 380      22.465  50.513  93.153  1.00 75.64           N
ATOM  16419  CA  LEU C 380      23.341  51.118  94.179  1.00 77.70           C
ATOM  16421  CB  LEU C 380      24.597  51.731  93.519  1.00 77.62           C
ATOM  16424  CG  LEU C 380      25.868  50.880  93.318  1.00 74.95           C
ATOM  16426  CD1 LEU C 380      26.868  51.568  92.394  1.00 71.94           C
ATOM  16430  CD2 LEU C 380      26.525  50.562  94.651  1.00 74.30           C
ATOM  16434  C   LEU C 380      22.640  52.186  95.051  1.00 79.41           C
ATOM  16435  O   LEU C 380      21.567  52.685  94.704  1.00 78.89           O
ATOM  16437  N   GLU C 381      23.263  52.509  96.187  1.00 82.32           N
ATOM  16438  CA  GLU C 381      22.857  53.631  97.051  1.00 83.82           C
ATOM  16440  CB  GLU C 381      21.840  53.174  98.118  1.00 84.66           C
ATOM  16443  CG  GLU C 381      21.539  54.238  99.213  1.00 86.27           C
ATOM  16446  CD  GLU C 381      20.385  53.893 100.145  1.00 88.12           C
ATOM  16447  OE1 GLU C 381      19.818  52.779 100.049  1.00 94.19           O
ATOM  16448  OE2 GLU C 381      20.056  54.758 100.989  1.00 90.42           O
ATOM  16449  C   GLU C 381      24.098  54.259  97.716  1.00 84.49           C
ATOM  16450  O   GLU C 381      25.192  53.713  97.605  1.00 83.91           O
ATOM  16452  N   SER C 382      23.932  55.426  98.352  1.00 86.31           N
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ATOM  16453  CA  SER C 382      24.911  55.965  99.324  1.00 85.92           C
ATOM  16455  CB  SER C 382      25.856  56.980  98.665  1.00 86.71           C
ATOM  16458  OG  SER C 382      26.433  56.470  97.471  1.00 86.98           O
ATOM  16460  C   SER C 382      24.207  56.625 100.518  1.00 84.88           C
ATOM  16461  O   SER C 382      23.001  56.886 100.487  1.00 83.67           O
ATOM  16463  N   LYS D  26      -0.972 -25.299  48.770  1.00 70.07           N
ATOM  16464  CA  LYS D  26       0.051 -24.786  49.737  1.00 68.39           C
ATOM  16466  CB  LYS D  26       0.832 -23.618  49.123  1.00 69.11           C
ATOM  16469  CG  LYS D  26       1.769 -24.038  47.974  1.00 72.87           C
ATOM  16472  CD  LYS D  26       2.589 -25.283  48.338  1.00 73.86           C
ATOM  16475  CE  LYS D  26       3.816 -25.450  47.480  1.00 71.75           C
ATOM  16478  NZ  LYS D  26       4.579 -26.640  47.939  1.00 72.71           N
ATOM  16482  C   LYS D  26      -0.557 -24.407  51.094  1.00 66.49           C
ATOM  16483  O   LYS D  26      -1.600 -23.758  51.173  1.00 66.25           O
ATOM  16487  N   LYS D  27       0.123 -24.833  52.151  1.00 64.50           N
ATOM  16488  CA  LYS D  27      -0.417 -24.823  53.502  1.00 64.07           C
ATOM  16490  CB  LYS D  27       0.569 -25.506  54.470  1.00 64.67           C
ATOM  16493  CG  LYS D  27       0.480 -27.028  54.535  1.00 67.71           C
ATOM  16496  CD  LYS D  27       0.688 -27.542  55.988  1.00 70.79           C
ATOM  16499  CE  LYS D  27      -0.572 -27.377  56.894  1.00 73.69           C
ATOM  16502  NZ  LYS D  27      -1.594 -28.479  56.725  1.00 73.86           N
ATOM  16506  C   LYS D  27      -0.739 -23.435  54.058  1.00 61.47           C
ATOM  16507  O   LYS D  27      -0.069 -22.453  53.754  1.00 60.62           O
ATOM  16509  N   VAL D  28      -1.783 -23.393  54.880  1.00 59.37           N
ATOM  16510  CA  VAL D  28      -2.031 -22.309  55.807  1.00 58.01           C
ATOM  16512  CB  VAL D  28      -3.452 -21.751  55.652  1.00 58.42           C
ATOM  16514  CG1 VAL D  28      -3.819 -20.811  56.804  1.00 61.21           C
ATOM  16518  CG2 VAL D  28      -3.579 -21.025  54.331  1.00 61.55           C
ATOM  16522  C   VAL D  28      -1.844 -22.880  57.207  1.00 56.58           C
ATOM  16523  O   VAL D  28      -2.271 -23.997  57.497  1.00 59.08           O
ATOM  16525  N   VAL D  29      -1.177 -22.111  58.058  1.00 54.64           N
ATOM  16526  CA  VAL D  29      -0.961 -22.467  59.449  1.00 53.80           C
ATOM  16528  CB  VAL D  29       0.498 -22.932  59.693  1.00 53.90           C
ATOM  16530  CG1 VAL D  29       0.776 -23.135  61.189  1.00 51.83           C
ATOM  16534  CG2 VAL D  29       0.795 -24.202  58.904  1.00 51.54           C
ATOM  16538  C   VAL D  29      -1.257 -21.223  60.279  1.00 53.97           C
ATOM  16539  O   VAL D  29      -0.766 -20.133  59.963  1.00 52.71           O
ATOM  16541  N   LEU D  30      -2.071 -21.391  61.324  1.00 53.89           N
ATOM  16542  CA  LEU D  30      -2.430 -20.289  62.212  1.00 53.55           C
ATOM  16544  CB  LEU D  30      -3.918 -20.339  62.549  1.00 53.06           C
ATOM  16547  CG  LEU D  30      -4.900 -20.448  61.381  1.00 54.18           C
ATOM  16549  CD1 LEU D  30      -6.303 -20.192  61.905  1.00 59.32           C
ATOM  16553  CD2 LEU D  30      -4.590 -19.502  60.227  1.00 54.65           C
ATOM  16557  C   LEU D  30      -1.627 -20.376  63.493  1.00 53.27           C
ATOM  16558  O   LEU D  30      -1.193 -21.451  63.880  1.00 52.96           O
ATOM  16560  N   GLY D  31      -1.429 -19.249  64.159  1.00 53.29           N
ATOM  16561  CA  GLY D  31      -0.822 -19.271  65.489  1.00 53.17           C
ATOM  16564  C   GLY D  31      -1.371 -18.159  66.360  1.00 54.11           C
ATOM  16565  O   GLY D  31      -1.911 -17.167  65.849  1.00 55.12           O
ATOM  16567  N   LYS D  32      -1.232 -18.323  67.673  1.00 52.40           N
ATOM  16568  CA  LYS D  32      -1.629 -17.289  68.625  1.00 51.94           C
ATOM  16570  CB  LYS D  32      -2.201 -17.907  69.908  1.00 51.79           C
ATOM  16573  CG  LYS D  32      -3.591 -18.450  69.728  1.00 52.03           C
ATOM  16576  CD  LYS D  32      -3.938 -19.514  70.756  1.00 52.98           C
ATOM  16579  CE  LYS D  32      -4.253 -18.888  72.094  1.00 56.55           C
ATOM  16582  NZ  LYS D  32      -4.665 -19.917  73.078  1.00 57.22           N
ATOM  16586  C   LYS D  32      -0.458 -16.404  68.990  1.00 50.45           C
ATOM  16587  O   LYS D  32       0.622 -16.907  69.321  1.00 52.17           O
ATOM  16589  N   LYS D  33      -0.684 -15.094  68.937  1.00 48.86           N
ATOM  16590  CA  LYS D  33       0.235 -14.097  69.502  1.00 50.09           C
ATOM  16592  CB  LYS D  33      -0.508 -12.773  69.730  1.00 50.39           C
ATOM  16595  CG  LYS D  33       0.355 -11.659  70.268  1.00 49.11           C
ATOM  16598  CD  LYS D  33      -0.438 -10.367  70.469  1.00 50.58           C
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ATOM  16601  CE  LYS D  33       0.404  -9.121  70.104  1.00 53.39           C
ATOM  16604  NZ  LYS D  33       0.406  -8.081  71.177  1.00 51.91           N
ATOM  16608  C   LYS D  33       0.786 -14.585  70.834  1.00 49.48           C
ATOM  16609  O   LYS D  33       0.027 -14.969  71.710  1.00 49.63           O
ATOM  16611  N   GLY D  34       2.102 -14.586  70.981  1.00 49.59           N
ATOM  16612  CA  GLY D  34       2.726 -15.016  72.227  1.00 50.05           C
ATOM  16615  C   GLY D  34       3.196 -16.456  72.219  1.00 50.34           C
ATOM  16616  O   GLY D  34       4.199 -16.774  72.861  1.00 49.43           O
ATOM  16618  N   ASP D  35       2.487 -17.331  71.504  1.00 50.76           N
ATOM  16619  CA  ASP D  35       2.855 -18.748  71.462  1.00 52.67           C
ATOM  16621  CB  ASP D  35       1.652 -19.614  71.058  1.00 55.52           C
ATOM  16624  CG  ASP D  35       0.666 -19.839  72.204  1.00 59.08           C
ATOM  16625  OD1 ASP D  35       0.924 -19.367  73.335  1.00 60.68           O
ATOM  16626  OD2 ASP D  35      -0.372 -20.496  71.959  1.00 57.54           O
ATOM  16627  C   ASP D  35       4.015 -19.007  70.506  1.00 52.90           C
ATOM  16628  O   ASP D  35       4.542 -18.075  69.882  1.00 52.10           O
ATOM  16630  N   THR D  36       4.412 -20.278  70.404  1.00 52.81           N
ATOM  16631  CA  THR D  36       5.355 -20.706  69.370  1.00 54.31           C
ATOM  16633  CB  THR D  36       6.680 -21.345  69.946  1.00 53.67           C
ATOM  16635  OG1 THR D  36       6.758 -22.730  69.619  1.00 53.00           O
ATOM  16637  CG2 THR D  36       6.809 -21.155  71.451  1.00 50.20           C
ATOM  16641  C   THR D  36       4.641 -21.637  68.374  1.00 55.43           C
ATOM  16642  O   THR D  36       3.597 -22.211  68.684  1.00 56.70           O
ATOM  16644  N   VAL D  37       5.192 -21.758  67.173  1.00 55.62           N
ATOM  16645  CA  VAL D  37       4.557 -22.533  66.113  1.00 56.79           C
ATOM  16647  CB  VAL D  37       3.693 -21.636  65.179  1.00 57.33           C
ATOM  16649  CG1 VAL D  37       4.497 -20.478  64.613  1.00 55.95           C
ATOM  16653  CG2 VAL D  37       3.092 -22.452  64.036  1.00 56.59           C
ATOM  16657  C   VAL D  37       5.630 -23.197  65.284  1.00 58.92           C
ATOM  16658  O   VAL D  37       6.700 -22.626  65.087  1.00 61.79           O
ATOM  16660  N   GLU D  38       5.343 -24.395  64.791  1.00 59.07           N
ATOM  16661  CA  GLU D  38       6.296 -25.128  63.974  1.00 58.43           C
ATOM  16663  CB  GLU D  38       6.443 -26.554  64.489  1.00 58.79           C
ATOM  16666  CG  GLU D  38       7.785 -27.159  64.161  1.00 62.23           C
ATOM  16669  CD  GLU D  38       7.847 -28.632  64.465  1.00 61.22           C
ATOM  16670  OE1 GLU D  38       8.439 -28.990  65.505  1.00 62.32           O
ATOM  16671  OE2 GLU D  38       7.298 -29.426  63.665  1.00 66.72           O
ATOM  16672  C   GLU D  38       5.828 -25.161  62.536  1.00 57.06           C
ATOM  16673  O   GLU D  38       4.700 -25.561  62.269  1.00 57.08           O
ATOM  16675  N   LEU D  39       6.690 -24.726  61.619  1.00 56.71           N
ATOM  16676  CA  LEU D  39       6.435 -24.857  60.177  1.00 56.29           C
ATOM  16678  CB  LEU D  39       6.842 -23.580  59.439  1.00 55.01           C
ATOM  16681  CG  LEU D  39       5.910 -22.357  59.491  1.00 55.10           C
ATOM  16683  CD1 LEU D  39       5.167 -22.201  60.815  1.00 57.18           C
ATOM  16687  CD2 LEU D  39       6.686 -21.084  59.187  1.00 54.50           C
ATOM  16691  C   LEU D  39       7.219 -26.066  59.654  1.00 56.51           C
ATOM  16692  O   LEU D  39       8.417 -26.177  59.893  1.00 57.54           O
ATOM  16694  N   THR D  40       6.546 -26.986  58.964  1.00 56.72           N
ATOM  16695  CA  THR D  40       7.193 -28.235  58.538  1.00 56.15           C
ATOM  16697  CB  THR D  40       6.242 -29.451  58.618  1.00 52.85           C
ATOM  16699  OG1 THR D  40       4.954 -29.055  58.178  1.00 56.31           O
ATOM  16701  CG2 THR D  40       6.124 -29.982  60.044  1.00 52.49           C
ATOM  16705  C   THR D  40       7.763 -28.145  57.124  1.00 56.08           C
ATOM  16706  O   THR D  40       7.207 -27.487  56.247  1.00 55.50           O
ATOM  16708  N   CYS D  41       8.895 -28.812  56.934  1.00 58.22           N
ATOM  16709  CA  CYS D  41       9.509 -28.976  55.631  1.00 57.45           C
ATOM  16711  CB  CYS D  41      10.559 -27.905  55.416  1.00 58.21           C
ATOM  16714  SG  CYS D  41      11.141 -27.805  53.737  1.00 63.90           S
ATOM  16716  C   CYS D  41      10.151 -30.353  55.616  1.00 56.20           C
ATOM  16717  O   CYS D  41      10.810 -30.730  56.588  1.00 52.79           O
ATOM  16719  N   THR D  42       9.942 -31.105  54.535  1.00 56.12           N
ATOM  16720  CA  THR D  42      10.312 -32.528  54.514  1.00 56.46           C
ATOM  16722  CB  THR D  42       9.088 -33.445  54.715  1.00 54.82           C
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ATOM  16724  OG1 THR D  42       8.125 -32.783  55.532  1.00 53.40           O
ATOM  16726  CG2 THR D  42       9.490 -34.747  55.375  1.00 54.76           C
ATOM  16730  C   THR D  42      10.958 -32.957  53.216  1.00 56.00           C
ATOM  16731  O   THR D  42      10.642 -32.435  52.154  1.00 56.61           O
ATOM  16733  N   ALA D  43      11.854 -33.931  53.326  1.00 56.98           N
ATOM  16734  CA  ALA D  43      12.476 -34.573  52.175  1.00 56.62           C
ATOM  16736  CB  ALA D  43      13.949 -34.867  52.466  1.00 56.05           C
ATOM  16740  C   ALA D  43      11.727 -35.866  51.847  1.00 55.96           C
ATOM  16741  O   ALA D  43      11.087 -36.465  52.713  1.00 55.99           O
ATOM  16743  N   SER D  44      11.797 -36.271  50.585  1.00 55.94           N
ATOM  16744  CA  SER D  44      11.268 -37.558  50.144  1.00 56.44           C
ATOM  16746  CB  SER D  44      11.459 -37.701  48.635  1.00 56.20           C
ATOM  16749  OG  SER D  44      12.711 -37.154  48.241  1.00 53.10           O
ATOM  16751  C   SER D  44      12.007 -38.671  50.873  1.00 56.04           C
ATOM  16752  O   SER D  44      11.390 -39.561  51.451  1.00 53.30           O
ATOM  16754  N   GLN D  45      13.336 -38.590  50.831  1.00 58.20           N
ATOM  16755  CA  GLN D  45      14.216 -39.446  51.625  1.00 59.66           C
ATOM  16757  CB  GLN D  45      15.662 -39.399  51.088  1.00 59.52           C
ATOM  16760  CG  GLN D  45      16.113 -40.648  50.336  1.00 59.58           C
ATOM  16763  CD  GLN D  45      15.594 -40.720  48.908  1.00 61.12           C
ATOM  16764  OE1 GLN D  45      16.353 -41.015  47.987  1.00 63.26           O
ATOM  16765  NE2 GLN D  45      14.301 -40.457  48.716  1.00 57.52           N
ATOM  16768  C   GLN D  45      14.211 -39.040  53.106  1.00 61.15           C
ATOM  16769  O   GLN D  45      14.201 -37.853  53.439  1.00 61.13           O
ATOM  16771  N   LYS D  46      14.213 -40.041  53.984  1.00 62.76           N
ATOM  16772  CA  LYS D  46      14.443 -39.841  55.415  1.00 61.86           C
ATOM  16774  CB  LYS D  46      13.874 -41.028  56.208  1.00 63.45           C
ATOM  16777  CG  LYS D  46      14.158 -41.056  57.718  1.00 64.10           C
ATOM  16780  CD  LYS D  46      14.047 -42.495  58.285  1.00 65.12           C
ATOM  16783  CE  LYS D  46      15.307 -43.340  58.010  1.00 66.80           C
ATOM  16786  NZ  LYS D  46      16.189 -43.537  59.201  1.00 67.16           N
ATOM  16790  C   LYS D  46      15.955 -39.713  55.604  1.00 61.37           C
ATOM  16791  O   LYS D  46      16.646 -40.699  55.895  1.00 59.89           O
ATOM  16793  N   LYS D  47      16.465 -38.502  55.379  1.00 60.22           N
ATOM  16794  CA  LYS D  47      17.882 -38.196  55.597  1.00 58.96           C
ATOM  16796  CB  LYS D  47      18.768 -38.913  54.566  1.00 58.43           C
ATOM  16799  CG  LYS D  47      18.892 -38.229  53.206  1.00 58.50           C
ATOM  16802  CD  LYS D  47      20.154 -38.708  52.466  1.00 59.64           C
ATOM  16805  CE  LYS D  47      21.012 -37.545  51.966  1.00 58.15           C
ATOM  16808  NZ  LYS D  47      22.463 -37.872  51.976  1.00 56.58           N
ATOM  16812  C   LYS D  47      18.133 -36.676  55.597  1.00 57.82           C
ATOM  16813  O   LYS D  47      17.205 -35.893  55.386  1.00 55.11           O
ATOM  16815  N   SER D  48      19.386 -36.277  55.841  1.00 57.37           N
ATOM  16816  CA  SER D  48      19.769 -34.858  55.924  1.00 56.74           C
ATOM  16818  CB  SER D  48      20.745 -34.623  57.082  1.00 56.60           C
ATOM  16821  OG  SER D  48      21.324 -33.327  57.023  1.00 54.06           O
ATOM  16823  C   SER D  48      20.396 -34.351  54.625  1.00 56.51           C
ATOM  16824  O   SER D  48      21.374 -34.904  54.132  1.00 57.70           O
ATOM  16826  N   ILE D  49      19.824 -33.279  54.095  1.00 56.29           N
ATOM  16827  CA  ILE D  49      20.289 -32.646  52.868  1.00 55.70           C
ATOM  16829  CB  ILE D  49      19.423 -33.051  51.652  1.00 55.14           C
ATOM  16831  CG1 ILE D  49      17.946 -32.685  51.896  1.00 54.71           C
ATOM  16834  CD1 ILE D  49      16.973 -33.274  50.903  1.00 54.63           C
ATOM  16838  CG2 ILE D  49      19.584 -34.531  51.369  1.00 53.70           C
ATOM  16842  C   ILE D  49      20.187 -31.146  53.078  1.00 55.75           C
ATOM  16843  O   ILE D  49      19.677 -30.696  54.105  1.00 55.41           O
ATOM  16845  N   GLN D  50      20.663 -30.375  52.110  1.00 55.80           N
ATOM  16846  CA  GLN D  50      20.532 -28.928  52.185  1.00 56.67           C
ATOM  16848  CB  GLN D  50      21.509 -28.205  51.257  1.00 56.80           C
ATOM  16851  CG  GLN D  50      21.608 -28.688  49.830  1.00 59.40           C
ATOM  16854  CD  GLN D  50      23.041 -28.605  49.319  1.00 61.14           C
ATOM  16855  OE1 GLN D  50      23.985 -29.005  50.011  1.00 62.03           O
ATOM  16856  NE2 GLN D  50      23.211 -28.073  48.110  1.00 66.64           N
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ATOM  16859  C   GLN D  50      19.110 -28.457  51.934  1.00 56.30           C
ATOM  16860  O   GLN D  50      18.373 -29.058  51.153  1.00 56.88           O
ATOM  16862  N   PHE D  51      18.749 -27.385  52.639  1.00 56.44           N
ATOM  16863  CA  PHE D  51      17.451 -26.730  52.530  1.00 55.94           C
ATOM  16865  CB  PHE D  51      16.441 -27.440  53.415  1.00 56.79           C
ATOM  16868  CG  PHE D  51      16.728 -27.292  54.879  1.00 58.03           C
ATOM  16869  CD1 PHE D  51      17.545 -28.199  55.532  1.00 53.74           C
ATOM  16871  CE1 PHE D  51      17.826 -28.056  56.880  1.00 55.86           C
ATOM  16873  CZ  PHE D  51      17.296 -26.991  57.592  1.00 57.32           C
ATOM  16875  CE2 PHE D  51      16.482 -26.067  56.945  1.00 59.39           C
ATOM  16877  CD2 PHE D  51      16.203 -26.220  55.596  1.00 59.32           C
ATOM  16879  C   PHE D  51      17.604 -25.293  53.013  1.00 55.25           C
ATOM  16880  O   PHE D  51      18.505 -24.996  53.790  1.00 55.07           O
ATOM  16882  N   HIS D  52      16.722 -24.408  52.572  1.00 56.19           N
ATOM  16883  CA  HIS D  52      16.763 -23.011  53.000  1.00 57.41           C
ATOM  16885  CB  HIS D  52      17.381 -22.122  51.906  1.00 60.64           C
ATOM  16888  CG  HIS D  52      18.869 -22.264  51.761  1.00 65.48           C
ATOM  16889  ND1 HIS D  52      19.500 -22.228  50.536  1.00 65.43           N
ATOM  16891  CE1 HIS D  52      20.805 -22.370  50.711  1.00 74.78           C
ATOM  16893  NE2 HIS D  52      21.042 -22.502  52.005  1.00 72.58           N
ATOM  16895  CD2 HIS D  52      19.849 -22.433  52.684  1.00 71.76           C
ATOM  16897  C   HIS D  52      15.365 -22.512  53.290  1.00 54.41           C
ATOM  16898  O   HIS D  52      14.497 -22.648  52.448  1.00 56.90           O
ATOM  16900  N   TRP D  53      15.150 -21.947  54.474  1.00 52.48           N
ATOM  16901  CA  TRP D  53      13.927 -21.194  54.761  1.00 52.75           C
ATOM  16903  CB  TRP D  53      13.524 -21.317  56.227  1.00 53.44           C
ATOM  16906  CG  TRP D  53      12.823 -22.553  56.599  1.00 52.10           C
ATOM  16907  CD1 TRP D  53      13.330 -23.582  57.314  1.00 54.09           C
ATOM  16909  NE1 TRP D  53      12.376 -24.549  57.498  1.00 55.56           N
ATOM  16911  CE2 TRP D  53      11.216 -24.145  56.896  1.00 56.54           C
ATOM  16912  CD2 TRP D  53      11.460 -22.882  56.328  1.00 54.78           C
ATOM  16913  CE3 TRP D  53      10.422 -22.237  55.650  1.00 57.50           C
ATOM  16915  CZ3 TRP D  53       9.185 -22.874  55.565  1.00 55.10           C
ATOM  16917  CH2 TRP D  53       8.976 -24.132  56.142  1.00 52.76           C
ATOM  16919  CZ2 TRP D  53       9.973 -24.780  56.812  1.00 56.22           C
ATOM  16921  C   TRP D  53      14.133 -19.710  54.488  1.00 50.73           C
ATOM  16922  O   TRP D  53      14.954 -19.074  55.142  1.00 49.83           O
ATOM  16924  N   LYS D  54      13.372 -19.151  53.554  1.00 49.78           N
ATOM  16925  CA  LYS D  54      13.342 -17.702  53.368  1.00 51.35           C
ATOM  16927  CB  LYS D  54      13.936 -17.299  52.015  1.00 52.23           C
ATOM  16930  CG  LYS D  54      13.494 -18.136  50.823  1.00 59.55           C
ATOM  16933  CD  LYS D  54      14.165 -17.674  49.518  1.00 57.29           C
ATOM  16936  CE  LYS D  54      15.659 -18.026  49.465  1.00 60.10           C
ATOM  16939  NZ  LYS D  54      16.260 -17.667  48.137  1.00 60.94           N
ATOM  16943  C   LYS D  54      11.929 -17.171  53.543  1.00 49.66           C
ATOM  16944  O   LYS D  54      10.992 -17.955  53.701  1.00 52.00           O
ATOM  16946  N   ASN D  55      11.777 -15.847  53.566  1.00 48.11           N
ATOM  16947  CA  ASN D  55      10.438 -15.226  53.629  1.00 47.08           C
ATOM  16949  CB  ASN D  55      10.382 -14.060  54.636  1.00 45.61           C
ATOM  16952  CG  ASN D  55      11.364 -12.934  54.328  1.00 45.87           C
ATOM  16953  OD1 ASN D  55      11.766 -12.707  53.185  1.00 51.14           O
ATOM  16954  ND2 ASN D  55      11.749 -12.216  55.367  1.00 42.58           N
ATOM  16957  C   ASN D  55       9.949 -14.803  52.250  1.00 45.23           C
ATOM  16958  O   ASN D  55      10.677 -14.916  51.255  1.00 43.06           O
ATOM  16960  N   SER D  56       8.712 -14.332  52.184  1.00 45.71           N
ATOM  16961  CA  SER D  56       8.129 -13.887  50.918  1.00 47.48           C
ATOM  16963  CB  SER D  56       6.729 -13.336  51.137  1.00 47.80           C
ATOM  16966  OG  SER D  56       6.760 -12.163  51.935  1.00 56.48           O
ATOM  16968  C   SER D  56       8.975 -12.822  50.239  1.00 47.97           C
ATOM  16969  O   SER D  56       8.996 -12.723  49.010  1.00 49.96           O
ATOM  16971  N   ASN D  57       9.681 -12.030  51.039  1.00 48.45           N
ATOM  16972  CA  ASN D  57      10.582 -11.026  50.503  1.00 48.84           C
ATOM  16974  CB  ASN D  57      10.779  -9.912  51.519  1.00 49.41           C
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ATOM  16977  CG  ASN D  57      11.347  -8.669  50.893  1.00 55.44           C
ATOM  16978  OD1 ASN D  57      10.792  -8.147  49.915  1.00 61.49           O
ATOM  16979  ND2 ASN D  57      12.477  -8.195  51.426  1.00 53.54           N
ATOM  16982  C   ASN D  57      11.947 -11.566  50.054  1.00 49.04           C
ATOM  16983  O   ASN D  57      12.839 -10.792  49.716  1.00 52.24           O
ATOM  16985  N   GLN D  58      12.103 -12.887  50.025  1.00 49.96           N
ATOM  16986  CA  GLN D  58      13.347 -13.534  49.594  1.00 48.57           C
ATOM  16988  CB  GLN D  58      13.730 -13.128  48.164  1.00 45.71           C
ATOM  16991  CG  GLN D  58      12.647 -13.412  47.154  1.00 50.64           C
ATOM  16994  CD  GLN D  58      12.163 -14.845  47.250  1.00 52.50           C
ATOM  16995  OE1 GLN D  58      12.964 -15.777  47.241  1.00 56.11           O
ATOM  16996  NE2 GLN D  58      10.854 -15.027  47.379  1.00 52.19           N
ATOM  16999  C   GLN D  58      14.469 -13.205  50.550  1.00 49.00           C
ATOM  17000  O   GLN D  58      15.547 -12.836  50.126  1.00 51.30           O
ATOM  17002  N   ILE D  59      14.216 -13.313  51.846  1.00 48.94           N
ATOM  17003  CA  ILE D  59      15.280 -13.109  52.808  1.00 50.70           C
ATOM  17005  CB  ILE D  59      15.011 -11.958  53.781  1.00 51.81           C
ATOM  17007  CG1 ILE D  59      14.727 -10.656  53.024  1.00 55.07           C
ATOM  17010  CD1 ILE D  59      13.930  -9.640  53.860  1.00 56.17           C
ATOM  17014  CG2 ILE D  59      16.220 -11.772  54.702  1.00 49.77           C
ATOM  17018  C   ILE D  59      15.468 -14.371  53.600  1.00 48.73           C
ATOM  17019  O   ILE D  59      14.518 -14.910  54.147  1.00 48.05           O
ATOM  17021  N   LYS D  60      16.714 -14.816  53.667  1.00 48.78           N
ATOM  17022  CA  LYS D  60      17.053 -16.074  54.300  1.00 48.95           C
ATOM  17024  CB  LYS D  60      18.524 -16.429  54.029  1.00 49.85           C
ATOM  17027  CG  LYS D  60      18.798 -17.096  52.692  0.30 46.20           C
ATOM  17030  CD  LYS D  60      20.124 -17.851  52.722  0.30 46.66           C
ATOM  17033  CE  LYS D  60      20.077 -19.091  53.641  0.30 44.65           C
ATOM  17036  NZ  LYS D  60      20.254 -18.797  55.102  0.30 36.58           N
ATOM  17040  C   LYS D  60      16.799 -15.980  55.798  1.00 48.12           C
ATOM  17041  O   LYS D  60      17.073 -14.952  56.408  1.00 49.83           O
ATOM  17043  N   ILE D  61      16.263 -17.048  56.377  1.00 46.84           N
ATOM  17044  CA  ILE D  61      16.004 -17.101  57.807  1.00 48.02           C
ATOM  17046  CB  ILE D  61      14.568 -17.543  58.091  1.00 47.34           C
ATOM  17048  CG1 ILE D  61      13.605 -16.480  57.567  1.00 47.70           C
ATOM  17051  CD1 ILE D  61      12.185 -16.946  57.481  1.00 51.20           C
ATOM  17055  CG2 ILE D  61      14.364 -17.778  59.590  1.00 45.19           C
ATOM  17059  C   ILE D  61      16.983 -18.060  58.442  1.00 47.57           C
ATOM  17060  O   ILE D  61      17.777 -17.670  59.302  1.00 49.36           O
ATOM  17062  N   LEU D  62      16.922 -19.312  58.006  1.00 47.97           N
ATOM  17063  CA  LEU D  62      17.907 -20.315  58.387  1.00 49.02           C
ATOM  17065  CB  LEU D  62      17.633 -20.815  59.808  1.00 49.88           C
ATOM  17068  CG  LEU D  62      16.373 -21.658  60.038  1.00 51.80           C
ATOM  17070  CD1 LEU D  62      16.556 -23.107  59.576  1.00 51.48           C
ATOM  17074  CD2 LEU D  62      15.986 -21.620  61.522  1.00 54.14           C
ATOM  17078  C   LEU D  62      17.914 -21.478  57.387  1.00 46.99           C
ATOM  17079  O   LEU D  62      16.960 -21.645  56.629  1.00 44.87           O
ATOM  17081  N   GLY D  63      18.977 -22.281  57.398  1.00 45.20           N
ATOM  17082  CA  GLY D  63      19.095 -23.384  56.454  1.00 45.81           C
ATOM  17085  C   GLY D  63      20.321 -24.244  56.646  1.00 45.70           C
ATOM  17086  O   GLY D  63      21.120 -24.004  57.537  1.00 47.29           O
ATOM  17088  N   ASN D  64      20.461 -25.262  55.808  1.00 46.43           N
ATOM  17089  CA  ASN D  64      21.592 -26.177  55.877  1.00 47.37           C
ATOM  17091  CB  ASN D  64      21.072 -27.607  56.017  1.00 46.87           C
ATOM  17094  CG  ASN D  64      22.184 -28.647  56.095  1.00 47.06           C
ATOM  17095  OD1 ASN D  64      23.368 -28.346  55.903  1.00 48.32           O
ATOM  17096  ND2 ASN D  64      21.796 -29.891  56.374  1.00 41.91           N
ATOM  17099  C   ASN D  64      22.456 -26.023  54.625  1.00 47.39           C
ATOM  17100  O   ASN D  64      22.122 -26.560  53.587  1.00 43.38           O
ATOM  17102  N   GLN D  65      23.562 -25.285  54.737  1.00 51.03           N
ATOM  17103  CA  GLN D  65      24.438 -24.981  53.586  1.00 53.34           C
ATOM  17105  CB  GLN D  65      25.055 -23.579  53.704  1.00 55.42           C
ATOM  17108  CG  GLN D  65      24.310 -22.502  52.924  1.00 63.21           C
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ATOM  17111  CD  GLN D  65      24.798 -22.366  51.483  1.00 68.32           C
ATOM  17112  OE1 GLN D  65      24.951 -23.356  50.765  1.00 70.29           O
ATOM  17113  NE2 GLN D  65      25.041 -21.128  51.058  1.00 73.15           N
ATOM  17116  C   GLN D  65      25.541 -26.008  53.425  1.00 53.91           C
ATOM  17117  O   GLN D  65      26.731 -25.674  53.472  1.00 51.75           O
ATOM  17119  N   GLY D  66      25.139 -27.257  53.212  1.00 54.62           N
ATOM  17120  CA  GLY D  66      26.101 -28.329  53.080  1.00 54.56           C
ATOM  17123  C   GLY D  66      26.970 -28.383  54.319  1.00 54.68           C
ATOM  17124  O   GLY D  66      28.044 -27.760  54.374  1.00 51.82           O
ATOM  17126  N   SER D  67      26.464 -29.095  55.324  1.00 54.02           N
ATOM  17127  CA  SER D  67      27.208 -29.417  56.544  1.00 52.50           C
ATOM  17129  CB  SER D  67      28.623 -29.922  56.218  1.00 54.69           C
ATOM  17132  OG  SER D  67      29.527 -28.864  55.946  1.00 57.84           O
ATOM  17134  C   SER D  67      27.278 -28.304  57.588  1.00 50.53           C
ATOM  17135  O   SER D  67      27.774 -28.556  58.679  1.00 50.40           O
ATOM  17137  N   PHE D  68      26.790 -27.097  57.270  1.00 48.69           N
ATOM  17138  CA  PHE D  68      26.647 -26.012  58.266  1.00 46.25           C
ATOM  17140  CB  PHE D  68      27.448 -24.781  57.861  1.00 40.88           C
ATOM  17143  CG  PHE D  68      28.900 -25.032  57.735  1.00 32.87           C
ATOM  17144  CD1 PHE D  68      29.686 -25.157  58.861  1.00 31.54           C
ATOM  17146  CE1 PHE D  68      31.042 -25.409  58.749  1.00 35.24           C
ATOM  17148  CZ  PHE D  68      31.617 -25.535  57.490  1.00 33.93           C
ATOM  17150  CE2 PHE D  68      30.828 -25.414  56.361  1.00 29.46           C
ATOM  17152  CD2 PHE D  68      29.483 -25.161  56.490  1.00 27.19           C
ATOM  17154  C   PHE D  68      25.214 -25.559  58.415  1.00 46.69           C
ATOM  17155  O   PHE D  68      24.543 -25.334  57.413  1.00 48.40           O
ATOM  17157  N   LEU D  69      24.753 -25.394  59.655  1.00 46.80           N
ATOM  17158  CA  LEU D  69      23.548 -24.591  59.901  1.00 46.79           C
ATOM  17160  CB  LEU D  69      23.087 -24.663  61.360  1.00 46.74           C
ATOM  17163  CG  LEU D  69      21.998 -23.668  61.820  1.00 45.52           C
ATOM  17165  CD1 LEU D  69      20.760 -23.686  60.959  1.00 41.15           C
ATOM  17169  CD2 LEU D  69      21.589 -23.957  63.245  1.00 47.27           C
ATOM  17173  C   LEU D  69      23.900 -23.161  59.557  1.00 45.81           C
ATOM  17174  O   LEU D  69      24.979 -22.703  59.891  1.00 47.19           O
ATOM  17176  N   THR D  70      23.005 -22.469  58.866  1.00 46.57           N
ATOM  17177  CA  THR D  70      23.187 -21.054  58.576  1.00 47.35           C
ATOM  17179  CB  THR D  70      23.338 -20.791  57.070  1.00 47.00           C
ATOM  17181  OG1 THR D  70      22.235 -21.360  56.357  1.00 46.70           O
ATOM  17183  CG2 THR D  70      24.638 -21.392  56.562  1.00 50.03           C
ATOM  17187  C   THR D  70      22.034 -20.223  59.087  1.00 47.73           C
ATOM  17188  O   THR D  70      20.910 -20.692  59.220  1.00 46.85           O
ATOM  17190  N   LYS D  71      22.342 -18.971  59.375  1.00 50.00           N
ATOM  17191  CA  LYS D  71      21.350 -17.998  59.771  1.00 50.04           C
ATOM  17193  CB  LYS D  71      21.643 -17.485  61.181  1.00 51.04           C
ATOM  17196  CG  LYS D  71      20.584 -17.852  62.195  1.00 52.33           C
ATOM  17199  CD  LYS D  71      20.433 -19.353  62.415  1.00 50.52           C
ATOM  17202  CE  LYS D  71      19.581 -19.606  63.664  1.00 50.66           C
ATOM  17205  NZ  LYS D  71      18.387 -18.706  63.713  1.00 48.48           N
ATOM  17209  C   LYS D  71      21.375 -16.850  58.786  1.00 49.81           C
ATOM  17210  O   LYS D  71      22.444 -16.374  58.390  1.00 48.80           O
ATOM  17212  N   GLY D  72      20.186 -16.411  58.397  1.00 50.56           N
ATOM  17213  CA  GLY D  72      20.036 -15.260  57.523  1.00 50.17           C
ATOM  17216  C   GLY D  72      19.851 -14.012  58.345  1.00 49.84           C
ATOM  17217  O   GLY D  72      19.948 -14.053  59.555  1.00 48.81           O
ATOM  17219  N   PRO D  73      19.590 -12.883  57.689  1.00 54.03           N
ATOM  17220  CA  PRO D  73      19.564 -11.653  58.450  1.00 56.41           C
ATOM  17222  CB  PRO D  73      20.030 -10.613  57.426  1.00 54.90           C
ATOM  17225  CG  PRO D  73      19.691 -11.191  56.084  1.00 52.53           C
ATOM  17228  CD  PRO D  73      19.353 -12.643  56.255  1.00 54.44           C
ATOM  17231  C   PRO D  73      18.206 -11.271  59.009  1.00 57.46           C
ATOM  17232  O   PRO D  73      18.136 -10.300  59.746  1.00 58.04           O
ATOM  17233  N   SER D  74      17.145 -12.013  58.702  1.00 60.01           N
ATOM  17234  CA  SER D  74      15.787 -11.515  58.996  1.00 62.77           C
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ATOM  17236  CB  SER D  74      14.712 -12.548  58.621  1.00 62.96           C
ATOM  17239  OG  SER D  74      14.458 -13.464  59.663  1.00 63.94           O
ATOM  17241  C   SER D  74      15.597 -11.030  60.449  1.00 64.15           C
ATOM  17242  O   SER D  74      16.318 -11.443  61.361  1.00 62.42           O
ATOM  17244  N   LYS D  75      14.625 -10.138  60.636  1.00 66.84           N
ATOM  17245  CA  LYS D  75      14.279  -9.587  61.962  1.00 68.12           C
ATOM  17247  CB  LYS D  75      13.081  -8.642  61.836  1.00 69.75           C
ATOM  17250  CG  LYS D  75      13.321  -7.416  60.932  1.00 74.63           C
ATOM  17253  CD  LYS D  75      12.030  -6.950  60.233  1.00 73.74           C
ATOM  17256  CE  LYS D  75      11.693  -7.826  59.033  1.00 77.18           C
ATOM  17259  NZ  LYS D  75      10.457  -7.378  58.346  1.00 77.76           N
ATOM  17263  C   LYS D  75      13.919 -10.716  62.924  1.00 66.42           C
ATOM  17264  O   LYS D  75      14.211 -10.671  64.112  1.00 66.11           O
ATOM  17266  N   LEU D  76      13.271 -11.720  62.355  1.00 65.63           N
ATOM  17267  CA  LEU D  76      12.923 -12.973  63.002  1.00 66.08           C
ATOM  17269  CB  LEU D  76      12.475 -13.947  61.902  1.00 64.61           C
ATOM  17272  CG  LEU D  76      11.362 -14.952  62.158  1.00 64.39           C
ATOM  17274  CD1 LEU D  76      10.236 -14.368  62.993  1.00 65.34           C
ATOM  17278  CD2 LEU D  76      10.848 -15.416  60.821  1.00 64.63           C
ATOM  17282  C   LEU D  76      14.055 -13.632  63.788  1.00 67.24           C
ATOM  17283  O   LEU D  76      13.810 -14.283  64.803  1.00 68.33           O
ATOM  17285  N   ASN D  77      15.284 -13.438  63.317  1.00 68.57           N
ATOM  17286  CA  ASN D  77      16.424 -14.319  63.616  1.00 68.10           C
ATOM  17288  CB  ASN D  77      17.739 -13.624  63.226  1.00 70.44           C
ATOM  17291  CG  ASN D  77      18.948 -14.524  63.405  1.00 72.93           C
ATOM  17292  OD1 ASN D  77      18.880 -15.725  63.137  1.00 86.20           O
ATOM  17293  ND2 ASN D  77      20.057 -13.952  63.865  1.00 79.02           N
ATOM  17296  C   ASN D  77      16.557 -14.864  65.036  1.00 66.80           C
ATOM  17297  O   ASN D  77      16.778 -16.057  65.228  1.00 66.29           O
ATOM  17299  N   ASP D  78      16.453 -13.986  66.020  1.00 65.64           N
ATOM  17300  CA  ASP D  78      16.637 -14.388  67.414  1.00 65.69           C
ATOM  17302  CB  ASP D  78      16.609 -13.171  68.367  1.00 68.23           C
ATOM  17305  CG  ASP D  78      15.950 -11.923  67.742  1.00 75.84           C
ATOM  17306  OD1 ASP D  78      16.384 -11.495  66.641  1.00 77.97           O
ATOM  17307  OD2 ASP D  78      15.006 -11.366  68.356  1.00 82.19           O
ATOM  17308  C   ASP D  78      15.620 -15.453  67.835  1.00 63.86           C
ATOM  17309  O   ASP D  78      15.970 -16.422  68.498  1.00 66.28           O
ATOM  17311  N   ARG D  79      14.376 -15.298  67.409  1.00 61.25           N
ATOM  17312  CA  ARG D  79      13.315 -16.224  67.789  1.00 59.74           C
ATOM  17314  CB  ARG D  79      11.995 -15.460  67.921  1.00 60.80           C
ATOM  17317  CG  ARG D  79      12.082 -14.278  68.866  1.00 57.42           C
ATOM  17320  CD  ARG D  79      10.792 -13.535  68.954  1.00 51.87           C
ATOM  17323  NE  ARG D  79      10.540 -12.706  67.782  1.00 45.36           N
ATOM  17325  CZ  ARG D  79       9.474 -12.786  66.984  1.00 45.37           C
ATOM  17326  NH1 ARG D  79       8.518 -13.673  67.182  1.00 50.15           N
ATOM  17329  NH2 ARG D  79       9.358 -11.956  65.971  1.00 44.62           N
ATOM  17332  C   ARG D  79      13.126 -17.375  66.801  1.00 60.30           C
ATOM  17333  O   ARG D  79      12.179 -18.156  66.948  1.00 60.79           O
ATOM  17335  N   ALA D  80      14.009 -17.492  65.807  1.00 58.46           N
ATOM  17336  CA  ALA D  80      13.840 -18.492  64.754  1.00 59.12           C
ATOM  17338  CB  ALA D  80      14.048 -17.862  63.398  1.00 59.56           C
ATOM  17342  C   ALA D  80      14.798 -19.651  64.945  1.00 59.62           C
ATOM  17343  O   ALA D  80      15.998 -19.453  65.106  1.00 60.02           O
ATOM  17345  N   ASP D  81      14.266 -20.865  64.904  1.00 60.29           N
ATOM  17346  CA  ASP D  81      15.062 -22.060  65.175  1.00 60.41           C
ATOM  17348  CB  ASP D  81      14.874 -22.462  66.641  1.00 62.39           C
ATOM  17351  CG  ASP D  81      15.973 -21.941  67.541  1.00 68.41           C
ATOM  17352  OD1 ASP D  81      17.160 -22.209  67.247  1.00 73.38           O
ATOM  17353  OD2 ASP D  81      15.647 -21.285  68.557  1.00 78.40           O
ATOM  17354  C   ASP D  81      14.693 -23.248  64.289  1.00 59.67           C
ATOM  17355  O   ASP D  81      13.712 -23.211  63.549  1.00 61.22           O
ATOM  17357  N   SER D  82      15.499 -24.301  64.376  1.00 58.72           N
ATOM  17358  CA  SER D  82      15.156 -25.602  63.817  1.00 57.80           C
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ATOM  17360  CB  SER D  82      15.860 -25.821  62.481  1.00 56.33           C
ATOM  17363  OG  SER D  82      15.184 -26.817  61.740  1.00 50.78           O
ATOM  17365  C   SER D  82      15.551 -26.682  64.813  1.00 57.70           C
ATOM  17366  O   SER D  82      15.729 -26.396  65.997  1.00 56.12           O
ATOM  17368  N   ARG D  83      15.680 -27.918  64.336  1.00 58.91           N
ATOM  17369  CA  ARG D  83      16.119 -29.032  65.172  1.00 59.68           C
ATOM  17371  CB  ARG D  83      14.924 -29.834  65.673  1.00 60.12           C
ATOM  17374  CG  ARG D  83      14.142 -29.177  66.783  1.00 64.04           C
ATOM  17377  CD  ARG D  83      13.154 -30.175  67.390  1.00 68.81           C
ATOM  17380  NE  ARG D  83      11.880 -29.545  67.744  1.00 78.30           N
ATOM  17382  CZ  ARG D  83      10.823 -30.198  68.219  1.00 77.56           C
ATOM  17383  NH1 ARG D  83      10.876 -31.512  68.430  1.00 80.28           N
ATOM  17386  NH2 ARG D  83       9.713 -29.527  68.504  1.00 77.52           N
ATOM  17389  C   ARG D  83      17.017 -29.948  64.370  1.00 58.80           C
ATOM  17390  O   ARG D  83      16.529 -30.726  63.552  1.00 61.64           O
ATOM  17392  N   ARG D  84      18.322 -29.865  64.614  1.00 56.78           N
ATOM  17393  CA  ARG D  84      19.302 -30.633  63.844  1.00 54.30           C
ATOM  17395  CB  ARG D  84      20.715 -30.087  64.072  1.00 52.76           C
ATOM  17398  CG  ARG D  84      20.904 -28.678  63.526  1.00 51.98           C
ATOM  17401  CD  ARG D  84      22.248 -28.092  63.895  1.00 48.11           C
ATOM  17404  NE  ARG D  84      22.330 -27.885  65.335  1.00 42.65           N
ATOM  17406  CZ  ARG D  84      23.441 -27.955  66.058  1.00 31.61           C
ATOM  17407  NH1 ARG D  84      24.608 -28.236  65.498  1.00 35.68           N
ATOM  17410  NH2 ARG D  84      23.373 -27.764  67.364  1.00 29.89           N
ATOM  17413  C   ARG D  84      19.234 -32.120  64.184  1.00 54.47           C
ATOM  17414  O   ARG D  84      19.664 -32.968  63.393  1.00 55.00           O
ATOM  17416  N   SER D  85      18.704 -32.423  65.368  1.00 53.86           N
ATOM  17417  CA  SER D  85      18.418 -33.796  65.762  1.00 52.88           C
ATOM  17419  CB  SER D  85      17.788 -33.820  67.159  1.00 52.10           C
ATOM  17422  OG  SER D  85      16.624 -33.014  67.211  1.00 44.20           O
ATOM  17424  C   SER D  85      17.488 -34.461  64.737  1.00 53.46           C
ATOM  17425  O   SER D  85      17.667 -35.628  64.396  1.00 53.22           O
ATOM  17427  N   LEU D  86      16.523 -33.693  64.228  1.00 53.24           N
ATOM  17428  CA  LEU D  86      15.552 -34.189  63.247  1.00 52.03           C
ATOM  17430  CB  LEU D  86      14.224 -33.431  63.386  1.00 51.29           C
ATOM  17433  CG  LEU D  86      13.619 -33.340  64.787  1.00 49.20           C
ATOM  17435  CD1 LEU D  86      12.214 -32.800  64.702  1.00 47.44           C
ATOM  17439  CD2 LEU D  86      13.630 -34.689  65.486  1.00 50.30           C
ATOM  17443  C   LEU D  86      16.014 -34.104  61.790  1.00 51.46           C
ATOM  17444  O   LEU D  86      15.376 -34.680  60.912  1.00 53.05           O
ATOM  17446  N   TRP D  87      17.098 -33.388  61.511  1.00 49.89           N
ATOM  17447  CA  TRP D  87      17.565 -33.286  60.130  1.00 50.40           C
ATOM  17449  CB  TRP D  87      18.816 -32.411  60.021  1.00 48.30           C
ATOM  17452  CG  TRP D  87      18.540 -30.943  60.244  1.00 48.36           C
ATOM  17453  CD1 TRP D  87      17.376 -30.383  60.693  1.00 48.54           C
ATOM  17455  NE1 TRP D  87      17.513 -29.022  60.793  1.00 49.53           N
ATOM  17457  CE2 TRP D  87      18.780 -28.672  60.411  1.00 43.98           C
ATOM  17458  CD2 TRP D  87      19.458 -29.856  60.060  1.00 43.71           C
ATOM  17459  CE3 TRP D  87      20.780 -29.770  59.624  1.00 44.96           C
ATOM  17461  CZ3 TRP D  87      21.376 -28.528  59.561  1.00 48.05           C
ATOM  17463  CH2 TRP D  87      20.673 -27.365  59.918  1.00 46.51           C
ATOM  17465  CZ2 TRP D  87      19.377 -27.419  60.340  1.00 44.34           C
ATOM  17467  C   TRP D  87      17.830 -34.669  59.571  1.00 50.61           C
ATOM  17468  O   TRP D  87      17.669 -34.890  58.379  1.00 50.87           O
ATOM  17470  N   ASP D  88      18.212 -35.595  60.451  1.00 53.34           N
ATOM  17471  CA  ASP D  88      18.494 -36.991  60.081  1.00 53.92           C
ATOM  17473  CB  ASP D  88      19.123 -37.738  61.260  1.00 54.55           C
ATOM  17476  CG  ASP D  88      20.589 -37.455  61.401  1.00 59.30           C
ATOM  17477  OD1 ASP D  88      21.101 -36.570  60.673  1.00 59.28           O
ATOM  17478  OD2 ASP D  88      21.232 -38.133  62.234  1.00 69.41           O
ATOM  17479  C   ASP D  88      17.287 -37.786  59.610  1.00 53.60           C
ATOM  17480  O   ASP D  88      17.455 -38.845  59.018  1.00 55.99           O
ATOM  17482  N   GLN D  89      16.088 -37.302  59.893  1.00 51.21           N
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ATOM  17483  CA  GLN D  89      14.887 -37.953  59.425  1.00 52.09           C
ATOM  17485  CB  GLN D  89      13.964 -38.252  60.611  1.00 52.89           C
ATOM  17488  CG  GLN D  89      14.633 -38.947  61.791  1.00 55.87           C
ATOM  17491  CD  GLN D  89      15.023 -40.398  61.500  1.00 65.01           C
ATOM  17492  OE1 GLN D  89      15.962 -40.664  60.747  1.00 71.22           O
ATOM  17493  NE2 GLN D  89      14.318 -41.340  62.122  1.00 64.03           N
ATOM  17496  C   GLN D  89      14.180 -37.071  58.382  1.00 52.21           C
ATOM  17497  O   GLN D  89      12.944 -37.020  58.343  1.00 51.02           O
ATOM  17499  N   GLY D  90      14.964 -36.383  57.543  1.00 50.99           N
ATOM  17500  CA  GLY D  90      14.426 -35.471  56.518  1.00 50.85           C
ATOM  17503  C   GLY D  90      13.410 -34.456  57.031  1.00 51.11           C
ATOM  17504  O   GLY D  90      12.399 -34.172  56.377  1.00 49.62           O
ATOM  17506  N   ASN D  91      13.680 -33.906  58.209  1.00 50.10           N
ATOM  17507  CA  ASN D  91      12.744 -33.010  58.862  1.00 49.16           C
ATOM  17509  CB  ASN D  91      12.176 -33.674  60.105  1.00 48.68           C
ATOM  17512  CG  ASN D  91      10.987 -32.939  60.664  1.00 47.44           C
ATOM  17513  OD1 ASN D  91      10.008 -33.549  61.065  1.00 41.58           O
ATOM  17514  ND2 ASN D  91      11.060 -31.620  60.685  1.00 53.16           N
ATOM  17517  C   ASN D  91      13.456 -31.715  59.210  1.00 49.71           C
ATOM  17518  O   ASN D  91      14.389 -31.710  60.019  1.00 50.12           O
ATOM  17520  N   PHE D  92      13.004 -30.626  58.586  1.00 48.98           N
ATOM  17521  CA  PHE D  92      13.711 -29.357  58.588  1.00 47.76           C
ATOM  17523  CB  PHE D  92      14.259 -29.065  57.193  1.00 49.53           C
ATOM  17526  CG  PHE D  92      14.925 -30.240  56.558  1.00 51.11           C
ATOM  17527  CD1 PHE D  92      15.832 -31.009  57.274  1.00 53.50           C
ATOM  17529  CE1 PHE D  92      16.440 -32.099  56.697  1.00 54.86           C
ATOM  17531  CZ  PHE D  92      16.150 -32.440  55.385  1.00 57.58           C
ATOM  17533  CE2 PHE D  92      15.244 -31.690  54.662  1.00 55.72           C
ATOM  17535  CD2 PHE D  92      14.639 -30.592  55.250  1.00 55.78           C
ATOM  17537  C   PHE D  92      12.761 -28.270  59.001  1.00 46.74           C
ATOM  17538  O   PHE D  92      12.443 -27.391  58.204  1.00 46.60           O
ATOM  17540  N   PRO D  93      12.319 -28.307  60.262  1.00 46.04           N
ATOM  17541  CA  PRO D  93      11.266 -27.408  60.661  1.00 46.87           C
ATOM  17543  CB  PRO D  93      10.712 -28.060  61.925  1.00 48.35           C
ATOM  17546  CG  PRO D  93      11.861 -28.786  62.509  1.00 46.63           C
ATOM  17549  CD  PRO D  93      12.796 -29.127  61.388  1.00 46.27           C
ATOM  17552  C   PRO D  93      11.815 -26.043  60.987  1.00 48.35           C
ATOM  17553  O   PRO D  93      12.992 -25.913  61.351  1.00 48.65           O
ATOM  17554  N   LEU D  94      10.959 -25.041  60.826  1.00 48.56           N
ATOM  17555  CA  LEU D  94      11.221 -23.685  61.269  1.00 47.67           C
ATOM  17557  CB  LEU D  94      10.887 -22.698  60.160  1.00 46.80           C
ATOM  17560  CG  LEU D  94      10.929 -21.208  60.495  1.00 47.25           C
ATOM  17562  CD1 LEU D  94      12.293 -20.835  61.068  1.00 48.22           C
ATOM  17566  CD2 LEU D  94      10.604 -20.384  59.242  1.00 45.98           C
ATOM  17570  C   LEU D  94      10.313 -23.454  62.457  1.00 49.54           C
ATOM  17571  O   LEU D  94       9.080 -23.465  62.310  1.00 48.55           O
ATOM  17573  N   ILE D  95      10.917 -23.268  63.632  1.00 50.54           N
ATOM  17574  CA  ILE D  95      10.169 -23.016  64.864  1.00 50.79           C
ATOM  17576  CB  ILE D  95      10.653 -23.912  66.021  1.00 49.82           C
ATOM  17578  CG1 ILE D  95      10.956 -25.322  65.511  1.00 50.38           C
ATOM  17581  CD1 ILE D  95      11.032 -26.388  66.588  1.00 49.96           C
ATOM  17585  CG2 ILE D  95       9.604 -23.951  67.120  1.00 51.11           C
ATOM  17589  C   ILE D  95      10.307 -21.546  65.270  1.00 53.06           C
ATOM  17590  O   ILE D  95      11.423 -20.995  65.279  1.00 56.14           O
ATOM  17592  N   ILE D  96       9.181 -20.919  65.615  1.00 52.52           N
ATOM  17593  CA  ILE D  96       9.170 -19.500  65.963  1.00 52.98           C
ATOM  17595  CB  ILE D  96       8.468 -18.688  64.868  1.00 51.34           C
ATOM  17597  CG1 ILE D  96       9.101 -19.011  63.512  1.00 50.27           C
ATOM  17600  CD1 ILE D  96       8.559 -18.211  62.354  1.00 54.15           C
ATOM  17604  CG2 ILE D  96       8.557 -17.193  65.164  1.00 51.83           C
ATOM  17608  C   ILE D  96       8.522 -19.241  67.336  1.00 54.32           C
ATOM  17609  O   ILE D  96       7.325 -19.424  67.491  1.00 55.46           O
ATOM  17611  N   LYS D  97       9.341 -18.793  68.296  1.00 55.29           N
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ATOM  17612  CA  LYS D  97       8.935 -18.449  69.670  1.00 56.12           C
ATOM  17614  CB  LYS D  97      10.170 -18.334  70.578  1.00 57.63           C
ATOM  17617  CG  LYS D  97      11.124 -19.532  70.601  1.00 62.44           C
ATOM  17620  CD  LYS D  97      12.533 -19.131  71.085  1.00 62.68           C
ATOM  17623  CE  LYS D  97      13.637 -19.851  70.277  1.00 68.50           C
ATOM  17626  NZ  LYS D  97      15.035 -19.394  70.616  1.00 67.47           N
ATOM  17630  C   LYS D  97       8.240 -17.091  69.740  1.00 56.64           C
ATOM  17631  O   LYS D  97       8.506 -16.204  68.924  1.00 54.64           O
ATOM  17633  N   ASN D  98       7.383 -16.916  70.744  1.00 56.52           N
ATOM  17634  CA  ASN D  98       6.769 -15.619  71.011  1.00 55.97           C
ATOM  17636  CB  ASN D  98       7.737 -14.729  71.770  1.00 56.98           C
ATOM  17639  CG  ASN D  98       8.271 -15.388  72.998  1.00 61.78           C
ATOM  17640  OD1 ASN D  98       9.489 -15.509  73.171  1.00 69.09           O
ATOM  17641  ND2 ASN D  98       7.368 -15.844  73.864  1.00 67.30           N
ATOM  17644  C   ASN D  98       6.323 -14.908  69.745  1.00 55.57           C
ATOM  17645  O   ASN D  98       6.728 -13.770  69.467  1.00 57.09           O
ATOM  17647  N   LEU D  99       5.483 -15.591  68.980  1.00 53.56           N
ATOM  17648  CA  LEU D  99       4.948 -15.035  67.756  1.00 52.64           C
ATOM  17650  CB  LEU D  99       3.770 -15.873  67.280  1.00 53.96           C
ATOM  17653  CG  LEU D  99       4.075 -17.191  66.583  1.00 51.73           C
ATOM  17655  CD1 LEU D  99       2.873 -18.088  66.695  1.00 52.25           C
ATOM  17659  CD2 LEU D  99       4.445 -16.943  65.131  1.00 49.58           C
ATOM  17663  C   LEU D  99       4.453 -13.629  67.988  1.00 50.70           C
ATOM  17664  O   LEU D  99       3.723 -13.381  68.943  1.00 50.72           O
ATOM  17666  N   LYS D 100       4.866 -12.717  67.121  1.00 49.61           N
ATOM  17667  CA  LYS D 100       4.215 -11.424  66.997  1.00 50.36           C
ATOM  17669  CB  LYS D 100       5.235 -10.338  66.669  1.00 51.27           C
ATOM  17672  CG  LYS D 100       6.370 -10.242  67.678  1.00 54.97           C
ATOM  17675  CD  LYS D 100       7.345  -9.134  67.337  1.00 51.88           C
ATOM  17678  CE  LYS D 100       8.586  -9.224  68.205  1.00 55.94           C
ATOM  17681  NZ  LYS D 100       9.628  -8.233  67.777  1.00 65.64           N
ATOM  17685  C   LYS D 100       3.167 -11.519  65.884  1.00 50.00           C
ATOM  17686  O   LYS D 100       3.186 -12.460  65.081  1.00 47.49           O
ATOM  17688  N   ILE D 101       2.246 -10.557  65.842  1.00 50.48           N
ATOM  17689  CA  ILE D 101       1.294 -10.491  64.745  1.00 49.48           C
ATOM  17691  CB  ILE D 101       0.272  -9.331  64.879  1.00 51.04           C
ATOM  17693  CG1 ILE D 101      -1.038  -9.808  65.517  1.00 52.16           C
ATOM  17696  CD1 ILE D 101      -0.890 -10.467  66.844  1.00 58.31           C
ATOM  17700  CG2 ILE D 101      -0.102  -8.761  63.501  1.00 52.45           C
ATOM  17704  C   ILE D 101       2.065 -10.336  63.453  1.00 49.70           C
ATOM  17705  O   ILE D 101       1.709 -10.968  62.460  1.00 51.08           O
ATOM  17707  N   GLU D 102       3.124  -9.517  63.467  1.00 48.47           N
ATOM  17708  CA  GLU D 102       3.848  -9.191  62.233  1.00 47.42           C
ATOM  17710  CB  GLU D 102       4.536  -7.815  62.318  1.00 48.71           C
ATOM  17713  CG  GLU D 102       5.879  -7.740  63.067  1.00 56.38           C
ATOM  17716  CD  GLU D 102       5.794  -6.997  64.401  1.00 61.88           C
ATOM  17717  OE1 GLU D 102       4.836  -7.259  65.184  1.00 62.54           O
ATOM  17718  OE2 GLU D 102       6.700  -6.163  64.655  1.00 56.63           O
ATOM  17719  C   GLU D 102       4.819 -10.268  61.729  1.00 46.05           C
ATOM  17720  O   GLU D 102       5.528 -10.030  60.758  1.00 45.71           O
ATOM  17722  N   ASP D 103       4.853 -11.436  62.375  1.00 47.39           N
ATOM  17723  CA  ASP D 103       5.526 -12.626  61.814  1.00 47.66           C
ATOM  17725  CB  ASP D 103       5.779 -13.697  62.887  1.00 47.98           C
ATOM  17728  CG  ASP D 103       6.707 -13.237  63.990  1.00 49.22           C
ATOM  17729  OD1 ASP D 103       7.691 -12.543  63.703  1.00 55.42           O
ATOM  17730  OD2 ASP D 103       6.464 -13.592  65.158  1.00 56.95           O
ATOM  17731  C   ASP D 103       4.683 -13.276  60.715  1.00 48.59           C
ATOM  17732  O   ASP D 103       5.165 -14.165  60.001  1.00 48.20           O
ATOM  17734  N   SER D 104       3.410 -12.877  60.618  1.00 49.63           N
ATOM  17735  CA  SER D 104       2.503 -13.423  59.607  1.00 47.43           C
ATOM  17737  CB  SER D 104       1.097 -12.835  59.724  1.00 46.44           C
ATOM  17740  OG  SER D 104       0.576 -12.950  61.035  1.00 47.73           O
ATOM  17742  C   SER D 104       3.076 -13.096  58.244  1.00 47.63           C
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ATOM  17743  O   SER D 104       3.334 -11.927  57.925  1.00 49.32           O
ATOM  17745  N   ASP D 105       3.292 -14.150  57.471  1.00 46.35           N
ATOM  17746  CA  ASP D 105       3.961 -14.081  56.187  1.00 45.68           C
ATOM  17748  CB  ASP D 105       5.454 -13.751  56.379  1.00 44.54           C
ATOM  17751  CG  ASP D 105       6.113 -13.157  55.126  1.00 45.86           C
ATOM  17752  OD1 ASP D 105       5.564 -13.269  54.003  1.00 40.32           O
ATOM  17753  OD2 ASP D 105       7.202 -12.567  55.274  1.00 46.39           O
ATOM  17754  C   ASP D 105       3.802 -15.454  55.504  1.00 45.18           C
ATOM  17755  O   ASP D 105       3.259 -16.411  56.081  1.00 39.80           O
ATOM  17757  N   THR D 106       4.250 -15.517  54.261  1.00 45.62           N
ATOM  17758  CA  THR D 106       4.394 -16.758  53.564  1.00 46.95           C
ATOM  17760  CB  THR D 106       3.878 -16.656  52.124  1.00 45.75           C
ATOM  17762  OG1 THR D 106       2.455 -16.789  52.146  1.00 43.96           O
ATOM  17764  CG2 THR D 106       4.454 -17.747  51.236  1.00 46.64           C
ATOM  17768  C   THR D 106       5.865 -17.100  53.628  1.00 49.23           C
ATOM  17769  O   THR D 106       6.714 -16.306  53.231  1.00 53.20           O
ATOM  17771  N   TYR D 107       6.149 -18.280  54.166  1.00 50.82           N
ATOM  17772  CA  TYR D 107       7.497 -18.771  54.304  1.00 50.99           C
ATOM  17774  CB  TYR D 107       7.712 -19.296  55.710  1.00 49.84           C
ATOM  17777  CG  TYR D 107       7.688 -18.190  56.719  1.00 47.46           C
ATOM  17778  CD1 TYR D 107       6.502 -17.814  57.335  1.00 48.00           C
ATOM  17780  CE1 TYR D 107       6.465 -16.776  58.261  1.00 49.53           C
ATOM  17782  CZ  TYR D 107       7.623 -16.097  58.571  1.00 51.13           C
ATOM  17783  OH  TYR D 107       7.589 -15.069  59.492  1.00 49.82           O
ATOM  17785  CE2 TYR D 107       8.822 -16.447  57.953  1.00 51.42           C
ATOM  17787  CD2 TYR D 107       8.845 -17.487  57.030  1.00 46.99           C
ATOM  17789  C   TYR D 107       7.709 -19.846  53.271  1.00 53.47           C
ATOM  17790  O   TYR D 107       6.800 -20.614  52.983  1.00 55.68           O
ATOM  17792  N   ILE D 108       8.912 -19.873  52.705  1.00 54.50           N
ATOM  17793  CA  ILE D 108       9.221 -20.712  51.571  1.00 54.69           C
ATOM  17795  CB  ILE D 108       9.639 -19.874  50.370  1.00 55.47           C
ATOM  17797  CG1 ILE D 108       8.763 -18.620  50.247  1.00 58.98           C
ATOM  17800  CD1 ILE D 108       9.438 -17.485  49.470  1.00 59.41           C
ATOM  17804  CG2 ILE D 108       9.564 -20.713  49.106  1.00 54.90           C
ATOM  17808  C   ILE D 108      10.393 -21.572  51.946  1.00 54.85           C
ATOM  17809  O   ILE D 108      11.366 -21.072  52.483  1.00 55.07           O
ATOM  17811  N   CYS D 109      10.302 -22.861  51.649  1.00 57.10           N
ATOM  17812  CA  CYS D 109      11.345 -23.814  51.988  1.00 55.92           C
ATOM  17814  CB  CYS D 109      10.786 -24.891  52.921  1.00 58.35           C
ATOM  17817  SG  CYS D 109      12.043 -25.973  53.691  1.00 63.70           S
ATOM  17819  C   CYS D 109      11.873 -24.437  50.708  1.00 54.59           C
ATOM  17820  O   CYS D 109      11.207 -25.266  50.094  1.00 53.53           O
ATOM  17822  N   GLU D 110      13.067 -24.026  50.301  1.00 53.89           N
ATOM  17823  CA  GLU D 110      13.667 -24.522  49.078  1.00 54.43           C
ATOM  17825  CB  GLU D 110      14.624 -23.488  48.502  1.00 53.55           C
ATOM  17828  CG  GLU D 110      14.007 -22.109  48.290  1.00 57.55           C
ATOM  17831  CD  GLU D 110      15.000 -21.092  47.744  1.00 59.72           C
ATOM  17832  OE1 GLU D 110      16.207 -21.178  48.083  1.00 69.01           O
ATOM  17833  OE2 GLU D 110      14.571 -20.203  46.976  1.00 62.17           O
ATOM  17834  C   GLU D 110      14.407 -25.808  49.414  1.00 54.19           C
ATOM  17835  O   GLU D 110      15.289 -25.802  50.271  1.00 53.94           O
ATOM  17837  N   VAL D 111      14.035 -26.906  48.756  1.00 54.36           N
ATOM  17838  CA  VAL D 111      14.659 -28.211  48.988  1.00 55.10           C
ATOM  17840  CB  VAL D 111      14.183 -28.822  50.327  1.00 53.51           C
ATOM  17842  CG1 VAL D 111      12.685 -29.136  50.305  1.00 51.44           C
ATOM  17846  CG2 VAL D 111      14.997 -30.056  50.669  1.00 54.35           C
ATOM  17850  C   VAL D 111      14.394 -29.194  47.832  1.00 57.12           C
ATOM  17851  O   VAL D 111      13.244 -29.495  47.522  1.00 58.09           O
ATOM  17853  N   GLU D 112      15.462 -29.684  47.201  1.00 59.76           N
ATOM  17854  CA  GLU D 112      15.366 -30.585  46.039  1.00 61.43           C
ATOM  17856  CB  GLU D 112      14.718 -31.931  46.424  1.00 62.31           C
ATOM  17859  CG  GLU D 112      15.297 -32.668  47.631  1.00 61.85           C
ATOM  17862  CD  GLU D 112      14.346 -33.755  48.145  1.00 62.28           C
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ATOM  17863  OE1 GLU D 112      13.305 -33.413  48.754  1.00 60.57           O
ATOM  17864  OE2 GLU D 112      14.632 -34.952  47.939  1.00 62.56           O
ATOM  17865  C   GLU D 112      14.573 -29.964  44.870  1.00 63.64           C
ATOM  17866  O   GLU D 112      13.701 -30.619  44.279  1.00 64.99           O
ATOM  17868  N   ASP D 113      14.867 -28.709  44.535  1.00 64.25           N
ATOM  17869  CA  ASP D 113      14.118 -27.990  43.487  1.00 64.40           C
ATOM  17871  CB  ASP D 113      14.372 -28.605  42.108  1.00 64.94           C
ATOM  17874  CG  ASP D 113      15.826 -28.914  41.881  1.00 67.23           C
ATOM  17875  OD1 ASP D 113      16.661 -28.062  42.245  1.00 69.33           O
ATOM  17876  OD2 ASP D 113      16.134 -30.007  41.357  1.00 72.39           O
ATOM  17877  C   ASP D 113      12.626 -27.993  43.771  1.00 63.70           C
ATOM  17878  O   ASP D 113      11.822 -28.188  42.870  1.00 62.08           O
ATOM  17880  N   GLN D 114      12.280 -27.808  45.042  1.00 65.47           N
ATOM  17881  CA  GLN D 114      10.899 -27.615  45.475  1.00 66.02           C
ATOM  17883  CB  GLN D 114      10.473 -28.703  46.462  1.00 65.08           C
ATOM  17886  CG  GLN D 114      10.479 -30.093  45.884  1.00 64.18           C
ATOM  17889  CD  GLN D 114       9.546 -30.225  44.701  1.00 63.51           C
ATOM  17890  OE1 GLN D 114       9.862 -30.898  43.724  1.00 63.23           O
ATOM  17891  NE2 GLN D 114       8.392 -29.570  44.777  1.00 61.91           N
ATOM  17894  C   GLN D 114      10.801 -26.276  46.169  1.00 66.99           C
ATOM  17895  O   GLN D 114      11.816 -25.649  46.472  1.00 67.91           O
ATOM  17897  N   LYS D 115       9.572 -25.845  46.417  1.00 67.54           N
ATOM  17898  CA  LYS D 115       9.323 -24.680  47.237  1.00 68.05           C
ATOM  17900  CB  LYS D 115       9.155 -23.438  46.354  1.00 67.67           C
ATOM  17903  CG  LYS D 115      10.415 -23.040  45.562  1.00 71.79           C
ATOM  17906  CD  LYS D 115      10.427 -21.540  45.151  1.00 73.30           C
ATOM  17909  CE  LYS D 115      11.334 -20.674  46.061  1.00 78.19           C
ATOM  17912  NZ  LYS D 115      10.941 -19.217  46.127  1.00 75.63           N
ATOM  17916  C   LYS D 115       8.087 -24.929  48.110  1.00 67.97           C
ATOM  17917  O   LYS D 115       6.983 -24.519  47.753  1.00 70.14           O
ATOM  17919  N   GLU D 116       8.277 -25.613  49.243  1.00 66.62           N
ATOM  17920  CA  GLU D 116       7.189 -25.823  50.214  1.00 65.87           C
ATOM  17922  CB  GLU D 116       7.588 -26.693  51.424  1.00 67.20           C
ATOM  17925  CG  GLU D 116       8.674 -27.768  51.232  1.00 72.35           C
ATOM  17928  CD  GLU D 116       8.164 -29.092  50.704  1.00 74.69           C
ATOM  17929  OE1 GLU D 116       8.984 -29.834  50.107  1.00 70.69           O
ATOM  17930  OE2 GLU D 116       6.964 -29.399  50.903  1.00 81.52           O
ATOM  17931  C   GLU D 116       6.791 -24.452  50.745  1.00 64.53           C
ATOM  17932  O   GLU D 116       7.580 -23.816  51.433  1.00 64.43           O
ATOM  17934  N   GLU D 117       5.582 -24.001  50.418  1.00 63.26           N
ATOM  17935  CA  GLU D 117       5.091 -22.683  50.834  1.00 61.06           C
ATOM  17937  CB  GLU D 117       4.436 -21.948  49.665  1.00 60.98           C
ATOM  17940  CG  GLU D 117       5.315 -20.920  48.984  1.00 63.22           C
ATOM  17943  CD  GLU D 117       4.647 -20.310  47.757  1.00 65.19           C
ATOM  17944  OE1 GLU D 117       3.434 -20.558  47.533  1.00 64.15           O
ATOM  17945  OE2 GLU D 117       5.341 -19.587  47.009  1.00 73.03           O
ATOM  17946  C   GLU D 117       4.070 -22.824  51.936  1.00 58.20           C
ATOM  17947  O   GLU D 117       2.997 -23.374  51.724  1.00 58.52           O
ATOM  17949  N   VAL D 118       4.405 -22.317  53.110  1.00 56.15           N
ATOM  17950  CA  VAL D 118       3.475 -22.273  54.213  1.00 55.15           C
ATOM  17952  CB  VAL D 118       4.103 -22.845  55.483  1.00 55.28           C
ATOM  17954  CG1 VAL D 118       3.188 -22.623  56.672  1.00 59.84           C
ATOM  17958  CG2 VAL D 118       4.383 -24.328  55.309  1.00 61.55           C
ATOM  17962  C   VAL D 118       3.115 -20.818  54.453  1.00 52.51           C
ATOM  17963  O   VAL D 118       3.993 -19.973  54.545  1.00 46.39           O
ATOM  17965  N   GLN D 119       1.818 -20.540  54.554  1.00 52.44           N
ATOM  17966  CA  GLN D 119       1.344 -19.240  54.986  1.00 52.03           C
ATOM  17968  CB  GLN D 119       0.089 -18.818  54.236  1.00 50.69           C
ATOM  17971  CG  GLN D 119      -0.631 -17.671  54.922  1.00 53.87           C
ATOM  17974  CD  GLN D 119      -1.306 -16.724  53.962  1.00 55.76           C
ATOM  17975  OE1 GLN D 119      -2.405 -16.997  53.458  1.00 57.45           O
ATOM  17976  NE2 GLN D 119      -0.665 -15.578  53.723  1.00 56.47           N
ATOM  17979  C   GLN D 119       1.059 -19.272  56.478  1.00 50.84           C
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ATOM  17980  O   GLN D 119       0.174 -19.975  56.936  1.00 48.06           O
ATOM  17982  N   LEU D 120       1.818 -18.491  57.232  1.00 52.34           N
ATOM  17983  CA  LEU D 120       1.591 -18.369  58.655  1.00 52.02           C
ATOM  17985  CB  LEU D 120       2.914 -18.234  59.416  1.00 52.51           C
ATOM  17988  CG  LEU D 120       2.787 -17.939  60.914  1.00 50.64           C
ATOM  17990  CD1 LEU D 120       1.981 -19.026  61.621  1.00 47.00           C
ATOM  17994  CD2 LEU D 120       4.156 -17.778  61.533  1.00 52.44           C
ATOM  17998  C   LEU D 120       0.759 -17.132  58.867  1.00 50.99           C
ATOM  17999  O   LEU D 120       1.141 -16.065  58.410  1.00 50.93           O
ATOM  18001  N   LEU D 121      -0.374 -17.300  59.552  1.00 51.58           N
ATOM  18002  CA  LEU D 121      -1.225 -16.205  60.006  1.00 50.99           C
ATOM  18004  CB  LEU D 121      -2.630 -16.346  59.413  1.00 50.35           C
ATOM  18007  CG  LEU D 121      -2.689 -15.954  57.929  1.00 52.37           C
ATOM  18009  CD1 LEU D 121      -3.940 -16.455  57.222  1.00 53.89           C
ATOM  18013  CD2 LEU D 121      -2.587 -14.461  57.789  1.00 56.04           C
ATOM  18017  C   LEU D 121      -1.293 -16.221  61.528  1.00 52.40           C
ATOM  18018  O   LEU D 121      -1.696 -17.243  62.133  1.00 55.35           O
ATOM  18020  N   VAL D 122      -0.901 -15.099  62.139  1.00 50.06           N
ATOM  18021  CA  VAL D 122      -0.848 -14.970  63.596  1.00 51.75           C
ATOM  18023  CB  VAL D 122       0.512 -14.425  64.017  1.00 50.92           C
ATOM  18025  CG1 VAL D 122       0.522 -14.084  65.503  1.00 53.45           C
ATOM  18029  CG2 VAL D 122       1.584 -15.436  63.683  1.00 51.19           C
ATOM  18033  C   VAL D 122      -1.948 -14.055  64.153  1.00 53.51           C
ATOM  18034  O   VAL D 122      -2.012 -12.882  63.782  1.00 57.15           O
ATOM  18036  N   PHE D 123      -2.787 -14.582  65.054  1.00 53.51           N
ATOM  18037  CA  PHE D 123      -3.913 -13.821  65.627  1.00 53.99           C
ATOM  18039  CB  PHE D 123      -5.248 -14.512  65.363  1.00 54.15           C
ATOM  18042  CG  PHE D 123      -5.569 -14.697  63.915  1.00 54.30           C
ATOM  18043  CD1 PHE D 123      -5.834 -13.610  63.111  1.00 49.61           C
ATOM  18045  CE1 PHE D 123      -6.140 -13.780  61.786  1.00 49.05           C
ATOM  18047  CZ  PHE D 123      -6.180 -15.040  61.243  1.00 53.38           C
ATOM  18049  CE2 PHE D 123      -5.919 -16.140  62.033  1.00 54.85           C
ATOM  18051  CD2 PHE D 123      -5.624 -15.967  63.363  1.00 55.54           C
ATOM  18053  C   PHE D 123      -3.813 -13.680  67.131  1.00 55.49           C
ATOM  18054  O   PHE D 123      -3.332 -14.579  67.804  1.00 54.10           O
ATOM  18056  N   GLY D 124      -4.309 -12.557  67.647  1.00 57.23           N
ATOM  18057  CA  GLY D 124      -4.513 -12.364  69.084  1.00 56.46           C
ATOM  18060  C   GLY D 124      -5.910 -11.830  69.380  1.00 56.28           C
ATOM  18061  O   GLY D 124      -6.446 -11.046  68.608  1.00 57.45           O
ATOM  18063  N   LEU D 125      -6.484 -12.254  70.505  1.00 55.86           N
ATOM  18064  CA  LEU D 125      -7.801 -11.808  70.973  1.00 55.02           C
ATOM  18066  CB  LEU D 125      -8.688 -13.024  71.239  1.00 55.80           C
ATOM  18069  CG  LEU D 125     -10.175 -12.762  71.473  1.00 56.79           C
ATOM  18071  CD1 LEU D 125     -10.796 -12.208  70.205  1.00 61.17           C
ATOM  18075  CD2 LEU D 125     -10.888 -14.021  71.887  1.00 55.80           C
ATOM  18079  C   LEU D 125      -7.663 -11.006  72.270  1.00 55.05           C
ATOM  18080  O   LEU D 125      -6.934 -11.397  73.173  1.00 57.75           O
ATOM  18082  N   THR D 126      -8.397  -9.909  72.384  1.00 55.30           N
ATOM  18083  CA  THR D 126      -8.227  -8.988  73.505  1.00 54.22           C
ATOM  18085  CB  THR D 126      -7.120  -7.994  73.183  1.00 53.58           C
ATOM  18087  OG1 THR D 126      -7.204  -6.891  74.083  1.00 61.96           O
ATOM  18089  CG2 THR D 126      -7.258  -7.467  71.759  1.00 53.99           C
ATOM  18093  C   THR D 126      -9.504  -8.204  73.839  1.00 53.09           C
ATOM  18094  O   THR D 126     -10.285  -7.879  72.952  1.00 55.22           O
ATOM  18096  N   ALA D 127      -9.701  -7.888  75.116  1.00 52.00           N
ATOM  18097  CA  ALA D 127     -10.840  -7.073  75.553  1.00 53.40           C
ATOM  18099  CB  ALA D 127     -11.373  -7.588  76.872  1.00 51.75           C
ATOM  18103  C   ALA D 127     -10.469  -5.584  75.683  1.00 54.20           C
ATOM  18104  O   ALA D 127      -9.404  -5.239  76.188  1.00 51.57           O
ATOM  18106  N   ASN D 128     -11.374  -4.712  75.246  1.00 56.15           N
ATOM  18107  CA  ASN D 128     -11.171  -3.262  75.325  1.00 58.00           C
ATOM  18109  CB  ASN D 128     -12.225  -2.518  74.497  1.00 59.23           C
ATOM  18112  CG  ASN D 128     -12.291  -2.998  73.061  1.00 64.71           C
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ATOM  18113  OD1 ASN D 128     -11.567  -3.919  72.665  1.00 73.27           O
ATOM  18114  ND2 ASN D 128     -13.168  -2.383  72.272  1.00 63.61           N
ATOM  18117  C   ASN D 128     -11.237  -2.718  76.741  1.00 58.78           C
ATOM  18118  O   ASN D 128     -10.745  -1.622  77.001  1.00 60.88           O
ATOM  18120  N   SER D 129     -11.874  -3.466  77.640  1.00 60.02           N
ATOM  18121  CA  SER D 129     -12.130  -3.007  79.009  1.00 60.62           C
ATOM  18123  CB  SER D 129     -13.618  -2.661  79.199  1.00 61.16           C
ATOM  18126  OG  SER D 129     -14.214  -2.210  77.991  1.00 60.11           O
ATOM  18128  C   SER D 129     -11.753  -4.095  79.999  1.00 60.55           C
ATOM  18129  O   SER D 129     -11.497  -5.231  79.623  1.00 60.80           O
ATOM  18131  N   ASP D 130     -11.736  -3.742  81.274  1.00 60.66           N
ATOM  18132  CA  ASP D 130     -11.507  -4.729  82.311  1.00 59.83           C
ATOM  18134  CB  ASP D 130     -11.679  -4.100  83.703  1.00 61.23           C
ATOM  18137  CG  ASP D 130     -11.121  -4.966  84.826  1.00 62.22           C
ATOM  18138  OD1 ASP D 130     -10.602  -6.079  84.564  1.00 64.41           O
ATOM  18139  OD2 ASP D 130     -11.205  -4.515  85.989  1.00 67.18           O
ATOM  18140  C   ASP D 130     -12.529  -5.828  82.088  1.00 58.25           C
ATOM  18141  O   ASP D 130     -13.691  -5.531  81.808  1.00 58.54           O
ATOM  18143  N   THR D 131     -12.078  -7.080  82.182  1.00 57.24           N
ATOM  18144  CA  THR D 131     -12.936  -8.263  82.022  1.00 55.57           C
ATOM  18146  CB  THR D 131     -12.107  -9.487  81.621  1.00 53.38           C
ATOM  18148  OG1 THR D 131     -11.023  -9.652  82.539  1.00 51.04           O
ATOM  18150  CG2 THR D 131     -11.555  -9.312  80.238  1.00 53.52           C
ATOM  18154  C   THR D 131     -13.727  -8.614  83.293  1.00 56.21           C
ATOM  18155  O   THR D 131     -14.560  -9.530  83.278  1.00 56.72           O
ATOM  18157  N   HIS D 132     -13.441  -7.904  84.386  1.00 55.72           N
ATOM  18158  CA  HIS D 132     -14.231  -7.967  85.612  1.00 55.30           C
ATOM  18160  CB  HIS D 132     -13.324  -7.885  86.839  1.00 54.37           C
ATOM  18163  CG  HIS D 132     -12.323  -8.997  86.932  1.00 53.87           C
ATOM  18164  ND1 HIS D 132     -11.677  -9.518  85.830  1.00 53.67           N
ATOM  18166  CE1 HIS D 132     -10.855 -10.477  86.217  1.00 53.49           C
ATOM  18168  NE2 HIS D 132     -10.935 -10.589  87.531  1.00 47.90           N
ATOM  18170  CD2 HIS D 132     -11.845  -9.675  88.003  1.00 48.56           C
ATOM  18172  C   HIS D 132     -15.165  -6.772  85.581  1.00 55.24           C
ATOM  18173  O   HIS D 132     -14.716  -5.644  85.422  1.00 55.81           O
ATOM  18175  N   LEU D 133     -16.463  -7.002  85.715  1.00 56.37           N
ATOM  18176  CA  LEU D 133     -17.423  -5.916  85.520  1.00 57.71           C
ATOM  18178  CB  LEU D 133     -17.647  -5.664  84.021  1.00 58.30           C
ATOM  18181  CG  LEU D 133     -17.733  -6.894  83.101  1.00 61.86           C
ATOM  18183  CD1 LEU D 133     -18.682  -7.954  83.631  1.00 63.60           C
ATOM  18187  CD2 LEU D 133     -18.151  -6.484  81.692  1.00 59.41           C
ATOM  18191  C   LEU D 133     -18.752  -6.176  86.211  1.00 58.35           C
ATOM  18192  O   LEU D 133     -19.010  -7.278  86.690  1.00 59.32           O
ATOM  18194  N   LEU D 134     -19.592  -5.145  86.239  1.00 57.45           N
ATOM  18195  CA  LEU D 134     -20.888  -5.206  86.905  1.00 56.42           C
ATOM  18197  CB  LEU D 134     -21.272  -3.816  87.422  1.00 56.74           C
ATOM  18200  CG  LEU D 134     -20.602  -3.324  88.715  1.00 57.94           C
ATOM  18202  CD1 LEU D 134     -20.972  -1.869  88.950  1.00 58.59           C
ATOM  18206  CD2 LEU D 134     -19.087  -3.487  88.705  1.00 57.62           C
ATOM  18210  C   LEU D 134     -21.985  -5.767  85.983  1.00 55.19           C
ATOM  18211  O   LEU D 134     -21.936  -5.619  84.759  1.00 52.52           O
ATOM  18213  N   GLN D 135     -22.973  -6.411  86.593  1.00 55.25           N
ATOM  18214  CA  GLN D 135     -24.077  -7.019  85.862  1.00 55.61           C
ATOM  18216  CB  GLN D 135     -25.138  -7.535  86.830  1.00 54.63           C
ATOM  18219  CG  GLN D 135     -26.085  -8.545  86.219  1.00 55.78           C
ATOM  18222  CD  GLN D 135     -26.989  -9.173  87.254  1.00 59.32           C
ATOM  18223  OE1 GLN D 135     -27.752  -8.478  87.925  1.00 67.47           O
ATOM  18224  NE2 GLN D 135     -26.902 -10.492  87.403  1.00 65.64           N
ATOM  18227  C   GLN D 135     -24.720  -6.014  84.932  1.00 55.52           C
ATOM  18228  O   GLN D 135     -24.922  -4.865  85.302  1.00 55.92           O
ATOM  18230  N   GLY D 136     -25.042  -6.448  83.721  1.00 56.26           N
ATOM  18231  CA  GLY D 136     -25.713  -5.583  82.757  1.00 55.42           C
ATOM  18234  C   GLY D 136     -24.780  -4.745  81.899  1.00 54.75           C
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ATOM  18235  O   GLY D 136     -25.234  -4.094  80.962  1.00 57.84           O
ATOM  18237  N   GLN D 137     -23.485  -4.746  82.208  1.00 51.86           N
ATOM  18238  CA  GLN D 137     -22.515  -4.062  81.370  1.00 51.09           C
ATOM  18240  CB  GLN D 137     -21.275  -3.681  82.177  1.00 49.94           C
ATOM  18243  CG  GLN D 137     -21.522  -2.546  83.144  1.00 47.82           C
ATOM  18246  CD  GLN D 137     -20.256  -2.046  83.813  1.00 49.66           C
ATOM  18247  OE1 GLN D 137     -19.324  -2.808  84.049  1.00 50.76           O
ATOM  18248  NE2 GLN D 137     -20.227  -0.762  84.141  1.00 52.11           N
ATOM  18251  C   GLN D 137     -22.135  -4.930  80.163  1.00 51.27           C
ATOM  18252  O   GLN D 137     -22.430  -6.129  80.126  1.00 50.43           O
ATOM  18254  N   SER D 138     -21.499  -4.302  79.175  1.00 51.61           N
ATOM  18255  CA  SER D 138     -21.092  -4.967  77.937  1.00 50.74           C
ATOM  18257  CB  SER D 138     -21.717  -4.279  76.725  1.00 50.04           C
ATOM  18260  OG  SER D 138     -23.126  -4.236  76.843  1.00 53.94           O
ATOM  18262  C   SER D 138     -19.589  -4.941  77.774  1.00 49.32           C
ATOM  18263  O   SER D 138     -18.960  -3.919  77.967  1.00 49.49           O
ATOM  18265  N   LEU D 139     -19.026  -6.082  77.413  1.00 51.10           N
ATOM  18266  CA  LEU D 139     -17.615  -6.199  77.090  1.00 51.33           C
ATOM  18268  CB  LEU D 139     -17.012  -7.375  77.846  1.00 51.35           C
ATOM  18271  CG  LEU D 139     -15.514  -7.557  77.618  1.00 52.96           C
ATOM  18273  CD1 LEU D 139     -14.712  -6.447  78.345  1.00 55.77           C
ATOM  18277  CD2 LEU D 139     -15.090  -8.948  78.054  1.00 53.61           C
ATOM  18281  C   LEU D 139     -17.462  -6.449  75.593  1.00 51.20           C
ATOM  18282  O   LEU D 139     -18.159  -7.301  75.026  1.00 49.61           O
ATOM  18284  N   THR D 140     -16.541  -5.727  74.960  1.00 50.52           N
ATOM  18285  CA  THR D 140     -16.297  -5.906  73.533  1.00 50.83           C
ATOM  18287  CB  THR D 140     -16.548  -4.610  72.684  1.00 51.00           C
ATOM  18289  OG1 THR D 140     -15.605  -4.555  71.606  1.00 53.65           O
ATOM  18291  CG2 THR D 140     -16.445  -3.333  73.514  1.00 49.90           C
ATOM  18295  C   THR D 140     -14.901  -6.462  73.299  1.00 50.83           C
ATOM  18296  O   THR D 140     -13.904  -5.865  73.714  1.00 51.00           O
ATOM  18298  N   LEU D 141     -14.850  -7.615  72.633  1.00 51.97           N
ATOM  18299  CA  LEU D 141     -13.595  -8.269  72.271  1.00 52.74           C
ATOM  18301  CB  LEU D 141     -13.757  -9.784  72.305  1.00 51.17           C
ATOM  18304  CG  LEU D 141     -14.179 -10.370  73.646  1.00 48.01           C
ATOM  18306  CD1 LEU D 141     -14.347 -11.865  73.499  1.00 44.17           C
ATOM  18310  CD2 LEU D 141     -13.176 -10.026  74.750  1.00 47.63           C
ATOM  18314  C   LEU D 141     -13.149  -7.855  70.883  1.00 53.26           C
ATOM  18315  O   LEU D 141     -13.986  -7.583  70.020  1.00 54.40           O
ATOM  18317  N   THR D 142     -11.832  -7.840  70.670  1.00 53.92           N
ATOM  18318  CA  THR D 142     -11.238  -7.422  69.386  1.00 55.49           C
ATOM  18320  CB  THR D 142     -10.629  -6.013  69.492  1.00 54.17           C
ATOM  18322  OG1 THR D 142     -11.548  -5.162  70.182  1.00 57.68           O
ATOM  18324  CG2 THR D 142     -10.347  -5.435  68.130  1.00 52.38           C
ATOM  18328  C   THR D 142     -10.141  -8.376  68.938  1.00 56.34           C
ATOM  18329  O   THR D 142      -9.446  -8.959  69.762  1.00 58.22           O
ATOM  18331  N   LEU D 143      -9.995  -8.527  67.626  1.00 56.33           N
ATOM  18332  CA  LEU D 143      -8.968  -9.388  67.053  1.00 56.03           C
ATOM  18334  CB  LEU D 143      -9.534 -10.202  65.900  1.00 56.84           C
ATOM  18337  CG  LEU D 143     -10.257 -11.498  66.244  1.00 60.58           C
ATOM  18339  CD1 LEU D 143     -11.411 -11.224  67.182  1.00 60.22           C
ATOM  18343  CD2 LEU D 143     -10.718 -12.189  64.950  1.00 58.03           C
ATOM  18347  C   LEU D 143      -7.825  -8.560  66.510  1.00 56.02           C
ATOM  18348  O   LEU D 143      -8.048  -7.626  65.729  1.00 57.30           O
ATOM  18350  N   GLU D 144      -6.605  -8.899  66.913  1.00 54.80           N
ATOM  18351  CA  GLU D 144      -5.420  -8.371  66.251  1.00 55.99           C
ATOM  18353  CB  GLU D 144      -4.266  -8.183  67.241  1.00 55.63           C
ATOM  18356  CG  GLU D 144      -3.362  -7.002  66.890  1.00 60.69           C
ATOM  18359  CD  GLU D 144      -2.114  -6.926  67.752  1.00 63.94           C
ATOM  18360  OE1 GLU D 144      -2.146  -7.458  68.887  1.00 72.09           O
ATOM  18361  OE2 GLU D 144      -1.106  -6.333  67.292  1.00 69.98           O
ATOM  18362  C   GLU D 144      -5.069  -9.365  65.144  1.00 54.60           C
ATOM  18363  O   GLU D 144      -4.844 -10.552  65.412  1.00 56.41           O
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ATOM  18365  N   SER D 145      -5.056  -8.890  63.903  1.00 52.86           N
ATOM  18366  CA  SER D 145      -4.920  -9.768  62.736  1.00 53.37           C
ATOM  18368  CB  SER D 145      -6.304 -10.028  62.117  1.00 52.48           C
ATOM  18371  OG  SER D 145      -6.858  -8.858  61.516  1.00 53.25           O
ATOM  18373  C   SER D 145      -3.978  -9.148  61.701  1.00 52.37           C
ATOM  18374  O   SER D 145      -3.958  -7.933  61.554  1.00 54.29           O
ATOM  18376  N   PRO D 146      -3.210  -9.978  60.968  1.00 51.88           N
ATOM  18377  CA  PRO D 146      -2.262  -9.416  59.997  1.00 51.04           C
ATOM  18379  CB  PRO D 146      -1.402 -10.611  59.627  1.00 51.10           C
ATOM  18382  CG  PRO D 146      -2.321 -11.785  59.786  1.00 50.23           C
ATOM  18385  CD  PRO D 146      -3.185 -11.453  60.966  1.00 50.99           C
ATOM  18388  C   PRO D 146      -2.969  -8.894  58.761  1.00 50.82           C
ATOM  18389  O   PRO D 146      -4.080  -9.315  58.478  1.00 50.19           O
ATOM  18390  N   PRO D 147      -2.333  -7.976  58.025  1.00 53.17           N
ATOM  18391  CA  PRO D 147      -2.921  -7.335  56.845  1.00 53.12           C
ATOM  18393  CB  PRO D 147      -1.728  -6.624  56.223  1.00 53.31           C
ATOM  18396  CG  PRO D 147      -0.891  -6.266  57.385  1.00 55.28           C
ATOM  18399  CD  PRO D 147      -0.986  -7.447  58.301  1.00 54.19           C
ATOM  18402  C   PRO D 147      -3.591  -8.251  55.810  1.00 53.13           C
ATOM  18403  O   PRO D 147      -4.637  -7.897  55.263  1.00 54.73           O
ATOM  18404  N   GLY D 148      -3.021  -9.408  55.523  1.00 53.41           N
ATOM  18405  CA  GLY D 148      -3.678 -10.313  54.567  1.00 55.58           C
ATOM  18408  C   GLY D 148      -5.009 -10.913  55.038  1.00 55.14           C
ATOM  18409  O   GLY D 148      -5.930 -11.116  54.251  1.00 50.96           O
ATOM  18411  N   SER D 149      -5.094 -11.147  56.343  1.00 54.71           N
ATOM  18412  CA  SER D 149      -6.037 -12.068  56.941  1.00 53.77           C
ATOM  18414  CB  SER D 149      -5.726 -12.207  58.427  1.00 54.85           C
ATOM  18417  OG  SER D 149      -6.017 -10.996  59.084  1.00 56.72           O
ATOM  18419  C   SER D 149      -7.484 -11.671  56.790  1.00 52.08           C
ATOM  18420  O   SER D 149      -7.798 -10.581  56.317  1.00 50.36           O
ATOM  18422  N   SER D 150      -8.353 -12.583  57.231  1.00 50.75           N
ATOM  18423  CA  SER D 150      -9.764 -12.537  56.923  1.00 48.63           C
ATOM  18425  CB  SER D 150      -9.936 -13.290  55.605  1.00 48.04           C
ATOM  18428  OG  SER D 150     -11.094 -12.867  54.941  1.00 50.58           O
ATOM  18430  C   SER D 150     -10.674 -13.168  58.002  1.00 47.91           C
ATOM  18431  O   SER D 150     -11.739 -13.675  57.675  1.00 47.31           O
ATOM  18433  N   PRO D 151     -10.292 -13.096  59.294  1.00 46.40           N
ATOM  18434  CA  PRO D 151     -10.920 -13.946  60.312  1.00 46.91           C
ATOM  18436  CB  PRO D 151     -10.002 -13.750  61.507  1.00 45.83           C
ATOM  18439  CG  PRO D 151      -9.565 -12.344  61.370  1.00 46.53           C
ATOM  18442  CD  PRO D 151      -9.286 -12.207  59.905  1.00 47.48           C
ATOM  18445  C   PRO D 151     -12.345 -13.588  60.748  1.00 47.44           C
ATOM  18446  O   PRO D 151     -12.781 -12.453  60.554  1.00 46.11           O
ATOM  18447  N   SER D 152     -13.038 -14.567  61.343  1.00 47.38           N
ATOM  18448  CA  SER D 152     -14.302 -14.340  62.069  1.00 49.80           C
ATOM  18450  CB  SER D 152     -15.513 -14.738  61.218  1.00 49.91           C
ATOM  18453  OG  SER D 152     -15.484 -16.117  60.872  1.00 57.34           O
ATOM  18455  C   SER D 152     -14.287 -15.102  63.416  1.00 49.58           C
ATOM  18456  O   SER D 152     -13.391 -15.889  63.667  1.00 49.21           O
ATOM  18458  N   VAL D 153     -15.263 -14.859  64.286  1.00 50.80           N
ATOM  18459  CA  VAL D 153     -15.117 -15.231  65.700  1.00 52.57           C
ATOM  18461  CB  VAL D 153     -14.724 -14.022  66.570  1.00 51.92           C
ATOM  18463  CG1 VAL D 153     -14.374 -14.475  67.987  1.00 50.90           C
ATOM  18467  CG2 VAL D 153     -13.580 -13.278  65.971  1.00 58.01           C
ATOM  18471  C   VAL D 153     -16.394 -15.718  66.337  1.00 54.01           C
ATOM  18472  O   VAL D 153     -17.450 -15.115  66.142  1.00 54.00           O
ATOM  18474  N   GLN D 154     -16.276 -16.761  67.154  1.00 54.05           N
ATOM  18475  CA  GLN D 154     -17.400 -17.252  67.935  1.00 56.08           C
ATOM  18477  CB  GLN D 154     -17.918 -18.552  67.327  1.00 55.99           C
ATOM  18480  CG  GLN D 154     -19.218 -19.058  67.913  1.00 54.19           C
ATOM  18483  CD  GLN D 154     -19.696 -20.309  67.194  1.00 53.64           C
ATOM  18484  OE1 GLN D 154     -18.987 -21.308  67.153  1.00 57.94           O
ATOM  18485  NE2 GLN D 154     -20.884 -20.253  66.611  1.00 37.30           N
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ATOM  18488  C   GLN D 154     -16.949 -17.482  69.369  1.00 57.47           C
ATOM  18489  O   GLN D 154     -15.963 -18.170  69.589  1.00 59.08           O
ATOM  18491  N   CYS D 155     -17.646 -16.887  70.334  1.00 58.37           N
ATOM  18492  CA  CYS D 155     -17.365 -17.138  71.743  1.00 57.77           C
ATOM  18494  CB  CYS D 155     -17.093 -15.846  72.494  1.00 57.38           C
ATOM  18497  SG  CYS D 155     -15.687 -14.948  71.865  1.00 62.04           S
ATOM  18499  C   CYS D 155     -18.541 -17.855  72.359  1.00 58.98           C
ATOM  18500  O   CYS D 155     -19.691 -17.628  71.973  1.00 60.03           O
ATOM  18502  N   ARG D 156     -18.235 -18.724  73.316  1.00 59.42           N
ATOM  18503  CA  ARG D 156     -19.221 -19.569  73.972  1.00 58.07           C
ATOM  18505  CB  ARG D 156     -18.858 -21.040  73.762  1.00 57.21           C
ATOM  18508  CG  ARG D 156     -19.934 -22.026  74.198  1.00 60.46           C
ATOM  18511  CD  ARG D 156     -19.441 -23.477  74.171  1.00 61.19           C
ATOM  18514  NE  ARG D 156     -18.865 -23.822  72.873  1.00 64.19           N
ATOM  18516  CZ  ARG D 156     -19.563 -24.033  71.761  1.00 62.39           C
ATOM  18517  NH1 ARG D 156     -20.881 -23.951  71.755  1.00 66.24           N
ATOM  18520  NH2 ARG D 156     -18.936 -24.323  70.635  1.00 65.74           N
ATOM  18523  C   ARG D 156     -19.231 -19.230  75.463  1.00 57.80           C
ATOM  18524  O   ARG D 156     -18.180 -19.208  76.103  1.00 56.95           O
ATOM  18526  N   SER D 157     -20.418 -18.962  76.007  1.00 57.05           N
ATOM  18527  CA  SER D 157     -20.577 -18.702  77.437  1.00 55.35           C
ATOM  18529  CB  SER D 157     -21.948 -18.081  77.718  1.00 56.54           C
ATOM  18532  OG  SER D 157     -22.981 -19.056  77.651  1.00 59.97           O
ATOM  18534  C   SER D 157     -20.454 -19.990  78.237  1.00 52.36           C
ATOM  18535  O   SER D 157     -20.618 -21.076  77.699  1.00 49.84           O
ATOM  18537  N   PRO D 158     -20.173 -19.876  79.536  1.00 52.22           N
ATOM  18538  CA  PRO D 158     -20.259 -21.030  80.431  1.00 52.39           C
ATOM  18540  CB  PRO D 158     -20.090 -20.396  81.821  1.00 51.88           C
ATOM  18543  CG  PRO D 158     -19.241 -19.220  81.584  1.00 50.43           C
ATOM  18546  CD  PRO D 158     -19.688 -18.678  80.243  1.00 53.67           C
ATOM  18549  C   PRO D 158     -21.575 -21.836  80.353  1.00 50.69           C
ATOM  18550  O   PRO D 158     -21.617 -22.982  80.799  1.00 48.48           O
ATOM  18551  N   ARG D 159     -22.635 -21.247  79.804  1.00 50.89           N
ATOM  18552  CA  ARG D 159     -23.885 -21.981  79.594  1.00 51.66           C
ATOM  18554  CB  ARG D 159     -25.085 -21.063  79.813  1.00 51.61           C
ATOM  18557  CG  ARG D 159     -25.122 -20.441  81.202  1.00 52.14           C
ATOM  18560  CD  ARG D 159     -26.509 -20.012  81.617  1.00 54.01           C
ATOM  18563  NE  ARG D 159     -27.332 -19.661  80.465  1.00 58.30           N
ATOM  18565  CZ  ARG D 159     -27.324 -18.491  79.842  1.00 55.15           C
ATOM  18566  NH1 ARG D 159     -26.559 -17.490  80.264  1.00 55.94           N
ATOM  18569  NH2 ARG D 159     -28.112 -18.326  78.795  1.00 57.35           N
ATOM  18572  C   ARG D 159     -23.964 -22.633  78.212  1.00 50.78           C
ATOM  18573  O   ARG D 159     -24.993 -23.187  77.847  1.00 50.37           O
ATOM  18575  N   GLY D 160     -22.871 -22.573  77.458  1.00 51.66           N
ATOM  18576  CA  GLY D 160     -22.768 -23.246  76.177  1.00 51.11           C
ATOM  18579  C   GLY D 160     -23.488 -22.524  75.061  1.00 51.24           C
ATOM  18580  O   GLY D 160     -23.803 -23.139  74.045  1.00 52.19           O
ATOM  18582  N   LYS D 161     -23.752 -21.230  75.239  1.00 51.67           N
ATOM  18583  CA  LYS D 161     -24.423 -20.425  74.214  1.00 53.02           C
ATOM  18585  CB  LYS D 161     -25.511 -19.546  74.839  1.00 54.50           C
ATOM  18588  CG  LYS D 161     -26.675 -20.326  75.482  1.00 57.95           C
ATOM  18591  CD  LYS D 161     -27.856 -20.517  74.518  1.00 60.42           C
ATOM  18594  CE  LYS D 161     -29.018 -21.274  75.167  1.00 57.48           C
ATOM  18597  NZ  LYS D 161     -28.624 -22.645  75.620  1.00 57.99           N
ATOM  18601  C   LYS D 161     -23.398 -19.562  73.472  1.00 54.00           C
ATOM  18602  O   LYS D 161     -22.539 -18.925  74.096  1.00 54.45           O
ATOM  18604  N   ASN D 162     -23.498 -19.543  72.142  1.00 53.68           N
ATOM  18605  CA  ASN D 162     -22.518 -18.869  71.288  1.00 52.60           C
ATOM  18607  CB  ASN D 162     -22.308 -19.636  69.985  1.00 51.64           C
ATOM  18610  CG  ASN D 162     -21.893 -21.064  70.207  1.00 47.38           C
ATOM  18611  OD1 ASN D 162     -22.541 -21.978  69.722  1.00 39.51           O
ATOM  18612  ND2 ASN D 162     -20.808 -21.266  70.947  1.00 53.72           N
ATOM  18615  C   ASN D 162     -22.954 -17.479  70.910  1.00 51.70           C
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ATOM  18616  O   ASN D 162     -24.099 -17.280  70.564  1.00 46.95           O
ATOM  18618  N   ILE D 163     -22.021 -16.534  70.985  1.00 55.12           N
ATOM  18619  CA  ILE D 163     -22.137 -15.217  70.362  1.00 54.68           C
ATOM  18621  CB  ILE D 163     -21.825 -14.094  71.388  1.00 54.18           C
ATOM  18623  CG1 ILE D 163     -22.932 -13.983  72.426  1.00 56.53           C
ATOM  18626  CD1 ILE D 163     -22.601 -13.031  73.582  1.00 57.98           C
ATOM  18630  CG2 ILE D 163     -21.678 -12.736  70.714  1.00 57.91           C
ATOM  18634  C   ILE D 163     -21.090 -15.193  69.246  1.00 54.27           C
ATOM  18635  O   ILE D 163     -19.995 -15.728  69.422  1.00 55.73           O
ATOM  18637  N   GLN D 164     -21.386 -14.571  68.113  1.00 53.58           N
ATOM  18638  CA  GLN D 164     -20.374 -14.477  67.060  1.00 55.90           C
ATOM  18640  CB  GLN D 164     -20.562 -15.598  66.020  1.00 56.53           C
ATOM  18643  CG  GLN D 164     -21.976 -15.837  65.517  1.00 57.92           C
ATOM  18646  CD  GLN D 164     -22.156 -17.247  64.967  1.00 58.23           C
ATOM  18647  OE1 GLN D 164     -22.159 -18.227  65.721  1.00 55.68           O
ATOM  18648  NE2 GLN D 164     -22.309 -17.355  63.649  1.00 58.55           N
ATOM  18651  C   GLN D 164     -20.224 -13.087  66.401  1.00 55.64           C
ATOM  18652  O   GLN D 164     -21.046 -12.207  66.591  1.00 55.44           O
ATOM  18654  N   GLY D 165     -19.127 -12.910  65.664  1.00 56.69           N
ATOM  18655  CA  GLY D 165     -18.803 -11.644  64.996  1.00 55.85           C
ATOM  18658  C   GLY D 165     -17.638 -11.740  64.008  1.00 55.76           C
ATOM  18659  O   GLY D 165     -17.093 -12.828  63.751  1.00 55.67           O
ATOM  18661  N   GLY D 166     -17.262 -10.594  63.451  1.00 53.91           N
ATOM  18662  CA  GLY D 166     -16.180 -10.524  62.475  1.00 54.74           C
ATOM  18665  C   GLY D 166     -14.819 -10.374  63.137  1.00 54.81           C
ATOM  18666  O   GLY D 166     -14.302 -11.332  63.708  1.00 52.62           O
ATOM  18668  N   LYS D 167     -14.241  -9.173  63.034  1.00 54.46           N
ATOM  18669  CA  LYS D 167     -13.034  -8.778  63.785  1.00 53.64           C
ATOM  18671  CB  LYS D 167     -12.273  -7.697  63.027  1.00 52.66           C
ATOM  18674  CG  LYS D 167     -11.428  -8.210  61.912  1.00 52.86           C
ATOM  18677  CD  LYS D 167     -10.998  -7.067  61.034  1.00 53.75           C
ATOM  18680  CE  LYS D 167      -9.838  -7.468  60.147  1.00 57.67           C
ATOM  18683  NZ  LYS D 167      -9.606  -6.442  59.094  1.00 59.20           N
ATOM  18687  C   LYS D 167     -13.386  -8.218  65.162  1.00 54.15           C
ATOM  18688  O   LYS D 167     -12.541  -7.660  65.858  1.00 55.19           O
ATOM  18690  N   THR D 168     -14.636  -8.383  65.561  1.00 54.22           N
ATOM  18691  CA  THR D 168     -15.181  -7.681  66.704  1.00 52.82           C
ATOM  18693  CB  THR D 168     -15.570  -6.232  66.283  1.00 51.78           C
ATOM  18695  OG1 THR D 168     -14.506  -5.346  66.634  1.00 46.88           O
ATOM  18697  CG2 THR D 168     -16.886  -5.737  66.921  1.00 50.02           C
ATOM  18701  C   THR D 168     -16.386  -8.484  67.123  1.00 53.97           C
ATOM  18702  O   THR D 168     -17.118  -8.984  66.265  1.00 55.63           O
ATOM  18704  N   LEU D 169     -16.581  -8.643  68.426  1.00 54.93           N
ATOM  18705  CA  LEU D 169     -17.872  -9.099  68.932  1.00 55.16           C
ATOM  18707  CB  LEU D 169     -17.999 -10.636  68.888  1.00 56.29           C
ATOM  18710  CG  LEU D 169     -17.258 -11.596  69.818  1.00 52.07           C
ATOM  18712  CD1 LEU D 169     -17.574 -11.393  71.281  1.00 57.77           C
ATOM  18716  CD2 LEU D 169     -17.651 -12.996  69.441  1.00 55.73           C
ATOM  18720  C   LEU D 169     -18.126  -8.549  70.321  1.00 54.29           C
ATOM  18721  O   LEU D 169     -17.196  -8.376  71.096  1.00 53.23           O
ATOM  18723  N   SER D 170     -19.391  -8.269  70.618  1.00 55.77           N
ATOM  18724  CA  SER D 170     -19.785  -7.758  71.931  1.00 57.83           C
ATOM  18726  CB  SER D 170     -20.657  -6.500  71.783  1.00 58.00           C
ATOM  18729  OG  SER D 170     -21.101  -6.046  73.058  1.00 59.15           O
ATOM  18731  C   SER D 170     -20.526  -8.802  72.782  1.00 57.44           C
ATOM  18732  O   SER D 170     -21.492  -9.430  72.339  1.00 56.56           O
ATOM  18734  N   VAL D 171     -20.060  -8.975  74.012  1.00 57.99           N
ATOM  18735  CA  VAL D 171     -20.802  -9.722  75.016  1.00 57.84           C
ATOM  18737  CB  VAL D 171     -19.858 -10.498  75.993  1.00 58.86           C
ATOM  18739  CG1 VAL D 171     -20.653 -11.499  76.791  1.00 60.80           C
ATOM  18743  CG2 VAL D 171     -18.706 -11.199  75.247  1.00 57.33           C
ATOM  18747  C   VAL D 171     -21.577  -8.645  75.767  1.00 56.77           C
ATOM  18748  O   VAL D 171     -20.987  -7.864  76.507  1.00 55.92           O
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ATOM  18750  N   SER D 172     -22.890  -8.595  75.572  1.00 56.82           N
ATOM  18751  CA  SER D 172     -23.690  -7.482  76.072  1.00 56.26           C
ATOM  18753  CB  SER D 172     -24.436  -6.838  74.912  1.00 57.11           C
ATOM  18756  OG  SER D 172     -25.679  -7.482  74.702  1.00 56.59           O
ATOM  18758  C   SER D 172     -24.695  -7.874  77.148  1.00 55.50           C
ATOM  18759  O   SER D 172     -25.156  -9.005  77.188  1.00 55.73           O
ATOM  18761  N   GLN D 173     -25.060  -6.901  77.984  1.00 56.13           N
ATOM  18762  CA  GLN D 173     -25.981  -7.108  79.106  1.00 55.53           C
ATOM  18764  CB  GLN D 173     -27.444  -7.202  78.630  1.00 57.06           C
ATOM  18767  CG  GLN D 173     -28.321  -5.996  79.001  1.00 60.28           C
ATOM  18770  CD  GLN D 173     -28.110  -4.790  78.103  1.00 64.40           C
ATOM  18771  OE1 GLN D 173     -28.261  -3.644  78.536  1.00 65.46           O
ATOM  18772  NE2 GLN D 173     -27.767  -5.040  76.846  1.00 64.55           N
ATOM  18775  C   GLN D 173     -25.581  -8.346  79.891  1.00 54.22           C
ATOM  18776  O   GLN D 173     -26.398  -9.218  80.162  1.00 55.87           O
ATOM  18778  N   LEU D 174     -24.310  -8.410  80.259  1.00 52.91           N
ATOM  18779  CA  LEU D 174     -23.783  -9.560  80.979  1.00 51.93           C
ATOM  18781  CB  LEU D 174     -22.326  -9.320  81.362  1.00 50.97           C
ATOM  18784  CG  LEU D 174     -21.354  -9.712  80.254  1.00 46.31           C
ATOM  18786  CD1 LEU D 174     -20.065  -8.945  80.373  1.00 49.23           C
ATOM  18790  CD2 LEU D 174     -21.096 -11.210  80.299  1.00 43.88           C
ATOM  18794  C   LEU D 174     -24.592  -9.907  82.224  1.00 51.33           C
ATOM  18795  O   LEU D 174     -24.772  -9.068  83.105  1.00 51.12           O
ATOM  18797  N   GLU D 175     -25.070 -11.153  82.269  1.00 51.60           N
ATOM  18798  CA  GLU D 175     -25.774 -11.722  83.425  1.00 50.66           C
ATOM  18800  CB  GLU D 175     -26.857 -12.668  82.939  1.00 50.66           C
ATOM  18803  CG  GLU D 175     -27.846 -12.049  81.972  1.00 51.22           C
ATOM  18806  CD  GLU D 175     -28.754 -13.087  81.336  1.00 51.50           C
ATOM  18807  OE1 GLU D 175     -29.535 -12.724  80.442  1.00 62.90           O
ATOM  18808  OE2 GLU D 175     -28.679 -14.272  81.710  1.00 53.40           O
ATOM  18809  C   GLU D 175     -24.824 -12.509  84.332  1.00 49.28           C
ATOM  18810  O   GLU D 175     -23.757 -12.939  83.901  1.00 49.68           O
ATOM  18812  N   LEU D 176     -25.231 -12.718  85.580  1.00 49.05           N
ATOM  18813  CA  LEU D 176     -24.399 -13.426  86.570  1.00 49.29           C
ATOM  18815  CB  LEU D 176     -24.979 -13.255  87.977  1.00 47.46           C
ATOM  18818  CG  LEU D 176     -24.242 -13.947  89.124  1.00 48.17           C
ATOM  18820  CD1 LEU D 176     -22.794 -13.504  89.185  1.00 50.38           C
ATOM  18824  CD2 LEU D 176     -24.944 -13.680  90.454  1.00 49.98           C
ATOM  18828  C   LEU D 176     -24.252 -14.918  86.243  1.00 49.36           C
ATOM  18829  O   LEU D 176     -23.218 -15.530  86.531  1.00 48.38           O
ATOM  18831  N   GLN D 177     -25.286 -15.495  85.637  1.00 49.89           N
ATOM  18832  CA  GLN D 177     -25.223 -16.873  85.168  1.00 50.51           C
ATOM  18834  CB  GLN D 177     -26.621 -17.376  84.774  1.00 50.29           C
ATOM  18837  CG  GLN D 177     -27.297 -16.643  83.600  1.00 52.73           C
ATOM  18840  CD  GLN D 177     -28.427 -17.463  82.946  1.00 53.51           C
ATOM  18841  OE1 GLN D 177     -28.711 -17.296  81.754  1.00 44.77           O
ATOM  18842  NE2 GLN D 177     -29.056 -18.368  83.720  1.00 53.31           N
ATOM  18845  C   GLN D 177     -24.226 -17.095  84.011  1.00 51.74           C
ATOM  18846  O   GLN D 177     -24.220 -18.162  83.411  1.00 54.21           O
ATOM  18848  N   ASP D 178     -23.398 -16.098  83.699  1.00 51.17           N
ATOM  18849  CA  ASP D 178     -22.345 -16.230  82.691  1.00 49.75           C
ATOM  18851  CB  ASP D 178     -22.690 -15.383  81.470  1.00 49.64           C
ATOM  18854  CG  ASP D 178     -23.642 -16.069  80.549  1.00 48.02           C
ATOM  18855  OD1 ASP D 178     -23.647 -17.320  80.521  1.00 42.77           O
ATOM  18856  OD2 ASP D 178     -24.372 -15.344  79.846  1.00 48.01           O
ATOM  18857  C   ASP D 178     -20.966 -15.804  83.182  1.00 50.41           C
ATOM  18858  O   ASP D 178     -20.039 -15.671  82.371  1.00 50.02           O
ATOM  18860  N   SER D 179     -20.824 -15.573  84.486  1.00 48.29           N
ATOM  18861  CA  SER D 179     -19.514 -15.338  85.058  1.00 46.97           C
ATOM  18863  CB  SER D 179     -19.610 -15.039  86.562  1.00 48.08           C
ATOM  18866  OG  SER D 179     -18.618 -14.113  86.975  1.00 46.52           O
ATOM  18868  C   SER D 179     -18.773 -16.636  84.805  1.00 45.33           C
ATOM  18869  O   SER D 179     -19.289 -17.696  85.103  1.00 44.47           O
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ATOM  18871  N   GLY D 180     -17.601 -16.563  84.197  1.00 45.37           N
ATOM  18872  CA  GLY D 180     -16.788 -17.751  84.000  1.00 46.81           C
ATOM  18875  C   GLY D 180     -15.836 -17.664  82.831  1.00 47.08           C
ATOM  18876  O   GLY D 180     -15.576 -16.591  82.298  1.00 43.84           O
ATOM  18878  N   THR D 181     -15.318 -18.823  82.440  1.00 49.78           N
ATOM  18879  CA  THR D 181     -14.489 -18.922  81.258  1.00 50.28           C
ATOM  18881  CB  THR D 181     -13.657 -20.206  81.265  1.00 50.54           C
ATOM  18883  OG1 THR D 181     -12.930 -20.290  82.494  1.00 53.85           O
ATOM  18885  CG2 THR D 181     -12.676 -20.217  80.089  1.00 50.79           C
ATOM  18889  C   THR D 181     -15.359 -18.927  80.013  1.00 50.94           C
ATOM  18890  O   THR D 181     -16.294 -19.720  79.904  1.00 51.44           O
ATOM  18892  N   TRP D 182     -15.047 -18.025  79.088  1.00 51.77           N
ATOM  18893  CA  TRP D 182     -15.644 -18.023  77.762  1.00 50.98           C
ATOM  18895  CB  TRP D 182     -16.042 -16.615  77.338  1.00 50.58           C
ATOM  18898  CG  TRP D 182     -17.226 -16.064  78.063  1.00 50.41           C
ATOM  18899  CD1 TRP D 182     -17.333 -15.856  79.396  1.00 51.75           C
ATOM  18901  NE1 TRP D 182     -18.562 -15.327  79.694  1.00 53.78           N
ATOM  18903  CE2 TRP D 182     -19.272 -15.170  78.537  1.00 47.89           C
ATOM  18904  CD2 TRP D 182     -18.458 -15.619  77.484  1.00 48.06           C
ATOM  18905  CE3 TRP D 182     -18.959 -15.579  76.176  1.00 50.74           C
ATOM  18907  CZ3 TRP D 182     -20.234 -15.085  75.968  1.00 50.92           C
ATOM  18909  CH2 TRP D 182     -21.020 -14.638  77.046  1.00 51.67           C
ATOM  18911  CZ2 TRP D 182     -20.555 -14.669  78.333  1.00 49.51           C
ATOM  18913  C   TRP D 182     -14.614 -18.563  76.798  1.00 50.96           C
ATOM  18914  O   TRP D 182     -13.423 -18.292  76.952  1.00 51.34           O
ATOM  18916  N   THR D 183     -15.084 -19.326  75.811  1.00 51.16           N
ATOM  18917  CA  THR D 183     -14.224 -19.966  74.828  1.00 51.23           C
ATOM  18919  CB  THR D 183     -14.473 -21.474  74.759  1.00 49.60           C
ATOM  18921  OG1 THR D 183     -14.146 -22.052  76.022  1.00 51.62           O
ATOM  18923  CG2 THR D 183     -13.616 -22.127  73.681  1.00 49.58           C
ATOM  18927  C   THR D 183     -14.467 -19.367  73.463  1.00 51.31           C
ATOM  18928  O   THR D 183     -15.477 -19.642  72.821  1.00 51.31           O
ATOM  18930  N   CYS D 184     -13.520 -18.554  73.022  1.00 52.73           N
ATOM  18931  CA  CYS D 184     -13.556 -18.012  71.683  1.00 54.51           C
ATOM  18933  CB  CYS D 184     -13.089 -16.568  71.701  1.00 54.89           C
ATOM  18936  SG  CYS D 184     -14.059 -15.677  72.890  1.00 61.88           S
ATOM  18938  C   CYS D 184     -12.747 -18.851  70.696  1.00 54.85           C
ATOM  18939  O   CYS D 184     -11.627 -19.284  70.973  1.00 54.27           O
ATOM  18941  N   THR D 185     -13.361 -19.080  69.541  1.00 55.56           N
ATOM  18942  CA  THR D 185     -12.731 -19.745  68.418  1.00 55.00           C
ATOM  18944  CB  THR D 185     -13.581 -20.936  67.996  1.00 54.27           C
ATOM  18946  OG1 THR D 185     -13.714 -21.824  69.111  1.00 52.72           O
ATOM  18948  CG2 THR D 185     -12.957 -21.661  66.827  1.00 54.50           C
ATOM  18952  C   THR D 185     -12.624 -18.737  67.274  1.00 54.26           C
ATOM  18953  O   THR D 185     -13.630 -18.164  66.863  1.00 54.65           O
ATOM  18955  N   VAL D 186     -11.403 -18.511  66.790  1.00 54.25           N
ATOM  18956  CA  VAL D 186     -11.143 -17.616  65.656  1.00 54.15           C
ATOM  18958  CB  VAL D 186      -9.885 -16.759  65.880  1.00 53.88           C
ATOM  18960  CG1 VAL D 186      -9.613 -15.890  64.659  1.00 54.27           C
ATOM  18964  CG2 VAL D 186     -10.032 -15.904  67.135  1.00 54.96           C
ATOM  18968  C   VAL D 186     -10.934 -18.435  64.388  1.00 53.99           C
ATOM  18969  O   VAL D 186     -10.098 -19.339  64.357  1.00 58.08           O
ATOM  18971  N   LEU D 187     -11.668 -18.090  63.340  1.00 52.20           N
ATOM  18972  CA  LEU D 187     -11.724 -18.886  62.121  1.00 52.50           C
ATOM  18974  CB  LEU D 187     -13.188 -19.191  61.782  1.00 53.49           C
ATOM  18977  CG  LEU D 187     -13.543 -20.514  61.106  1.00 50.97           C
ATOM  18979  CD1 LEU D 187     -15.009 -20.458  60.738  1.00 52.54           C
ATOM  18983  CD2 LEU D 187     -12.701 -20.774  59.889  1.00 50.31           C
ATOM  18987  C   LEU D 187     -11.095 -18.114  60.972  1.00 51.90           C
ATOM  18988  O   LEU D 187     -11.479 -16.970  60.713  1.00 51.92           O
ATOM  18990  N   GLN D 188     -10.135 -18.753  60.301  1.00 51.71           N
ATOM  18991  CA  GLN D 188      -9.542 -18.260  59.056  1.00 51.97           C
ATOM  18993  CB  GLN D 188      -8.104 -17.776  59.290  1.00 51.88           C
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ATOM  18996  CG  GLN D 188      -7.305 -17.428  58.032  1.00 51.87           C
ATOM  18999  CD  GLN D 188      -7.774 -16.159  57.340  1.00 52.45           C
ATOM  19000  OE1 GLN D 188      -7.811 -15.086  57.939  1.00 49.99           O
ATOM  19001  NE2 GLN D 188      -8.109 -16.274  56.060  1.00 51.18           N
ATOM  19004  C   GLN D 188      -9.580 -19.408  58.049  1.00 51.58           C
ATOM  19005  O   GLN D 188      -8.986 -20.464  58.271  1.00 51.04           O
ATOM  19007  N   ASN D 189     -10.275 -19.173  56.942  1.00 52.77           N
ATOM  19008  CA  ASN D 189     -10.585 -20.195  55.943  1.00 52.62           C
ATOM  19010  CB  ASN D 189      -9.323 -20.728  55.258  1.00 53.17           C
ATOM  19013  CG  ASN D 189      -8.532 -19.638  54.566  1.00 52.86           C
ATOM  19014  OD1 ASN D 189      -9.057 -18.569  54.258  1.00 43.61           O
ATOM  19015  ND2 ASN D 189      -7.249 -19.903  54.326  1.00 61.59           N
ATOM  19018  C   ASN D 189     -11.413 -21.280  56.598  1.00 52.19           C
ATOM  19019  O   ASN D 189     -12.591 -21.048  56.875  1.00 55.59           O
ATOM  19021  N   GLN D 190     -10.822 -22.446  56.836  1.00 50.92           N
ATOM  19022  CA  GLN D 190     -11.444 -23.471  57.669  1.00 52.44           C
ATOM  19024  CB  GLN D 190     -11.651 -24.767  56.883  1.00 53.07           C
ATOM  19027  CG  GLN D 190     -10.454 -25.730  56.849  1.00 53.28           C
ATOM  19030  CD  GLN D 190      -9.400 -25.349  55.829  1.00 56.43           C
ATOM  19031  OE1 GLN D 190      -9.136 -24.168  55.595  1.00 61.17           O
ATOM  19032  NE2 GLN D 190      -8.786 -26.353  55.217  1.00 59.00           N
ATOM  19035  C   GLN D 190     -10.619 -23.768  58.907  1.00 52.71           C
ATOM  19036  O   GLN D 190     -11.057 -24.509  59.769  1.00 53.18           O
ATOM  19038  N   LYS D 191      -9.416 -23.215  58.975  1.00 53.72           N
ATOM  19039  CA  LYS D 191      -8.512 -23.477  60.083  1.00 54.18           C
ATOM  19041  CB  LYS D 191      -7.066 -23.170  59.657  1.00 55.20           C
ATOM  19044  CG  LYS D 191      -6.186 -24.396  59.362  1.00 57.49           C
ATOM  19047  CD  LYS D 191      -6.532 -25.122  58.058  1.00 56.87           C
ATOM  19050  CE  LYS D 191      -5.260 -25.485  57.235  1.00 57.44           C
ATOM  19053  NZ  LYS D 191      -4.248 -26.381  57.913  1.00 55.07           N
ATOM  19057  C   LYS D 191      -8.926 -22.639  61.306  1.00 53.32           C
ATOM  19058  O   LYS D 191      -9.389 -21.514  61.151  1.00 53.16           O
ATOM  19060  N   LYS D 192      -8.751 -23.186  62.511  1.00 52.86           N
ATOM  19061  CA  LYS D 192      -9.222 -22.530  63.739  1.00 53.91           C
ATOM  19063  CB  LYS D 192     -10.485 -23.231  64.289  1.00 54.14           C
ATOM  19066  CG  LYS D 192     -11.578 -23.484  63.243  1.00 56.41           C
ATOM  19069  CD  LYS D 192     -12.966 -23.785  63.836  1.00 55.44           C
ATOM  19072  CE  LYS D 192     -13.208 -25.259  64.121  1.00 57.49           C
ATOM  19075  NZ  LYS D 192     -14.683 -25.573  64.184  1.00 54.24           N
ATOM  19079  C   LYS D 192      -8.155 -22.468  64.836  1.00 53.61           C
ATOM  19080  O   LYS D 192      -7.221 -23.275  64.865  1.00 53.61           O
ATOM  19082  N   VAL D 193      -8.314 -21.500  65.739  1.00 53.25           N
ATOM  19083  CA  VAL D 193      -7.480 -21.391  66.932  1.00 52.90           C
ATOM  19085  CB  VAL D 193      -6.271 -20.508  66.646  1.00 51.67           C
ATOM  19087  CG1 VAL D 193      -6.695 -19.172  66.048  1.00 56.14           C
ATOM  19091  CG2 VAL D 193      -5.466 -20.312  67.888  1.00 52.21           C
ATOM  19095  C   VAL D 193      -8.295 -20.876  68.145  1.00 53.74           C
ATOM  19096  O   VAL D 193      -9.103 -19.961  68.009  1.00 53.84           O
ATOM  19098  N   GLU D 194      -8.089 -21.481  69.318  1.00 54.42           N
ATOM  19099  CA  GLU D 194      -8.884 -21.165  70.516  1.00 54.34           C
ATOM  19101  CB  GLU D 194      -9.088 -22.400  71.392  1.00 54.97           C
ATOM  19104  CG  GLU D 194     -10.533 -22.866  71.489  1.00 58.46           C
ATOM  19107  CD  GLU D 194     -10.708 -24.031  72.459  1.00 59.84           C
ATOM  19108  OE1 GLU D 194      -9.897 -24.159  73.408  1.00 64.41           O
ATOM  19109  OE2 GLU D 194     -11.664 -24.818  72.273  1.00 65.48           O
ATOM  19110  C   GLU D 194      -8.285 -20.090  71.401  1.00 53.11           C
ATOM  19111  O   GLU D 194      -7.075 -19.979  71.545  1.00 49.11           O
ATOM  19113  N   PHE D 195      -9.178 -19.318  72.009  1.00 55.14           N
ATOM  19114  CA  PHE D 195      -8.841 -18.333  73.024  1.00 54.95           C
ATOM  19116  CB  PHE D 195      -9.022 -16.912  72.479  1.00 53.77           C
ATOM  19119  CG  PHE D 195      -7.913 -16.471  71.567  1.00 52.09           C
ATOM  19120  CD1 PHE D 195      -6.778 -15.867  72.077  1.00 49.99           C
ATOM  19122  CE1 PHE D 195      -5.742 -15.474  71.241  1.00 53.83           C
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ATOM  19124  CZ  PHE D 195      -5.842 -15.673  69.880  1.00 54.06           C
ATOM  19126  CE2 PHE D 195      -6.972 -16.277  69.359  1.00 56.31           C
ATOM  19128  CD2 PHE D 195      -7.998 -16.675  70.202  1.00 52.62           C
ATOM  19130  C   PHE D 195      -9.775 -18.567  74.195  1.00 56.67           C
ATOM  19131  O   PHE D 195     -10.992 -18.571  74.013  1.00 60.11           O
ATOM  19133  N   LYS D 196      -9.222 -18.790  75.386  1.00 56.89           N
ATOM  19134  CA  LYS D 196     -10.038 -18.836  76.594  1.00 55.67           C
ATOM  19136  CB  LYS D 196      -9.568 -19.948  77.514  1.00 56.02           C
ATOM  19139  CG  LYS D 196      -9.764 -21.320  76.892  1.00 57.44           C
ATOM  19142  CD  LYS D 196     -10.317 -22.332  77.867  1.00 55.86           C
ATOM  19145  CE  LYS D 196     -10.967 -23.483  77.118  1.00 60.28           C
ATOM  19148  NZ  LYS D 196     -11.462 -24.566  78.016  1.00 64.78           N
ATOM  19152  C   LYS D 196      -9.954 -17.493  77.278  1.00 54.92           C
ATOM  19153  O   LYS D 196      -8.906 -16.861  77.251  1.00 55.80           O
ATOM  19155  N   ILE D 197     -11.066 -17.036  77.847  1.00 55.38           N
ATOM  19156  CA  ILE D 197     -11.101 -15.771  78.593  1.00 56.16           C
ATOM  19158  CB  ILE D 197     -11.613 -14.609  77.738  1.00 55.35           C
ATOM  19160  CG1 ILE D 197     -10.706 -14.353  76.543  1.00 56.60           C
ATOM  19163  CD1 ILE D 197     -11.281 -13.324  75.585  1.00 59.10           C
ATOM  19167  CG2 ILE D 197     -11.698 -13.339  78.578  1.00 57.87           C
ATOM  19171  C   ILE D 197     -12.043 -15.837  79.790  1.00 56.32           C
ATOM  19172  O   ILE D 197     -13.218 -16.151  79.634  1.00 58.26           O
ATOM  19174  N   ASP D 198     -11.541 -15.487  80.969  1.00 56.33           N
ATOM  19175  CA  ASP D 198     -12.382 -15.371  82.158  1.00 56.33           C
ATOM  19177  CB  ASP D 198     -11.550 -15.677  83.400  1.00 55.36           C
ATOM  19180  CG  ASP D 198     -11.030 -17.106  83.402  1.00 60.37           C
ATOM  19181  OD1 ASP D 198     -11.799 -18.020  83.025  1.00 58.17           O
ATOM  19182  OD2 ASP D 198      -9.852 -17.322  83.769  1.00 69.19           O
ATOM  19183  C   ASP D 198     -13.075 -13.995  82.254  1.00 55.23           C
ATOM  19184  O   ASP D 198     -12.421 -12.956  82.331  1.00 54.15           O
ATOM  19186  N   ILE D 199     -14.405 -14.003  82.206  1.00 56.57           N
ATOM  19187  CA  ILE D 199     -15.201 -12.797  82.397  1.00 57.69           C
ATOM  19189  CB  ILE D 199     -16.273 -12.590  81.301  1.00 60.29           C
ATOM  19191  CG1 ILE D 199     -15.626 -12.451  79.917  1.00 61.74           C
ATOM  19194  CD1 ILE D 199     -16.630 -12.390  78.780  1.00 60.16           C
ATOM  19198  CG2 ILE D 199     -17.113 -11.329  81.614  1.00 59.93           C
ATOM  19202  C   ILE D 199     -15.915 -12.897  83.727  1.00 57.55           C
ATOM  19203  O   ILE D 199     -16.868 -13.663  83.879  1.00 56.29           O
ATOM  19205  N   VAL D 200     -15.451 -12.101  84.681  1.00 57.25           N
ATOM  19206  CA  VAL D 200     -16.000 -12.078  86.019  1.00 55.36           C
ATOM  19208  CB  VAL D 200     -14.883 -11.799  87.032  1.00 55.51           C
ATOM  19210  CG1 VAL D 200     -15.409 -11.884  88.468  1.00 54.19           C
ATOM  19214  CG2 VAL D 200     -13.722 -12.773  86.798  1.00 55.91           C
ATOM  19218  C   VAL D 200     -17.064 -10.982  86.083  1.00 54.74           C
ATOM  19219  O   VAL D 200     -16.771  -9.811  85.834  1.00 55.37           O
ATOM  19221  N   VAL D 201     -18.300 -11.369  86.390  1.00 53.29           N
ATOM  19222  CA  VAL D 201     -19.396 -10.417  86.495  1.00 53.18           C
ATOM  19224  CB  VAL D 201     -20.620 -10.767  85.569  1.00 52.12           C
ATOM  19226  CG1 VAL D 201     -20.939 -12.205  85.598  1.00 55.63           C
ATOM  19230  CG2 VAL D 201     -21.852  -9.967  85.951  1.00 53.67           C
ATOM  19234  C   VAL D 201     -19.783 -10.281  87.960  1.00 53.05           C
ATOM  19235  O   VAL D 201     -20.197 -11.246  88.606  1.00 54.54           O
ATOM  19237  N   LEU D 202     -19.622  -9.064  88.472  1.00 53.67           N
ATOM  19238  CA  LEU D 202     -19.914  -8.743  89.863  1.00 53.57           C
ATOM  19240  CB  LEU D 202     -19.071  -7.558  90.329  1.00 54.33           C
ATOM  19243  CG  LEU D 202     -17.573  -7.621  90.015  1.00 55.39           C
ATOM  19245  CD1 LEU D 202     -16.893  -6.356  90.508  1.00 57.32           C
ATOM  19249  CD2 LEU D 202     -16.942  -8.854  90.640  1.00 55.32           C
ATOM  19253  C   LEU D 202     -21.378  -8.393  89.973  1.00 53.25           C
ATOM  19254  O   LEU D 202     -21.896  -7.634  89.154  1.00 53.35           O
ATOM  19256  N   ALA D 203     -22.044  -8.941  90.983  1.00 53.14           N
ATOM  19257  CA  ALA D 203     -23.487  -8.803  91.100  1.00 51.68           C
ATOM  19259  CB  ALA D 203     -24.159  -9.716  90.112  1.00 51.77           C
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ATOM  19263  C   ALA D 203     -23.964  -9.145  92.482  1.00 50.63           C
ATOM  19264  O   ALA D 203     -23.250  -9.776  93.252  1.00 50.94           O
ATOM  19266  N   PHE D 204     -25.180  -8.715  92.790  1.00 51.21           N
ATOM  19267  CA  PHE D 204     -25.920  -9.279  93.907  1.00 52.04           C
ATOM  19269  CB  PHE D 204     -27.061  -8.350  94.333  1.00 51.17           C
ATOM  19272  CG  PHE D 204     -26.613  -7.128  95.115  1.00 53.91           C
ATOM  19273  CD1 PHE D 204     -26.036  -7.260  96.380  1.00 54.70           C
ATOM  19275  CE1 PHE D 204     -25.637  -6.135  97.110  1.00 50.70           C
ATOM  19277  CZ  PHE D 204     -25.833  -4.867  96.585  1.00 52.31           C
ATOM  19279  CE2 PHE D 204     -26.422  -4.718  95.327  1.00 50.85           C
ATOM  19281  CD2 PHE D 204     -26.812  -5.841  94.608  1.00 53.80           C
ATOM  19283  C   PHE D 204     -26.470 -10.659  93.479  1.00 52.33           C
ATOM  19284  O   PHE D 204     -26.861 -10.855  92.319  1.00 50.22           O
ATOM  19286  N   GLN D 205     -26.499 -11.617  94.407  1.00 53.43           N
ATOM  19287  CA  GLN D 205     -27.111 -12.924  94.120  1.00 54.28           C
ATOM  19289  CB  GLN D 205     -27.053 -13.857  95.335  1.00 53.60           C
ATOM  19292  CG  GLN D 205     -25.652 -14.326  95.670  1.00 53.48           C
ATOM  19295  CD  GLN D 205     -25.592 -15.311  96.816  1.00 49.76           C
ATOM  19296  OE1 GLN D 205     -26.521 -16.081  97.059  1.00 40.19           O
ATOM  19297  NE2 GLN D 205     -24.479 -15.297  97.520  1.00 42.54           N
ATOM  19300  C   GLN D 205     -28.561 -12.740  93.707  1.00 56.68           C
ATOM  19301  O   GLN D 205     -29.081 -13.513  92.898  1.00 57.95           O
ATOM  19303  N   LYS D 206     -29.186 -11.700  94.266  1.00 58.26           N
ATOM  19304  CA  LYS D 206     -30.613 -11.461  94.154  1.00 58.72           C
ATOM  19306  CB  LYS D 206     -31.237 -11.589  95.545  1.00 59.92           C
ATOM  19309  CG  LYS D 206     -32.640 -12.164  95.539  1.00 64.22           C
ATOM  19312  CD  LYS D 206     -32.661 -13.680  95.295  1.00 62.70           C
ATOM  19315  CE  LYS D 206     -34.081 -14.153  95.008  1.00 62.49           C
ATOM  19318  NZ  LYS D 206     -34.322 -15.524  95.512  1.00 64.99           N
ATOM  19322  C   LYS D 206     -30.927 -10.081  93.556  1.00 59.53           C
ATOM  19323  O   LYS D 206     -30.213  -9.105  93.797  1.00 60.41           O
ATOM  19325  N   ALA D 207     -32.010 -10.014  92.787  1.00 58.87           N
ATOM  19326  CA  ALA D 207     -32.402  -8.796  92.081  1.00 58.07           C
ATOM  19328  CB  ALA D 207     -33.087  -9.165  90.786  1.00 58.28           C
ATOM  19332  C   ALA D 207     -33.324  -7.911  92.919  1.00 57.62           C
ATOM  19333  O   ALA D 207     -33.273  -6.683  92.831  1.00 56.63           O
ATOM  19335  N   SER D 208     -34.176  -8.544  93.719  1.00 57.90           N
ATOM  19336  CA  SER D 208     -35.167  -7.834  94.517  1.00 57.38           C
ATOM  19338  CB  SER D 208     -36.352  -7.428  93.639  1.00 58.01           C
ATOM  19341  OG  SER D 208     -37.377  -6.819  94.408  1.00 61.64           O
ATOM  19343  C   SER D 208     -35.666  -8.721  95.647  1.00 57.23           C
ATOM  19344  O   SER D 208     -35.524  -9.945  95.597  1.00 56.70           O
ATOM  19346  N   SER D 209     -36.260  -8.094  96.661  1.00 56.62           N
ATOM  19347  CA  SER D 209     -36.893  -8.826  97.751  1.00 55.04           C
ATOM  19349  CB  SER D 209     -35.844  -9.312  98.746  1.00 54.48           C
ATOM  19352  OG  SER D 209     -35.068  -8.233  99.226  1.00 52.23           O
ATOM  19354  C   SER D 209     -37.939  -7.976  98.460  1.00 55.00           C
ATOM  19355  O   SER D 209     -37.902  -6.745  98.404  1.00 56.00           O
ATOM  19357  N   ILE D 210     -38.862  -8.660  99.134  1.00 54.81           N
ATOM  19358  CA  ILE D 210     -40.025  -8.042  99.785  1.00 52.89           C
ATOM  19360  CB  ILE D 210     -41.270  -8.012  98.829  1.00 52.32           C
ATOM  19362  CG1 ILE D 210     -42.583  -7.896  99.618  1.00 47.17           C
ATOM  19365  CD1 ILE D 210     -43.756  -7.465  98.781  1.00 48.25           C
ATOM  19369  CG2 ILE D 210     -41.289  -9.245  97.913  1.00 53.11           C
ATOM  19373  C   ILE D 210     -40.335  -8.805 101.074  1.00 53.18           C
ATOM  19374  O   ILE D 210     -40.351 -10.039 101.085  1.00 52.55           O
ATOM  19376  N   VAL D 211     -40.586  -8.063 102.152  1.00 53.22           N
ATOM  19377  CA  VAL D 211     -40.730  -8.646 103.489  1.00 52.62           C
ATOM  19379  CB  VAL D 211     -39.474  -8.323 104.352  1.00 53.09           C
ATOM  19381  CG1 VAL D 211     -39.696  -8.653 105.830  1.00 53.12           C
ATOM  19385  CG2 VAL D 211     -38.247  -9.067 103.814  1.00 50.71           C
ATOM  19389  C   VAL D 211     -42.005  -8.155 104.184  1.00 52.33           C
ATOM  19390  O   VAL D 211     -42.456  -7.028 103.960  1.00 51.82           O
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ATOM  19392  N   TYR D 212     -42.571  -9.025 105.023  1.00 52.90           N
ATOM  19393  CA  TYR D 212     -43.779  -8.738 105.815  1.00 51.43           C
ATOM  19395  CB  TYR D 212     -44.965  -9.565 105.297  1.00 49.88           C
ATOM  19398  CG  TYR D 212     -45.073  -9.663 103.774  1.00 48.56           C
ATOM  19399  CD1 TYR D 212     -45.818  -8.735 103.051  1.00 46.68           C
ATOM  19401  CE1 TYR D 212     -45.934  -8.819 101.663  1.00 47.38           C
ATOM  19403  CZ  TYR D 212     -45.302  -9.838 100.979  1.00 47.61           C
ATOM  19404  OH  TYR D 212     -45.426  -9.896  99.611  1.00 42.73           O
ATOM  19406  CE2 TYR D 212     -44.554 -10.782 101.673  1.00 49.03           C
ATOM  19408  CD2 TYR D 212     -44.445 -10.692 103.068  1.00 46.32           C
ATOM  19410  C   TYR D 212     -43.535  -9.077 107.287  1.00 50.42           C
ATOM  19411  O   TYR D 212     -43.717  -8.238 108.175  1.00 52.05           O
ATOM  19413  N   GLU D 220     -35.213  -7.841 109.543  1.00 59.95           N
ATOM  19414  CA  GLU D 220     -33.879  -8.124 109.015  1.00 59.74           C
ATOM  19416  CB  GLU D 220     -33.315  -9.397 109.647  1.00 59.82           C
ATOM  19419  CG  GLU D 220     -32.987  -9.251 111.125  1.00 61.25           C
ATOM  19422  CD  GLU D 220     -32.245 -10.450 111.680  1.00 60.21           C
ATOM  19423  OE1 GLU D 220     -31.459 -10.264 112.631  1.00 60.22           O
ATOM  19424  OE2 GLU D 220     -32.443 -11.572 111.164  1.00 60.18           O
ATOM  19425  C   GLU D 220     -33.889  -8.289 107.503  1.00 58.67           C
ATOM  19426  O   GLU D 220     -34.517  -9.211 106.990  1.00 57.22           O
ATOM  19428  N   PHE D 221     -33.204  -7.387 106.799  1.00 58.96           N
ATOM  19429  CA  PHE D 221     -32.934  -7.561 105.367  1.00 58.57           C
ATOM  19431  CB  PHE D 221     -32.969  -6.227 104.609  1.00 58.00           C
ATOM  19434  CG  PHE D 221     -34.318  -5.561 104.601  1.00 58.68           C
ATOM  19435  CD1 PHE D 221     -35.425  -6.215 104.078  1.00 59.95           C
ATOM  19437  CE1 PHE D 221     -36.672  -5.599 104.068  1.00 60.49           C
ATOM  19439  CZ  PHE D 221     -36.816  -4.311 104.578  1.00 58.43           C
ATOM  19441  CE2 PHE D 221     -35.720  -3.651 105.090  1.00 54.01           C
ATOM  19443  CD2 PHE D 221     -34.481  -4.271 105.099  1.00 55.40           C
ATOM  19445  C   PHE D 221     -31.572  -8.221 105.177  1.00 57.72           C
ATOM  19446  O   PHE D 221     -30.665  -8.055 105.992  1.00 56.05           O
ATOM  19448  N   SER D 222     -31.450  -8.978 104.092  1.00 58.51           N
ATOM  19449  CA  SER D 222     -30.214  -9.666 103.745  1.00 58.79           C
ATOM  19451  CB  SER D 222     -30.399 -11.172 103.949  1.00 59.48           C
ATOM  19454  OG  SER D 222     -29.224 -11.894 103.631  1.00 62.22           O
ATOM  19456  C   SER D 222     -29.879  -9.350 102.284  1.00 59.36           C
ATOM  19457  O   SER D 222     -30.756  -9.425 101.426  1.00 61.66           O
ATOM  19459  N   PHE D 223     -28.623  -8.984 102.008  1.00 58.05           N
ATOM  19460  CA  PHE D 223     -28.178  -8.624 100.650  1.00 54.78           C
ATOM  19462  CB  PHE D 223     -27.819  -7.141 100.586  1.00 53.03           C
ATOM  19465  CG  PHE D 223     -28.917  -6.233 101.035  1.00 54.85           C
ATOM  19466  CD1 PHE D 223     -29.821  -5.712 100.119  1.00 56.51           C
ATOM  19468  CE1 PHE D 223     -30.838  -4.861 100.524  1.00 51.18           C
ATOM  19470  CZ  PHE D 223     -30.959  -4.527 101.853  1.00 50.43           C
ATOM  19472  CE2 PHE D 223     -30.060  -5.039 102.783  1.00 52.05           C
ATOM  19474  CD2 PHE D 223     -29.047  -5.888 102.371  1.00 53.39           C
ATOM  19476  C   PHE D 223     -26.967  -9.448 100.216  1.00 52.76           C
ATOM  19477  O   PHE D 223     -25.878  -8.909 100.037  1.00 51.25           O
ATOM  19479  N   PRO D 224     -27.151 -10.764 100.030  1.00 51.69           N
ATOM  19480  CA  PRO D 224     -26.022 -11.597  99.628  1.00 51.38           C
ATOM  19482  CB  PRO D 224     -26.621 -13.004  99.599  1.00 51.22           C
ATOM  19485  CG  PRO D 224     -28.071 -12.789  99.378  1.00 51.52           C
ATOM  19488  CD  PRO D 224     -28.392 -11.546 100.144  1.00 51.23           C
ATOM  19491  C   PRO D 224     -25.527 -11.214  98.244  1.00 50.88           C
ATOM  19492  O   PRO D 224     -26.333 -10.894  97.370  1.00 52.45           O
ATOM  19493  N   LEU D 225     -24.217 -11.239  98.045  1.00 49.76           N
ATOM  19494  CA  LEU D 225     -23.653 -10.877  96.750  1.00 49.29           C
ATOM  19496  CB  LEU D 225     -22.898  -9.538  96.815  1.00 49.61           C
ATOM  19499  CG  LEU D 225     -22.060  -9.198  98.040  1.00 50.65           C
ATOM  19501  CD1 LEU D 225     -20.981 -10.259  98.286  1.00 52.33           C
ATOM  19505  CD2 LEU D 225     -21.462  -7.796  97.869  1.00 49.70           C
ATOM  19509  C   LEU D 225     -22.788 -11.994  96.201  1.00 46.53           C
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ATOM  19510  O   LEU D 225     -22.506 -12.958  96.902  1.00 43.14           O
ATOM  19512  N   ALA D 226     -22.401 -11.858  94.936  1.00 45.37           N
ATOM  19513  CA  ALA D 226     -21.691 -12.909  94.229  1.00 48.01           C
ATOM  19515  CB  ALA D 226     -21.555 -12.563  92.771  1.00 49.85           C
ATOM  19519  C   ALA D 226     -20.327 -13.140  94.845  1.00 48.44           C
ATOM  19520  O   ALA D 226     -19.714 -12.217  95.368  1.00 50.48           O
ATOM  19522  N   PHE D 227     -19.856 -14.380  94.780  1.00 48.73           N
ATOM  19523  CA  PHE D 227     -18.635 -14.778  95.481  1.00 49.94           C
ATOM  19525  CB  PHE D 227     -18.272 -16.219  95.144  1.00 45.83           C
ATOM  19528  CG  PHE D 227     -16.941 -16.639  95.681  1.00 45.36           C
ATOM  19529  CD1 PHE D 227     -16.726 -16.702  97.054  1.00 38.84           C
ATOM  19531  CE1 PHE D 227     -15.507 -17.093  97.561  1.00 38.85           C
ATOM  19533  CZ  PHE D 227     -14.476 -17.423  96.694  1.00 40.38           C
ATOM  19535  CE2 PHE D 227     -14.672 -17.365  95.324  1.00 40.67           C
ATOM  19537  CD2 PHE D 227     -15.901 -16.972  94.820  1.00 41.54           C
ATOM  19539  C   PHE D 227     -17.450 -13.881  95.146  1.00 52.47           C
ATOM  19540  O   PHE D 227     -16.638 -13.553  96.016  1.00 53.85           O
ATOM  19542  N   THR D 228     -17.371 -13.478  93.883  1.00 54.11           N
ATOM  19543  CA  THR D 228     -16.200 -12.780  93.362  1.00 55.71           C
ATOM  19545  CB  THR D 228     -16.258 -12.767  91.826  1.00 56.84           C
ATOM  19547  OG1 THR D 228     -17.429 -12.061  91.386  1.00 60.35           O
ATOM  19549  CG2 THR D 228     -16.313 -14.218  91.288  1.00 58.07           C
ATOM  19553  C   THR D 228     -16.017 -11.354  93.929  1.00 56.66           C
ATOM  19554  O   THR D 228     -14.903 -10.813  93.931  1.00 55.94           O
ATOM  19556  N   VAL D 229     -17.103 -10.770  94.432  1.00 57.65           N
ATOM  19557  CA  VAL D 229     -17.066  -9.433  95.028  1.00 58.31           C
ATOM  19559  CB  VAL D 229     -18.338  -8.581  94.632  1.00 59.53           C
ATOM  19561  CG1 VAL D 229     -19.633  -9.274  95.010  1.00 59.43           C
ATOM  19565  CG2 VAL D 229     -18.294  -7.171  95.237  1.00 58.88           C
ATOM  19569  C   VAL D 229     -16.863  -9.463  96.553  1.00 58.58           C
ATOM  19570  O   VAL D 229     -16.675  -8.411  97.159  1.00 57.87           O
ATOM  19572  N   GLU D 230     -16.872 -10.652  97.164  1.00 58.66           N
ATOM  19573  CA  GLU D 230     -16.688 -10.780  98.623  1.00 58.69           C
ATOM  19575  CB  GLU D 230     -16.587 -12.249  99.041  1.00 59.30           C
ATOM  19578  CG  GLU D 230     -17.917 -12.993  99.104  1.00 59.66           C
ATOM  19581  CD  GLU D 230     -17.836 -14.286  99.913  1.00 59.55           C
ATOM  19582  OE1 GLU D 230     -16.879 -14.455 100.706  1.00 56.54           O
ATOM  19583  OE2 GLU D 230     -18.741 -15.134  99.754  1.00 62.58           O
ATOM  19584  C   GLU D 230     -15.448 -10.047  99.137  1.00 58.44           C
ATOM  19585  O   GLU D 230     -15.510  -9.310 100.127  1.00 58.12           O
ATOM  19587  N   LYS D 231     -14.327 -10.267  98.458  1.00 58.50           N
ATOM  19588  CA  LYS D 231     -13.040  -9.660  98.832  1.00 58.91           C
ATOM  19590  CB  LYS D 231     -11.896 -10.390  98.108  1.00 59.75           C
ATOM  19593  CG  LYS D 231     -11.933 -10.283  96.568  1.00 63.26           C
ATOM  19596  CD  LYS D 231     -11.281 -11.484  95.868  1.00 61.99           C
ATOM  19599  CE  LYS D 231      -9.782 -11.571  96.160  1.00 63.05           C
ATOM  19602  NZ  LYS D 231      -9.486 -12.136  97.506  1.00 59.26           N
ATOM  19606  C   LYS D 231     -12.967  -8.147  98.552  1.00 57.11           C
ATOM  19607  O   LYS D 231     -12.388  -7.388  99.330  1.00 56.09           O
ATOM  19609  N   LEU D 232     -13.585  -7.734  97.447  1.00 56.22           N
ATOM  19610  CA  LEU D 232     -13.487  -6.370  96.906  1.00 55.70           C
ATOM  19612  CB  LEU D 232     -14.411  -6.222  95.688  1.00 54.72           C
ATOM  19615  CG  LEU D 232     -13.782  -6.484  94.317  1.00 53.00           C
ATOM  19617  CD1 LEU D 232     -12.892  -7.721  94.302  1.00 53.46           C
ATOM  19621  CD2 LEU D 232     -14.865  -6.587  93.261  1.00 53.75           C
ATOM  19625  C   LEU D 232     -13.784  -5.228  97.872  1.00 55.81           C
ATOM  19626  O   LEU D 232     -14.479  -5.399  98.874  1.00 55.92           O
ATOM  19628  N   THR D 233     -13.241  -4.059  97.531  1.00 55.71           N
ATOM  19629  CA  THR D 233     -13.449  -2.830  98.283  1.00 55.68           C
ATOM  19631  CB  THR D 233     -12.124  -2.059  98.484  1.00 55.16           C
ATOM  19633  OG1 THR D 233     -11.240  -2.832  99.304  1.00 55.37           O
ATOM  19635  CG2 THR D 233     -12.355  -0.708  99.150  1.00 55.13           C
ATOM  19639  C   THR D 233     -14.461  -1.956  97.548  1.00 56.35           C
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ATOM  19640  O   THR D 233     -14.484  -1.922   96.315  1.00 58.15           O
ATOM  19642  N   GLY D 234     -15.299  -1.259   98.312  1.00 55.46           N
ATOM  19643  CA  GLY D 234     -16.335  -0.403   97.742  1.00 53.89           C
ATOM  19646  C   GLY D 234     -17.175   0.280   98.805  1.00 52.41           C
ATOM  19647  O   GLY D 234     -16.973   0.056  100.000  1.00 51.52           O
ATOM  19649  N   SER D 235     -18.117   1.112   98.368  1.00 50.70           N
ATOM  19650  CA  SER D 235     -19.027   1.795   99.286  1.00 51.48           C
ATOM  19652  CB  SER D 235     -18.413   3.125   99.755  1.00 51.85           C
ATOM  19655  OG  SER D 235     -17.958   3.920   98.671  1.00 51.16           O
ATOM  19657  C   SER D 235     -20.418   2.002   98.667  1.00 50.36           C
ATOM  19658  O   SER D 235     -20.557   2.020   97.446  1.00 48.75           O
ATOM  19660  N   GLY D 236     -21.438   2.150   99.517  1.00 50.07           N
ATOM  19661  CA  GLY D 236     -22.830   2.221   99.055  1.00 50.59           C
ATOM  19664  C   GLY D 236     -23.830   2.842  100.024  1.00 50.40           C
ATOM  19665  O   GLY D 236     -23.447   3.375  101.071  1.00 48.99           O
ATOM  19667  N   GLU D 237     -25.117   2.778   99.661  1.00 49.95           N
ATOM  19668  CA  GLU D 237     -26.188   3.358  100.483  1.00 50.06           C
ATOM  19670  CB  GLU D 237     -26.135   4.891  100.413  1.00 51.02           C
ATOM  19673  CG  GLU D 237     -26.434   5.461   99.041  1.00 51.07           C
ATOM  19676  CD  GLU D 237     -26.503   6.962   99.049  1.00 49.31           C
ATOM  19677  OE1 GLU D 237     -26.995   7.520   98.052  1.00 51.35           O
ATOM  19678  OE2 GLU D 237     -26.072   7.582  100.046  1.00 47.04           O
ATOM  19679  C   GLU D 237     -27.609   2.885  100.121  1.00 49.51           C
ATOM  19680  O   GLU D 237     -27.807   2.203   99.115  1.00 48.94           O
ATOM  19682  N   LEU D 238     -28.582   3.285  100.951  1.00 48.63           N
ATOM  19683  CA  LEU D 238     -29.997   2.922  100.800  1.00 47.11           C
ATOM  19685  CB  LEU D 238     -30.387   1.929  101.900  1.00 46.77           C
ATOM  19688  CG  LEU D 238     -31.740   1.214  101.808  1.00 46.51           C
ATOM  19690  CD1 LEU D 238     -31.775   0.217  100.665  1.00 48.67           C
ATOM  19694  CD2 LEU D 238     -32.046   0.506  103.111  1.00 44.88           C
ATOM  19698  C   LEU D 238     -30.875   4.171  100.895  1.00 46.43           C
ATOM  19699  O   LEU D 238     -31.580   4.530   99.949  1.00 45.31           O
ATOM  19701  N   TRP D 251     -32.641   5.527  104.561  1.00 50.37           N
ATOM  19702  CA  TRP D 251     -31.384   6.174  104.211  1.00 51.69           C
ATOM  19704  CB  TRP D 251     -31.554   7.699  104.243  1.00 51.63           C
ATOM  19707  CG  TRP D 251     -32.285   8.266  103.072  1.00 52.07           C
ATOM  19708  CD1 TRP D 251     -31.855   8.288  101.783  1.00 54.18           C
ATOM  19710  NE1 TRP D 251     -32.786   8.902  100.977  1.00 54.39           N
ATOM  19712  CE2 TRP D 251     -33.845   9.305  101.746  1.00 54.58           C
ATOM  19713  CD2 TRP D 251     -33.563   8.925  103.080  1.00 54.77           C
ATOM  19714  CE3 TRP D 251     -34.497   9.234  104.083  1.00 56.49           C
ATOM  19716  CZ3 TRP D 251     -35.676   9.900  103.723  1.00 53.81           C
ATOM  19718  CH2 TRP D 251     -35.925  10.260  102.381  1.00 54.06           C
ATOM  19720  CZ2 TRP D 251     -35.025   9.973  101.383  1.00 53.59           C
ATOM  19722  C   TRP D 251     -30.250   5.773  105.167  1.00 52.25           C
ATOM  19723  O   TRP D 251     -30.239   6.208  106.312  1.00 53.10           O
ATOM  19725  N   ILE D 252     -29.314   4.936  104.710  1.00 53.39           N
ATOM  19726  CA  ILE D 252     -28.028   4.730  105.424  1.00 52.95           C
ATOM  19728  CB  ILE D 252     -28.052   3.542  106.480  1.00 52.07           C
ATOM  19730  CG1 ILE D 252     -27.723   2.183  105.847  1.00 51.34           C
ATOM  19733  CD1 ILE D 252     -26.320   1.684  106.165  1.00 51.08           C
ATOM  19737  CG2 ILE D 252     -29.382   3.488  107.262  1.00 51.29           C
ATOM  19741  C   ILE D 252     -26.858   4.583  104.427  1.00 52.71           C
ATOM  19742  O   ILE D 252     -27.076   4.408  103.230  1.00 49.06           O
ATOM  19744  N   THR D 253     -25.631   4.681  104.944  1.00 54.71           N
ATOM  19745  CA  THR D 253     -24.398   4.687  104.137  1.00 56.15           C
ATOM  19747  CB  THR D 253     -23.882   6.144  103.904  1.00 56.24           C
ATOM  19749  OG1 THR D 253     -24.964   7.000  103.515  1.00 55.03           O
ATOM  19751  CG2 THR D 253     -22.817   6.189  102.820  1.00 56.29           C
ATOM  19755  C   THR D 253     -23.295   3.874  104.845  1.00 57.36           C
ATOM  19756  O   THR D 253     -23.275   3.790  106.070  1.00 57.59           O
ATOM  19758  N   PHE D 254     -22.381   3.284  104.073  1.00 58.47           N
ATOM  19759  CA  PHE D 254     -21.344   2.399  104.622  1.00 58.61           C
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ATOM  19761  CB  PHE D 254     -21.974   1.061 105.015  1.00 59.53           C
ATOM  19764  CG  PHE D 254     -22.626   0.348 103.864  1.00 59.96           C
ATOM  19765  CD1 PHE D 254     -21.960  -0.672 103.191  1.00 62.00           C
ATOM  19767  CE1 PHE D 254     -22.553  -1.329 102.110  1.00 60.92           C
ATOM  19769  CZ  PHE D 254     -23.824  -0.958 101.688  1.00 60.76           C
ATOM  19771  CE2 PHE D 254     -24.496   0.068 102.347  1.00 62.46           C
ATOM  19773  CD2 PHE D 254     -23.894   0.717 103.429  1.00 61.56           C
ATOM  19775  C   PHE D 254     -20.228   2.138 103.603  1.00 59.14           C
ATOM  19776  O   PHE D 254     -20.462   2.195 102.392  1.00 58.60           O
ATOM  19778  N   ASP D 255     -19.025   1.840 104.097  1.00 59.15           N
ATOM  19779  CA  ASP D 255     -17.902   1.427 103.238  1.00 59.33           C
ATOM  19781  CB  ASP D 255     -16.601   2.121 103.680  1.00 59.88           C
ATOM  19784  CG  ASP D 255     -16.630   3.630 103.457  1.00 61.43           C
ATOM  19785  OD1 ASP D 255     -15.959   4.360 104.219  1.00 64.65           O
ATOM  19786  OD2 ASP D 255     -17.319   4.093 102.524  1.00 61.56           O
ATOM  19787  C   ASP D 255     -17.754  -0.105 103.267  1.00 58.94           C
ATOM  19788  O   ASP D 255     -18.566  -0.794 103.883  1.00 59.47           O
ATOM  19790  N   LEU D 256     -16.738  -0.636 102.589  1.00 58.57           N
ATOM  19791  CA  LEU D 256     -16.494  -2.080 102.572  1.00 58.36           C
ATOM  19793  CB  LEU D 256     -17.392  -2.742 101.514  1.00 59.64           C
ATOM  19796  CG  LEU D 256     -17.652  -4.255 101.579  1.00 59.62           C
ATOM  19798  CD1 LEU D 256     -18.794  -4.625 100.639  1.00 57.95           C
ATOM  19802  CD2 LEU D 256     -16.403  -5.070 101.253  1.00 61.83           C
ATOM  19806  C   LEU D 256     -15.025  -2.391 102.290  1.00 57.63           C
ATOM  19807  O   LEU D 256     -14.608  -2.389 101.142  1.00 58.03           O
ATOM  19809  N   LYS D 257     -14.245  -2.635 103.340  1.00 57.23           N
ATOM  19810  CA  LYS D 257     -12.860  -3.101 103.199  1.00 58.22           C
ATOM  19812  CB  LYS D 257     -11.878  -2.333 104.110  1.00 58.63           C
ATOM  19815  CG  LYS D 257     -12.244  -2.284 105.619  1.00 59.20           C
ATOM  19818  CD  LYS D 257     -11.267  -1.432 106.449  1.00 57.85           C
ATOM  19821  CE  LYS D 257     -10.304  -2.277 107.281  1.00 56.77           C
ATOM  19824  NZ  LYS D 257      -9.670  -3.373 106.496  1.00 57.61           N
ATOM  19828  C   LYS D 257     -12.874  -4.573 103.550  1.00 59.25           C
ATOM  19829  O   LYS D 257     -13.511  -4.962 104.533  1.00 59.96           O
ATOM  19831  N   ASN D 258     -12.186  -5.382 102.742  1.00 59.93           N
ATOM  19832  CA  ASN D 258     -12.192  -6.855 102.859  1.00 60.28           C
ATOM  19834  CB  ASN D 258     -10.762  -7.392 103.032  1.00 60.48           C
ATOM  19837  CG  ASN D 258      -9.912  -6.534 103.955  1.00 62.15           C
ATOM  19838  OD1 ASN D 258     -10.395  -5.975 104.950  1.00 62.50           O
ATOM  19839  ND2 ASN D 258      -8.630  -6.431 103.628  1.00 61.36           N
ATOM  19842  C   ASN D 258     -13.121  -7.449 103.936  1.00 61.13           C
ATOM  19843  O   ASN D 258     -12.721  -7.646 105.094  1.00 61.04           O
ATOM  19845  N   LYS D 259     -14.370  -7.701 103.535  1.00 60.67           N
ATOM  19846  CA  LYS D 259     -15.369  -8.388 104.364  1.00 59.67           C
ATOM  19848  CB  LYS D 259     -14.845  -9.762 104.817  1.00 60.46           C
ATOM  19851  CG  LYS D 259     -14.222 -10.634 103.717  1.00 60.39           C
ATOM  19854  CD  LYS D 259     -15.054 -11.876 103.418  1.00 63.03           C
ATOM  19857  CE  LYS D 259     -14.284 -12.876 102.557  1.00 63.79           C
ATOM  19860  NZ  LYS D 259     -13.810 -12.267 101.282  1.00 65.00           N
ATOM  19864  C   LYS D 259     -15.858  -7.599 105.594  1.00 58.60           C
ATOM  19865  O   LYS D 259     -16.675  -8.110 106.365  1.00 58.04           O
ATOM  19867  N   GLU D 260     -15.388  -6.367 105.769  1.00 57.41           N
ATOM  19868  CA  GLU D 260     -15.715  -5.584 106.958  1.00 58.11           C
ATOM  19870  CB  GLU D 260     -14.436  -5.189 107.699  1.00 58.58           C
ATOM  19873  CG  GLU D 260     -13.694  -6.372 108.326  1.00 57.98           C
ATOM  19876  CD  GLU D 260     -12.214  -6.098 108.524  1.00 57.61           C
ATOM  19877  OE1 GLU D 260     -11.422  -6.519 107.652  1.00 58.27           O
ATOM  19878  OE2 GLU D 260     -11.846  -5.452 109.532  1.00 50.23           O
ATOM  19879  C   GLU D 260     -16.510  -4.352 106.561  1.00 57.37           C
ATOM  19880  O   GLU D 260     -16.196  -3.716 105.561  1.00 57.22           O
ATOM  19882  N   VAL D 261     -17.532  -4.024 107.354  1.00 57.46           N
ATOM  19883  CA  VAL D 261     -18.516  -2.998 106.992  1.00 58.84           C
ATOM  19885  CB  VAL D 261     -19.905  -3.628 106.734  1.00 59.86           C
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ATOM  19887  CG1 VAL D 261     -20.892  -2.575 106.212  1.00 59.81           C
ATOM  19891  CG2 VAL D 261     -19.795  -4.811 105.764  1.00 60.30           C
ATOM  19895  C   VAL D 261     -18.671  -1.968 108.102  1.00 59.18           C
ATOM  19896  O   VAL D 261     -18.868  -2.338 109.258  1.00 59.42           O
ATOM  19898  N   SER D 262     -18.629  -0.683 107.740  1.00 60.00           N
ATOM  19899  CA  SER D 262     -18.540   0.413 108.720  1.00 60.19           C
ATOM  19901  CB  SER D 262     -17.399   1.363 108.324  1.00 60.71           C
ATOM  19904  OG  SER D 262     -16.147   0.701 108.372  1.00 62.28           O
ATOM  19906  C   SER D 262     -19.858   1.188 108.957  1.00 60.12           C
ATOM  19907  O   SER D 262     -20.755   0.682 109.635  1.00 59.04           O
ATOM  19909  N   VAL D 263     -19.954   2.409 108.418  1.00 60.68           N
ATOM  19910  CA  VAL D 263     -21.081   3.340 108.644  1.00 60.35           C
ATOM  19912  CB  VAL D 263     -21.686   3.248 110.079  1.00 61.17           C
ATOM  19914  CG1 VAL D 263     -20.632   3.592 111.146  1.00 62.38           C
ATOM  19918  CG2 VAL D 263     -22.924   4.153 110.212  1.00 61.75           C
ATOM  19922  C   VAL D 263     -20.611   4.783 108.403  1.00 59.28           C
ATOM  19923  O   VAL D 263     -19.452   5.103 108.658  1.00 58.59           O
ATOM  19925  N   LYS D 264     -21.509   5.643 107.920  1.00 58.75           N
ATOM  19926  CA  LYS D 264     -21.179   7.048 107.660  1.00 59.03           C
ATOM  19928  CB  LYS D 264     -20.917   7.266 106.163  1.00 59.18           C
ATOM  19931  CG  LYS D 264     -20.205   6.100 105.469  1.00 59.90           C
ATOM  19934  CD  LYS D 264     -19.627   6.481 104.105  1.00 59.76           C
ATOM  19937  CE  LYS D 264     -18.284   7.192 104.226  1.00 60.91           C
ATOM  19940  NZ  LYS D 264     -17.578   7.263 102.920  1.00 60.55           N
ATOM  19944  C   LYS D 264     -22.278   7.997 108.154  1.00 57.70           C
ATOM  19945  O   LYS D 264     -23.445   7.617 108.277  1.00 56.11           O
ATOM  19947  N   PRO D 270     -35.407   6.986 112.279  1.00 52.14           N
ATOM  19948  CA  PRO D 270     -35.719   5.757 111.528  1.00 51.34           C
ATOM  19950  CB  PRO D 270     -35.743   6.253 110.079  1.00 50.54           C
ATOM  19953  CG  PRO D 270     -34.703   7.356 110.054  1.00 51.18           C
ATOM  19956  CD  PRO D 270     -34.683   7.971 111.452  1.00 51.93           C
ATOM  19959  C   PRO D 270     -34.663   4.659 111.685  1.00 50.66           C
ATOM  19960  O   PRO D 270     -34.636   3.737 110.887  1.00 51.03           O
ATOM  19961  N   LYS D 271     -33.860   4.733 112.747  1.00 51.49           N
ATOM  19962  CA  LYS D 271     -32.496   4.174 112.765  1.00 51.51           C
ATOM  19964  CB  LYS D 271     -31.701   4.719 113.964  1.00 51.04           C
ATOM  19967  CG  LYS D 271     -31.364   6.212 113.893  1.00 49.35           C
ATOM  19970  CD  LYS D 271     -32.364   7.076 114.659  1.00 45.19           C
ATOM  19973  CE  LYS D 271     -32.011   8.551 114.566  1.00 45.44           C
ATOM  19976  NZ  LYS D 271     -30.663   8.858 115.121  1.00 39.79           N
ATOM  19980  C   LYS D 271     -32.373   2.648 112.742  1.00 51.79           C
ATOM  19981  O   LYS D 271     -32.695   1.970 113.721  1.00 50.08           O
ATOM  19983  N   LEU D 272     -31.875   2.144 111.607  1.00 53.53           N
ATOM  19984  CA  LEU D 272     -31.443   0.751 111.437  1.00 54.28           C
ATOM  19986  CB  LEU D 272     -31.143   0.445 109.949  1.00 55.19           C
ATOM  19989  CG  LEU D 272     -32.233   0.095 108.919  1.00 57.39           C
ATOM  19991  CD1 LEU D 272     -32.691   1.328 108.125  1.00 57.44           C
ATOM  19995  CD2 LEU D 272     -33.420  -0.646 109.553  1.00 60.69           C
ATOM  19999  C   LEU D 272     -30.172   0.467 112.241  1.00 54.31           C
ATOM  20000  O   LEU D 272     -29.619   1.352 112.889  1.00 53.68           O
ATOM  20002  N   GLN D 273     -29.730  -0.787 112.193  1.00 55.02           N
ATOM  20003  CA  GLN D 273     -28.418  -1.192 112.694  1.00 55.43           C
ATOM  20005  CB  GLN D 273     -28.537  -1.885 114.065  1.00 55.59           C
ATOM  20008  CG  GLN D 273     -27.211  -2.393 114.682  1.00 55.17           C
ATOM  20011  CD  GLN D 273     -26.427  -1.319 115.438  1.00 52.93           C
ATOM  20012  OE1 GLN D 273     -26.852  -0.847 116.493  1.00 46.57           O
ATOM  20013  NE2 GLN D 273     -25.264  -0.952 114.907  1.00 52.07           N
ATOM  20016  C   GLN D 273     -27.824  -2.130 111.645  1.00 55.53           C
ATOM  20017  O   GLN D 273     -28.423  -3.156 111.311  1.00 53.97           O
ATOM  20019  N   MET D 274     -26.649  -1.759 111.135  1.00 56.56           N
ATOM  20020  CA  MET D 274     -25.996  -2.452 110.018  1.00 56.36           C
ATOM  20022  CB  MET D 274     -25.139  -1.457 109.232  1.00 56.51           C
ATOM  20025  CG  MET D 274     -24.377  -2.029 108.049  1.00 57.12           C
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ATOM  20028  SD  MET D 274     -25.394  -2.146 106.575  1.00 62.31           S
ATOM  20029  CE  MET D 274     -26.064  -3.793 106.744  1.00 61.34           C
ATOM  20033  C   MET D 274     -25.111  -3.590 110.505  1.00 56.37           C
ATOM  20034  O   MET D 274     -24.346  -3.433 111.458  1.00 56.65           O
ATOM  20036  N   GLY D 275     -25.213  -4.736 109.842  1.00 56.02           N
ATOM  20037  CA  GLY D 275     -24.317  -5.845 110.108  1.00 56.13           C
ATOM  20040  C   GLY D 275     -22.872  -5.409 109.977  1.00 55.95           C
ATOM  20041  O   GLY D 275     -22.506  -4.696 109.042  1.00 56.24           O
ATOM  20043  N   LYS D 276     -22.063  -5.833 110.939  1.00 55.59           N
ATOM  20044  CA  LYS D 276     -20.625  -5.551 110.972  1.00 56.11           C
ATOM  20046  CB  LYS D 276     -20.015  -6.060 112.294  1.00 57.11           C
ATOM  20049  CG  LYS D 276     -20.541  -7.441 112.778  1.00 59.85           C
ATOM  20052  CD  LYS D 276     -21.743  -7.331 113.755  1.00 59.41           C
ATOM  20055  CE  LYS D 276     -22.885  -8.312 113.417  1.00 56.36           C
ATOM  20058  NZ  LYS D 276     -22.535  -9.734 113.671  1.00 53.48           N
ATOM  20062  C   LYS D 276     -19.857  -6.148 109.785  1.00 55.14           C
ATOM  20063  O   LYS D 276     -18.850  -5.585 109.343  1.00 52.28           O
ATOM  20065  N   LYS D 277     -20.339  -7.283 109.277  1.00 56.31           N
ATOM  20066  CA  LYS D 277     -19.621  -8.057 108.259  1.00 57.40           C
ATOM  20068  CB  LYS D 277     -18.921  -9.249 108.927  1.00 57.72           C
ATOM  20071  CG  LYS D 277     -17.927  -8.868 110.022  1.00 57.34           C
ATOM  20074  CD  LYS D 277     -17.523 -10.071 110.859  1.00 57.47           C
ATOM  20077  CE  LYS D 277     -18.669 -10.561 111.737  1.00 58.38           C
ATOM  20080  NZ  LYS D 277     -18.193 -11.388 112.879  1.00 59.61           N
ATOM  20084  C   LYS D 277     -20.542  -8.558 107.133  1.00 56.99           C
ATOM  20085  O   LYS D 277     -21.741  -8.262 107.116  1.00 55.31           O
ATOM  20087  N   LEU D 278     -19.955  -9.299 106.191  1.00 57.67           N
ATOM  20088  CA  LEU D 278     -20.701  -9.944 105.104  1.00 58.46           C
ATOM  20090  CB  LEU D 278     -19.786 -10.222 103.909  1.00 57.52           C
ATOM  20093  CG  LEU D 278     -19.118  -9.015 103.258  1.00 56.25           C
ATOM  20095  CD1 LEU D 278     -18.172  -9.487 102.182  1.00 56.25           C
ATOM  20099  CD2 LEU D 278     -20.146  -8.045 102.688  1.00 55.60           C
ATOM  20103  C   LEU D 278     -21.323 -11.268 105.562  1.00 59.86           C
ATOM  20104  O   LEU D 278     -20.766 -11.941 106.432  1.00 61.13           O
ATOM  20106  N   PRO D 279     -22.480 -11.648 104.982  1.00 60.00           N
ATOM  20107  CA  PRO D 279     -23.243 -10.880 104.006  1.00 60.12           C
ATOM  20109  CB  PRO D 279     -24.357 -11.848 103.593  1.00 59.18           C
ATOM  20112  CG  PRO D 279     -24.513 -12.754 104.738  1.00 58.92           C
ATOM  20115  CD  PRO D 279     -23.133 -12.934 105.284  1.00 60.28           C
ATOM  20118  C   PRO D 279     -23.833  -9.600 104.606  1.00 60.74           C
ATOM  20119  O   PRO D 279     -24.045  -9.517 105.826  1.00 59.77           O
ATOM  20120  N   LEU D 280     -24.067  -8.609 103.747  1.00 60.94           N
ATOM  20121  CA  LEU D 280     -24.668  -7.347 104.167  1.00 61.98           C
ATOM  20123  CB  LEU D 280     -24.756  -6.373 102.990  1.00 61.28           C
ATOM  20126  CG  LEU D 280     -23.447  -5.924 102.340  1.00 59.59           C
ATOM  20128  CD1 LEU D 280     -23.741  -5.124 101.080  1.00 57.60           C
ATOM  20132  CD2 LEU D 280     -22.595  -5.117 103.310  1.00 56.93           C
ATOM  20136  C   LEU D 280     -26.064  -7.627 104.707  1.00 63.30           C
ATOM  20137  O   LEU D 280     -26.843  -8.331 104.060  1.00 63.78           O
ATOM  20139  N   HIS D 281     -26.375  -7.089 105.885  1.00 63.81           N
ATOM  20140  CA  HIS D 281     -27.627  -7.413 106.569  1.00 64.50           C
ATOM  20142  CB  HIS D 281     -27.597  -8.897 106.978  1.00 65.93           C
ATOM  20145  CG  HIS D 281     -28.273  -9.200 108.278  1.00 68.64           C
ATOM  20146  ND1 HIS D 281     -27.635  -9.073 109.495  1.00 71.30           N
ATOM  20148  CE1 HIS D 281     -28.466  -9.416 110.463  1.00 72.61           C
ATOM  20150  NE2 HIS D 281     -29.616  -9.774 109.918  1.00 73.03           N
ATOM  20152  CD2 HIS D 281     -29.519  -9.653 108.552  1.00 71.01           C
ATOM  20154  C   HIS D 281     -27.847  -6.497 107.771  1.00 64.93           C
ATOM  20155  O   HIS D 281     -26.887  -6.139 108.448  1.00 66.37           O
ATOM  20157  N   LEU D 282     -29.100  -6.127 108.044  1.00 65.18           N
ATOM  20158  CA  LEU D 282     -29.414  -5.207 109.165  1.00 64.94           C
ATOM  20160  CB  LEU D 282     -29.504  -3.742 108.675  1.00 64.93           C
ATOM  20163  CG  LEU D 282     -30.179  -3.317 107.364  1.00 59.82           C
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ATOM  20165  CD1 LEU D 282     -31.439  -4.116 107.110  1.00 58.97           C
ATOM  20169  CD2 LEU D 282     -29.237  -3.396 106.181  1.00 55.65           C
ATOM  20173  C   LEU D 282     -30.663  -5.571 109.995  1.00 64.05           C
ATOM  20174  O   LEU D 282     -30.873  -5.047 111.103  1.00 60.91           O
ATOM  20176  N   ASN D 296     -34.359   0.575  97.016  1.00 50.09           N
ATOM  20177  CA  ASN D 296     -33.094   0.452  96.299  1.00 52.29           C
ATOM  20179  CB  ASN D 296     -32.986   1.533  95.214  1.00 52.45           C
ATOM  20182  CG  ASN D 296     -33.804   1.211  93.976  1.00 54.86           C
ATOM  20183  OD1 ASN D 296     -33.879   0.060  93.548  1.00 60.19           O
ATOM  20184  ND2 ASN D 296     -34.407   2.236  93.383  1.00 54.83           N
ATOM  20187  C   ASN D 296     -31.865   0.540  97.217  1.00 53.06           C
ATOM  20188  O   ASN D 296     -31.675   1.540  97.909  1.00 53.59           O
ATOM  20190  N   LEU D 297     -31.044  -0.512  97.221  1.00 53.69           N
ATOM  20191  CA  LEU D 297     -29.697  -0.461  97.799  1.00 53.19           C
ATOM  20193  CB  LEU D 297     -29.409  -1.701  98.647  1.00 53.44           C
ATOM  20196  CG  LEU D 297     -27.965  -1.842  99.152  1.00 53.87           C
ATOM  20198  CD1 LEU D 297     -27.598  -0.706 100.107  1.00 56.29           C
ATOM  20202  CD2 LEU D 297     -27.756  -3.189  99.822  1.00 53.90           C
ATOM  20206  C   LEU D 297     -28.678  -0.379  96.668  1.00 53.65           C
ATOM  20207  O   LEU D 297     -28.705  -1.199  95.745  1.00 52.72           O
ATOM  20209  N   THR D 298     -27.778   0.602  96.748  1.00 53.30           N
ATOM  20210  CA  THR D 298     -26.740   0.802  95.731  1.00 52.65           C
ATOM  20212  CB  THR D 298     -26.712   2.261  95.243  1.00 52.96           C
ATOM  20214  OG1 THR D 298     -26.732   3.144  96.376  1.00 56.56           O
ATOM  20216  CG2 THR D 298     -27.909   2.547  94.337  1.00 51.36           C
ATOM  20220  C   THR D 298     -25.354   0.444  96.267  1.00 51.63           C
ATOM  20221  O   THR D 298     -25.083   0.608  97.462  1.00 50.50           O
ATOM  20223  N   LEU D 299     -24.489  -0.051  95.378  1.00 50.62           N
ATOM  20224  CA  LEU D 299     -23.102  -0.371  95.728  1.00 50.11           C
ATOM  20226  CB  LEU D 299     -22.945  -1.867  96.060  1.00 49.91           C
ATOM  20229  CG  LEU D 299     -21.560  -2.321  96.554  1.00 50.78           C
ATOM  20231  CD1 LEU D 299     -21.170  -1.562  97.813  1.00 53.29           C
ATOM  20235  CD2 LEU D 299     -21.500  -3.822  96.807  1.00 49.65           C
ATOM  20239  C   LEU D 299     -22.137   0.029  94.608  1.00 48.19           C
ATOM  20240  O   LEU D 299     -22.326  -0.337  93.447  1.00 46.34           O
ATOM  20242  N   ALA D 300     -21.109   0.786  94.984  1.00 47.98           N
ATOM  20243  CA  ALA D 300     -20.029   1.176  94.086  1.00 49.39           C
ATOM  20245  CB  ALA D 300     -19.774   2.683  94.180  1.00 47.97           C
ATOM  20249  C   ALA D 300     -18.775   0.398  94.469  1.00 50.12           C
ATOM  20250  O   ALA D 300     -18.525   0.174  95.652  1.00 51.97           O
ATOM  20252  N   LEU D 301     -18.000  -0.018  93.469  1.00 50.08           N
ATOM  20253  CA  LEU D 301     -16.776  -0.784  93.688  1.00 51.34           C
ATOM  20255  CB  LEU D 301     -16.918  -2.185  93.089  1.00 51.28           C
ATOM  20258  CG  LEU D 301     -18.125  -2.982  93.590  1.00 52.15           C
ATOM  20260  CD1 LEU D 301     -18.308  -4.257  92.782  1.00 53.40           C
ATOM  20264  CD2 LEU D 301     -17.987  -3.295  95.072  1.00 52.51           C
ATOM  20268  C   LEU D 301     -15.616  -0.063  93.028  1.00 51.47           C
ATOM  20269  O   LEU D 301     -15.746   0.413  91.904  1.00 51.57           O
ATOM  20271  N   GLU D 302     -14.478   0.004  93.709  1.00 52.24           N
ATOM  20272  CA  GLU D 302     -13.358   0.795  93.210  1.00 55.43           C
ATOM  20274  CB  GLU D 302     -12.157   0.733  94.163  1.00 56.01           C
ATOM  20277  CG  GLU D 302     -11.478  -0.629  94.254  1.00 58.92           C
ATOM  20280  CD  GLU D 302     -10.312  -0.636  95.228  1.00 58.20           C
ATOM  20281  OE1 GLU D 302      -9.570   0.365  95.278  1.00 58.05           O
ATOM  20282  OE2 GLU D 302     -10.132  -1.647  95.939  1.00 63.10           O
ATOM  20283  C   GLU D 302     -12.950   0.355  91.808  1.00 56.22           C
ATOM  20284  O   GLU D 302     -13.007  -0.832  91.485  1.00 56.96           O
ATOM  20286  N   ALA D 303     -12.569   1.330  90.981  1.00 57.46           N
ATOM  20287  CA  ALA D 303     -12.082   1.089  89.619  1.00 57.59           C
ATOM  20289  CB  ALA D 303     -10.791   0.272  89.665  1.00 57.43           C
ATOM  20293  C   ALA D 303     -13.108   0.406  88.711  1.00 58.66           C
ATOM  20294  O   ALA D 303     -12.739  -0.287  87.760  1.00 59.28           O
ATOM  20296  N   LYS D 304     -14.392   0.592  89.001  1.00 59.63           N
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ATOM  20297  CA  LYS D 304     -15.438  -0.130  88.281  1.00 60.18           C
ATOM  20299  CB  LYS D 304     -15.705  -1.484  88.940  1.00 59.91           C
ATOM  20302  CG  LYS D 304     -14.534  -2.431  88.804  1.00 59.97           C
ATOM  20305  CD  LYS D 304     -14.854  -3.829  89.269  1.00 61.17           C
ATOM  20308  CE  LYS D 304     -13.582  -4.652  89.400  1.00 61.13           C
ATOM  20311  NZ  LYS D 304     -12.779  -4.644  88.141  1.00 61.23           N
ATOM  20315  C   LYS D 304     -16.717   0.688  88.167  1.00 60.58           C
ATOM  20316  O   LYS D 304     -17.590   0.634  89.037  1.00 60.60           O
ATOM  20318  N   THR D 305     -16.804   1.446  87.075  1.00 61.86           N
ATOM  20319  CA  THR D 305     -18.008   2.193  86.720  1.00 61.96           C
ATOM  20321  CB  THR D 305     -17.870   2.912  85.349  1.00 62.82           C
ATOM  20323  OG1 THR D 305     -17.327   2.007  84.376  1.00 52.48           O
ATOM  20325  CG2 THR D 305     -16.981   4.167  85.474  1.00 61.48           C
ATOM  20329  C   THR D 305     -19.231   1.282  86.671  1.00 63.59           C
ATOM  20330  O   THR D 305     -19.127   0.053  86.502  1.00 66.14           O
ATOM  20332  N   GLY D 306     -20.391   1.912  86.806  1.00 62.32           N
ATOM  20333  CA  GLY D 306     -21.633   1.204  87.038  1.00 61.13           C
ATOM  20336  C   GLY D 306     -21.986   1.308  88.505  1.00 59.96           C
ATOM  20337  O   GLY D 306     -21.334   2.010  89.277  1.00 57.92           O
ATOM  20339  N   LYS D 307     -23.027   0.592  88.890  1.00 60.51           N
ATOM  20340  CA  LYS D 307     -23.532   0.661  90.242  1.00 59.65           C
ATOM  20342  CB  LYS D 307     -24.377   1.935  90.399  1.00 59.54           C
ATOM  20345  CG  LYS D 307     -24.531   2.440  91.829  1.00 61.32           C
ATOM  20348  CD  LYS D 307     -23.604   3.621  92.159  1.00 62.72           C
ATOM  20351  CE  LYS D 307     -24.082   4.353  93.422  1.00 62.70           C
ATOM  20354  NZ  LYS D 307     -23.276   5.553  93.777  1.00 61.79           N
ATOM  20358  C   LYS D 307     -24.368  -0.599  90.479  1.00 58.73           C
ATOM  20359  O   LYS D 307     -25.383  -0.800  89.803  1.00 59.90           O
ATOM  20361  N   LEU D 308     -23.938  -1.458  91.402  1.00 56.19           N
ATOM  20362  CA  LEU D 308     -24.768  -2.601  91.793  1.00 55.13           C
ATOM  20364  CB  LEU D 308     -24.016  -3.577  92.695  1.00 53.12           C
ATOM  20367  CG  LEU D 308     -22.843  -4.301  92.045  1.00 51.17           C
ATOM  20369  CD1 LEU D 308     -22.174  -5.246  93.039  1.00 50.36           C
ATOM  20373  CD2 LEU D 308     -23.292  -5.048  90.796  1.00 50.21           C
ATOM  20377  C   LEU D 308     -26.023  -2.086  92.486  1.00 53.53           C
ATOM  20378  O   LEU D 308     -26.006  -1.055  93.145  1.00 51.81           O
ATOM  20380  N   HIS D 309     -27.108  -2.824  92.330  1.00 53.59           N
ATOM  20381  CA  HIS D 309     -28.424  -2.320  92.649  1.00 55.00           C
ATOM  20383  CB  HIS D 309     -28.987  -1.629  91.395  1.00 56.99           C
ATOM  20386  CG  HIS D 309     -30.480  -1.511  91.368  1.00 64.50           C
ATOM  20387  ND1 HIS D 309     -31.286  -2.422  90.719  1.00 69.23           N
ATOM  20389  CE1 HIS D 309     -32.552  -2.064  90.856  1.00 73.67           C
ATOM  20391  NE2 HIS D 309     -32.596  -0.949  91.565  1.00 74.96           N
ATOM  20393  CD2 HIS D 309     -31.313  -0.579  91.895  1.00 72.98           C
ATOM  20395  C   HIS D 309     -29.307  -3.474  93.123  1.00 53.81           C
ATOM  20396  O   HIS D 309     -29.231  -4.572  92.583  1.00 52.54           O
ATOM  20398  N   GLN D 310     -30.115  -3.229  94.154  1.00 54.03           N
ATOM  20399  CA  GLN D 310     -31.121  -4.201  94.603  1.00 54.20           C
ATOM  20401  CB  GLN D 310     -30.525  -5.207  95.592  1.00 53.57           C
ATOM  20404  CG  GLN D 310     -31.569  -6.159  96.165  1.00 51.93           C
ATOM  20407  CD  GLN D 310     -30.979  -7.313  96.947  1.00 51.98           C
ATOM  20408  OE1 GLN D 310     -29.793  -7.622  96.840  1.00 51.04           O
ATOM  20409  NE2 GLN D 310     -31.817  -7.963  97.745  1.00 45.49           N
ATOM  20412  C   GLN D 310     -32.324  -3.526  95.250  1.00 54.35           C
ATOM  20413  O   GLN D 310     -32.176  -2.733  96.173  1.00 54.20           O
ATOM  20415  N   GLU D 311     -33.513  -3.874  94.772  1.00 55.20           N
ATOM  20416  CA  GLU D 311     -34.751  -3.402  95.378  1.00 56.10           C
ATOM  20418  CB  GLU D 311     -35.941  -3.694  94.463  1.00 56.72           C
ATOM  20421  CG  GLU D 311     -36.211  -2.636  93.410  1.00 57.24           C
ATOM  20424  CD  GLU D 311     -37.690  -2.541  93.072  1.00 57.45           C
ATOM  20425  OE1 GLU D 311     -38.048  -2.680  91.883  1.00 60.36           O
ATOM  20426  OE2 GLU D 311     -38.499  -2.346  94.004  1.00 55.98           O
ATOM  20427  C   GLU D 311     -35.012  -4.050  96.743  1.00 57.13           C
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ATOM  20428  O   GLU D 311     -34.667  -5.212  96.969  1.00 59.32           O
ATOM  20430  N   VAL D 312     -35.628  -3.282  97.642  1.00 56.10           N
ATOM  20431  CA  VAL D 312     -36.108  -3.791  98.925  1.00 54.35           C
ATOM  20433  CB  VAL D 312     -35.258  -3.293 100.107  1.00 55.79           C
ATOM  20435  CG1 VAL D 312     -35.394  -4.253 101.295  1.00 55.16           C
ATOM  20439  CG2 VAL D 312     -33.797  -3.124  99.698  1.00 58.54           C
ATOM  20443  C   VAL D 312     -37.519  -3.274  99.139  1.00 52.65           C
ATOM  20444  O   VAL D 312     -37.829  -2.152  98.747  1.00 51.46           O
ATOM  20446  N   ASN D 313     -38.368  -4.088  99.761  1.00 51.15           N
ATOM  20447  CA  ASN D 313     -39.753  -3.699 100.019  1.00 49.70           C
ATOM  20449  CB  ASN D 313     -40.677  -4.254  98.923  1.00 49.29           C
ATOM  20452  CG  ASN D 313     -40.109  -4.077  97.511  1.00 47.00           C
ATOM  20453  OD1 ASN D 313     -40.574  -3.240  96.738  1.00 43.93           O
ATOM  20454  ND2 ASN D 313     -39.104  -4.872  97.175  1.00 47.81           N
ATOM  20457  C   ASN D 313     -40.223  -4.171 101.403  1.00 48.99           C
ATOM  20458  O   ASN D 313     -39.804  -5.227 101.879  1.00 50.76           O
ATOM  20460  N   LEU D 314     -41.089  -3.384 102.040  1.00 46.64           N
ATOM  20461  CA  LEU D 314     -41.621  -3.715 103.361  1.00 45.22           C
ATOM  20463  CB  LEU D 314     -40.802  -3.006 104.438  1.00 45.62           C
ATOM  20466  CG  LEU D 314     -41.099  -3.282 105.923  1.00 46.54           C
ATOM  20468  CD1 LEU D 314     -40.589  -4.654 106.338  1.00 47.51           C
ATOM  20472  CD2 LEU D 314     -40.489  -2.194 106.823  1.00 43.11           C
ATOM  20476  C   LEU D 314     -43.087  -3.310 103.462  1.00 42.59           C
ATOM  20477  O   LEU D 314     -43.925  -4.084 103.920  1.00 40.19           O
ATOM  20479  O   HOH S   1      23.900   8.091  67.594  1.00 36.83           O
ATOM  20482  O   HOH S   2       5.912   4.439  54.558  1.00 29.49           O
ATOM  20485  O   HOH S   3     -16.003 -21.359  70.559  1.00 31.23           O
ATOM  20488  O   HOH S   4      13.033 -10.043  57.159  1.00 50.76           O
ATOM  20491  O   HOH S   5     -16.929  -1.491  61.333  1.00 38.50           O
ATOM  20494  O   HOH S   6     -22.626  -6.539  63.353  1.00 50.27           O
ATOM  20497  O   HOH S   7      16.630  -9.251  65.143  1.00 45.50           O
ATOM  20500  O   HOH S   8      44.030   7.432  44.731  1.00 37.27           O
ATOM  20503  O   HOH S   9      31.788  -5.318  53.301  1.00 35.07           O
ATOM  20506  O   HOH S  10     -30.206  -7.085  50.788  1.00 46.69           O
ATOM  20509  O   HOH S  11       2.607  -8.285  67.630  1.00 33.72           O
ATOM  20512  O   HOH S  12       2.236   1.490  38.087  1.00 44.75           O
ATOM  20515  O   HOH S  13      37.064 -22.971  76.347  1.00 43.10           O
ATOM  20518  O   HOH S  14      29.806 -11.612  69.475  1.00 31.98           O
ATOM  20521  O   HOH S  15     -15.188   2.660  97.916  1.00 45.05           O
ATOM  20524  O   HOH S  16      -5.607 -22.673  71.013  1.00 41.14           O
ATOM  20527  O   HOH S  17      -0.264   5.022  34.615  1.00 53.08           O
ATOM  20530  O   HOH S  18       5.673   8.372  50.771  1.00 41.06           O
ATOM  20533  O   HOH S  19       8.805  14.650  55.069  1.00 36.37           O
ATOM  20536  O   HOH S  20      -5.379 -16.793  52.803  1.00 34.32           O
ATOM  20539  O   HOH S  21      -6.797 -11.277  35.837  1.00 52.95           O
ATOM  20542  O   HOH S  22      37.201  11.338  80.658  1.00 70.53           O
ATOM  20545  O   HOH S  23      43.835  13.822  42.909  1.00 61.88           O
ATOM  20548  O   HOH S  24      13.385  -2.184  19.956  1.00 45.10           O
ATOM  20551  O   HOH S  25       3.200 -26.115  65.629  1.00 29.75           O
ATOM  20554  O   HOH S  26     -20.435 -19.113  31.054  1.00 30.05           O
ATOM  20557  O   HOH S  27      29.310 -15.968  54.370  1.00 41.89           O
ATOM  20560  O   HOH S  28     -28.905 -11.538  89.618  1.00 44.37           O
ATOM  20563  O   HOH S  29      -6.444 -19.644  75.505  1.00 34.88           O
ATOM  20566  O   HOH S  30      -3.930 -24.054  62.231  1.00 46.15           O
ATOM  20569  O   HOH S  31     -26.525 -18.165  54.874  1.00 32.11           O
ATOM  20572  O   HOH S  32     -16.859 -33.447  52.129  1.00 52.93           O
ATOM  20575  O   HOH S  33      24.707  -2.954  31.853  1.00 37.36           O
ATOM  20578  O   HOH S  34     -37.527  -9.583  49.990  1.00 45.23           O
ATOM  20581  O   HOH S  35     -21.289  -9.902  61.681  1.00 34.17           O
ATOM  20584  O   HOH S  36      18.763   5.020  61.136  1.00 35.70           O
ATOM  20587  O   HOH S  37      31.828 -25.589  50.936  1.00 38.57           O
ATOM  20590  O   HOH S  38      35.516  -4.398  50.634  1.00 85.69           O
ATOM  20593  O   HOH S  39      35.516  -4.398  50.634  1.00 85.69           O
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ATOM 20596 O HOH S 40 -12.682 4.430 47.461 1.00 46.60 O

CLAIMS:

1. A method for screening for a molecule capable of binding to CD4 comprising:

(a) providing one or more candidate molecules;

(b) determining whether the one or more candidate molecules is capable of binding to one or more of the following regions of human CD4: amino acids 148 to 154, amino acids 164 to 168 and amino acids 185 to 192; and

(c) selecting a molecule determined in step (b) to be capable of binding to CD4.

2. A method according to claim 1 wherein the step (b) further comprises determining whether the one or more candidate molecules binds to at least one of the following amino acid of human CD4: 26, 156, 159, and 161.

3. A method according to claim 1 or claim 2 wherein step (b) comprises determining whether the one or more candidate molecules is capable of binding to CD4 without a salt bridge.

4. A method according to any preceding claim wherein the one or more candidate molecules is an antibody, an antibody derived molecule, a peptide, an oligonucleotide, a siRNA, a mimotope, a peptidomimetic, a foldamer, a small molecule, a recognition protein based on a natural or an engineered lipocalin, a DARPin, a fibronectin, an affibody, a Kunitz-type inhibitor, a peptidic aptamer, a ribozyme, or a toxin.

5. A method according to claim 4 wherein the antibody is a humanized antibody or a camelid antibody.

6. A method according to any preceding claim wherein the one or more candidate molecules are antibodies or antibody fragments comprising CDR1 and CDR2 of BT061 light chain and CDR1 and CDR3 of BT061 heavy chain optionally with amino acid substitutions in the sequences of the CDRs provided:

(i) the light chain CDR1 comprises: Ser32; Gly33; and Tyr 34;

(ii) the light chain CDR2 comprises: Leu54; and Ile57;

(iii) the heavy chain CDR1 comprises: Asp31, Glu31, Thr31, Cys31, Pro31, Met31 or Tyr31; and

(iv) the heavy chain CDR3 comprises Tyr103, Phe103 or His103; Arg104; Tyr105; Asp106; and Trp110, Phe110, His 110 or Tyr110.

7. A method according to claim 6 wherein the amino acid substitutions in the sequence of CDR1 and CDR2 of BT061 light chain and CDR1 and CDR3 of BT061 heavy chain are selected from those set out in Table 4 and Table 5.

8. A method according to claim 6 or claim 7 wherein the antibody or antibody fragment comprises a light chain comprising Tyr 53 or Phe 53 and a heavy chain comprising Ser 28.

9. A method according to any one of claims 6 to 8 wherein the antibody or antibody fragment comprises a light chain comprising Asp64 and/or a heavy chain comprising Glu 56.

10. A method according to any one of claims 6 to 9 wherein the antibody or antibody fragment further comprises the CDR3 of BT061 light chain and/or the CDR2 of BT061 heavy chain optionally with amino acid substitutions in the sequences of these CDRs wherein the substitutions are selected from those set out in Table 4 and Table 5.

11. A method according to any preceding claim wherein steps (a) to (c) are conducted on a computer system.

12. A method according to claim 11 further comprising a step (d) of producing the molecule selected in step (c).

13. A method according to claim 12 further comprising a step (e) of contacting in vitro the molecule produced in step (d) with a CD4+ cell or with a peptide or polypeptide comprising one or more of the following regions of human CD4: amino acids 148 to 154, amino acids 164 to 168 and amino acids 185 to 192.

14. A method according to claim 13 wherein step (e) comprises determining whether the molecule produced in step (d):

(i) binds to a peptide comprising one or more of the following regions of human CD4: amino acids 148 to 154, amino acids 164 to 168, and amino acids 185 to 192;

(ii) activates CD4+CD25+ regulatory T cells; and/or

(iii) reduces CD4 receptor expression on a CD4 expressing cell.

15. A method according to any one of claims 1 to 10 wherein steps (a) to (c) are conducted in vitro and step (b) comprises contacting the one or more candidate molecules with a peptide or polypeptide comprising one or more of the following regions of human CD4: amino acids 148 to 154, amino acids 164 to 168 and amino acids 185 to 192.

16. A method according to claim 15 wherein the one or more candidate molecules are a library of molecules.

17. A method according to claim 16 wherein the library is a phage display library.

18. A method according to anyone of claims 14 to 17 wherein the step of determining comprises performing X ray crystallography or NMR and selecting a molecule which binds to the peptide or polypeptide without a salt bridge.

19. A method according to any one of claims 15 to 18 further comprising a step (d) of screening a moleculeselected in step (c) for its ability to activate CD4+CD25+ regulatory T cells, and/or a step (e) of screening a molecule selected in step (c) for its ability to reduce CD4 receptor expression on a CD4 expressing cell.

20. A method according to any one of claims 13 to 19 wherein the peptide or the polypeptide is fixed to a membrane or an equivalent suitable surface, or is coupled to a magnetic bead.

21. A method according to any one of claims 13 to 20 wherein the peptide or polypeptide comprises the Ig-like C2-type 1 domain of human CD4 or comprises the Ig-like V-type domain and the Ig-like C2-type 1 domain of human CD4.

22. A method according to any one of claims 13 to 21 wherein the peptide or polypeptide mimics the conformation of the wild-type CD4 epitope.

23. A method according to any one of claims 14 to 22 wherein the contacting step comprises contacting the peptide and the molecule with a competitor antibody or antibody fragment having the heavy and light chain variable domains of BT061 to determine if the candidate or selected molecule is able to block binding of the competitor antibody or antibody fragment to the regions of the peptide or polypeptide.

24. A method for producing a therapeutic composition comprising:

(a) selecting a molecule determined as being capable of activating CD4+CD25+ regulatory T cells using the method of claim 14 or claim 19: and

(b) producing a therapeutic composition comprising the selected molecule.

25. A therapeutic composition obtainable by a method according to claim 24, wherein the molecule does not comprise CDR1, CDR2 and CDR3 of BT061 heavy chain and CDR1, CDR2 and CD3 of BT061 light chain.

26. A method for screening for an antibody or antibody fragment capable of binding CD4 comprising:

(a) providing an antibody or antibody fragment comprising CDR1 and CDR2 of BT061 light chain and CDR1 and CDR3 of BT061 heavy chain optionally with amino acid substitutions in the sequences of the CDRs provided:

(i) the light chain CDR1 comprises: Ser32; Gly33; and Tyr 34;

(ii) the light chain CDR2 comprises: Leu54; and Ile57;

(iii) the heavy chain CDR1 comprises Asp31, Glu31, Thr31, Cys31, Pro31, Met31 or Tyr31; and

(iv) the heavy chain CDR3 comprises Tyr103, Phe103 or His103; Arg104; Tyr105; Asp106; and Trp110, Phe110, His 110 or Tyr110,

(b) determining whether the antibody or antibody fragment is capable of binding to CD4, and

(c) selecting the antibody or antibody fragment determined in step (b) to be capable of binding to CD4,

wherein the antibody or antibody fragment does not comprise CDR1, CDR2 and CDR3 of BT061 heavy chain and CDR1, CDR2 and CDR3 of BT061 light chain.

27. A method according to claim 26 wherein the amino acid substitutions in the sequences of CDR1 and CDR2 of BT061 light chain and CDR1 and CDR3 of BT061 heavy chain are selected from those set out in Table 4 and Table 5.

28. A method according to claim 26 or claim 27 wherein the antibody or antibody fragment comprises a light chain comprising Tyr53 or Phe53 and a heavy chain comprising Ser28.

29. A method according to any one of claims 26 to 28 wherein the antibody or antibody fragment comprises a light chain comprising Asp64 and/or a heavy chain comprising Glu 56.

30. A method according to any one of claims 26 to 29 wherein the antibody or antibody fragment further comprises the CDR3 of BT061 light chain and/or the CDR2 of BT061 heavy chain optionally with amino acid substitutions in the sequences of these CDRs wherein the substitutions are selected from those set out in Table 4 and Table 5.

31. A method according to any one of claims 26 to 30 wherein steps (a) to (c) are conducted on a computer system.

32. A method according to claim 31 further comprising a step (d) of producing the antibody or antibody fragment selected in step (c).

33. A method according to claim 32 further comprising determining whether the antibody or antibody fragment produced in step (d):

(i) activates CD4+CD25+ regulatory T cells;

(ii) binds to one or more of the following regions of CD4: amino acids 148 to 154; amino acids 164 to 168 and amino acids 185 to 192; and/or

(iii) down-regulates expression of CD4 on CD4 expressing cell.

34. A method according to any one of claims 26 to 31 wherein steps (a) to (c) are conducted in vitro.

35. A method according to claim 34 wherein step (b) comprises determining whether the antibody or antibody fragment:

(i) activates CD4+CD25+ regulatory T cells;

(ii) binds to one or more of the following regions of CD4: amino acids 148 to 154; amino acids 164 to 168 and amino acids 185 to 192; and/or

(iii) down-regulates expression of CD4 on CD4 expressing cell.

36. A method according to any one of claims 14, 19, 33 and 35 wherein the CD4 expressing cells are PBMC.

37. A method for producing a therapeutic composition comprising:

(a) selecting the antibody or antibody fragment identified according to claim 33 or 35 as being capable of activating CD4+CD25+ regulatory T cells; and

(b) producing a therapeutic composition comprising the selected molecule.

38. A therapeutic composition obtainable by a method according to claim 37.

39. An antibody or antibody fragment capable of activating CD4+CD25+ regulatory T cells comprising CDR1 and CDR2 of BT061 light chain and CDR1 and CDR3 of BT061 heavy chain optionally with amino acid substitutions in the sequences of the CDRs provided:

(i) the light chain CDR1 comprises: Ser32; Gly33; and Tyr 34;

(ii) the light chain CDR2 comprises: Leu54; and Ile57;

(iii) the heavy chain CDR1 comprises Asp31, Glu31, Thr31, Cys31, Pro31, Met31 or Tyr31; and

(iv) the heavy chain CDR3 comprises Tyr103, Phe103 or His103; Arg104; Tyr105; Asp106; and Trp110, Phe110, His 110 or Tyr110,

and wherein the antibody or antibody fragment does not comprise CDR1, CDR2 and CDR3 of BT061 heavy chain and CDR1, CDR2 and CDR3 of BT061 light chain.

40. An antibody or antibody fragment according to claim 39 comprising the sequence:

```
        10         20         30         40         50         60
DIVMTQSPDS LAVSLGERAT INCXXXXXXS XSGYSYXYWY QQKPGQPPKL LIYLASILEX
        70         80         90        100        110        120
GVPDRFSGSG SGTDFTLTIS SLQAEDVAVY YCQHSXXXPW XFGQGTKVEI KRTVAAPSVF
       130        140        150        160        170        180
IFPPSDEQLK SGTASVVCLL NNFYPREAKV QWKVDNALQS GNSQESVTEQ DSKDSTYSLS
       190        200        210      218
STLTLSKADY EKHKVYACEV THQGLSSPVT KSFNRGEC
```

wherein the amino acids at positions 24 to 29, 31, 37, 60, 96 to 98 and 101 are selected from those shown at the corresponding positions in Table 4,

and further comprising the sequence:

```
        10         20         30         40         50         60
EEQLVESGGG LVKPGGSLRL SCAASGFSFS XXXXYWLRQA PGKGLEWIGV XXXXXXXXXX
        70         80         90        100        110        120
XXXXXXXGRF TISRDDSKNT VYLQMNSLKT EDTAVYYCSA SYXRYDXXXX FXXWGQGTLV
       130        140        150        160        170        180
TVSSASTKGP SVFPLAPSSK STSGGTAALG CLVKDYFPEP VTVSWNSGAL TSGVHTFPAV
       190        200        210        220        230        240
LQSSGLYSLS SVVTVPSSSL GTQTYICNVN HKPSNTKVDK KVEPKSCDKT HTCPPCPAPE
       250        260        270        280        290        300
LLGGPSVFLF PPKPKDTLMI SRTPEVTCVV VDVSHEDPEV KFNWYVDGVE VHNAKTKPRE
       310        320        330        340        350        360
EQYNSTYRVV SVLTVLHQDW LNGKEYKCKV SNKALPAPIE KTISKAKGQP REPQVYTLPP
       370        380        390        400        410        420
SRDELTKNQV SLTCLVKGFY PSDIAVEWES NGQPENNYKT TPPVLDSDGS FFLYSKLTVD
       430        440        450  454
KSRWQQGNVF SCSVMHEALH NHYTQKSLSL SPGK
```

wherein the amino acids at positions 31 to 34, 51 to 67, 103, 107 to 110, 111 and 112 are selected from those shown at the corresponding positions in Table 5.

41. An antibody or antibody fragment according to claim 39 comprising the sequence SGYSY from CDR1 of BT061 light chain and/or the sequence LASILE from CDR2 of BT061 light chain and/or the sequence YYRYD from CDR3 of BT061 heavy chain.

42. An antibody or antibody fragment according to claim 39 wherein the amino acids substitutions in the sequences of the CDRs are isosteric variations

43. An antibody or antibody fragment capable of activating CD4+CD25+ regulatory T cells comprising V domains that are at least 80% identical to the V domains of the antibody BT061, the V domains comprising:

(i) the sequence motif SGYSY in CDR1 of the light chain V domain;

(ii) the sequence motif LASILE in CDR2 of the light chain V domain; and

(iii) the sequence motif SYXRYD in CDR3 of the heavy chain V domain where X is Y, F or H,

with the proviso that the antibody or antibody fragment does not comprise V domains that are 100% identical to the V domains of the antibody BT061.

44. An antibody or antibody fragment according to claim 39 wherein the amino acid substitutions in the sequence of CDR1 and CDR2 of BT061 light chain and/or CDR1 and CDR3 of BT061 heavy chain are selected from those set out in Table 4 and Table 5.

45. An antibody or antibody fragment according to claim 39 or claim 44 wherein the antibody or antibody fragment comprises a light chain comprising Tyr53 or Phe 53 and/or a heavy chain comprising Ser28.

46. An antibody or antibody fragment according to any one of claims 39, 44 or 45 wherein the antibody or antibody fragment comprises a light chain containing Asp64.

47. An antibody or antibody fragment according to any one of claims 39, or 44 to 46 wherein the antibody or antibody fragment comprises a heavy chain comprising Glu 56.

48. An antibody or antibody fragment according to any one of claims 39, or 44 to 47 wherein the antibody or antibody fragment further comprises the CDR3 of BT061 light chain and/or the CDR2

of BT061 heavy chain optionally with amino acid substitutions in the sequences of these CDRs wherein the substitutions are selected from those set out in Table 4 and Table 5.

49. An antibody or antibody fragment according to any one of claims 39 or 44 to 48, comprising the CDR sequences of BT061 light chain and the CDR sequences of BT061 heavy chain with a single amino acid substitution wherein the substitution is:

(i) A63G in the heavy chain;

(ii) R33K in the heavy chain; or

(iii) L98I in the light chain.

50. An antibody or antibody fragment according to any one of claims 39 or 44 to 48, comprising the CDR sequences of BT061 light chain and the CDR sequences of BT061 heavy chain and a double amino acid substitution wherein the substitutions are:

(iv) R33K and A63G in the heavy chain; or

(v) L98I in the light chain and R33K in the heavy chain.

51. An antibody or antibody fragment according to claim 49 and 50 further comprising the remaining variable domain sequences of BT061.

52. An antibody or antibody fragment according to any one of claims 39 to 51, further comprising an Fc receptor capable of binding to CD64.

53. An antibody according to any one of claims 39 to 52 wherein the antibody is an IgG antibody.

54. An isolated peptide comprising less than 50 amino acids of human CD4 protein and including two or three of the following regions of human CD4: amino acids 148 to 154, amino acids 164 to 168, and amino acids 185 to 192.

55. An isolated peptide comprising less than 20 amino acids of human CD4 protein and including one or more of the following regions of human CD4: amino acids 148 to 154, amino acids 164 to 168, and amino acids 185 to 192.

56. A mimotope of an isolated peptide comprising less than 50 amino acids of human CD4 protein and including one or more of the following regions of human CD4: amino acids 148 to 154, amino acids 164 to 168, and amino acids 185 to 192.

57. A nucleic acid encoding the antibody or antibody fragment according to any one of claims 39 to 53.

58. A vector comprising the nucleic acid of claim 57.

59. A host cell or hybridoma comprising the nucleic acid of claim 57 or the vector of claim 58.

60. A method for the production of an antibody or antibody fragment according to any one of claims 39 to 53 comprising a step of culturing the host cell according to claim 60 in a culture medium under conditions allowing the expression of the antibody or antibody fragment and separating the antibody or fragment from the culture medium.

61. A pharmaceutical composition comprising the antibody or antibody fragment according to any one of claims 39 to 53 and further comprising a pharmaceutically acceptable carrier.

62. An antibody or antibody fragment according to any one of claims 39 to 53 further comprising a label.

63. An in vitro method for the activation of CD4+CD25+ regulatory T cells comprising contacting the cells with the antibody or antibody fragment according to any one of claims 39 to 53.

64. A method of treating a subject suffering from or preventing a subject suffering from an autoimmune disease or transplant rejection comprising administering to said subject an antibody or antibody fragment according to any one of claims 39 to 53.

65. An antibody or antibody fragment according to any one of claims 39 to 53 for use in medicine.

66. An antibody or antibody fragment for use in medicine according to claim 65 wherein the use is the treatment of an autoimmune disease or transplant rejection.

67. Use of an antibody or antibody fragment according to claim 65 for the manufacture of a medicament for treating autoimmune disease or transplant rejection.

68. Use of an antibody or antibody fragment according to any one of claims 39 to 53 for activating CD4+CD25+ regulatory T cells in vitro.

69. Use of an antibody or antibody fragment according to any one of claims 39 to 53 for identifying CD4+CD25+ regulatory T cells in vitro.

70. Use of the isolated peptide of claim 54 or claim 55 or the mimotope of claim 56 for screening for molecules capable of binding to CD4 and/or activating CD4+CD25+ regulatory T cells.

71. A method of screening for the presence of CD4+CD25+ T regulatory cells in a sample comprising a step of contacting a labeled antibody or antibody fragment according to claim 62 with the sample, washing the sample to remove unbound antibody and detecting the presence of the label in the sample.

72. A method of screening according to claim 71 wherein the CD4+CD25+ T regulatory cells are activated.

73. A method of screening according to claim 71 or claim 72 wherein the sample is a biological sample taken from a subject suffering from an autoimmune disease or from transplant rejection.

74. A method of treating a subject suffering from or preventing a subject suffering from an autoimmune disease or transplant rejection comprising removing a sample comprising CD4+CD25+ regulatory T cells from the subject, contacting the sample with an antibody or antibody fragment

according to any one of claims 39 to 53 to activate CD4+CD25+ regulatory T cells and administering the activated cells to the subject.

75. A CD4+CD25+ regulatory T cell activated with an antibody or antibody fragment according to any one of claims 39 to 53 for use in medicine.

76. A CD4+CD25+ regulatory T cell for use according to claim 75 wherein the use is the treatment of an autoimmune disease.

77. Use of a CD4+CD25+ regulatory T cell activated with an antibody or antibody fragment according to any one of claims 39 to 53 for the manufacture of a medicament for the treatment of an autoimmune disease or transplant rejection.

78. A kit for isolating CD4+CD25+ regulatory T cells comprising magnetic beads coated with the antibody or antibody fragment of any one of claims 39 to 53 and a second anti-CD4 antibody or an anti-CD25 antibody.